Y KYIV RYSING

PAST | PRESENT | FUTURE

kyiv.consulting

Published by Kyiv Strategy Consulting in 2022

Copyright © 2022 by Kyiv Strategy Consulting

Please note that data consisted in this KYIV RYSING project (hereinafter referred to as KYIV RYSING) is protected by data rights and cannot be republished without permission. The rightsholder is Kyiv Strategy Consulting LLC, a legal entity registered and existing under the laws of Ukraine.

KYIV RYSING is a registered trademark owned by Kyiv Strategy Consulting LLC, the use of which is prohibited without the permission of the rightsholder.

The answers to the interviews are presented in the original. In case the text of the answer has been translated into another language, this translation has been previously agreed upon with the interviewer.

KYIV RYSING is a pro-bono project and does not incline to any political, ideological or religious orientation.

KYIV RYSING it is the only comprehensive book covering evolutionary milestones in the history of Ukraine, tying its past to its present-day and providing an outlook on post-war Ukraine based on verified data, proven research methodology, nationwide poll results, and numerous interviews with opinion leaders from Ukraine and overseas. Being rich in solid facts and reliable data, KYIV RYSING provides an independent and realistic 'made in Ukraine' view, as well as stable, clear, and consistent insights on the current developments in Ukraine and what needs to be done to overcome the consequences of the war and seize unlocked opportunities.

ISBN 978-617-8025-23-6

Typesets Source Sans Pro, Montserrat Images © www.shutterstock.com, www.stock.adobe.com Approved for publication on September 23, 2022

Kyiv Consulting

Kontraktova Square, 10a, Kyiv, 04070 Telephone numbers: +38 (050) 521 02 99, +38 (095) 540 32 41 E-mail: info@kyiv-consulting.com www.kyivconsulting.com

Printed by family printing house hUSS^{••} Shakhtarska str., 5, Kyiv, 04074 Telephone number: +38 (044) 587 98 53 E-mail:info@huss.com.ua www.huss.com.ua Certificate of the subject of publishing: DK series #3165 dated 14.04.08.

TABLE OF CONTENTS

Table of Contents	3
OPENING CHAPTER	
Opening Message	<u>4</u>
What does the 'RYSING' mean?	<u>5</u>
What KYIV RYSING is	<u>6</u>
Introduction	<u>7</u>
Executive Summary	<u>8</u>
CHAPTER 1: PAST	<u>13</u>
1.1 History	<u>16</u>
CHAPTER 2: PRESENT	<u>31</u>
2.1 Military	<u>35</u>
2.2 Society	<u>59</u>
<u>Refugees</u>	<u>61</u>
Employment	<u>68</u>
Ukrainian Identity	<u>72</u>
Education	<u>83</u>
<u>Healthcare</u>	<u>90</u>
2.3 Environment	<u>95</u>
Environmental Safety	<u>97</u>
Biological Diversity	<u>102</u>
Nuclear Security	<u>105</u>
2.4 Economy	<u>113</u>
Agriculture	<u>120</u>
Mining & Manufacturing	<u>130</u>
Energy	<u>140</u>
Transport & Logistics	<u>148</u>
Ш	<u>158</u>
Professional Services	<u>162</u>

CHAPTER 3: NEW AGE UKRAINE	<u>171</u>
3.1 Investment potential	<u>175</u>
<u>3.1.1 Society</u>	<u>185</u>
Culture	<u>187</u>
Social Protection	<u>192</u>
Healthcare	<u>198</u>
Education	<u>204</u>
3.1.2 Environment	<u>211</u>
Environment	213
<u>3.1.3 Economy</u>	<u>219</u>
Housing & Social Infrastructure	<u>221</u>
Agriculture	226
Manufacturing	<u>232</u>
Energy	<u>238</u>
Transport	<u>242</u>
Ш	<u>248</u>
3.2 Balanced expectations	<u>255</u>
CLOSING CHAPTER	
Conclusion	<u>274</u>
<u>Closing Message</u>	<u>276</u>
Who We Are	<u>277</u>
Our Story During the War	<u>280</u>
<u>Contributors</u>	<u>282</u>
Sources of Inspiration	<u>285</u>
Interviews & Biographies	<u>286</u>
Sources of Information	<u>413</u>
Research Methodology	<u>414</u>
Investor's Toolkit	<u>415</u>
Leading Change	<u>418</u>
<u>References</u>	<u>420</u>
List of Abbreviations	423

OPENING MESSAGE



Dear All,

The year 2022 has been a year unlike any other. It is a year that has called upon us to respond to profound global disruptions with the fullness of our collective humanity, resiliency, and ingenuity, as well as our keen sense of shared social responsibility. While these values are constants at Kyiv Strategy Consulting, I am especially pleased to take this opportunity to congratulate my team for the excellent job they have done and to reflect on our many accomplishments over the past several months.

I would like to extend my utmost gratitude to my dearest team. Despite having been scattered across Europe, its members consistently demonstrated unprecedented unity, dedication and propensity for hard work during these turbulent times. The 'Ukrainian spirit' is truly something to behold, it's an amazing phenomenon, and it gives me great pride to be the leader of such a talented and highly motivated team.

Kyiv Strategy Consulting is one of the largest and most respected business consultancies in Ukraine. During our evacuation, as the fog of war began to lift following the successful defence of Kyiv city, we began to think seriously about the ways in which our team might contribute to the country's recovery in the aftermath of war. It was decided ultimately that we would undertake a pro bono project to create.

KYIV RYSING is the most comprehensive independent publication on the situation in Ukraine. Its contents constitutes nothing less than the story of Ukraine's past, present, and collective hopes for the future visualised and presented by the 130-member strong team of business consultants and a significant number of subject matter experts from Ukraine and internationally dealing with military, social, environmental, and economic questions.

The facts and figures presented in KYIV RYSING are detailed and impressive. There is currently no other comparable study about contemporary Ukraine available at this time. Our idea was that no relevant information ought to be overlooked, such as in the compilation of a professional Factbook.

Our approach to developing KYIV RYSING was based on proven consulting techniques and tools, which we are normally used in either private or public sector consulting engagements. There was no stone left unturned during the project. It is no wonder, therefore, that more than 23,000 pages of articles, websites, books and other sources of information were analysed by the team during the project. Daily alignment calls with the lead consultants ensured that all relevant information coming in was analysed in real-time week by week.

The publication KYIV RYSING supports what has already been clear even before the invasion. The fact that Ukraine holds a key position in the global supply and distribution chains in terms of food production, infrastructure, and logistics. Ukraine's agricultural sector has undergone the greatest scrutiny since the war. But there is also the manufacturing industry that accounts for 10% of the national GDP and takes up 50% of the total exported goods. Little wonder that making the world aware of products 'Made in Ukraine' will be another priority for all Ukrainians in the post-war period.

Looking with hope towards the future, KYIV RYSING provides an assessment of the quality of Ukraine's educational, healthcare, information technology, and professional services sectors and reveals that there is much to be optimistic about. Ukrainian legal specialists will be in high demand when, as will inevitably be the case, justice will be sought internationally for the damage to individuals and Ukraine's economy, infrastructure, and environment.

As well as Ukrainian business advisors will be the entry point for donors, investors, and international organisations, who want to rediscover the business potential of Ukraine, as it harbours numerous must-win opportunities. As Aristotle said: "It is not enough to win a war; it is more important to organise the peace". Russian military attacks are still ravaging Ukraine, nevertheless, we need to be focusing on the long-term future of the country, which will require a massive, concerted effort to rebuild Ukraine.

We are proud of the vision our many contributors have made to our publication. As noted above, we drew upon the knowledge and expertise of both Ukrainian and foreign subject matter experts and advisors, representing various relevant domains. Our joint efforts, coupled with our collective skillsets, speaks for itself and ensures that we are reliable partners to both the private and public sectors in leveraging opportunities in the upcoming New Age of Ukraine.

I have no doubt that KYIV RYSING will become an essential go-to handbook in the months and years ahead.

Best regards Nicolai Kiskalt

WHAT DOES THE 'RYSING' MEAN? WHY DO WE WRITE WITH 'Y'?

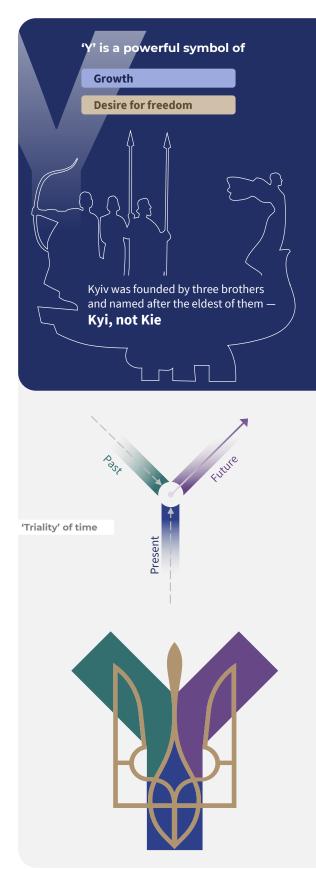
Many will probably start thinking: is there a word I do not know, or is it something in the Ukrainian language? In fact, it is more than that. Letter 'Y' is a powerful symbol of growth that also represents a strong desire for freedom. This idea runs like a thread through the entire report, capturing the attention of the readers at first glance.

We keep the focus on the 'Y' effect starting from the capital name Kyiv – the heart of Ukraine, which stands for the whole country on every front. The Latinised name of the city is written exactly as KYIV, not Kiev, like its translation from the Russian language version. It has deep roots in history, as Kyiv was founded by three brothers and named after the eldest of them – Kyi, not Kie. It is essential to follow such a consistent approach, which was authorised by the United Nations Group of Experts on Geographical Names (UNGEGN). Small things lead to a big change, and even correct spelling may help the world recognise Ukraine's independence from Russia both culturally, mentally, and politically.

The lower vertical part of the 'Y' stands straight up, and the split begins onethird of the way: one diagonal line goes to the left and another one to the right. Exactly as the 'triality' of time: Present, Past, and Future. Despite the fact that the letter 'Y' is like a fork in the road, Ukraine, as a sovereign state, has firmly determined its independence, values, and European vector of development. There is no split in direction, Ukrainians step confidently towards these goals, but the fight is still ongoing. It is not only a price to pay for own choice of freedom and democratic future but also a struggle for the physical existence of the whole nation. Ukrainians have everything at stake. Here the 'Y' sounds just like the question 'Why?' Why has it happened? Why is the world observing the war in the centre of Europe in the XXIst century? Why should every citizen of the civilized world stand with Ukraine? Why is there no other way but to be a part of this fight for human rights and democracy? Why does Ukraine now need not only political statements but concrete and decisive measures from the international leaders supported by their nations?

We try to answer all these questions based on the lessons learned from the turbulent Past, walking through hardships of the Present, and giving a comprehensive outlook on the Future. While 'Y' also symbolises the 'yes', giving the answer about the perspective and significant potential for a steady development of Ukraine's major domains: economy, environment, and society which we disclose focusing on the scenarios of the recovery prospects, international financial assistance, and revival of the investment and business opportunities.

Indeed, the replacement of letters is more than a word game. It is about the RYSING of KYIV and the entire Ukraine associated with making a choice for change and transformation, moving along a new path to a stable and solid Future.



WHAT KYIV RYSING IS

The latest pro-bono assignment of Kyiv Strategy Consulting has started in Summer 2022 and aims to raise awareness of the global community on what has actually happened in Ukraine, what are

RYSING

community on what has actually happened in Ukraine, what are the reasons behind the ongoing war, what needs to be done to get Ukraine back on track, as well as what are Ukraine's perspectives going forward.

Made in the form of a comprehensive study, KYIV RYSING is an outcome of the dedicated teamwork of more than 130 business consultants, enriched by views and ideas of Ukrainian and international subject-matter experts, each representing various domains: military, government, business, academic, etc.

In fact, it is the only comprehensive report covering evolutionary milestones in the history of Ukraine, tying its past to its presentday and providing an outlook on post-war Ukraine based on verified data, proven research methodology, nationwide poll results, and numerous interviews with opinion leaders from Ukraine and overseas.

KYIV RYSING is a single-entry source enabling foreign donor countries, multinational organisations, international investors, and business people from abroad to fulfil their primary interest in Ukraine and its potential without having to dig into numerous sources of 'scattered', unprocessed, or hard-to-perceive data. The study covers all the basic and most frequently asked questions about Ukraine's past, present, and future.

KYIV RYSING is to provoke an upheaval in the world's perception of Ukraine and to change the focus of the international community from 'well-known' topics like the supply of heavy weaponry, grain shipments, increasing gas prices, continuing military aid, refugee crisis, etc. to what Ukraine actually is at the moment and what it is aiming for in the future. It is to entice the global community, donor countries, multinational organisations, international investors and business people from abroad to invest in Ukraine, as its potential (in spite of the war and related challenges) appears to be highly promising with numerous hidden investment opportunities in, inter alia, agriculture, housing, infrastructure, high-tech, metallurgy, engineering, energy, transportation, information technology and, most importantly, the Ukrainian people.

Being rich in solid facts and reliable data, **KYIV RYSING provides an independent and realistic 'made in Ukraine' view**, as well as stable, clear, and consistent insights on the current developments in Ukraine and what needs to be done to overcome the consequences of the war and seize unlocked opportunities.

Ukraine's success story starts with a common effort and European security starts with a safe neighbourhood. Contribution to Ukraine's victory and recovery implies direct and implicit benefits — **both in terms of ROI and making Europe stronger with a strong Ukraine.**

INTRODUCTION

KYIV RYSING is a comprehensive investigation focusing on the business ecosystem of Ukraine, developed by Kyiv Strategy Consulting for the purpose of **improving visibility of our country within the global information space.** It implies highlighting the real potential of Ukraine in the context of **PAST** and **PRESENT** events, as well as **FUTURE** plans and opportunities by addressing the following conceptual topics:

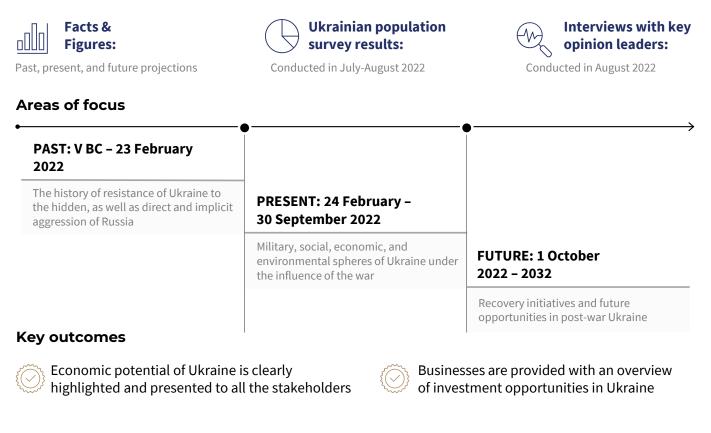
- Historical prerequisites for the full-scale Russian invasion of Ukraine
- The current impact of the war on military, social, economic, and environmental spheres, both in Ukraine and globally
- Future opportunities and action-plans in the development of New Age Ukraine after the victory in the war against Russia

We believe that Ukraine will offer a variety of investment options in the post-war period, as the times of big challenges come with big opportunities. Therefore, the study aims at highlighting the economic potential along with the future global role of strong and democratic Ukraine. KYIV RYSING is prepared based on application of the comprehensive data-driven approach, which allows to generate insights from different sources. It includes official facts & figures from Ukrainian and international public sources, results of the survey, as well as interviews with opinion leaders, including business representatives, international politics, and military experts. This approach allows us to evaluate the topic from a 360-degree perspective and share it with the international audience.

The investigation is aimed at highlighting business opportunities in Ukraine in the post-war period, as well as inspiring foreign companies to do business and invest therein.

Major components of the investigation

Input and data sources



- Numerous insights on the impact of the war on Ukraine were collected and presented
- Opinion leaders shared their thoughts on the potential and the future of Ukraine

EXECUTIVE SUMMARY (1/4)



PAST

Ukraine is a country with a thousand-year-old history, rich cultural heritage, and traditions. The Slavic word 'Ukraine' is mentioned for the first time in the Ipatiiv chronicles of 1187.

The ancient history (V BC - IX) is connected with the emergence of the historical Slavs and Trypillia culture on the Ukrainian terrain.

The Medieval history of Ukraine is associated with Kyivan Rus' (IX — XIII) and Kyiv as the capital of a large and prosperous state, spreading from the Carpathian Mountains to the Volha River and from the Black Sea to the Baltic Sea. This was the golden period of Ukrainian history. Back then, the first silver hryvnias were cast, coins with the Prince's trident were embossed, magnificent temples were built on the banks of the Dnipro river, and manuscripts were written behind the walls of Kyiv monasteries describing 'where the Rus' land came from.

In the XVth — XVIIIth centuries, Ukrainian territories had an official name Viys'ko Zaporiz'ke. Its organisation was based on the principles of brotherhood, equality, and democracy, as well as on the warrior's code of conduct that called for courage, loyalty, struggle against the enemies of Faith, protection of the land, and asceticism. This period is widely embedded in the Ukrainian traditional songs, artworks, and literature that constitute an inherent part of Ukrainian identity. This state had existed for over a century. Far back then, Moscow decided to transform Ukraine into an 'imperial periphery' and destroy even the idea of the existence of such a country.

On 24 August 1991, the Verkhovna Rada of Ukraine adopted a historical document of exceptional importance for the destiny of the Ukrainian people — **the Act of Proclamation of Independence of Ukraine**. It stated: 'Proceeding from the mortal danger that loomed over Ukraine in connection with the coup d'état in the USSR on 19 August 1991, continuing the thousand-year tradition of state-building in Ukraine, **proceeding from the right to self-determination provided for by the UN Charter and other international legal documents**, implementing the Declaration on the state sovereignty of Ukraine, the Verkhovna Rada of the Ukrainian Soviet Socialist Republic solemnly proclaims the independence of Ukraine...'

However, this was a turning point in the history of Ukraine. **Russia** had never appeared to recognise Ukrainian sovereignty, demonstrating direct interference with the domestic affairs of Ukraine, bringing pro-Russian politicians into the Ukrainian Parliament, fabricating the results of presidential elections, and holding fake referendums on the occupied territories. These actions might be referred to as a hybrid war against Ukraine.

The Revolution of Dignity of 2013-2014 and the following historical events vividly show the **continuous devotion of the people of Ukraine to core values, such as human dignity, democracy, freedom, the rule of law, and human rights, that form the basis of the European Union**. Despite political instability and economic uncertainty in the country, Ukraine's people have always been choosing the path of democracy and freedom.

EXECUTIVE SUMMARY (2/4)

MILITARY

With the beginning of the full-scale Russian invasion of Ukraine on 24 February 2022, Russia deployed troops into Ukrainian regions located along the border with Belarus, Russia, and temporarily occupied Crimea. The military offensive was accompanied by intense shelling of Ukrainian cities, airfields, and weapons depots throughout the country. The strong resistance of the Ukrainian armed forces pushed Russia to withdraw its troops from the north of Ukraine and relocate them to the eastern and southern regions in April 2022.

Considering more than tenfold dominance of the Russian defence budget over the Ukrainian one, as well as significant superiority in the number of Russian armed forces over Ukrainian ones, Ukraine counts on the military aid and support of its partners and allies to win the war. **Continuous strengthening of ties with Western partners helps Ukraine in obtaining modern offensive weapons and taking the initiative in certain areas of the front.**

SOCIETY

The healthcare system of Ukraine, which has been undergoing transformation into a patient-centric, affordable, and anticorrupted healthcare model since 2017, continues to function on a full scale, despite the war-caused challenges. Uneven patient loads in the hospitals due to high levels of Internally Displaced People, as well as shortages in medicines caused by the supply chain disruptions, are among the major problems of the Ukrainian healthcare system during the Russian invasion of Ukraine. Moreover, 127 medical facilities in Ukraine were totally destroyed by the invasion, while more than 460 remained occupied.

Since the Russian invasion of Ukraine, the Ukrainian educational system has faced enormous challenges. As a result of Russian air attacks and shelling, 284 educational buildings in Ukraine were completely destroyed, and 2,461 were damaged. The total losses of the destroyed education buildings are estimated to exceed 2 Bn USD. Nevertheless, the 2020/2021 academic year in Ukraine was completed, and the External Independent Evaluation was changed into multi-subject testing, and admissions campaigns were held online.

The Ukrainian language, traditions, and culture were suppressed for a long time, as the country was occupied first by the Russian Empire and then by the Soviet Union. For instance, the Ukrainian language was banned 134 times for almost 400 years. Now, in 2022, Ukrainian cultural and architectural heritage is being destroyed across the country by Russian troops. Millions of Ukrainians fight for their core values, such as freedom, justice, and security, by defending the country, supporting the army, and volunteering. During the first 4 months from the beginning of the full-scale Russian invasion in February 2022, Ukrainians donated more than 600 Mn USD to support the Ukrainian army.

Since the beginning of the war, almost 5 million Ukrainians have lost their jobs. Thus, every third working place in Ukraine was lost. As of the beginning of March 2022, the number of vacancies decreased by more than 14 times compared to the prewar period. Nowadays, the number of Ukrainians returning to work is gradually increasing, especially in the de-occupied territories and in those regions where active hostilities did not take place. However, in temporarily occupied territories and combat zones, business activity did not restore to the pre-war level, as proper working conditions could not be provided. In addition, the employment crisis in Ukraine, caused by the Russian invasion, might put pressure on the labour markets and social security systems in the neighbouring countries that are hosting Ukrainian refugees.

Approximately one-third of Ukrainians were forced to leave their homes, seeking a safer place, due to the full-scale Russian invasion of Ukraine in February 2022. About 7 million citizens moved to another location inside the country, becoming Internally Displaced People, while nearly 4.0 million Ukrainians moved abroad and applied for temporary protection. Poland, Germany, and the Czech Republic had the biggest inflow of Ukrainian refugees, offering temporary protection and support. In 2022, Ukraine became the second-ranked country in the world in the number of external refugees.

EXECUTIVE SUMMARY (3/4)

ECONOMY

The **Russian annexation of Crimea** in 2014 and the **war against Ukraine in the Donbas region** deprived **20%** of the Ukrainian economy with up to **150 Bn USD** damage. Such acts of aggression caused a serious crisis across all sectors of the Ukrainian economy and resulted in **high inflation**, **unemployment**, and **budget deficit**. To stabilise the national economy, the Ukrainian government conducted several reforms to improve the business environment, redirecting trade flows from Russia and CIS countries toward the EU and other regions. Conducted reforms also allowed Ukraine to increase in **Doing business ranking** in 6 years by 48 positions to **64th in 2021**.

The agricultural sector is one of the most important industries for Ukraine, with a 10% contribution share to the GDP in 2021. By June 2022, the war caused at least 28.3 Bn USD direct and indirect losses. As Ukraine is one of the leading agricultural suppliers worldwide, about 400 million people might not be able to get grain crops as a result of the ongoing war. Due to the war, the annual food inflation reached 15% or higher in 36 countries as of May 2022.

Mining & Manufacturing industry historically was one of the most important for the Ukrainian economy, with large export volumes. In 2020, Ukraine was the 6th largest extractor of iron ore, the 5th largest extractor of titanium, and the 9th largest extractor of uranium. As of June 2022, the Russian invasion of Ukraine caused at least 11.9 Bn USD of material losses. Metallurgical enterprises of Ukraine were severely affected by the war, and one-third of pre-war capacities were destroyed or stopped operations — Illich Iron & Steel Works, as well as Azovstal in Mariupol. The global manufacturing supply chain is at risk, as Ukraine leads exports in some specific products. Ukraine's share of the Neon gas trade amounted to approximately 70% of the global volume, thus putting the whole global semiconductor industry under huge supply chain risk.

Energy sector of Ukraine, before Russia's war against Ukraine, was undergoing a **comprehensive transformation** aimed at decreasing dependency on Russian gas and electricity in favour of the EU. The war has caused more than **2 Bn USD damage** to the Ukrainian energy system and **460 Mn USD damage** to the Ukrainian power grid. **The loss of the Zaporizhzhia Nuclear Power Plant** and several Thermal power plants severely **undermined the energy capabilities of Ukraine**. The global economy also suffered the consequences of Russia's war against Ukraine, as the oil and gas prices **reached record heights,** driving **inflation** and **stagnation** of all industries.

Before the full-scale war, the **transport & logistics sector** of Ukraine was undergoing a transformation under the **Drive Ukraine 2030** plan with a total budget of **60 Bn USD by 2030**. As of June 2022, the total economic war-caused loss was estimated to be at least **44 Bn USD**, with the largest share attributed to the road infrastructure — **30 Bn USD**. Due to the blockade of Ukrainian ports by Russia, Ukraine relied on its **railroad** and **truck export** to the EU, even though it is more expensive and has less transport capacity compared to maritime.

Ukrainian IT sector showed a solid CAGR of 28.8% during 2017-2021 and was one of the major centres for the IT industry in Central and Eastern Europe, with large export volumes to the USA and Western Europe. Russia's war against Ukraine disrupted the IT sector, but not to such an extent compared to other industries. Ukrainian IT companies opened their offices outside Ukraine to secure their project pipelines. The global IT companies expect a revenue decline of about 6 Bn USD in 2022.

ECOLOGY

The Russian invasion of Ukraine has caused an environmental disaster across the large territory of the country, and the harm from it will continue to unfold for many years to come. The missile attacks of Russian forces on critical infrastructure and hazardous sites significantly exacerbated the pollution of air, land, and water in the country and put it under threat to the biodiversity of the whole European region. Moreover, the nuclear terrorism of the Russian occupiers at the Zaporizhzhia Nuclear Power Plant **now poses a severe risk to the nuclear safety of the global world.** Recovery of the environment of Ukraine requires huge resources to at least return to its pre-war state and ensure its sustainable development for the future.

EXECUTIVE SUMMARY (4/4)

NEW AGE UKRAINE

Discussions on the post-war recovery of Ukraine started in March 2022, during the first most difficult weeks of the Russian invasion. A month later, the government of Ukraine initiated the development of the respective recovery plan, as well as the mechanisms for its implementation. International partners demonstrated their desire and readiness to provide Ukraine with the needed resources and expertise to facilitate the process of rebuilding the country. Numerous discussions and a vast analytical work of the Ukrainian and international experts **resulted in the development of the National Recovery Plan of Ukraine for 2022-2032**, presented at the Ukraine Recovery Conference in Lugano on 4-5 July 2022.

The National Recovery Plan is aimed at developing New Age Ukraine, a strong and independent country with an equal and inclusive society, a sustainable and resilient economy, as well as a clean and safe environment. Institutional effectiveness and EU integration are the key strategic imperatives of the recovery concept.

The Plan implies the implementation of various projects in the economic, social, and environmental spheres of the country as a part of **15 National Programmes, with the total amount of required funding of 750 Bn USD.** This will ensure the sustainable economic growth of Ukraine at 7% annually, reduce CO_2 emissions by 65%, and earn a spot in the Top-25 countries of the Economic Complexity Index and the Human Capital Index by 2032.

However, in order to reach these ambitious targets, the Ukrainian government has to create a favourable investment climate through mitigating **internal risks** for investors, performing important **institutional reforms**, developing **investment incentives**, and **promoting Ukraine** worldwide as a "magnet" for investments.

Ukraine of the future has a high potential to build a strong democratic country with a fast-growing economy and high quality of living. It will become an attractive investment destination and a reliable economic partner for businesses from the EU and other countries across the globe.

New Age Ukraine will become a strong and independent country that successfully realises its potential and provides various business and investment opportunities for its international partners and prospects.



PAST

CHAPTER 1.0

EL

million



We strongly believe that understanding the past leads to a better future. With this being said, KYIV RYSING publication is divided into three chapters:

- I. Past
- II. Present
- III. Future

reflecting on the triality of time.

The first chapter dives deep into the history of Ukraine and takes you on a fascinating journey through time. It traces back to the IXth century when Kyivan Rus emerged and Kyiv became the centre of Eastern Slavs, numerous ancient Slavic tribes that are regarded as the ancestors of the modern Ukrainians.

"We are not makers of history. We are made by history", as Martin Luther King Jr. fairly said.

Given the momentum, **history**, **memory**, **and identity are of extreme importance for the Ukrainian people**, as today these concepts are intertwined more than ever, shaping Ukraine's domestic and foreign policies. It is hard to overestimate the **significance and function of the past in contemporary Ukraine.** Courage and bravery, independence and freedom - qualities that are now being directly associated with Ukraine and its people have not appeared at random. They were shaped and upbrought through centuries of resistance, fight and self-identification of the Ukrainian nation. So does Russia's invasion of Ukraine, it was not an on-spot decision. The specifics of the Ukraine-Russia bilateral relationship rests upon a long and tangled history between the two countries.

KYIV RYSING will tell you a true story, based on facts and figures, about why the war happened and what is the background of it.

Make a thousand-years leap to discover Ukraine and Ukrainians. **KYIV RYSING** will ensure you don't get lost in the mazes and labyrinths of Ukraine's history.

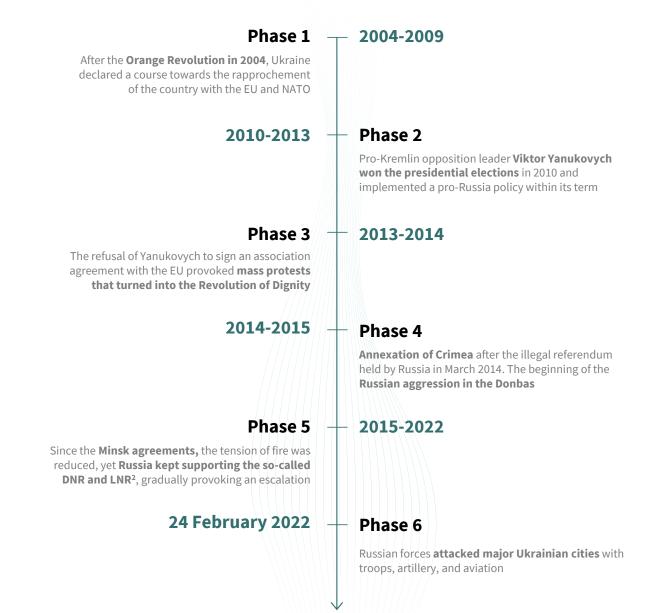
Past Histor

RUSSIA ALWAYS TRIED TO APPROPRIATE FOR ITSELF A DEEP CENTURIES-OLD HISTORY OF UKRAINE

Ukrainian history dates back to the times of Kyivan Rus', which was one of the largest states in Europe back in the IX-XIII centuries. The capital of this state was Kyiv, while Moscow did not even exist then. After the collapse of Kyivan Rus', Ukraine did not have its own state for a long time, while the Grand Duchy of Moscow developed independently and wanted to revive Rus' under its patronage. Starting from Cossack times, especially from 1654¹, when the liberation Cossack movement of Bohdan Khmelnytskyi took place, Russia tried to transform Ukraine into an 'imperial suburb' and destroy Ukrainian identity. Despite the long-term oppression of the national spirit of Ukrainians, it did not disappear while waiting for the chance to rise.

In 1991, Ukrainians established their **independent and sovereign state** that did not suit Russia. **The turning point in relations between the countries took place in 2004**, when Ukrainians, for the first time, openly demonstrated their intention to be a part of the democratic world and resented the victory of a pro-Russian candidate.

The prerequisites of the modern Ukraine-Russia relationship



Notes: (1) In 1654, according to the Pereyaslav agreements, a military-political union was concluded between Russia and the Hetmanate (Ukraine); (2) DNR (Donetsk People's Republic) and LNR (Luhansk People's Republic) are territories of Ukraine, temporarily occupied by Russian troops since 2014

Past

BETWEEN IXTH AND XITH CENTURIES, THE KYIVAN RUS' SUBSTANTIALLY EXPANDED ITS TERRITORIES

Kyivan Rus', the first state to arise among the Eastern Slavs in the IXth century, took its name from **the city of Kyiv**, which was **founded in the year 482. Since 882, the Rus' was ruled by the Riurykide dynasty**, a lineage named after the Varangian Prince

Riuryk. During the reign of Oleh the Seer, a regent of Riuryk's juvenile son, Kyiv became the capital of the newly established and rapidly rising state.



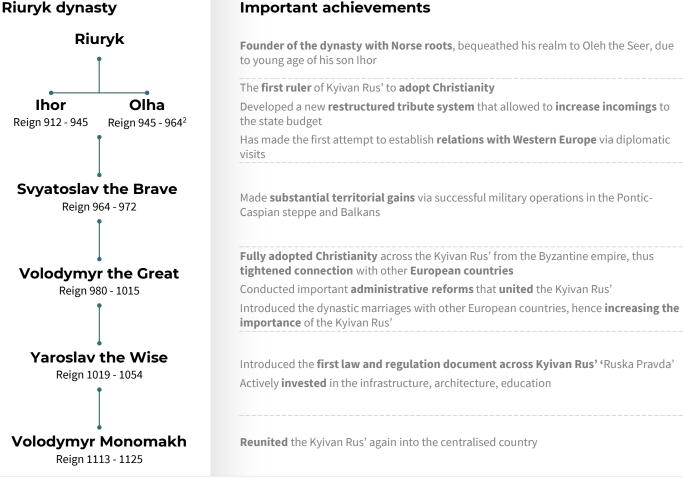
Territorial expansion of Kyivan Rus' from IXth to early XIIIth centuries

The first known rulers of Kyiv were the **Norse people, Askold and Dir,** that began to rule **in the year 860**. They were sanctioned to raid **Constantinople** in **860**, which was known to be the **first raid of Rus' people to the Byzantine empire**. In the years **860 - 912**, the Kyivan Rus' spread across **Eastern Europe** from **Kyiv** as the capital in the South to the **Novgorod and Ladoga cities in the North**. During the reign of **Ihor, Olha, and Svyatoslav** in 912 - 972, the Rus' increased its **territorial expansion** to the **South**, reaching the **Black sea**, and to the East, establishing the cities of **Murom and Ryazan**. The **apogee of power and territorial expansion** the Kyivan Rus' reached during the reign of **Volodymyr** the Great and his son Yaroslav the Wise in the years 980 - 1054. In the South, the Rus' increased its presence across the **Black sea steppes** reaching the **Danube river**. In the West, the Rus' expanded up to the **Carpathian mountains** and the **river San** while the Northern and Eastern lands remained approximately within the same borders. Between the death of **Yaroslav the Wise in 1054**, and the **Mongolian invasion in 1223 - 1240**, the Kyivan Rus' remained **mostly within the same borders**. The decline of the Rus' power largely started in the **late XIIth - early XIIIth** centuries and ended with the **Mongolian invasion from the East**.

ast listory

DURING RIURYKIDS REIGN THE KYIVAN RUS' BECAME THE MAJOR POWER IN EASTERN & CENTRAL EUROPE

The **Riuryk dynasty** reign across the Kyivan Rus' lasted more than **four centuries from IXth till XIIIth. Ihor**, Riuryk's son, **took over the reign of Kyivan Rus' after the death of Oleh the Seer** in 912¹. The new ruler continued the policy of his predecessor. However, the setting of high tributes **caused the people to rebel** and deprive lhor of his life. That was the start of **the reign of Princess Olha**, his wife, who strengthened the power of Kyiv and marked a decisive turn in the state's history.



Rise and fall of the Riuryk dynasty

The grandson of Olha, **Volodymyr the Great**, succeeded in **spreading Christianity in 988** and was the first ruler to **give Kyivan Rus' political unity.** The diplomatic relations with the Byzantine, Holy Roman Empire, Poland, and Sweden were developed during Volodymyr's reign. His son, **Yaroslav the Wise**, **continued the policy of building foreign relations through diplomatic efforts.** The power of the Riuryk dynasty attracted other European dynasties to strengthen ties via marriages. Thus, **Yaroslav established the Kyivan Rus' relations with the European kingdoms** via the marriages of his daughters: Elisiv, Queen of Norway; Anastasia, Queen of Hungary; and Anne, Queen of France.

Due to its geographical location, Kyiv attracted princes, merchants, and craftsmen, who turned the city into a major trade and craft centre of Eastern Europe. The medieval trade way was named the 'Route from Varangians to Greeks', which connected the Baltic and the Black Sea markets and joined Scandinavia, Kyivan Rus', and the Eastern Roman Empire. Being a political, economic, and cultural centre of the Slavic state, Kyiv was titled the 'Mother of Rus' cities'.

The political traditions introduced by Volodymyr were based on the **principles of territorial indivisibility and dynastic sovereignty,** which were effective until the reign of Volodymyr Monomakh but did not survive Kyiv's decline, starting in the XIIth century. Due to being fragmented and weakened by internal political strifes, Kyivan Rus' **became easy prey for invaders. In 1237**, **Mongols**, led by Batu Khan, **invaded the Kyivan Rus'** from the East, and **dozens of cities were destroyed or looted**. In 1240, **Kyiv was captured by the Mongols.** By that date, the **Kyivan Rus' stopped its existence**, and the former Rus' municipalities became part of the **Golden Horde for centuries**, marking the new age — The age of Mongol Rule under which Moscow principality gained its power.

Past Histor

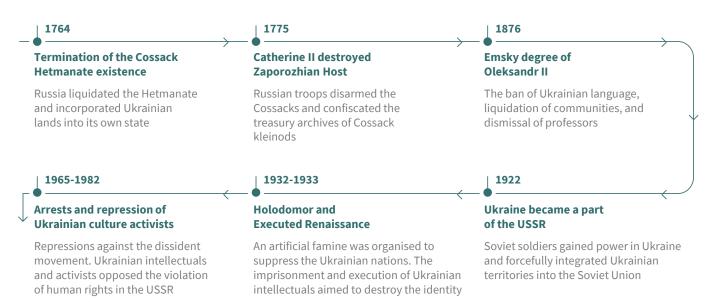
DESPITE ATTEMPTS TO DESTROY UKRAINIAN IDENTITY BY ENEMIES, COSSACKS PRESERVED IT

Rising within three centuries from the period of disintegration of Kyivan Rus', the Ukrainian nation has been standing in opposition to subjugation to Moscow for hundreds of years.

In 1556, Dmytro Vyshnevetsky became the first Cossack Hetman. He established the Khortytsya Host and fortified a castle on the island of the Dnipro river to go for raids on the Ottoman empire. However, the first Cossack country with all the attributes was the Cossack Hetmanate¹ (officially Viys'ko Zaporoz'ke), which was established by Cossack Hetman Bohdan Khmelnytskyi in 1648. In 1654², Russia tried to transform Ukraine into an 'imperial suburb' and destroy the whole essence of the Ukrainian identity. Bohdan Khmelnytskyi strengthened the Zaporozhian Host in Central Ukraine, inhabited by Cossacks, with supreme power in the new Ukrainian state. For over a century, the Zaporozhian Host with Cossacks was a solid political and military force that challenged the authority of Poland-Lithuania, the Ottoman Empire, the Crimean Khanate, and the Tsardom of Russia. After Khmelnytsky's death, a rift between the leaders and Cossacks began due to the different visions of the Ukrainian lands' future. In 1687, Ivan Mazepa was elected as a new leader, who tried to unite Ukraine; however, after the win of Russia in the Battle of Poltava in 1709, and Cossack Hetmanate became an autonomous state of the Tsardom of Russia.



Further attempts to destroy Ukrainian identity by Moscow



Despite the long-term oppression of the national spirit of Ukrainians, it was not eliminated and waited for the chance to rise.



Source: Media overview Notes: (1) Ukrainian Cossack state that was founded by Hetman Bohdan Khmelnytsky; (2) In 1654, according to the Pereyaslav agreements, a military-political union was concluded between Russia and the Hetmanate (Ukraine)

DID YOU KNOW THAT UKRAINE IS THE LARGEST COUNTRY IN EUROPE?



UKRAINE-RUSSIA RELATIONS HAVE A LONG HISTORY AND ARE BASED ON KEY VALUES CONTRADICTIONS

In 1991, Ukrainians established their independent and sovereign state, aiming to rebuild democracy and freedom as the main priorities.

Since the first years of Ukrainian independence, **Ukraine-Russia relations have been gradually deteriorating.** From 1991 to 2004, close relationships between the two countries were based on the historic background of Ukraine, which was formed under Russian influence. **Everything changed in 2004 when Ukrainians, for the first time, openly demonstrated their intention to be a part of a democratic world** and resented the victory of a pro-Russian candidate in the rigged presidential election.



The shift of Ukraine toward **European course of development became the stumbling point in Ukraine-Russia relations** and the core reason for the current war. **Russia reacted immediately and aggressively to each step of the Ukrainian European Integration,** and each year the relations became more strained.

On 24 February 2022, the disagreements in Ukraine-Russia relations reached their peak, resulting in the Russian invasion of Ukraine. The main reasons of this invasion were the Kremlin's reaction to **Ukraine's desire to pursue an independent foreign policy,** get rid of the Russian ideological and political ascendency, and **finally become a Europe-oriented democratic sovereign state**.

Russia could not accept the Ukrainian sovereignty and evolution towards European values, as this might mean the collapse of the traditional Russian political order and change the views of its population to more liberalistic.

UKRAINE'S STEPS TOWARD EU INTEGRATION PROVOKED RUSSIA TO AGGRESSION

Key phases of Ukraine-Russia relations

n and Science of Ukraine website; Media overview	Pa Histo
On 24 February 2022, Putin declared a so-called 'Special military operation' of Russia in Ukraine. Russian troops attacked major Ukrainian cities with troops, artillery, and aviation: Kyiv, Kharkiv, Mariupol, Chernihiv, and others .	
FULL-SCALE INVASION	
FROZEN CONFLICT The tension of fire reduced, yet a complete ceasefire was not achieved. Russia kept supporting the so-called DNR and LNR with militants and weapons, gradually provoking escalation.	
MASKS OFF Crimea was annexed after the illegal referendum held by Russia in March 2014. Russian troops entered the territory of the Donetsk and Luhansk regions and supported the separation of the so-called DNR and LNR.	
REVOLUTION OF DIGNITY The refusal of Yanukovych to sign an association agreement with the EU provoked mass protests that turned into the Revolution of Dignity.	
PUPPET IN POWER Pro-Kremlin opposition leader Viktor Yanukovych won the presidential elections in 2010 and implemented a pro-Russia policy within his term.	
TURN TO THE WEST¹ After the Orange Revolution in 2004 , the elected president, Viktor Yushchenko, declared a course towards the rapprochement of Ukraine with the EU and NATO.	
	O THE WEST ¹

Notes: (1) Term 'the West' refers to various regions, nations, and states, depending on the context, most often consisting of the majority of Europe, North America, and Oceania

PHASE 1: TURN TO THE WEST 2004 - 2009

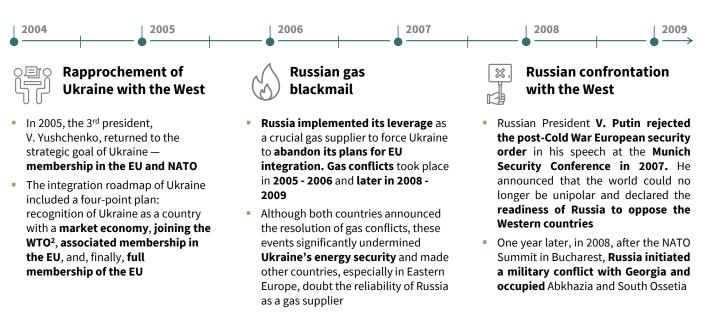
The **fifth presidential election in 2004** forced Ukrainians to choose between two **candidates with opposite political programmes:** V. Yanukovych had a pro-Russian position, while V. Yushchenko declared intentions to move the country towards the EU and NATO membership.

According to the announced results, the 2nd round of the 2004 presidential elections was won by the pro-Russian candidate Victor Yanukovych. However, the **numerous facts of deliberate falsifications** led to mass peaceful protests with appeals to cancel the fabricated results of the election. Since the colour of

Yushchenko's election campaign was orange, these events were called **the Orange Revolution**. The protests ended with the revoting and the victory of Victor Yushchenko, who became the legally elected President of Ukraine.

The cadence of President Yushchenko was a **period of advancement toward EU Integration and fast economic development** until the global crisis in 2008. At the same time, **each step of Ukraine's movement toward the EU and NATO deteriorated relations with Russia** and caused a response in the form of economic and political pressure.

Key steps along the phase



Key economic indicators of Ukraine in 2008¹ compared to 2004

Changes within four years



Unemployment rate **6%** \vee (-2 p. p.)

Exports, Bn USD

88 ^ +121%

Net FDI inflows, Bn USD **11** $^{+522\%}$



Veronika Ostrovskaya Talks about Politics, History, Values, and National Identity



President elections of 2004 and the Orange Revolution were major determining factors of the pro-European choice of all Ukrainians. It was the first sign of neglecting the Soviet / Russian empire's past and movement toward the Western world with its values and respect for all nations and cultures. Ukrainian identity was on the rise, together with the Ukrainian language, culture, and freedom of speech.

Source: World Bank website; Museum 'Making the Ukrainian Nation' website; Media overview Notes: (1) The years of V. Yushchenko's cadence were analysed. 2008 was taken as the final year since, in 2009, most economic indicators of Ukraine collapsed significantly due to the global economic crisis; (2) World Trade Organisation

PHASE 2: PUPPET IN POWER 2010 - 2013

In February 2010, the pro-Russian candidate Victor Yanukovych won the presidential election in the second round despite the concerns about objectivity of these elections and possible manipulations. Three months after taking office, Yanukovych signed an agreement that allowed the Russian Black Sea Fleet to keep its base in Crimea until at least 2042, which, along with the renouncing of the previous ambition of Ukraine to join NATO, was the geopolitical success of Russia. Besides, in August 2012, the Ukrainian parliament passed a law granting so-called regional languages, particularly Russian, official status on a part of the territories of Ukraine, a symbolic move that Moscow had long been urging for¹. At the same time, despite the power consolidation, Yanukovych appeared unable to deliver on the Kremlin's key demand: to join a Moscow-led Eurasian Customs Union aimed to unite Russia, Belarus, and Kazakhstan. Moscow pushed the project as the foundation of what would be an alternative European Union for former Soviet states. Eventually, the excessive power consolidation, as well as the explicit pro-Russian policy of Yanukovych led to the beginning of the Revolution of Dignity.

Key steps along the phase



For his corruption and pro-Russian policy, Viktor Yanukovych was ousted from the presidency after giant street protests.

Key economic indicators and ratings of Ukraine in 2013 compared to 2010

Changes within three years





Exports, Bn USD
89 ^ +27%



Source: World Bank website; BBC website; Media overview

Notes: (1) The Constitutional Court of Ukraine recognised the 2012 language law as unconstitutional, as it was adopted with violations. The law has lost its validity, the court's decision cannot be appealed.; (2) Thousand cubic metres

PHASE 3: REVOLUTION OF DIGNITY 21 NOVEMBER 2013 - 23 FEBRUARY 2014

In November 2013, V. Yanukovych decided to **suspend the signing Association Agreement** with the EU. Such a decision was part of the abrupt policy shift from **Pro-European to Pro-Russian** vector of development and forced the **thousands of demonstrators**, predominantly young students, to go out on the streets. **On 30 November 2013**, the protests were severely suppressed by the police. However, the protest did not stop, leading to hundreds of thousands of new protestors at Independence Square in Kyiv, and the chain of events known as Euromaidan or the **Revolution of Dignity started**. The rapid and dramatic expansion of the civil resistance was based on the people's extremely critical attitude about the policies being implemented by the **Yanukovych regime**, as well as the authoritarian use of power by this regime.

Major Goals of Revolution of Dignity



Signing of Association Agreement and Free Trade Agreement with the EU

Impeachment of President
V. Yanukovych

Re-adoption of the 2004 amendments to the Constitution of Ukraine

Revolution of Dignity at a glance

November 2013 - December 2013

🖺 Peaceful Revolution of Dignity and ignition of fire

- Following the suspension of the signing of the Association Agreement with the European Union, around 1,500 protesters gathered on Independence Square on 21 November 2013, reaching 4,000 protesters the next day. At the same time, dozens of people came to the main squares of their cities in Lviv, Ivano-Frankivsk, Kharkiv, and others
- On 30 November, authorities sent 2,000 security forces, who dispersed the protesters in a cruel manner, most of whom were students. The abuses of the police and violent suppression against youth provoked the transformation of the student movement into a nationwide protest against the regime

January 2014

🔆 Massive clashes on Independence Square

- As protests became more severe, the government of Ukraine adopted the Dictatorial Law, which contained the prohibition of outdoor demonstrations and demonstrations. Along with that, snipers started to cover the police, and on 22 January 2014, several Euromaidan participants were killed on Bloody Reunion Day. However, the authorities' goal to intimidate protesters did not succeed
- Further clashes were followed by great numbers of casualties from both sides. From 18 to 21 February, the bloodiest events occurred when the police used weapons against the peaceful protesters were used

~800,000	108	~2,500	
protesters in Kyiv	Heavenly Hundred	people injured	

February 2014

The downturn of Yanukovych regime

 Under the pressure of protesters, V. Yanukovych signed an agreement to transfer powers to the Parliament and hold early elections. But within hours, he fled the capital, and his administration crumbled

Key economic indicators in 2014 compared to 2013



Unemployment rate $9\% \land +2 p.p.$



234 arrested



PHASE 4: MASKS OFF MARCH 2014 - FEBRUARY 2015

After the escape of V. Yanukovych from the country, the Ukrainian Parliament deemed his act unconstitutional for abandoning his duties as the President. **An early Presidential election in Ukraine was scheduled for 25 May 2014.**

In the end of February and the beginning of March 2014, taking advantage of the political turbulence in Ukraine, the Russian troops without identification signs on the uniform were transferred to Crimea with the purpose to **occupy the peninsula**. Along with it, there were a number of actions in the eastern, southern, and central regions of Ukraine in March-April 2014 organised by the Russian special forces aimed at separating these regions from Ukraine and joining Russia. In response to it, the pro-Ukrainian governmental and non-governmental forces carried out actions **to preserve the territorial integrity and sovereignty of Ukraine**, which were largely supported by the majority of Ukrainians in most regions of the country. However, in April 2014, the Russian military forces along with the terrorist forces backed by Russia started seizing the governmental buildings across different cities and towns of the Donetsk and Luhansk regions, **aiming to declare the separation of so-called DNR and LNR from Ukraine**. In response to it, the Ukrainian government was forced to launch a military counter-offensive.

Key steps along the phase



March 2014

Annexation of Crimea

- As Russian troops controlled the streets and main administrative buildings, **members of the Crimean Parliament held a 'referendum'** on the willingness of the peninsula's residents to join Russia
- Despite the Council of the European Commission for Democracy through Law concluding the noncompliance of the 'referendum' with international law, Russia ratified the treaty, bringing Crimea into the country

🛓 Beginning of the Russian hybrid war

- Russia claimed its ambitions to **establish the so-called 'Novorossiya,'** on the territory of Ukraine, incorporating its eastern and southern regions into Russia. In order to implement this plan, the Russian special forces organised a number of military and hybrid actions across different cities and towns of the eastern and southern regions of Ukraine
- With the lack of support from the local population and the **reconquest** of the occupied territories by Ukrainian military forces, separatist groups supported by Russia self-proclaimed separation only from a part of the Donetsk and Luhansk regions and called them DNR and LNR

April-May 2014

February 2015

Borders of control according to



From April 2014 to March 2015, more than **6,000 people** (Ukrainian military and civilians) in Donbas were killed due to the Russian aggression. The European leaders tried to find a diplomatic solution, and **Minsk Agreement I was the first step in this way**. An immediate ceasefire was the primary point in the protocol

Minsk Agreements

Due to the violation of the ceasefire by the pro-Russian terrorist forces in January 2015, the European leaders initiated the review of the first agreement in Minsk. As a result, the Minsk Agreement II was signed in February 2015 by the representatives of Ukraine, Russia, OSCE¹, and the so-called DNR and LNR. Among the key measures were a ceasefire, withdrawal of heavy weapons, monitoring of the OSCE, as well as a dialogue on modalities of conducting local elections. Despite Minsk Agreement II was never fully implemented, there has been less fighting and fewer casualties ever since

Key economic indicators of Ukraine in 2015 compared to 2014









Past History

PHASE 5: FROZEN CONFLICT 2015 - 2019

After 2015, Russia and pro-Russian forces in Donbas were regularly infringing Minsk Agreement II terms, continuing to capture small increments of Ukrainian territory, using prohibited heavy weapons, violating the ceasefire, and launching cyberattacks. Therefore, **the conflict resolution was suspended**. The reasons for the frozen conflict were the **denial** of the involvement of official Russian forces into the aggression, and their unwillingness to renegotiate key Minsk Agreement II terms. Despite the existing Russian aggression during 2015-2019, Ukraine continued its economic development and the way toward the integration with the European Union.

• 2015 - 2017

🖌 The launch of military reforms

- Before 2014, the Ukrainian army was underdeveloped and was constantly dwindling in numbers. The Russian aggression forced Ukraine's leadership to reconsider the national defence concept, and to reform the military sector, in order to withstand the aggression in the future. In June 2016, Ukraine presented to NATO four areas of its further army transformation
- After 2014, the size of the Ukrainian army increased to more than 250,000 military personnel in 2019. Almost 20 combat brigades, new regiments and battalions, and units of operational, combat, logistics, and technical support were established

Focused areas of Ukrainian army reformation:

1		i
1	Defence	
Į.	planning	
1		

Special forces creation

```
Capacity
building
```

Logistics and medical support

• 2017 - 2018

🔋 Ukraine's path to the EU

- After entrenching Ukraine's EU course and implementing the necessary reforms, the European Parliament adopted the possibility of visa-free travelling for the citizens of Ukraine to the EU in 2017
- In June 2017, the European Council adopted a decision to conclude the association agreement with Ukraine and entered it into force in September 2017
- In 2018, Ukraine continued its pathway toward EU compliance, and the government established the High Anti-Corruption Court as a measure to comply with the European anti-bribery standards

EU-Ukraine association agreement pledges:

Decentralisation and anti-corruption policy

Harmonisation of law with EU standards

Reform of the judiciary

2018 - 2019

Aaritime conflict

- Russia wanted to establish greater control over maritime regions adjacent to Crimea, including the Sea of Azov and the Black Sea. It built the bridge over the Kerch Strait in 2018, enabling Russia to prevent the passage of Ukrainian vessels
- In 2018, Russian forces forcibly prevented Ukrainian naval vessels from passing through the Kerch Strait and illegally captured 24 crew members. In November 2018, in response to that case, martial law was introduced in 10 regions of Ukraine for 30 days. In 2019, the International Tribunal for the Law of the Sea issued an order requiring Russia to release the sailors and ships

Key changes to the military in 2019 vs 2015:



Key economic indicators and ratings of Ukraine in 2019 compared to 2015

Changes within four years

GDP real, Bn USD **102** ~+12%



Exports, Bn USD 77 ^ +43%

Net FDI inflows, Bn USD 6 ^ +29.3 times

Past Histo

PHASE 5: FROZEN CONFLICT 2019 - 2022

During 2019-2022, Russia continued to insist on providing autonomous status to the so-called DNR and LNR, which would allow them to **block the external policy decisions of Ukraine**. At the same time, Russia demanded that Ukraine should refuse from its course toward NATO and limit the deployment of weapons in Donbas. In 2021-2022, the Russian military capacity increased massively along the border with Ukraine, yet Russia

was claiming to the international governments that these forces are concentrated only for the purpose of military exercises. However, in the beginning of 2022, the Russia's representatives significantly **intensified the conflict escalation**, continuing to increase the number of their troops on the borders with Ukraine and organising various provocations trying to find a falsified casus belli for the full-scale invasion.

October 2019

Steinmeier Formula adoption ک

- On 1 October 2019, the representatives of Ukrainian delegation signed a document on the implementation of the Steinmeier
 Formula. This formula, worked out by the former German Minister of Foreign Affairs, proposed a series of steps to fulfil the Minsk
 Agreement II conditions
- However, the document's signing provoked mass protests in Ukrainian cities, the largest of which was the 'No to Surrender!' on 14 October. As a result, the implementation of the Steinmeier Formula was delayed

• 2020 - 202**1**

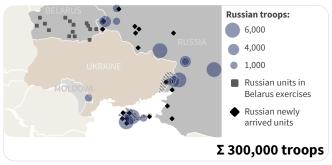
- In June 2020, Ukraine was named a NATO Enhanced Opportunities Partner. In September 2020, V. Zelenskyy approved Ukraine's National Security Strategy, which ensures the development of a distinctive partnership with NATO
- In 2021, V. Zelenskyy insisted on NATO membership at the meeting with the US President, J. Biden, as Russia started to mass its troops close to Ukraine. Despite the threat of full-scale invasion, the US President expressed unwillingness to NATO membership of Ukraine. At the same time, Russia sought to prevent Ukraine's NATO ambitions and demanded an assurance that Ukraine never joins the alliance

January – February 2022

Rising tensions

- Russia continued concentrating troops and equipment on the border with Ukraine and announced the largest joint military exercises with Belarus' in January 2022. Nonetheless, Russian officials issued statements denying any plans to invade Ukraine
- On 22 February 2022, V. Putin recognised the occupied territories of the Donetsk and Luhansk regions as independent states. The next day, Russia evacuated its diplomatic staff from Kyiv and closed the airspace on the eastern border of Ukraine

Russian troops on the Ukraine's border as of 17 February 2022



Key economic indicators of Ukraine and ratings in 2021 compared to 2019

Changes within two years





Export, Bn USD 96 ~ +25%



Source: World Bank website; National bank of Ukraine website; Ukrainian parliament website; NATO website; EU Commission website; Media overview Notes: (1) Series of meetings that were conducted by the leaders of Ukraine, France, Germany, and Russia to resolve the War in Donbas in a diplomatic way. The first meeting was made during the 70th anniversary of D-Day celebrations in Normandy, France

Ukraine is de facto already a country of NATO's eastern flank

୨୨

Was it possible to avoid Russia's military invasion of Crimea and Donbas in 2014?

The answer is yes. If the West had taken a much tougher position from the very beginning. And set red lines for Russia and Putin. However, since the West wanted to reach compromises, the war could not be avoided. Therefore, in terms of the geopolitical situation, the position of the West is decisive.

PAVLO KLIMKIN

Ukrainian diplomat; Former Foreign Minister of Ukraine (2014-2019)

Involvement during Russia's war against Ukraine: Pavlo Klimkin is taking an active social position and shares his thoughts about the war in Ukraine. He raises such important issues as the impact of the war on the West, the ways it changes the global political system, what steps Ukraine should take on its way to EU membership and many others.

In your opinion, how beneficial were the Minsk II Agreements for Ukraine?

From the very beginning, it was impossible to implement them. But, at the same time, they allowed Ukraine to preserve and develop our forces and abilities, as well as provided an opportunity to win some time. This set of documents was primarily about Russia's desire to control Ukraine. Therefore, Minsk cannot be considered separately from the Russia's plans to impose control on us and destroy us as a country, as a nation.

How will Russia-Ukraine relationship change after the war? Can you describe possible scenarios?

Everything will depend on what kind of regime will be in Russia. I do not see any sane relations in the future. The reason for this is primarily the negative emotion that our society feels towards the Russian enemy. Moreover, I do not even see an effective peace agreement in the future. The current Russian regime is not ready for real negotiations. We, in turn, will not be ready for any compromises.

Was it possible to avoid a full-scale invasion and resolve the tension through diplomacy?

If the West had taken a much tougher position from the very beginning. Now Ukraine is de facto already a country of NATO's eastern flank. The Kremlin is focused on the destruction of Ukraine and the Ukrainians. They see us as some sick and wrong Russians. This vision is part of Russian ideology. That is why a more decisive and consistent position of the West could have changed the situation. The West was not ready for this.

What would you name the biggest diplomatic victories of Ukraine?

There were many victories. Starting with visa-free travel, breaking the agreement with Russia on the so-called friendship, as well as that on participation in the CIS, and ending, at least for the moment, with the granting of candidate status in the EU. Many things make Ukraine cooler. There are a lot of achievements in recent years. But this is only the beginning. We have an ambitious program ahead, which must be implemented.

The annexation of Crimea was the first predictor of the fullscale war in 2022

୨୨

Hostilities and violence may not last forever; however, they may last quite long. Atrocities never go unnoticed, but shape the future. Protracted conflicts are much more difficult to resolve when the history of hatred plays on the side of violence. In that sense, Russia's decision to go to war gets another dimension of responsibility. I do not think Russia and Ukraine will remain hostile forever; but I do believe that overcoming mistrust, hatred, and fear in bilateral relations will be close to impossible in the next decade.

DR NICKOLAY KAPITONENKO

International Relations Expert at the Tactics Institute for Security and Counter-Terrorism

Involvement during Russia's war against Ukraine: Dr Nickolay Kapitonenko holds an active social position by raising awareness of Russia's war against Ukraine through local and foreign media, talking about the impact of Russia's invasion of Ukraine and its implication for Europe.

Which event(s), in your opinion, became the 'point of no return' in the relations between independent Ukraine and Russia?

The two countries are destined for war. Wars always result from political choices. With that said, I do not think that there is a moment in history, which made Russia's invasion of Ukraine inevitable. However, some points in bilateral relations have certainly made a bigger impact on further developments. Among such points, I would pick the annexation of Crimea in 2014 by Russia. That was a moment of truth for a variety of reasons. By opting for annexation, Russia has violated the fundamentals of international order. That moment has also been a test for Russian society, tempted by the propaganda of greatness; a test that it failed. I still believe that the only right thing for the Russian citizens was to reject the annexation. By accepting it they launched a chain of events making war much more difficult to escape.

What are your expectations on the evolution of Ukraine-Russia and the EU-Russia post-war relations?

Relations between Ukraine, the EU, and Russia in the future will heavily depend on the outcome of the ongoing war. If the war is turned into a protracted frozen conflict, then hostility and deterrence would be keywords for framing relations between Ukraine and Russia. The EU will continue its support for Ukraine with the view to not letting it lose.

I do not think that Russia is likely to undergo fundamental transformations after or during the war against Ukraine. It would hardly resemble the post-Soviet model, but rather look like an Iranian one. Sanctions will make Russia's economy poorer and more primitive, but as long as it will be able to sell energy resources, the regime will sustain itself. An authoritarian, aggressive, and dangerous Russia would require measures of containment from the Europeans.

PRESENT

0. 9

CHAPTER 2.0

SALE THE ME

A. A. C.

At at inter Wh it Be

Althumas

PRESENT: INTRODUCTION



The second chapter sheds light on the current situation in Ukraine. As the war has touched all aspects of Ukraine's life, our mission was to make a blurred window clear by processing piles of various multi-sectoral data on the country's **Military, Social, Environmental** and **Economic** domains and presenting it in a structured, clear and concise way.

KYIV RYSING is based on desk research of publicly available data, conducted through the application of various types of techniques, such as **descriptive**, **exploratory**, **diagnostic**, **and predictive analysis**. This allowed gathering of qualitative and quantitative information regarding historical prerequisites that led to the outbreak of the war, as well as its impact on various areas of life in Ukraine and globally.

The data was enriched by interviews with more than 60 subjectmatter experts and opinion leaders from Ukraine and abroad, who provided valuable insights and shared their perspectives on the overall situation in Ukraine and its implications across a relevant domain or industry. The study also leverages the results of an online nationwide public survey that dates back to July-August 2022 and covers 1,000 respondents, reflecting the public opinion of ordinary Ukrainians aged 18 and above.

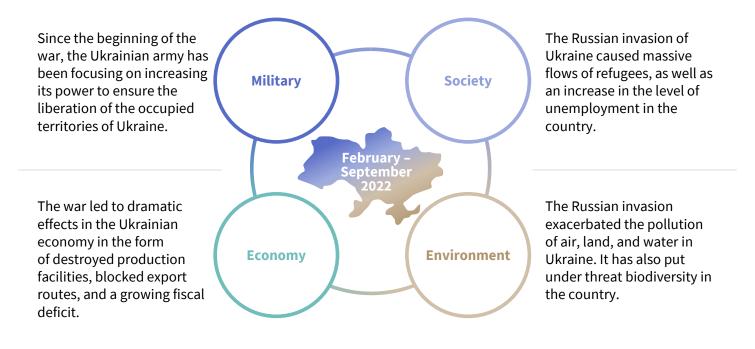
In the world of misinformation and propaganda, the idea of KYIV RYSING was to relate facts, data, subject-matter experts' insights, as well as ordinary people's opinions on the situation in Ukraine, and thus to provide an unbiased and objective picture for everyone to be able to make his / her own conclusions.

resent

THE RUSSIAN INVASION OF UKRAINE BECAME A CHALLENGE FOR ALL THE SPHERES IN THE COUNTRY

The full-scale Russian invasion had **an enormous impact on all the spheres of the country's life.** The Russian occupying forces, in violation of all the existing rules of international law, committed a huge number of war crimes and acts of terrorism that led to the **deaths of civilians, massive destruction of infrastructure, disruptions in national economic chains**, and **pollution of the environment.** Millions of people were forced to flee their homes, while hundreds of thousands decided to defend the independence and territorial integrity of their homeland. Russia's war against Ukraine has continued for almost eight months, causing human and economic losses in Ukraine every day. Despite this, Ukrainians keep defending their country side by side with each other and their allies, bringing closer the longawaited victory over the enemy. Therefore, it is important to understand the current state of Ukraine's military, social, economic, and environmental spheres in order to ensure their resilience during the ongoing war, as well as comprehensive recovery after the victory is obtained.

The impact of the Russian invasion of Ukraine







+10 times

increase in the military expenses of Ukraine after the beginning of the war

Society



6+ million

number of internally displaced people in Ukraine due to the war

Environment



+300,000 tonnes

amount of emissions caused by the shelling of oil & gas storage facilities

Economy



-35.0%

projected decrease in the GDP of Ukraine in 2022 compared to 2021

MILITARY

CHAPTER 2.1

THE MILITARY SECTOR HAS BECOME THE SHIELD OF UKRAINE DURING THE RUSSIAN INVASION

The Ukrainian military sector has been standing **at the forefront** of the country's defence since the beginning of the full-scale Russian invasion. Despite the quantitative superiority of the enemy in different types of weapons (artillery, aviation, missiles) and simultaneous attacks from different directions, the Armed Forces of Ukraine, along with other defence forces, **managed to** withstand the first weeks of the war and to stop the further offensive of the Russian occupiers. This became possible, in particular, due to the professionalism of the Ukrainian army along with the military assistance of the allied countries. However, as the war is still continuing, **Ukraine needs a larger amount of weapons from international partners** to enable the liberation of the temporarily occupied territories and ensure security in the whole European region for many years ahead. For these reasons, it is highly important to highlight **the determining role of Ukraine's military sector in its defence** against Russia, as well as to understand the future plans for enhancing the military potential of Ukraine in a short and long-term period.



Military

The section discloses key aspects of the military sector of Ukraine before and during the full-scale Russian invasion in the context of:

- Balance of power
- The course of the war
- Key outcomes for the global military and defence sector

Balance of power

- Ukrainian army before the war
- Comparison of the military potential of Ukraine and Russia
- Military support to Ukraine by foreign partners

The course of the war

- First weeks of the full-scale Russian invasion of Ukraine
- Strategic changes in Russia's war against Ukraine during April-June 2022
- Stabilisation of the front-line and artillery war in July-September 2022

Key outcomes for the global military and defence sector

- Peculiarities of Russia's war against Ukraine
- The impact of the war in Ukraine on the military and defence sector worldwide



SINCE 2014, THE ARMED FORCES OF UKRAINE HAVE COME THROUGH STRUCTURAL TRANSFORMATIONS

Financing and size of the Armed Forces of Ukraine

Period	President	Total personnel, thousands	Financing, share of the GDP ¹
1991 – 1994	Leonid Kravchuk	980,000 - 455,000	6.9%
1994 – 2005	Leonid Kuchma	455,000 - 245,000	1.4%
2005 - 2010	Viktor Yushchenko	245,000 - 200,000	1.1%
2010 - 2014	Viktor Yanukovych	200,000 - 184,000	1.0%
2014 - 2019	Petro Poroshenko	184,000 - 250,000	2.3 %
2019 – present	Volodymyr Zelenskyy	250,000 - 261,000 ²	2.7%

After the dissolution of the Soviet Union in 1991, Ukraine inherited a large army with almost 1 million total military personnel, thousands of tanks and armoured vehicles, as well as the third largest nuclear arsenal after the USA and Russia (176 ballistic missiles and 2,500 units of tactical nuclear weapons).

From 1991 until the annexation of Crimea and the Russian aggression in the Eastern regions of Ukraine in 2014, the Armed Forces of Ukraine experienced a constant **reduction in the number of military personnel** and weapons due to the **significant deficit in financing**. The situation was aggravated by systemic corruption in the defence sector, as well as by the short-sighted defence policy of the country's top leadership. However, the beginning of the Russian aggression in 2014 forced the Ukrainian government to carry out a wide range of measures to enhance the power of the Armed Forces of Ukraine.

After 2014, the size of the Ukrainian army **increased to more than 250,000 military personnel**. Almost 20 combat brigades, new regiments and battalions, and units of operational, combat, logistics, and technical support were established. Along with the increase in quantity, the military leadership also initiated structural changes in the military's management, aiming to enhance the quality and effectiveness of the armed forces.

Selected reforms in the defence sector of Ukraine after 2014

Although the full-scale Russian invasion of Ukraine began on 24 February 2022, the military aggression of Russia against Ukraine has been continuing since 2014. During this 8year period, the **Ukrainian army was built almost from scratch** and was **gaining combat experience in the Joint Forces Operation**³ against the Russian army and pro-Russian separatist forces in the Donetsk and Luhansk region. Reforms in the defence sector of Ukraine over this period allowed them to **significantly improve the technical and organisational capacity of the Armed Forces**. Increase in the number of military personnel, as well as the annual national defence budget of Ukraine. Reorganisation of military units / divisions

Gradual transition of the Armed Forces of Ukraine to the NATO standards (STANAG) in the technical and organisational spheres

Rearmament of Ukrainian army with new armoured vehicles, drones, missiles, anti-tank systems, etc. instead of Soviet models of weapons

Establishment of the new separate types of the Armed Forces of Ukraine: Special Operation Forces and Airborne Assault Troops



Development and improvement of the system of material and food supply of the Armed Forces of Ukraine

Source: Ukrmilitary website; The Ministry of Defence of Ukraine website; Media overview

Notes: (1) Average for the period; (2) As of the beginning of 2022; (3) A complex of military and special organisational and legal measures of the Ukrainian security forces aimed at countering the illegal Russian and pro-Russian armed groups in the east of Ukraine

THE MILITARY SECTOR OF UKRAINE IS INFERIOR TO RUSSIA'S IN TERMS OF THE BALANCE OF POWER

From the very beginning of Russia's war against Ukraine, the balance of power was highly skewed towards Russia

A country's military potential is determined by a number of factors, starting from the country's overall size in terms of population, land area, economy, network of political allies, available technological advancements, etc., and ending specifically with an existing and ready-for-deployment army and weapons arsenal.

According to the Global Firepower 2022, **Ukraine ranks 22nd** among the **strongest armies of 142 countries**, while **Russia takes 2nd place.** The EU countries closest to Ukraine in the ranking are Spain (19th) and Poland (24th). Besides, France (7th), Italy (11th), and Germany (16th) are among the strongest armies in the EU.

50

Belarus

Ikraine

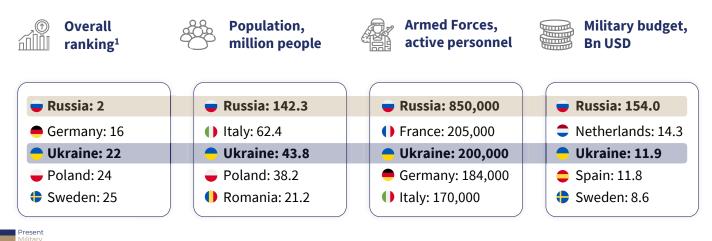
Russia has a population that **exceeds the population of Ukraine by more than threefold**, and available manpower in Russia is more than 3 times larger than in Ukraine (69.7 million people vs 22.3 million people, respectively). Russia is also a Top-3 spender on military expenditures after the USA and China, while Ukraine is only the 20th. Russia's **military budget is 13 times higher** than Ukraine's, which significantly complicates the opposition of Ukraine to occupiers in terms of the available weapons and other resources.¹ Despite this, Ukraine has been managing to resist the Russian army since the beginning of the full-scale invasion due to the **professionalism of the defence forces, support from volunteers, and military assistance from allied countries.**

Comparison of the sizes of the countries participating in Russia's war against Ukraine

-

After the beginning of the war on 24 February 2022, Ukraine actually has to confront two countries – Russia, which acts directly as an aggressor, and Belarus, which provides its territory and military infrastructure to Russian forces to enable their invasion of Ukraine from the northern direction. The total length of Ukraine's border with enemy countries is more than 3,300 km, which significantly complicates the defence of the country from multiple directions. In addition, the colossal quantitative superiority of Russia in different types of resources has become a difficult challenge for Ukraine, requiring much effort to fight effectively against one of the largest countries in the world.

Russia and Ukraine compared to selected EU countries by selected criteria in 2022, influencing the country's military potential and defence capacity



Source: Global Firepower website; Media overview

38

Notes: (1) Based on the Global Firepower analysis 2022, the latest available data

Ukraine needs to join either NATO or another militarypolitical union

୨୨

We need to switch to NATO standards completely or become a part of it or become a part of another effective security system instead.

After this war, we need to build a strong defence system with everything we lack now, but additionally, we have to monitor and consider new threats and be ready to protect ourselves and the civilised world.

OLEKSII ZIBOROV

Community Policing and Communication Expert; Police Operations and Training Advisor

Involvement during Russia's war against Ukraine: Ever since Oleksii has joined the Armed Forces of Ukraine, he actively covers the situation at the front, tries to maintain the morale of the civilian population, drawing the attention of the local and foreign community to the war in Ukraine and the needs at the front.

After the beginning of the war, the saying 'Ukraine is the shield of Europe' has gained higher relevance. How can you comment on it?

Now we all have seen the way russia is dealing with its neighbours. Stupid imperial ambitions and 'the right of force' led them to where they are now. Ukraine is not the only country that can suffer from bordering russia but we managed to stop them. Ukraine is not the only country that suffered from bordering Russia, however, we managed to stop them. I am not sure if any of the NATO counties could be attacked openly without any military consequences, the way the russians did it in Ukraine. But russians are also skilled in a hybrid war, so attacking NATO member-states can be just a matter of time. Because of the war in Ukraine, Russia has lost a huge part of its military potential and its image as the 'second army in the world'. In fact, russians have broken their spears against the 'shield of Europe'.

Ukraine should definitely become a part of NATO or a new security system that will be efficient and ready to respond to modern threats. In the future, experience and specialists from Ukraine will be the resources that will be in high demand.

In your opinion, how important was the contribution of the allies to the success of Ukrainian army on the battlefield?

It is worth mentioning, that even before 24 February 2022 the USA and the UK provided Ukraine with Javelins and NLAWs (as far as I know), which proved their efficiency as anti-tank weapons during the first weeks of the full-scale invasion. Today we can see results, according to the information from the media and different social networks, how 155mm, as well as 105mm, long-range artillery is working on the frontline. M142 HIMARS and M270 MLRS with high precision rockets fueled by the skills of the Ukrainian soldiers have saved many lives of both the defenders and civilians. On the battlefield, we still need new weapon systems: artillery with enough amount of ammunition and counter-artillery systems, high-precision rocket systems, military UAVs (intelligence, surveillance and strikes), tanks and LAVs, as well as long-range anti-air systems to protect its cities from enemy missiles.

THE QUANTITATIVE SUPERIORITY OF THE RUSSIAN ARMY IN WEAPONS IS A CHALLENGE FOR UKRAINE

At the end of July 2022, **the estimated number of Ukrainian troops at the front was 200,000 - 300,000 soldiers.** Moreover, the country has already **mobilised approx. 700,000 soldiers**, some of which are undergoing training inside and outside the country — on the territory of the allied countries. Russian troops at the front are estimated to amount to 100,000 - 150,000 soldiers, a third of which might be from the so-called DNR and LNR.

However, Ukraine is inferior to Russia in terms of the number of weapons. At the beginning of the war, Ukraine had nearly three times fewer tanks than Russia. They became the main target of Ukrainian armed forces in the first months of the invasion, so Russia lost approximately half of its tanks. **Russia has an advantage in the number of volley fire systems.** However, they have relatively low accuracy, which often causes casualties among civilians. On the other side, **M270 and HIMARS¹**, which were handed over to Ukraine by its allies, have a significantly better level of accuracy and have already been used for the destruction of logistical and fortified facilities of Russia in the temporarily occupied territories. However, the number of such systems in Ukraine is not yet high enough to reach dominance by these types of weapons.

Ukraine is also inferior to Russia in the number of ballistic and cruise missiles. Thus, the country needs to expand its missile arsenal to enable attacks on the enemy's military objects.

BALANCE OF POWER IN RUSSIA'S WAR AGAINST UKRAINE²



Artillery is one of the main advantages of the Russian military forces, particularly of the number of ammunitions of Soviet calibre. Russia maintained significant reserves of these types of ammunition after the dissolution of the Soviet Union. The Russian army fires approximately 50,000 shells every day (or 1.5 million per month), which is close to World War II indicators. The Ukrainian Armed Forces are striking the Russian logistics infrastructure to limit the firepower of its artillery. Soviet models of artillery used by Russia have comparatively low accuracy and average range³, compared to NATO artillery supplied to Ukraine, which has better accuracy and higher range. However, **Ukraine had only approximately 300 NATO artillery systems, while Russia had nearly 3,000 artillery systems** as of the end of July 2022. Moreover, Ukraine may have problems with its Soviet models of artillery systems **due to a lack of ammunition for them.**



Dr Inna Buresh Talks about Army, Military Professionalism, and Perseverance



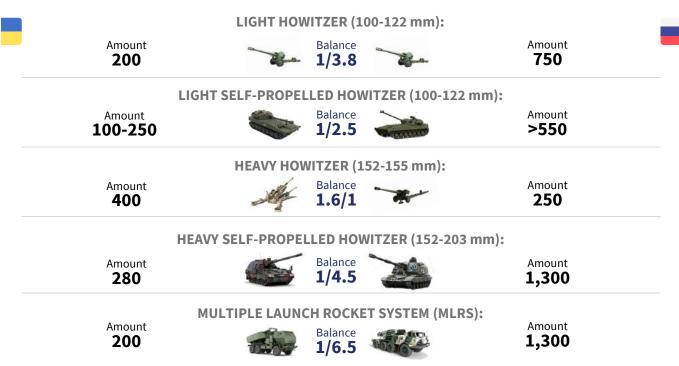
The **Russian invasion of Ukraine** showed the whole world how **desperate**, **patriotic**, and **professional** the Ukrainian army could be by **withstanding a more powerful enemy**. Ukrainians not only have shown the ability to use powerful and complex western weapons but showed **how effective their own military equipment could be**. Ukraine has proven the power of its own artillery, anti-ship missiles, and other types of weapons and military equipment, **demonstrating a high level of defence capability**.

Source: Forbes Ukraine website; Media overview Notes: (1) High Mobility Artillery Rocket System; (2) As of July 2022; (3) Primarily up to 30-35 km

THE POWER OF ARTILLERY IS ONE OF THE MAJOR FACTORS IN THE RUSSIAN INVASION OF UKRAINE

The Russian invasion of Ukraine has demonstrated that **artillery plays an important role during the offensive and defence operations.** According to various estimates, artillery now accounts for 70 to 80% of all losses of both parties. In addition, the massive use of artillery was the main factor allowing the Russian army to advance over the past few months in the Luhansk region. Russian troops have a multiple numerical advantage in most types of artillery weapons, but they are inferior in accuracy and firing range to some types of weapons that are transferred to Ukraine by partners and allies. Amid the quantitative superiority of the Russian forces in artillery, **'counter-battery combat' becomes an especially important factor of success.** In the war of artillery, the Ukrainian and Russian armies use different tactics. The occupiers, having a great advantage in the number of barrels and shells, fire large areas, while **Ukrainian soldiers hit pointwise — at specific targets** (command posts, warehouses, enemy's positions etc.). Ukrainian artillerists successfully carry out this kind of tasks, however, the existing amount of weapons and ammunition is still not enough to overcome the tactics of the 'barrage' of Russian troops and turn the tide of the artillery war in the favour of Ukraine. In order to ensure the counter-offensive of the Armed Forces of Ukraine for the de-occupation of the regions in the south and east of the country, **it is important to continue enhancing the power of Ukrainian artillery.**

ARTILLERY WAR DURING RUSSIA'S WAR AGAINST UKRAINE¹



The use of multiple launch rocket systems during Russia's war against Ukraine

- At the end of June 2022, the USA supplied Ukraine with the first multiple launch rocket systems, which resulted in the surge of activity of the Armed Forces of Ukraine. These systems allowed to make significant losses to the logistics of the enemy, as well as its command posts. This, in turn, has led to the slow down of the offensive of the Russian occupying forces
- Modern MLRS provide an almost guaranteed hit on any target larger than 10 m at a distance of more than 70 km. With one volley, the system can destroy 6-12 separate targets, depending on the type of installation
- As of the end of August 2022, the Armed Forces of Ukraine had more than 20 units of multiple launch rocket systems – HIMARS, M270, and MARS

Key characteristics of the major MLRSs		Showing .
used by Ukraine	HIMARS M142	M270
Calibre	227 mm	227 mm
Number of missiles ²	6	12
Firing range ²	32-70 km	32-70 km
Maximum speed	85 km/h	64 km/h

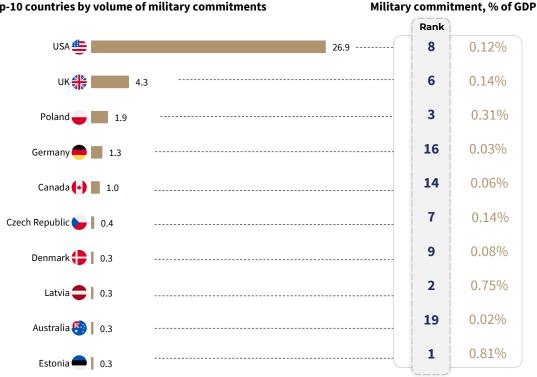
Notes: (1) As of July 2022; (2) The systems are able to carry out blocks with ATACMS missiles, with calibre 610 mm and firing range 165-300 km

UKRAINE ALLIES AND PARTNERS PROVIDED MILITARY SUPPORT A DOZEN BILLION DOLLARS

Since the start of the full-scale Russian war against Ukraine, the total volume of military support for Ukraine has substantially increased. Allies provided both the Soviet-era weaponry that allowed faster usage on the battlefield and the NATO-standard **weaponry** that would, in the long run, re-arm the Ukrainian Army according to NATO standards. Since February 2022, the complexity of military support has increased, from anti-tank guided missiles to Multiple Launch Rocket Systems (MLRS) and complex Air defence systems. Thanks to the courage and professionalism of Ukrainian soldiers and the full-scale support of the allies and partners, Ukraine was able to master the usage of weapons provided in a very short time period.

By September 2022, the largest military support to Ukraine by volume was provided by the USA, with about 27 Bn USD. Moreover, in May 2022, the US Congress approved the Ukraine Democracy Defence Lend-Lease Act of 2022. The Act would come into effect in October 2022, which will strengthen the support of Ukraine on its battlefields. Most of the European countries supported Ukraine with some kind of arms, especially the UK, Poland, and the Baltic countries, via bilateral commitments or group commitments at the Copenhagen conference. Currently, complex air defence systems, artillery, and fighter jets are the most crucial arms under discussion.

Military commitments of the Ukraine partners and allies since 24 February 2022, Bn USD



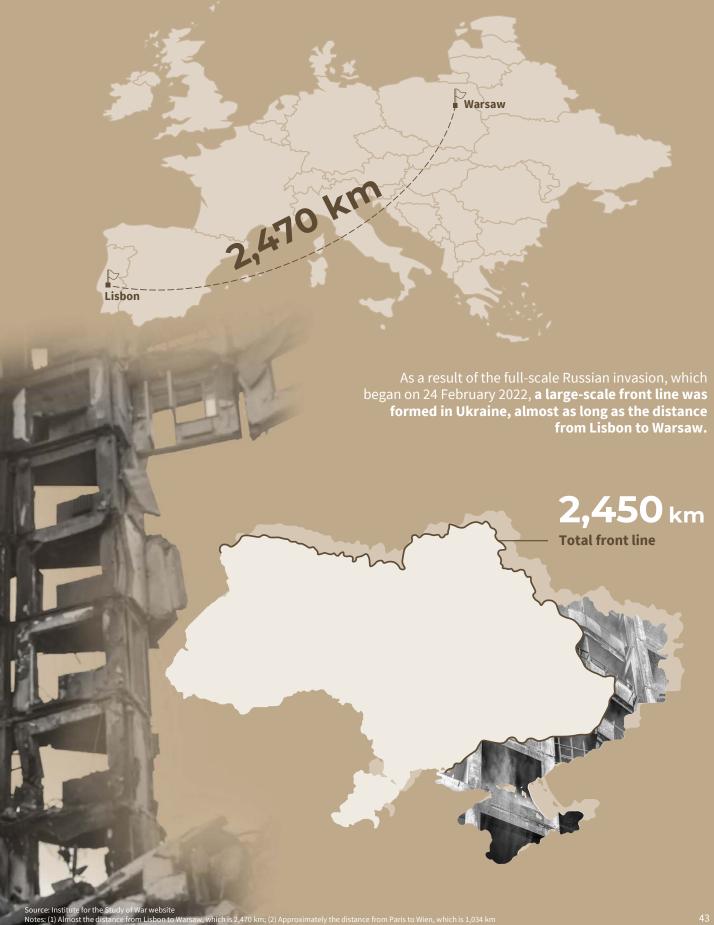
Top-10 countries by volume of military commitments

Top-5 countries by disclosed military deliveries¹ between 24 February and 3 August 2022

	Armored vehicles	Tanks	Howitzers ²	MLRS
Total	568	260	320	35
	👙 USA — 300	Poland — 240	🌻 USA — 108	✤ Czech Republic — 20
	₩ UK — 120	▶ Czech Republic — 20	🕀 Norway — 22	👙 USA — 12
	🚱 Australia — 54		France — 12	🛑 Germany — 3
	늘 Slovenia — 35		Poland — 18	
	🛑 Lithuania — 20		e Germany — 10	

Even though Ukraine has received a substantial volume of weaponry from its allies and partners, more is yet to come through disclosed or undisclosed commitments. Aside from the armoured vehicles, tanks, howitzers, and MLRS, Ukraine has received transport and attack helicopters from the USA, Slovakia, and the Czech Republic. Air defence systems, like NASAMS, IRIS-T, and C-300, were and will be provided by the USA, Germany, and Slovakia. As of August 2022, there are discussions undergoing with Slovakia to provide 11 MiG-29 fighter jets to Ukraine.

DID YOU KNOW THAT THE FRONT LINE IN UKRAINE IS ABOUT 2,450 KM?



PHASE 6: A FULL-SCALE INVASION (1/4) **FEBRUARY – MARCH 2022**

On 24 February 2022, at 4:30 a.m. Kyiv time, V. Putin officially announced a 'Special military operation' in Ukraine, which was the beginning of the full-scale invasion of a sovereign state. V. Putin announced the goal of invasion as the 'demilitarisation and denazification' of Ukraine. The truth was that the Russian aim was to destroy Ukraine as a sovereign state. Russian forces began intensive shelling of Ukrainian Armed Forces units in the East and crossed the northeastern borders, as well as launching missiles and bombing airfields and weapons depots

throughout Ukraine. In response, the Ukrainian Parliament approved the imposition of Martial Law. Entering from Russia, Belarus, and occupied Crimea, Russian troops invaded Ukraine near Kharkiv, Kherson, Chernihiv, and Sumy. During the invasion, parts of the Kyiv and Chernihiv regions and **almost all of** the Sumy and Kherson regions were occupied by Russian troops. In the occupied territories, Russian troops robbed houses, kidnapped people, and murdered and raped civilians.

Main stages of the full-scale Russian invasion of Ukraine

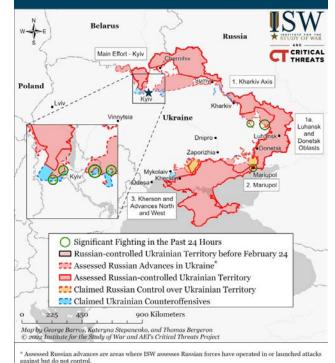
February 2 0 2 2

- The introduction of martial law in Ukraine and the general mobilisation were announced. Ukraine severed diplomatic relations with Russia
- On 24 February, Russian troops invaded the Chornobyl nuclear plant threatening global nuclear security. A Russian airborne assault consisting of 35 helicopters tried to storm the airfield in Hostomel in the Kyiv region but was destroyed by the Ukrainian military
- On 26 February, a plane with a Russian landing force was shot down near Vasylkiv, as well as a transport plane near Bila Tserkva
- In the first week of the war, Russia occupied the Azov region, from Kherson to the outskirts of Mariupol and Vasylivka, the northern areas of the Kyiv region, Luhansk, Kharkiv, and Chernihiv regions, and almost all the Sumy region. Moreover, Russian troops attacked and shelled Kharkiv, Chernihiv, Sumy, and the suburbs of Kviv
- On 28 February, Ukraine started the **negotiation process** with Russia

March 2 0 2 2

- On 1 March, Russian troops began an assault on Kherson, which was accompanied by shelling of residential buildings
- Mariupol was blockaded and under constant shelling, and the humanitarian situation in the city was rapidly deteriorating. Battles began for Azovstal¹, which became the centre of resistance of the Ukrainian army

Assessed Control of Terrain in Ukraine and Main Russian Maneuver Axes as of March 31, 2022, 3:00 PM ET



Institute for the Study of War and AEI's Critical Threats Project

- On 9 March, the Russian invaders carried out an airstrike on a hospital in Mariupol, which fell on the maternity ward. As a result, 3 people were killed, including a child, and another 17 people were injured
- On 16 March, the Russian military dropped a powerful aerial bomb on the theatre in Mariupol, where hundreds of civilians were hiding; most of them died
- On 29 March, the building of the Mykolaiv Regional State Administration was destroyed by a rocket attack in the morning; 20 people died

resent

PHASE 6: A FULL-SCALE INVASION (2/4) APRIL – JUNE 2022

After the withdrawal of Russian troops from the Kyiv region, it was clear that the occupation of Ukraine would require much more effort than Russian authorities initially expected. In this regard, V. Putin gave the order to 'liberate the Donbas', which meant building up Russian forces in the territories of the Donetsk and Luhansk regions. However, in April-June 2022, the Russian army was unable to execute this order, and the conquest of Mariupol, with a population of over 400,000 people, as well as Severodonetsk and Lysychansk (more than 100,000 people both), became their most significant achievements.

Mariupol, a port city on the Sea of Azov, became one of the symbols of Ukrainian resistance. The city's massive Azovstal

steelworks plant served as a shelter for thousands of civilians for months, and it also remained the last fortress for military units of defenders despite being surrounded, low on ammunition, and outnumbered by Russian forces.

In May 2022, **the Ukrainian army got an order to complete their 'combat mission' in Mariupol**, ending the 82-day battle for the city and saving the soldiers' and civilians' lives, which resulted in the Russian occupation of the territory.

At the same time, **Ukraine continued to strengthen ties with Western partners,** receiving modern offensive weapons, which gives reason to assume a turning point in hostilities in favour of the Armed Forces of Ukraine.

Main stages of the full-scale Russian invasion of Ukraine

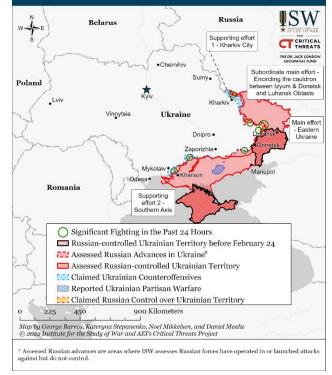
April 2 0 2 2

- Russian troops were forced to retreat with defeat from the Kyiv, Chernihiv, and Sumy regions while attempting to create new troops to establish control over parts of the Kharkiv, Luhansk, and Donetsk regions
- After the de-occupation of cities in the Kyiv region, the Ukrainian military, police, and international media representatives identified a huge number of Ukrainian civilians killed by the Russians. Evidence of mass torture, looting, and rape was found in Bucha, Irpin, Borodyanka, and other cities
- On 13 April, the Russian Black Sea Fleet's flagship 'Moskva' cruiser caught fire as a result of two Neptune missile strikes near Zmiinyi (Snake) Island and sank the next day

May 2 0 2 2

- The Armed Forces of Ukraine launched a counteroffensive in the Kharkiv region, while Russian
 troops shifted their main efforts to the Luhansk direction
- Russian troops continued to attack the Azovstal steelworks plant in Mariupol, where civilians and the Ukrainian defenders continued to hide. On 16 May, the evacuation of civilians, seriously wounded servicemen and other Ukrainian defenders from Azovstal began. As of 20 May, about a thousand defenders of Mariupol surrendered
- Russian troops launched a massive offensive on the strategically important city of Severodonetsk in the Luhansk region

Assessed Control of Terrain in Ukraine and Main Russian Maneuver Axes as of June 30, 2022, 3:00 PM ET



Institute for the Study of War and AEI's Critical Threats Project

June 2 0 2 2

- After almost a month of high-intensity fighting for Severodonetsk, the Armed Forces of Ukraine left the city to prevent encirclement. Later, President Volodymyr Zelenskyy called the battle for this city 'one of the most difficult' in the war and that 'the fate of our Donbas is largely decided there'
- The Navy of the Armed Forces of Ukraine destroyed the tugboat of the Black Sea Fleet of the Russian Federation 'Vasiliy
 Bekh', which was carrying Russian troops and weapons to Zmiiny (Snake) Island
- On 30 June, as a result of Ukraine's military operation, the Russian military evacuated the remnants of the garrison and left Zmiiny (Snake) Island

PHASE 6: A FULL-SCALE INVASION (3/4) JULY – AUGUST 2022

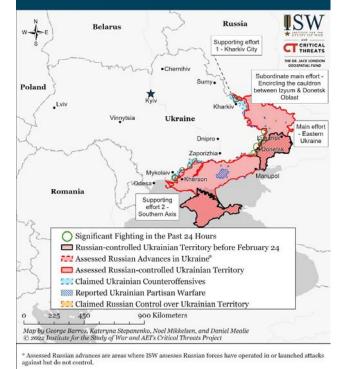
In July and August, shelling of Ukrainian cities and civilian objects continued. However, the effective use of weapons provided by allies enabled the decrease in the intensity of Russian shelling of Ukrainian cities by the Armed Forces of Ukraine. In August, Ukraine announced the counteroffensive movements towards the enemy positions on the right bank of the Dnipro river, which forced Russians to begin the massive transfer of their troops to the right bank of the Dnipro river in the Kherson region. Ukraine managed to attack the bridges across Dnipro, thus significantly lowing the supply of Russian ammunition and troops and locking up them on the right bank of Dnipro. August 2022 was the first month of a large-scale war when Russian invaders did not manage to capture a single city and a single large settlement in Ukraine due to the lack of military power. At the same time, Ukraine **continued to intensify the military support** from its Western partners and allies. **On 20 July**, the fourth so-called **Ramstein conference** took place, where Ukraine **secured additional military support** from the USA and dozens of other countries. Main support included **HIMARS** Multiple Launch Rocket System and **Harpoon** anti-ship missiles. On 24 August, the USA announced over **3 Bn of USD extra aid** to Ukraine that included an advanced **Surface to Air Missile System** — **NASAMS. Germany** announced military aid that included the IRIS-T Surface to Air Missile Systems, which would strengthen Ukrainian selfdefence capabilities. By the end of August, **Russia** had **failed to achieve any military gains** across all major frontline directions.

Main stages of the full-scale Russian invasion of Ukraine

July 2 0 2 2

- On 1 July, the Armed Forces of Ukraine completely liberated Snake Island in the Black Sea, potentially opening the path for Ukrainian cargo ships to deliver agriculture and other goods worldwide
- On 3 July, Ukraine announced the withdrawal of troops from Lysychansk¹. Russian militaries occupied the city, having multiple advantages in the number of manpower and equipment over the Ukrainian defenders
- The Armed Forces of Ukraine began to actively use the received Western weapons, in particular, the HIMARS Multiple Launch Rocket System, to hit Russian military depots, bases, and infrastructure in the temporarily occupied territories of Ukraine
- The Armed Forces of Ukraine started to use advanced artillery rounds, like extended-range guided artillery shells M982 Excalibur, which allowed them to strike up to 50 km behind the Russian frontline
- On 29 July, Russian troops shelled the colony in the temporarily occupied Olenivka². Russian invaders held Ukrainian soldiers and civilians captive there, of whom more than 50 people have died and nearly 130 injured
- By the end of July, Russian troops and mercenaries gained some minor territorial gain to the east and south of the city of Bakhmut, with high casualties and limited opportunities to advance further

Assessed Control of Terrain in Ukraine and Main Russian Maneuver Axes as of August 31, 2022, 3:00 PM ET



August 2 0 2 2

resent

Institute for the Study of War and AEI's Critical Threats Project

- The intensity of missile attacks on Ukrainian cities has significantly decreased as a result of the continued successful use of Western weapons by the Armed Forces of Ukraine, particularly HIMARS, to hit Russian military depots and bases
- Explosions rang out at the Russian military airfield in Novofedorivka in occupied Crimea near Saky³ at Russian ammunition depots and the Russian military air base near Simferopol³
- On 11 August, Ukraine confirmed significant military equipment commitments in Copenhagen, Denmark, from multiple
 European countries. Initial military aid is estimated to be around 1.5 Bn Euro, which will strengthen Ukrainian counter-offensive plans
- On 29 August, the Armed Forces of Ukraine announced counter-offensive actions in the south of Ukraine, particularly in the Kherson region, breaking through the first line of Russian defence

PHASE 6: A FULL-SCALE INVASION (4/4) SEPTEMBER 2022

Ukrainian counteroffensive in the Kherson region was accompanied by strikes on bases of the Russian Armed Forces and warehouses with ammunition, as well as the destruction of Russian pontoon bridges in the region. On September 6, the Armed Forces of Ukraine began a counteroffensive in the Kharkiv region, which became a tactical surprise for the Russian troops, leading to mistakes by Russian commanders and the subsequent retreat of Russian forces from the north and northeast of the Kharkiv region.

Since the beginning of the counteroffensive, the Armed Forces of Ukraine have **liberated more than 8,000 km² of Ukrainian territory** from the Russian occupiers. More than **420 settlements** and more than **150,000 residents** have been **liberated in the Kharkiv region**.

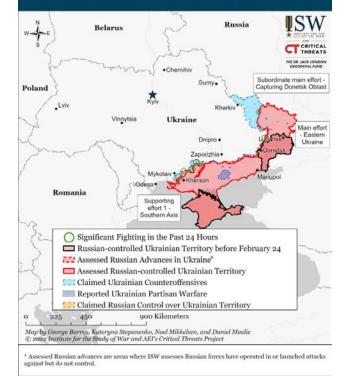


Main stages of the full-scale Russian invasion of Ukraine

September 2 0 2 2

- As a result of counter-offensive actions, on 4 August, the Armed Forces of Ukraine announced the liberation of the village of Vysokopillia in the north of the Kherson region from the Russian occupiers
- The systematic destruction of Russian warehouses with ammunition and pontoon bridges across rivers in the Kherson region
- On 6 September, Ukrainian troops launched a counteroffensive in the Kharkiv region, advancing more than
 20 km through the territory occupied by Russia and recapturing about 400 km²
- The Armed Forces of Ukraine broke through the Russian defence and advanced almost 50 km. In the course of conducting active counter-offensive actions in the Kharkiv direction, more than 20 settlements were liberated, including Balakliya — a city with a population of 27,000, which was under Russian occupation for six months. Moreover, the Ukrainian army seized hundreds of units of captured Russian military equipment
- Liberation of the cities of Kupiansk and Izium in the Kharkiv region. As a result of the Russian invasion, more than 80% of the infrastructure in Izium was destroyed, and more than 1,000 people died during the occupation
- On 11 September, in the course of counter-offensive actions, the Ukrainian military entered the state border of Ukraine in the north of the Kharkiv region
- On 12 September, the Ukrainian military announced the liberation of five settlements in Kherson Oblast and nearly 500 km² from the Russian occupation

Assessed Control of Terrain in Ukraine and Main Russian Maneuver Axes as of September 21, 2022, 3:00 PM ET



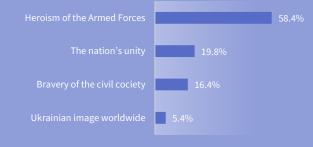
Institute for the Study of War and AEI's Critical Threats Project

- Russia continued shelling Ukraine's critical infrastructure, in particular, the thermal power plant in Kharkiv, which left the city without electricity, water, and hydro-technical structures in Kryvyi Rih, leading to the rise of the water level in the Inhulets River to 3 metres and the flooding of 112 houses
- A large mass grave of Ukrainian soldiers and about 500 civilian burials were found in liberated Izium from Russian occupation
- Russian invaders launched a missile strike on the South Ukraine Nuclear Power Plant, with the rocket falling 300 metres away from the nuclear reactors
- Russian occupiers have announced the holding of pseudo-referendums from 23 to 27 September 2022 on the accession to the Russian Federation of the temporarily occupied territories of Donetsk, Luhansk, Kherson, and Zaporizhzhia regions
- On 21 September, Russia announced a partial mobilisation, during which it is planned to call up about 300,000 people

VOLUNTEERS HAVE GREATLY CONTRIBUTED TO THE SUCCESS OF THE UKRAINIAN ARMED FORCES

of the defenders of Ukraine became a reason for pride for the majority of Ukrainians. Besides, the **exceptional unity of the nation**, along with the **bravery of the Ukrainian civil society**, made Ukrainians proud of their country, as well as motivated to volunteer and support the army in the fight for freedom and independence of Ukraina independence of Ukraine.

Reasons for the pride of Ukrainians after the beginning of the war¹



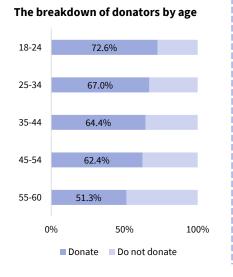


share of Ukrainians who have volunteered either full-time or partially since the beginning of the war¹

Since the beginning of the invasion, a Ukrainian has volunteered either full-time or partially every second to help our military forces and refugees during the war. Moreover, the massive donations by people in Ukraine and from abroad significantly supported the Ukrainian army with the purchase of various types of weapons and ammunition.

According to various estimates, since the beginning of the war, Ukrainians and foreigners have donated more than 1 Bn USD through the largest funds and campaigns to support the army and refugees. However, the actual scale of donations from Ukrainians is much higher, taking into account the donations made directly according to certain requests. With the collected funds, it became possible to significantly improve the supply of Ukrainian soldiers with materials, including drones, cars, night vision devices, personal protective equipment, etc., which, in turn, had a huge impact on the success of the Ukrainian army on the battlefield.

The structure of donations made by Ukrainians during the war²



Have you made donations since the What is the average monthly donation amount you have made?³ invasion? If yes, for what purpose? <14 USD \bigcirc Military 45.4% purposes 56.7% Humanitarian <28 USD 18.8% purposes No answer Yes <135 USD Do not know 17.3% <270 USD 8.3% the purpose 6.1% >270 USD Other 1.4% 1.8% 1.6% purposes Do not make Average amount **25 USD** No 36.4% donations of donation

war against Russia. More than 60% of Ukrainians admit the high influence of the response of international partners to the war in Ukraine, yet the rest of the population considers that

?

Has the response of international partners been sufficient for Ukraine to stop Russia?¹

42.2%

16.5%

23.9% Yes, but only from the

es: Kyiv Consulting analysis; Gradus Research website ; (1) Ukrainian population survey conducted by Kyiv Consulting, July-August 2022, n=1,000 respondents; (2) Based on the survey conducted by Gradus Research; (3) is are converted from UAH to USD based on the exchange rate as of 12 September 2022

Russian forces have to be stopped in Ukraine

୨୨

Putin's worst nightmare is a vibrant, prosperous, and democratic Ukraine on Russia's border, showing the Russian people what their country could be if the kleptocratic regime ruling Russia was replaced by a democratic, free market system that functioned properly. The ultimate irony is that in setting out to make Russia great again, Putin has actually made NATO great

again, generating unity among NATO members not seen since the end of the Cold War and prompting Finland and Sweden to seek to join NATO.

GENERAL DAVID H. PETRAEUS

Partner, KKR & Chairman, KKR Global Institute, USA

PETRAEUS

Involvement during Russia's war against Ukraine: General David H. Petraeus actively maintains awareness for support of Ukrainian forces and the Ukrainian government. He is a member of the Strategic Advisory Council (SAC), which provides support and advice to the Ukrainian World Congress's 'Unite with Ukraine' campaign. The SAC has set a goal of providing 100,000 Territorial Defence Force fighters with lifesaving protective gear, including helmets, body armour, ballistic eyewear, and medical kits.

How dangerous would be to freeze the conflict as per the 2014 scenario instead of restoring the Ukrainian borders fully? What would you say to those European politicians who prompt the opposite solution?

The grinding, costly, and slow advance of the Russian forces has to be stopped in Ukraine — and pushed back there. Western countries must enable Ukraine to retake as much of what has been lost since 24 February, if not all, and beyond.

We have to keep in mind that Putin wants not only to seize much more of Ukraine, but he also has greater ambitions to restore Russia to greatness. He wants to irrevocably weaken Ukraine and, ultimately, take away its independence.

I believe that the USA, Europe, and the western world will, despite the challenges of inflation, energy issues, and slowing economic growth, remain steadfast in their support for Ukraine, its forces, and its people — for whom all citizens of the free world have come to feel great admiration.

Putin's worst nightmare is, of course, a vibrant, prosperous, democratic Ukraine on Russia's border, showing the Russian people what their country could be if the kleptocratic regime ruling Russia was replaced by a democratic, free market system that functioned properly. Needless to say, the ultimate irony is that in setting out to make Russia great again, Putin has actually made NATO great again, generating unity and resolve among NATO members not seen since the end of the Cold War and prompting Finland and Sweden — two historically neutral, very capable, and geostrategically important states — to seek to join NATO.

THE LESSONS FROM RUSSIA'S WAR AGAINST UKRAINE WILL AFFECT OTHER MILITARIES

The importance of quality military training

The Russian military budget accounted for 154.0 Bn USD as of the beginning of 2022, while the Ukrainian one is more than ten times smaller - 11.9 Bn USD. However, **Russia has not achieved an overwhelming, lightning-fast victory, as the military equipment is not the deciding factor**. During the first seven months of Russia's war against Ukraine, **Ukrainian resistance and struggle have shown that quality leadership and training might make all the difference.**

Since 1993, Ukraine has been implementing the American model of training, according to which junior officers and noncommissioned officers are assigned tasks, encouraging initiative in making tactical decisions on the ground. In

The advantage of nimble modern weapons

Selected list of modern high-accuracy weapons used by the Armed Forces of Ukraine²

MLRS

40,000+





Anti-armor systems, hand grenades & mortars

X number of units in use

The difficulty of concealing preparations for a full-scale invasion

n/a

Neptune &

Harpoon missiles

Before the full-scale Russian invasion of Ukraine, **Kremlin-owned media increasingly spread propaganda** that **Ukraine was preparing to attack the Donbas region** — **or even Russia itself.** In the pre-invasion period, Russian coverage of the narrative about an impending Ukrainian attack rose dramatically and also became increasingly hostile.

Meanwhile, intelligence data, satellite images, and posts on social networks documented ongoing Russian troop movements and deployment along Ukraine's border. The **combined open-source intelligence analysis of Russia's preparations for the invasion,** both online and offline, **enabled an understanding that Russian intentions were hiding in plain sight.**

Continuing aggressive foreign policy of Russia



addition, the **increase in the number of training programmes for the Ukrainian military abroad** contributes not only to the mastery of the use of Western-style weapons but also **increases the tactical training of Ukrainian soldiers.**

Selected countries, training Ukrainian military personnel in 2022



Ukraine continues to defend and regain its territory, in particular, thanks to the use of weapons transferred by allies. The heavy **Russian** force in the form of **tanks**, **supply trucks**, **helicopters**, **and fighter aircraft is being demolished by Ukrainian** defensive units armed with light weapons, such as **Stingers**, **Javelins**, **NLAWs**, **and drones**. The **use of HIMARS¹ made it possible to significantly reduce the advantage of Russian artillery**. In addition, **Russian naval ships had the upper hand over the** Ukrainian fleet until **Ukrainian Neptune and American Harpoon precision missiles** were used, forcing the Russian fleet to retreat.



Å¥.

日

By 50%

increased the amount of Russian propaganda about Ukraine in January 2022 compared to the previous month

~140,000

military personnel were pulled by Russia to the borders of Ukraine on the eve of a full-scale invasion on 24 February 2022

Since the dissolution of the Soviet Union in 1991, **Russia has been an aggressive player in the geopolitics of the past Soviet Union member states, not shying away from military intrusions that they were supposed to, broadly speaking, set the local controls**. Besides the two military interventions in Georgia, military support for Transnistria in its separation from Moldova, the two Chechen Wars, the annexation of Crimea, and the invasion of the East of Ukraine on 24 February 2022, Russia invaded Ukraine, starting the largest expansionist war of the XXIst century. **The aggressive and barbaric behaviour of Russia has become an integral part of its foreign policy** and must not be tolerated in the future.

ource: The Ministry of Defence of Ukraine w

Source: The Ministry of Defence of Ukraine website; Atlantic Council website; Media overview Notes: (1) Highly Mobility Artillery Rocket System; (2) As of August 2022

The key to winning this artillery duel is to increase the lethality of the artillery rounds

୨୨

The lessons learned from Russia's war against Ukraine are many and will be studied for generations. A smaller, motivated army with the will to fight can defeat a numerically superior army if it has better leadership, and leadership development throughout the organisation, and has just enough precision-guided weapons to effectively implement a superior strategy. Stingers, Javelins, NASAMs, HARMs, Neptunes, and HIMARs, together, with a smaller army, can defeat a far larger army.

DAN RICE

President of the Thayer Leadership; Special Advisor to the Commander In Chief Ukraine Armed Forces

Involvement during Russia's war against Ukraine: Dan Rice actively supports Ukraine on its way to Victory. In April 2022, he was named Special Advisor to General Valeriy Zaluzhnyy, Commander-in-Chief of the Ukrainian Armed Forces. Dan Rice started visiting Ukraine in May 2022 to directly learn about the leadership, leader development transformation of the Ukrainian Armed Forces from 2014 to the present day. He travels back and forth between Ukraine and Washington DC speaking, writing and lobby for more lethal, precision guided weapons on behalf of Ukraine. He is registered with the US Justice Department as an agent of Ukraine.

What are the main lessons for military people worldwide that could be taken from the case of Russia's war against Ukraine?

The lessons learned from Russia's war against Ukraine are many and will be studied for generations. A smaller, motivated army with the will to fight can defeat a numerically superior army if it has better leadership, and leadership development throughout the organisation, and has just enough precision-guided weapons to effectively implement a superior strategy. Stingers, Javelins, NASAMs, HARMs, Neptunes, and HIMARs, together, with a smaller army, can defeat a far larger army.

At this stage of the war, in September 2022, the war has ground down to a 2,000 km front and an artillery duel. Russia still holds an enormous numerical superiority in howitzers and tanks (which can fire indirect fire). The West has given nearly all the howitzers it can to Ukraine. But since the West cannot increase the number of artillery guns, the key to winning this artillery duel is to increase the lethality of the artillery rounds. The entire NATO defence of Europe against a planned Russian invasion was planned to be outgunned, but have far more lethal artillery rounds with Dual Purpose Improved Conventional Munitions (DPICM) which have 88 submunitions. These are between 5-15 times more lethal than the High Explosive artillery rounds currently being provided to Ukraine. With DPICM, Ukraine can go on the offensive and take back Donbas and Crimea. Without DPICM this war of attrition will likely remain an artillery war in which Ukraine is significantly outgunned. Ukraine, the USA, Russia, Poland, Romania, Latvia, and Estonia did not sign the Convention for Cluster Munitions agreement and should not be withholding DPICM from Ukraine using that convention as a reason.

This war should put into question the benefits of the Convention on Cluster Munitions (CCM) and if the CCM has emboldened Russian / Chinese / North Korean aggression, and weakened the West, by taking away one of the primary defensive weapons designed to deter their aggression. Ukraine needs DPICM to help win this war.

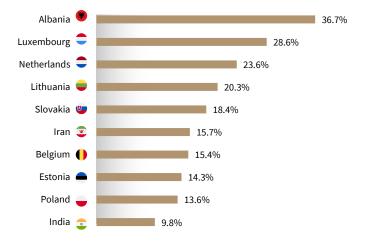
IMPACT OF THE RUSSIAN INVASION OF UKRAINE ON THE GLOBAL DEFENCE & MILITARY SECTOR IS RISING

The Russian war against Ukraine has already **impacted the global security system and military sector by exacerbating geopolitical tensions worldwide and affecting countries to reexamine their defence budgets and military strategy.** After European defence spending growth by $4.8\%^1$ in real terms in 2021, **EU countries** are expected to **accelerate army modernisation and increase defence budgets** in 2022 and the next years.

After decades of neutrality, Finland and Sweden submitted applications to join NATO in May 2022. The membership applications have been spurred by security concerns over Russia's war in Ukraine. Moreover, NATO announced plans to bolster the defences along the block's eastern flank, which includes training of more combat-ready troops and pre-positioned military equipment in eastern Europe. In June 2022, in the context of rising global tensions, NATO endorsed a new Strategic Concept — the first since 2010. It declares Russia as 'the most significant and direct' threat to the alliance and increases focus on bolstering deterrence and defence, along with a new emphasis on building resilience.

The worsening security environment in Europe and growing tension in the Indo-Pacific region are among the major challenges in the global security system.

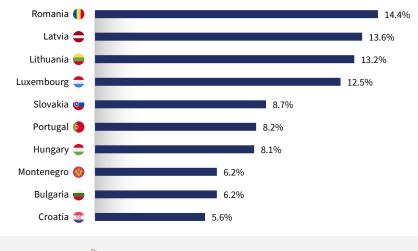
Defence budget growth in 2022 vs 2021, by countries²



After the world military expenditure passes 2 Tn USD for the first time in 2021, the defence expenditure is expected to grow in 2022, primarily in European countries due to upending the continent's security landscape caused by the Russian invasion of Ukraine. Germany announced spending an additional 112.7 Bn USD for the armed forces³, which includes investments and armament projects for the German military, responding to Russia's invasion of Ukraine. In addition, Iran declared expanding its defence expenditure, preparing for possible growing tension in relations with Israel, while Taiwan announced a double-digit increase in defence expenditure for 2023 amid escalating tension with China.

Military personnel growth in 2022 vs 2021, by countries^{4,5}

countries. primarily European Eastern European countries, are increasing the number of their armed forces in response to the Russian invasion of Ukraine. Latvia's Defence Ministry expects to extend its armed forces in active service by more than 80% by 2028 to strengthen the country's military capability, while Lithuania decided to increase the number of young people called up for compulsory military service to meet the increasing demand for junior officers. The government of Poland announced the bill, which provides to more than double the number of soldiers in the Polish army by 2027.





20 Bn USD⁶

are earmarked for the modernisation of the navy of Germany under its plan of the military upgrade over 2027

5.8 Bn USD

spent by Poland on purchasing tanks, howitzers, and fighter jets from South Korea to replace equipment provided to Ukraine

2.6 Bn USD

will be spent by Australia on buying long-range strike missiles years ahead of schedule because of growing external threats



1.3 Bn USD

will be spent by the USA on the development of advanced satellites designed to track hypersonic missile threats

Source: CSIS website; SIPRI website; IISS website; NATO website; NTI website; Media overview

Notes: (1) The largest defence spending growth recorded for any region in 2021; (2) Not including additional defence budget expenditure; (3) Germany was not included in the defence budget chart, as its additional defence spending was included in the country's special fund; (4) Personnel expenditure includes military and civilian expenditure and pensions; (5) The costs of maintaining military personnel are the main item of defence budget expenditure in most European countries; (6) Approximate planned budget

DID YOU KNOW THAT VOLUNTEERS FROM MORE THAN 50 COUNTRIES CAME TO DEFEND UKRAINE?

After the full-scale Russian invasion of Ukraine on 24 February 2022, more **than 20,000 volunteers**¹ from about **50 countries joined the International Legion** unit and stood up **to protect the territorial integrity of Ukraine**.

Selected list of countries represented in the Ukrainian International Legion

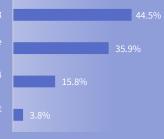


THE MAJORITY OF UKRAINIANS BELIEVE THAT UKRAINE CAN WIN THE WAR IN 2023 OR SOONER

After more than 7 months since the beginning of the full-scale Russian invasion of Ukraine and the liberation of territories in the north and north-east of the country, about **45% of people believe that Ukraine will win the war in 2023**. At the same time, more than a third of Ukrainians consider that the victory of Ukraine is possible by even the end of this year.

In your opinion, what is the most likely scenario out of the following $\ensuremath{\mathsf{?}}^1$

Ukraine will win the war in 2023 Ukraine will win the war by the end of 2022 Ukraine will win the war in 2024 or later The chances are low that





share of Ukrainians who believe that in the medium-term perspective, Ukraine will become a member of EU¹ The views of Ukrainians are split in evaluating the current geopolitical situation and the country's future prospects. **23.1% of Ukrainians believe that in the nearest 5 years, Ukraine will be on the path to joining the EU and NATO.** 19.2% think that the next 5 years will open the door for the EU only. 28.2% are certain that Ukraine will enter the EU and NATO in less than 5 years.

Currently, **Ukraine has the status of a candidate**. Legally, the next step is the start of accession negotiations. But before that, the European Commission must assess Ukraine's progress in work on seven priority areas of reforms. Failure to fulfil the requirements may result in the cancellation of the candidate status for Ukraine.

The seven blocks of reforms that Ukraine must implement in order to maintain its status as a candidate and move forward with the EU integration process:

- **1.** Adopt and implement legislation on the procedure for selecting judges to the Constitutional Court of Ukraine, with preliminary selection based on an assessment of their integrity and professional skills.
- **4.** Ensure compliance with the FATF² anti-money laundering legislation; adopt a comprehensive strategic plan for reforming the law enforcement sector.
- 2. Complete an integrity check by the Ethics Council of candidates for membership in the High Council of Justice and the selection of candidates for the creation of the High Qualification Commission of Judges of Ukraine.
- Implement the 'anti-oligarchic law' to limit the excessive influence of oligarchs on economic, political, and social life in a legally sound manner, compliant with the opinion of the Venice Commission.
- Finalise the appointment of the new head of the Specialized Anti-Corruption Prosecutor's Office by approving the determined winner; select and appoint a new director for the National Anti-Corruption Bureau of Ukraine.
- Overcome the influence of vested interests by aligning the media law with the EU Audiovisual Media Services Directive and devolving powers to an independent media regulator.

 Complete the reform of the legislation on national minorities in accordance with the recommendations of the Venice Commission, together with mechanisms for its immediate and effective implementation.

Despite the full-scale Russian invasion, **the majority of Ukrainians have not relocated from the country**, while about 78.4% of the Ukrainians who have fled abroad are planning to return to their homeland after the war or active hostilities are over. This should allow Ukraine to avoid the outflow of its human capital, which is highly important for the post-war recovery of the country.

? Do you plan to return to Ukraine?¹

46.7% Yes, when the war is fully over

31.7% Yes, when military actions at my place of

Source: Kyiv Consulting analysis; Media overview

Notes: (1) Ukrainian population survey conducted by Kyiv Consulting, July-August 2022, n=1,000 respondents; (2) The Financial Action Task Force

To Putin independent Ukraine poses an existential threat

୨୨

There was (and remains) a lack of understanding in most Western capitals over the strength of Putin's obsession with Ukraine. He firmly believes that Ukraine has been artificially separated from Russia and sees the emergence of a democratic, European Ukraine as a deliberate attempt to spark the next stage of a Russian imperial retreat which began in 1989. In other words, Putin is convinced that preventing the loss of Ukraine is a matter of existential importance for the survival of the Russian state.

PETER DICKINSON

UkraineAlert Editor at Atlantic Council

Involvement during Russia's war against Ukraine: Peter Dickinson holds an active civic position, trying to raise awareness on the current state of affairs in Ukraine, giving special attention to the influence and affects of the military actions in Ukraine both on a local and global levels.

Not many countries, including European ones, seemed to expect that Russia would really invade Ukraine. How could you explain this given the track record of Russian military activities in other countries?

Despite the widespread availability of highly accurate intelligence reports regarding Putin's intention to launch a fullscale invasion of Ukraine, a mood of widespread scepticism prevailed right up until 24 February. This was true in Ukraine and in Western capitals. Indeed, the available information strongly indicates that very few members of the Russian establishment felt an invasion was imminent. This scepticism was primarily rooted in the assumption that a full-scale invasion would be disastrous for Russia.

What was the reason for other states to perceive Ukraine as a victim that would not stand against Russia in the first days of the invasion? What went wrong with the Ukrainian brand image in the past, and what lessons can be taken out of this?

Prior to the invasion, Ukraine was probably the most misunderstood country in Europe. Almost all international media coverage of Ukraine since the country first became independent in 1991 was produced by Moscow correspondents whose reports frequently served to perpetuate common Russian stereotypes and negative perceptions of Ukraine. Successive Ukrainian governments neglected the country's international image and little was ever done to establish a Ukrainian brand among outside audiences.

Sooner or later Putinism will falter

୨୨

Under Putinism, Russia has turned into an authoritarian, expansionist, backward-looking, and aggressive country. A country ruled by a kleptocratic gang of revisionist FSB agents. Cracking down Putinism can only be done by the Russian people. But we, the democratic world, must not stand idle. Putin does not show any signs of abandoning his sick fantasies of subjugating Ukraine; nor has he altered his strategic goal of changing Europe's political map with military force. Sooner or later Putinism will falter - simply because people seek to look forward, and not backward.

DR STEFANIE BABST

Former NATO Deputy Assistant Secretary General

Involvement during Russia's war against Ukraine: Dr Babst raises awareness to the war, expressing her solidarity with the Ukrainians and support for the victims of the war. She is an advocate of Ukraine's sovereignty and territorial integrity, stands for a long-term, robust, and globally networked Roll Back Russia strategy, emphasising that Russia's invasion is a global challenge and the war is a serious blow to globalisation.

What is the most effective way of interaction between Ukraine and Russia if they have drastically different kinds of political behaviour?

The Kremlin's ambition to recreate a sphere of influence and deny other countries the right to choose their own path is set to remain a fundamental challenge for the European democracies as long as Putin reigns over Russia. Designing a broader and internationally well-coordinated strategy against the regime in Moscow is therefore a must-do for the transatlantic community. The core objective of a 'Roll Back Russia' strategy should first and foremost be to insist on the preservation of Ukraine's full and unconditioned state sovereignty and territorial integrity.

In your opinion, what are the Top-3 decisions to be made by the Ukrainian government once martial law is lifted?

The first one is time: time to heal the emotional and physical wounds of millions of Ukrainians who had to endure Russia's terror. The second one is ownership and participation: while Ukraine's government and state institutions will be in the driving seat to develop the political and economic framework for the country's reconstruction, the participation of civil society, NGOs and individual Ukrainians in this process is key. And the third one is transparency and accountability: any postwar political or economic decision must be guided by the abovementioned principles.

Motivation, resilience, and courage of soldiers and officers remain the key success factors

୨୨

We are grateful to our foreign partners for the provision of medical support. But now and after the war, this work needs a systematic and massive approach. It is, therefore, necessary to develop, on a wider scale, our own national and local medical and psychological rehabilitation centres, with technological assistance (in the form of equipment and treatment protocols), with account of foreign experience in medical treatment and the material provision of healthcare professionals.

DR SERHII CHERVONOPYSKYI

Chairman of the Ukrainian Union of Afghanistan Veterans; Lieutenant General; Hero of Ukraine

Involvement during Russia's war against Ukraine: Together with his brothers-in-arms, combat veterans, Serhii directed his efforts to support territorial defence battalions in their fight for the independence and territorial integrity of Ukraine. By leveraging his position in the Ukrainian society, Serhii draws public attention to the need of a comprehensive approach to elimination of the consequences of war in the humanitarian sphere.

In your view, what state initiatives and programmes need to be implemented to bring the military back to normal civilian life?

This issue has to be tackled at the very beginning of military service. A well-prepared soldier is more resistant in overcoming various negative situations and cases at military service, he / she is consequently less traumatised physically and psychologically. Priority in rehabilitation programmes should be given to the families of the deceased soldiers, and to the families of persons who became disabled as a result of the war, for whom the provision of housing is a priority.

For the ex-servicemen who have not been wounded, the main thing is to find a job with decent wages. This requires programmes to create such jobs and appropriate vocational training. For soldiers who became disabled as a result of the war, treatment and prosthetics programmes are essential, while at the same time opportunities for socially useful activities and accessible work should be provided.

The world currently has various ratings of the power of armies, which usually assess their potential quantitatively. Can a significant quantitative military advantage be gained at the expense of highly accurate weapons?

Power rankings of the global armies based on the criteria of quantity, quality, and the technology of weapons can only assess the ability to destroy the enemy and to win a fight or a battle. However, it is always important to retain the results of conquests.

The motivation, resilience, and courage of soldiers and officers remain the key success factors. It is difficult to transform this into quantitative criteria. The well-known 'Afghan experience' of the wars of the XX century (UK, USSR) and of the XXI century (USA, NATO) has proved that the number of weapons and the availability of new technologies is a necessary condition, but not enough to win.

SOCIETY

CHAPTER 2.2

dimilities

RUSSIAN INVASION CAUSED A REFUGEE CRISIS AND DAMAGE TO SOCIAL INFRASTRUCTURE IN UKRAINE

The Russian invasion negatively affected the Ukrainian social sector, causing a high level of internal and external migration, unemployment growth, and the destruction of cultural sites as well as educational and medical institutions. About **one-third of Ukrainians were forced to leave their homes to save their own lives**, so Ukraine became the second-largest country in the world by the number of external refugees. Due to the full-scale Russian

invasion, a third of employees in Ukraine have lost their jobs. During the war in Ukraine, the Russian army also partially or fully demolished 161 Ukrainian cultural sites, as well as fully destroyed 209 education buildings and 127 medical facilities. For these reasons, it is highly important to understand the scope of the war's **impact on the Ukrainian social sector** and the future plans for its recovery.

8⁸

Society

The section discloses key aspects of the development of social sectors in Ukraine before the full-scale war and describes major changes caused by the Russian invasion for / related to:

- Refugees
- Employment
- Ukrainian identity

- Education
- Healthcare

Refugees

- Migration flows within the Post-Soviet time and before Russia's war against Ukraine
- Changes in internal and external migration during the war
- The impact of Ukrainian refugee flow on European countries

Employment

- Key characteristics of Ukraine's labour market before the war
- Consequences of the war on employment in Ukraine
- Employment among refugees and its impact on the hosting countries

Ukrainian identity

- Core values of the Ukrainian nation
- Struggle for Ukrainian language and culture
- Protection of the cultural heritage of Ukraine during the war

Education

- Structure of Ukraine's education system and its transformation
- Impact of the Russian invasion on education in Ukraine
- International support to Ukrainian students during the war

Healthcare

- Challenges and transformation of medicine in Ukraine before the war
- Impact of the war on medicine in Ukraine
- Foreign support of the Ukrainian healthcare system since the Russian invasion

RUSSIA WAS THE MAIN DESTINATION FOR UKRAINIAN MIGRANTS IN THE PAST

Not Soviet Time	Military aggression	Full-scale war
(1991 - 2014)	2014 - 2022	(February 2022 – ongoing)

The migration outflow from Independent Ukraine started in 1991 and was driven mainly by the **economic and political instability in the country** after the break-up of the Soviet Union. Within the first decade of Ukraine's independence, almost 85% of Ukrainian migrants settled in the former Soviet Union countries.

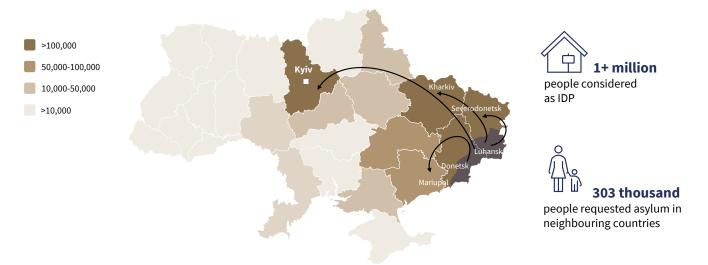
After the break-up of the Soviet Union, Russia and other CIS countries were attractive destinations for Ukrainians. Common historical past, the proximity of location, absence of language barriers, close family ties, and, most importantly, favourable policy regarding Ukrainians' employment contributed to the influx of labour migrants from Ukraine.

Top-5 destinations of Ukrainian migrants, thousand people



Since 2014, another big wave of migration from Ukraine has been driven by the Russian **annexation of Crimea and military aggression in the Eastern regions.** Thus, external migrant flows have shifted **to the EU and North American countries**. In addition, **starting from 2014, Ukraine has experienced** the most significant **internal displacement in** Europe since World War II. As of March 2015, almost one year after the Russian occupation of Donbas and Crimea, **the number of internally displaced people (IDP) reached 1.2 million**. **Kharkiv, Kyiv regions, and non-occupied parts of Donetsk and Luhansk regions** accepted the majority of IDP.

Top IDP destinations by region, as of March 2015

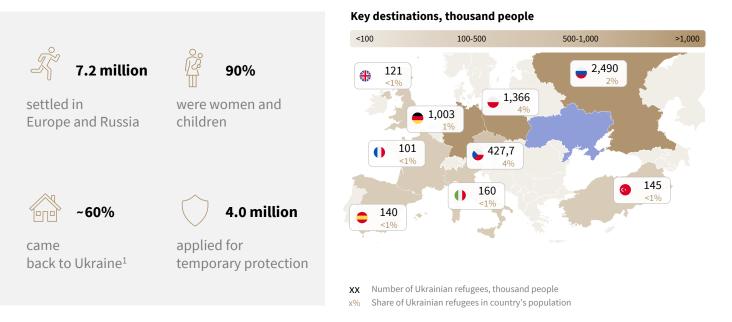


THE WAR CAUSED MASSIVE FLOWS OF UKRAINIAN REFUGEES WITHIN THE COUNTRY AND ABROAD

	Post Soviet Time	Military aggression	الله الم	Full-scale war
<	(1991 - 2014)	2014 - 2022		(February 2022 – ongoing)

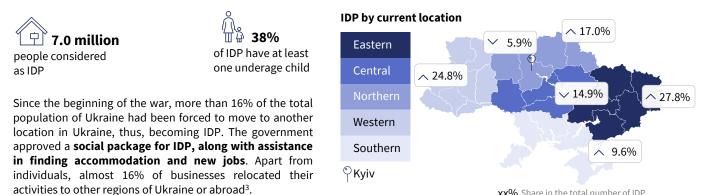
Since the full-scale Russian invasion of Ukraine, nearly **one-third of Ukrainians have left their homes** in seek of a safe haven. Massive displacement movements were also registered within the country. **Western regions of Ukraine became the preferred destinations**, as at the beginning of the war, they were considered by refugees as the safest territories. **Poland, Germany, and the Czech Republic** had the biggest inflow of Ukrainian refugees and responded quickly by **offering temporary protection and support**. Overall, the situation in Ukraine has been recognised as the **biggest human displacement crisis in the world nowadays**.

Outbound Ukrainian refugees at a glance as of 8 September 2022



In 2022, Ukraine became the **Top-2 country in the world in terms of the number of outbound refugees** (1st place – Syria). The majority of refugees settled in **EU countries** promptly in accordance with the **Temporary Protection** Initiative. However, over two million people were deported or forced to evacuate to Russia. After the de-occupation of the northern regions, **people started to return back**, especially from the other regions of Ukraine. According to the Razumkov Centre poll¹, 97% of outbound refugees plan to **come back from abroad after the end of the war or sooner**.

Internally displaced people at a glance as of 8 September 2022



XX% Share in the total number of IDPChanges in August compared to July 2022



ource: IOM — Ukraine Internal Displacement Report. Round 6 — [2022]; UNHCR website; Media overview

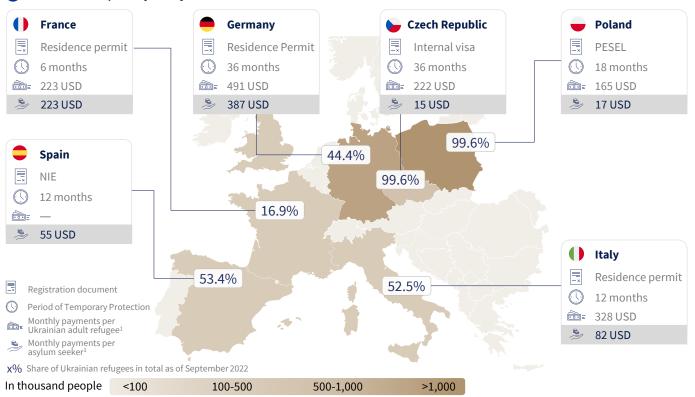
Notes: (1) According to the Adviser to the Minister of Internal Affairs as of 30 May 2022; (2) Conducted from 20 July to 25 August 2022 in 30 countries. The number of respondents — 511; (3) According to an Advanter Group poll conducted in July-August 2022

DESPITE THE NEGATIVE SHORT TERM IMPACT, THE REFUGEE CRISIS HAS LASTING BENEFITS FOR THE EU

Post Soviet Time	Military aggression	😪 Full-scale war
(1991 - 2014)	2014 - 2022	(February 2022 – ongoing)

In 2015, Europe experienced **the Syrian refugee crisis**. It resulted in **the growth of asylum applicants** in the EU **to 1.3 million people**, a 129% increase compared to 2014. In 2021, **Syrians, Afghans, and Iraqis** comprised ~40% of all asylum applicants in the EU. However, the war in Ukraine exacerbated the migration crisis in the EU. European countries promptly responded to the increase in Ukrainian refugee numbers and introduced measures to support those who were forced to leave their homes. In 2021, Ukraine was the 23rd in the number of asylum applicants filed in the EU. However, in March 2022, Ukrainians were the largest group of people seeking asylum.

Response of the European countries to the Ukrainian refugee crisis



EU countries, Temporary Protection

Temporary Protection allowed Ukrainian refugees to stay legally in EU countries, ensuring access to work, social welfare, and medical care. Germany and France, which had past experience in accepting refugees from the Middle East, established fast mechanisms for the provision of assistance to refugees. Also, Poland and the Czech Republic provided Ukrainian refugees with much greater support than that granted to non-Ukrainian refugees. In order to accelerate the integration of Ukrainian refugees into their societies, EU countries offered a range of benefits, such as free travel till July 2022, free language courses, and free access to education for Ukrainian children.



Dmytro Povreznyuk Talks about Migration, Refugees, Social Policy



Russia wanted to **disrupt Europe and Ukraine** with the **refugee crisis** in similar way as it was during the Middle East refugee crisis. However, **Europe demonstrated full solidarity with Ukraine** and helped to host **over 7 million refugees** mostly women and children with full financial and humanitarian support. Ukraine on other hand managed to place internally displaced people in the Western part of the country.

DECREASE IN LABOUR SHORTAGES AND THE INFLUX OF SKILLED TALENTS ARE KEY LONG-TERM BENEFITS

Post Soviet Time	Military aggression	۹ <u>م</u>	F
(1991 - 2014)	2014 - 2022	~ /	(Febru

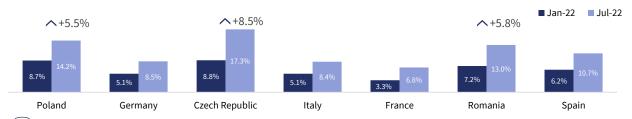
A huge inflow of Ukrainian refugees appeared to be a **challenge** for EU countries. After the experience of the Syrian refugee crisis in 2015, European countries **expect a negative impact** of the influx of Ukrainian refugees on their economies, e.g., through an increase in budget expenditures and growing inflation. However, accepting Ukrainian refugees also creates **opportunities that the hosting countries can benefit** from.

While the negative effects of hosting Ukrainians are expected in the short term, host countries might benefit from the gradual integration of Ukrainian refugees in the long run.

Growing inflation

A sudden surge in demand for housing, fuel, food, and healthcare services leads to **supply shortages** and drives **inflation to go up**. The highest inflation is recorded in the neighbouring countries of the **Czech Republic**, **Poland**, and **Romania**. However, the main driver of growing inflation remains the **energy crisis caused by Russia**.

Inflation rate in selected EU countries



Large budget expenditures

Host countries are experiencing a sharp increase in spending from government budgets due to providing support for refugees. However, according to estimations of the Kiel Institute, the cost of assistance to refugees **did not exceed 1% of GDP** in each of the hosting countries in March - August 2022 due to **strong support from sponsors and international organisations, as well as the willingness of Ukrainian refugees to work**.

Competition in labour markets

Employment of qualified refugees may **complicate the competition** in the labour market. There is currently increasing demand for Ukrainian **IT specialists**. Nevertheless, the biggest impediment to the employment of Ukrainian refugees is the **language barrier**.

Decrease in labour shortages

Refugees can **close the gap in low-paid or low-skilled jobs** where developed countries face labour shortages. According to the Polish government, almost **half of Ukrainian refugees are blue-collar workers**, while the remaining ones are employed as office workers, specialists, or technicians.

Previous employment of Ukrainian refugees, Top-5 sectors as of August 2022¹











F**ull-scale war** Iary 2022 – ongoing)

An influx of skilled talent

Many universities in the EU provide **support for Ukrainian students**. Some universities allow undergraduate students from Ukrainian universities to **continue their studies in Europe**, while others offer **scholarships and grants**. With gradual integration, young talent and experienced professionals with strong STEM² skills may contribute to the **development of the European technology sector**.

Acceleration of scientific progress

The integration of Ukrainian students & academics in hosting countries could **boost scientific development**. The EU has promptly set up initiatives aimed at supporting Ukrainian researchers: **MSCA4Ukraine** provides fellowships for doctoral candidates and post-doctoral researchers, and **Science for Ukraine** offers job and further research opportunities for Ukrainian scientists.

Russian missile strikes might heavily undermine the heating season

୨୨

We saw it in the Dnipropetrovsk region already. The Russians will resort to this in the future, during the heating season throughout Ukraine. That is why, understanding this, from the very beginning of the second stage of the war, which has been going on since 2014, we appealed to our international partners for help in closing the Ukrainian sky. We asked to close the sky precisely to prevent casualties among the civilian population and the destruction of civilian infrastructure.

DMYTRO LUBINETS

Commissioner for Human Rights of the Verkhovna Rada of Ukraine

Involvement during Russia's war against Ukraine: Dmytro Lubinets holds an active social position by raising awareness of Russia's war against Ukraine, giving special attention to the challenges that Ukraine faces daily, the issues of the release of prisoners, as well as systematic violations against the civilian population. Also, he calls on the world to prevent the execution of Ukrainian prisoners of war.

As of July 2022, more than 1.5 million Ukrainians left for Russia, voluntary or coercive. In your opinion, how should Ukraine ensure the observance of the rights of Ukrainians in Russia?

Russian Federation forcibly deported and continues to deport Ukrainian citizens to its territory by simply not giving them the opportunity to leave the temporarily occupied Ukrainian territory and go straight to Ukraine.

People go through a filtering process. It begins with the fact that all family members must go to a certain room if they want to leave together. In that building, they are automatically detained, all their documents are taken away, they are taken to different rooms. Men are kept separately from women and children. We have mass evidence that everyone is being stripped down to their underwear, looking for marks from the use of weapons. After that, they conduct interrogations and compare the answers to the questions.

The Government of Ukraine states that there will be a difficult heating season ahead with low temperatures, what is the reason for this?

The heating season will be extremely difficult. And this is not because we may not have enough gas or electricity. The Russian Federation is already directing its missiles at the infrastructure that provides heating for the civilian population and power plants.

We saw it in the Dnipropetrovsk region. The Russians will resort to this in the future, during the heating season throughout Ukraine. That is why, understanding this, from the very beginning of the second stage of the war, which has been going on since 2014, we appealed to our international partners for help in closing the Ukrainian sky. We asked to close the sky precisely to prevent casualties among the civilian population and the destruction of civilian infrastructure.

The main challenge for us is the safety of children

୨୨

The main challenge for us is, of course, the safety of Ukrainian children. The risk of rocket attacks remains all over Ukraine, and the enemy continues to apply psychological pressure by targeting crowded places, schools and kindergartens. However, having seen how hard it is for children to stay in shelters all the time, we decided to take the children out of the cities (towns) to the countryside complexes, where they can have a proper rest and an emotional release. This is very important because they have recently arrived from regions and areas where active fighting takes place. They are shutting themselves, being in a constant state of anxiety.

OLEKSANDRA KARPENKO

National Reforms Council under the President of Ukraine

Involvement during Russia's war against Ukraine: Since the beginning of the full-scale Russian invasion, Oleksandra has led several humanitarian initiatives: evacuation of the Ukrainian settlers from the hot spots to Warsaw, ordganisation of shelters for internally displaced persons in Dnipro, supervising educational projects for displaced children. In addition, Oleksandra manages the War Crimes investigation project.

You help internally displaced families and their children. Now, how many families and children have you been able to help?

As of September 2022, we were able to help around 120 displaced children of ages 6 to 16. Together with the Logos Centre for Applied Education, we organised one shift of a summer children's camp and three shifts of a day education camp. Every day the teachers worked hard to bring the children back to life and to teach them new ones . Activities included: art therapy, swimming pool, spoken English, mathematics, Ukrainian, fashion shows, workshops, various training sessions, vocals, magic chemistry, salt caves, sports tournaments, creative activities, board games, field trips, acting classes, parodies and a lot more. Our mission was to give the children psychological support and help them to start the school year in a stable emotional state.

During the war you organise summer camps and kindergartens for children. Do you have any plans to help children in other fields?

The school year has begun, so we have many plans for the educational development of children. Housing, employment, and socialisation remain the main problems for internally displaced parents and children. People found themselves in an extremely difficult situation when they need to take care of their child(ren), get used to a new environment, look for housing and how to make their living. It is gratifying that there are already many initiatives in this direction, but so far it is not enough to help everyone who needs it. In particular, there is a lack of projects for the construction of social housing – I think this is what the state can help with.

Staying at home for some people is the only way to a better mental health

୨୨

Almost every day I recollected Benigni's film 'Life is Beautiful', which I watched back in the late 90s. Could I have thought then that the film about the stay of a Jewish father with his young son in a fascist concentration camp would become my instruction, manual for survival so that when the war is over, we all remain sane?

KHRYSTYNA VLASOVA

Mother of two boys, decorator, and interior designer

Involvement during Russia's war against Ukraine: Since the beginning of the war, me and my husband, have supported local Territorial Defence Forces. We have helped pensioners, fed cats living in the streets, donated to the Armed Forces of Ukraine. We collected money for a sniper's rifle, for surgery for a man from the city of Nova Kakhovka, collected things for displaced people from Mariupol, and helped in setting up the hub.

Currently, all Ukrainians are going through a difficult stage of their lives, which is reflected in particular in their psychological state. Do you observe such changes in your children?

At the time of the full-scale invasion, our boys were 5 and 7 years old: they were no longer too young to be fully involved, worry, and mirror the mental state of their parents, but at the same time not mature enough to reflect on events that surrounded them. They cannot realise the war to the extent an adult can. Nor do they have the experience of a loss and the understanding of death. I believe that we are lucky - they have not seen death with their own eyes and do not follow the news yet. All they experience empirically is the sounds of sirens and explosions. When I was scared, they rather felt curious.

We slept in our little hallway over the course of the first 40 nights. One day a rocket landed relatively close to us (we live in Kyiv, Lukyanivka district), and our youngest said: 'Mom, do you remember how much afraid I was of fireworks? I am not afraid of them anymore.' I never wanted my child to get rid of phobias in such a perverse way. It is very painful.

I could see that my kids had no fear, and this allowed me not to leave everything, not to run, but to stay in the city, next to my husband. It was important for me to be near him, to be in my place, on my land, in the best city of the world — in my mystical and extremely powerful Kyiv. Together with my husband, we chose the only way to save ourselves – to be here and help others. Did the war affect our children? I think they grew up way too fast.

THE UKRAINIAN LABOUR MARKET IS CHARACTERISED BY HIGH LABOUR MIGRATION

The Ukrainian labour market had evolved gradually, having passed from agriculture to industry-oriented, as was when the country was a part of the USSR. After its breakdown, Ukraine stepped on the path of a service-oriented economy, with the national labour market increasing its focus on the wholesale and retail trade, as well as the agriculture and manufacturing sectors.

Key Ukrainian labour market figures in 2021



people of working

age

rate

514 USD unemployment average salary

in Ukraine

Political and economic instability after 2004, 2008, and 2014 has led to rapidly increasing labour migration of both skilled and unskilled workers, forcing them to leave the country in order to find more reliable sources of income. In addition, exploitation of workers and an extensive underground economy are still common issues that need to be addressed.

Top-3 sectors by the average wage in 2021



Unemployment rate by selected countries in 2021

Eastern European countries

Czech Republic Estonia Latvia 3% 6% 7%

employment rate of 56%.

and manufacturing sectors.

regions.

In 2021, 16 million people were

officially employed in Ukraine, with an

The largest share of the employed population worked in the wholesale and

retail trade, as well as the agriculture

Kyiv, Kharkiv, Lviv, and Odesa regions

registered the lowest unemployment

rates in Ukraine. At the same time, there were significant regional disparities in

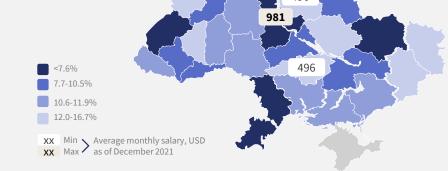
salaries, with the highest average wage in

Kyiv and the lowest in Chernihiv,

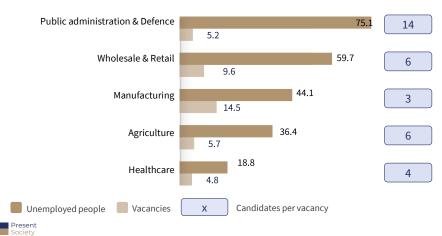
Kropyvnytskyi, and Ivano-Frankivsk



Neighbouring countries Former Soviet Union countries Moldova Ukraine Belarus Kazakhstan Russia 4% 5% 5% 5% Unemployment rate of the working-age population in 2021 496 981



Top sectors by the number of unemployed people, thousand of people / vacancies¹, as of June 2021



On 1 June 2021, the largest number of the unemployed population was registered in the public administration & defence sector due to the civil service reform, while the manufacturing sector had the largest number of vacancies. As well as public administration and defence, the competition in the workplace was the most intense in financial services and insurance. The least number of people per workplace was registered in the mining and water supply trade, as well as the utility sectors.

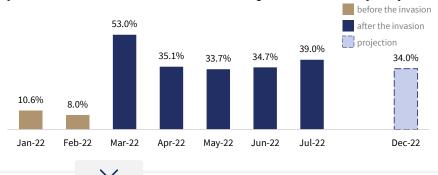
Source: State Employment Centre - The situation on the labour market - [2022]; State Statistics Service of Ukraine website; Media overview Notes: (1) Relevant vacancies registered at employment centres

68

ALMOST A THIRD OF UKRAINIANS HAVE LOST THEIR JOBS SO FAR DUE TO THE RUSSIAN INVASION

Since the beginning of the war, almost 30% of Ukrainians have lost their jobs due to a steep decline in economic activity and displacement, considering the security risks. The **number of** Ukrainians returning to work rose compared to March 2022. However, the National Bank of Ukraine reported a record increase in the unemployment rate. Still, temporarily occupied territories and active combat zones remain areas where employers cannot offer proper working conditions.

Share of unemployed population in Ukraine (data based on non-official surveys and NBU report)



Changes in the labour market of Ukraine, as of 1 August 2022 vs 1 February 2022





The labour market of Ukraine **was adversely hit by the Russian invasion**. According to the Ukrainian personnel portal, Work.ua, **the number of vacancies dropped by more than 14 times** at the beginning of March 2022 compared to the pre-war period. Companies were forced to **cut salaries or cancel bonuses**, send workers on **vacation at their own expense**, **fire employees**, or even **stop operations completely**.

Top sectors by the number of unemployed people, thousand of people / vacancies², as of August 2022³



As of August 2022, the average salary comprised 380 USD per month, a 25% decrease compared to the pre-war level. At the same time, the number of candidates per vacancy rose by 2 times. In August 2022, the highest competition for a workplace was registered in the financial services & insurance trade (70 people per vacancy) and in public administration & defence. As of August 2022, more than 16 thousand unemployed people were conscripted to military service, and nearly 13 thousand were employed in the public administration & defence sector.

Source: Advanter — Study of the state of SMEs in Ukraine — [2022]; Rating Group — Employment sociological survey — [March, May 2022]; The State Employment Centre website; Media overview

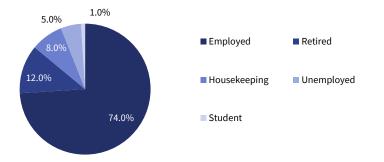
Notes: (1) According to the European Business Association research; (2) Relevant vacancies registered at employment centres; (3) Compared to August 2021

Present

AROUND THREE MILLION PEOPLE OF WORKING AGE FLED ABROAD AFTER THE RUSSIAN INVASION

Since the start of the war, more than 7 million¹ refugees have left Ukraine. The majority of refugees are women, children, and men over 60. Around 84% of refugees are of working age, many of whom have lost their jobs or had to resign due to the war. This caused an unexpected employment crisis, while the neighbouring countries are now facing rather significant labour market integration challenges.

Ukrainian refugees by employment status before the war, as of August 2022



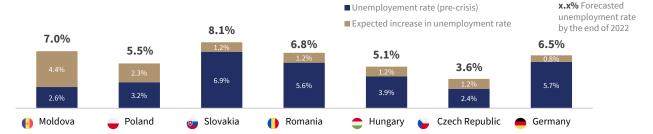
Survey of Ukrainian refugees regarding job search²



70

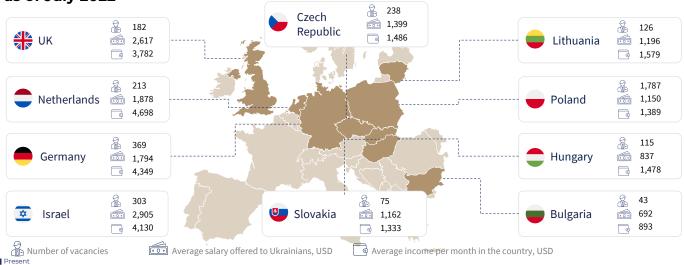
Unlike refugees from other countries, **Ukrainians immediately began to integrate into society**. To support this, the European Union **simplified the job search process** after the registration of the migrant worker or temporary protection status. Despite a significant share of refugees finding work, **many Ukrainians faced several difficulties in their job search**. The majority of those who encountered obstacles in employment **determined that the language barrier was a top impediment**.

Refugee crisis impact on local labour markets²



The **employment crisis in Ukraine** caused by the Russian invasion might also create **labour disturbances** in the neighbouring countries, mainly **Moldova, Poland, Slovakia, Romania,** and in **Hungary**. The longer hostilities continue, the longer Ukrainian refugees **would be forced to remain in exile, putting additional pressure** on the **labour markets and social security systems** in the hosting countries. Moreover, Ukrainians are generally offered **lower salaries** than average in other particular countries. This situation could **cause an additional imbalance** in the labour market and **escalate competition among local candidates**.

Top-10 countries by the largest number of vacancies offered to Ukrainians, as of July 2022³



Source: United Nations High Commissioner for Refugees website; International Labour Organisation website; Media overview Notes: (1) As of 8 September 2022; (2) Based on the UK's Office for National Statistics survey; (3) According to OLX Work data as of July 2022

There is a low level of trust between entrepreneurs and state authorities

୨୨

The main problem in organising cooperation between businesses and public authorities is a low level of trust. Recently, we have been trying to change it and persuade businesses that we have one common goal: to ensure compliance with legislation, stability of operation and development of an enterprise, as well as creation and preservation of jobs.

IHOR DEGNERA

Head of the State Labour Service of Ukraine

Involvement during Russia's war against Ukraine: Under martial law, one of the main factors for victory is to support the Armed Forces of Ukraine. Paying taxes is more important than ever. The State Labour Service of Ukraine actively supports employers and employees by providing consultations on such important issues as labour relations during the martial law period, as well as providing advice to refugees on the safe job search.

What are the prospects and priorities of the State Labour Service of Ukraine after the war?

As soon as Ukraine wins, the efforts of the State Labour Service will be directed to assist in restoration of the economy, in line with the requirements of the law. Many years of experience show that once a mechanism is set up, it can operate for many years. We plan to carry on the implementation of projects in the field of advisory services to employers and online consultations. In addition, a set of measures is being developed, aimed to remove the practice of undeclared labour as much as possible. In such a civilised country, there is no room for impeding economic development, as well as preventing workers and employers from building their relations on the principles of partnership and mutual respect.

We also plan to wage an information campaign, targeted at forming and strengthening public respect for the labour protection law.

On 1 July 2022, the information campaign 'Go to Light!' was launched. In your opinion, how effective is it?

Undeclared labour relations give employers unlimited opportunities to exert pressure on workers, and facilitate tax evasion. It also reduces revenues to the national and local budgets. People working unofficially are deprived of their right to decent working conditions, protection of their interests at work and guarantees of social protection.

According to the most recent data published by the State Statistics Committee, the share of the unofficially employed was 17.6% of the total working population.

During the campaign, labour inspectors visit employers, inform them about the requirements of the law, and then monitor the state of their labour relations. Since the beginning of the campaign, 42,000 information visits to employers have been made, with 23,000 workers legalised by their employers.

CULTURAL HERITAGE AND MENTAL VALUES SHAPE THE CORE OF THE UKRAINIAN IDENTITY

The Ukrainian identity, including language, traditions, core values, cultural heritage, and art, form a system of unique signs and properties that distinguishes Ukrainians from others. The system has been shaped under the influence of historical and social events throughout the centuries up to date. Ukrainian language and culture were suppressed for a long time.

Even the culture of Ukrainian borscht cooking has to be defended, as Russia has been trying to appropriate this Ukrainian dish for years. Comprising a huge amount of various unique elements, the Ukrainian identity reflects the depth and diversity of the Ukrainian soul and true national character, which need to be protected and preserved for future generations nowadays.

Key components of the Ukrainian national identity



FOR AGES UKRAINIANS HAVE BEEN FIGHTING FOR THEIR CORE VALUES – FREEDOM, JUSTICE, SAFETY

Freedom, justice, and safety are the fundamental values of different generations of Ukrainians. These **social values have been shaped throughout the centuries**, as Ukraine was occupied for a long time, initially by the Russian Empire and later by the Soviet Union.

Since the start of the full-scale Russian invasion in February 2022, millions of Ukrainians have stood up for their core values by

defending the country, supporting the army, and volunteering. In May 2022, more than 95% of Ukrainians referred to freedom among their main values¹.

Additionally, **82% of citizens consider democracy as an indispensable form of governance**, fighting for it during the Soviet repressions, revolutions in 2004^2 and $2013 - 2014^3$, and in the war against Russia in 2022.

Key values of Ukrainians⁴



Global manifestation of Ukrainian identity

Colours of Ukraine

In May 2022, the Pantone Colour Institute showed support for Ukraine by posting the colours of the Ukrainian flag, naming them Freedom Blue and Energising Yellow.



Be Brave Like Ukraine

In 2022, Ukraine launched an international advertising campaign about the bravery of Ukrainian people, placing billboards on the streets of more than 15 countries worldwide.



OPINION CORNER

Diana Sudareva Talks about National Consciousness, Ukrainian Identity, Values, and Dignity



For many Ukrainians, Russian full-scale invasion on 24 February 2022 was **a point of no return in many ways**. More and more **citizens switch to the Ukrainian language**, more and more songs in Ukrainian appear on music charts, society feels not only emotional upliftment but also unity and deep respect and honor for others. **Ukrainians once again have to defend their core values**, and this time, it is happening in a war started by a neighboring terrorist state. The **bravery**, **dedication**, and courage of Ukrainians leave no doubt about our victory.

Source: Rating Group website; The United Nations Development Programme (UNDP) website; Pantone website; Brave.ua website; Media overview

Notes: (1) According to Rating Group survey among 1,000 respondents, conducted in May 2022 in all regions except for the temporarily occupied territories of the Crimea and Donbas; (2) Orange Revolution; (3) Revolution of Dignity; (4) According to UNDP survey, n=2,002, conducted in December 2020; (5) European Court of Human Rights; (6) During 24 February 2022–7 April 2022

THE UKRAINIAN LANGUAGE WAS BANNED BY THE RUSSIAN EMPIRE AND LATER BY THE SOVIET UNION

Throughout the centuries, the Ukrainian language, as the main component of the Ukrainian identity, was suppressed and banned by the Russian Empire and later again by the Soviet Union. Those who spoke or wrote in Ukrainian were persecuted, punished, or killed.

Selected examples of suppressed Ukrainian cultural organisations

- Brotherhood of Saints Cyril and Methodius. The first secret Ukrainian political organisation, based on traditions of the Ukrainian liberation movement, was quickly suppressed by the authorities in 1847, with most of the members being exiled or imprisoned
- Executed Renaissance. Generations of Ukrainian-language poets, writers, and artists of the 1920s and early 1930s, who created highly artistic literature, painting, music, theatre, and cinema works, were murdered during the Great Terror¹
- Sixtiers. The generation of the Ukrainian national intelligentsia of the 1950s - 1960s, with a pronounced civic position, was destroyed or driven underground by arrests during a decade



80% influencers were

of creative Ukrainian suppressed or killed in the 1930s





Ukrainian cultural figures were arrested in August - September 1965

Selected cases of Ukrainian language suppression

• 1720

Decree of Peter I, Monarch of the Tsardom of Russia and later the Russian Empire⁴, prohibited book printing in Ukrainian and forced the removal of Ukrainian texts from church books

1863

'Valuev circular'⁵ banned publication of religious, educational, and literature recommended for the use in primary literacy training in the Ukrainian language

1876

Emsky degree of Alexander II, Emperor of Russia⁶, prohibited musical works and stage performances in Ukrainian, as well as the printing and importing of any sort of Ukrainian literature

1881

Prohibition of teaching in elementary schools and the conduction of church sermons in the Ukrainian language

1914-1916

Russification campaigns in Western Ukraine aimed to ban the Ukrainian language, as well as education and church

1929

Arrests of Ukrainian scientists and clergy, as well as their replacements, by Russian-speaking figures

1958

Resolution of the Plenum of the Central Committee of the CPSU⁷ on the transition of Ukrainian schools to the Russian language of tuition

• 1970

Order of the Ministry of Education of the USSR to write and defend thesis only in Russian, with approval only in Moscow

1990

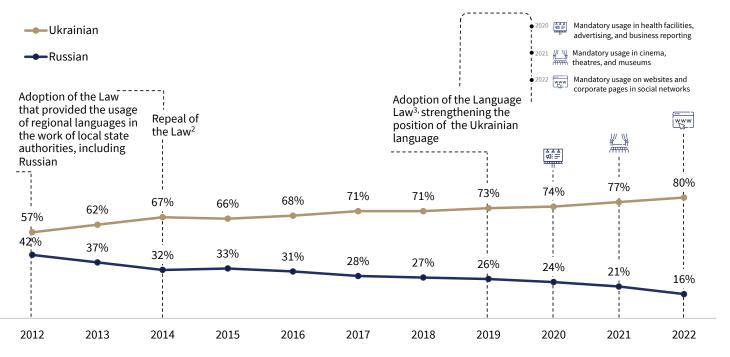
Adoption of the Law on Languages of the USSR nations, granting official status to the Russian language across the entire territory of the Union

ource: Learning.ua website; Patentbureau website; Media overview

Notes: (1) Soviet General Secretary Joseph Stalin's campaign to solidify his power; (2) Ukrainian poet and artist; (3) During 1847-1858; (4) 1682-1725; (5) A secret order of the Minister of Internal Affairs of the Russian Empire Peter Valuev to the territorial censorship committees; (6) 1855-1881; (7) Communist Party of the Soviet Union

DESPITE ALL ATTEMPTS, THE SHARE OF UKRAINIAN-SPEAKING PEOPLE HAS BEEN RISING SINCE 2012

What language do Ukrainians consider to be native?¹



As Ukraine declared its independence in 1991, an increasing amount of its **citizens claimed Ukrainian as their native language**. The share of the population speaking Ukrainian at home also increased, while the usage of Russian as the main language decreased. The **current Language Law, adopted in 2019, strengthened the position of the Ukrainian language** and provided its mandatory usage in public administration, services, education, and media. The share of Ukrainians who read in the Ukrainian language increased from 24% in 2014 to 36% in 2020, while Russian-language literature was preferred by only 24% of readers in 2020, compared to 44% in 2014⁴. In 2022, **83% of citizens wanted to see Ukrainian as the only state language**, compared to 47% in 2014⁴. In addition, the Russian invasion of Ukraine in February 2022 **extremely strengthened the position of the Ukrainian language**, stimulating even those who never spoke Ukrainian to switch to it on a permanent basis.

Selected cases of the ban and persecution of Ukrainian language since the beginning of the war in the temporarily occupied territories

Destruction of Ukrainian books

Seeking and burning historical books and books in the Ukrainian language by Russian occupiers

Seizure of Ukrainian historical and fiction literature from the libraries in the temporarily occupied territories of the Luhansk, Donetsk, Chernihiv, and Sumy regions

Studying by Russian curriculum

Compulsion to study in accordance with the Russian curriculum and standards at schools and kindergartens



The Russian Ministry of Education announced that from 1 September 2022, **schools** in the temporarily occupied cities of the Zaporizhzhia region would **have to work under Russian standards**

Pressure on school workers

Kidnapping people because of their unwillingness to cooperate with Russian occupation forces



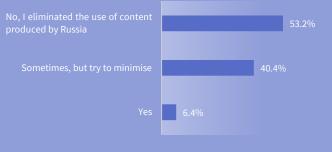
Kidnapping of the Head of the Education department and three school principals who refused to cooperate with the Russian occupiers in temporarily occupied Melitopol in March 2022

Source: Rating Group — The 10th national survey: Ideological markers of the war — [April 2022]; Verkhovna Rada of Ukraine website; VoxUkraine website; Media overview Notes: (1) According to the Rating Group national survey, conducted in all regions except for the temporarily occupied territories of the Crimea and Donbas, n=1,000; (2) Declared unconstitutional in 2018; (3) Provides for the gradual entry into force of its provisions by 2030; (4) According to Info Sapiens and GFK surveys, n=751 for 2020, n=1,000 for 2014

THE RUSSIAN INVASION CAUSED THE REVALUATION OF NATIONAL CULTURAL VALUES BY UKRAINIANS

More than 90% of Ukrainians either eliminated or minimised the use of the content produced by Russia after the beginning of the war. There are numerous evidences how Russia has used the culture (films, music, literature etc.) as a part of its propaganda and the hybrid aggression tool. Therefore, the majority of Ukrainians are trying to overcome the impact of the enemy on cultural sphere.

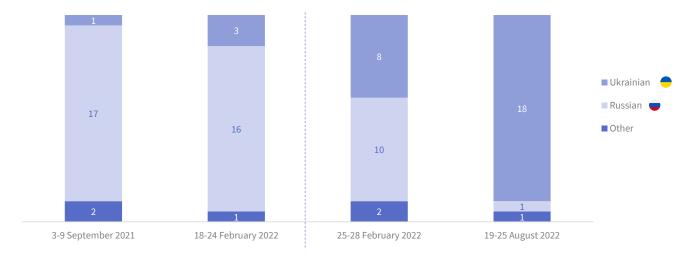
Do you continue to use the content produced by Russia after the invasion $\mathbf{^{1}}$





share of Ukrainians who have switched from Russian to Ukrainian language following the full-scale invasion¹ After the start of the full-scale Russian invasion, **29.0% of Ukrainians switched from Russian to Ukrainian language**, which demonstrates the growing awareness of people regarding their national identity. Moreover, the majority of Ukrainians understand that the enemy is using language and other cultural matters as weapons of the hybrid war.

The rising cultural self-awareness of the Ukrainians has also reflected in the **increasing volume** of content (in particular songs and videos) produced in Ukrainian, as well as in the growing popularity of this content among the Ukrainians. For example, almost a year ago in September 2021, 17 out of 20 most popular songs on YouTube in Ukraine were in Russian language, while in August/September 2022 the situation is absolutely reverse – 18 out 20 most popular song are in Ukrainian.



Top-20 popular songs in Ukraine according to YouTube charts, by language

The level of unity among the Ukrainians has increased since the beginning of the war according to almost 90% of respondents. Most people demonstrated an outstanding suppor

of each other and the defenders amid the attempt of the Russian occupiers to destroy the Ukrainian nation and the sovereignty of the country.

?

In your opinion, has the level of unity among the Ukrainians changed since the invasion?¹

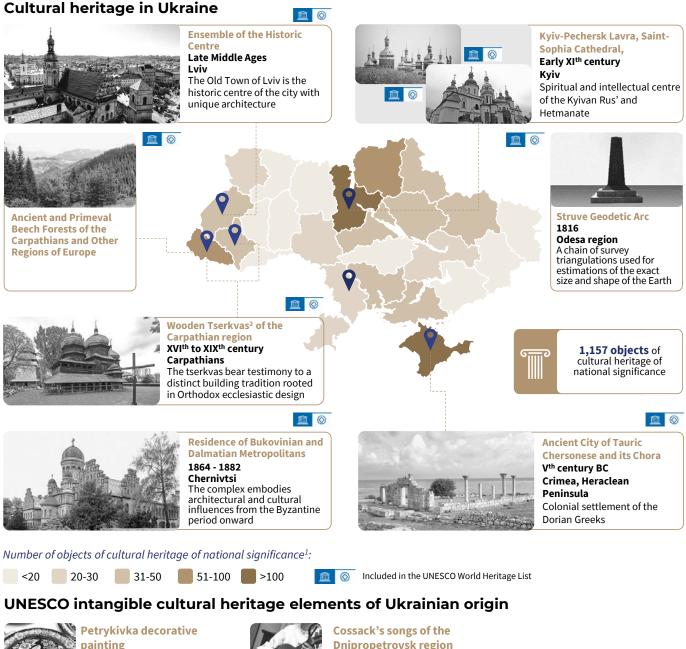
88.0% Yes, it has increased

7.0% No, it has remained unchanged

5.0% Yes, it has decreased

UKRAINE HAS UNIQUE CULTURAL SITES, WITH 7 LANDMARKS LISTED IN UNESCO WORLD HERITAGE

Ukraine's architecture and arts represent a legacy of many historical periods and reflect both the international cultural footprint and the authentic Ukrainian-inherent charm. Ukrainian cultural heritage is globally recognised, with seven locations in Ukraine being inscribed on the UNESCO World Heritage List: six of them are cultural locations, and one is a natural sight. The UNESCO Intangible Heritage List also contains five cultural elements of Ukrainian origin.



2013³

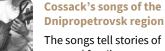
A style of ornamental

painting with a high degree of symbolism



Ornek, a Crimean Tatar ornament

A system of symbols and their meanings currently used in embroidery, weaving, pottery, and engraving



war and family relationships

Culture of Ukrainian borscht cooking

Variations of borscht can include mushrooms, fish, or sweet peppers, but necessarily — a beetroot

2019

Tradition of Kosiv painted ceramics The tradition rose in the XVIIIth century and involved using clay

Source: UNESCO World Heritage Centre website; UNESCO Intangible Cultural Heritage website; Media overview Notes: (1) As of 14 January 2022; (2) Churches; (3) Year of the inscription on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity

2016

2022

DID YOU KNOW THAT THE TALLEST STATUE IN EUROPE IS LOCATED IN UKRAINE ?

The **tallest monumental sculpture in Europe** is **Motherland** in **Kyiv**, with a **height of 62 metres**. The Motherland Monument holds a 16-metre-long sword in one hand and a 96 m² shield in the other.

The highest statues¹ in Europe



THE RUSSIAN ARMY HAS PARTIALLY OR TOTALLY DESTROYED 186 CULTURAL SITES

...any damage to cultural property, irrespective of the people it belongs to, is a damage to the cultural heritage of all humanity, because every people contributes to the world's culture...

Preamble of the 1954 Hague Convention¹



Actions taken by Ukrainians to preserve cultural heritage during Russia's war against Ukraine

In March 2022, volunteers from the international project **Save Ukrainian cultural heritage online** created a digital archive of the majority of Ukrainian cultural heritage objects. The team of more than **1,300 cultural heritage professionals** – librarians, archivists, researchers, and programmers – saved more than 50 TB³ of scanned documents, artworks, and many other digital materials from more than 5,000 websites of Ukrainian museums, libraries, and archives.





To cover the stained-glass windows of the **Kyiv funicular** with special shields, volunteers collected **9,441 USD**⁴ of **donations from 662 people** in March-April 2022. Thus, the windows of the upper station were covered with 12 wooden shields, strengthened with fire-proof tarpaulin and galvanised iron sheets. Similar works were carried out at the lower station. The protection of the stained glass windows **took more than a month**.

Many **monuments in Ukraine are protected by structures made of bags of sand**. Large monuments, such as the one dedicated to Knyahynya (Queen) Olha and Volodymyr the Great in Kyiv, as well as smaller monuments, such as the one dedicated to Dante Alighieri have been closed. Odesa residents have also hidden the main monument of the city — Duke de Richelieu. The **smaller monuments were dismantled and carried away** to safer places.



Source: UNESCO World Heritage Centre website; Destroyed Cultural Heritage of Ukraine website; Saving Ukrainian Cultural Heritage Online website; Media overview Notes: (1) UNESCO Convention for the Protection of Cultural Property in the Event of Armed Conflict, ratified by both Russia and Ukraine in 1957; (2) According to UNESCO website as of 11 July 2022; (3) Terabyte; (4) Numbers are converted from UAH to USD based on the exchange rate by the NBU as of 14 July 2022

Nothing Ukrainianises Ukrainians as much as Putin's missiles and shells

୨୨

The major difference between Ukrainians and Russians is not the language, religion or culture, but it lies in different political traditions and relations between the authorities and the population, the state and the society. Ukrainians have never treated power as something sacred, but often as something alien — and therefore they have had a strong experience of self-organisation, which the Russians do not have. In modern conditions this formula can be rewritten as follows: in Ukraine someone like Putin or Lukashenko is impossible (Yanukovych tried two times, but failed), while in Russia impossible is something like the victorious Maidan.

DR YAROSLAV HRYTSAK

Historian; Doctor of Historical Sciences; Professor of the UCU, Lviv

Involvement during Russia's war against Ukraine: Dr Yaroslav Hrytsak highlights facts on the Ukrainian history, comments on the situation in the country after the full-scale invasion, and considers the war from a historical perspective. In addition, he gives interviews to raise awareness about Ukraine: its history and identity.

In your opinion, what can be characterised as a Ukrainian identity? How has it changed since the Declaration of Independence in 1991, especially since the start of the full-scale invasion?

The major difference between Ukrainians and Russians is not the language, religion or culture, but it lies in different political traditions and relations between the authorities and the population, the state and the society. Ukrainians have never treated power as something sacred, but often as something alien — and therefore they have had a strong experience of self-organisation, which the Russians do not have. In modern conditions this formula can be rewritten as follows: in Ukraine someone like Putin or Lukashenko is impossible (Yanukovych tried two times, but failed), while in Russia impossible is something like the victorious Maidan.

Since 1991, the number of those who consider the Ukrainian language their native language has been steadily growing. In your opinion, what are the main factors influencing this trend?

The number one contributing factor is the emergence of Ukraine as an independent state. The existence of independent Ukraine as a new reality inevitably spawns the tendency toward the growth of a Ukrainian-speaking share of the population, especially among the power elite. As far as this factor is concerned, the three-generation rule applies here: full language assimilation is in place among the generation of grandchildren. The second contributing factor is russia's policy: nothing

Ukrainianises Ukrainians as much as Putin's missiles and shells lately. Famous Ukrainian historian Antonovych compared Ukrainians with the Irish: even if all Ukrainians spoke Russian, it would not make them Russians, just as the English language did not make the Irish English.

There were many attempts to destroy Ukrainian cultural identity

୨୨

The government should support initiatives aimed at studying the cultural and national identity of the Ukrainian nation, as well as encourage scientific research that sheds light on the historical, cultural, and political foundations of the formation of Ukrainians as a nation. And of course, those things, which are a part of the national pride and characterise Ukrainians the most, should be promoted by the state and incorporated into the country's brand.

DR ANTON DROBOVYCH

Head of the Ukrainian Institute of National Remembrance

Involvement during Russia's war against Ukraine: Dr Anton Drobovych fights in the ranks of the Armed Forces and continues giving expert media interviews online. Recently, Anton became a member of the World Economic Forum in Davos, delivering his speech straight from the trench.

In your opinion, what are the core values of Ukrainians and what factors have influenced their development?

The main ones are freedom, dignity, justice, and self-sufficiency in the understanding of economic independence. A long history of being suppressed by empires and the memory of the glorious times of Cossacks have created an immense desire for freedom — to live as they have decided for themselves, without a king, lord, or oppressor. Such things as rethinking the experience of World War II or the Revolution of Dignity have created strong respect for human dignity, human rights, and the unconditional value of the individual. For a long time, Ukrainian land was in the hands of foreign lords, whose rule provoked an immense urge for Ukrainians to have their land and desire to be economically independent and autonomous.

What explains this permanent desire to destroy the Ukrainian language and why it still exists and develops to this day?

Language is one of the key markers of identity, which is why everyone who established control over Ukrainian territories tried to assimilate the local population and reduce the level of cultural identity, and especially displace the Ukrainian language. This has failed: complete and natural character systems of great communities do not emerge at random; they are formed over centuries; hence it is not so easy to supplant or destroy them. But the main factor of the language's survival is its authenticity and relevance to Ukrainians. It is something intrinsic and important, something that is perfect and different, therefore valuable.

Those who explode with a 'suppression of russian language' rhetoric do not read

୨୨

These trends will continue and I hope that the current dramatic events will add such features as responsibility for one's choice, as well as an ability to exert consolidated control over authorities. This will be the modernised Ukrainian political nation that is emerging now.

KOSTIANTYN KOZHEMYAKA

President of Fund for Cultural Initiatives ArtHuss

Involvement during Russia's war against Ukraine: Kostiantyn continues working actively, implements new projects dedicated to modern Ukrainian artists and the Ukrainian culture, making a significant contribution to cultural diplomacy and popularisation of modern Ukrainian art in Ukraine and abroad.

What do you think can be characterised as Ukrainian identity? How has this Ukrainian identity changed since 1991?

In its origins, the Ukrainian identity was shaped by the historical principle and, to a lesser extent, by the geographical principle. Since 1991 a Ukrainian political nation has been formed, based on the identity of the core nation and on the principles and the values, shared by all who live in the country, regardless of their nationality. Such values are freedom, democracy, empathy, inclusiveness, etc.

In 2030, these trends will continue and I hope that the current dramatic events will add such features as responsibility for one's choice, as well as an ability to exert consolidated control over authorities. This will be the modernised Ukrainian political nation that is emerging now.

19 June 2022, Ukrainian Parliament passed a law banning imports of Russian literature. What impact will this decision have?

Same as the visa regime with the Russian Federation, this should have been imposed much earlier. But we should not pin all the blame on politicians, before 24 February 2022 38% of the Ukrainians tolerated Russia with varying degrees of loyalty. Despite that the war has been on for 8 years. We can now witness the process of catharsis. Everything undergoes radical and dramatic changes, including changes of attitude.

Looking at the reading audience of my publishing house, I can assure you that over the last 7-8 years the most active readers seeks to read Ukrainian-language publications. And those who shout about the 'oppression of Russian books', do not, as a rule, read books at all, neither in Russian nor in Ukrainian.

DID YOU KNOW THAT THE FIRST UNIVERSITY IN EASTERN EUROPE WAS OPENED IN UKRAINE?

Prince Konstantin-Vasily of Ostroh established the Ostroh Academy, the first institution of higher education in Eastern Europe and the oldest Ukrainian scientific and educational institution.



Ostroh

Kyiv

UKRAINIAN FOUR-LEVEL EDUCATIONAL SYSTEM FACES A DECLINE IN STUDENTS

In the early 1990s, the **significant demographic changes and economic recession in Ukraine** led to a reduction in the number of students and, hence, the number of educational institutions and teachers. In 2014/2015, the number of students, teaching staff, and educational institutions further declined due to the occupation of the territories in the Donetsk and Luhansk regions, as well as the annexation of Crimea. Ukraine's education system comprises four primary levels: **preschool, secondary, professional, and higher education.**

Number of students, thousands 11,633 1.615 10,061 648 1,789 7,057 6,946 525 1,689 1,336 7,102 244 316 6,764 4,230 3,757 1991/1992 2000/2001 2014/2015 2021/2022

■ Preschool ■ Secondary school ■ Professional ■ Higher education

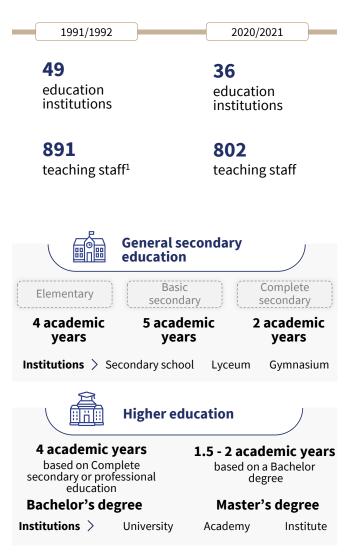
Structure of Ukraine's education system



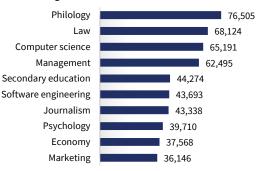
Top Universities in Ukraine as of 2022

1	651 - 700	Taras Shevchenko National University of Kyiv	
2	701 - 500	NTUU ² 'Ihor Sikorsky Kyiv Polytechnic Institute'	
3	541 - 550	Karazin Kharkiv National University	
4	810 - 1000	Lviv Polytechnic National University	
		National Technical University 'Kharkiv Polytechnic Institute'	
5	651 - 700	, , , , , , , , , , , , , , , , , , ,	

Number of institutions & staff, thousands



The most popular majors in the 2020/2021 academic year⁵



Source: The Ministry of Education and Science of Ukraine website; World Intellectual Property Organisation; State Statistics Service of Ukraine website; Media overview Notes: (1) As of 1998/1999 educational year; (2) National Technical University of Ukraine; (3) Consolidated rating; (4) Featuring 1,300 universities from around the world. After 200 positions, universities do not get individual places but are placed in a group (201 - 250); (5) By number of applications

BEFORE THE WAR, UKRAINIAN EDUCATION MOVED TOWARD EUROPEAN STANDARDS

Nevertheless, the Ukrainian education system has a long history. During the XXth century, it was shaped and controlled by Russia. **Until 1991 the education system was extremely politicised and impacted by the long-lasting russification policy.**

Starting from 1991, Ukraine has been introducing reforms in the field of education to reflect changes in its economic, political and social policies. **Independence and globalisation** became the main guiding principles of these reforms.

Since 1992, Ukrainian authorities have been adopting rules regarding licensing, accreditation, and legal **establishment of private institutions of higher** education. In 2005, Ukraine joined the **Bologna Process to harmonise its local** higher education with the European one. In 2006, an **External Independent Evaluation** (EIE) was launched with the aim to give equal access to quality education, monitor compliance of secondary education with the **State Standard**, and analyse the reforming process.

Countries by education rating, as of 2021 The number of Ukrainian students abroad began to **Top-3 countries increase**, especially after the annexation of Crimea and the USA UK Germany armed conflict in the east of Ukraine. The most popular destination for educational migration was primarily **Europe**, 2 1 3 namely Poland, Germany, and the Czech Republic, as well as North America. In turn, the Ministry of Education and Science promotes Ukrainian education at the international **Neighbouring countries** level. As of 2021, there were 37.5 thousand registered Poland Ukraine Hungary invitations for foreign applicants, with medicine being the most popular major among international students. 26 30 ~80,000 Slovakia Romania Belarus Ukrainian students 47 45 52 studied abroad in 2020

Ukrainian education at a glance, as of the 2021/2022 educational year

Preso	:hool	Secon scho	ndary ol		Professional & Higher
15,335 kindergartens	<5% private kindergartens	13,991 schools	> 4 million pupils	338 colleges	281 universities
3-7 years old preschool age	~58% penetration of preschool education	∼9 students/● ^{VS} teacher	~12 students / ● teacher	>1 million students	~6% international students

OPINION

CORNER

In 2018, the Ukrainian government launched a **reform programme in education called 'New Ukrainian School'**, which aimed to create **a new education environment** as a main priority. Reform implementation consisted of **three stages**, starting with the launch of the new **State Standard of Primary Education** in 2018, followed by the reform **of basic secondary education, scheduled for 2022.** The final stage of the reform that **dealt with profile secondary education** was projected to start in **2027.**

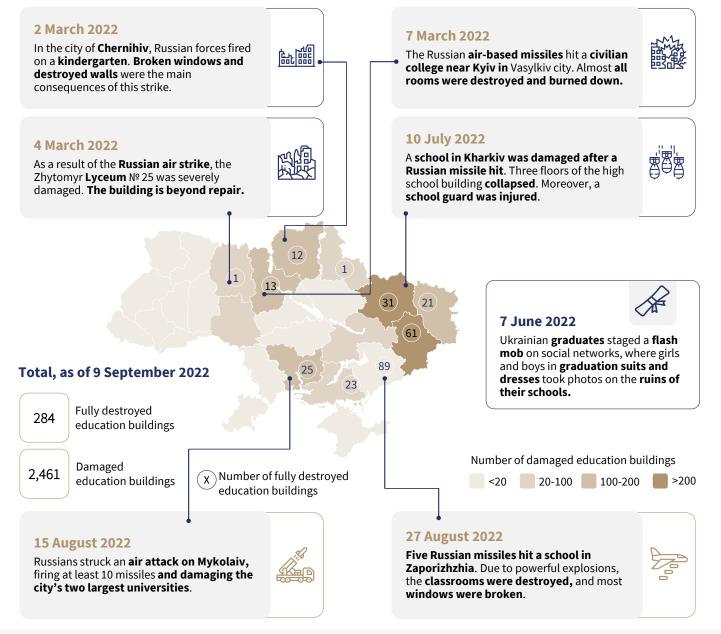
Source: The Ministry of Education and Science of Ukraine website; World Intellectual Property Organisation website; State Statistics Service of Ukraine website; Media overview Pavlo Timchenko Talks about Educational Management, Digitalisation, Innovations, and Reforms



On 27 July 2022, the Ukrainian Parliament adopted the law, according to which the Automated Information Complex of Educational Management will become operational in Ukraine. The system will ensure digital interaction with an appropriate level of personal data protection between state and local self-government authorities, educational institutions, and participants of the educational process. This law will help speed up the de-bureaucratisation of the educational process and the digital transformation of education in Ukraine.

DESPITE MASSIVE CHALLENGES, ACADEMIC YEAR 2021 / 2022 IN UKRAINE WAS FULLY COMPLETED

Destroyed and damaged education institutions as a result of the Russian invasion



Ukrainian education at a glance

2021/2022 educational year

650,000 or ~16% of all Ukrainian pupils¹ were forced to move abroad



Graduates received diplomas, EIE was changed for the Multisubject test², and entrance campaigns were primarily adopted for online 69 professional and higher education institutions moved their operations to the safer regions of the country

Remote school education Google, the Ministry of Ed&Sc³ of Ukraine, and UA TV channels created an **'All-UA online schedule'** for school students

2022/2023 educational year

~51% of schools are ready for offline education⁴ the 2022/2023 academic started with only

half of the educational institutions, with shelters in place in case of bombings0

Educational format, thousand children

506	865	3,034
began the	began the	began the
academic year in	academic year	academic year
the EU schools	offline	online or in mixed
		format

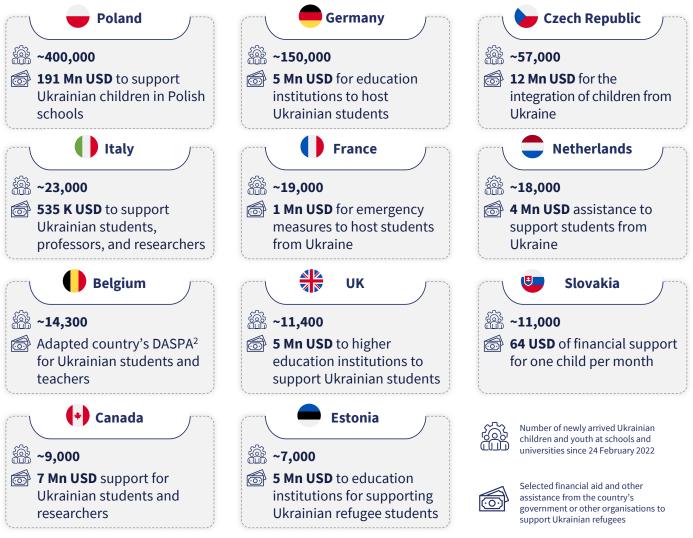
Source: The Ministry of Education and Science of Ukraine website; UNICEF website; SaveSchools website; Media overview

Notes: (1) According to the UNICEF; (2) Complex 120 minutes multi-subject test for university entrance campaign; (3) Education and Science; (4) As of 1 September 2022

UKRAINIAN REFUGEE STUDENTS ARE INTEGRATED INTO EDUCATION IN HOSTING COUNTRIES

As of August 2022, over two million Ukrainian children were forced to move abroad. Moreover, almost 22 thousand Ukrainian teachers stayed abroad. In response to this, the Ministries of Education in hosting countries have developed programmes to involve students, pedagogical, and scientificpedagogical specialists from Ukraine who applied for education or work. In 2022, around 30% of Ukrainian students are expected to apply to European universities, putting higher pressure on the education systems of the hosting countries, as they may not be ready for such a high number of new enrollees. If not managed properly, this could cause a crisis in the European education sector.

Selected countries' support of Ukrainian refugee students with education, as of September 2022¹



The hosting countries keep integrating **Ukrainians** into their education systems, demonstrating a high level of empathy for refugees and students. Naturally, Ukrainian children may have **some issues with the adaptation** caused by the new **environment**, including **language barriers** and **rules** that must be followed. Moreover, some countries have **compulsory education**, forcing parents to enrol their children on local school registration lists. This puts a double load on the children, as they must also continue their Ukrainian education.

International support for the Ukrainian education sector

UNESCO

UNESCO provides computer equipment, develops digital education platforms and content, as well as a system of electronic assessment for higher education



Canadian, German, Lithuanian, and British universities launched a partnership with Kyiv-Mohyla Academy, providing their campuses for Ukrainian students³

Google

43,000 laptops In partnership with the Ministry of Ed&Sc⁴ of Ukraine, Google will provide **computer equipment and software for the education process**

Source: The Ministry of Education and Science of Ukraine website; Erasmus+ website; UNICEF website; SaveSchools website; Media overview Notes: (1) Based on the latest available data; (2) Reception and schooling system for newcomers and assimilated students; (3) The list is going to be expanded with the US higher education institutions; (4) Education and Science

Economics and IT are the most promising educational streams

୨୨

Economic specialties remain relevant today and will be in demand in the future. Professionals in economics are indispensable for shaping a balanced economic agenda of a country, as well as for developing reforms that will be required for the recovery of the Ukrainian economy.

At the same time, we see that in its further development higher education should focus on strengthening students' skills in information technology.

DR ANZHELA IGNATYUK

Dean of the Faculty of Economics, Taras Shevchenko National University of Kyiv

Involvement during Russia's war against Ukraine: Despite the full-scale invasion of Russia, Dr Anzhela Ignatyuk stayed in Ukraine. She takes an active social position and continues working, helping future entrants to get a profession, which will help rebuild our country in the future.

How will the universities of Ukraine transform their accreditation systems to bring them in line with the European standards?

In 2019, the accreditation system of educational programmes in Ukraine went through drastic changes. The new approach and the criteria for accreditation are now based on the European Standards and Guidelines for Quality Assurance in the European Higher Education Area and on the best European practices. The new accreditation procedure requires re-evaluation of the content and organisation of education, fairness and transparency of assessment, quality of teaching vs. the European standards. And all this becomes a driver for ensuring the quality of higher education, based on the principles of the European Association as one of the obligations of Ukraine within the framework of the Association Agreement with the EU. For the accreditation purposes, we may ask our European colleagues for independent evaluation of our educational programmes. Our joint degree English-language programmes with Macerata University (Italy) and Nord University (Norway) are the most likely candidates for this kind of accreditation.

How can the Faculty of Economics collaborate better with the Professional Services sector in order to rebuild Ukraine?

The university pursues a policy of collaboration with professional organisations. For quite a number of years, the Faculty collaborates with the Expert Council of Employers and Graduates of the Faculty of Economics. It is a consultative and advisory body that we cooperate with strategically, in order to ensure the high quality of the educational process, compliance with the latest trends in the labour market, as well as endowing our graduates with a relevant professional skillset. With the support of the Council of Employers, the Faculty of Economics organises various events such as forums, round tables, and conferences to discuss strategic economic issues. We also cooperate with professional organisations such as the Union of Small, Mediumsized and Privatised Enterprises of Ukraine, the Chamber of Commerce and Industry of Ukraine, the German-Ukrainian Chamber of Commerce, the CFA Institute, the Chartered Institute of Management Accountants (CIMA), the Association of Marketing Professionals of Ukraine, and the number of others.

I would rather see the education sector more flexible and connected to practice

୨୨

I would not like educational institutions to impose a 'correct' worldview and intrude on university practices. We do not need any 'correct' ideologies and state programmes of some 'patriotic' education – this is archaic. The Ukrainian educational process should be aimed at raising an autonomous, free and responsible individual, able to resist all forms of authoritarianism and propaganda of undemocratic forms of social life.

DR ANDRII BAUMEISTER

Philosopher; Public Intellectual; Professor at Taras Shevchenko National University of Kyiv

Involvement during Russia's war against Ukraine: With the beginning of the full-scale Russian invasion of Ukraine, Andrii has actively shared his thoughts on the war, touching on comprehensive topics, ranging from lives of ordinary people in the realities of constant fear and anxiety to the impact of the war on the future of entire Europe.

How can we stop the outflow of the Ukrainian students to Europe?

The state, society, business, and the public sphere have to work together. It is important to create an environment where young people feel they are needed and important. It is clear that it is still difficult for the Ukrainian universities to compete with those in the USA and Europe. It is important to bridge the gap between a university and the labour market, between a university and social life, between a diploma and the possibility of creative selfrealisation of young professionals.

How do you see the education sector after the Ukrainian victory?

After the victory, I would rather see the education sector more flexible, more connected to practice, and more integrated into the Western education and labour system. There should be less imitation, fewer bureaucratic requirements and more academic freedom and creativity.

How should the education respond to the challenges that the society has faced since the outbreak of the full-scale war?

I would not like educational institutions to impose a 'correct' worldview and intrude on university practices. We do not need any 'correct' ideologies and state programmes of patriotic education – this is archaic. The Ukrainian educational process should be aimed at raising an autonomous, free, and responsible individual, able to resist all forms of authoritarianism and propaganda of undemocratic forms of social life.

Has the mindset of students changed since the start of Russian full-scale invasion?

Without a doubt, the mindset of students has undergone transformation. Perhaps, having experienced the war, we should be more open, authentic, open-minded, ready for serious debate and respectful to one another. An individual's dignity, sovereignty and responsibility must be at the forefront.

UKRAINIAN HEALTHCARE IS BEING TRANSFORMED INTO A PATIENT-CENTRIC AND DIGITALISED SYSTEM

Nowadays, the healthcare system of Ukraine is based on the Beveridge model, which guarantees **free access to healthcare services for all Ukrainian citizens**. However, until 2018, there was a big **quality gap between state and private healthcare services** in the Ukrainian healthcare system.

into a patient-centric, effective, affordable, and anticorrupted healthcare model. In 2017, the Programme of Medical Guarantees (PMG) established a new financing model for the healthcare system, according to which the state now pays a unified tariff for a list of guaranteed medical services to doctors and medical facilities where patients receive care.

Since 2017, the Medical sector of Ukraine has been transforming

Ukrainian healthcare system at a glance

ſ	2017	2021	
	2017	2021	

LPI¹ ranking, Health pillar

The Health pillar assesses the overall health level of the population and its access to healthcare services. Ranking includes health outcomes, the effectiveness of the health systems, illness and risk factors, and mortality rates.





Until 2017, state medical institutions received funds directly from the state budget as a subvention for personnel and infrastructure capacity. Based on the registration address, people were connected to doctors, and at the same time, doctors were working on fixed salary rates that did not depend on the quality of their work. Since 2018, budget funds have gone both to state hospitals and private practices. Costs for treatment are allocated to patients, not institutions, and people can conclude a contract with a doctor they choose without any registration limits. Doctors are motivated to provide quality service because their income depends on the number of patients.



Main changes in the Ukrainian healthcare system throughout 2017 - 2021



Source: The Ministry of Health of Ukraine website; Legatum Institute website; The Ministry of Finance of Ukraine website; State Statistics Service of Ukraine website; Media overview Notes: (1) Legatum Prosperity Index shows a country ranking on certain factors such as wealth, health, quality of life, and others; (2) Expenditures on healthcare in the Consolidated Budget of Ukraine; (3) The number of doctors positions (without dentists) and the middle medical staff positions; (4) Share of expenditures on health care in the total expenditures of the consolidated budget of Ukraine; (5) National Health Service of Ukraine; (6) Cardiovascular disease, diabetes, and bronchial asthma

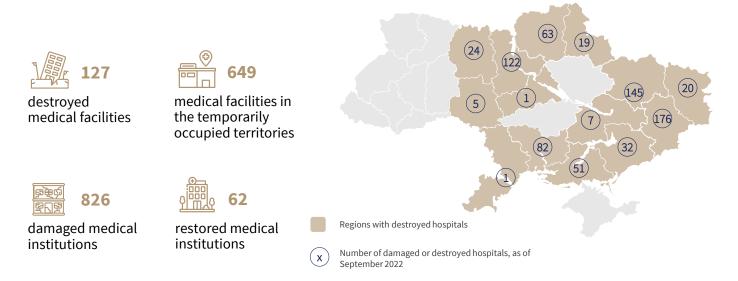
HEALTHCARE SYSTEM OF UKRAINE CONTINUES TO FUNCTION ON A FULL SCALE IN SPITE OF THE WAR

Since 24 February 2022, almost a thousand medical institutions have been completely destroyed or damaged due to the Russian invasion. So far, Ukraine has restored only a small part of the damaged medical facilities with the support of international partners. Moreover, Ukraine continues to transfer funds to the accounts of each medical institution in the occupation.

The main challenges of Ukraine's healthcare system during the war

- Shortages in medicines to fulfil the demand caused by damaged warehouses and supply chain disruptions
- Tuberculosis and HIV¹ programme disruptions
- Diagnostic and treatment interruption of NCD²
- Uneven patient loads of hospitals
- Treatment and rehabilitation of military people
- Mental health worsening
- High level of injuries and casualties among civil people

Losses and the internal displacement of medical staff, as of August 2022



As of 26 August 2022, over 3,800 internally displaced medical workers were employed across Ukraine. The largest number of such medical workers were officially employed in Dnipro (548), Kharkiv (363), and the Poltava (347) regions. To support the activity of medical institutions, **NHSU provided payments under a fixed tariff** without correlating the number of actually provided services. It also **simplified the prescription process** under the **Affordable Medicines Reimbursement programme.**

MOH³ cooperates with Medecins Sans Frontieres to organise medical train referrals for wounded civilians from territories with active military hostilities. It also opened a distribution warehouse for emergency medical supplies.

Military medical care

Military hospitals

Military medical care and treatment are provided by a **three**level military medical system based on territorial principles, where the first level is the hospitals with a maximum load:

- The Main Military Clinical Hospital ensures highly specialised medical care, and five Regional Military Medical Centers are responsible for providing specialised medical care to military people
- 14 Military Hospitals and one Military Medical Clinical Center for Occupational Pathology provide further qualified medical care

Combat medics

During 2017-2021, more than **600 combat medics were** released from the Tactical Medicine Training Centre under the American 68W standard⁴

- Since February 2022, intensive training has been provided to meet the demand for emergency medical treatment specialists in the full-scale war
- Combat medics provide crucial support distributed in combat units along the entire front line. They treat the wounded and evacuate casualties from the battlefield

Source: Health Cluster Ukraine — Public Health Situation Analysis — [2022]; The Ministry of Health of Ukraine website; Media overview Notes: (1) Human immunodeficiency viruses; (2) Non-communicable diseases are non-transmissible diseases, usually chronic diseases of long duration and generally slow progression; (3) The Ministry of Health of Ukraine; (4) The Military Occupational Specialty for the United States Army's Combat Medic Specialist

HUGE INTERNATIONAL SUPPORT FOR UKRAINIAN HEALTHCARE IS BEING PROVIDED DURING THE WAR

Share of medical aid in total, UNITED 24 aid from selected

countries as of 28 June 2022



UNITED24 Donation initiative to support the medical system The President of Ukraine launched **UNITED24** as a central **donation platform** for collecting **aid for three main areas**, including medical aid. As of 9 September 2022, **10.2 Mn USD** was collected **for medical needs**.





The Ukrainian system received great humanitarian support to stabilise its position during the war. As of August 2022, humanitarian help amounted to over 328 Mn USD and was delivered from foreign and Ukrainian businesses, charity organisations, and foreign medical institutions.

Humanitarian support as of the 100th day of the war

ക



~131 million medicines





llion



122,500 instruments



13,900 integrated kits



137,000 equipment units



furniture

pieces of medical

615





2,500 military uniform units for medics

590 starlink portals for medical facilities

Healthcare support of the European Union



On 4 March 2022, the European Union agreed to activate the **Temporary Protection Directive** for displaced persons from Ukraine. It **defines the rights for temporary protection and grants residence permits**, access to education, the labour market, as well as medical assistance, with both emergency care and essential treatment of illness.



Provides Ukrainian refugees with **access to all medical services** in the country on the same basis as Polish citizens, using only a Ukrainian passport or identity document.



MedWatch organisation arranges insulin for people who need it and drugs for people with cancer or multiple sclerosis.

> Source: The Ministry of Health of Ukraine website; UNITED24 website; World Health Organisation website; European Commission website; Media overview



The 24 European Reference Networks (ERNs), which specialise in the diagnosis and treatment of rare / very rare illnesses with 1,600 expert centres in more than 300 EU hospitals, offered the Rare Diseases Hub Ukraine, an application that connects patients in Ukraine who have a rare disease with organisations, hospitals, and members of the ERN.



Alina Mykhailova-Zinchenko Talks about Medicine, International Aid, Humanitarian Crisis



Humanitarian aid is extremely important for Ukraine. During the full-scale Russian invasion of Ukraine, according to the Ministry of Health, the invaders killed at least 18 medical workers and seriously injured 56, **damaged 884 medical** facilities, of which 123 were completely knocked down. With shelling, the occupiers destroyed 87 ambulances, seized 241 cars, and also damaged about 450 pharmacies.

Alongside donation support, **18 countries** provided **specialised medical care services** to Ukrainian patients via **medical evacuation programmes**. As of September 2022, selected medical evacuation programmes included such areas:

- Evacuations of children with cancer disease via 'Convoys of life' to the Unicorn centre in Poland, with further transportation to the hosting countries. As of 7 September 2022, 500 children with cancer were evacuated via 15 medical convoys
- Within the SAFER Ukraine programme, children with oncological and haematological diseases were evacuated for treatment in the USA, Canada, and 14 European countries
- Evacuation of civilians with specific diseases and severe injuries with the need for prosthetics. As of 7 September 2022, in cooperation with MOH and the EU Commission, approximately 1,400 Ukrainian civilians were evacuated to other countries.

Medical workers in Ukraine face increasing pressure

୨୨

Unfortunately, the situation with medical care in the occupied territories is critical. A large number of medical institutions have been looted. There are problems with the logistics of medicines. Patients with chronic diseases are in need of medication, especially patients receiving hormone therapy, cancer patients, insulindependent patients and people with cardiovascular problems.

LIUDMYLA POLISHCHUK

Nurse at the Centre of primary medical and sanitary aid, Vinnytsia, Ukraine

Involvement during Russia's war against Ukraine: Medical workers work overtime. In connection with the war, the load on all medical institutions increased. In order to provide assistance to wounded soldiers, institutions like sanatoriums and medical dispensaries are even involved. Inpatient medical care has switched to irregular working hours.

What benefits have you gained from the implementation of the medical reform in your medical practice? What disadvantages have you noticed in the new system?

After the implementation of the medical reform, the e-system has become a priority. Namely, the introduction of an electronic patient record, which contains absolutely all data about the health status of a patient and treatment received throughout his or her life. The introduction of electronic prescriptions and an electronic medical opinion as to temporary inability to work is also an achievement. Unfortunately, there are occasional delays in the operation of the electronic system.

How has the war affected the work of medical institutions? Is there enough medical staff in hospitals? What help is most needed during the war for people having numerous chronic diseases?

During the war, medical facilities, especially hospitals, went into a special mode of operation. The number of requests from patients with chronic diseases, as well as those from internally displaced persons, has increased. One should also note regular medical assistance is provided to wounded combatants, brought back from the combat zone. Medics are under great pressure, but they are fulfilling their functions. Nowadays, a large number of people require medical, as well as psychological assistance.

ENVIRONMENT

CHAPTER 2.3

ENVIRONMENTAL CONSEQUENCES OF THE WAR ARE HUMAN CONSEQUENCES, BUT IN A DIFFERENT FORM

Beyond the horrible human tragedy, the Russian invasion of Ukraine has also caused a **shocking environmental disaster**. The catastrophic harm to the environment will continue to unfold for many years as Russia launched missile attacks on critical infrastructure and hazardous sites — nuclear facilities, chemical plants, ammonia pipelines, and petroleum refineries — leading to

the **widespread contamination** of air, water, and soil. Ukraine will need many years and considerable resources to at least return the environment to its pre-war state. For that reason, it is highly important to understand the scope of military **impact on the environment** in Ukraine, as the environmental consequences are also human consequences, just in another form.



Environment

The section discloses key aspects of the environmental sphere that have suffered the most from the Russian full-scale war in Ukraine, including:

- Environmental safety
- Biological diversity
- Nuclear security

Environmental safety

- Situation of environmental safety in Ukraine before the war
- Effects of the military actions on air, water, and soil
- Possible impact of environmental crimes in Ukraine on Europe

Biological diversity

- Biodiversity in Ukraine before the Russian aggression
- Influence of the Russian hostilities on the nature reserve fund
- Emerging risks to the biodiversity of Europe due to the war

Nuclear security

- Current state of the nuclear sector in Ukraine
- Impact of the Russian invasion of Ukraine on nuclear security
- Potential threat of Russian nuclear terrorism to the world

resent

BEFORE THE WAR, UKRAINE FOCUSED ON THE IMPROVEMENT OF ITS ENVIRONMENTAL SAFETY

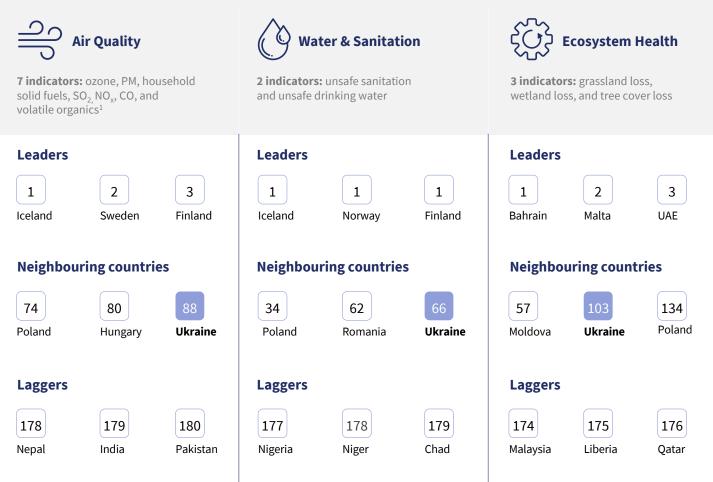
Before the Russian invasion of Ukraine in February 2022, **the country had been focusing on the transition to sustainable development to improve environmental protection.** Since Ukraine is a country with a heavily industrialised economy and large agricultural sector, it was dealing with long-standing negative environmental consequences, including industrial pollution, depletion of natural resources, degradation of natural ecosystems, low energy efficiency, poor waste management, etc. This led to increasing air pollution, land degradation, biodiversity loss, climate change, and human health issues associated with environmental risk factors.

The EU-Ukraine Association Agreement allowed the country to start the development of an environmental policy and the implementation of various measures in the field of climate change and environmental safety. Key reasons for environmental problems in Ukraine:

- Inherited structure of economy with a prevailing share of resource- and energy-intensive industries
- Depreciation of fixed assets of the industrial and transport infrastructure
- Absence of proper separation of environmental protection and economic functions
- Ineffective system management of state governance in the area of environmental protection
- Insufficient understanding in society of priorities for the preservation of the environment

In 2021, **Ukraine was ranked 52nd in the Environmental Performance Index (EPI)**, a global ranking across 180 countries that provides a data-driven summary of the state of sustainability in terms of climate change performance, environmental health, and ecosystem vitality across 11 categories. However, the performance of Ukraine across specific indicators, such as air quality, water and sanitation, and ecosystem health, was comparatively poor, indicating the need for further improvement of the environmental situation.

Environmental performance in Ukraine before the war across selected categories, EPI 2022



Source: Yale University — The 2022 Environmental Performance Index (EPI) — [2021]; The Ministry of Environmental Protection and Natural Resources of Ukraine website; CEE Bankwatch

Notes: (1) Ozone exposure, particulate matter 2.5 exposure, household solid fuels, sulfur dioxide exposure, nitrogen oxides exposure, carbon monoxide exposure, and volatile organic compound exposure

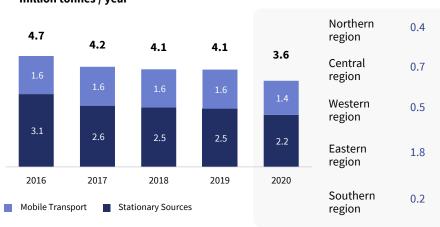
Present

KEY ISSUES: AIR POLLUTION, LAND DEGRADATION, AND LACK OF WATER PROTECTION

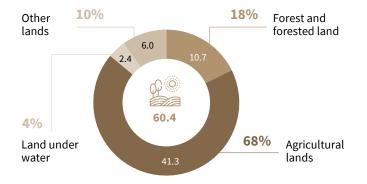
Due to the high carbon intensity of the economy, with various resource- and energyintensive industries, air pollution has been one of the main environmental issues in Ukraine. Despite the decrease in emissions during 2016-2020 by 23%, the level of air pollution in industrial regions and large cities remained high in 2020, with particularly heavy pollution in the eastern part of the country. In 2020, stationary sources of air pollution accounted for around 60% of emissions, which were mainly produced by the mining and processing industries and energy

generation.

Air pollutant emissions by source in Ukraine, million tonnes / year



Land use in Ukraine in 2020, million ha

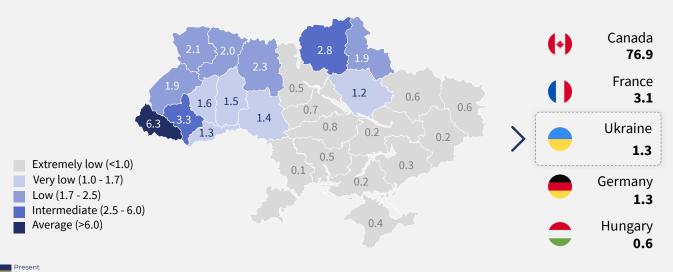


The large agriculture sector in Ukraine has also been causing various environmental problems related to the **inefficient use of land resources and aggressive agricultural practices**. In 2020, agricultural land in Ukraine amounted to 68% of the total area, most of which was fertile and arable land.

Excessive ploughing of land, violation of the balanced ratio between land categories, reduction of the territory of unique steppe plots, and disruption of the natural process of soil formation on a national scale have led to **the processes of land degradation throughout the country**, including **erosion**, **soil compaction**, **and the loss of humus**.

Additionally, discharges from industrial enterprises, improper condition of the drainage infrastructure and treatment facilities, noncompliance with the standards of water protection zones, and the flushing of toxic substances have significantly **reduced the quality of groundwater in Ukraine and caused the scarcity of water.** Ukraine is **one of the least water-rich countries** in Europe. In 2020, **renewable freshwater per capita in Ukraine amounted to 1.3 thousand m**³, which is considered to be an insufficient level.

Renewable freshwater resources per capita in thousand m³ per year, 2020



THE WAR HAS EXACERBATED THE POLLUTION OF AIR, LAND, AND WATER IN THE COUNTRY

Russia's war against Ukraine has had an **enormous impact** on both different, separate natural components (air, water, and land) and ecosystems as a whole. The Ukrainian environment has already suffered about **11 Bn USD of losses** since the beginning of the war, while the considerable volume of damage is still difficult to assess because of the ongoing hostilities. Numerous missile strikes, bombardments, shelling, and other crimes committed by Russia **caused ecological catastrophes across almost all the regions of Ukraine**. The restoration of ecosystems will require a significant amount of funds and resources.

Major factors causing the pollution of air, land, and water during the war in Ukraine



Explosions of missiles, bombs, and shells that cause the pollution of air, land, and water with toxic substances



Destruction of treatment and sewage facilities, causing pollution of the environment with waste



Pollution of water and soil by cadaveric venom due to the mass death of people and animals



Leakage and combustion of petroleum products and chemicals as a result of shelling of industrial sites



Pollution as a result of the destruction of facilities that provide the pumping of water from decommissioned coal mines



Numerous fires in forests, residential buildings, markets, warehouses, etc., caused by hostilities

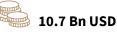
Environmental consequences of the Russian invasion of Ukraine^{1,2}



total number of eco-crimes committed by the Russian army, which caused environmental pollution



number of citizens without proper access to drinking water across Ukraine



estimated losses to the environment of Ukraine as a result of hostilities across the country



amount of emissions caused by the shelling of oil storage facilities in Ukraine 45 times

increase in the area of forest fires in Ukraine caused by the war compared to 2021



total area of the territory of Ukraine that should be demined from bombs, shells, mines, etc.

OPINION CORNER

Maryna Tropina Talks about Environmental challenges, Pollution, and Ecological security

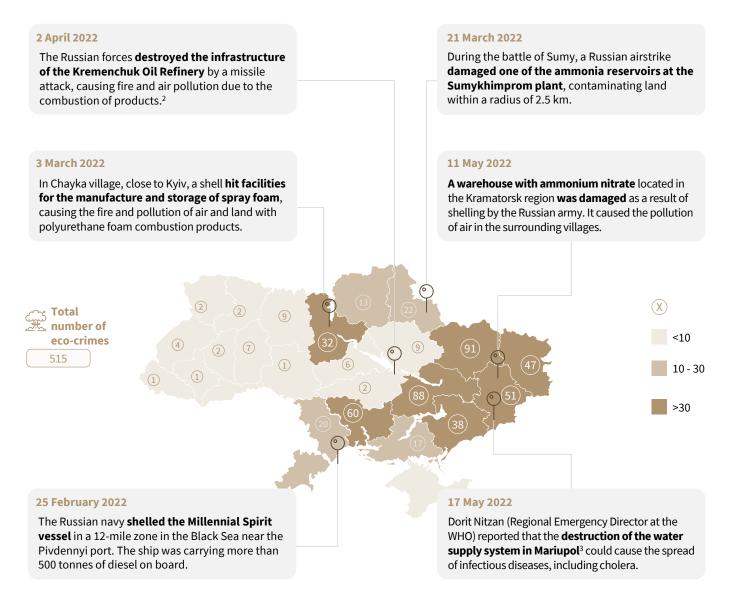


With Russia's invasion of Ukraine, the problem of **ecological security became especially critical**, as the spectrum of destruction is quite wide: incidents at nuclear power plants, oil refineries, gas facilities, and agricultural processing enterprises. Thousands of cases of **air**, **water**, and **land pollution with explosive toxic substances** and degradation of ecosystems have already been recorded, which is a threat not only to Ukraine, but also to neighbouring countries.

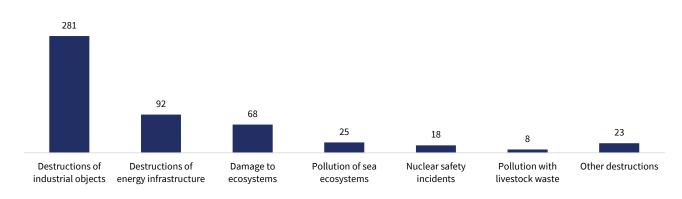
Source: The Ministry of Environmental Protection and Natural Resources of Ukraine website; Media overview Notes: (1) For the period of 24 February 2022 – 11 September 2022, latest available data; (2) Selected based on the publicly available data

SINCE THE START OF THE WAR, THERE HAVE BEEN A NUMBER OF ECO-CRIMES CAUSING HIGH POLLUTION

Selected eco-crimes committed by Russia, causing the pollution of air, water, and land¹



Eco-crimes committed by the Russian military forces by category¹



Source: Ecoaction website; The Ministry of Environmental Protection and Natural Resources of Ukraine website; Media overview

Notes: (1) For the period of 24 February 2022 – 11 September 2022, according to the interactive map of NGO Ecoaction; (2) The attacks were also repeated on 24 April, 12 May, and 18 June 2022; (3) During the siege of Mariupol

THE WAR IN UKRAINE IS NEGATIVELY INFLUENCING THE ENVIRONMENT IN THE WHOLE OF EUROPE

Environmental impact of the war in Ukraine on the European continent¹

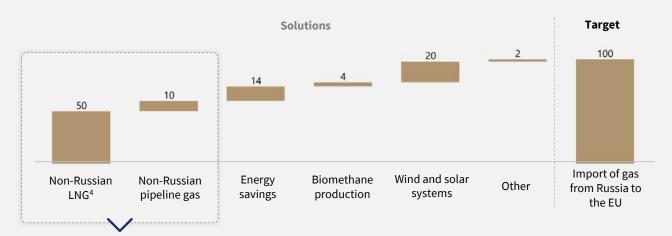
Ukraine is the largest European country located in the Eastern part of the continent, covering more than 603.7 thousand km². The hostilities are taking action across almost the whole territory of Ukraine, so the environmental consequences of the war are **also indirectly impacting and spreading across all layers of the geosphere in neighbouring countries.**

Emissions from hostilities are polluting the air not only in the territory of Ukraine but also in neighbouring countries, as the **winds spread the polluted air** throughout the whole European continent.

$\left(\right)$

Due to the war in Ukraine, the pollution of water and sea ecosystems with **radiation, chemicals, or toxic waste** is also having a transboundary impact on the ecosystems of some European countries. Neighbouring countries, such as Poland, Slovakia, Hungary or Romania, may be affected by the **pollution of soil and the deterioration of land fertility** due to the contaminated acid rainfalls spreading from Ukraine.

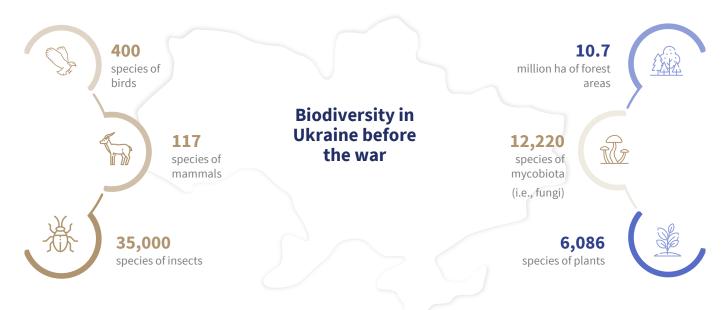
Key elements of the RePowerEU plan to reduce the dependence of EU countries on Russian gas in 2022, bcm^{2,3}



Despite the continuing efforts of European countries to boost the transition to clean energy sources, **the plans to reduce the dependence of EU countries on Russian oil and gas could still push emissions higher in the short-term period.** In the search for alternative energy sources within the coming years, these countries are still focusing on the import of LNG4 and are also slowing down the phase-out of coal.

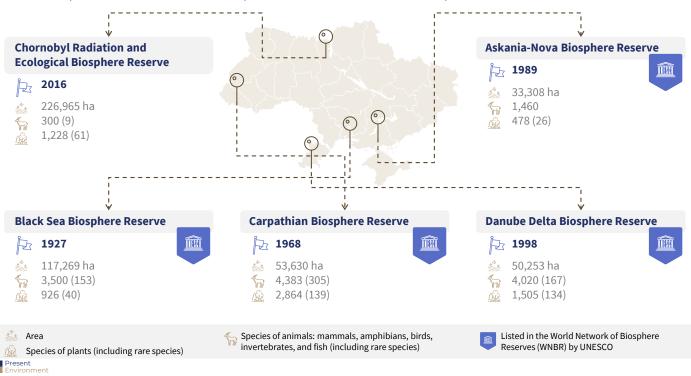
UKRAINE HAS RICH FLORA AND FAUNA DUE TO FAVOURABLE CLIMATE CONDITIONS

Ukraine has significant natural biodiversity potential, which plays an important role in the development of many ecosystem services and the use of land and resources. The variety of landforms and the existence of many migratory paths and nature zones in the country define the richness of its flora and fauna. **Nowadays, there are more than 44 thousand animal species and around 18 thousand species of plants and fungi** identified in Ukraine, with many of them being rare and endemic species. Ukraine continues to develop regulations and measures aimed at improving the condition of biodiversity. In 2021, Ukraine was ranked 76th out of 180 countries for the Biodiversity & Habitat category in the 2022 Environmental Performance Index (EPI), which evaluates the actions of countries in preserving natural ecosystems and protecting biodiversity. Ukraine lagged behind 19 countries within Eastern Europe, but it was one of the leaders among 12 former Soviet Union states in the ranking.



Biosphere Reserves of Ukraine

In 2021, the Ukrainian nature reserve fund comprised 8,633 territories and sites. These territories account for 6.8% of the country's total area. The fund includes 53 national parks, 19 natural reserves, and 5 Biosphere Reserves approved by Presidential decrees. Biosphere Reserves are protected areas of international importance, meant for the conservation of plants and animals.



Source: Yale University – The 2022 Environmental Performance Index (EPI) – [2021]; The State Statistics Service of Ukraine; The Ukraine World Project website; Electronic Version of the National Atlas of Ukraine; WOWNature website; National Parks in Ukraine website

THE WAR AFFECTED AROUND A THIRD OF ALL BIODIVERSITY CONSERVATION AREAS IN UKRAINE

Russia's war against Ukraine has a wide range of harmful impacts on biodiversity and the natural habitat. The war has been particularly damaging to the country's protected areas, such as national parks and natural reserves, which have always been the mainstay of biodiversity conservation in Ukraine.

Major threats to biodiversity in Ukraine during the Russia's war against Ukraine

- Warfare. Shelling, shooting, and numerous explosions have a direct impact on the environment, damaging or killing wild animals and destroying plant species.
- Habitat destruction. Forest fires, movements of large-scale military vehicles, poaching, and encroachment on natural reserves harm habitats and destroy large areas of vegetation.
- Environmental damage. The remnants of war, such as land mines, cluster munitions, and large volumes of military scrap, contain metals and toxic materials that contaminate soil and water sources, leading to illness or death of animals.
- Noise pollution. The impact of powerful explosions, vibrations, sound navigation and location systems disturb the quiet existence of wild animals by disorienting them.

The impact of the war on biodiversity^{1,2}



2.9 million ha

fire as a result

of all protected areas in Ukraine are influenced by war activities



of the nature protection fund are under threat in the war zone



66,000 people³

displaced to protected areas, where they can disturb natural habitats



of forests were damaged by

of the Russian invasion

of the protected areas are negatively affected by military hostilities



have died in the Black Sea or washed up on the shores since the beginning of the war



Selected war events impacting biodiversity

12 April 2022

In the south of the Donetsk region, the reported presence of the Russian military in the Meotida National Nature Park led to the **destruction of the birds' nesting places**, with some rare species missing the breeding season and not having offspring.

20 April 2022

The Marine Guard of the State Border Guard Service of Ukraine **declared a mine danger at the Danube Delta,** famous for one of the greatest wetlands on Earth, hosting over 300 species of birds and 45 freshwater fish species.

12 May 2022

Mass deaths of dolphins were recorded off the coast of the Odesa region. Dolphins fell into the zone of powerful radiation from the navigation devices of Russian warships, which led to their disorientation, and mammals were thrown ashore.

11 August 2022

As a result of hostilities, **a pine forest caught fire** in the Novokakhovske forestry and the Oleshkivske forestry of the Kherson region. **100 hectares of pine forest caught fire** near the village of Kardashynka due to shelling by the Russian army.

25 August 2022

The Shalygin territorial community in the Sumy region was shelled by Russian multiple rocket launching systems with phosphorous projectiles, 20 explosions were recorded. After surveying the area, a **forest fire was discovered in the area of the nature reserve**, as well as the remains of projectiles.

Source: The Ministry of Environmental Protection and Natural Resources of Ukraine website; WOW Nature website; Emerging Europe website; Dixi Group, USAID — 100 Days of the War: The Consequences for Ukrainian Environment — [2022]; Ecopolitic website Notes: (1) For the period of 24 February 2022 – 08 September 2022; (2) Selected based on the publicly available data; (3) For the period of 24 February 2022 – 20 June 2022

THE EUROPEAN ECOSYSTEM SAFETY IS AT RISK, AS UKRAINE HOLDS 35% OF EUROPE'S BIODIVERSITY

Ukraine is deeply integrated into global natural processes (such as migratory bird routes) **and nature protection activities** (for example, rare species conservation). The country is also part of the Green Heart of Europe, a region with places that are particularly rich in biodiversity, stretching from the Danube River Basin to the Carpathian Mountains.

Natural habitats in **Ukraine are home to a third of the biodiversity in Europe**, with more than 70,000 plant and animal species. The rare or endemic species comprise the world's most endangered group of species, which includes European bison, brown bears, lynx, and sturgeons. **The Russian invasion of Ukraine threatens the biodiversity of Europe.**

Internationally important wildlife sites and migratory bird routes are at risk



400 species of birds depend on the crossroads of the migratory routes that pass through Ukraine

Every spring, hundreds of thousands of waterfowl migrate along the southern sea coast and the northern forests of Ukraine. Various species arrive at these sites for nesting, including 30,000 pairs of white storks and 500 pairs of rare black storks. This year, **war activities threatened the breeding season.**



14 territories

of internationally important wetlands were affected by war activities

Ukraine has 50 sites classified as Wetlands of International Importance, which are called 'Ramsar Sites', with a total area of 930,559 ha. Since the war started, **48% of the total area of the coasts of the Azov & Black Seas** and the lower reaches of the Danube and Dnipro rivers **has been damaged.**



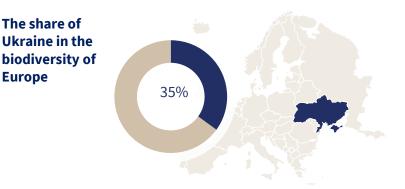
200 sites covering several million ha of the Emerald Network have been in danger since the war began

The Emerald Network is a network of protected areas created to preserve species and habitats at the European level.¹ Currently, the Emerald Network in Ukraine covers around 12% of the country's territory. Since the invasion, the **Emerald Network area of 2.9 million ha has been under the threat of destruction.**



4 Biosphere Reserves have either been occupied by the Russian army or severely impacted by military actions

Since the Russian invasion, **more than 20 nature reserves and national parks, including 4 biosphere servers,** have been affected by hostilities. The long-term impact on biodiversity in Europe will be significant, as many of these protected areas have natural importance for Europe as a whole.





Nataliia Gerasymchuk Talks about Environment, Biodiversity, Ecology, and Legal Accountability

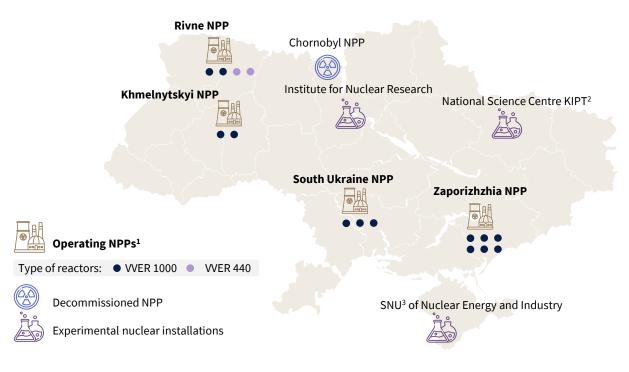


The international community should **increase responsibility for ecological crimes**. Since the late 1990s, there have been a few efforts to **include ecocide as one of the major crimes in the Rome Statute of the International Criminal Court**. What we witness now in Ukraine is '**the purposeful, negligent destruction of the natural environment through human activity**.' Unfortunately, there is little chance that Russia will be held accountable for its crimes against nature. For now, ecocide laws are vaguely written and difficult to enforce.

Source: Ramsar website; WWF website; BBC website; Emerging Europe website; Sustainable Development of Forestry in Ukraine website; WOWNature website; European Environment Agency website Notes: (1) The Emerald Network is formed in non-EU countries and is part of the 'Natura 2000' network operating in the EU

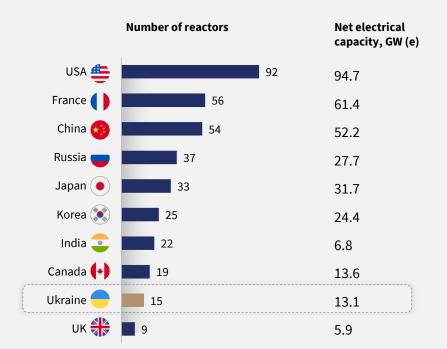
NUCLEAR POWER HAS REMAINED A CRUCIAL ELEMENT IN THE ENERGY SECTOR OF UKRAINE

Nuclear installations in Ukraine, 2021



The energy sector of Ukraine **is heavily dependent on nuclear energy,** with 15 reactors being located at 4 nuclear power plants and generating more than half of the total electricity in the country. According to the Energy Strategy of Ukraine 2035, nuclear power is regarded as one of the most cost-effective low-carbon energy sources, and **its generation volume in the total electricity supply is expected to increase.** Apart from NPPs, there are also other nuclear objects in Ukraine, such as radioactive waste storage sites, experimental nuclear centres, facilities for the extraction and processing of uranium ore, etc.

Top-10 countries by the number of reactors in operation, 2021⁴



Ukraine is one of the world's leading nuclear countries by the number of reactors and net electrical capacity. In order to ensure the robust and safe operations of all these nuclear installations, the country **developed a comprehensive security monitoring system.**

The **Chornobyl accident** (1986) became a milestone in the field of nuclear security, both in Ukraine and globally. The disaster caused a slowdown in the expansion of the nuclear sector in Ukraine. However, it also led to significant improvements in the level of nuclear security across all the NPPs in the country.

Source: International Atomic Energy Agency website; World Nuclear Association website; UATOM website; Media overview Notes: (1) Nuclear power plant; (2) Kharkiv Institute of Physics and Technology; (3) Sevastopol National University; (4) Latest available data; (5) Energoatom is a Ukrainian state enterprise that operates all four nuclear power stations in Ukraine

THE WAR HAS PUT THE SECURITY OF NUCLEAR FACILITIES ACROSS THE COUNTRY UNDER THREAT

Nuclear safety incidents caused by the Russian invasion of Ukraine¹



Since the beginning of the Russian invasion of Ukraine, **18 incidents of nuclear terrorism** committed by the Russian military forces have been reported at different nuclear objects in Ukraine. They include both direct damages to the nuclear infrastructure and dangerous incidents that could have potentially caused the destruction of nuclear objects.

However, taking into account the specific characteristics of the nuclear sector, even a **small** incident at nuclear facilities might lead to large-scale environmental disasters.

Selected cases of nuclear terrorism committed by the Russian military forces¹

Hostilities in the Chornobyl Exclusion Zone

In March 2022, Russian troops **damaged a number of infrastructure objects** at the Chornobyl NPP, which could have caused a nuclear catastrophe. The hostilities also led to largescale forest fires and the spread of radioactive dust within the Exclusion Zone.

Capture of the Zaporizhzhia NPP

Since March 2022, the NPP has been temporarily under the control of Russian forces, who interfere in the work of staff, place military equipment in the territory of the plant, and shell the infrastructure of the plant. The shelling of the NPP's infrastructure has led to the disconnection of the final operating reactor from the grid on 11 September 2022.²

Low altitude of missile flights above NPPs

In April - June 2022, Ukraine recorded **four cases of Russian missiles flying over the sites** of the South Ukraine NPP, Khmelnytskyi NPP, and Zaporizhzhia NPP, posing a threat to the environment and communities not only in Ukraine but also globally.

Shelling of other nuclear facilities

In March 2022, there were **three cases of shelling** of the National science centre of KIPT³, where the experimental nuclear reactor is located. It did not cause an increase in radiation levels, yet the facility was significantly damaged. The risk of radioactive contamination is still high.

The consequences of Russian nuclear terrorism on the environment in Ukraine¹



increase in the radiation level in the Chornobyl Exclusion Zone during 24 -25 February 2022 as a result of the Russian invasion



estimated losses to the environment caused by the Russian occupation of the Chornobyl Exclusion Zone



total area of forest fires across the Chornobyl Exclusion Zone during the period of the Russian occupation

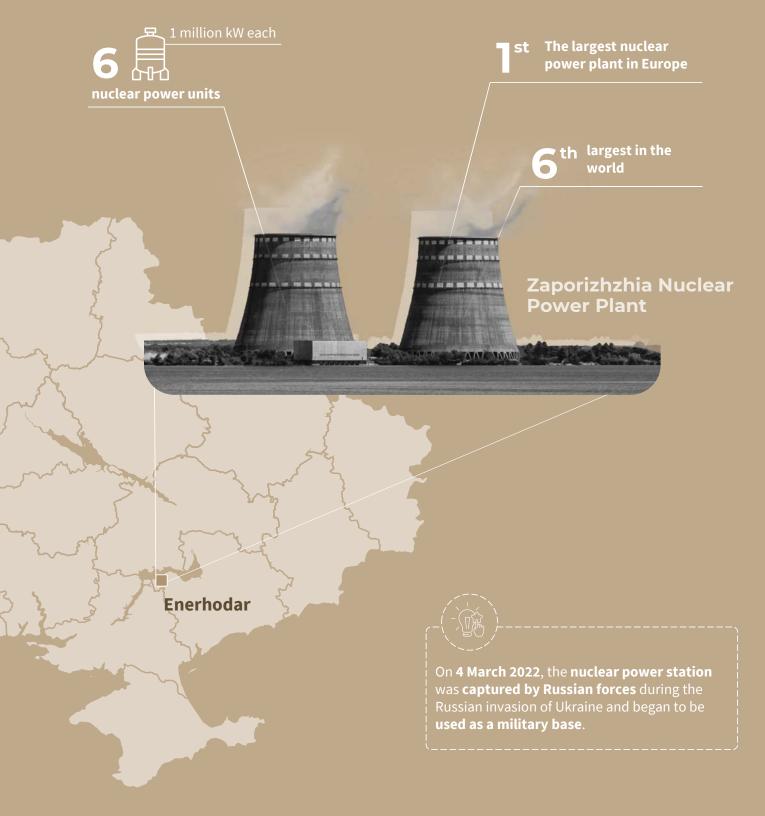


number of ionising radiation sources (with the total radioactivity of 7 million becquerels) stolen by the Russian invaders from the Exclusion Zone

Source: Ecoaction website; The Ministry of Environmental Protection and Natural Resources of Ukraine website; Nuclear Energy Agency website

Notes: (1) For the period of 24 February 2022 – 11 September 2022, according to the interactive map of NGO Ecoaction; (2) On 6 September 2022, the IAEA issued a report on the nuclear facilities in Ukraine. The report's main conclusion was that the occupation of the plant by Russian armed forces violates all seven pillars of nuclear safety; (3) Kharkiv Institute of Physics and Technology

DID YOU KNOW THAT THE LARGEST NUCLEAR POWER PLANT IN EUROPE IS LOCATED IN UKRAINE?



RUSSIAN NUCLEAR TERRORISM POSES SEVERE RISKS TO THE GLOBAL ENVIRONMENT AND SAFETY

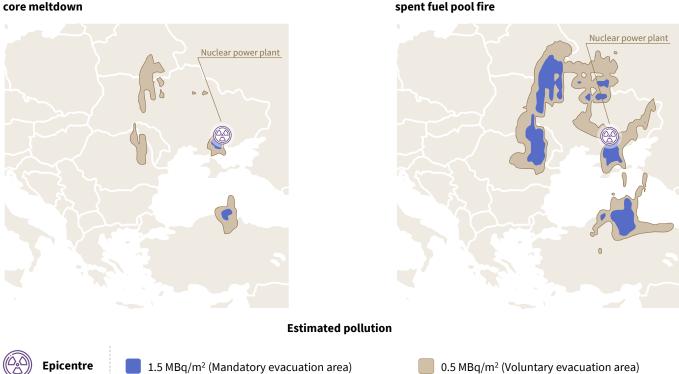
Due to the nuclear aspects of the war, provoked by Russia's direct attacks and occupation of the nuclear facilities in Ukraine, there is an **existential threat of an ecological catastrophe in Europe and the whole world**. The professionalism and heroism of Ukrainian nuclear engineers, soldiers, firefighters, and other people defending the nuclear facilities have been preventing the massive environmental disaster for about four months since the beginning of the invasion. However, as the war still continues and the nuclear danger remains high, ecological risks should not be underestimated.

Polluted area from hypothetical

Estimated pollution in case of hypothetical nuclear accidents at the Zaporizhzhia NPP¹⁻³

The hypothetical impact of the possible nuclear accidents caused by the Russian invasion of Ukraine on the environment of the Eurasian continent **depends significantly on the type of the damaged nuclear objects, the scale and characteristics of destruction, location, weather conditions, etc.** However, the simulations made by atomic scientists indicate that possible accidents at the Zaporizhzhia NPP, which is currently controlled by the Russian forces⁴, **may cause massive pollution of the environment not only in Ukraine but also in other countries of Europe and the Middle East.**

Polluted area from hypothetical core meltdown



Estimation of the relocated population in case of hypothetical nuclear accidents at the Zaporizhzhia NPP

Country	Compulsory	Voluntary
🗕 Ukraine	34,000 – 3.6 million	960,000 – 6.7 million
📀 Türkiye	69,000 – 2.2 million	1.7 – 3.2 million
🛑 Romania	0 – 2.1 million	1.1 – 1.5 million
Moldova	0 - 420,000	260,000 - 450,000
elarus 📒	0 - 880,000	320,000 – 1.9 million

According to the scientific simulations, a hypothetical core meltdown and / or a fire in the spent fuel storage area at the Zaporizhzhia NPP due to hostilities **could cause the relocation of approximately 9 - 14 million people in five countries**, depending on the type of accident and the weather conditions.¹

Present

ource: Bulletin of the Atomic Scientists website; Nuclear Information and Resource Service website

Notes: (1) Estimations made by the Bulletin of the Atomic Scientists; (2) The simulations were conducted as if the radiation release and spread happened in the third and fourth weeks of March 2021; (3) The estimations are made for the hypothetical accident at the nuclear reactor Zaporizhzhia 1; (4) As of 11 September 2022

The world should not turn a blind eye to the crimes of Russia

୨୨

The work of international experts should contribute to the deoccupation and demilitarisation of Zaporizhzhia NPP, adjacent territories and the satellite town of Enerhodar. All things that happened and are happening at Zaporizhzhia NPP must be called by their proper names. The world should not turn a blind eye to the crimes of Russia.

OLEH KORIKOV

Head of the State Atomic Energy Regulatory Commission

Involvement during Russia's war against Ukraine: Oleh Korikov actively tries to inform European experts, especially those of IAEA mission, about the situation at nuclear energy enterprises, in particular, those that were forced to work under occupation conditions, calling attention to the fact that Russia ignores all international obligations to comply with nuclear safety standards by committing acts of nuclear terrorism. Oleh Korikov is sure that the Zaporizhzhia NPP should be de-occupied and return to the control of the Ukrainian authorities.

What potential consequences can nuclear incidents at one NPP or other nuclear facilities have for Ukraine and the world?

The answer to this question depends on many factors. It depends on which of the four NPPs will have an accident, on how many power units, what kind of accident it will be — whether the core will be damaged or not, what the weather will be like, and so on. There are too many factors that can determine possible consequences in case of a conditional accident. Zaporizhzhia NPP is potentially the closest to an emergency situation. Currently, a potential scenario with a complete blackout looks most likely. The occupied NPP is located on the shore of the Dnipro River cascade of reservoirs. Thus, the accident may lead to further radiation contamination of the lower reaches of the Dnipro River and the Black Sea. Then the accident will become transboundary in nature.

What are the main steps to be taken by the Ukrainian government and the international community to ensure nuclear safety in the future?

The international security system in the field of nuclear energy use needs a really serious update. Before the full-scale invasion of Russia, no one thought those reactor facilities or spent fuel storage facilities could be at the epicentre of hostilities. All NPPs in the world were built to operate in peacetime.

Therefore, new norms and rules should be developed, considering the Ukrainian experience, first of all, to prevent the recurrence of such situations in the future.

Any country that might want to repeat nuclear blackmail should understand all the consequences of its actions. Similarly, Russia must be punished for what it is doing now. There can be no cooperation with a terrorist country. All existing agreements must be terminated.

It is mind-blowing that after Russia's attacks nuclear energy is still perceived as safe

୨୨

When we talk about the environmental impacts of Russia's aggression, nuclear risks are definitely the largest in terms of possible scope and impact. It is totally mind-blowing to imagine that while we are experiencing this new form of terrorism in Ukraine and no one in the world knows how exactly to react, nuclear energy still seems to be perceived as safe globally.

No less important is the current and future environmental consequences from the damage of industrial facilities which cause air, water and soil pollution.

NATALIA GOZAK

Executive Director, Ecoaction

Involvement during Russia's war against Ukraine: Natalia's current professional activity is based on ensuring that Ukraine develops in a safe and clean environment. Natalia has a more than 18-year track record in the environmental civil society movement in Ukraine.

How would you evaluate the impact of war on the environment of Ukraine and its current state, as compared to that before the war?

I have witnessed slow but persistent movement towards higher public interest to environmental safety and transformation of popular social discourse from 'let's clean up the park and recycle waste' to 'how to deal with batteries' and finally towards 'climate change adaptation solutions for cities' and 'zero waste municipalities'. Moreover, Revolution of Dignity in 2014 has opened many 'official doors' for civil society and has installed a powerful engine of EU-approximation by accelerating reforms in the environmental sphere of Ukraine. Now the clear EU candidacy perspective is creating more possibilities for progress in environmental reforms. Ukraine should use this historic opportunity to modernise and develop a green economy as a part of the EU's climate neutrality pathway. In the coming years our priorities will be shaped around security and the need to address the severe economic decline. However, this does not mean that there is no place for protection of climate and environment. To the contrary, if we follow a green post-war reconstruction pathway and set a clear sustainable transformation goals, all of the aspects mentioned above will complement one another. For example, transition to renewable energy can go hand in hand with ensuring a longer term energy security. Unfortunately, the longer the war continues, the worse the situation may become in terms of degradation of the natural environment and stronger pressure on natural resources. This is caused by attempts to compensate for the lack of arable land and available resources in the situation of the higher than usual demand. That is why at all the levels the number one priority is Ukraine's victory to make sure we can start rebuilding as soon as possible. Meanwhile, we have a lot of work ahead to rebuild the country, the economy, return the people and restore the environment. That's why planning the green reconstruction, engaging communities, civil society, businesses and international partners, implementing the first pilot projects is crucial already today.

Emergencies at industrial enterprises pose extraordinary threat to environment

୨୨

Today there is growing concern over the actions of the Russian occupiers at the Zaporizhzhia NPP, who resorted to shelling of its territory. All principles of nuclear safety have been violated: high-voltage lines and the nitrogenoxygen station have been damaged through provocative shelling by the occupiers, weapons, and munitions are stored at the plant, and the dry storage facility for used nuclear fuel is at risk of a damage.

Such actions can lead to considerable radiation contamination of territories not only in Ukraine, but also in the countries of the Black Sea region and Eastern Europe.

DMYTRO AVERIN

Expert Zoï Environment Network (War impact analysis and data management)

Involvement during Russia's war against Ukraine: Dmytro holds an active position on social matters, highlighting the impact of the military actions on the ecology and the environment both in Ukraine and globally. He enjoys the long-term experience of cooperation with the OSCE on environmental issues in Donbas.

How would you evaluate the impact of war on the environment of Ukraine and its current state compared to that before the war began?

The war in Ukraine has negatively affected all components of the environment — soils and landscapes, surface and groundwater, air, biodiversity, etc. Military operations in the industrial regions of Ukraine with a large number of environmentally hazardous objects deteriorate the situation.

The main danger to the environment during the war is associated with pollution through accidents at industrial enterprises. Since the outbreak of the war, almost all industries have experienced attacks across the country, ranging from Donbas, where cities and factories were destroyed, to the central and western regions of Ukraine. Numerous oil depots, power stations, metallurgical, chemical and petrochemical plants, machine-building, food processing and agricultural enterprises have been targeted or have been in a situation, where it was impossible to continue operations due to disruption of logistic routes, electricity and gas supplies, lack of water, raw materials or personnel.

What are potential consequences of nuclear incidents at one of Ukraine's nuclear plants or other nuclear facilities?

For the first time in the history of mankind, war is taking place on nuclear infrastructure sites. The reality of this has called into question the rules that govern the operation of nuclear plants and other radiation-hazardous facilities during wartime, as well as the ability of the international commonwealth to respond to such challenges. Among Ukraine's five nuclear power plants and two research subcritical reactors, three were directly affected by the war, namely: the Chornobyl NPP, Zaporizhzhia NPP, Europe's largest and the world's third-largest nuclear power plant by capacity, and 'Dzherelo neytroniv', the neutron source nuclear subcritical facility in Kharkiv. Other hazardous radiation facilities, located in Ukraine and being therefore at risk, embrace storages of used nuclear fuel and other radioactive waste, sites of underground nuclear explosions, uranium mining and processing facilities, as well as a wide range of research, medical and industrial sources of ionising radiation.

ECONOMY

CHAPTER 2.4

RUSSIAN INVASION CAUSED MASSIVE ECONOMIC DISRUPTIONS AND LIMITED BUSINESS ACTIVITY

The full-scale Russian invasion has had dramatic effects on the Ukrainian economy in the form of a high level of migration, destroyed infrastructure, blocked export routes, and a growing fiscal deficit. As of September 2022, the total direct damage caused by the war was 114.5 Bn USD¹ (112% of Ukrainian GDP in 2021). At least 131.3 thousand residential buildings, 2,472 educational institutions, 934 medical institutions, 422 enterprises, as well as numerous other objects¹, have been damaged, destroyed or seized.

Ukraine will need large investments and economic support to return to at least the pre-war state of the economy. But **not only is** Ukraine experiencing economic difficulties. As a result of the war, growing inflation and rising interest rates of the World Bank slowed down the global GPD growth projection for 2022 from 4.1% to 2.9%², which will affect people and businesses all around the world. For that reason, it is highly important to understand the scope of the impact of war on the Ukrainian economy and the plan for its recovery.



Economy

The section discloses key aspects of the Ukrainian economy, which has suffered the most from the full-scale Russian war in Ukraine or will have high investment potential after the war, including:

- Agriculture
- Mining & Manufacturing
- Energy

- Transport & Logistics
- IT

Agriculture

- The development of agriculture in Ukraine before the war
- The consequences of military actions on sowing campaign
- The possible threat of global famine

Mining & Manufacturing

- The state of mining & manufacturing before the Russian aggression
- The impact of the Russian invasion on industry potential
- The impact on global consumers due to the war



- The overview of the energy sector in Ukraine before the invasion
- The impact of the Russian invasion on the energy balance of Ukraine
- The impact of the war on global energy prices

Transport & Logistics

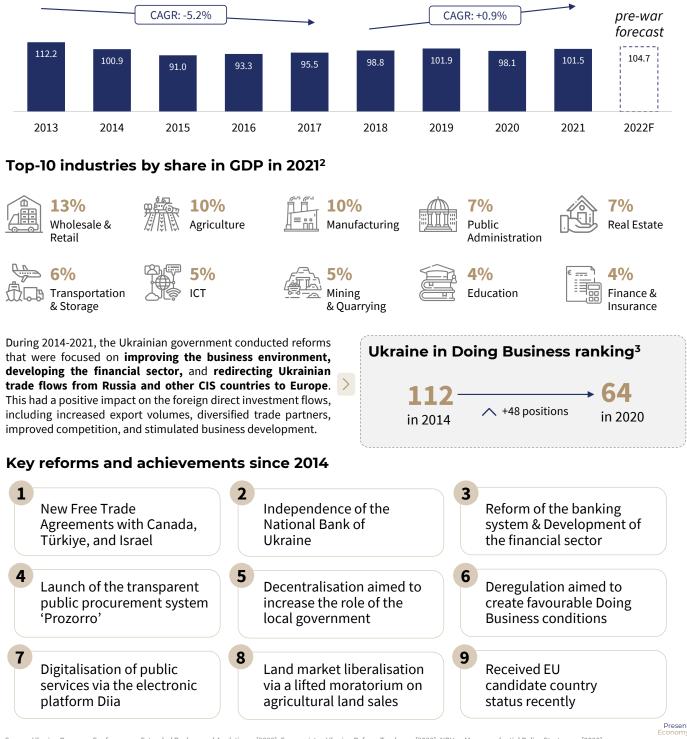
- The state of the transportation system in Ukraine before the war
- The impact of the Russian hostilities on the infrastructure
- The emerging risks to the global transportation system
- The current potential of the IT sector in Ukraine
- The impact of the Russian invasion of Ukraine on the IT sector
- The influence of the Russian invasion on the global IT sector

IT

CONDUCTED SECTORAL REFORMS FORCED THE UKRAINIAN ECONOMIC RECOVERY AFTER 2014-2015

The **annexation of Crimea** in 2014 and the start of the military aggression of Russia in Donbas **deprived 20% of the Ukrainian economy**, while the **total damage amounted to 150 Bn USD**. In 2015, real GDP decreased by 9.8% compared to 2014, and during 2014-2016, the Ukrainian economy **lost 38% of its GDP because of the banking system crisis**. To cope with the **growing inflation and budget deficit**, the government conducted a number of

reforms **to stabilise the macroeconomic and fiscal policies**. Another disruptive factor impacting the Ukrainian economy was the COVID-19 pandemic that started in 2020, causing a 3.8% decrease in the Ukrainian GDP compared to 2019. But the increased demand for Ukrainian goods, especially metal and agricultural products, revived economic growth in 2021. Before the war, the GDP was forecasted to grow by 3.2% in 2022.



Ukrainian real GDP, Bn USD¹

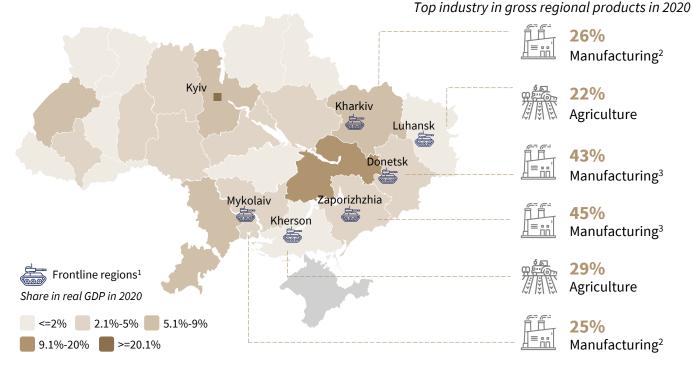
Source: Ukraine Recovery Conference — Extended Background Analytics — [2022]; Economist — Ukraine Reform Tracker — [2022]; NBU — Macroprudential Policy Strategy — [2020]; World Bank — Doing Business Ranking — [2014, 2020]; State Statistics Service of Ukraine website; World Bank website; The Ministry of Economy of Ukraine website; Media overview Notes: (1) Based on the data of the World Bank, constant 2015; (2) Based on the data of the State Statistics Service of Ukraine; (3) Conducted by the World Bank

IN 2022, UKRAINIAN GDP IS PROJECTED TO DROP BY **45% REFLECTING DAMAGE CAUSED BY THE WAR**

The current frontline regions historically specialise in metallurgy, mining & quarrying, and agriculture. In 2020, there were ~73,000 enterprises employing almost 4 million people, and the regions generated 20% of Ukrainian GDP, with the Kharkiv region being the largest contributor, with a share of 6%.

Having been partially occupied by Russian troops since the start of the full-scale war in Ukraine, these regions are now suffering from intense military actions, making proper business activities impossible and decreasing the total output of the Ukrainian economy.

Role of the frontline regions in the Ukrainian economy



Sectors of the Ukrainian economy by top share of revenue generated in frontline regions in 2020



16 27% Manufacturing



Mining & Quarrying

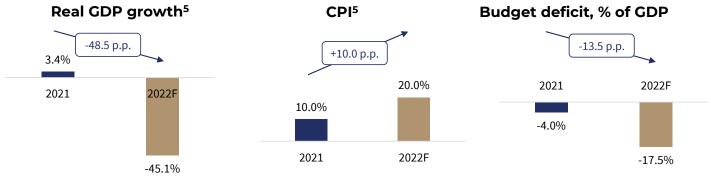




Agriculture

The Russian invasion caused massive infrastructure disruption and a partial stop of business operations. To prevent the collapse of the economy, the government imposed capital controls, banking sector restrictions, and tax deferrals, while the NBU⁴ increased the key interest rate to 25% to control inflation. Nowadays, the growing fiscal gap is another challenge as government expenditures

continue to grow. Now, Ukraine spends more than 4 Bn USD monthly to support the Armed Forces, compared to 6 Bn USD in 2021. Yet, from January - May 2022, tax revenues decreased by 19% compared to the same period in 2021. To cover disbalances, international partners have already provided funding, but the end of the war is a crucial step to ensuring economic recovery.



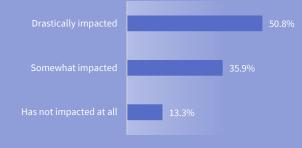
116

Source: World Bank — Global Economic Prospects — [June 2022]; Ukraine Recovery Conference — Extended Background Analytics — [July 2022]; UkraineInvest — Rebuilding Variane with Private Sector — [June 2022]; State Statistics Service of Ukraine website; Vox Ukraine website Notes: (1) Regions with active military actions or partially occupied regions as of July 2022; (2) Leading subsector — manufacture of food products, beverages, and tobacco products; (3) Leading subsector — metallurgy; (4) The National Bank of Ukraine; (5) Based on the forecasts of World Bank, as of June 2022

THE RUSSIAN INVASION NEGATIVELY AFFECTED THE PROFESSIONAL ACTIVITY OF UKRAINIANS

The Russian invasion of Ukraine has **drastically affected the professional activity of almost every Ukrainian**. Some lost their jobs, while others experienced a decrease in the amount of their monthly income. The working model has also changed, with companies either relocating or switching to a remote working format.

Has the Russian invasion of Ukraine affected your field of professional activity?¹

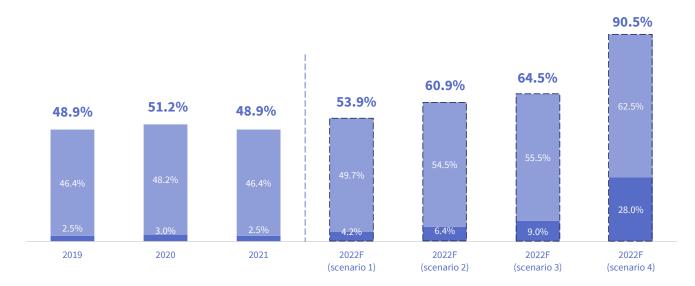




share of Ukrainians who have experienced a drop in their monthly income¹ About 50% of Ukrainians have experienced a decline in their monthly income due to the **Russian invasion of Ukraine**, while a quarter of Ukrainians have lost their jobs. The most difficult situation is observed in the frontline regions, which have been hit the most by hostilities. The decline in the income of Ukrainians has also negatively affected the domestic demand in the country.

Compared to the pre-war level at the moment, the Ukrainian national currency, the hryvnia, is 46% more expensive than the US dollar. **In August 2022, inflation in Ukraine accelerated to about 23% in annual terms**, according to the preliminary estimates of the National Bank of Ukraine. However, the real average consumer goods price increase suggests that a regular shopping check became at least 30% more expensive – all these against the background of decreasing job opportunities and generally non-increasing salaries. Every day of delayed peace will accelerate a freefall into poverty in Ukraine.

Per cent share of Ukrainians living in / vulnerable to income poverty²



In order to maintain the resilience of business operations, as well as **to ensure the security of employees during the war**, Ukrainian companies have actively **switched to a hybrid or remote working format**. As a result, **more than half of Ukrainians are currently working from home or in a hybrid mode**, while only a quarter of them are working offline.

?

Which work model has your company been using since the beginning of the war?¹ **25.9%** Remote / hybrid work before the war³

24.2% Office work

18.5% Closure of the physical office

Source: Kyiv Consulting analysis; UNDP – The Development Impact f the War in Ukraine – [2022]

Notes: (1) Ukrainian population survey conducted by Kyiv Consulting, July-August 2022, n=1,000 respondents; (2) UNDP projections of household income in Ukraine as of 16 March 2022; (3) And continues this practice today

Few Ukrainian businesses apply for governmental support programmes

୨୨

In early August, the European Business Association measured investment attractiveness of Ukraine, which considered, inter alia, factors that affected business performance and the overall investment climate of the country.

It is clear that the first place in the ranking was attributed to the war, the second – to corruption and the third – to the weak judicial system, followed by purchasing capacity of the population and logistical issues.

ANNA DEREVYANKO

Executive Director of the European Business Association (EBA)

Involvement during Russia's war against Ukraine: Since the beginning of the war, EBA has been engaged in cooperation with private companies and state institutions to support the economy, as well as the Armed Forces of Ukraine. The 'Second Chance Bank' project (first online reuse centre in Ukraine) was transformed to platform for sharing information on military needs with companies willing to provide support.

What government initiatives can help re-launch the business sector, which has been affected the hardest by the country's economic decline?

We see that grant programmes are now being launched, and this is an important signal of businesses' support. However, businesses should have the confidence to apply for such programmes and have faith that they will get the needed funds. Now, according to a survey of microentrepreneurs, who are members of the Unlimit Ukraine (EBA CSR project), we see that 63% of the surveyed entrepreneurs have not used governmental or international programmes to support their businesses. Whereas 16% referred to the option to pay 2% single tax, 6% used other tax benefits, 5% used the 5-7-9 credit programme, 3% said they applied for the e-Robota programme, and 1% used reimbursement for the IDP employment. Therefore, confidence building is probably still worth working on.

What are the main types of problems Ukrainian businesses face during the war?

In early August, the European Business Association measured investment attractiveness of Ukraine, which considered, inter alia, factors that affected business performance and the overall investment climate of the country. It is clear that the first place in the ranking was attributed to the war, the second – to corruption and the third – to the weak judicial system, followed by purchasing capacity of the population and logistical issues.

There are certain issues in the dialogue with the public authorities. However, we can see that if we speak honestly and openly about these difficulties, using arguments and facts, then, for the most part, these issues can be resolved and a compromise can be found. For example, until recently, there were indeed some difficulties in communication with representatives of the Tax Service.

In an optimistic scenario, Ukraine can become a member of the EU in 5 years



Membership in the EU will open great market opportunities for Ukrainian entrepreneurs, for agriculture, any industrial production, and services. Border problems will disappear. Ukrainian products will become EU products. Deep intra-industrial cooperation and specialisation will be made possible. Ukrainian companies will become attractive partners not only for all EU companies but also for off-EU companies that would like to be present within the EU.

DR MARCIN SWIECICKI

Ukraine Business Ombudsman (2019-2021); Former Deputy Minister of Economy; Former Mayor of Warsaw

Involvement during Russia's war against Ukraine: Dr Marcin Swiecicki takes an active social position supporting Ukraine, expresses his solidarity with Ukrainian people and raises awareness of Russia's war against Ukraine. Also, he supports Ukraine's accession to the EU, calls on the world to fight terrorists, and help Ukraine with weapons.

11% of Ukrainian businesses have relocated abroad. What should be the state policy to create favourable conditions for these businesses to come back to Ukraine?

I do not think that business return to Ukraine after the war requires too many special conditions. The most important, what is needed already now, is to facilitate border crossing for trucks and trains. I presume that quantity of goods crossing the borders with EU will be growing but conditions on borders are dramatic. Hundreds of vehicles are waiting several days for custom checks, phytosanitary and veterinary control. Corruption is booming. Any company that has trade ties with EU partners will stay abroad, once possible, rather than return behind the border again. Ukraine, Poland, and other EU countries bordering with Ukraine should agree on standards for border crossing, e.g. no more than three hours and do everything to achieve and keep such standards.

What are your projections regarding the ease and duration of Ukraine becoming a member of the European Union?

EU will open negotiations on accession after Ukraine fulfils several preliminary conditions, which are fair competitive nominations to the Constitutional Court, NABU, and special prosecutor office, and with laws on media and national minorities, and reform of self-governing judicial bodies and antioligarch reform. Ukraine declares that can fulfil these conditions by the end of 2022 so that negotiations on accession could be opened in 2023. In the past enlargements, such negotiations took usually not less than 4 years. Then 1-2 years for ratifications by all member states is needed. Ukraine has privileged conditions since it has been implementing a Deep and Comprehensive Free Trade Agreement with the EU since 2014. DC FTA is based on Acquis Communautaire almost like membership requirements. In optimistic scenario Ukraine can become member of the EU in 5 years.

THE FERTILITY OF THE UKRAINIAN SOIL DETERMINES THE EFFICIENCY OF THE AGRICULTURAL SECTOR

The value of Ukrainian land is determined by two main factors, such as **fertility** and the ability to harvest in local climatic conditions through land **reclamation and fertilisation**. More than 60% of the territory of Ukraine is covered by 'chornozem', a black-coloured soil containing a high percentage of humus,

providing a high potential for the agricultural sector. Moreover, Ukraine plays a key role in ensuring global food security, by owning almost 30% of the world's chornozem. These fertile soils enable the growth of a variety of grains, oil crops, vegetables, and fruits.

Soil fertility map of Ukraine, as of 2021



41.3 million ha

land fund of agricultural land in Ukraine¹

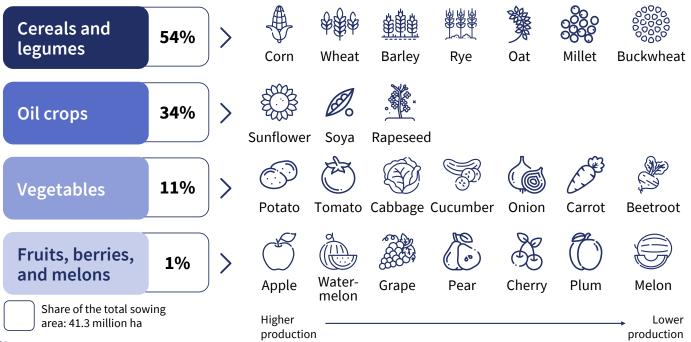
2/3

of the territory of Ukraine is covered by fertile soils

3rd place

in the world by share of arable land to the total land area — 54%²

Key agricultural cultures growing in Ukraine, as of 2020

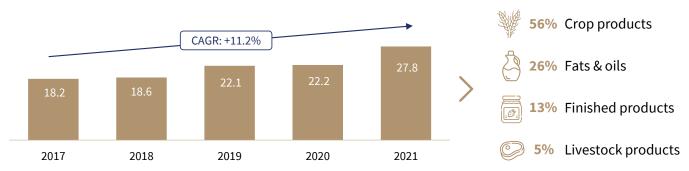


Source: Latifundist - Agribusiness of Ukraine - [2020, 2021]; The Ministry of Agrarian Policy and Food of Ukraine website; Soils Protection Institute of Ukraine website; FAO website; Media overview Notes: (1) As of 2021; (2) As of 2020

120

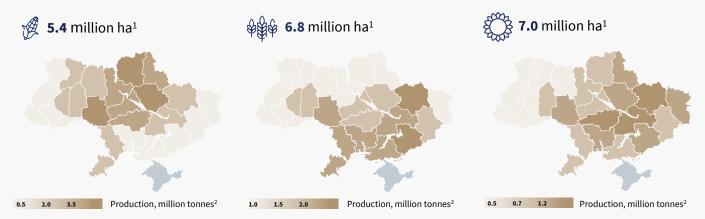
IN 2021, THE AGRICULTURAL SECTOR ACCOUNTED FOR 44% OF UKRAINE'S EXPORTS AND 10% OF GDP

Ukrainian export of agricultural products, Bn USD



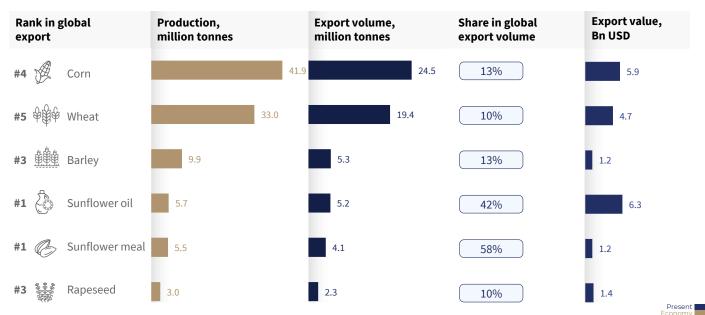
In 2021, the **agricultural sector** had one of the largest shares in the country's real GDP — **10.3%**. In addition, **Ukraine has harvested the biggest crop of cereals, legumes, and oilseeds** since its independence, **thanks to favourable weather conditions and the state aid programme of affordable loans to farmers**. As a result, the agricultural export revenue kept growing and reached a record **43.9% of the total Ukrainian exports**.

Key growing regions of major cereals and oilseeds in Ukraine



Ukrainian main agricultural products, corn, wheat, and sunflower, are grown throughout the country, primarily in the southern, eastern, and northern regions. In 2021, Ukraine exported more than half (59%) of its corn and wheat harvest, as well as 91% of sunflower oil, becoming the world's largest sunflower producer and sunflower oil exporter.

Main products of Ukrainian agricultural export in 2021



Source: USDA — Ukraine Agricultural Production and Trade — [April 2022]; Latifundist — Agribusiness of Ukraine — [2020, 2021]; The Ministry of Agrarian Policy and Food of Ukraine website; State Statistics Service of Ukraine website; UCAB website; Media overview Notes: (1) As of 2020; (2) As of 2019

IN 2022, THE CROP IN UKRAINE IS FORECASTED TO DROP BY 40% TO NEARLY 65 MILLION TONNES

Ukrainian export of agricultural products



expected Ukrainian harvest in 2022, a 40% reduction vs 2021



projected Ukrainian grain harvest in 2022, a 44% drop vs 2021

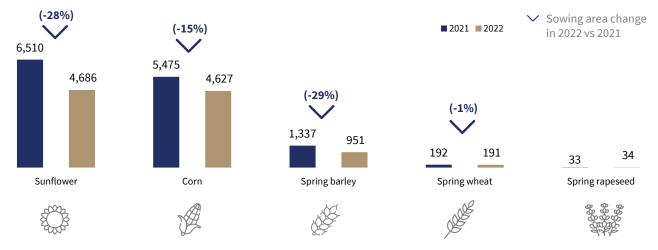


estimated amount of grain stolen by Russia from the occupied areas



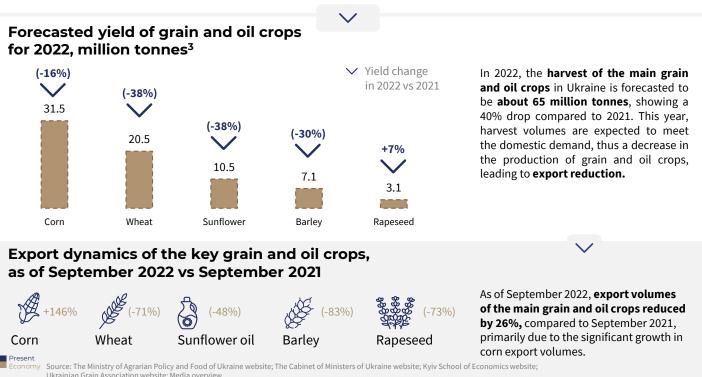
livestock that died in regions of active military actions

Sowing area in Ukraine by type of key crops, thousand ha²



In 2022, the sowing area of the main spring crops was 14.2 million ha - a 16.3% reduction compared to 2021. Meanwhile, winter crops (wheat, rye, and barley) were sown on an area of **7.6** million ha, which was slightly smaller than in the past year. The biggest change, as a result of the hostilities and occupation of

some parts of the country, occurred in the crop structure of sunflower, corn, and spring barley. Not being able to export products because of the blockade of seaports, Ukrainian farmers **have increased the crop area for peas, beans, and buckwheat**, expecting higher demand in the domestic market.



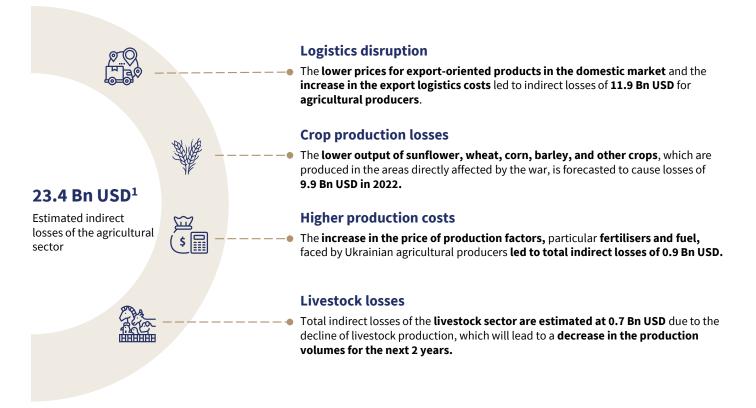
Ukrainian Grain Association website; Media overview Notes: (1) For the period of 24 February 2022-26 June 2022; (2) The spring sowing campaign in Ukraine finished in June 2022; (3) As of early September, more than 95% of the crop has been harvested

THE TOTAL DAMAGE TO THE AGRICULTURAL SECTOR CAUSED BY THE WAR IS MORE THAN 27 BN USD

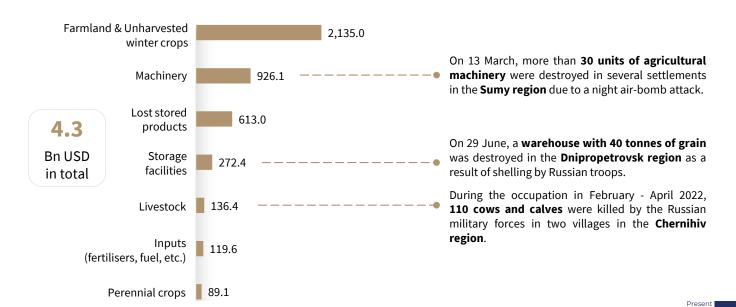
As As of June 2022, indirect losses of the agricultural sector of Ukraine are estimated at 23.4 Bn USD due to a decrease in production, the blockade of seaports, and the increase in the price of production factors. In addition, direct losses reached 4.3 Bn USD, accounting for almost 15% of the accumulated capital in the agriculture sector of Ukraine.

Calculations of losses enable an understanding of both the scale of the industry's decline and its lost growth opportunities. Without compensation for losses, farmers in the regions most affected by the war might not be able to resume production in pre-war volumes in the next few years and could close their businesses.

Indirect damage to the Ukrainian agricultural sector, Bn USD¹



Direct damage to the Ukrainian agricultural sector, Mn USD¹



ABOUT 120 MILLION PEOPLE ARE DEPENDENT ON UKRAINIAN AGRICULTURAL EXPORTS



120 million people

worldwide might not be able to get Ukrainian grain crops due to the Russian invasion of Ukraine



By the end of 2024

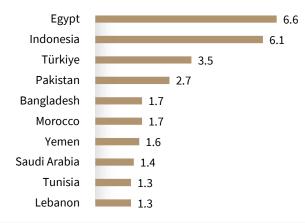
food prices will be kept at historically high levels, exacerbating food insecurity and inflation



36 countries

around the world faced food inflation in 2022 at the level of 15% or higher as of May 2021

Leading importers of Ukrainian wheat in 2021, million tonnes



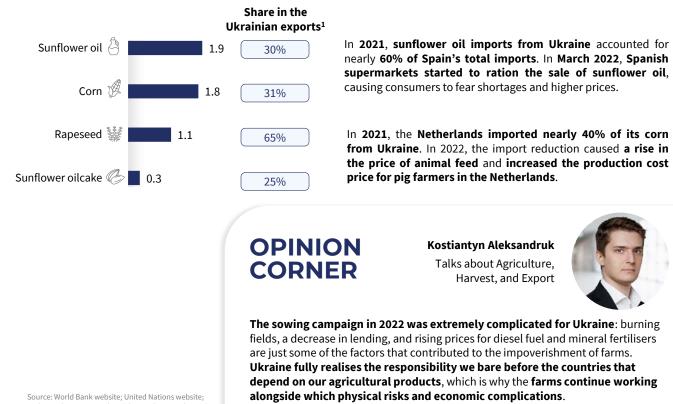
Despite the dependence on Ukrainian exports, **none of the leading importers of Ukrainian wheat initiated imposing sanctions against Russia. Indonesia** declared its **readiness to participate in the restoration of medical infrastructure**, while In June 2022, **Egypt banned the trade of domestically produced wheat** until the end of August, **allowing sales** only to the **government**. In mid-2022, the average price per tonne of **imported wheat already increased by approximately 100 USD** compared to 2021.

In March 2022, the **production cost** of subsidised **bread** in **Tunisia**, which **imported about a third of its wheat from Ukraine**, has already been **twice higher** than its **selling price**, while local bakeries report a **lack of grain**.

In Lebanon, the price of bread has increased by 27% since February 2022. In March 2022, the national government started to negotiate international support in financing the grain import, on which Lebanon spends about 20 Mn USD per month.

Pakistan provided humanitarian aid, including medicines and food. Since the start of the full-scale invasion, **Türkiye took a position of neutrality**, maintaining contact with both Ukraine and Russia.

Main products of agricultural export from Ukraine to the EU in 2021, Bn USD

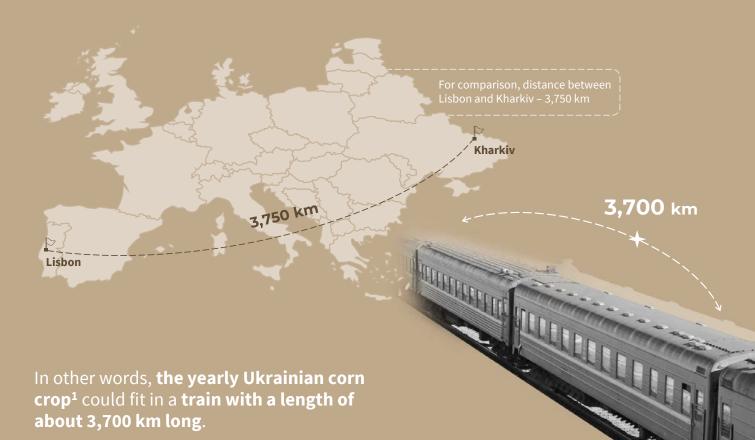


Source: World Bank website; United Nations website; Forbes website; Latitundist website; The United States Institute of Peace website; Media overview Notes: (1) Share of the European Union in the total export volumes of Ukraine in 2021

DID YOU KNOW THAT THE YIELD OF CORN IN UKRAINE HAS INCREASED BY 50% SINCE 1991?



To accommodate the entire crop of corn grown¹ in Ukraine in one year, 43 olympic stadiums would be needed.



THE WAR CAUSED THE GLOBAL FOOD PRICE INDEXES GROWTH TO HIGH HISTORICAL LEVELS



of Ukrainian grain was exported through seaports in 2021



22 million tonnes

of grain were blocked in Ukrainian seaports as a result of the Russian invasion



3 Ukrainian seaports

continued to operate in the first months of the war but generated only 10% of prewar turnover

Ukrainian agricultural production significantly exceeds its domestic consumption; about 70% of all agricultural products are exported. Thus, Ukraine has been participating in ensuring global food security for many years, exporting most of the grain and oil harvest to the countries of Europe, Asia and Africa. From the first days of the Russian war against Ukraine, the Russian military blocked almost all Ukrainian seaports, the country's main export routes, disabling the export of Ukrainian agricultural products, which affected global food security and caused a sharp price increase.

food security, especially in low-income and import-dependent

countries in Africa and Asia. In addition to the rapid global

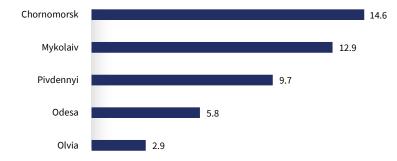
increase in food prices and the shortages of grain and bakery

products in some countries, civil protests continue to occur in

Russia's war against Ukraine, as well as droughts, which are

getting worse worldwide, could have a major negative impact

Top-5 Ukrainian ports by grain transhipment volume in 2021, million tonnes



In 2021, five key ports of Ukraine provided more than 90% of grain transhipment. All of them were blocked by the Russian military without a possibility of ships entering or exiting from the beginning of the Russian Invasion of Ukraine in February 2022 until August. In addition, about 70 ships were blocked in Ukrainian seaports during that period.

After the Russian invasion of Ukraine in February 2022, global food prices rose sharply and reached the highest historical level in March. The higher food prices were mainly driven by supply shortages of key commodity crops, such as wheat, corn, and oil seeds. Russia's war against Ukraine also led to fuel and fertiliser price growth worldwide, causing further food shortfalls and price increases.

The war has already proved to create challenges for global

FAO Food Price Index dynamics¹

159.7 158.4 158.1 154.7 141 140.7 138.0 135.6 0 **GRADUAL RECOVERY OF START OF UKRAINE RESUMES EXPORT OF UKRAINIAN EXPORTS BY SEAPORTS THE WAR** AGRICULTURAL PRODUCTS Januarv Februarv March April Mav June Julv August

poor countries.

on global food security.

Global food prices rose sharply and reached the highest historical level in March 2022 after the Russian invasion of **Ukraine**. Higher fertiliser and fuel prices, as well as food supply shortages, affected global food prices to remain at extremely high levels for months. Despite the ongoing hostilities, Ukraine managed to increase the volume of exports of agricultural products by rail, affecting the global food prices to decrease gradually. The Black Sea Grain Initiative, signed by Ukraine and Russia with Türkiye and the United Nations, enabled the export of grain and food products from three Ukrainian seaports, impacting global food prices decrease and providing more steady food security.

Source: FAO website; UN website; Ukrainian Railways website; Media overview

Notes: (1) A measure of the monthly change in international prices of a basket of food commodities, which consists of the average of five commodity group price indices (Cereal, Vegetable Oil, Dairy, Meat, and Sugar) weighted by the average export shares of each group over 2014-2016 126

108 SHIPS EXPORTED GRAIN AND FOOD PRODUCTS FROM UKRAINE TO MORE THAN 20 COUNTRIES

After the beginning of the full-scale Russian invasion, **Ukraine started exporting grain to the EU by railway because of the Russian blockade of its seaports**. However, the volumes of railroad export of agricultural products were significantly lower than pre-war and export volumes in 2021.

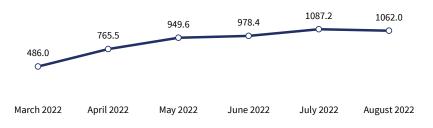
e of the Chornomorsk, and Pivdenny. On 1 August, the first ship with 26 thousand tonnes of Ukrainian corn left the Odesa seaport in the direction of Lebanon, but the receiving party refused the cargo because of the delay in shipment.
 As of 9 September, 108 ships left three Ukrainian seaports for

On 22 July, Ukraine and Russia signed an agreement with Türkiye and the United Nations, called the Black Sea Grain Initiative¹, which enabled the unblocking of the export of

As of 9 September, 108 ships left three Ukrainian seaports for grain and food products transportation to more than 20 countries in Asia, Europe, and Africa.

grain and food products from the Ukrainian seaports of Odesa,

Ukrainian railroad export transportation of grain, sunflower oil, and meal, thousand tonnes



Since the launch of grain, sunflower oil, and meal railway export to the EU, Ukraine targets to increase the maximum capacity of transhipment railway stations to about 1.5 million tonnes of grain per month. From March -August 2022, Ukraine exported almost 4.4 million tonnes of grain and about 1 million tonnes of sunflower oil and meal by railroad.

Unblocked Ukrainian seaports participating in the Black Sea Grain Initiative²

During almost 40 days of operation of the Black Sea Grain Initiative, Ukraine exported almost 2.5 million tons of agricultural products from three seaports.

The largest volume of agricultural products, about 1 million tonnes, was exported from the Chornomorsk port, almost 900 thousand tonnes were exported from the Pivdennyi port, and more than 600 thousand tons from the port of Odesa.

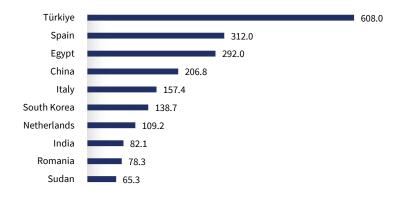


The volume of exports of the main agricultural products within the Black Sea Grain Initiative²



Total volume of exports of agricultural products: 2.5 million tonnes

Leading importers of the Ukrainian grain and food products within the Black Sea Grain Initiative, thousand tonnes²



Asia was the main export direction of the Ukrainian grain and food products, with 44% of the total volume, 36% was exported to Europe, and 20% more to Africa.

According to trade agreements concluded by Ukraine and respective countries in the pre-war period, Türkiye, Spain, and Egypt became the largest importers of corn from Ukraine within the Black Sea Grain Initiative, while wheat was primarily imported by Türkiye, Egypt and Sudan. In addition, India, Türkiye, and Italy became the main importers of sunflower oil.

Sources: The Ministry of Infrastructure of Ukraine website; The Cabinet of Ministers of Ukraine website; Ukrainian Railways website; UN website; Media overview Notes: (1) Also called the Initiative on the Safe Transportation of Grain and Foodstuffs from Ukrainian ports. The validity of the initiative is 120 days, and it could be automatically extended if neither side decides to terminate it; (2) As of 9 September 2022 Present

Farmers are forced to restructure planted areas

୨୨

Agribusiness today requires stable support more than ever, in particular, a fair, simple, predictable, and transparent tax system based on a permanent tax model, as well as simplified relations between business and the state. The so-called 'resource' law on the balance of budgetary revenues must work, which envisages the implementation of a minimum tax obligation.

IGOR CHYKIN

Director of Agribusiness, Kernel

Involvement during Russia's war against Ukraine: Despite the fact that the most intensive military actions are localised in the regions, where Kernel has substantial farming operations, Igor's team has launched a sowing and harvesting campaigns, doing everything possible to ensure food security to avoid humanitarian disaster for the whole world.

What changes are expected in the production of the main crops in Ukraine? Will all the main crops in Ukraine remain the leaders in terms of production volumes in the next 5-10 years?¹

The most significant changes will be in sunflower and maize crops production. Relatively low energy intensity, a high proportion of internal processing, historically high yields, and resistance of plants under stress conditions — high temperatures and moisture deficit – are the factors that encourage Ukrainian agro-producers to choose to increase the planting of sunflowers. The expected reduction in maize planted area is caused by the high level of energy intensity of the crop, the significant increase in logistics costs due to the collapse of steady supply lines, and the unprecedented rise in the price of gas and mineral additives. This will be a logical way to optimise the land area of agricultural enterprises.

What reforms should be implemented in Ukraine to improve business conditions and profitability for crop producers and grain traders?¹

Agribusiness today more than ever requires stable support, in particular, a fair, simple, predictable, and transparent tax system based on a permanent tax model, as well as simplified relations between business and the state. The so-called 'resource' law on the balance of budgetary revenues must work, which envisages the implementation of a minimum tax obligation.

This is a good initiative that encourages agricultural producers to pay taxes fairly at different levels by eliminating 'grey' schemes. Combating unfair competition through the implementation of a new tax model with simple and clear rules for all market participants will help the responsible business to survive and continue its development, and strengthen the country.

Small farmers are highly dependent on crediting

୨୨

Small producers of agricultural products now face a problem of insufficient credit, because the banks have reduced the volume of credit, which is necessary for the implementation of the autumn and spring sowing campaign.

Therefore farmers desperately need government assistance in the form of investments or grant programmes, as banks do not provide sufficient financing.

HRYHORII SHAMRYTSKYI

Chairman of the Congress of Farmers of Poltava region, farm owner

Involvement during Russia's war against Ukraine: Hryhorii and farmers from his community have been packing humanitarian aid, particularly food for the military in Kyiv and the Kyiv region, as well as to Okhtyrka, and Trostyanets in Sumy region. They also helped IDP in the Poltava region by providing food packages. Also, together with the farmers, they bought a car for the local territorial defence.

How would you characterise the sowing campaign this year? What problems did the farmers of Poltava region face this year?

It was the most difficult sowing campaign in the entire history of the Independence of Ukraine. Typically, farmers would hold their crops until spring to sell at higher prices than at harvest to raise funds for the seed company and pay off debt. But with the beginning of the war, the prices of grains, such as sunflower and wheat, fell dropped twofold. Farmers had lunch several times. In addition, banks reduced lending volumes or stopped lending altogether in February, despite long-term relationships and prior agreements. This factor also made it difficult to conduct a seed campaign. The third point that affected the severity of the sowing company is the price of diesel fuel, which has increased in price 3 times, and the price of mineral fertilisers. Accordingly, the number of fertilisers used during sowing was less, we were forced to save on fertilisers, cultivation, trips, and plant protection products.

Which investment projects in the agricultural sector of the Poltava region could be interesting for a foreign investor?

If before the war we were an export-oriented country and most of the types of grain produced by us were exported abroad and processed there, today we understand how important processing is within the borders of our country. For example, buckwheat that came to us from Belarus and Russia became 5-6 times more expensive due to the closure of borders, and we realised that it is more profitable to grow buckwheat, pack it and sell it on the domestic market. Therefore, in my opinion, today it is necessary to invest funds in the agriculture of Ukraine precisely in the direction of the creation of processing enterprises. It is also necessary to urgently increase the volume of animal husbandry because today we produce much fewer animal products than back 15-20 years ago. Programmes for the development of animal husbandry must be developed, because today, during the war, the price of meat has increased by approximately 30-40%, the price of milk has also increased, and the price of grain has decreased twice.

DID YOU KNOW THAT UKRAINE'S LANDS ARE RICH IN MINERAL RESOURCES?

Selected Ukrainian reserves of

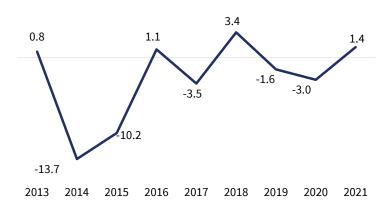
130

mineral resources

5 6 6 6 Ukraine's land has mineral resources in high concentrations. Due to the unique raw material base of iron and manganese 25 Mn ores, Ukraine is one of the countries with the most developed ferrous metallurgy in the world. 16 S 117 types of minerals 12 Mg 22 Ti 28 Ni $\hat{\bigcirc}$ ³¹ Ga neInvest — Ukraine's Mining sector: Inv unities — [2021]

MINING INDUSTRY HAS HISTORICALLY BEEN ONE OF THE MAJOR SECTORS IN THE ECONOMY OF UKRAINE

Changes in the Index of industrial production in mining in Ukraine, p.p.



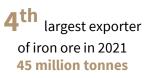
The rich mineral resources base in Ukraine determined high reliance of the national economy on mining. In 2021, the industry contributed **almost 5% to the GDP** of Ukraine. It was one of the leading export industries in 2021, with a **12% share** of mineral products (mainly iron ore) **in the country's total earnings from the export of goods**. As a result of the Russian military aggression, the Index of industrial production in mining **decreased drastically in 2014-2015**, mainly due to the temporary loss of control over a part of the territory of Donbas, where the majority of mines (especially coal) is located.

Key findings on the mining industry of Ukraine

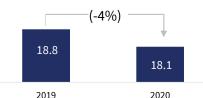
Ukraine is one of the **top exporters** of iron ore globally, and it also has the potential to **increase the mining and export of other groups of metals.**¹

Ukraine has the potential for a larger exploration of non-metallic minerals, which may **reduce the dependence on the import** of certain types of raw materials.

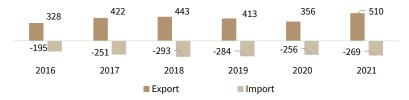
The current level of exploration and extraction of fuel and energy minerals **does not allow the** required level of energy independence for Ukraine.

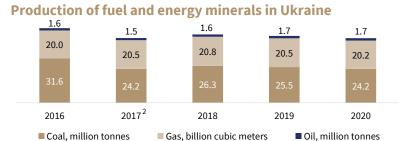


Reserves of iron ore in Ukraine, billion tonnes



International trade of Ukraine in non-metallic minerals, Mn USD





Ukraine's placement in the world by minerals extraction, as of 2020



Kill

Metallic minerals

Iron: 6th place globally (7% of global output)³

Titanium: 5th place globally (6% of global output)

Manganese: 7th place globally (4% of global output)

Non-metallic minerals

Kaolin: 7th place globally (4% of global output)

Zircon: 11th place globally (1% of global output)

Graphite: 10th place globally (1% of global output)

Mineral fuels

Uranium: 9th place globally (2% of global output)

Coking coal: 10th place globally (1% of global output)

Steam coal: 12th place globally (0.3% of global output)

Present

UKRAINIAN MANUFACTURING WAS ALWAYS LARGE, YET STRUCTURAL PROBLEMS LIMITED ITS GROWTH

Manufacturing was **the third largest industry in the economy** of Ukraine in 2021, accounting for 10% of the GDP and more than half of the total export of goods. Nowadays, the manufacturing industry includes a wide range of subsectors and has the potential to become the country's economic development driver.

However, over recent years, the industry has been facing a **number of structural challenges**. These include low domestic demand for industrial products, weak integration of the sector into global value chains, low competitiveness of industrial products from Ukraine on global markets, etc.

Key findings on the manufacturing industry of Ukraine in 2021

Sector	Turnover, Bn USD	Share	Change in th 2013/202		Export, Bn USD	Employees, thousands ²
Foodstuff, beverages, tobacco	25	31%	(-0 p.p.)	4	4	286
Metallurgy and metal products	24	29%	(-28 p.p.)	5	16	185
Rubber and plastic products	8	9%	+20 p.p.	Ľ	1	114
Engineering	8	9%	(-24 p.p.)	5	6	287
Wood and paper products	4	5%	(-21 p.p.)	5	3	71
Chemical products	4	5%	+1 p.p.	Ľ	3	56
Coke and refined products	4	5%	(-26 p.p.)	5	1	14
Furniture	2	3%	+3 p.p.	L	1	103
Pharmaceuticals	2	3%	+6 p.p.	L	0	25
Textile, clothes sewing	1	1%	(-3 p.p.)	5	1	70
Manufacturing total	82	100%	(-12 p.p.)	5	36	1,211

The manufacturing industry in Ukraine is mainly represented by **low-technological sectors** (food, metallurgy, rubber & plastic), while the engineering, chemical, and pharma sectors accounted for only 16% of the total industrial turnover in 2021.

The Russian **military aggression** that started in 2014 caused the destruction of production facilities and logistics infrastructure, as well as the breakdown of regional value chains in Ukraine. It was a major factor in the manufacturing decline from 2014-2021.



In 2021, **ferrous metals became the largest group** in the total country's export value of goods. The share of engineering accounted for only 9% of the export of goods, indicating an insignificant technological focus on the manufacturing industry.

OPINION CORNER

Talks about Manufacturing, Economy, Investments, Incentives, and Perspectives

Anna Didenko

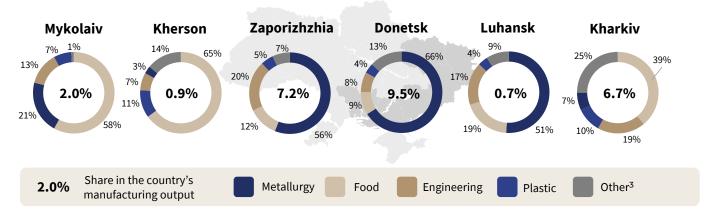


Ukraine has **outstanding potential to become the manufacturing hub in Europe,** with highly efficient production sites. The local economic incentives provided by the Ukrainian government, along with the **necessary investment infrastructure and transparent legal system,** will enable a **favourable investment climate**. The most promising manufacturing areas might be in **heavy machinery, automotive, metals, and defence engineering and manufacturing**.

Source: The Federation of Employers of Ukraine — State of the Industry in Ukraine — [2021]; State Statistics Service of Ukraine website; The Cabinet of Ministers of Ukraine website Notes: (1) Index of Industrial production; (2) Latest available data for 2020

WAR CAUSED SIGNIFICANT DAMAGES IN THE MINING AND MANUFACTURING INDUSTRIES OF UKRAINE

Manufacturing output structure in the frontline regions^{1,2}



The industrial sector in Ukraine has been significantly affected since **more than a quarter of the country's manufacturing output is located in the frontline regions**. The largest metallurgical and mining enterprises, oil refinery infrastructures, as well as engineering and chemical plants have been either severely damaged or temporarily withdrawn from the national value chains.

total material losses of the mining and manufacturing sector of Ukraine due to the Russian invasion⁴

Bn USD

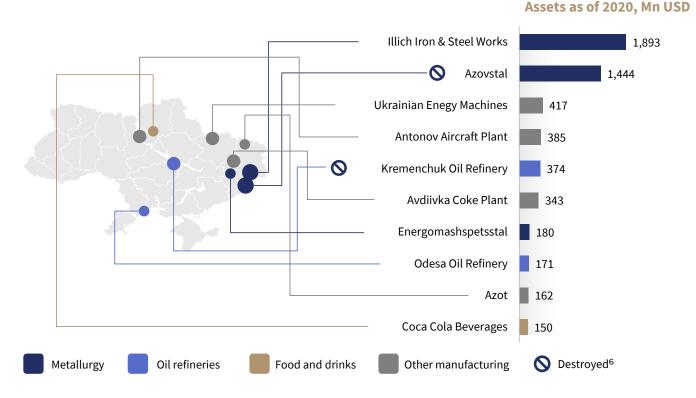
11.9

sector of Ukraine caused by disruptions in the value chain and interruption of the production process are much higher. ad

According to the estimations of the NBU, the physical damages in the mining and

manufacturing sector as a result of the Russian invasion comprise **13% of the total material losses in the economy.**⁴ However, the total economic losses of the industrial

Top-10 industrial sites that were the most damaged due to the Russian invasion⁵



Source: UkraineInvest — Rebuilding Ukraine with Private Sector — [2022]; State Statistics Service of Ukraine website; NBU website; Media overview

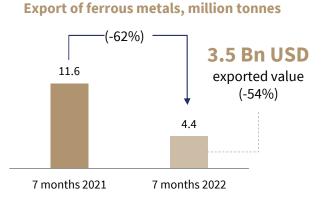
Notes: (1) Frontline regions as of 11 September 2022; (2) Based on the structure in 2020; (3) Including chemical, pharmaceutical, wood & paper, coke & refined sectors; (4) Latest available assessment of the NBU as of 10 May 2022; (5) As of 7 June 2022, latest available assessment; (6) Complete or critical destruction of the facilities that requires the full restoration

METALLURGICAL SECTOR HAS BEEN HIT ESPECIALLY HARD AS A RESULT OF THE RUSSIAN INVASION

Metallurgical sector of Ukraine, which historically has been one of the largest exporters and taxpayers in the national economy, **was significantly damaged due to the hostilities and the occupation** of parts of the Eastern and Southern regions of the country in 2022. Ukraine has lost about 30-40% of production capacities in metallurgy after the Russian invasion, as they were mostly located in Mariupol, where severe hostilities have been taking place. Except for the physical damages, the industry has also suffered **the breakdown of production chains and a decrease in exports caused by the blockade** of seaports.

Production and export of metallurgical products in Ukraine





Operating status of the selected metallurgical enterprises, as of August 2022



The war in Ukraine significantly affected the operations of the largest metallurgical enterprises. **Illich Iron & Steel Works and Azovstal in Mariupol, which accounted for one-third of the total metallurgical production of the country, were forced to stop their operations** after the beginning of the Russian invasion. Other enterprises reduced or suspended their production due to the breakdown of value chains.

In May – June 2022, **ArcelorMittal Kryvyi Rih and Zaporizhstal restored their operations at reduced capacity.** They focused on replacing the production of metal items that were previously produced exclusively at Azovstal and Illich Iron & Steel Works. However, starting from 1 August 2022, ArcelorMittal was forced to suspend operations of its mining and processing plant in Ukraine for 3 months.

The metallurgical sector of Ukraine has also been suffering losses from the **theft of metal products that were stored in the temporarily occupied territories by Russia**. For example, on 3 June 2022, the first Russian ship, carrying almost 3 thousand tonnes of stolen rolled metal from the Mariupol port, arrived in Russia at the port of Rostov-on-Don.



total value of metallurgical products stored at the territory of the Mariupol seaport in the amount of 200 thousand tonnes³

Present Econom

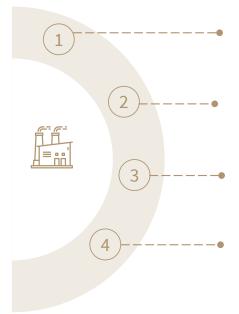
DAMAGES IN UKRAINIAN MINING & MANUFACTURING HAVE NEGATIVELY AFFECTED GLOBAL SUPPLY CHAINS

The role of Ukraine in the global manufacturing supply chains¹

		₩ ₩ ₩			
Exporting sector in Ukraine	Key products	Global / regional supply chains	Share in the global trade	Most dependent markets ²⁻⁴	
Chemical	Neon gas	Semiconductors	45 - 70% ⁵	Taiwan, Korea, China, USA, Germany	
Metallurgy	Pig iron		22%	USA, Spain, Türkiye, UAE	
	Manganese ⁶	Steel	18%	Türkiye, Germany, Poland	
	Iron ore		3%	Poland, Czech Republic, Romania	
	Flat and rolled steel products	Heavy manufacturing	13%	North Macedonia, Slovakia Italy, Bulgaria, Costa Rica	
	Titanium ore	Aerospace, Aviation, Automotive, Medical	9%	Czech Republic, Egypt, Romania, Hungary	
Engineering	Ignition wiring sets	Automotive	4%	Romania, Germany, Czech Republic	

Ukraine is an important supplier of some specific products for the global manufacturing industry. The disruptions in the export of iron ore and iron products, metals, semi-finished metal products, neon gas, and transport equipment from Ukraine have already led to increased pressure on the global supply chain in various sectors. Steel, heavy manufacturing, semiconductors, automotive, and other industries that rely on supplies from Ukraine are experiencing shortages of resources and taking action to mitigate the evolving supply chain crisis caused by the Russian invasion of Ukraine.

The impact of the war in Ukraine on the global manufacturing supply chain



The two leading Ukrainian companies, Ingas and Cryoin, which supply 45 - 55% of the semiconductor grade neon globally, **were forced to suspend their operations due to the war.** The effect of the lack of supply from Ukraine could be felt in 7 - 9 months when **global supplies of neon gas will run out.**

Manufacturing in a large number of countries relies heavily on the export of metallurgical products from Ukraine (including ores and metal products). **The Russian invasion damaged about a third of the metallurgical capacity in Ukraine**, which, in turn, has led to disruptions in global supply chains.

Ukraine is one of the world's largest suppliers of titanium ore, which is used as an input in a number of engineering sectors. Due to the Russian invasion, **Ukraine reduced the export of titanium ores and concentrates by 46%** in the first half of 2022, putting the global titanium supply chain under pressure.

Since the start of the war, various **automotive parts producers have stopped their operations in Ukraine**, affecting automotive manufacturing in Europe. Despite Ukraine having a small automotive parts industry, it has been a **key supplier of wiring harnesses for Volkswagen factories** in Europe.

DID YOU KNOW THAT UKRAINE IS A LEADING SUPPLIER OF WIRING HARNESSES?

Wiring harnesses, produced in Ukraine provide



7% of all automotive industry imports into the EU



Main EU buyers of Ukrainian wiring harnesses in automotive industry

Volkswagen	Opel	Mercedes-Benz	BMW	Audi
Lamborghini				



Metallurgy, chemicals, and mechanical engineering have suffered the most

୨୨

Using an indicative planning tool and model calculations, we created an industrial investment menu of Ukraine, which collected over 614 promising investment projects in such areas as defence, metallurgy and metalworking, energy, mechanical engineering, logistics, furniture and woodworking, and others.

In general, investments in more than 614 projects, totalling 425 Bn USD will create almost 1 million jobs, and this figure can double if counted with 'spillover' effects (cross-sectoral development).

DENYS KUDIN

First Deputy Minister of the Economy of Ukraine

Involvement during Russia's war against Ukraine: Denys Kudin pays considerable attention to the matter of Ukraine's economic recovery after the war and works on a programme to help Ukrainians who decided to stay in the country. He is also engaged with governments and leading international companies that are ready to help Ukraine and take part in the post-war recovery of the country.

What kind of support has the state provided to industrial enterprises since the beginning of the full-scale invasion?

The war became an extraordinary challenge for the economy. To address it, the Government introduced a wartime economic policy. The priority of this policy is ensuring fast renewal of business activities, including those of the industrial enterprises. The followings policy programmes were launched: SME grants Programme 'e-Robota'; Public Procurement Localisation programme, etc.

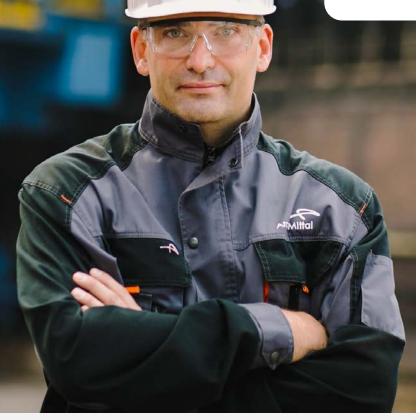
We believe our Enterprise Relocation Programme is a success. As of 1 September 2022: 1,823 applications for relocation have been processed, 727 enterprises have moved their facilities from areas of active hostilities, and 529 enterprises have resumed their activities in the safe territories. Among the relocated ones, which have already relaunched their activities at their new locations, 30% are in manufacturing.

Which measures and initiatives should be in focus for Ukraine to become one of the leading industrial hubs in the European region?

Reconstruction of Ukraine as a whole, including industry, will take place within the framework of the Ukraine's Recovery Plan. There were identified sectoral directions (the defence industry sector, metallurgy and metalworking, and the agro-industrial complex sector) capable of ensuring the achievement of the set goal — making Ukraine become one of the leading industrial hubs in the European region.

First, they are traditional for Ukraine, taking a significant share in its economy and are material drivers of Ukraine's GDP and employment. Second, for ensuring development of the agricultural sector, metallurgy and metalworking in Ukraine, we need a sizeable volume of raw materials, having which is a significant competitive advantage in itself. In case of the defence industry, there are established machine-building traditions, relevant scientific and production personnel, as well as the unique experience of their field application.

The US duties are still too high for Ukrainian steel producers to enter the market



୨୨

In fact, the USA enacted Section 232 several years ago to protect its own market. This clause included additional duties of 40% on all steel products imported into the USA from a specified list of countries. In addition to that, there were also anti-dumping duties, for Ukraine about 39%. This makes our final prices uncompetitive on the North American market.

MAURO LONGOBARDO

CEO of ArcelorMittal, Kryvyi Rih

Involvement during Russia's war against Ukraine: Despite the full-scale Russian invasion of Ukraine, in early April Mauro did his best to keep the company running by personally managing the launch. At that time, ArcelorMittal Kryvyi Rih continued to pay salaries to all its employees. The company also paid taxes in the amount of 75 Mn USD in advance and directed 2 Mn USD for humanitarian aid in Ukraine and the purchase of medicines for medical facilities in Kryvyi Rih.

The USA announced the suspension of import duties on Ukrainian steel and steel products for the period of one year. How do you estimate the potential benefits of such liberalisation?

In fact, the USA enacted Section 232 several years ago to protect its own market. This clause included additional duties of 40% on all steel products imported into the USA from a specified list of countries. In addition to that there were also anti-dumping duties, also for Ukraine (about 39%). So, we did not consider the North American market because we had an additional double duty. I know that there are some senators who are working on this and trying to find an exception to remove the anti-dumping duty. This is still quite a large number for us, and it makes us uncompetitive. That is, the door seems to have been opened, but not completely. I attribute this to logistical issues. Because of logistics, we have huge expenses. And these additional costs prevent you from being competitive. Without this duty of 39% it would be much better.

Ukraine is known to be one of the key suppliers of metallurgical products for some regions. How has the war influenced the production volumes of metallurgical products?

Ukraine can produce about 24 million tonnes of steel at its current capacity. Most of it is exported. Now, unfortunately, all capacities are reduced.

Some of these capacities have been damaged and cannot be restored in the nearest future. In general, the country currently has enough capacity to produce 14 million tonnes of various metal products. Our company accounts for half of this volume. Here, in Kryvyi Rih, we produce 7 million tonnes of pig iron, of which 6 million are used to produce steel products and 1 million are sold as pig iron products.

As for this entire volume, namely 7 million, 80% was previously exported. The Ukrainian market is not large enough to absorb such a quantity.

Once the war ends, engineers and technical professionals will be in high demand

୨୨

Steel sector has always been important in the development of Ukraine's economy. In the absence of large construction needs in wartime conditions, the steelmakers' task is to meet the needs of Ukrainian enterprises, export metals, and maintain their production potential.

VICTOR HERASYMCHUK

Head of repair and maintenance department in TREI-UKRAINE, construction subsidiary of ArcelorMittal Kryvyi Rih

Involvement during Russia's war against Ukraine: TREI-UKRAINE supports the Ukrainian military by supplying night-vision devices, while its workers take part in volunteer activities to help people affected by the war.

How has the war affected your work directly? How has the workload of your company changed compared to the pre-war times?

.

With the outbreak of large-scale invasion, the workload of the company decreased sharply — by more than a half. There were difficulties with the logistical component — supply of equipment and spare parts, especially of foreign production. Also, the management decided to partly switch to remote work.

How do you estimate the role of the steel sector in ensuring the functioning of the Ukrainian economy under wartime conditions?

The steel sector has always been important in the development of a country's economy. In the absence of large construction needs in wartime conditions, the steelmakers' task is to meet the needs of Ukrainian enterprises, export metals, and maintain their production potential.

Is it possible to resume the functioning of Mariupol metallurgical plants after the deoccupation of the Donetsk region?

I think that it is necessary to renew the functioning of metallurgical plants. It is stipulated by the location of metallurgical works in Mariupol from the developed port and rail infrastructure. The supply of iron ore and coke raw materials is carried out from the Donetsk and Dnipropetrovsk regions.

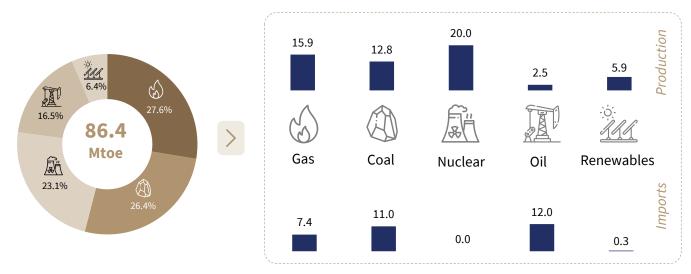
How do you assess the prospects for employment in the steelmaking / metallurgical profession once the war is over?

Metallurgy is a large industrial complex. It requires the knowledge of engineering and technical personnel in many branches. It is therefore very promising and in demand to be educated and to work in all professional fields in the metallurgical sector, especially at the end of the war.

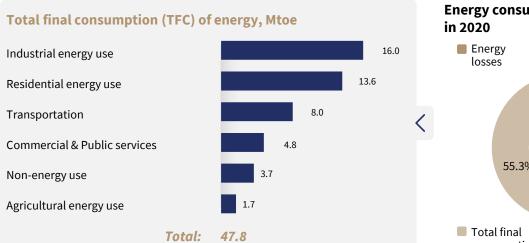
BEFORE THE WAR, UKRAINE RELIED ON ENERGY IMPORTS, COVERING 34% OF THE ENERGY SECTOR

Until 2014, Ukraine was self-sufficient in terms of coal and gas production. It mainly imports natural gas, oil, and petroleum products. In 2014, as a result of the annexation of Crimea and military aggression of Russia in Donbas, Ukraine was deprived of coal mines in the Donbas region, as well as oil & gas fields on the Black Sea shelf. These have deteriorated the stability of the energy system and increased its reliance on imported resources. To decrease the dependence on Russian energy resources and bring the system in line with European standards, Ukraine has been reforming the energy sector since 2014. However, the results of the reforms were ambiguous since **Russia** remained the main exporter of energy resources to Ukraine.

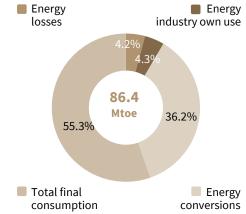
Total primary energy supply (TPES) in Ukraine by energy source in 2020, Mtoe¹



In 2020, the Ukrainian energy mix was relatively diversified, with no fuel representing more than 30% of the TPES. Energy demand surpasses domestic supply, which covered only 66% of national consumption in 2020. The remaining energy gap was covered by imports, mostly from Russia and Belarus. Ukraine heavily relied on the import of oil products since none of them was produced locally in 2020. Even though the export of some energy sources, such as electricity and biofuels, exceeded imports in 2020, the **total export of energy remained low** at 1.3 Mtoe. Hungary and Poland were the major importers of Ukrainian energy. In 2020, the **largest final energy consumer was the industrial sector**, followed by the residential sector and transportation.



Energy consumption in Ukraine in 2020



Present

SINCE 2015, UKRAINE HAS TAKEN ESSENTIAL STEPS IN THE LIBERALISATION OF THE GAS MARKET

Ukrainian natural gas market indicators in 2021



~20 bcm¹ production

~3 bcm imports



transit

42 bcm



14 bcm pumped into UGS²

In 2021, Ukraine was the **fourth-largest producer of gas** in Europe. The country has **one of the largest gas transit infrastructures** in the world, with the **second-largest storage capacity** in Europe.

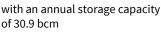


km

of gas transmission and distribution pipelines



13 UGS





annual capacity of the gas transit system

In 2015, the **Natural Gas Market Law was passed** with the objective of matching the Ukrainian gas sector with the EU doctrines. The law set the regulatory basis for the unbundling of gas storage facilities, LNG terminals, and distribution system operators. **It created access to gas transmission, distribution, and supply networks for the private sector**, allowing companies

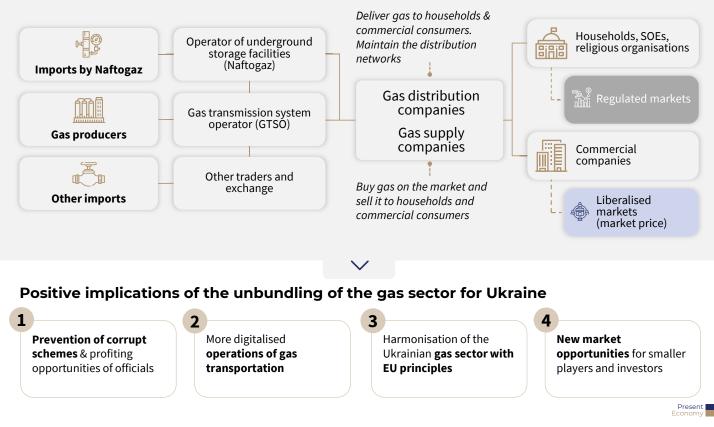
Gas Transmission System Operator of Ukraine (GTSOU) to increase transparency. That year, there were already 347 private companies operating in the wholesale gas market, 408 companies in transmission activities, and 449 companies in gas storage. After five years of constant reforms, the **unbundling of the gas sector was completed in January 2020.** In line with EU market **principles**, the state-owned enterprise (SOE) Ukrtransgaz became the gas storage facilities operator, and a new SOE GTSOU has been engaged in natural gas transmission since then.

Ukrainian natural gas market after liberalisation

to sell gas to any consumer, including households. In 2019, the

Ukrainian gas market switched from monthly to daily balancing,

and an online information exchange platform was launched by the

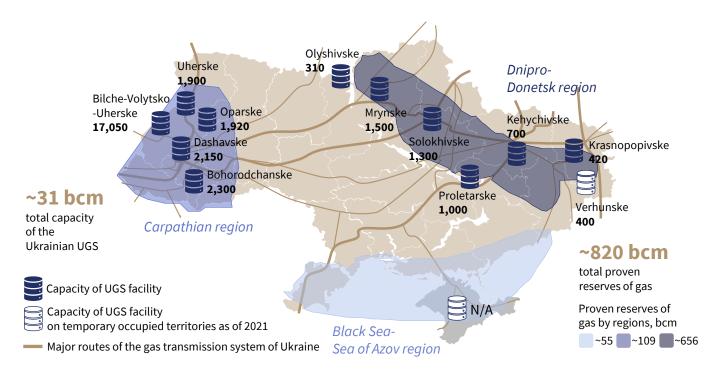


Source: IEA – Ukraine Energy Profile – [2021]; OECD iLibrary website; Statista website; Naftogaz website; Media overview Notes: (1) Billion cubic metres; (2) Underground gas storage; (3) Megawatts

EU COULD CREATE STRATEGIC GAS RESERVES USING THE LARGEST UKRAINIAN GAS STORAGE FACILITIES

Ukraine has considerable **natural gas reserves. The potential reserves are estimated at 5.4 trillion cubic metres (TCM)** as of 2021, with **proven reserves of 820 bcm of natural gas**. Hydrocarbon resources are concentrated in three areas: in the east, west, and south of the country. The **Dnipro-Donetsk region in the east is the largest one, accounting for 80% of proven reserves** and about 90% of gas production in Ukraine. The Western Carpathian region possesses 13% of proven reserves and 6% of production. The remaining share of proven reserves is in the Black-Azov Sea region in the south of Ukraine. While Ukraine has been trying to extract more of its own natural gas for decades, energy independence has yet to be achieved. The **exhaustion of most of the active deposits and the Russian military aggression since 2014 became major obstacles**. Nevertheless, the exploration work of new deposits continued. In December 2021, the state-owned enterprise of Ukrgazvydobuvannya announced the **discovery of a new gas field near the Kharkiv region** in Eastern Ukraine. The new Mospanivske gas field has estimated resources of up to 5 billion cubic meters (bcm) of natural gas.

Oil & gas-bearing regions and UGS¹ facilities in Ukraine as of 2021, bcm



In 2021, the Ukrainian natural gas transportation network included **13 underground storage facilities**, of which 12 were operated by Ukrtransgaz – the state-owned Storage System Operator of Ukraine. The country held the **second-largest storage capacity in Europe and Eurasia**, behind Russia. Most of the UGS (80% of the gas storage capacity) is concentrated on the western border of Ukraine. The underground gas storage is profitable for both foreign traders and Ukrainian companies

who work with cross-border transportation and gas storage due to the proximity of the UGS to Europe and the convenience of logistics processes. The services of the Ukrainian UGS were used by more than 100 foreign companies from 27 different countries. In 2021, in addition to Europe and America, the client portfolio included companies from Asian countries for the first time, such as Hong Kong and Singapore.

Key figures of the Ukrainian UGS



~31 bcm

total capacity of the Ukrainian UGS



60%

share of total capacity used on average for domestic consumers, leaving 40% for foreign companies



10 bcm

gas injected into Ukrainian UGS by foreign companies in 2020 (4 times higher vs 2019)



21%

share of Ukraine in the European UGS capacity

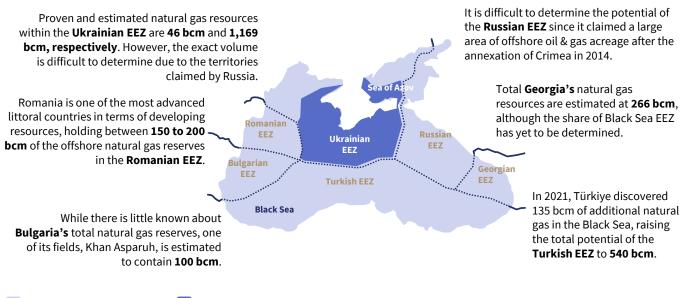
Fconom

THE BLACK-AZOV SEA OIL & GAS REGION HAS A LOT OF POTENTIAL AS PER GEOLOGISTS' ESTIMATES

The Black Sea covers an area of approximately 423,000 km², with a maximum water depth of 2,245 m. **There are many oil & gas fields** around the borders of the Black Sea. Whereas most of the oil & gas deposits are located onshore, as well as in shallow-

marine areas, very few wells are drilled in its deep-water sector. The exploration of petroleum in the Black Sea is still in its infancy stage. Nevertheless, petroleum geologists point toward the considerable potential of the region.

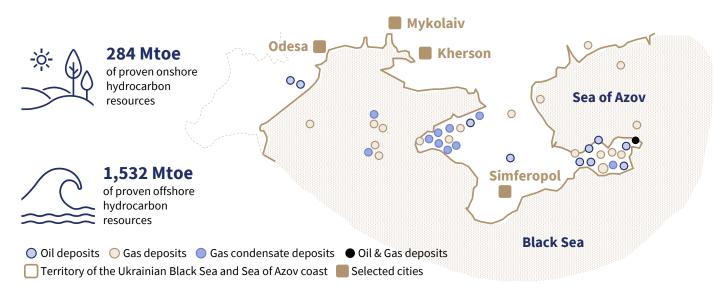
Black Sea Exclusive Economic Zones (EEZ) as of 2021



Black Sea & Sea of Azov area Crimean territorial sea and EEZ ······ Borders between EEZ claimed by Russia since 2014

The Black-Azov Sea oil & gas region of Ukraine is currently at the early stage of the study, and the degree of development of the initial reserves is only 3.5%. In 2014, there were 39 oil & gas deposits in the region, with total proven hydrocarbon resources of 1,816 million tonnes of oil equivalent (Mtoe). The offshore hydrocarbon resources accounted for 84%. While total natural gas resources of the region were estimated at 1.3 trillion cubic meters (TCM), potentially, the Ukrainian Black-Azov Sea region may contain more than 2 TCM of natural gas. Estimated and proven reserves of the hydrocarbons of the Ukrainian Black Sea region indicate that the area has a powerful oil & gas potential. When Russia seized Crimea in 2014, Ukraine had lost control of almost 80% of its oil & gas deposits in the Black-Azov Sea region, as well as a significant part of the port infrastructure.

Location of oil & gas deposits within the Ukrainian Black-Azov Sea region as of 2014



SINCE THE START OF THE WAR, UKRAINE HAS LOST SIGNIFICANT PART OF ITS ENERGY INFRASTRUCTURE

Russia's war against Ukraine had a significant negative impact on the energy system of Ukraine. In the regions where hostilities took place, energy infrastructure has been either severely damaged or completely destroyed. In addition, temporary occupation and disruptions in the operations of the Zaporizhzhia NPP¹ and several TPPs² in the Donbas region further undermined the energy capabilities of Ukraine, **increasing the risk of crisis in the next heating season**. In order to prevent this, Ukraine has to increase imports of energy resources (coal, in particular). However, due to the blockade of Ukrainian seaports, the country is now unable to transport energy resources by sea and is forced to look for alternative transport routes.

Impact of Russia's war against Ukraine on the energy sector of Ukraine



2 Bn USD

estimated damage to the

Ukrainian energy system³



460 Mn USD

estimated damage to the

Ukrainian power grid⁴



5,000 km length of destroyed

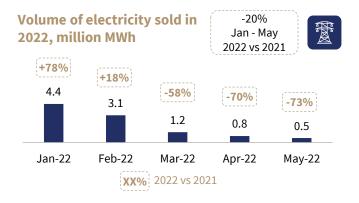
gas pipes⁵

-43% in NNP capacity

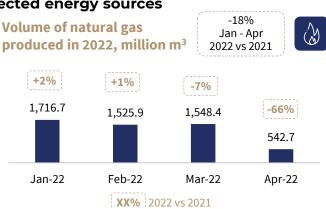
due to the loss of Zaporizhzhia NPP, the largest in Europe

Impact of Russia's war against Ukraine on selected energy sources

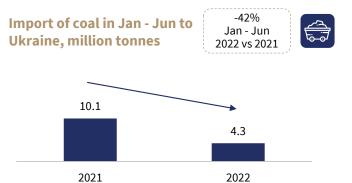
Ukrainian **natural gas output dropped** after the beginning of the Russian invasion, with **production being stopped or reduced** at some fields due to worsening safety conditions. Additionally, several gas storage facilities were damaged, including the **Mrynske and Krasnopopivske storage sites, which stopped** their operations due to the hostilities. The **Olyshivske gas storage facility was shelled** by the Russian army in mid-March. In April 2022, gas **storage levels were 40% below** the levels of 2021.



In the first half of 2022, the **import of coal dropped almost by 50%** year over year. Despite the war, **41% of import value came from Russia**. Production of coal in Jan – Apr 2022 decreased by 30% compared to 2021, as Ukraine has **lost 10 coal mines** on the currently occupied territories and **20 coal mines** on the controlled territory by Ukraine. To survive the next heating season, Ukraine would **need to increase its coal inventory to at least 2 million tonnes.**



Consumption of electricity in Jan - Apr 2022 **decreased by 30%** compared to 2021 due to **disruptions of the power grid** and the migration of the Ukrainian population from the areas of active military actions. Since the start of the war, over **2.5 million households have lost access to electricity**. As of June 2022, **737 settlements with 647.3 thousand households remained disconnected from the power grid.** Moreover, Russian forces have shelled several large power plants since the beginning of the invasion, leaving Ukrainians without electricity and water supply in some territories.⁶



Present

ource: State Customs Service of Ukraine website; DTEK website; Energy Map website; Media overview

Notes: (1) Nuclear power plant; (2) Thermal power plant; (3) As of March 2022; (4) As of April 2022; (5) As of May 2022; (6) Including power plants in Chernihiv, Sumy, Okhtyrka, Kremenchuk, Kharkiv, Eskhar, Mykolaiv, Kryvyi Rih, Zmiiv, Avdiivka

THE EU HAS PLEDGED TO DRASTICALLY REDUCE THE IMPORT OF RUSSIAN FOSSIL FUELS DUE TO THE WAR

Since the beginning of Russia's war against Ukraine, the global energy market has endured many disruptions, including an **increase in the price of energy resources and obstruction of logistical chains**. Prices of coal, oil, and natural gas reached their historic maximums under the risk of disruptions related to the war. The European energy market has suffered the most from the war since **Russia was the biggest exporter of energy resources to Europe** in 2021. In response to the Russian aggression, **the EU has pledged to ban seaborne imports** of Russian crude oil by the end of 2022 and **to stop the import of Russian fossil fuels by 2030**.

Changes in the European (EU-27) energy import from Russia in March - June 2022¹



-22.3%

in oil products imports



-27.6%

in crude oil imports



in LNG² imports



Impact of Russia's war against Ukraine on selected energy sources

Responding to the war, **the EU**, **which was a major importer of Russian gas in 2021**, pledged to **cut the import by two-thirds before the end of 2022** and **completely stop** imports of Russian fossil fuels **by 2030**. Thus, in June 2022, for the first time in history, Europe imported more LNG from the USA than via the pipeline from Russia. Meanwhile, **Russia continues to blackmail the EU by stopping Nord Stream 1**, which pumps a third of Russian gas to Europe, until sanctions against Russia over its invasion of Ukraine are lifted.



Given the rise in natural gas prices in the second half of 2021, the demand for coal was soaring. The Russian invasion of Ukraine only intensified the demand for coal, making its price increase rapidly. In April 2022, the EU agreed on the fifth package of sanctions against Russia, which included an import ban on Russian coal. The EU embargo on Russian coal came into force in August 2022. It is estimated to create over 9 Bn USD in loss of revenue per year for Russia.

Dutch TTF natural gas future price, USD **Start of** 500.0 the war 250.8 400.0 8 Sep 2022 300.0 79.4 16 Feb 2022 200.0 100.0 0.0 01-22 03-22 05-22 07-22 09-22

Before the war, **Russia was the biggest exporter of oil** to the EU, with almost a **25% share in European oil imports**, the equivalent of 430 Bn USD a year. In response to the Russian aggression against Ukraine, the **EU imposed a partial embargo on Russian crude oil and petroleum products** in June 2022. The EU **pledged to ban seaborne imports** of Russian crude oil as of December 2022 and ban petroleum product imports as of February 2023. However, **pipeline imports of crude oil and petroleum products from Russia will be exempt** in a compromise with some of the EU member states.



Source: Goldman Sachs — Carbonomics — [March 2022]; British Petroleum — Statistical Review of World Energy — [2021]; Statista website; Eurostat website; Media overview

Notes: (1) Four months into the war were compared to the four previous months (November 2021-February 2022); (2) Liquefied Natural Gas; (3) Through pipeline

Ukraine has sufficient resource potential to increase domestic natural gas production

୨୨

Ukraine's potential to increase its domestic natural gas production is more than enough. It can achieve energy independence and start exporting to EU countries.

Surely, it is impossible to realise the available resource potential in the conditions of active hostilities and captured territories, but soon after the victory, this should transform into a critical goal. We understand, and the war outlined it even more, that Ukraine can no longer depend on imported gas. This is a question of national security, not only of energy.

ANDRII ZHUPANYN

Member of Parliament of Ukraine

Involvement during Russia's war against Ukraine: Andrii is actively engaged in volunteer activities, organising humanitarian hubs to help refugees. He was a member of the Ukrainian delegation to Washington, following which a number of historical decisions were endorsed: the lend-lease, the proposition to transfer money from frozen Russian assets to help Ukraine, as well as allocation of the 33 Bn USD package to Ukraine.

What is the future of the natural gas industry, and the energy sector in Ukraine? What changes in the energy sector will be accelerated by the war?

Ukraine's potential to increase its domestic natural gas production is more than enough. It can achieve energy independence and start exporting to EU countries. We have already exported gas to Europe, as in the mid-1970s Ukraine produced 68 bcm, and will definitely be able to do it in future.

The regions in the east and west of the country, as well as the Black Sea shelf, are promising for development. More than 700 bcm of natural gas are available for production, and trillions of cubic meters are potential resources. The State Geological Survey of Ukraine emphasises that the Black Sea shelf has nearly 2.3 bcm tonnes of conventional fuel, which is equivalent to 2.3 trillion cm and makes up about 40% of all energy reserves of our country.

In post-war Ukraine, how will the landscape of the heavy industries change, given the changes in the energy sector?

Since the beginning of the war, many large industrial consumers have been damaged or destroyed. Given the extent of damage, having been caused to some of them, we should not expect any quick recovery of demand for natural gas from the heavy industry. Consequently, natural gas consumption decreased by approximately 50%. Demand reduction was also observed in production of electricity, as Azovstal was destroyed and other facilities have greatly reduced their production capacities. In metallurgy, the war caused a 75% drop in output, compared to its pre-war volumes.

Heavy industry is forecasted to revive mainly in the west of Ukraine. This, however, is a very long-lasting process. Considering the high cost of energy, new facilities will, first of all, focus on improvement of their energy efficiency and reduction of waste.

DID YOU KNOW THAT IN 1909 OIL PRODUCTION IN BORYSLAV ACCOUNTED FOR 5% OF THE GLOBAL?

1909

More than 1,920,000 tonnes of oil were produced in Boryslav — about 5% of the world's oil production, that made the region the third biggest producer of oil globally after the USA and the Russian Empire.

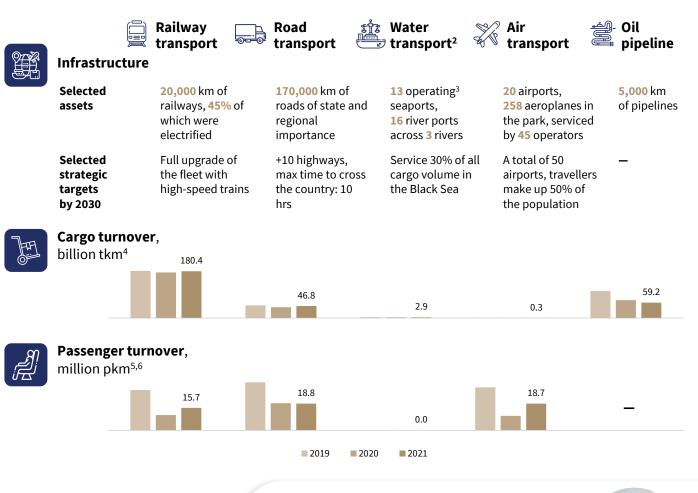
In the foothills of the Carpathian Mountains, **Boryslav** has been **a large industrial center** for centuries. The area became a major oil producer since the XIXth century in Europe. The eastern oil and gas region began to develop actively only in the 1950s, and until that time the western part of Ukraine was the center of oil production.



THE PRE-WAR TRANSPORT SECTOR OF UKRAINE WAS UNDERGOING A COMPLETE TRANSFORMATION

Since its independence, Ukraine has built an **extensive transport infrastructure**, from multiple **seaports and river terminals** to developed **land and air transport networks**. **These networks** have enabled **efficient transportation** for mining and agriculture, oil & gas, food & beverages, and many other product categories, both within the country and abroad. Before the war, the sector's development was determined by a strategic plan called '**Drive Ukraine 2030**', jointly developed by the Ukrainian Ministry of Infrastructure and the top industry experts of the EU in 2018. With **an aim at the improvement and modernisation of** the Ukrainian transport infrastructure, the document contained the best practices, along with technological advancements (digitisation, introduction of driverless cars, and construction of smart roads). The ultimate goal was the eventual integration of Ukrainian and European infrastructure networks, intended to enable further economic growth. The total budget of the plan was 60 Bn USD by 2030, creating 600,000 additional jobs. Some projects have already been initiated. For example, 5,000 km of roads were constructed in 2021, along with major airport renovation projects in Uzhhorod and Kherson.

Snapshot by transportation type in 2021¹



OPINION CORNER

Yuliia Shnepa

Investment

Talks about Infrastructure,

Financing, Reconstruction, and

Q

Source: Transport Strategy Centre — Transport Book — [2021]; State Statistics Service website; State Aviation Administration website; The Ministry of Infrastructure website

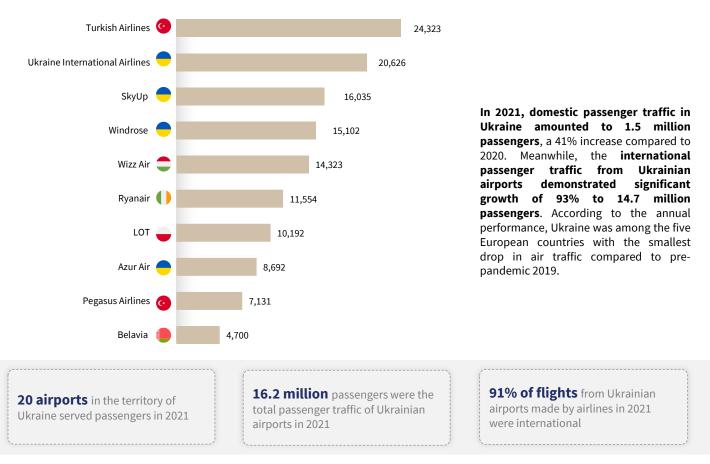
Notes: (1) Excluding urban transport; (2) Including both sea and river transport; (3) Not including five seaports on the temporarily occupied territory (4) Tonne-km; (5) Passenger-km; (6) Excluding urban transport. The figure for road transport includes buses only The war has brought about severe infrastructure damages: railways, airports, roads, bridges, and other objects shall require either an overhaul or 'building from scratch.' This is a good opportunity for **European subcontractors to get involved in upcoming projects with the support of international financial institutions**, for example, the **International Bank for Reconstruction and Development** and the **European Investment Bank**.

AIR TRANSPORTATION IN UKRAINE WAS PRESENTED BY BOTH DOMESTIC AND INTERNATIONAL AIRLINES

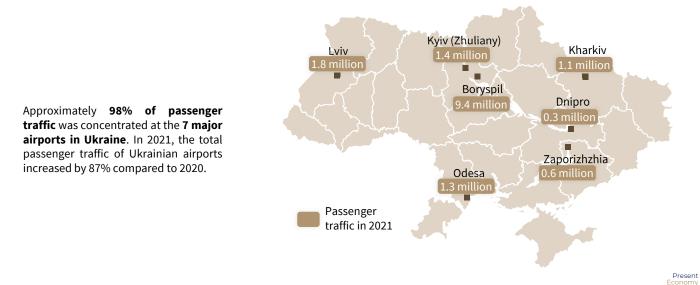
There is a large development opportunity for the air transportation sector of Ukraine, given the size and population of the country. The rapid growth of passenger transportation at Ukrainian airports was after 2015, growing from 10.7 million passengers to 24.3 million in 2019. The spread of the COVID-19 pandemic caused a sharp decline in air transportation

services. However, the sector demonstrated a fast recovery, growing by almost 50% in 2021 compared to the previous year. **10** Ukrainian airlines operated regular international flights to 42 countries, while 28 foreign airlines had flights from Ukraine to 27 countries worldwide. 5 Ukrainian airlines operated domestic flights to 9 cities inside the country.

Major players in the air transportation sector of Ukraine, by number of flights, in 2021



The largest airports in Ukraine, by passenger traffic, in 2021



THE WAR CAUSED MULTIBILLION DAMAGES TO THE UKRAINIAN TRANSPORT AND LOGISTICS SECTOR

The full-scale Russian war in Ukraine has direct and indirect impacts on the transport and logistics sector of the country. Since the beginning of the invasion on 24 February, the Russian army has been hitting the critical infrastructure of Ukraine to halt economic activities, especially the trading flows.

In addition to the high cost of physically destroyed Ukrainian infrastructural assets, such as roads, bridges, airports, and railways, Ukraine has also suffered huge economic losses from the disruption of business operations and the closure of various production facilities, which has led to a significant decrease in demand for transport services and an increase in transportation tariffs.

• Fuel shortage and price increase

The destruction of oil depots, as well as the Kremenchuk oil refinery and the naval blockade of ports, have led to an acute shortage of petroleum products and a hike in prices in the Ukrainian fuel market. As of July 2022, gas prices increased by almost 107%, while fuel prices rose by 43% compared to 23 February 2022. However, in July-September 2022, Ukraine managed to rebuild its fuel market, which allowed it to increase the resilience and flexibility of supplies. More than 50% of the fuel is now transported by fuel trucks, avoiding the concentration of large amounts of fuel on transport knots, which are under the threat of shelling by Russia.

Estimated damages to the Ukrainian transport & logistics infrastructure¹

Item	Details	Damages, Bn USD
Roads	24.8 thousand km	26.3
Railway stations and rolling stock	6.3 thousand railways, 41 bridges	2.7
Civilian airports	19 units	2.0
Bridges and bridge crossings	311 units	1.7
Cars	188.1 thousand units	1.7
Ports and port infrastructure	4 units	0.5
Military airfields	12 units	0.5
An-225 Mriya aircraft	1 unit	0.3
Storage infrastructure	198 units	0.3
Oil depots	28 units	0.2
	Estimated total:	36.2 Bn USD

Most of the Ukrainian seaports had been under a complete Russian **blockade** until 22 July 2022, when the Black Sea Grain Initiative was set.² The initiative enabled the export of grain and foodstuffs from Ukraine. However, the export of other goods is still impossible.³ The blockade is causing **daily** economic losses for Ukraine in the amount of 170 Mn USD.

In 2021, Ukrainian air transport started to recover from COVID-19, as the number of flight passengers increased to over 16 million people, which was 87% more than in 2020. Shortly after the Russian invasion on 24 February 2022, Ukraine closed its airspace to all civilian flights because of the high safety risk.

Ukrainian Railwav **Company** became crucial to the country's trade and defence during the war. Since 24 February, it has transported about 160 thousand tonnes of aid and evacuated almost 4 million people⁴. Railway employees are paying a high price for their work: 177 have been killed, and 257 were wounded during the war.

DID YOU KNOW THAT THE LARGEST AIRPLANE WAS CONSTRUCTED IN UKRAINE?

Antonov An-225 'Mriya',

the largest and the heaviest airplane ever, was constructed in only one instance in Ukraine in 1988.



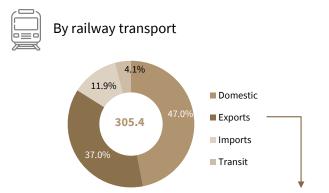
In **February 2022**, Antonov An-225 'Mriya' **was destroyed by Russian forces** in Hostomel (the Kyiv region) during the Russian invasion of Ukraine.

TRANSPORT ROUTES HAVE CHANGED DUE TO THE DISRUPTION OF THE TRANSPORT SYSTEM

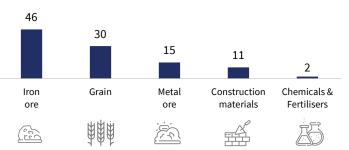
Before the war, Ukraine was an **important transit corridor** for trade between **Europe, Asia, and the Middle East**, having 19 FTAs¹ with 46 countries. The established transport routes were well-developed and enabled high standards for product delivery.

The railway transport capacity was mostly used for domestic delivery and transit, which accounted for 84% of the total cargo volume in 2020. In contrast, water transport was mostly used for the export of goods, including iron ore, coal, and grain.

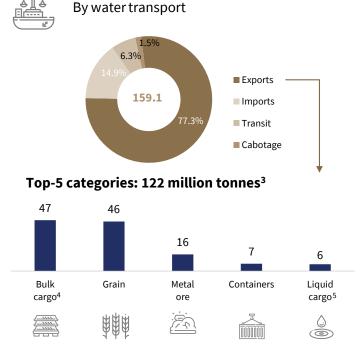
Cargo transportation in Ukraine in 2020, million tonnes



Top-5 categories: 104 million tonnes²



The significant disruption of the transport system of Ukraine has led to rapid changes in transport routes. The **freight traffic shifted to railways and roads as Russia blocked most of the Ukrainian seaports**. Three ports on the Danube river provide only



a tenth of the pre-war transhipment capacity. The ports unblocked within the **Black Sea Grain Initiative** serve only the export of grain and foodstuffs, while the export of other products by seaports (such as iron or metal ore) is temporarily impossible.⁶

Ukrainian seaports before and during Russia's war against Ukraine



Source: Transport Strategy Centre — Transport Book — [2021]; State Statistics Service of Ukraine website; The Ministry of Infrastructure of Ukraine website; Media overview Notes: (1) Free Trade Agreement; (2) The chart does not include crude oil & oil products — 0.2 million tonnes and coke — 0.1 million tonnes; (3) The graphic does not include crude or Ro-Ro (goods transported by cars and wagons on ships) — 0.8 million tonnes; (4) Dry goods transported without packaging, mainly ore and coal; (5) Mainly fats & oils, as well as crude oil & oil products; (6) As of 11 September 2022; (7) As a part of the Black Sea Grain Initiative

THE WAR HAS SEVERE CONSEQUENCES FOR THE **TRANSPORT & LOGISTICS SECTOR GLOBALLY**

In addition to immediate upheavals in the transport systems of Ukraine and the neighbouring countries, the Russian invasion has caused major disruptions to the global supply chains, both in terms of the security of logistics routes and the availability of commodities. When the global supply chains just started to recover from the impact of COVID-19, global trade was hit with another wave of new challenges. Hostilities, infrastructure damages, trade restrictions, and global sanctions on doing business with Russia have led to a growing number of delays of goods, rising fuel prices, and freight costs. As a result, international companies are now forced to recalibrate their long-standing supply chains and partner ecosystems.

The impact of the war on the global logistics and supply chains



Maritime

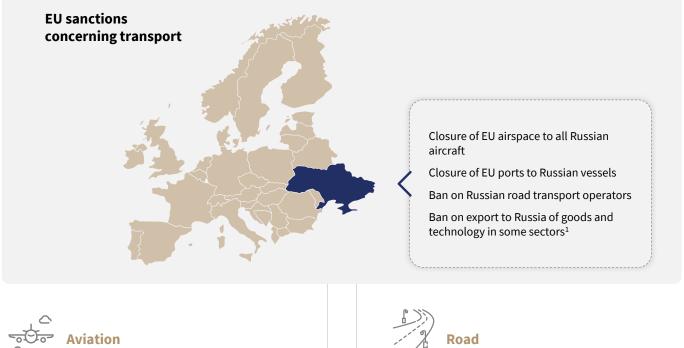
Before the war, around 70% of Ukrainian exports were distributed via ships

Ukraine is one of the world's largest exporters of grain, supplying more than 45 million tonnes annually, primarily through Black Sea ports. The blockade of ports placed global food security at threat, especially in emerging countries. Therefore, in July 2022, the UN initiated the creation of maritime corridors to enable the export of grain from Ukraine.



Rail transit through Ukraine amounted to 2% of westbound container traffic volumes

Russia's war against Ukraine has jeopardised the rail connectivity between China and Europe, as most routes pass through Russia. Although only 2-3% of the total volume was transported via routes in Ukraine, the global sanctions imposed against Russia are forcing cargo owners and logistics operators to look for alternative routes.



Flights between Europe and Ukraine accounted for 3.3% of air passenger traffic in 2021

Air transport has been greatly affected by the Russian invasion, as 36 countries have closed their airspace to Russian aircrafts², and Russia responded with a retaliatory move. The imposed sanctions led to the need for rerouting, which significantly increased the cost of flights, as additional fuel and flight time are required.



12,000 truck drivers of different nationalities were stuck in Ukraine at the beginning of the war

The shutdown of other modes of transport has increased the demand for road transport, yet rising fuel prices and driver shortages are causing delays and disruptions in supply chains. Due to limited capacity and high transport costs, there may be shortages of materials and goods in various sectors in Europe and beyond.

We have to build a NEW Ukraine: modern, efficient, green, comfortable

୨୨

Only in railways we have lost over 23% of the infrastructure. This is supplemented by the destroyed roads, bridges, and airports, as well as blocked, mined and destroyed ports. One should add also the economic losses which were caused by the blocked export of grains, sunflower oil, metal, chemicals, etc., which amounted to 2-3 Bn USD. A rough estimate of losses from the russian invasion (excluding occupied territories since we cannot calculate there) already exceeds 1 Tn USD.

DR YULIA KLYMENKO

Member of Parliament; First Deputy Head of Transport & Infrastructure Committee at the Verkhovna Rada of Ukraine

Involvement during Russia's war against Ukraine: Yulia takes an active social position and communicates with foreign ambassadors, inter-factional unions, and other representatives to raise awareness on the war in Ukraine.

According to preliminary estimates, the total amount of losses incurred by the Ukrainian transport infrastructure due to the Russian invasion exceeds 40 Bn USD? How much time may Ukraine need for its restoration?

First of all, I would say that infrastructure losses are much higher than 40 Bn USD. Only in railways we have lost over 23% of the infrastructure. This is supplemented by the destroyed roads, bridges, and airports, as well as blocked, mined and destroyed ports. One should add also the economic losses which were caused by the blocked export of grains, sunflower oil, metal, chemicals, etc., which amounted to 2-3 Bn USD. A rough estimate of losses from the russian invasion (excluding occupied territories since we cannot calculate there) already exceeds 1 Tn USD. But we must start reconstructing our country right now because, on the one hand, we have to defend our land and, on the other hand, rebuild and keep the economy running. And we have to rebuild a NEW Ukraine: modern, efficient, green, comfortable, and competitive globally.

In June 2022, the EU and Ukraine signed the Agreement on the liberalisation of road transportation on the Ukraine-EU routes. What global impact do you expect from such decision?

I believe it will improve and speed up logistics between Ukraine and the EU. This is critically important right now when the Ukrainian economy is completely dependent on sustainable logistics through its western borders. Ukraine feeds 400 million people, mostly in low-income countries. In global consumption. Ukraine exports 58 million tonnes of agricultural commodities annually. 90% of it was shipped through the seaports of Azov and the Black Sea, through a developed infrastructure ecosystem of river- and seaport facilities equipped with storage and export laboratories. Understanding how critical our food supply is for many countries (Egypt depends on Ukraine, as the latter accounts for 80% of its wheat consumption), despite the war, Ukraine has invested to triple its river, railway, and road transportation capacity. Now we can export through our western borders 1.5-2 million tonnes of grain monthly (vs. 0.5 million tonnes before).

SkyUp Airlines is in the process of registration in the European Union

୨୨

My professional life has changed drastically since 24 February. There is no possibility to fly from our home base in Kyiv or other Ukrainian airports at the moment. Instead, I am flying from different countries under the aegis of the companies SkyUp has wet lease agreements with.

As well as the other crew members I have short- and medium-term business trips to different bases followed by a period of time spent at home. Since SkyUp does not have one permanent base at the moment, all the pilots and cabin crew members should be really flexible and ready to travel a lot, even to change locations during one business trip.

TETIANA KOVKINA

First Officer at SkyUp Airlines

Involvement during Russia's war against Ukraine : In the conditions of the closure of the Ukrainian airspace, Tetiana continues working, flying across various countries under the aegis of companies that SkyUp has wet lease agreements with. Tetiana contributes to economic stability of Ukraine, showing dedication to work, being really flexible and ready to travel a lot.

What changes did your company go through to adjust to the new reality? What measures were implemented to retain the pilots and other professionals?

From the very beginning the company's efforts were headed at establishing new contracts and finding new possibilities to continue operations. Finally, the first wet lease flights departed just a few months later. The results of tremendous job can be seen now, as our company's aircrafts fly all around Europe, as well as in Türkiye, Egypt, and other countries.

Despite everything, the company continues to operate and support Ukraine by paying taxes. To make it possible, our pilots and cabin crew were relocated to different countries where aircrafts are based now.

There is one more important project SkyUp is working on, registration of SkyUp Airlines in the European Union.

How did your professional life change after 24 February 2022?

My professional life has changed drastically since 24 February 2022. Today there is no possibility to fly from our home base in Kyiv or other Ukrainian airports. Instead, I fly from other countries under the aegis of the companies that SkyUp has wet lease agreements with. Just like other crew members, I have short- and medium-term business trips to various bases followed by a period of time spent at home.

Since SkyUp does not have one permanent base at the moment, all its pilots and cabin crew members should be really flexible and ready to travel a lot, even to change locations during one business trip. It may look challenging, but that is our way of life now. And I am trying to get used to it.

Logistics is the lifeblood of a country's economy



With the outbreak of war and martial law in Ukraine, everyone felt the importance of the transport sector in ensuring operation of the economy and the life of our state as a whole.

After all, during the first days of warfare, all of our employees got involved in delivering humanitarian aid from Europe to different parts of Ukraine.

SERHIY KLYMCHENKO

Truckdriver

Involvement during Russia's war against Ukraine: Since the early days of the war, Serhiy has been working on a charitable basis, having delivered humanitarian aid to different parts of Ukraine.

How do you assess the role of the transport sector in ensuring the functioning of the Ukrainian economy under wartime conditions?

During the first days of warfare, all of our employees got involved in delivering humanitarian aid from Europe to different parts of Ukraine.

In the beginning, all the trips were made on a charity basis. Eventually, when it became economically onerous, we returned to making commercial shipments so that our economy could begin to wake up and the carriers would have the financial means to deliver the humanitarian aid all Ukrainians needed as quickly as possible. Thus, humanitarian aid and goods were delivered.

Although shipment volumes transported by trucks cannot be compared to those carried by ships, in these difficult times resilient on-land transportation contributes to the overall success of the country.

Transportation is the lifeblood of Ukraine's economy. And only through our joint efforts will we win and become a successful country.

How has the war affected your work? How has the number of trips changed compared to prewar times?

The war had an extremely negative impact on our work. Because of the need to support our country's economy during wartime, the number of trucks travelling abroad has greatly increased, forming long queues at the borders. However, the number of operated routes has decreased considerably. This has led to a reduction in the number of trips per month, which has affected drivers' monthly payroll.

What impact has the shortage of fuel, and the resulting increase in its price, had on your work?

After the invasion of Ukraine by the Russian Federation, our state faced a shortage of fuel. Fuel is the most important component for logistics, which ensures the vitality of our profession. During the acute phase of the shortage, we had very big problems, as the vast majority of our time was spent not on the road, but in the queues at petrol stations.

The taxi market in Ukraine is absolutely uncontrolled

୨୨

The available taxi services in Ukraine compete by offering the lowest price only. Calculation of travel fares takes place behind the scenes, without considering the formula of economic feasibility.

This way, everyone compromises on his / her own safety and continues a vicious circle of the wild market. The Ukrainian taxi market should undergo a quality reform or copy the US, Germany, or Israel model, for example.

YURII KRASII

Taxi driver, volunteer

Involvement during Russia's war against Ukraine: Since the beginning of the war, Yurii has been engaged in volunteer activities. From the first days after the de-occupation of Bucha, Irpin, and Hostomel, he was engaged in the renewal of the local infrastructure.

The war has affected every business in Ukraine, forcing them to adapt to new realities. How will the war impact the taxi market in Ukraine?

The purpose of any state is to create comfortable and equal conditions for the coexistence of its citizens with the help of laws and regulations. In this aspect, for many reasons, our state is not ideal, and many activity areas remain unregulated.

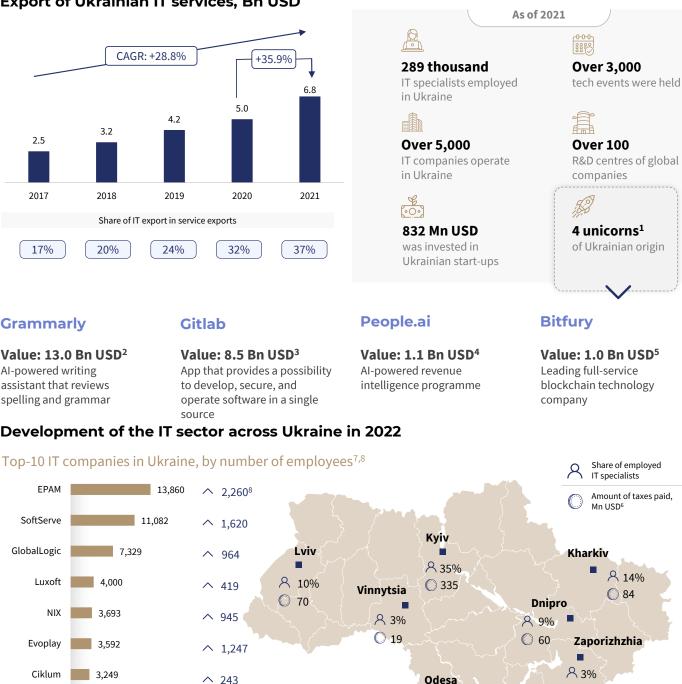
In Ukraine, the market of taxi transportation services is an example of a business activity that requires changes. There is a law on passenger transportation by taxi in Ukraine, but it does not work. It does not provide effective control over its enforcement and definitely does not keep up with the scientific and technical progress which swept the industry after the mobile aggregator apps entered the market.

Well-known are the cases of 'Uberisation' of taxi markets — drivers do not pay taxes and, at the same time, they are not socially protected. They are not subject to pensionable service and they have tax benefits neither for fuel nor for the purchase of a new car. At the same time, passengers are not insured against accidents or incompetence of a driver. Nobody controls drivers, as one can get a job through a messenger. Cab services compete by offering the lowest price only. That being said, the calculation of travel fares takes place behind the scenes, without considering the formula of economic feasibility. This way, everyone compromises on his / her own safety and continues a vicious circle of the wild market. The Ukrainian taxi market should undergo a quality reform or copy the US, Germany or Israel model, for example.

The main idea is not to ban some apps but to create equal rules for all market players. The formula of 'economically reasonable tariff + licensing and taxation of any transporter's activities = responsible service for passengers and decent work conditions for drivers' must start working.

UKRAINIAN IT INDUSTRY HAS SHOWN POSITIVE EXPORT DYNAMICS, GROWING TO 7 BN USD IN 2021

Since 1991, the Ukrainian IT sector has boosted its development, thanks to highly professional IT specialists and the growing interest of global tech companies. Google, Oracle, and Ericsson were among the key global firms that established R&D centres in Ukraine. Despite a relatively small share in GDP in 2021 (2.7%), IT services increased their share in service exports to 37%, with the USA and the UK being the leading export destinations. In recent years, the IT sector generated twice as much export revenue as the gas transmission system or 25% of the agricultural sector's export revenue.



Export of Ukrainian IT services, Bn USD

3.2 2.5 2017 2018 Share of IT export in service exports 17% 20%

Grammarly

Value: 13.0 Bn USD² Al-powered writing assistant that reviews spelling and grammar

Development of the IT sector across Ukraine in 2022

EPAM Amount of taxes paid SoftServe GlobalLogic Luxoft 4.000 NIX 3,693 Evoplay 3,592 Ciklum 3,249 Odesa 018 DataArt 3.000 へ 375 8 5% 0 30 Intellias 2,523 へ 517 Infopulse 📃 2,122 へ 132

Notes: (1) A start-up company with a value of over 1 Bn USD; (2) As of November 2021; (3) As of July 2022; (4) As of October 2021; (5) As of April 2019; (6) Numbers are converted from UAH to USD due to the average exchange rate by NBU; (7) As of January 2022; (8) Compared to July 2021

Source: IT Ukraine Association – Ukraine IT report – [2021]; Ukrainelnvest – Ukrainian IT industry – [February 2020]; Statista website; DOU website

DESPITE THE RUSSIAN INVASION, THE UKRAINIAN IT SECTOR IS RESILIENT AND SUPPORTS THE ECONOMY

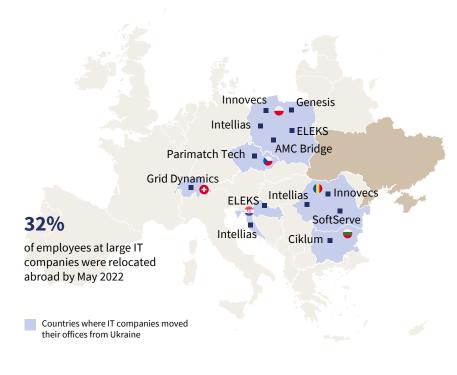
During the war, the **Ukrainian IT sector managed to slightly strengthen its position** compared to other industries. In March-May 2022, the IT sector generated **1.7 Bn USD in sales** — 6% **higher than in the same period in 2021**. Such a positive performance was mainly driven by a successfully implemented remote work scheme, active international contracts, and a general

trend towards opening offices outside Ukraine to hedge the operating risks. On the other hand, since February 2022, **all exporters,** including the IT industry, have been **obliged** to exchange their revenues into **foreign currency** at a **fixed rate,** which is about 10% lower than the **market rate**, hence **lowering** the IT industry's profits.

The impact of Russia's war against Ukraine on the Ukrainian IT sector



IT companies that opened offices outside Ukraine after 24 February 2022¹



(Ö)

Potential challenges

Although IT companies have successfully moved a part of their employee workforce out of Ukraine and continued operations, it has brought **new challenges to the IT sector, provoking uncertainty** as to the future path and the development of the IT industry in Ukraine, with the following crucial questions:

- Will every company return after the war?
- **How intensively** will foreign companies poach Ukrainian IT experts?
- Taking into account the destroyed infrastructure of universities, will there be enough new IT specialists to maintain industry growth?



Since February 2022, IT companies in Ukraine have been actively helping to resist Russian aggression, either by donating to the Ukrainian Army and humanitarian funds, such as UNICEF and Red Cross or by joining the Ukrainian Armed Forces or the Cyber Army.



of the entire IT headcount joined the Cyber Army of Ukraine¹



of all the IT workforce joined the Ukrainian Armed Forces¹



was donated by Ukrainian IT companies to charity funds³

Source: Forbes website; NBU website; Focus website; IT Association of Ukraine; LigaTech website; DOU website; Media overview Notes: (1) As of May 2022; (2) Numbers are converted from Euro to USD due to the average exchange rate by ECB; (3) In March 2022

Presen

AFTER EXITING THE RUSSIAN MARKET, GLOBAL IT COMPANIES ARE EXPERIENCING FINANCIAL LOSSES

At the global level, Russia's war against Ukraine has caused some temporary IT project disruptions. The major task of international companies operating in Ukraine is to secure their staff and make sure their project pipelines are moving smoothly to meet deadlines. To achieve this, some IT companies have moved their offices outside Ukraine, thus securing their most important asset - people. As a result, all major existing contracts remained active, even despite the war. However, this gave other global IT companies opportunities to rehire Ukrainian IT talents, posing a risk to the future state and development of the IT industry in Ukraine. In addition, Russia's war against Ukraine has also brought new challenges to the global IT companies that have branches in Ukraine, Russia, and Belarus, for example, the growing cybersecurity threats, tech-talent migration, and sanctions implemented by the governments. Global companies had to suspend their activities in Russia under the pressure of Western sanctions and probable negative effects on their brand image.

+3%

forecasted growth of global ICT¹ spending in 2022 compared to the +5% pre-war forecast²

~6 Bn USD

forecasted losses of global IT companies due to the war by the end of 2022

10% decline

forecasted in ICT spending of businesses in the CEE³ region during 2022

107+

global IT companies have suspended operations from Russia since 24 February 2022⁴

27% drop

in ICT spending is forecasted in Russia in 2022 if the war lasts beyond 2022

170,000

IT specialists could emigrate from Russia, thus reshaping the global IT talent pool

Selected IT companies' responses to Russia's war against Ukraine

AWS	Stopped accepting new customers in Russia for its cloud computing services. AWS did not have any physical assets in Russia.	Microsoft	Stopped accepting new customers in the Russian market for all its products and services. The company is expecting to lay off 400 employees .
Google	Suspended all advertising activities in Russia, including on YouTube. Losses are expected to amount to around 1% of Google's total revenue in 2021.	SAP	Suspended all new sales to Russia and Belarus . The company estimates to lose around 325 Mn USD because of the exiting from these countries.
IBM	Suspended all operations from Russia. The total impact on the company's revenue is expected to be -300 Mn USD .	Apple	Suspended Apple Pay services and all product sales in the Russian market, which accounted for less than 1% of Apple's total revenue in 2020.

OPINION CORNER

Sergii Gavrylenko Talks about Digitalisation, Reforms, Virtual Economic Zones, and Incentives

The Ukrainian Government takes measures to facilitate the development of the IT

companies to build a transparent corporate structure, attract foreign investments

industry. The newly established virtual economic zone of 'Diia.City' in Ukraine allows the combining of effective tax conditions with other tools, enabling

more easily, and utilise additional mechanisms to protect intangible assets.



Source: IDC — The Impact of the Russia-Ukraine War on the Global ICT Market Landscape — [March 2022]; New York Times website; The Wall Street Journal website; The Economist website; Reuters website; Leave Russia project website Notes: (1) Information and Communications Technology; (2) In case the war continues by the end

of 2022;(3) Central Eastern Europe; (4) As of 12 September 2022

160

More than 300 companies have become participants of Diia.City

୨୨

It is too early to talk about the impact of Diia.City on the development of the industry as a whole. War times have adjusted all aspects of public life. For example, investors are now thinking more about the risks of military action and the legal specifics of cooperation. There is the possibility that companies joining Diia.City will be able to book their IT staff and get permission for them to travel abroad on short-term business trips. This is something that Western clients and partners need to be assured that the project development team will remain in place. Accordingly, such guarantees will also have a positive effect on the volume of foreign investment in the IT sector.

VITALY SEDLER

CEO and co-founder, Intellias; President of IT Ukraine Association

Involvement during Russia's war against Ukraine: The total amount of donations made by Intellias has already exceeded 30 Mn UAH and is still growing. Most of the aid was used for the purchase of drones, and protective equipment for the military, modernisation of the command and analytical centres of the Air Command 'West' of the Air Forces of the Armed Forces of Ukraine, and the purchase of off-road vehicles for the military.

During the war, the number of IT companies that joined Diia.City increased compared to the prewar period. How does this affect the IT industry?

More than 300 companies joined Diya City. Many of these companies have indeed joined Diia.City after the full-scale invasion began. In fact, the platform was officially launched only at the beginning of 2022. In the first two months of operation, this service did not have a noticeable impact on the Ukrainian IT sector due to a short operation period.

In general, the development of the IT industry in Ukraine will significantly depend on the implementation of the initiative for the development of specialised education in Ukraine. In this context, we see the grand plans of the Ministry of Digital Transformation and the Ministry of Education, which we support through our daily effort. Diia.City creates flexibility and freedom of choice for its enterprises-participants. Freedom of choice is the key principle that we have always insisted on preserving.

How do you assess readiness of the Ukrainian high-tech industry for war? To what extent has the IT sector been affected?

The sector has demonstrated a high level of viability. 85% of companies managed to completely or almost completely restore business operations. 2/3 of companies report growth, and 1/7 of them record significant growth. The exception constitutes only the companies that worked purely with the Ukrainian market. They were forced to close their businesses.

Currently, the situation remains stressful and difficult. The evacuation of tens of thousands of specialists from dangerous regions of the country was a big challenge for everyone. And those who prepared for this in advance, had an Emergency Response Team and a clear Business Continuity Plan, which they began to implement immediately, and were able to more easily survive the most difficult times at the end of February and the first months of spring. And, despite everything, we continue to work and fill the country's budget.

UKRAINE HAS A GROWING PROFESSIONAL SERVICES MARKET THAT OFFERS DIVERSIFIED SOLUTIONS



In 2021, the **professional services market in Ukraine exceeded 1 Bn USD**, increasing at a CAGR of 9.0% for the past two years. Considering the high quality of services provided by auditors, lawyers, consultants, and researchers in Ukraine, as well as the diversity of their service offerings for businesses and public sector clients, **the industry has the potential for further development in the postwar economy.**

Key trends on the professional services market in Ukraine

Professional services companies in Ukraine are widely adopting **digital solutions and advanced technologies** in order to enhance the quality and added value of their service offerings.

Professional services companies in Ukraine are actively developing **hybrid working formats** aimed at accessing a new pool of talent, regardless of their location.



In view of the rising client demands and expectations, professional services companies in Ukraine pay special attention to the constant **improvement** of client experience.

Since employees are a key asset in the professional services industry, Ukrainian companies are offering **various learning opportunities** for the development of human capital.

Ukrainian consulting firms are **strengthening their strategic and transformational offerings** in view of the potential growth in demand for these services amid the post-war recovery of businesses in the country. Consultants can also facilitate the alignment of investment processes with the requirements of investors and other stakeholders, ensuring the efficient use of funds.



Oleksandr Maksymenko Talks about Professional services, Business Development, Outsourcing, and Consulting

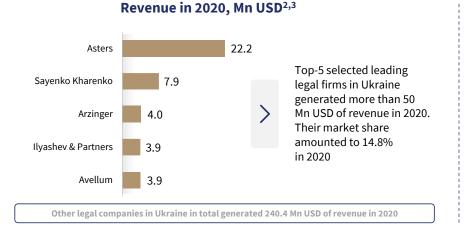


Ukrainian professional services industry is highly developed and able to support projects of any complexity, field of activity, and duration. It is represented by legal services, audit, management consulting services, accounting, and tax consultancies. Foreign investors are free to choose either a global professional services company or a local one to receive professional support in any sphere of business activity.

Source: State Statistics Service of Ukraine; Consultancy website; Media overview Notes: (1) The analysis is focused on 4 segments of the professional services market; (2) Figures are converted based on the average exchange rate provided by the NBU

AFTER THE WAR, UKRAINIAN LEGAL FIRMS WILL CONSULT ON LEGAL AND REGULATORY MATTERS

Selected leading companies on the legal services market in Ukraine¹



The Ukrainian legal services sector is characterised by **a large number of market players and a high level of competition** between them. The market is represented by international law firms (Baker McKenzie, CMS, DenTn, etc.), regional firms (for example, Kinstellar), as well as national firms, such as Asters, Avellum, and Aequo. These companies are often **recognised by reputable international rankings** due to the high quality of services they provide.

Selected projects of the leading legal companies in Ukraine

Period: December 2021 Industry: Agriculture

Service: M&A

Ukrainian legal firm advised InVivo Group on the merger with Soufflet Group, one of the major deals in the agriculture sector within the last decade. Services included obtaining merger clearances in Ukraine and other jurisdictions. Period: September 2021 Industry: Public sector Service: Finance One of the Ukrainian legal companies provided advisory services on the issuance of 1.25 Bn USD of Eurobonds by Ukraine. This was the first

Eurobonds, admitted to listing

issuance of Ukraine's

on the LSE.⁴

Period: July 2021 Industry: Construction Service: Finance A leading Ukrainian legal firm acted as the legal counsel to the Black Sea Trade and

Development Bank in connection with the provision of 20 Mn USD financing to the group of companies owning two shopping malls in Kyiv.

The role of legal companies in the post-war economy of Ukraine



Participate in the development of legal acts in various spheres (economy, society, environment, etc.)



Provide legal services to businesses on M&A deals, privatisation, and land lease matters



Initiate investment arbitration regarding the destruction of property due to the war



Provide legal advisory services to foreign companies on entering the Ukrainian market



Consult institutions on the procedures of confiscation of Russia's assets located in third countries



Represent victims in the international tribunal, which was organised to bring Russian war criminals to justice

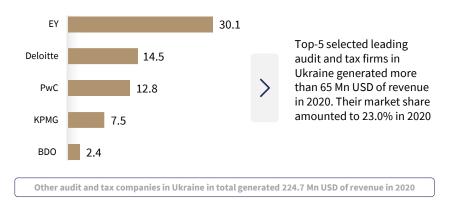
Source: Media overview

Notes: (1) Selected law firms according to the ranking of Yurydychna Hazeta in 2021. These include Asters, Sayenko Kharenko, Ilyashev & Partners, Arginger and Avellum; (2) Numbers are converted based on the average annual exchange rate by the NBU in 2020; (3) Latest available; (4) London Stock Exchange

ACCOUNTING FIRMS CONTINUE TO PROVIDE CLIENTS WITH AUDIT & TAX SERVICES DURING THE WAR

Selected leading companies in the audit and tax services market in Ukraine

Revenue in 2020, Mn USD^{1,2}



In 2020, audit, accounting, and tax consulting services comprised the largest share of the professional services market in Ukraine. The sector is characterised by a **high level of competition between international and local firms**, providing services to public and private businesses from different industries. **Accounting firms in Ukraine are often engaged in large public projects** to enhance the transparency, efficiency, and credibility of these projects.

Selected projects of the leading audit and tax companies in Ukraine

Period: June 2022 Industry: IT

Service: Due Diligence

One of the leading audit and tax firms in Ukraine conducted legal, tax, and financial due diligence for Nortal, a global digital transformation provider, in its acquisition of Skelia, the international leader in building cross-border IT organisations. Period: February 2022 Industry: Media Service: Audit One of the leading accounting firms in Ukraine acted as an

independent advisor in verifying the correctness of the calculation of votes on the National Selection for the international Eurovision song contest in 2022. Period: July 2020 Industry: Hospitality Service: Audit The Ukrainian office of one of the global accounting firms conducted an audit of financial statements for the privatisation of the Dnipro Hotel in Kyiv. The hotel was sold to an investor in a public auction for more than 40 Mn USD.

The role of audit and tax companies in the post-war economy of Ukraine



Participate in the development of plans and programmes for the post-war economic recovery of Ukraine



Audit losses and impairment of property value that was partially or fully destroyed during the war



Offer legislative proposals and regulations on preferential tax regimes for foreign and national businesses



Participate in the development and implementation of the anticipated systemic reform of Ukrainian tax law



Provide audit and accounting services to ensure the reliable access of clients to information in times of uncertainty



Source: Media overview

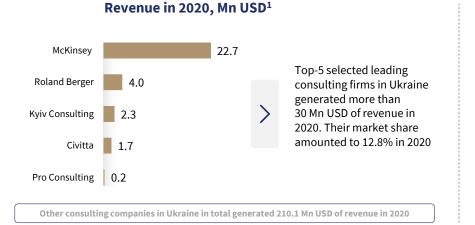
Participate in the auditing of objects in the course of continuing large-scale privatisation in Ukraine



4 Notes: (1) Numbers are converted based on the average annual exchange rate by the NBU in 2020; (2) Latest publicly available information

BUSINESS CONSULTANTS ARE READY TO TAKE PART IN THE POST-WAR RECOVERY OF UKRAINE

Selected leading companies on the consulting services market in Ukraine



The Ukrainian management consulting industry is highly competitive, **including around 300 international and local companies** of different sizes and focuses. They provide **a wide range of highly diversified service offerings** to businesses from different industries (manufacturing, oil and gas, banking, etc.), as well as to clients from the public sector, advising government institutions, international organisations, NGOs, and state enterprises.

Selected projects of the leading consulting companies in Ukraine

Period: June 2022 Industry: Public sector Service: Strategy

Schuce. Strategy

One of the leading management consulting companies in Ukraine participated in the development of the post-war National Recovery Plan for the country in cooperation with government authorities. Period: March 2021 Industry: Manufacturing Service: Corporate Finance One of the leading regional

consulting firms in Ukraine provided corporate finance services to SMEs² from Eastern regions of Ukraine for the purpose of obtaining debt and equity financing in the amount of more than 1 Mn USD. Period: January 2020 Industry: Infrastructure Service: Strategy

Ukrainian office of one of the global strategy consulting companies participated in the development and verification of the project of corporate strategy by 2025 for Ukrainian Sea Ports Authority.

The role of consulting companies in the post-war economy of Ukraine



Participate in the development of initiatives on the post-war economic recovery of Ukraine



Support business process optimisation for companies affected by the war



Provide a full range of advisory services to foreign partners on the investment process in Ukraine



Prepare go-to-market strategies for foreign companies on entering the Ukrainian market



Provide strategy and transformation services for companies to leverage opportunities in the post-war economy



Consult businesses in Ukraine on a number of relevant topics (supply chain resilience, risk management, digital, etc.)

The business consulting market in Ukraine will boom!

୨୨

In addition to political and economic skills, cultural and social aspects must also be taken into account!

JÖRG HOSSENFELDER

CEO of Lünendonk & Hossenfelder

Involvement during Russia's war against Ukraine: Jörg has already for years long-lasting business relations with Ukraine. Lünendonk is a famous market research company from Germany. In Lünendonk's upcoming 'Consulting Handbook' which will be published in November 2022 the business consulting market of Ukraine will be an important topic. Due to the special demand for professional consulting services in Ukraine – also from international consultancies – after the war, Jörg and his team are planning to publish in Spring 2023 a 'Ukraine Special' about leading business consultancies in Ukraine and how they will help to rebuild Ukraine.

No successful transformation can happen without the skills of consultants. Is it the same when transforming an entire country?

With the exception of the purchasing process, the consulting activities of companies and government institutions are very similar. The larger the client, the more complex the challenges. Furthermore, not only the on-site situation, but also the exogenous framework conditions such as global supply chains, energy and production factors, technical and service staff, etc. are among the factors that must be taken into account. In addition, agility and speed play a special role, which is now very much taken up by the consultants. Especially with regard to the reconstruction of Ukraine, these are essential success factors.

What key consulting capabilities do the future consultants of Ukraine need to bring?

As mentioned before, besides the consultant skills, years of knowledge of Ukraine are part of the basis of the consultants. In addition to political and economic skills, cultural and social aspects must also be taken into account if projects are to run successfully together with the clients. Management consultants who want to establish a successful consulting business in Ukraine should take this into account.

The world will be very much interested in a new and strong Ukraine

୨୨

Ukrainian business has lived through various crisis situations over the last decades. However, this one is, without doubt, the most serious test for resilience which we have ever seen. It has therefore shaped the demand for legal services accordingly. Almost all major businesses were forced to go through corporate & financial restructuring, downsizing and adoption of new business models, as well as to revise their supply chains, customer & distribution channels, look for new markets and business opportunities abroad.

TIMUR BONDARYEV

Arzinger Law Office, Attorney-at-Law, Founding & Managing Partner, Ukraine

Involvement during Russia's war against Ukraine: Timur holds an active civic position and puts efforts to raise awareness on the war-related issues by assisting in raising funds to support the Ukrainian army and refugees. Timur evacuated a large part of his staff to Lviv and started to support public and private clients, who have suffered material war-caused damage, with their future international claims against russia.

What role will the legal business play in the postwar recovery of the Ukrainian economy? Which services will be in the highest demand from the side of businesses and the public sector?

Already at this stage we see numerous serious requests from both public & private sectors related to future rebuilding of Ukraine. We are confident that services provided by major diversified law firms will be very much in demand in the new post-war Ukraine. Property & Construction, Public-Private Partnership, Project Finance, Capital Markets, M&A, Employment, International & Domestic Tax and other expertise will be in great demand in the years to come. Needless to say, that significant emphasis will be in the area of damages, russia will have to pay for all crimes & atrocities committed in Ukraine and this process will keep lawyers from all over the world very much busy for the next decade or two.

How do you assess the future of the legal services market in Ukraine? Will the war launch new trends in the market, as well as new business processes at legal companies?

The post-war legal services market will most probably look very much different since not all existing players will survive the war. Having said this, those firms, which will be able to swiftly adopt and adjust themselves to the new reality, and therefore survive the war, will be the actual winners. I believe that the world will be very much interested in a new and strong Ukraine. New / old foreign investments will arrive, market shares in all sectors of the economy will be redistributed, new strong players will emerge in every industry and we will see the economy growing dramatically. This will require proper legal support, which shall be provided according to the best international standards.

Post-war foreign investments are likely to reach unprecedented levels

୨୨

It is expected that Ukraine will attract approximately 750 Bn USD in external investments through interstate grants, debt / equity loans and private investments, such as public-private partnerships. The legal business will be a necessary pillar for building up the post-war economy structure.

Foreign investment will increase to a level never seen before. We expect a higher amount of state tenders within the public sector. In particular, the infrastructure sector will place an almost indefinite list of tender projects to rebuild the entire infrastructure in our country destroyed by the illegal Russian war.

ARIO DEHGHANI

Counsel at Baker McKenzie

Involvement during Russia's war against Ukraine: Ario Dehghani takes an active social position by raising awareness of Russia's war against Ukraine on social media and communicating a true message on the course of the war developments. In addition, Baker McKenzie undertook prompt measures to relocate employees and their entire families to other countries.

Against the background of the reducing business activities what measures have been taken by your company to support the business and secure its functioning in new conditions?

The major resource of our business is our employees. Our management did everything possible to protect our employees from the threats posed by the war, including the relocation of our colleagues and their entire families to other countries (more than 13 countries in the EU). The colleagues that are staying in Ukraine are being supported to continue their work while staying safe and secure.

Since the beginning of Russia's war against Ukraine, the Baker McKenzie Kyiv office has received tremendous support from the Baker McKenzie offices worldwide. Ukrainian colleagues were provided with a safe haven and immense practical support by Baker McKenzie offices in other European countries. Many colleagues were included in business projects of other Baker McKenzie offices. Our Kyiv office also had new areas of work due to the changed conditions in our country.

How do you assess the future of the legal services market in Ukraine? Will the war cause the emergence of new trends in the market and business processes of legal companies?

We see a future shift in the legal sector to more Western-driven law support. Ukrainian law itself is expected to become more compliant with European standards. However, the demand of foreign investors will drive changes in the legal market. The war casualties and the overall breakdown of the local economy will hit the purely local-oriented law firms. Global law firms will probably have a competitive advantage to cover the 360-degree scope of needs, also heavily driven by foreign law. The product range of legal services will change as well. The protection of foreign investments in Ukraine will be a strong demand and Ukrainian law firms will adjust to a more European law-driven approach to service, knowledge, experience, and standards. Compliance with foreign anti-corruption and Western corporate governance standards will play a key role in protecting the interests of foreign and local investors.

NEW AGE UKRAINE

CHAPTER 3.0

n

16877 65

FUTURE: INTRODUCTION



'I'm not emotional about investments. Investing is something where you have to be purely rational and not let emotions affect your decision making — just the facts', — William A. Ackman

Until recently Ukraine's investment appeal was associated with high risks (vs high expected margins, though), forcing many reputable companies to refrain from doing business in Ukraine. Things changed.

Although Russia's unprovoked aggression against Ukraine has resulted in the grievous suffering of many thousands of Ukrainian citizens and continues causing massive destruction of the country's infrastructure and production facilities, it spurred Ukraine's **tremendous transformation towards a more democratic state.** The state where it is the **civil society that determines the country's internal and external course of development.**

The transformation seems to be irreversible, as Ukraine has firmly stepped on the track towards a fully-fledged membership in the EU.

Immediately after the war, **Ukraine will demonstrate rapid economic growth, driven by the low comparison base.** But if the dynamics of positive changes is retained, and the necessary institutional reforms will get implemented, including:

- Enhancement of quality of institutions and making them more compliant to the EU standards
- Fight against corruption
- Improvement of tax administration through establishment of unified and transparent rules for all market players
- Raising accountability of Ukraine's government towards its people
- Creation of favourable conditions for business of all forms and sizes

the subsequent growth rates will get more sustainable, and Ukraine's economy will become more resilient to external shocks. This way, the country will finally be able to shed the burdens of the past and a new chapter in Ukraine's history will start.

In the third chapter of KYIV RYSING we aimed to support this process, pitch Ukraine's investment potential and opportunities, as well as to explain why global community should stay engaged in Ukraine's fight against aggressor and its post-war recovery.

KYIV RYSING major focus in this chapter centres around the need of strategic transformation and proper expectations management to ensure Ukraine's prosperous future.

Stay engaged - do not miss out your chance to become a part of a great success story of Ukraine's RYSING.

THE DEVELOPMENT OF NEW AGE UKRAINE IMPLIES THOROUGH PLANNING AND RISK ASSESSMENT

In July 2022, the National Recovery Plan of Ukraine was presented at the international conference in Lugano. According to this plan, **Ukraine aims to attract 750 Bn USD of funding within 10 years for 15 target programmes** of the post-war recovery. The plan reflects the total investment potential that Ukraine can realise in case of highly favourable conditions. However, since the implementation of the plan **depends on uncontrollable circumstances to a large extent**, there are possible risks that the realisation of all programmes may be complicated. In this regard, it is important to analyse the prospect of creating a New Age Ukraine in view of the impact of these circumstances in order to **provide key stakeholders with balanced expectations** regarding the possibilities of implementing the recovery plan. Such an approach will allow decision-makers to focus on key reforms necessary to create a **favourable investment climate**, as well as allow investors to choose the **most priority sectors and projects** in terms of the available **opportunities**, potential **risks**, and expected **ROI**.



New Age Ukraine

The section discloses investment opportunities in post-war Ukraine, presented as a part of the National Recovery Plan, as well as the analysis of risks and limitations that may slow down or hinder the implementation of some initiatives:

- Investment potential
- Balanced expectations



Investment potential

The section implies an overview of sectors and industries as a part of each sphere in terms of the total funding needs, initiatives, targets, visions, and the largest investment projects. These will define the strategic priorities of the post-war recovery of Ukraine for all the stakeholders.

- Prerequisites and the concept of the National Recovery Plan of Ukraine
- The post-war recovery of the social sphere
- The post-war recovery of the environment
- The post-war recovery of the economy



Balanced expectations

The section describes the risks that might put under threat the realisation of the investment potential of Ukraine, assessing the possible scenarios in terms of the combination of various risks and priority initiatives that Ukraine should focus on in order to enable the post-war recovery of Ukraine.

- Military, internal, and external risks
- Possible scenarios of the post-war development of Ukraine in view of potential risks
- Key priorities of the post-war recovery of Ukraine

INVESTMENT POTENTIAL

CHAPTER 3.1

UKRAINE AIMS TO REALISE ITS POTENTIAL AND TO BUILD THE COUNTRY OF THE NEW AGE

New Age Ukraine is a strong and independent country with a developed processing industry, a wide industrial park network, reputable IT companies, effective infrastructure, and a clean environment. Ukraine ensures high living standards, as well as access to high-quality education and healthcare. In 2032, Ukraine will demonstrate sustainable economic growth, driven by further integration with the EU, which makes the country a 'magnet' for international investments.

NEW AGE UKRAINE

Equal and inclusive **society**

Clean and safe environment

Sustainable and resilient economy

Priority targets by 2032



Sectoral targets by 2032



15 million

displaced Ukrainians returned back¹



Cultural Service Centres to be established



share of processed goods in manufacturing export



public motor roads will be reconstructed / constructed

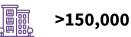


universities in the TOP-1,000 QS World Rankings²

TOP-25

Index ranking

in Economic Complexity



new apartments will be built³



industrial parks to be developed



registered start-ups in Ukraine



TOP-25

in World Bank Human

Capital Index ranking

share of public health expenditure in GDP



share of agriculture in GDP of Ukraine



carbon-free energy sources in the energy mix



waste management facilities operating

Source: Ukraine Recovery Conference materials Notes: (1) Includes internally displaced people, external refugees, people deported to Russia, and people who returned after migration to other countries; (2) Ranking of the world's strongest universities; (3) Under Social Housing Fund programme

176

AFTER THE END OF THE WAR UKRAINE WILL BECOME AN ATTRACTIVE INVESTMENT DESTINATION

The majority of Ukrainians believe that Ukraine will become an attractive investment destination in the first 3 years after the victory. However, more than 20% of respondents suggest that potential risks will remain high, restraining investment flows to the country.

Will Ukraine be an attractive destination for investors in the first 3 years after the war ends?¹





share of Ukrainians who believe that construction will be the most attractive sphere for foreign investments after the end of the war¹ Almost half of Ukrainians consider that **construction will become the most attractive sector for investors**, given the need to rebuild the destroyed living and other civil infrastructure after the war. Around **31%** of respondents **believe that the agriculture sector has the highest potential** to attract funding from investors, taking into account the high export potential of Ukraine in this sector. Ukraine has already become a leading destination for the European Investment Bank, which invested nearly 620 Mn USD in vital infrastructure across the country in 2021.

Ukraine needs help to rebuild some of the critical social infrastructure facilities that were destroyed as a result of the Russian invasion. The cost of inflicted damages is constantly growing as the war continues. In September 2022, the total amount of direct damage to infrastructure increased to 114.5 Bn USD².

Damaged and destroyed infrastructure objects of Ukraine²



The estimations of Ukrainians regarding the expected period the country will need to fully recover from the war are split almost equally. 30% of Ukrainians believe that it will take our country more than 10 years to return to ordinary pre-war life, while 28% of them expect that Ukraine has the potential to fully recover within 5-7 years after the end of the war.

?

How much time will Ukraine need to fully recover and return to ordinary pre-war life?¹ 69.7%

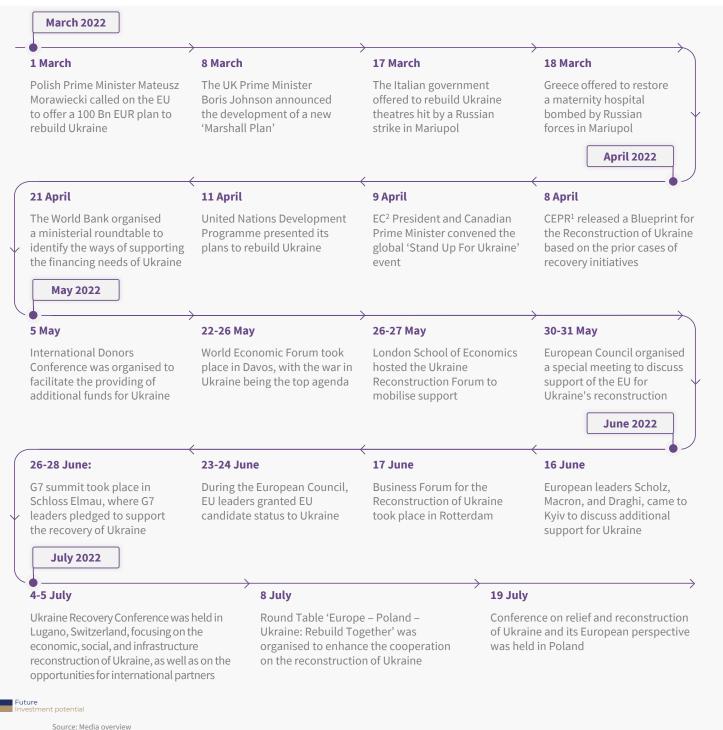
30.3% >10 years

DISCUSSIONS ON THE POST-WAR RECOVERY OF UKRAINE STARTED IN MARCH 2022

The international community demonstrated outstanding unity in supporting Ukraine's fight for freedom. Since March 2022, **international institutions** and **world leaders have organised several conferences and roundtables**, each aimed at developing plans for the recovery of Ukraine. These events addressed the fundamental challenges Ukraine had been facing and coordinated approaches to economic, humanitarian, and military support with post-war reconstruction plans.

Numerous discussions and vast analytical works resulted in the development of the National Recovery Plan of Ukraine for 2022-2032, presented at the Ukraine Recovery Conference in Lugano on 4-5 July 2022. The conference has given an impetus to the process of rebuilding the country, yet there is still tremendous work ahead in regard to coordinating international efforts and ensuring the implementation of the initiatives for the recovery of Ukraine.

Timeline of selected events devoted to the recovery of Ukraine



THE IMPLEMENTATION OF THE NATIONAL RECOVERY PLAN REQUIRES ACTIVE SUPPORT FROM DONORS

Timeline of selected events devoted to the recovery of Ukraine (continued)

20 July	23 July		
Foreign affairs ministers of Austria and the Czech Republic visited Ukraine and discuss the issue of demining and cooperation in the field of energy	ed visited Kyiv and s	The US House of Representatives delegation visited Kyiv and stated its solid intentions to help rebuild Ukraine and resist the Russian invasion	
	<i>,</i>	August 2022	
23 August	19 August	↓ 18 August	
Representatives of about 60 countries and international organisations participated in the Second Summit of the Crimea Platform September 2022	Representatives of Eurocities ¹ visited Kyiv and signed a Memorandum in support of the reconstruction of Ukrainian cities	Turkish President and UN Secretar General met with the leaders of Ukraine and discussed the resumption of grain export, as well as the Russian nuclear blackmail	
6 September	9 September	22 September	
V. Zelenskyy presented the Advantage Ukraine platform for attracting foreign investments at the opening of trading at the NYSE ²	The World Bank will publish 'Damage and Needs Assessment' to form an internationally recognised basis for further concrete support actions	UN Security Council will hold a meeting focused on the situation in Ukraine, particularly the impunity and justice	
	25 October	13 October	
October			

xxx - planned events

The expected amount of financing that Ukraine will receive by the end of 2022 as part of the National Recovery Plan

~30.0 Bn USD

total confirmed donations from external partners by the end of 2022

11.0 Bn USD



possible additional donations from the USA

750.0 Bn USD

Estimated cost of the National Recovery Plan





possible additional donations from the European Commission



3.2 Bn USD

possible additional donations from the World Bank



Future nvestment potential

THE MOST RECENT VERSION OF THE RECOVERY PLAN FOR UKRAINE WAS PRESENTED IN JULY 2022

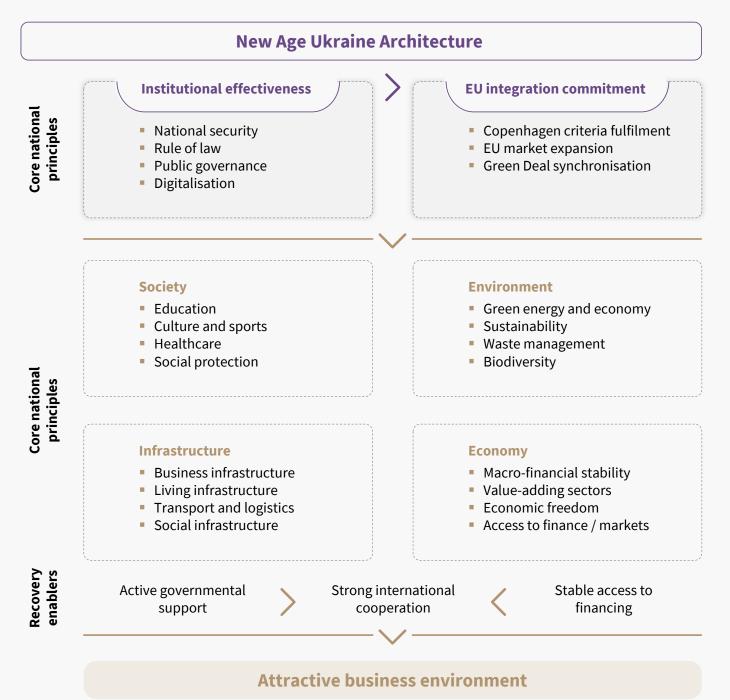
Ukraine has a solid future vision and a steady ambition to rebuild the country into a **stronger**, **safer**, **more advanced version of itself**.

The Recovery Plan for Ukraine was presented on 4–5 July 2022 at the **international Ukraine Recovery Conference in Lugano, Switzerland**. The participants comprised over 1,000 people, including Ukrainian government officials and international

delegations of experts. Key takeaways and further actions were described in the Recovery Blueprint documents and published on the official website of the Conference.

The documents suggest a holistic approach toward the recovery and transformation of Ukraine, which are based on the **two strategic imperatives of institutional effectiveness and EU integration.**

New Age Ukraine Architecture in accordance to the Recovery Plan



The Ukrainian government is determined to show transparency

୨୨

People who in so many creative ways contribute to the victory of Ukraine will write their names in history. The world will remember them not only as humanitarians and philanthropists but also as those who made a successful investment — an investment in freedom and democracy.

YELYZAVETA YASKO

Member of Parliament of Ukraine; Member of Foreign Affairs Committee; Member of the Ukrainian Delegation at PACE

Involvement during Russia's war against Ukraine: Yelyzaveta takes an active social and political position. She participates in international conferences and forums calling on foreign businesses to stop cooperation with the aggressor country, as well as to strengthen the imposed sanctions and invest in Ukraine.

In your opinion, what international partnerships of post-war Ukraine could present a big potential and are yet to be developed? What existing partnerships can be taken to the new level?

Ukraine's material losses are approaching 1 Tn USD. If the war turns into another World War II, the losses will be catastrophically higher.

People who in so many creative ways, including those via international cooperation, contribute to the victory of Ukraine will write their names in history. The world will remember them not only as humanitarians and philanthropists but also as those who made a successful investment — in freedom and democracy.

Post-war Ukraine is not only about a powerful army. It is also about large-scale recovery and construction opportunities, multi-industry development, a large agro-industrial complex and an enormous market.

Existing partnerships should become more available for Ukraine's local communities. Strengthening accountability through the development of an institutional framework, which enables collaboration for changing the systems, is also important.

Victory stamps are to be the greatest stamps ever designed

୨୨

The toughest decisions are always the ones where people's lives can be in danger. The decision to resume work on the second day of the war, including near military zones and within the temporarily occupied territories, was tough to make, but I am confident we made the right choice, as millions of people depend on our work.

Our heroic employees delivered food, pension and humanitarian aid in the hardest-to-reach places from occupied cities to the smallest villages. We are the last company to leave and the first to come back after a city or a village is liberated from the enemies.

IGOR SMELYANSKY

CEO at Ukrainian National Postal Operator (Ukrposhta)

Involvement during Russia's war against Ukraine: After Russia's full-scale invasion of Ukraine, Ukrainian National Postal Operator (Ukrposhta) has been actively delivering humanitarian aid and pensions, as well as working with international postal operators. Committed and brave employees headed by a talented CEO constitute a reliable backbone for the Ukrainian economy and the social system during wartime.

In what way will the imminent integration of Ukraine into the EU impact Ukrposhta, at both operational and strategic levels?

When we talk to our colleagues in the EU about speeding up deliveries and improving services, many of them are amazed that we even continue working. So, we see the EU integration as an opportunity, which can allow us to improve the quality and speed of services for our clients.

I hope that we can maintain our adaptability and flexibility and would not get bogged down in bureaucratic procedures that would enable us to adopt leading European technologies and raise funding for our development and growth.

Does your team already have the idea of a postage stamp that Ukrposhta will release on a victory day?

It will be the greatest stamp to design and we certainly feel the responsibility for doing it at the appropriate creative level, while communicating the right message. The history of our wartime stamps has shown that the stamp's design, is going to be an exceptional one.

The heroism of our troops and our people deserves commemoration that will be known across the globe. And I feel confident we will have the largest number of stamps ever issued. So that all people around the world could celebrate the victory with us.

Ukraine should get a chance for 'autonomous' development

୨୨

The international development and reconstruction organisations should give Ukraine a chance for its own 'autonomous' development, avoiding the role of a just dependent peripheral element of the networks of transnational corporations with guarantees that the land and main infrastructures would be owned primarily by the nation.

DR VALENTIN YAKUSHIK

Chairman of the Supervisory Board of the Ukrainian Institute of Politics

Involvement during Russia's war against Ukraine: Dr Valentin Yakyshik takes an active public position and analyses Russia's war against Ukraine. He actively discusses Russia's war against Ukraine with local and international representatives and media.

What must be the major principles of post-war reconstruction and development of Ukraine?

1. Ukraine should get a chance for 'autonomous' development, avoiding the role of a just dependent peripheral element of the networks of transnational corporations.

2. Establish an efficient national banking system with accessible and transparent crediting of businesses and households.

3. Oversee the decentralisation and deconcentrating of international investment projects, the creation of international mechanisms for stopping the widely-spread post-soviet practices of 'splitting' budgetary money

4. Establish a branch of 'examination authority' controlling the quality of civil servants and top political appointees.

5. Provide a special mass support for SMEs (e.g. using the models of the UK and Taiwan)

6. Organise programmes of employment for the demobilised Ukrainian soldiers and military officers

What are the Top-3 decisions to be made by the Ukrainian government once martial law is lifted?

The government must undertake:

1. A set of measures aimed at 'social equality and justice' vis-àvis citizens, local communities, and regions, with initial strict rationing of consumer goods and investments into reconstruction, and balanced fair distribution of all types of international aid, guaranteeing 'basic income' and chances for survival and self-development of persons, families, local communities and productive units, supporting grass-root initiatives, small and medium businesses.

2. Tough measures against criminal gangs; purges of corrupt, incompetent, and irresponsible administrators; institution-building of grass-root, professional and international controls.

3. Develop a decree on a gradual transition to policies of fostering political and cultural pluralism in social life, including in mass media, political movements, and organisations.

SOCIETY

CHAPTER 3.1.1



Vision: Ukraine will become an equal and inclusive society, where each citizen will have equal opportunities with full access to high-quality healthcare, education, and a decent level of social protection.



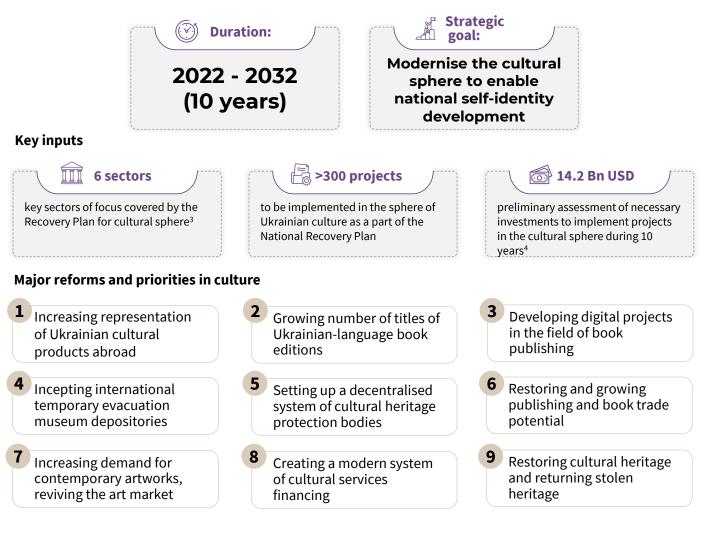
Society: predicted investments for selected areas



UKRAINE'S CULTURAL RECOVERY IS AN ESSENTIAL PART OF SELF-IDENTITY DEVELOPMENT

Culture is one of the major pillars of the development and sustenance of societies. Russia's war against Ukraine has shown that culture is also an indispensable and crucial part of Ukrainian national security in the long run. **Common values, attitudes, preferences, and knowledge** unite society. However, in this respect, Ukraine is not yet homogeneous because of the lack of due recognition and concern from the government and, as a result, underfinancing or financing of the industry in a leftover manner. The National Recovery Plan suggests that Ukraine should shift the focus on restoring and protecting cultural heritage and developing multi-stakeholder engagement that will enable the national self-identity.

Concept of the post-war Culture Recovery Plan^{1,2}





Iryna Petrenko Talks about Culture, Tourism, Cinematography, and Investments



Cultural heritage is an asset that Ukraine should use by converting into cultural and event tourism. Some cities pay film producers money for showing their sceneries in the films, and Ukraine now offers film producers a cash rebate system. This is how the global impression of cities and countries is created. Thus, creators receive money for projects, and the city receives a flow of tourists. Considering the huge attention and interest in Ukraine in the world, such a cooperation option is worth considering.

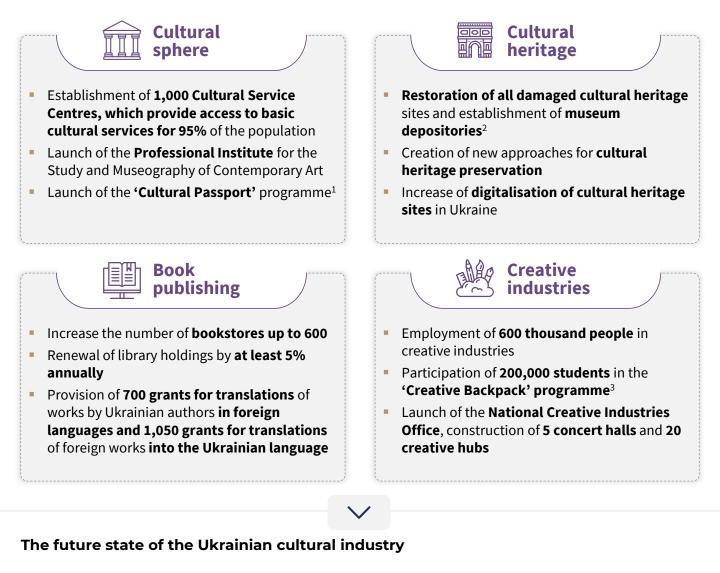
Source: Ukraine Recovery Conference materials Notes: (1) A part of the National Recovery Plan 2022; (2) Based on the analysis of materials of the Ukraine Recovery Conference 2022, press releases of the Cabinet of Ministers of Ukraine, and articles of the experts in the field of the culture; (3) Culture sphere, creative industries, book publishing and libraries, ethnic affairs and religion, cultural heritage, and national memory; (4) Including confiscated Russian assets, partner grants, partner debt / equity, private investments, and state budget

UKRAINE AIMS TO REESTABLISH ITS CULTURAL POTENTIAL AND RESTORE HERITAGE SITES

Being restored after the war, Ukraine's **cultural sphere will** contribute to the formation of a value-driven Ukrainian society, able to cherish the uniqueness of its culture with European values

being deeply rooted in it. The renewed cultural ecosystem **will also contribute to the global heritage through** the incorporation of unique features of Ukrainian culture.

Key targets of the post-war recovery of the cultural sector of Ukraine by 2032





A new cultural infrastructure meets the requirements of the population and is highly digitalised



The sphere is financed from multiple resources rather than on a leftover basis



Ukrainian society recognises the importance of culture for its human capital growth



Cultural heritage of Ukraine is preserved and better protected. All damaged objects are restored



Ukrainian national cultural products are in high demand within Ukrainian society and abroad



The Ukrainian book-publishing industry demonstrates a stable year-over-year growth

ent potential Source: Ukraine Recovery Conference materials

Notes: (1) The government programme that provides pupils with an opportunity to become familiar with various types of art and contemporary creative industries; (2) Cultural sights damaged or destroyed during Russia's war against Ukraine; (3) The programme will finance the trips of pupils to Ukrainian cities and their acquaintance with the creative experience (tours, workshops, training in AR/VR technologies, 3D printing, participation in cinema schools, etc.)

uture

CULTURAL SPHERE CAN BE A LUCRATIVE INVESTMENT OPTION BASED ON RECOVERY VISION

The nearest future bears many **changes** in the cultural sphere of Ukraine, as the country needs **to develop new cultural infrastructure**, provide **material** and **technical support for cultural institutions**, and conduct **training programmes for**

cultural specialists. The **rise** of Ukraine in the cultural sphere **is only possible with support** from international businesses and organisations that together will bring Ukrainian culture to a new global level and **support its presence in the world.**

Recent achievements in the sphere of culture in Ukraine during 2021



57 objects¹



79 films

of cultural heritage were restored

were released with the government's support

100,000 objects of cultural heritage were

digitalised



7 regions

hosted the pilot 'Centres of cultural services'2 project

Investment opportunities in the Ukrainian cultural sphere

Funding needs	Key objectives
5.8 Bn USD	Building physical and cultural infrastructure (museums, memorials, libraries, centres of cultural services, concert halls, art centres) to popularise national identity and cultural diversity
⊙ 3.7 Bn USD	Supporting cinema, audio-visual production , and creative industries infrastructure by granting financing, as well as through the transformation of the education system ³
2.9 Bn USD	Developing ecosystems for culture, history, memory, heritage, and creative industries with a focus on identity, visual arts, educational programmes, and cultural services
1.1 Bn USD	Promoting digital culture across all cultural domains by creating digital platforms for the Ukrainian Institute of National Memory, digital records of cultural heritage objects, and digital libraries
0.7 Bn USD	Restoring cultural heritage damaged during Russia's war against Ukraine to promote national identity and to develop effective mechanisms for the further preservation of cultural heritage

Source: Ukrainelnvest – Ukrainelnvest Guide – [2022]; Ukraine Recovery Conference Materials; UkraineNow website; Media overview Notes: (1) As part of the 'Great Restoration' programme; (2) Multifunctional public spaces that ensure the availability of a basic set of cultural services to the population; (3) As of 2020, Ukraine offers foreign film producers a 25% -30% cash rebate system subject to Article 11 of the Law 'On State Support of Cinematography'

Russians are trying to get rid of Ukrainian printed word because it has a great power

୨୨

There are now more than 4,000 libraries in the temporarily occupied territories, and there is no doubt that their funds have already been demolished by the Russian world.

We are proud of our colleagues, the librarians of the temporarily occupied Kherson region, who, despite the significant pressure from the invaders, did not agree to cooperate with the enemy.

DR ALLA GORDIIENKO

General Director of the National Library of Ukraine for Children

Involvement during Russia's war against Ukraine: From the first days of armed aggression, Dr Alla Gordiienko together with her team actively support and help Ukrainian defenders — they donate to the army, weave nets, and volunteer. She also launched many initiatives, such as gathering books, children's drawings, souvenirs, and letters of gratitude to be transferred to the hospitals and to the front.

Since the beginning of the Russian invasion in 2022, the occupiers have been actively destroying Ukrainian literature. Are there ways to protect Ukrainian literature from Russian invaders?

The Russian occupiers are trying to destroy what they are afraid of, what they think is an ideological weapon and has a significant impact on people's mind. It is for this reason they are trying to get rid of the Ukrainian printed word, since this word has a great power.

After our territories are liberated, one of the most important tasks will be to supply the libraries that suffered from the war with quality Ukrainian books. It is real. I am convinced that it will be done with the greatest commitment from the state.

Today the government is developing a Ukraine Recovery Programme. It puts a strong emphasis on the cultural sector, including renewal of the library sector.

In your opinion, how will the library sector look in the future, and are there any development initiatives that might be of interest to investors?

As many libraries have been destroyed, the prospect for investors lies in rebuilding and modernisation of library facilities. Additional areas of focus nowadays are:

- Establishment of centres of psychological rehabilitation through books and reading in the premises of public libraries for children
- Development and implementation of library projects aimed at children having physical disabilities, both inborn and as a result of the war
- Creation of learning centres for foreign languages study and improvement of the Ukrainian language leveraging the library platforms

I am convinced that today and in the future libraries will be in public demand and will be shored up by the state and partners representing various spheres of public domain, advocating promotion of Ukrainian identity.

Ukraine is a fullfledged brand, that is gaining popularity and winning hearts

୨୨

Undoubtedly, Ukraine is not only the capital of freedom, courage, and honour but also a fully-fledged brand itself! Currently, we are witnessing a tremendously growing interest in everything that is labelled 'Made in Ukraine'. And this interest has not bypassed the fashion industry. How long will it last? It is difficult to answer. However, it seems that interest in our products and the country has solid prospects to last at least a decade.

IVAN FOTESKO

A Ukrainian fashion designer and founder of the IF brand

Involvement during Russia's war against Ukraine: With the start of a full-scale Russian invasion of Ukraine, Ivan rearranged production to help the army. Now his business has shifted toward the production of body armor.

Do you plan to start production of winteruniform for the defenders of Ukraine?

Indeed, in early days of the full-scale invasion, I faced a dilemma of what to produce to meet the needs of the Ukrainian army. Having sorted through several options, within a month I managed to rearrange the existing workshop and production capacities to sew plate carriers, pouches for first-aid kits, helmet covers, trunks, sleeping bags, etc., approved by the defenders.

What form of government assistance is critical for requalified clothing manufacturers and designers?

Like any non-profit enterprise, volunteer activity is in vital need of financing, and grant support from the state. So support of the government in terms of army supplies would be greatly welcomed. But looks rather like a dream.

Has the attitude towards Ukrainian designers and designer clothes changed recently?

Today Ukraine is not only the capital of freedom, courage, and honour but also a fully-fledged brand itself! Currently, we are witnessing a tremendously growing interest in everything that is labelled 'Made in Ukraine'. And this interest has not bypassed the fashion industry. How long will it last? It is difficult to answer. However, it seems that interest in our products and the country has solid prospects to last at least a decade.

Which initiatives and programs could contribute to the Ukrainian fashion industry development?

The Ukrainian fashion industry needs government support. Ukrainian Fashion Week should become a positive signal to the entire world and global fashion community and introduce Ukrainians as a nation of winners and freedom-lovers.

IN ORDER TO PROTECT VULNERABLE PEOPLE, THE UKRAINIAN SOCIAL MODEL REQUIRES AN UPGRADE

From the Soviet Union Ukraine inherited a model of social policy that was focused on **offering a wide range of social subsidies** for the population. Yet, the **current system is ineffective**, as it provides little assistance and puts much burden on the budget. Thus, the **quality of life of the vulnerable population in Ukraine is quite low**. With the start of Russia's war against Ukraine, the situation further deteriorated, as more people need financial support, while the funding is limited. In the current version of the **National Recovery Plan**, major focus is put on the social sphere with the aim to **provide secure social support** for the citizens, as well as **implement new social policy model based on the EU principles and standards**.

The concept of the post-war Social Recovery Plan^{1,2}



OPINION CORNER

Talks about Social Policy, Veterans' Rights, Rehabilitation System, and Human Rights

Dr Inna Koreiba



Source: The Cabinet of Ministers of Ukraine website; Ukraine Recovery Conference materials; Media overview

Notes: (1) A part of the National Recovery Plan; (2) Based on the analysis of materials of the Ukraine Recovery Conference 2022 and press releases of the Cabinet of Ministers of Ukraine; (3) Including confiscated Russian assets, partner grants, partner debt / equity, private investments, and state budget; (4) Unified Information System of the Social Sphere; (5) Difficult life situation; (6) Internally displaced person In the post-war period, the **reintegration of veterans** should be **the top social policy priority**. Ex-military people and their families should receive all necessary support and assistance from the state, which **they have chosen to defend at the cost of their lives**. For this purpose, a **unified system of rehabilitation should be established** by **involving rehabilitation specialists** and **ensuring equal access to such institutions**.

SOCIAL PROTECTION POLICIES REQUIRE FUNDAMENTAL LEGISLATIVE AMENDMENTS

While developing a new social policy, Ukraine should follow the fundamental principles of the EU – the inseparability of social and economic progress. The post-war recovery will require an integrated social protection strategy containing reviewed policies for beneficiaries - refugees, veterans, and IDPs.

The new social system is expected to be people-centred, flexible, and able to provide a high level of services. It should also establish clear, transparent, and objective criteria for obtaining the status of a person who can exercise the rights of the respective social services and benefits.

social sphere

Key targets of the post-war recovery of the Ukrainian social sector



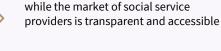
Social protection

- Implementation of the second level¹ of the pension provision; the replacement rate² comprises 60%
- Launch of unified Register of Providers and Recipients of Social Services³
- Provision of social integration and participation in society for people with disabilities



Return of Ukrainian citizens from abroad

- Development of an online 'Self-realisation in Ukraine'⁴ platform
- Elaboration of a new Integration Policy for Ukraine
- Implementation of the Unified Information System for Social Assistance (UISSA)⁵



The majority of Ukrainian refugees returned from abroad, as attractive socioeconomic and infrastructural conditions were created

The future of the Ukrainian

The new pension system provides a decent standard of living after retirement,

Human rights protection

- Introduction of the rehabilitation programmes for Ukrainian citizens who became victims of the Russian aggression
- Implementation of a state policy on guarantees and the protection of IDP's rights

rights

The victims of the armed aggression against Ukraine know and exercise their

Children who suffered from the war receive social protection that provides a

successful integration into society

high level of social care, education, and

personal development, along with further

Children's rights protection

- Realisation of the project 'Money follows the child'6
- Launching the system of family courts, which specialise in civil cases focused on children
- Introduction of professional development programmes for workers specialising in children



Veterans' rights protection

- Provision of veterans with long-term preferential mortgage lending (3%)
- Understanding the areas of improvement of the legislation related to the social protection of veterans and developing the respective changes in legislation

The government provides all necessary support for veterans to assist with their reintegration back into civilian life

Source: Ukraine Recovery Conference materials Notes: (1) The mandatory cumulative pension provision; (2) The percentage of an individual annual employment income replaced by retirement income; (3) It will enable recipients to freedy choose a provider of social services; (4) A unified online platform for communication with and assistance to displaced people; (5) The system ensures full verification of social payments; (6) A social protection initiative ensuring children's access to a full range of high-quality services: care, education, and personal development

Future

193

INVESTORS' PARTICIPATION IN SOCIAL PROJECTS ACCELERATES POSITIVE CHANGES IN THE SECTOR

In the National Recovery Plan, most social projects will be conducted **by the government and local authorities**, as the social sphere is considered one of their main responsibilities. **Private businesses might also contribute to the upgrade of the** **social sector** in Ukraine via **donations, promoting employment, or taking part in joint projects** with the Ministry of Social Policy of Ukraine. Besides, the Plan includes several social projects that require **collaboration with private investors**.

Main aspects of how businesses can bring positive social impact to Ukraine



Organise trainings and courses to enhance the skills of vulnerable people



Ensure the **employment of vulnerable groups of the population,** both in the public and private sector



Participate in **joint social projects** with government authorities



Donate money or goods to social initiatives of state or private charity foundations

Recent joint projects of the Ministry of Social Policy and private businesses

'Supporting the vulnerable'

In February 2022, **the Ministry of Agrarian Policy and Food, the Ministry of Social Policy, and Ukrainian entrepreneurs** set a joint goal to **provide food for one million vulnerable Ukrainians**. Enterprises from the food industry donated requested goods, while the ministries ensured their distribution and delivery to the targeted audience.

'eDopomoga' initiative¹

In July 2022, **Mastercard and Fozzy Group**² launched a joint project **via the eDopomoga platform created by the Ministry of Social Policy**, aiming to **support the vulnerable** population. People in need left applications while benefactors covered their bills in the Fozzy retail chain. Payments with a card from Mastercard provided additional bonuses.

Most promising social projects involving private investors during the recovery period

	Key objectives	Investors' role
'Return talents back'0.5 Bn USD 2023 - 2025	Return talented Ukrainians from abroad	Enterprises' initiatives supported by the government via grants, education, export support & promotion, and the opening of creative hubs
Veteran integration programme 0.5 Bn USD 2023 - 2025	Ensure a gradual transition from military to civil life for veterans	Conducting re-skill training with further employment offers or taking part in the creation of a network of veteran support offices
Digital reintegration platform	Encourage the general displaced population to return to Ukraine after the war	Participating in the development of the platform as well as communicating their job opportunities Funding needs
Future		

Source: Ukraine Recovery Conference materials; The Ministry of Social Policy of Ukraine; Media overview 194 Notes: (1) In May 2022 a similar project was launched by Varus a Ukrainian chain of supermarkets and Visa; (2)

Notes: (1) In May 2022, a similar project was launched by Varus, a Ukrainian chain of supermarkets, and Visa; (2) Ukrainian food retailer

Support for veterans must become a new business excellence standard



I would like to see the Ukrainian government capitalise on the universal respect of the soldier and do a post-war 'hire a veteran PR campaign' or implement a 'veteranowned business' certification.

Soldiers learn discipline, determination, and leadership skill that is priceless to an employer. I sincerely hope that Ukrainian veterans are given opportunities to showcase what they have learned in the ranks of the military because I think it can strengthen your business culture for decades to come.

MARK J. LINDQUIST

15

LINDQUIST

Veteran | Guest performer: NFL / NBA / MLB / NCAA | As seen on LOST, Hawaii Five-O | Entertainer / Host

Involvement during Russia's war against Ukraine: Mark J. Lindquist suspended his political career in March to travel to Europe and provide humanitarian aid to Ukraine. He has spent 150 days in Ukraine since the war began working on shipping up to 200 tonnes of donated medical supplies from Minneapolis to Ukraine.

What is your advice on the development of a governmental veteran protection programme in post-war Ukraine? What are the Top-3 topics that should never be overlooked?

The biggest challenge a battle-hardened soldier faces when readjusting to civilian life is the mental side of life as a veteran. Soldiers face the trauma that is unique to most members of society and they adapt to high levels of stress and adrenaline-fueled battles for survival that become their new normal. The three topics I would fund immediately are:

- 1) A post-traumatic stress therapy grant programme for all businesses who hire veterans and include this as a part of a veteran's employee benefit package, subsidised by the government;
- Create a place for veterans to gather by forming civic organisations made up of veterans much like our American Legion or VFW (Veterans of Foreign Wars). Soldiers need to be surrounded by those who understand them and can relate to one another. That support system is essential for post-war re-acclimation;
- 3) Make soldier suicide prevention a national priority. Form a hotline for soldiers to be connected directly to a therapist with no red tape. Implement a community support training programme whereby friends and relatives can enrol and learn how to support a veteran dealing with trauma.

The return of citizens is both a part of government social policy and a choice

୨୨

We should use this disaster as an opportunity. We can create an inclusive and ambitious commission generating radical ideas for Ukraine's future and build on the sense of unity and common purpose the war has created. And if the processes are transparent and our intentions are clear and consistent, the whole world will join us in this unique project. We will not need to ask – the best architects, engineers, physicians, scientists, and medics will be happy to become a part of the civilisational project to honour the victory over evil!

OLENA SOTNYK

Member of Parliament of Ukraine (2014-2019); Advisor to the Deputy Prime Minister of Ukraine

Involvement during Russia's war against Ukraine: In March 2022, Olena Sotnyk became a co-founder of the international fund 'Future for Ukraine' that supports Ukrainian victims of the war through the efforts of volunteers, specialists, non-governmental organisations, and businesses. Currently, the fund provides medical assistance to victims of hostilities and medical institutions, as well as support internally displaced children.

How do you see the future reunion of Ukrainian families?

I know from my own experience that even under all the conditions of insecurity I am really happy only at home, I feel better here than anywhere else. I have been convinced hundreds of times that Ukraine is a country of unique opportunities. I am sure that the return of our people and the reunification of families is not a unilateral matter for the government. The government must ensure safe living conditions for its citizens, especially children, but in addition to that Ukrainians should also see the good perspectives of staying in Ukraine. Perhaps now we are not as comfortable as in the European Union, but we are moving in this direction, and we are creating all the conditions to achieve this, and even better than that. The citizens must also be willing to become a part of Ukrainian history of success, of building and renovating their Ukraine, instead of just being foreigners and living elsewhere. People must feel responsibility for their future.

What programmes could be implemented to ensure that people are better equipped to cope with force majeure situations in the future?

After the victory, Ukraine will have to develop under conditions of limited resources and with a constant threat at the southeastern borders. There is no other way out but to prepare Ukrainians for the appropriate tactical, psychological reaction to the threats. I believe it is necessary for all citizens, regardless of their sex and age, to be trained accordingly.

We should use this disaster as an opportunity. We can create an inclusive and ambitious commission generating radical ideas for Ukraine's future and build on the sense of unity and common purpose the war has created. And if the processes are transparent and our intentions are clear and consistent, the whole world will join us in this unique project. We will not need to ask – the best architects, engineers, physicians, scientists, and medics will be happy to become a part of the civilisational project to honour the victory over evil!

The world now needs a new mechanism of collective security

୨୨

Hybrid war, as a war of a new generation, forces the need to create a new unprecedented mechanism of collective security and defence, which should be based on the principle of immediate response 'one for all, and all for one', without compromise and without 'deep concern'. To this end, it is important to warn and resolutely curb hate speech as a threat to the international community.

DR BOHDANA OSTROVSKA

Doctor of Science of Law ('International law') Expert of the UNESCO Chair Human Rights, Peace, Democracy, Tolerance and International Understanding at National University of Kyiv-Mohyla Academy (NaUKMA) Leading Researcher, Kyiv Regional Center of the National Academy of Legal Sciences of Ukraine

Involvement during Russia's war against Ukraine: After Russia's full-scale invasion of Ukraine Dr Ostrovska has taken an active social position. She defends human rights on the legal front.

What regulatory mechanisms could be implemented around the world to prevent instilling hatred, as well as to promote tolerance among those vulnerable to manipulation?

The ideals of nations are the basis of the great idea of the UN. War destroys the natural order of peacebuilding and human coexistence, being a powerful unifying factor.

As a litmus test, it shows the true values of a nation that chooses freedom and peace, and at the same time shows the true face of an aggressor. Currently, Ukraine is more than ever a united nation and a nation that has united the whole world and demonstrated the exemplary power of resistance in unity.

A new future of the international community is being born on the foundations of this war in the geographical centre of Europe. The world will never be the same again. The most desirable victory is the victory not in a war, but over the war; thus we shift the focus from the problem to the prospects.

What lessons can the world draw from this war? In your opinion, why did the promise of 'never again' happen to be unrealistic?

'Never again' is a beautiful loud declaration, but it is also an oath written and sanctified in blood, which is currently being tested in real time. Such words had to be supported by actions. Otherwise, what value do the empty slogans about democracy, peace, freedom, equality, and fraternity have?

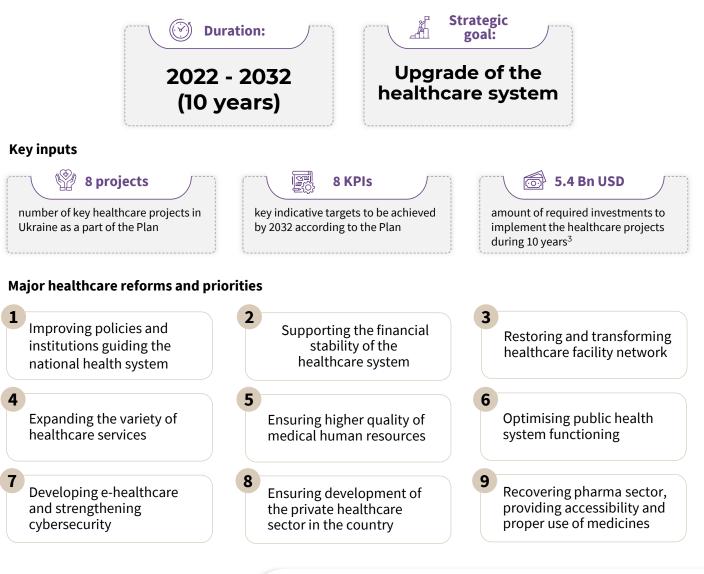
What lesson is learned from the war, and does history teach a lesson? It depends on who teaches it and how it is interpreted. Today, Ukraine teaches a lesson of courage and dignity that has already gone down in history. The prophetic words of our national anthem — 'we will lay down our soul and body for our freedom' — best demonstrate the genetics of the indomitable spirit of Ukrainians and our values.

Unfortunately, a part of the international community is still not fully aware of the true scale of the threat to peace and security – until the war comes to their homes.

UKRAINIAN HEALTH SECTOR REQUIRES STRUCTURAL OPTIMISATION TO ENSURE HIGHER SERVICE QUALITY

The healthcare system implements one of **the key priorities of the Ukrainian government** — the **preservation**, **protection**, **and improvement of public health**. The war caused **pressure on the national health system**, related to the **numerous destruction of healthcare facilities** and the **growth in demand for different types of medical services** that were not in priority before. Active migration of the population and medical personnel significantly worsened the situation. Currently, the major priority of healthcare recovery is the transformation of the health system to provide Ukrainians with high-quality and timely medical services, as well as to prepare the system to prompt response to unpredictable health emergencies.

The concept of the post-war Healthcare Recovery Plan^{1,2}



OPINION CORNER

Talks about Healthcare, HealthTech, Investments, and Innovations

Nataliia Shevchuk



 Ukrainian specialists are already implementing breakthrough ideas in the field of HealthTech, which is now highly interesting for global investors. A vivid example is a Ukrainian-American start-up, A.D.A.M., with its 3D bone printing technology. This start-up was rated as one of the Top-5 best start-ups in this field among 1,700 global participants in 2021. This case shows the high potential, professionalism, and level of innovativeness of Ukrainian youth.

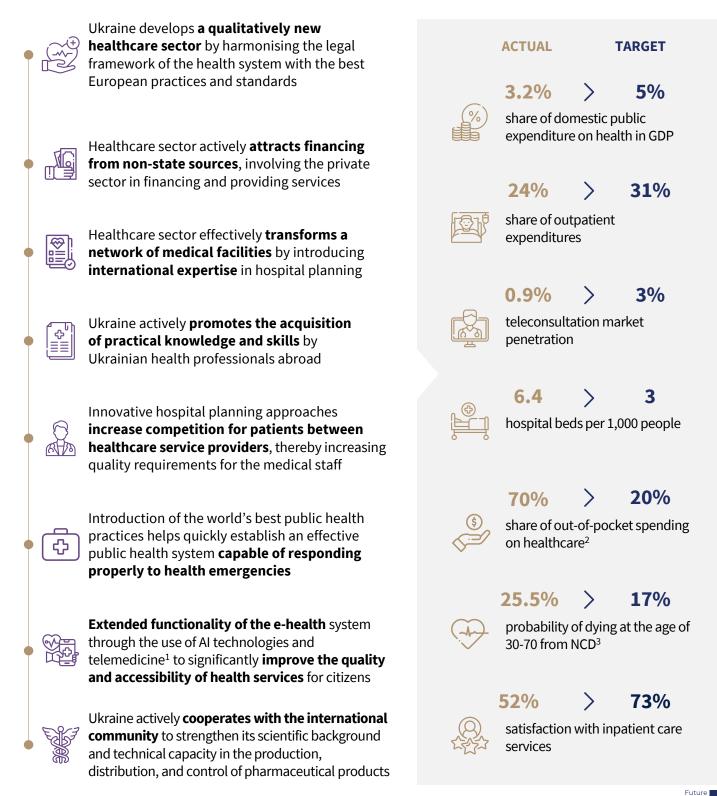
Source: The Cabinet of Ministers of Ukraine website; Ukraine Recovery Conference materials; The Ministry of Health of Ukraine website

Notes: (1) A part of the National Recovery Plan 2022; (2) Based on the analysis of materials of the Ukraine Recovery Conference 2022, press releases of the Cabinet of Ministers of Ukraine, and articles of the experts in the field of healthcare; (3) Including confiscated Russian assets, partner grants, partner debt / equity, private investments, and state budget

PROPER SYSTEM RESTRUCTURING WILL IMPROVE ITS RESPONSIVENESS TO HEALTH INQUIRIES

Implementation of comprehensive reforms in healthcare is aimed at **improvement of the organisational principles of health management**. Effective transformation will ensure a **higher quality of specialised healthcare services** and provide citizens with equal access to the state-guaranteed package of medical care. The introduction of innovative materials and the technical base of health facilities will also contribute to increasing the productivity of healthcare personnel.

Future state of the Ukrainian healthcare system



Source: Ukraine Recovery Conference materials; The Ministry of Health of Ukraine website Notes: (1) A practice of medicine using telecommunication technology to deliver care at a distance; (2) Out-of-pocket health expenditure refers to individuals' direct expenses to health care providers, excluding any prepayments for health services, such as taxes, insurance premiums, or contributions; (3) A non-communicable disease — a non-infectious medical condition that can not be passed from person to person

HEALTH SECTOR ATTRACTS FUNDS TO HARMONISE THE MEDICAL SYSTEM WITH EU STANDARDS

An ongoing full-scale transformation of the healthcare system intensifies the process of medical institutions' autonomisation. This creates the foundation for ensuring transparency and accountability of the system, as well as helps eliminate corruption in the form of hidden payments from patients, misuse of investment resources and working capital. Moreover, the new healthcare model and introduction of the best international practices of public-private partnerships in Ukraine make a huge contribution to increasing the attractiveness of the sector for private businesses and foreign investments.

Recent achievements of the ongoing healthcare system transformation¹

>97%

>25,000

of primary care providers actively contribute to the system transformation

>2 Bn USD

received primary care providers under 'money follows the patient' principle ³

By 2-3 times

of doctors joined the

'eHealth' electronic

healthcare system

increased the salary of doctors in effectively managed medical institutions

>125 Mn USD

family doctors

>32 million

was refunded to pharmacies under the 'Affordable medicines'⁴ programme

Purpose of

funding:

Ukrainians signed an e-

declaration with their

By 1.5 times

increased the financing of first-level medical providers²

100%

of the patient's needs for the stent system is covered⁵

Major transformation project requiring the most of investments



Transforming healthcare facilities

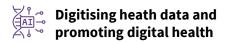
Key objectives

- Implementing an integrated service delivery model, ensuring the provision of evidence-based and high-quality healthcare services
- Introducing high-quality solutions and innovative technologies in medical facilities, focusing on primary care and heart diseases, as well as cancer hospitals

Strengthening health workforce

Key objectives

- Developing effective healthcare education based on the best international practices
- Upgrading activity-based personnel planning and improving the leadership skills of hospital managers
- Creating conditions ensuring the professional well-being of the healthcare workforce



Key objectives

- Facilitating telemedicine solutions to enhance preventive and primary care services
- Extending internet coverage in healthcare facilities to serve clients with a signed e-declaration
- Creating drug registers to improve pharmaceutical supply chains and monitoring

Targeted campaigns demanding financing according to the Healthcare Recovery Plan



Enhancing war-time and post-war rehabilitation services, mental health, and psychological support



Strengthening public health emergency preparedness and developing rapid response plans



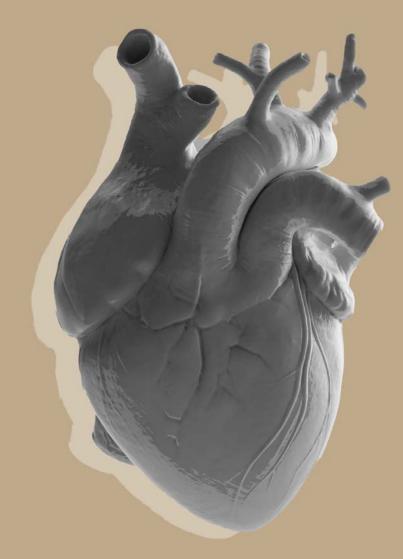
Improving primary healthcare services to address the rising cases of non-communicable diseases

Source: Ukraine Recovery Conference Materials; The Ministry of Health of Ukraine website; Media overview

Notes: (1) A period of 2018-2022 is considered; (2) Healthcare services of family doctors who do not have a narrow specialisation; (3) A healthcare payment mechanism, when the patient himself chooses the doctor or healthcare institution, and then the state pays for the services provided; (4) A state programme allowing patients with cardiovascular disease, type II diabetes or bronchial asthma receive medication either for free or at a low cost; (5) For patients requiring immediate stenting due to myocardial infarctions

uture

DID YOU KNOW THAT THE FIRST PROSTHETIC HEART VALVE SURGERY WAS PERFORMED IN UKRAINE?



1963

Mykola Amosov, a Ukrainian doctor and surgeon, was the **first to perform a prosthetic heart valve surgical operation**. 2013 was declared the year of Mykola Amosov by UNESCO.



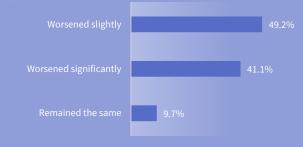


More than 400 scientific works of his authorship

RUSSIA'S WAR AGAINST UKRAINE HAS A HEAVY INFLUENCE ON THE MENTAL HEALTH OF PEOPLE

The war has naturally **worsened the psychological state of almost every Ukrainian** to a certain degree. Even those who were able to withstand the first most difficult months of the war will **suffer mental exhaustion** since the **continuous impact of stress** negatively affects the mental health of Ukrainians.

How do you feel the war in Ukraine has impacted your psychological state?¹



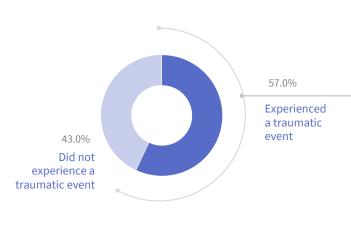


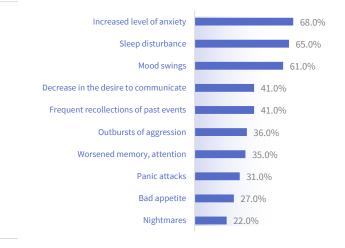
65.5%

share of Ukrainians who have experienced a drop in monthly income¹ The **majority of Ukrainians have not asked for psychological support** and are not planning to do so, even despite the continuous impact of stress on their mental health during the war. However, according to the estimations of the Ministry of Health of Ukraine, the **number of Ukrainians who will require psychological support in the future will increase to almost 15 million people**.

Almost 60% of Ukrainians **reported that during the last 6 months, they experienced a certain traumatic event** that affected them and their loved ones. This percentage is higher among women, residents of Eastern Ukraine, and people whose loved ones participated in hostilities during the war — 60%, 66%, and 72%, respectively. Most often, these people noticed such symptoms as increased levels of anxiety (68%), sleep disturbances (65%), and mood swings (61%).

Share of Ukrainians experiencing traumatic events and existing syndromes as the result of war²





Despite the ongoing war, **almost 70% of Ukrainians have returned to their everyday activities in the new reality** (going to the cafe, buying new things, etc.), which helps to support the functioning of the economy by driving domestic demand. At the same time, almost 20% of people have financial difficulties due to the loss of a job or a decrease in salary.

?

After the start of the war, were you able to return to your everyday activities in the new reality?¹

37.7% Yes, because life mus go on

31.7% Yes, because I see this as an economic help to the country

Notes: (1) Ukrainian population survey conducted by Kyiv Consulting, July-August 2022, n=1,000 respondents; (2) The research was performed by Gradus Research for Darnytsia pharmaceutical company, 1,000 interviews, men and women aged 18 to 60 living in cities with a population of 50,000 or more, 19-20 August 2022

After the war, the majority of Ukrainians will grow better and stronger

୨୨

Post-traumatic growth is a phenomenon that explains not only the processes of healing and adaptation after experiencing an acute traumatic event but also the processes of significant growth and development of the individual.

Post-traumatic growth explains why some people do not 'break down' psychologically after experiencing a trauma, but on the contrary, gain resources and strength to make a significant 'leap forward', to change their lives for the better.

MARIIA MAKSYMCHUK

Psychologist

Involvement during Russia's war against Ukraine: With the outbreak of Russia's war against Ukraine, she got involved in volunteer work by running online stress reduction and psycho-emotional support groups for adults. Also, in collaboration with the Vema Kids team, she conducted online neuropsychological practices for children to reduce stress, aimed at confirming that life goes and that the war will end with our victory.

In your opinion, is enough attention being paid to psychological education in Ukraine? What aspects of psychology do you see as priorities for research now?

Over the past 10 years, psychological literacy of Ukrainians has increased significantly. However, of course, psychoeducation is something that should be in schools (as a separate subject), at selected enterprises, and in general hospitals. In my opinion, it would be extremely important to study the phenomenon of posttraumatic growth. This is a phenomenon that explains not only the processes of healing and adaptation after experiencing an acute traumatic event but also the processes of significant growth and development of an individual. Post-traumatic growth explains why some people do not 'break down' psychologically after experiencing a trauma, but on the contrary, gain resources and strength to make a significant 'leap forward', to change their lives for the better.

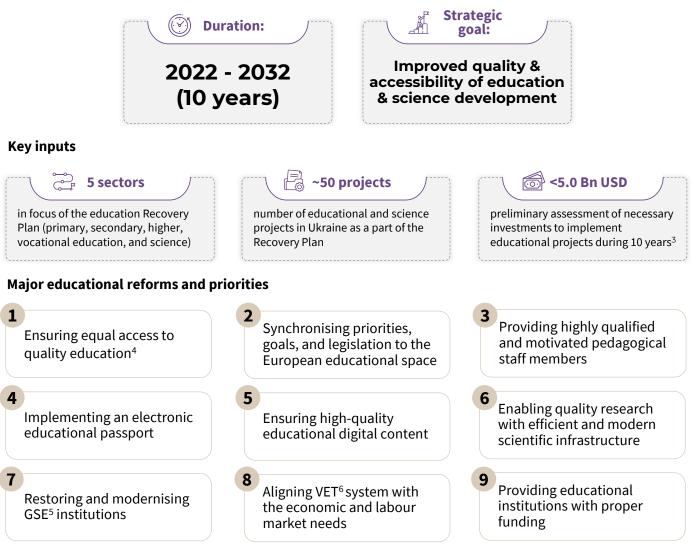
More than half of Ukrainians need psychological support, and 44% of citizens are separated from their families. In your opinion, will the situation deteriorate in the future?

Our psyche has a very high potential for self-healing and adaptation even in extremely difficult circumstances. Of those who do develop acute stress disorder or post-traumatic stress disorder, only a third will need the help of a psychologist or psychotherapist, and the rest will be able to cope on their own. Another issue is that Russia's war against Ukraine destroys many aspects of everyday life: families are separated, jobs are lost, and the usual quality of life deteriorates – these problems do not cause acute stress disorder or post-traumatic stress disorder, but significantly affect psychological well-being. From this point of view, psychological support will be useful for many Ukrainians who were affected by the war.

IMPROVEMENT OF ACCESSIBILITY AND QUALITY OF EDUCATION ARE AMONG UKRAINE'S KEY PRIORITIES

Before the Russian invasion, the key strategic priorities of the Ministry of Education and Science of Ukraine were the **development of an inclusive, innovative, and educated society**, as well as **increasing the share of science-intensive GDP**. However, the large-scale Russian invasion of Ukraine caused some pressing issues in the field of education and science. The post-war Education Recovery Plan implies the continuation of the pre-war policy in the field of education and science, with a priority on its synchronisation in the educational and research areas of the EU.

The concept of the post-war Education Recovery Plan^{1,2}



OPINION CORNER

Anastasiia Yaroshenko Talks about Education, Productivity, Gains, Funding Models, and Responsibility



Source: The Ministry of Education and Science of Ukraine website; Ukraine Recovery Conference materials; Media overview

Notes: (1) A part of the National Recovery Plan 2022; (2) Based on the analysis of materials of the Ukraine Recovery Conference 2022, press releases of the Cabinet of Ministers of Ukraine; (3) Including confiscated Russian assets, partner grants, partner debt / quity, private investments, and state budget; (4) For citizens abroad, internally displaced people, and those in the temporarily occupied territories; (5) General Secondary Education; (6) Vocational education and training Ukraine requires the creation of **private universities** focused on solving real business cases and solutions and teaching modern professions, as public higher education institutions are underfinanced. There is a strong connection between the funding of higher education, labour productivity, and the state of the economy. Every unit of currency invested in education is a huge multiplier for the economy. Today, many investments in higher education institutions come from businesses.

STRATEGIC GOALS ACHIEVEMENT WILL TRANSFORM THE EDUCATION SYSTEM OF UKRAINE

Transformation of the education system of Ukraine aimed to ensure high quality of education at all levels, from early childhood and preschool education to higher and adult education. Reforms in the area of science were designed to stop stagnation in research activities and integrate the science of Ukraine into the European Research Area. The policy of recovery and development of Ukrainian education and science in the post-war period determines **adult education and the improvement of citizens' skills and abilities as the key drivers of economic success**, individual well-being, and social cohesion in Ukraine. Setting favourable conditions for innovations will catalyse economic development.

Key targets in the post-war recovery of the education system of Ukraine by 2032

Primary education	15% increase in childhood and preschool education infrastructure ¹
Secondary education	520 PISA ² maths score for Ukraine in secondary education
Higher education	20 universities of Ukraine in TOP-1,000 QS World University Rankings ³
Vocational education	55% level of the attractiveness of vocational education for school graduates
Science	12.8 citation index of scientific articles as measured by citations / articles

The future state of education and science in Ukraine

e				
VE.		닠	_	
6 <u>=</u>	L		5	
2		-		
	1112111			

All institutions of improved preschool systems use the updated State Standard and Educational Programme.



Learning programmes adapted to modern challenges due to the complete implementation of the NUS⁴ reform.



Uniting universities into powerful regional higher education centres with a changed governance system and financial autonomy.



The **updated content** of the educational and upbringing processes includes the **safety of living**, **defence of the homeland**, and **mental health**.



The **increased attractiveness of VET**⁵ among young people, while institutions are supported by sufficient **material and technical resources.**



The field of science and innovations in Ukraine is built based on best practices and is fully integrated into the global research space.

Source: The Ministry of Education and Science of Ukraine website; Ukraine Recovery Conference materials; Media overview Notes: (1) Innovative solutions, which optimise space in classrooms and expand the capacity of early childhood and preschool settings; (2) Programme for International Student Assessment; (3) The QS World University Rankings identifies the world's strongest universities by key eight indicators; (4) The New Ukrainian School is educational reform, providing changes according to the new National Primary Education Standard; (5) Vocational education and training

UKRAINE OFFERS A RANGE OF PROJECTS IN THE EDUCATION SYSTEM FOR FOREIGN INVESTORS

Support of international partners, both governmental organisations and businesses, **will play a crucial role in the recovery of Ukraine's education system & science**. The country aims to receive assistance in order to **ensure sustainability in the field of education & science** during the war and in the post-war recovery period, as well as to **promote the implementation**

of modern principles, approaches, practices, and tools. On the other hand, foreign organisations, businesses, and investors will benefit from the fast recovery processes, particularly the development of an inclusive, innovative, and educated society that will result in a competitiveness increase in the labour market of Ukraine.

Recent achievements of the ongoing education system transformation¹

7%

of GDP accounted for education expenditures in Ukraine²

15,000

additional places in early childhood and preschool settings were created

157

general secondary education institutions were involved in piloting the new State Standard on BSE³

48,000

educational devices⁴ for digital school programmes were covered by Google and UNICEF

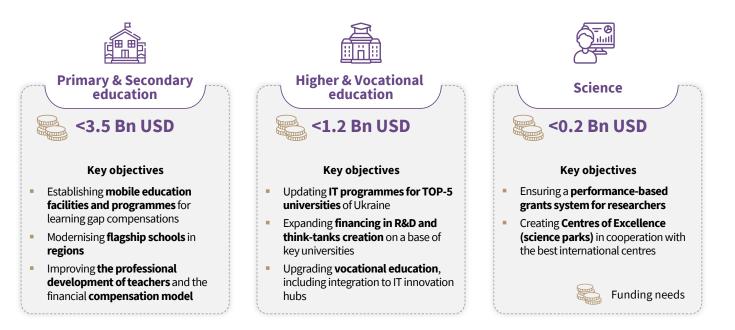
648

inclusive resource centres were established for children with special educational needs

156

educational and practical vocational education & training centres were established

Key investment areas in the education system during the recovery period



ource: Ukraine Recovery Conference materials; Cabinet of Ministers of Ukraine website; Media overview

Notes: (1) During 2017–2022; (2) According to the draft State Budget of Ukraine for 2022; (3) Basic Secondary Education; (4) Including laptops, tablets, and mobile digital classrooms

The primary necessity of higher educational institutions is digitalisation

୨୨

We need a very significant digital transformation of our universities. It will help us get more resilient. When a university can longer hold classes in person, because of infrastructure damage or its relocation from Ukraine's east to its western part, it is still able to continue lecturing, since its system is built online. This means you need to have LMS (Learning Management System). A good LMS example might be Canvas or Moodle or Blackboard.

DR ROMAN SHEREMETA

Economist, Founding Member of Global Ukraine Foundation, Co-Chair of Ukrainian American House

Involvement during Russia's war against Ukraine: Dr Roman Sheremeta holds an active social position supporting Ukraine. He develops initiatives on how to rebuild the country by strengthening its educational system and giving opportunities for business students to implement their business plans, and create start-ups to build new companies thereby being a part of this rebuilding process.

In your opinion, what are the Top-3 priorities that should be addressed on the government level in order to preserve and strengthen the educational system of Ukraine?

The number one priority is that we need to change the model of higher education. We need to move away from the Soviet Unionstyle Universities, where it was always from top to bottom. Where the Ministry makes all the decisions and the Universities have to follow the decisions, made by the Ministry. Instead, the universities must have freedom, as well as their own vision and mission, through which they would be competing with one another. That is the first thing that has to be done. There has to be a change, where you move from a top-bottom to bottom-up approach in the governance of universities. The second thing is that I do believe that we need a very significant digital transformation of our universities. It will help us get more resilient. When a university can longer hold classes in person, because of infrastructure damage or its relocation from Ukraine's east to its western part, it is still able to continue lecturing, since its system is built online.

What role can the American University Kyiv (AUK) play together with other Think Tanks to support the recovery of Ukraine?

We have a couple of initiatives on their way already. The number one initiative is with Arizona State University. We have been in touch with half a dozen of prominent Ukrainian universities. We also have been in touch with big companies in the USA and with the US government. On top of that, we have been working with the Ministry of Education and the Ministry of Digitalisation. So, we got all of these different stakeholders to come together under the guidance of Arizona State University and American University Kyiv and put our proposal to do the digital transformation of all Ukrainian universities. It is a massive proposal, it is very expensive, but it is very much needed to transform our universities.

As we are taking the lead in that, I visited the Reconstruction Forum in Lugano and met with the Minister of Digitalisation, Mr Fedorov, as well as spoke with the members of Parliament, heading the committee of Science and Education.

In the long term, Ukraine may lose its human capital

୨୨

Children's education is one of the major reasons why Ukrainian families decide to leave the country or not return soon. Rebuilding and restoring educational infrastructure will take time and will require significant resources, but it will be critical to prevent us from having the lost generation. The long-term consequences of children's and young people's mental health are no less worrying. There is an extensive body of research on the negative impact of war on children's cognitive development and wellbeing, which is why establishing a robust mental health support system is a priority.

Г навчаю для україни

OKSANA MATIIASH

CEO, Teach For Ukraine

Involvement during Russia's war against Ukraine: After the full-scale invasion, Oksana Matiiash and her team have stayed in Ukraine and continued teaching even after two of the network's schools were badly damaged. 'Teach for Ukraine' is now launching new projects with the support of UNICEF and the World Bank.

How did the war affect your organisation's operations, and what adjustments did you have to implement to continue your functions?

Teach For Ukraine have launched Emergency Response Projects to support children's mental health, help teachers to adapt to teaching in an emergency context, as well as provide academic support to displaced kids. Much of the team has fled their homes, and many individuals are volunteering to support the war effort. We are devastated to report that one of Teach For Ukraine's teachers, Yulia Zdanowska, was killed by shelling in Kharkiv on 3 March while providing humanitarian aid to residents. A gifted mathematician and a talented computer scientist, she was only 21 years old.

Currently, 'Teach For Ukraine' is working on a post-crisis plan. Even in best-case scenarios, Ukraine's school system faces enormous challenges, including significant damage of schools' infrastructure, population-wide trauma and loss of thousands of teachers. 'Teach For Ukraine' anticipates playing a central role in addressing challenges posed to Ukrainian children. We will need significant support from partners to execute our recovery plans.

What are the main challenges that Ukrainian schools face in the context of relocation of staff and children, both within Ukraine and abroad?

The large-scale war against Ukraine has had a devastating impact on children's education. The war has forced more than 640 thousand Ukrainian schoolchildren to flee Ukraine to neighbouring countries, with only 30,000 coming back. This means that 15% of Ukrainian learners are still abroad. So far, this has been the most significant disruption to the education of children in the history of independent Ukraine. The large-scale war immediately shut down all schools. Children are forced to live with the constant risk of shelling, accompanied by the air raid sirens that cause many kids to suffer from severe trauma and fear about their present and future. Although approximately 3.7 million children have accessed some form of online learning since the beginning of the war, the effectiveness of such learning is questionable. It is especially true for thousands of Ukrainian children who spent weeks, if not months living in bomb shelters. Many have lost at least five months of school time, which may result in substantial learning losses.

Ukraine will need more cyber security specialists, engineers, and military

୨୨

Over the past 20 years, the job market has changed and is going to transform even faster. On its website, Forbes magazine has recently published the most demanded skills and abilities for the next 10 years. They include digital literacy, data literacy, critical thinking, emotional intelligence, creativity, collaboration, flexibility, leadership skills, time management, curiosity and continuous learning. Currently, even numerous military experts note these skills with the Ukrainian armed forces, which explains their success on the battlefield.

DR LESIA BARANOVSKA

Chair of the Sectoral Expert Council (Mathematics and Statistics) at NAQA; Programme Director at Institute for Applied System Analysis (National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute')

Involvement during Russia's war against Ukraine: Dr Lesia Baranovska highlights the war in Ukraine and gives comments to analytical reports issued by international experts on strategic issues. In addition, she writes an author's column on social networks dedicated to issues of the quality of higher education and prospects of its development in Ukraine.

The COVID-19 pandemic and, subsequently, the war made many Ukrainians shift to online learning platforms. Do you think that online learning is as effective as face-to-face?

Online learning can become effective under several conditions. First of all, it is necessary to increase the digital literacy of teachers with the help of various professional development courses. Second, universities need to have both material and technical capabilities for the introduction of high-quality distance education. According to licensing conditions, a licensee must comply with the requirements for staff, as well as educational and methodological support, ensure creation and functioning of the management system for a such distant mode of learning, as well as for web resources of educational components. Therefore, it is now relevant for higher education institutions to create their own remote learning platforms and fill them with high-quality content. Just like Stanford has once created its 'Best Start-up 2012', 'Coursera', the National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute', created its online learning platform.

International trends in the applied and social sciences get changed. In your opinion, what specialties are now most in demand, and which ones are going to be in the coming years?

Over the past 20 years, the job market has changed and is going to continue to transform even faster. On its website, Forbes magazine has recently published the most in-demand skills and abilities for the next 10 years. They include digital literacy, data literacy, critical thinking, emotional intelligence, creativity, collaboration, flexibility, leadership skills, time management, curiosity and continuous learning. Now, even numerous military experts note these skills with the Armed Forces of Ukraine, which explains their successes on the battlefield. According to projections of the US Bureau of Labour Statistics, from 2020 to 2030, the aggregate rate of job creation will be 7.7%. I believe that now Ukraine will need professionals in such areas as IT (in particular, cyber security specialists), labour services, such as construction, healthcare, 3D architecture, engineering, Big Data analytics, as well as various military activities.

ENVIRONMENT

CHAPTER 3.1.2

ENVIRONMENT

Vision: Ukraine integrates the environmental component as a crucial basis for social and economic recovery. In the future, Ukraine chooses to become a green, safe, and prosperous country.



Environment: predictions for selected areas



Future Investment potential

IN THE RECOVERY PLAN, THE ENVIRONMENT PLAYS ONE OF THE KEY ROLES IN REBUILDING UKRAINE

Before the beginning of the war, Ukraine had developed an environmental policy that defined targets and established instruments to ensure its **transition towards sustainable development**. However, the Russian invasion of Ukraine forced the government to focus mainly on the issues of social security and the war economy. Still, according to the National Recovery Plan developed by the National Council for the Recovery of Ukraine from the War, **Ukraine is committed to continuing the development of a clean and safe environment,** as well as the integration of its environmental policy with the EU.

The concept of the post-war Environmental Recovery Plan^{1,2}



OPINION CORNER

Larysa Herasymenko Talks about Sustainability, Waste Management, Regulations, and Standards



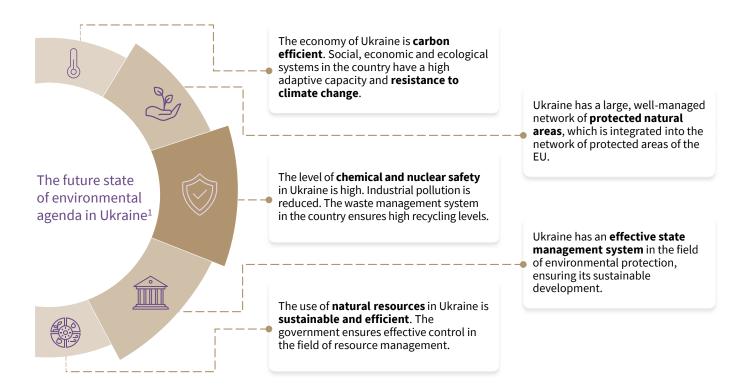
Ukrainian authorities recognise the importance of post-war reconstruction of the country, grounded on principles of **sustainable development**. On 20 June 2022, the Verkhovna Rada adopted the draft law No. 2207-1-d (pending president's signature to be enacted) '**On Waste Management**'. It will establish conditions for building **up-to-date waste processing infrastructure in Ukraine** based on European standards and an 'open borders' approach to investors. The law is also supposed to **strengthen the responsibility of producers of recyclable materials**, as well as **introduce a European hierarchy of waste management**.

Source: The Cabinet of Ministers of Ukraine website; Ecopolitic website; Ukraine Recovery Conference materials Notes: (1) A part of the National Recovery Plan 2022; (2) Based on the analysis of materials of the Ukraine Recovery Conference 2022, press releases of the Cabinet of Ministers of Ukraine and articles of the experts in the field of environment; (3) Including confiscated Russian assets, partner grants, partner debt / equity, private investments, and state budget

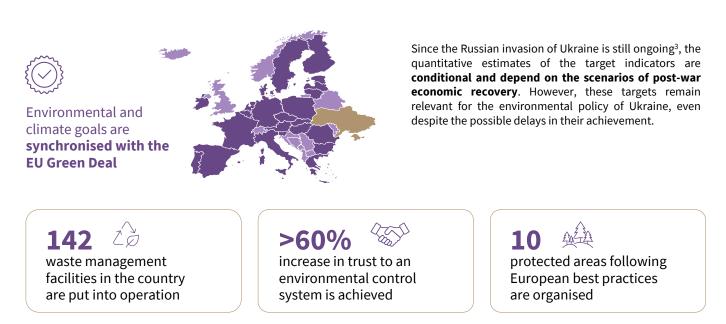
UKRAINE HAS THE POTENTIAL TO REACH AMBITIOUS TARGETS IN SUSTAINABLE DEVELOPMENT

The implementation of post-war recovery initiatives, along with other environmental policy measures that have been started before the beginning of the war, is aimed at ensuring the socialeconomic development of Ukraine according to the principles of sustainability and green transition.

The future of the environment in Ukraine will be reshaped towards energy and resource efficiency, preservation of natural ecosystems, and effective waste management. This transformation will allow the country to progress in achieving sustainability targets and follow the EU green agenda.



Selected commitments of Ukraine in the field of sustainability by 2032²



ource: The Cabinet of Ministers of Ukraine website; Ecopolitic website; Ukraine Recovery Conference materials

Notes: (1) Based on the analysis of materials of the Ukraine Recovery Conference 2022; (2) Presented targets are selected based on the analysis of the National Recovery Plan 2022; (3) As of the date of the report issuance

THE ENVIRONMENTAL RECOVERY OPENS UP A RANGE OF OPPORTUNITIES FOR FOREIGN PARTNERS

Possibilities for the support of environmental recovery in Ukraine¹

International partners have a number of **opportunities for contributing to the recovery of the environment in Ukraine** with their profound expertise in green projects and sustainability initiatives. This support will allow Ukraine to significantly speed up the transition to a clean and safe environment, as well as successfully synchronise its environmental agenda with the EGD.



Provide technical

support to the Government of Ukraine in building the architecture of climate governance to ensure an effective green transition



Make investments in green recovery projects in Ukraine (incl. waste management, green modernisation, biodiversity protection etc.)



Create equal opportunities for Ukraine as a partner of Europe in the access to financing, knowledge, and markets



Deliver financial and other support in

overcoming the consequences of the war (incl. demining of territory, overcoming pollution etc.)

Major investment opportunities in the field of environmental recovery of Ukraine^{1,2}

The project implies the green modernisation of

installations with innovative technologies at

various industrial enterprises in Ukraine. The

number of such installations has not been

Ecological modernisation of industrial enterprises



10 Bn USD funding needs

disclosed publicly yet.

Description

Description

The project offers a wide range of opportunities (>100 planned objects) for the restoration or construction of waste management facilities in Ukraine, such as waste-to-energy facilities, waste processing plants, etc., as well as the development of the recycling ecosystem in the country.

Expected results

- Reduction of greenhouse gas emissions by 10 times
- Implementation of the Directive 2010/75/EU3

Creation of a network of waste

 Improvement of energy and ecological indicators

Expected results

sorting stations

Creation of new jobs

Solution of the waste

management problem

Development of waste management infrastructure



8 Bn USD funding needs

Development of 15 wildlife crossings on migration routes



Development of nine forest seed centres



Except for the Top-2 projects, the Environmental Recovery Plan also includes up to 20 smaller **investment opportunities in other areas** (preservation of landscape and protection of biodiversity, balanced use of natural resources, ecological safety, etc.) with the **aggregated funding needs of about 2 Bn USD.**



Source: Ukraine Recovery Conference materials

Notes: (1) A part of the National Recovery Plan 2022; (2) For the full list of potential investment projects, please refer to the National Recovery Plan of Ukraine; (3) The Directive on Industrial Emissions

Future

The war has also almost annulled the environmental agenda of the country

୨୨

Ukraine must develop a national Biodiversity strategy and implement it to achieve the protection of 30% of Ukrainian territory through the Emerald network law implementation on our way to EU environmental legislation approximation.

Such an approach will engage the public in management planning and allocate funding to proper natural resources management and restorations for the benefit of local communities and each Ukrainian.

DR BOHDAN VYKHOR

CEO, WWF Ukraine

Involvement during Russia's war against Ukraine: Bohdan and his team actively assess the environmental impact of the war in Ukraine, raise the issue of environmental safety, and call for recognition of the crucial role that nature and clean technologies must play in ensuring sustainable recovery from the war.

How do you see the environmentally friendly and climate neutral recovery of Ukraine?

Ukrainian post-war reconstruction efforts must enable and promote building back better and, through this, support Ukraine's fulfilment of its international commitments and harmonisation with EU regulations (acquis communautaire), including the EU's Green Deal requirements and further best available policy implementations. The investment must take into account evolving challenges, including climate change, as well as growing challenges related to water and food security, as well as loss of biodiversity and ecosystem services. For example, the reconstruction of urban areas should take into account climate adaptation, energy efficiency and renewables. Nature-based solutions (NBS) should be considered for agricultural lands, water and forest management. Ukraine's rich natural resources are not inexhaustible and cannot be considered a source of rapid recovery and quick economic benefits after the war. Instead, investments should be made to create a system of wise use and successful management, to ensure sustainable development of all sectors.

What actions should be taken by Ukrainian society to reduce the impact of war on biodiversity?

The Ministry of Environment and Natural Resources of Ukraine, WWF-Ukraine, scientists, and other civil society organisations participated in creating the draft of the Biodiversity Strategy for Ukraine till 2030 based on 'EU Biodiversity Strategy for 2030: Bringing nature back into our lives'. Unfortunately, due to the war, work on the strategy has been frozen. Its purpose is to ensure monitoring of the state of biodiversity in Ukraine as a basis for balanced management decisions; implement the concept of ecosystem services; form a comprehensive approach to species conservation, and fulfil international obligations regarding biodiversity conservation. It will become the basis for all decisions in the field of nature conservation and will correspond to the Convention on the Protection of Biological Diversity, the EGD, and other MEAs. In the long-term perspective, the strategy will provide an algorithm for creating environmental security. Another crucial issue which should be part of the Biodiversity strategy is legislation enabling the conservation of unique nature pieces of Ukraine - the Emerald Network law.

Green transition in Ukraine is now put on hold

୨୨

By the end of 2022, the government wants to implement the EU environmental and climate standards into national legislation, but the feasibility of these reforms remains unclear. For example, shortly after the break of hostilities, the government adopted a series of deregulation initiatives, such as temporary suspension of all kinds of report submission, permission to import trucks, buses and special machinery with lower environmental requirements etc. It means that at least this year, there will be no verified data for greenhouse gases emission and green transportation reform is delayed, which is also caused by Russian blockade of Ukraine's ports.

OLGA BOIKO

Coordinator of the Committee for Industrial Ecology and Sustainable Development of the European Business Association (EBA)

Involvement during Russia's war against Ukraine: Olga actively participates in the recovery plan of Ukraine, launched by the National Council for the reconstruction of Ukraine. She contributes to development of 'Environmental safety', pursuing solutions aimed at solving urgent and long-standing environmental problems.

How will the war impact Ukraine's green transition and the alignment of its environmental policy with the European Green Deal?

Ukraine has always been supportive of the EU green transition ambitions to become the first carbon-neutral continent, according to the European Green Deal.

In 2021, several significant steps to the decarbonisation of the economy were made. For instance, Ukraine has adopted the Second Nationally Determined Contribution under the Paris Agreement to reduce its greenhouse gas emissions by 65% by 2030 from the 1990 levels. This target is more ambitious than the previous one and even more than the commitments undertaken by the EU and other developed countries.

Russian invasion has set back the efforts in our fight against climate change for decades. Green transition is now put on hold as state defence, energy security, supply chain restoration and support of people in need are among Ukraine's priorities for the coming years.

What are the major steps that should be taken by the Ukrainian society (government, NGOs, people, businesses) after the end of the war to return Ukraine on the path to climate neutrality?

Ukraine will not be able to reach its climate neutrality without external financial support. The international community must join forces to not only defeat the aggressor state, but to meet the climate neutrality target of the continent by implementing the following 7 principles:

- 1. Ukraine must be excluded from the EU carbon border adjustment regulation
- 2. Reconstruction must be energy-efficient and consider principles of the circular economy
- 3. The regulation of the electricity market must be changed
- Accessible financing is vital for climate-neutral recovery
 International private investment must be protected from political risks
- . 6. Enhancing resilience to climate change by ecological restoration is needed
- 7. Post-war recovery does not tolerate overregulation

ECONOMY

CHAPTER 3.1.3

db



Vision: Ukraine will be a developed digital economy oriented on high value-added sectors, with effective infrastructure, efficient finance & banking sector, and an attractive business climate.



Economy: predictions for selected areas



Infrastructure: modernisation of housing & social infrastructure

257.0 Bn USD

Future Investment potential



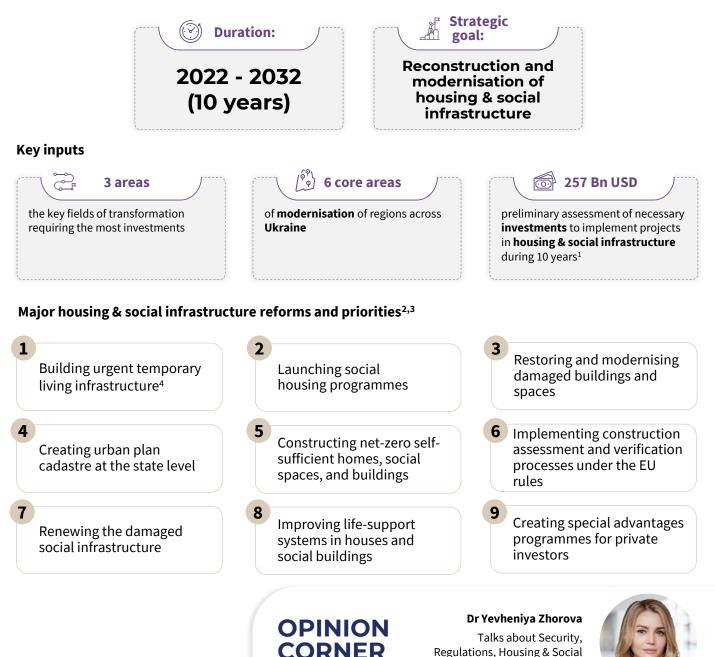
Value-added sectors: agriculture, manufacturing, energy, transport, & IT

330.8 Bn USD

RECONSTRUCTION OF HOUSING AND SOCIAL INFRASTRUCTURE IS ONE OF THE TOP PRIORITIES

Ukrainians' well-being was heavily shattered, as nearly **17 million** people were forced to leave their homes due to the war in Ukraine. Now, it has become one of the top priorities for Ukraine to provide its people with new housing & other social infrastructures, such as schools, kindergartens, hospitals, parks, sports & recreation facilities, and more.

The concept of the post-war housing & social infrastructure recovery



The new construction regulations in Ukraine should provide increased security in all social infrastructure facilities. It implies the adoption of the world's good practices in this sphere, e.g., the adaptation of premises for sheltering, including their easy accessibility, the provision of secure rooms on floors, the presence of firewalls, and the prevention of the over-compaction of buildings. We should establish a new set of requirements for the developers that will be able to help save lives in dangerous circumstances.

Regulations, Housing & Social

Infrastructure

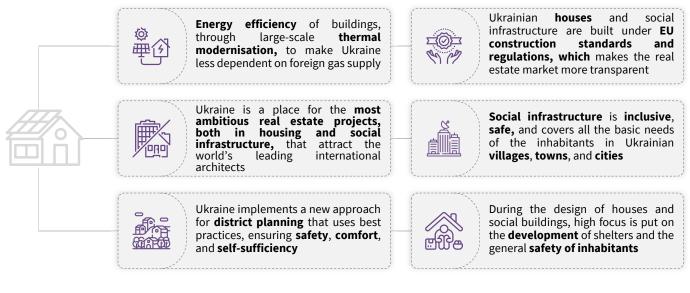
Source: Ukraine Recovery Conference materials Notes: (1) Including confiscated Russian assets, partner grants, partner debt / equity, private investments, and state budget; (2) Elements of the National Recovery Plan 2022; (3) Based on the analysis of materials of the Ukraine Recovery Conference 2022, press releases of the Cabinet of Ministers of Ukraine, and articles of the experts in the field of regional development; (4) Converting non-residential buildings into residential

UKRAINE HAS CONCRETE TARGETS TO ACHIEVE BY **2032 IN THE AREA OF INFRASTRUCTURE**

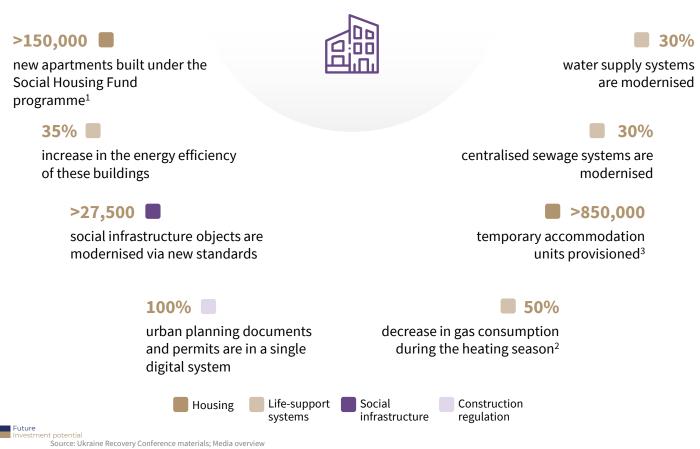
Ukraine plans to attract billions of dollars in critical social infrastructures, like schools, kindergartens, with inclusiveness and high energy efficiency that would provide convenient public services to all of Ukraine's people. The implementation of transparent construction practices and the development of ambitious real estate projects will help Ukraine not only provide

displaced people with temporary accommodation (until the end of hostilities in the front-line regions) but also build new, fully upgraded houses and apartments. It will also help make investment practices more transparent, leading to an increase in the number of newly attracted real estate and infrastructure investors from abroad.

The future vision of housing & social infrastructure in Ukraine



Key targets of housing & social infrastructure reforms by 2032



Notes: (1) Fund that has its main priority to raise capital for building social housing for displaced Ukrainians; (2) Heating season in Ukraine lasts from the second part of October till the first part of April; (3) Non-residential buildings that are provided on the temporary basis until the new housing is provided

MULTIPLE PROGRAMMES ARE CREATED TO ATTRACT INVESTORS TO HOUSING RECOVERY PROJECTS

How investors can support Ukrainian housing & social infrastructure reconstruction efforts

International investors have the opportunity to become **long-term partners** with Ukraine through investing in the recovery programmes of the Ukrainian **real estate sector**, especially in housing & social infrastructure.

Grant programmes for investors will **highlight their brand images** while **investments** are paid off, as the Recovery Plan would be **financially supported** by Ukrainian **partners** worldwide.

Selected initiatives to consider



Major housing & social infrastructure investment focus areas in Ukraine^{2,3}

Modernising housing and life support infrastructure

91 Bn USD

The project aims to attract **42 Bn USD** financing for **water** and **wastewater management system modernisation** that is expected to lead to optimisation of **water consumption** by the households. In addition, about **45 Bn USD** will be invested in the **modernisation** and **repair** of housing infrastructure.

Rolling out energy efficiency and district modernisation



90 Bn USD

Providing temporary and building new housing



Rebuilding damaged social infrastructure



The **residential energy efficiency programme** aims to **reduce** the **consumption of gas** and **electricity due to thermal modernisation.** Moreover, the program considers up to **1 Bn USD** investments in the **localisation** of material production in the **construction industry**.

The program aims to attract **31 Bn USD** for the **new housing infrastructure** that will be developed in line with the best urban planning practices. In addition, **10 Bn USD** is expected to be spent on **temporary housing provision** via the conversion of non-residential buildings into residential.

Social infrastructure projects aim to collect nearly **4 Bn USD** for the **renewal** of **damaged** infrastructure. About **29 Bn USD** would be invested in **upgrading** buildings, with a focus on inclusiveness and new construction standards. Up to **1 Bn USD** is expected to be invested in the **development of youth spaces**.

齮 🛛 Funding needs

Future

Source: Ukraine Recovery Conference materials

Notes: (1) International Finance Institutions; (2) A part of the National Recovery Plan 2022; (3) For the full list of potential investment projects, please refer to the National Recovery Plan of Ukraine

REAL ESTATE MARKET CAN ACHIEVE SOLID GROWTH IN CASE OF RESILIENT FUNDING PROCESSES

New housing

construction in Ukraine.

million square meters

As of July 2022, Ukraine estimates the need for approximately 18.4 million m² of new housing to be built due to the destruction of Ukrainian. Apart from new housing, major **restoration** is required for 23.6 million m² of housing. The goal to construct the new real estate in such volumes is ambitious for both Ukraine and its partners and will take years to achieve. However, rebuilding housing and other social infrastructures is one of the priorities for the Government of Ukraine; hence, the recovery pace of the construction industry might be higher than the total economy of Ukraine. The strong financial support of partners and EU regulations will drive the recovery of the real estate industry. Within the estimated high-growth scenario¹, the plan to build 18.4 million m² of new housing might be met in 2025.

Scenarios' expected results

Scenarios and the main underlying assumptions

CAGR: +48.0% 11.4 10.0 Assumptions: War ends in the first 7.5 half of 2023. Ukraine successfully by 2026 5.2 implements EU construction 3.1 regulations, the economy shows indications of rapid recovery, and 2021 2022F 2023F 2024F 2025F supply chain disruptions in the by 2026 construction industry are limited. as % of pre-war 2021's level Ukraine gets full 100% support tor build 18.4 million m² of housing¹. CAGR: +34.8% 11.4 7.3 57 bv 2028 4.3 3.0

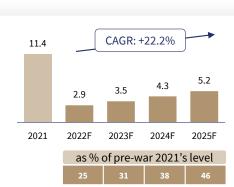
Sustain

High growth

Assumptions: War ends by the end of 2023. The EU construction regulations take a longer time to implement. Supply chain and logistic problems cause delays, making construction more expensive. Medium-growth scenario assumes 60% of financial support for housing.

Lagging

Assumptions: War lasts over 2023. Construction regulatory issues cause an increase in bureaucracy. The industry receives lower than expected financial support to recover. The low-growth scenario assumes that Ukraine gets 30% of financial support for targeted housing construction.



2023F

2024F

as % of pre-war 2021's level

2025F



by 2027

The housing construction pace might reach the pre-war level

18.4 million m² of new housing might be built, HHD excluding new housing that was already in the pipeline²

ource: World Bank — Global Economic Prospects — [June 2022]; State Services of Ukraine website; Kyiv Consulting analysis

2021

2022F

Notes: (1) In the Ukraine Recovery Plan, there is a goal to build 18.4 million m² of new housing, funded by the confiscated Russian assets, partner grants, partner debt / equity, private investments, and state budgets; (2) Assumption: the construction takes 2 years, and the construction of the new buildings will start at the beginning of 2023

uture

Ukraine has a high potential for smart cities' development

୨୨

Ukrainian cities can become more open to innovations. We have great IT specialists and architects who could offer innovative solutions for cities especially in the field of smart and safe environment technologies, digital service systems and urban planning.

Thus, Ukraine can become a global pilot project in creating a new type of smart and safe urban areas, separate settlements for citizens who have lost their permanent housing as a result of war or natural disasters. Emphasis will be placed on digital security and mobility technologies, new construction technologies, and environmental standards.

DR VICTORIYA PODGORNA

Member of Parliament of Ukraine

Involvement during Russia's war against Ukraine: Dr Victoriya Podgorna takes an active social position by raising awareness of Russia's war against Ukraine in media, emphasising domestic and foreign political factors that will have the most impact on the course and end of Russia's war against Ukraine, as well as the importance of Ukraine obtaining the status of a candidate for membership of the EU.

What are the main concepts that will drive the post-war cities' reconstruction and development in Ukraine?

It is very important not just to restore destroyed Ukrainian cities, but to establish a new urban trend. This war puts an end to a long period of the dismantling of the Soviet heritage. Most Ukrainian cities were designed for industrial development, rather than as an environment for communities and citizens. As a result, after the collapse of the USSR, Ukrainian cities found themselves in a major crisis - instability, low quality of services, problems with ecology, chaotic construction and planning of urban development, high resource intensity of cities (consumption of energy, heat, water, space). The war showed the acuteness of problems with the security of cities - the lack of bomb shelters, protection of cities from air strikes, operational warning systems, uninterrupted functioning of infrastructure, etc. Therefore reconstruction must ensure the necessary level of safety and quality of life with the help of innovative technologies and approaches to city management.

What are the first candidates in Ukraine to become smart cities after reconstruction, and what is the expected time horizon?

Even before the war, dozens of cities and communities implemented smart city technologies and concepts. Kyiv, Dnipro, and Kharkiv were the leaders among Ukrainian cities. Most of the cities actively carried out processes of digitisation of city services and created smart city and infrastructure management systems. After the war, these processes will accelerate. Because the concept of a smart city is the best approach to ensure greater sustainability of cities, quality of life and safety, and effective management.

After reconstruction, Kharkiv has a chance to become one of the smartest cities in Ukraine, where it will have to restore a significant part of housing and infrastructure. It should be done on the basis of the most modern approaches and technological standards. However, such reconstruction will take at least 10 years.

AGRICULTURE IS A PRIORITY SECTOR FOR FURTHER REFORMS DUE TO ITS HUGE GROWTH POTENTIAL

With each year of independence, Ukraine has been strengthening its position as one of **the most important producers of agricultural products** in the world, playing a leading role in ensuring global food security. Since the Russian invasion of Ukraine, almost **the entire agricultural sector in the country has been at risk,** with the sowing

campaign and seaport blockade being the most pressing issues. Agriculture is one of the most prioritised sectors covered by the National Recovery Plan, with a key focus on the **development of processing**, an increase in the export share of **value-added products**, and the **modernisation of agricultural infrastructure**.

The concept of the post-war Agriculture Recovery Plan^{1,2}



OPINION CORNER

Anatolii Denysenko Talks about Economy, Agriculture, Sustainability, and Innovations



Currently, the Ukrainian agricultural sector faces two important tasks: **short-term** – **demining and reclamation of affected lands, and medium / long-term task** – **the active implementation of the European Green Deal (EGD)** within the agriculture sector. Given the wide range of areas covered, it will have a significantly positive impact on Ukraine's trade and economic cooperation with the EU.

Source: The Ministry of Agrarian Policy and Food of Ukraine website; Ukraine Recovery Conference materials

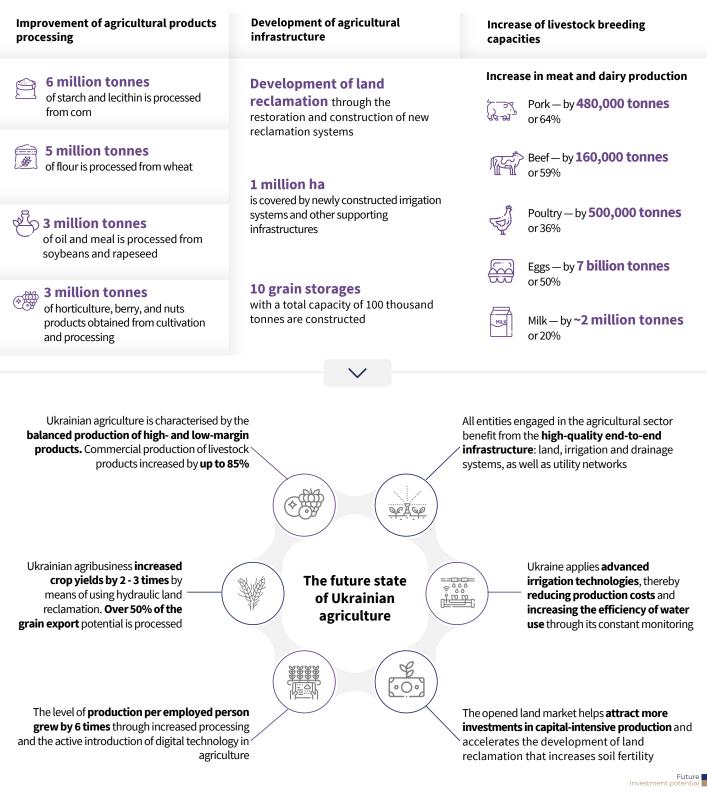
Notes: (1) A part of the National Recovery Plan 2022; (2) Based on the analysis of materials of the Ukraine Recovery Conference 2022, press releases of the Cabinet of Ministers of Ukraine, and articles of the experts in the field of agriculture; (3) Including confiscated Russian assets, partner grants, partner debt / equity, private investments, and state budget

ONGOING SECTOR TRANSFORMATION ENSURES A SUCCESSFUL FUTURE FOR UKRAINIAN AGRICULTURE

The successful transformation of Ukrainian agriculture aimed to produce a **greater variety of high-value-added products** will strengthen domestic production and make a positive impact on global food security. By 2032, agriculture is expected to account

for **>18% of the Ukrainian GDP** and provide over **188,000 jobs**. The processed products are projected to comprise **more than 12 million tonnes** of Ukrainian export potential, while **export earnings** per conditional tonne of raw materials — will **increase by 40%**.

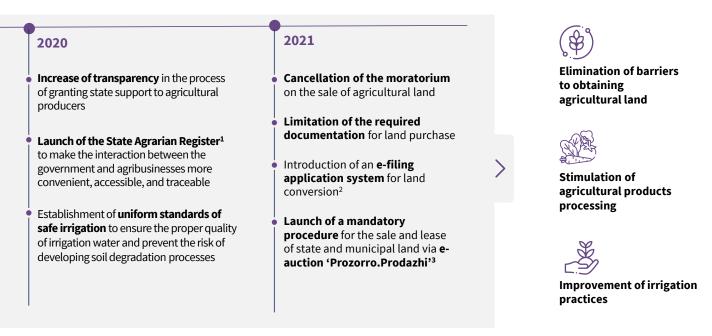
Key targets of agricultural projects and reforms by 2032



RECENTLY IMPLEMENTED KEY AGRARIAN REFORMS IMPROVED THE SECTOR'S INVESTMENT LANDSCAPE

In recent years, Ukraine has been **on the verge of key transformations** in the agricultural sector and land legal regulation. Recently the Ukrainian government has implemented **significant structural reforms** in the sector, such as **lifting the moratorium** on agricultural land turnover and **launching the geospatial data portal**. This has contributed to the **reduction of unofficial land cultivation**, expansion of **logistical capacity** of farms, and creation of a **transparent system of state support** for agricultural producers.

Recent improvements in agriculture to improve investment climate



Key reforms in Ukraine were introduced to create **unique opportunities for the attraction of additional funding** for largescale infrastructure projects. As agribusiness facilities were significantly destroyed during the war, **the rapid recovery of the agri-industrial complex became the highest priority**. In addition, the war revealed the urgent need to improve **road logistics**, modernise **sea and river basin infrastructures**, and develop logistics points on the borders with the EU. The investments in equipment, laboratories, and technology now become the important key objectives to restore agriculture as a high-tech and innovative sector. Nowadays, active logistical and financial assistance from Ukrainian international partners helps the sector stay afloat, contributing to an increase in crop processing and storage capacities.

Selected projects approved in 2022 supporting Ukrainian agriculture recovery

Project name and purpose of funding	Supporting country / organisation	Total amount of approved funding
Support of Ukrainian farmers — provision of farms with seeds, fertilisers, and equipment for production and storage	👙 USA USAID	100 Mn USD
Increase of grain storage capacity — supply of bulk bags and containers of sleeves for the temporary storage of grain	<mark>≰⊳</mark> UK	93 Mn USD
	World Bank	70 Mn USD
Direct financing of SMEs ⁴ — payment for resources and services related to food production and agricultural activities	🍪 EU	54 Mn USD
Support of agricultural needs — provision of plastic grain sacks and grain processing equipment, access to veterinary and phytosanitary services, and the construction of grain storage facilities	🕑 Canada	52 Mn USD

Investment potential Source: The Ministry of Agrarian Policy and Food of Ukraine website; Media overview Notes: (1) An automated information system for gathering, accumulating, and processing information about manufacturers of agricultural products; (2) A conversion of agricultural land for purposes other than farming and agriculture; (3) An electronic system of public procurements organised on a tender basis; (3) Small- and medium-sized enterprises

UKRAINE HAS NUMEROUS OPPORTUNITIES FOR INVESTMENT IN AGRIBUSINESS AND PROCESSING

Ukrainian agriculture **benefits from the significant cost advantages** due to attractive land rental prices, extremely fertile soil, and competitive salaries. The sector has **a large perspective for productivity growth**, as yields per hectare remain below the EU benchmarks.

With additional investment in management, irrigation technology, logistics, and value-added production, Ukraine is **capable of doubling its food exports**.

Key competitive advantages of investing in Ukrainian agriculture



Major drivers increasing the potential of Ukrainian agriculture



Shift from agricultural commodities export to **value-added products**



Competing **in high-margin niches**, including fresh and organic products



Yield growth due to precision agriculture, new hybrids, and crop protection products Increased customer loyalty through the growth of **Ukrainian brand** awareness

Most promising investment opportunities by transformation project groups

Improvement of agricultural product processing	Development of agricultural infrastructure	Increase of livestock breeding capacities 5.5 Bn USD	
22.8 Bn USD ²	5.6 Bn USD		
Key investment highlights	Key investment highlights	Key investment highlights	
 Development of deep processing of products of plant origin — starch, fibre, and lecithin Launch of production units for advanced grain and oleaginous crop processing Improvement of technological processes in the food industry to develop new innovative product lines in the raw material processing segment 	 Restoration of damaged infrastructures Construction of new irrigation systems and the expansion of pumping stations and inter-farm networks Building land infrastructure to diversify logistics supplies as an alternative to seaports Modernisation of the Danube River Basin infrastructure 	 Construction of agro-industrial parks, with a closed cycle of breeding, processing, and waste utilisation Creation of complexes for raising, slaughtering, and processing cattle for domestic and international market beef sales Reconstruction of husbandry facilities in stock and swine breeding 	

Future

The cost of land and labour in Ukraine is a medium term competitive advantage

୨୨

The main investment opportunities include the market of livestock and poultry products, application of more than one processing stage to pulses and oilseeds, investments in logistics infrastructure, bio-energy, and the use of alternative energy sources for processing raw materials. In this case, cattle breeding and biofuels can be segments with a cumulative effect for investment, i.e. feed production, processing of waste into biofuel, and production of semi-finished products by controlled technology. Most likely, multinational corporations with expertise and access to global markets and supply chains will be engaged in the development of these segments.

YULIA POROSHENKO

Founder of Agrohub Platform; Co-founder of 'Radar Tech' technological cluster, McKinsey&Co alumna

Involvement during Russia's war against Ukraine: Yulia and Oleksii Poroshenko are running multiple initiatives purpose of which is to facilitate the process of finding the necessary assistance in Ukraine and abroad for temporarily displaced Ukrainian families, including the initiative in partnership with the INSEAD alumni association, UAhelpinfo.org project etc.

How do you assess the impact of Ukraine's gained EU candidate status on the development of the agricultural industry?

A positive, though not rapid impact, is expected. The candidate status requires a transition to compliance with basic standards and regulations in production. The current abolition of quotas on exports to the European Union was an advance that increased the effective selling prices of several export items. It enables compensating the logistical discount from sales of grain to more distant destinations and facilitates additional processing of agricultural products in Ukraine right now.

Compliance and high standards are basic constraints to expanding supplies to Europe. Yet, for non-EU members, they are more stringent on a number of parameters: banned pesticides, GMOs, animal welfare requirements, antibiotics and hormones in feed, traceability of origin, etc.

Amid significant restrictions, insufficiently compensated by subsidies, the cost of land and labour in Ukraine is a medium-term competitive advantage.

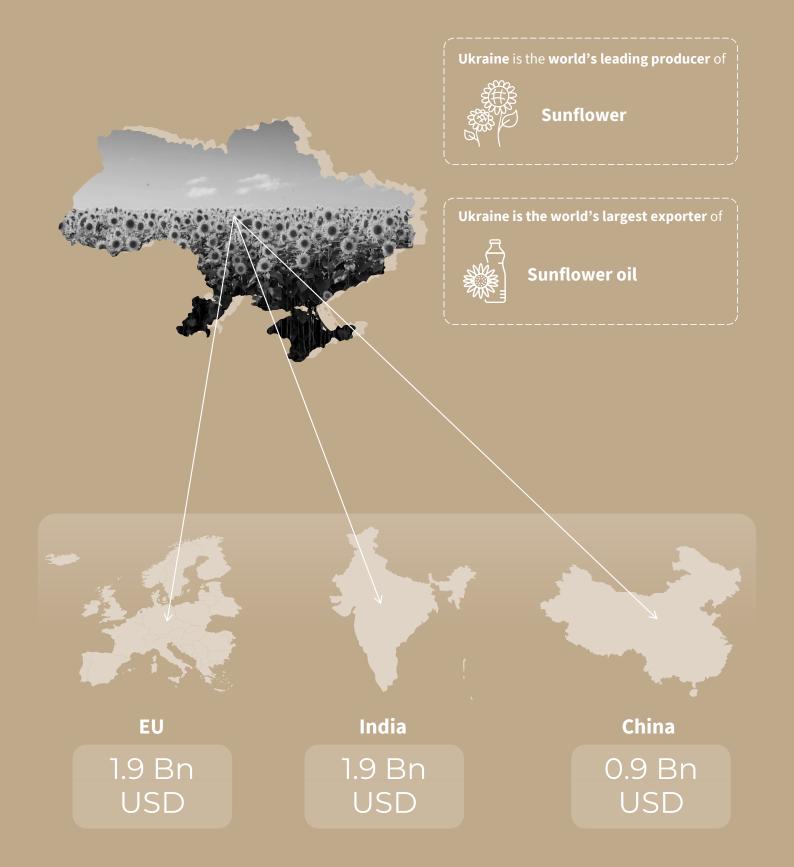
What are the prospects of the construction of plants for hybrid seed production in Ukraine, and how can it influence the country's food security?

Even before the war, Ukraine was developing domestic production of seed materials under licenses from originators or directly by large originators. However, almost everything produced was intended for domestic sales and not designed for exports to other countries.

Such factors as favourable cost of the land lease, improved investment climate, and qualified inexpensive labour combined with the extensive soil and climate potential of hybridisation testing grounds are sufficient to invest in this segment.

Such a trend will have a positive impact on food security, although not definitive. Seed production in Ukraine will mainly reduce the cost of production for farmers due to the absence of import duties and VAT. The fact is that a substantial part of the crops produced is varietal and the seed material is grown from elite seeds by producers themselves (wheat, barley, soybeans, rye, etc.).

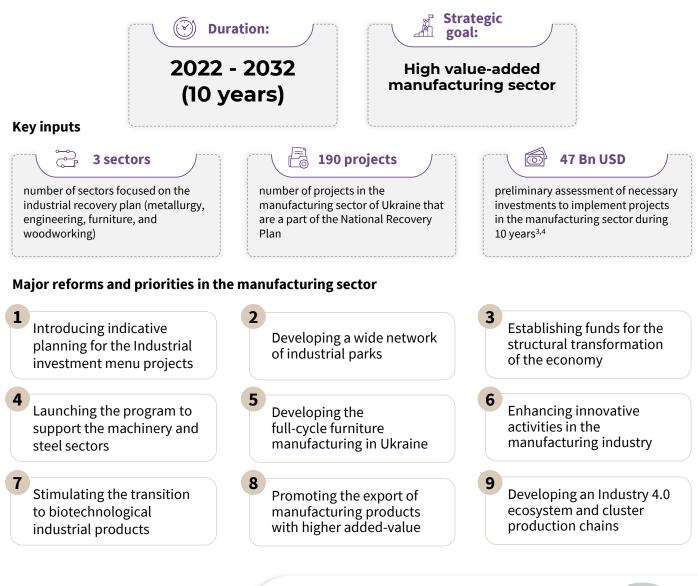
DID YOU KNOW THAT UKRAINE IS ONE OF THE LEADING AGRICULTURAL EXPORTERS?



UKRAINE PLANS TO DEVELOP COMPETITIVE MANUFACTURING IN THE POST-WAR ECONOMY

The National Recovery Plan implies structural transformations of the post-war economy of Ukraine **through accelerated development of the processing industry** and increasing the export of industrial products with high value-added tax. The implementation of the plan will ensure the long-term growth of the manufacturing industry in the future and increase its competitiveness in the global market. Moreover, the **manufacturing sector in Ukraine may become the regional industrial hub in Europe** in the following sectors: metallurgy, engineering, furniture, and woodworking.

The concept of the post-war Recovery Plan for the manufacturing industry^{1,2}



OPINION CORNER

Talks about Manufacturing, Supply Chains, Industrial Parks, Outsourcing, and Efficiency

Dariia Kolomiiets



Source: The Cabinet of Ministers of Ukraine website; Ukraine Recovery Conference materials; Media overview

Notes: Notes: (1) A part of the National Recovery Plan 2022;

(2) Based on the analysis of materials of the Ukraine Recovery Conference 2022 and press releases of the Cabinet of Ministers of Ukraine; (3) Including confiscated Russian assets, partner grants, partner debt / equity, private investments, and state budget; (4) According to the Industrial investment menu, as a part of the National Recovery Plan sector evolution: Ukraine is an integral part of the European supply chain, Ukraine has excellent facilities to outsource and offset production, and the development of industrial parks might drive the manufacturing sector in the long-term perspective. The country is actively developing a network of industrial parks across different industries. Chips, batteries, and power elements, which are highly demanded in a global market, might be promising production streams within the framework of industrial parks.

At least three aspects bring tremendous potential to the Ukrainian manufacturing

UKRAINIAN MANUFACTURING CAN BE INTEGRATED IN THE EU VALUE CHAINS AS AN INDUSTRIAL HUB

The purpose of the post-war recovery initiatives in the manufacturing industry is to **ensure the long-term growth of processing sectors** in Ukraine by transitioning to the production of highly complex, diverse products with a high degree of integration into global value-added chains. The future state of

manufacturing in the country will be defined by developing domestic processing capacities, increasing innovative activities of producers, and expanding access to high-value-added product markets. **This will help strengthen the position of Ukraine's economy in the global market**.

The future state of the manufacturing industry in Ukraine¹



Key targets in the post-war recovery of the manufacturing sector in Ukraine by 2032²



Source: The Cabinet of Ministers of Ukraine website; Ukraine Recovery Conference materials; Media overview

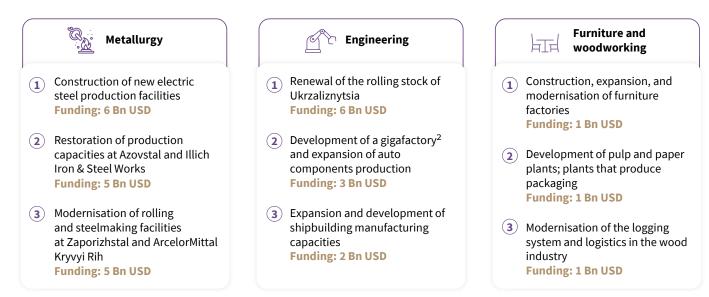
Notes: (1) Based on the analysis of materials of the Ukraine Recovery Conference 2022; (2) Presented targets are selected based on the analysis of the National Recovery Plan 2022 and comments of the Minister of Economy of Ukraine

INVESTORS ARE OFFERED TO JOIN A RANGE OF PROJECTS IN THE MANUFACTURING SECTOR

Investment opportunities for the recovery and development of manufacturing in Ukraine¹

Sector	Objective	Number of projects	Investments, Bn USD	Workplaces, thousands
Metallurgy	Meeting domestic demand and increasing competitive exports of processed products	23	15.4	79
	Developing green metallurgy and integrating into EU supply chains	4	10.9	23
Engineering	Meeting domestic demands	18	13.3	21
	Integrating into EU value-added chains	2	2.8	n/a
Furniture and woodworking	Increasing domestic production	85	1.3	72
	Expanding the primary processing of raw materials (wood)	57	2.8	11
	Developing wood industry	1	0.5	3

Top-3 largest investment manufacturing sector projects of Ukraine¹



Strengths of Ukraine's manufacturing sector

- Vast iron ore resource, suitable for DR-grade products³
- Top export positions in semi-finished products
- Asset base in several engineering sectors
- Available wood resources for further processing
- Educated and cost-competitive labour

The implementation of projects as part of the National Recovery Plan will allow Ukraine to develop an innovative economic structure, with a manufacturing industry producing and exporting large volumes of high value-added products. As a result, Ukraine will integrate with EU value chains as an industrial hub, with a focus on metallurgy, engineering, and furniture / wood.

Source: The Cabinet of Ministers of Ukraine website; Ukraine Recovery Conference materials

uture

Notes: (1) According to the Industrial investment menu, as a part of the National Recovery Plan; (2) Factory for the production of batteries for electric vehicles; (3) DR – direct reduction. The technology for converting iron ore into metallic iron

Steel producers need further reduction of trade barriers with key trading partners

୨୨

Ukraine needs to focus its efforts on maintaining the production potential of its metals and mining complex. To be competitive in the current environment, Ukrainian steelmakers have to reduce their production costs. To do that, the sector needs government support. Above all, this relates to resolving logistics issues. Moreover, the cost of production is significantly affected by the expensive electricity and gas, as well as high iron ore extraction rents.

YURIY RYZHENKOV

CEO, Metinvest Holding

Involvement during Russia's war against Ukraine: Under Yuriy's management, Metinvest is playing a direct role in the war effort, delivering steel for 1,500 bulletproof vests a week for Ukraine's Armed Forces. It is also importing military equipment, such as drones, night vision headsets and helmets. Yuriy is an ambassador of the 'Do It Together' charitable foundation and the 'Saving Lives' project, set up to provide humanitarian aid.

Given that Ukraine is a key supplier of steel products for some regions, how will the reduction of its exports affect global supply chains?

Ukraine remains one of the largest suppliers of metal products to European markets, although the country's export opportunities are extremely limited because of logistics issues. Over the first half of the year, Ukraine halved its exports of metals. To compensate for the loss of Ukrainian steel, EU countries have increased steel imports from Brazil.

India, Türkiye, Taiwan, and other countries are large suppliers of steel products to Europe as well. The war in Ukraine will have long-lasting consequences for the global steel industry. They include likely adjustments in global trade flows and supply chains, as well as changes in energy trade.

In early May 2022, the USA announced the suspension of import duties on Ukrainian steel and steel products for one year. How do you assess the potential benefits of such liberalisation?

We welcome the US initiative to remove the special duty of 25% on supplies of rolled steel from Ukraine. At the same time, we hope that the USA will remove other trade barriers, particularly the anti-dumping duty applied to Ukrainian metals.

After the cancellation of the duty on imports of Ukrainian steel products to the USA, this market will become a promising area for Ukraine. In particular, the Group will be able to increase exports to the USA instead of making shipments to Latin America and Asia. We are considering entering the US market with square billet and welded pipes, as well as wire rods and rebar, subject to market conditions.

Fair and transparent privatisation leads to a better investment climate

୨୨

Privatisation is an additional factor in the revival of small and medium-sized businesses. After the war, the privatisation process will play an important role.

Ukraine has a sufficient number of objects for privatisation. I assume that part of the Russian assets will be nationalised and will also be subject to privatisation.

SERHII FURSA

Economic expert, and specialist of the sales department of the Dragon Capital

Involvement during Russia's war against Ukraine: Serhii Fursa touches on a wide range of financial issues, caused by Russia's war against Ukraine. He covers breaking news, explaining it from an economic point of view and clarifying the key nuances associated with the financial side of every piece of news, including those related to the anti-Russian sanctions imposed by the EU and the USA.

Which objects can be privatised first and how do you see the impact of privatisation on the postwar recovery of the country?

As a rule, privatisation has been an additional factor that facilitated SMEs' recovery. After the war, the privatisation process will play an important part. Firstly, Ukraine has a sufficient number of objects for privatisation. Secondly, I assume that part of the russian assets will be nationalised and will also be subject to privatisation.

The privatisation procedure is about fighting corruption in the first place. Because the bigger the share of state-owned enterprises within the economy, the higher the corruption levels. Privatisation is also a positive sign for investors. A fair and transparent privatisation procedure leads to significant improvement in investment climate. Only this way privatisation has a chance of becoming one of Ukrainian economic growth drivers.

Can you think of any mechanisms for ensuring the transparency and accountability of the process of disposing with international partners' funds?

I find the EBRD¹ model of financing construction of roads in Ukraine perfect for any type of a foreign project. It implies that Western partners set up a legal entity that should carry out the distribution of funds, hold tenders, as well as choose what is to be financed and in which way.

As a project owner, the government of Ukraine shall decide on which projects are financially feasible and submit them for consideration of such legal entity (or a fund, whatever). Once the project is financially feasible, the fund is going to approve it, and allocate the resources for it. Such was the EBRD model.

This mechanism will enable Western governments to control the distribution of their taxpayers' money. For Ukraine, it shall imply an increase in the level of trust by minimising corruption risks.

Russian oligarchs must pay for the damage, caused by the war

୨୨

Using an indicative planning tool and model calculations, we created an industrial investment menu of Ukraine, which collected more than 614 promising investment projects in such areas as the defence-industrial complex, metallurgy and metalworking, energy, mechanical engineering, logistics, furniture and woodworking industry, and others.

In general, investments in more than 614 projects in the amount of about 425 Bn USD will create almost 1 million jobs, and that amount can double if counted with cross-industrial sectors development.

DR OLEKSANDRA MISIATS

Head of public procurement, international trade, SDM Partners

Involvement during Russia's war against Ukraine: Oleksandra has been involved in organising a business conference, inviting Polish investors to rebuild Ukraine after the war. We explain the most recent developments, opportunities and challenges when tendering in Ukraine. This event gives investors an opportunity to be prepared for the post-war reconstruction of Ukraine through participation in public procurement.

The Government of Ukraine announced that the Recovery Plan would be financed by both international investments and the arrested Russian money. In your opinion, how complicated this procedure could be? How long could it take?

The most complicated issue is to deal with arrested money. The state property is protected abroad under the doctrine of state immunity, so it is difficult to appropriate Russian assets. However, Ukraine, the US and other states has already taken the initial steps. We welcome Canada initiatives, which amended its national laws and made it possible to forfeit frozen Russian assets. The US and other states have also already drafted respective laws enabling losses compensation. On the other hand, the adoption of special laws and litigation may take years. Ukraine is also lobbying the UN General Assembly to adopt a resolution that will become the basis for the creation of an international compensation mechanism. We all are enthusiastic about the above steps that makes reimbursement possible.

Over 400 polish companies announced that they will help rebuild Ukraine after the war ends. To your point of view, what sectors of the economy could be the most interesting for Polish business?

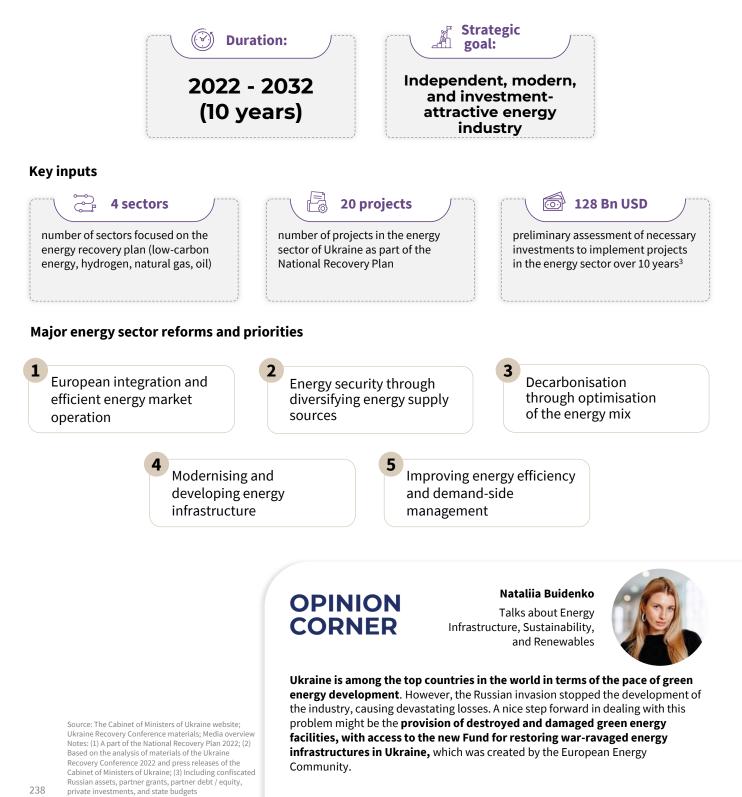
Polish companies are mostly interested in infrastructure projects, including those financed by international institutions. We expect substantial investments into the Ukrainian market from at least 5 financial institutions: EBRD, European Investment Bank, International Monetary Fund, World Bank Group, Council of Europe Development Bank and others. We also expect substantial US investments, on the back of the widely discussed Marshall Plan for Ukraine. Other industries include - construction, energy projects, and agriculture.

ENERGY SECURITY IS A KEY COMPONENT OF THE ENERGY SECTOR POST-WAR RECOVERY PLAN

The Ukrainian energy industry substantially transformed over the last decade, with the share of renewable energy sources (RES) increasing and the share of coal & natural gas decreasing in the energy mix. Transparency in the gas and electricity markets was ensured by recent reforms that formed a competitive environment.

Russia's war against Ukraine has damaged and destroyed the energy infrastructure and put European nuclear security at risk. The National Recovery Plan implies the reshaping of the Ukrainian energy sector by rebuilding the infrastructure in line with green transformation and optimising the energy mix.

The concept of the post-war Recovery Plan for the energy sector^{1,2}



TRANSFORMED ENERGY SECTOR WILL POWER THE UKRAINIAN ECONOMY AFTER THE WAR

Ukraine aims toward the **efficiency of the sector and security of the primary energy supply** with the implementation of post-war recovery initiatives. The ambition is to **transform the industry** into a carbon-neutral and develop policies **with respect to future EU commitments**. It will allow Ukraine to support the EU in achieving energy autonomy.

Key targets in the post-war recovery of the Ukrainian energy sector¹

of electricity exports to the EU by 2025

of renewable sources in the energy mix by 2032

carbon-free energy mix by 2032

The future state of the Ukrainian energy sector



Energy market is further liberalised in Ukraine

Ukrainian gas and electricity markets are liberalised, with new suppliers increasing the intensity of the competition. The energy market is **fully integrated with EU markets,** and the Ukrainian **trade platforms are successfully merged** with the European ones.

©	0
æ	y @

Primary energy sources are independent in Ukraine

Increased production of **natural gas allows diversification of energy sources**. **Energy storages** provide full flexibility to the energy system, and **strategic energy reserves** are formed in advance. Ukrainian residential and private houses are modern and energy efficient.



Ukraine produces and exports hydrogen

Ukraine produces affordable hydrogen due to the low cost of electricity production by the Ukrainian renewable energy sector. The existing **natural gas infrastructure** is upgraded and **used to export hydrogen to Europe.**



Ukraine has new and modern energy infrastructures

Outdated natural gas transportation and transit system are fully rebuilt and modernised. **New interconnections** in the Ukrainian energy infrastructure expand the flow of energy within the European electricity network of transmission system operators.



Ukraine actively develops renewable energy sources

Ukrainian coal regions are fully transformed, and coal mines are decommissioned. Ukraine significantly relies on nuclear, biomass, wind, solar, and hydroelectric power plants, thus ensuring carbon-neutral electricity production.



Decarbonisation of the economy through greater electrification

Ukrainian household sector has transformed electricitybased heating systems. The transportation sector is also electrified with an increased number of electric vehicles and railroad transportation.

UKRAINE WILL SUPPORT EUROPEAN ENERGY SECURITY AND TRANSITION TO NET-ZERO

Investors actively seek opportunities to invest in **renewable energy sources** since a **long-term alternative** to Russian energy pipelines came to light after the beginning of the war. **Opportunities provided by RES** (solar, bioenergy, geothermal, wind energy, and hydropower) **instigate the transition to net zero**. On the other hand, **fossil energy sources**, including oil, coal and natural gas, **provide short- and mid-term solutions for the European energy deficit**. Ukraine presents investors with appealing opportunities to invest in **low-carbon energy sources**, **hydrogen production**, as well as **oil and natural gas projects**.

Most promising investment opportunities in the Ukrainian energy sector

н



Low-carbon energy projects ~50 Bn USD

Key investment highlights

- Build out 5-10 GW¹ of RES with around 3.5 GW of hydro and pumped hydro capacities
- Develop biofuels (bioethanol, biodiesel, biomethane) production from agricultural, residue, and waste
- Increase nuclear capacity through higher utilisation of existing capacities and building new blocks



Key investment highlights

- Build at least 30 GW of renewable energy for hydrogen production
- Build out around 15 GW of electrolyser capacity for green hydrogen
- Develop hydrogen transport infrastructure to connect hydrogen production sites with consumers in Ukraine and abroad

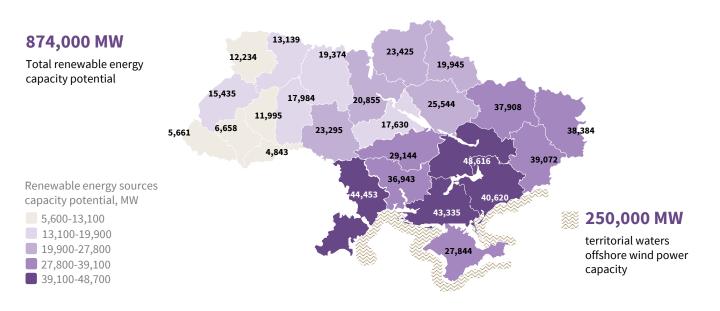


Key investment highlights

- Increase natural gas production from existing fields and develop unconventional gas fields
- Modernise natural gas transmission and distribution networks
- Expand oil refining capacity, including rebuilding, building or modernising facilities and oil pipelines

Renewable energy sources provide an opportunity to move electricity production that is not accompanied by GHG emissions in line with the **global shift toward net-zero targets**. In Ukraine, the share of renewables within the total energy supply is set to increase to 10% by 2032.

Renewable energy capacity potential of individual regions of Ukraine, MW²



uture

Ukraine can become a leading European green energy producer

୨୨

Ukraine has a chance to become one of Europe's leading energy suppliers of 'clean fuel'. We need to unlock our enormous potential for green energy. We have a chance to establish a competitive green hydrogen ecosystem in Ukraine including production, storage, and transportation of hydrogen.

I strongly believe that we should use this chance, despite such tragic and unfair cruel actions, and sustainably build better Ukraine, with new green technologies targeting to strengthen the whole European energy system on the way to decarbonisation goals and energy independence.

DR YULIIA RYBAK

Co-Head of Secretariat of German-Ukrainian Energy Partnership

Involvement during Russia's war against Ukraine: Dr Yuliia Rybak calls to come up with innovative ideas that will accelerate Ukraine's energy transition, and promotes the initiative, launched by the German-Ukrainian Energy Partnership in cooperation with the Women's Energy Club of Ukraine, aimed to support highly qualified women working in the energy sector, who were forced to leave Ukraine.

How do you see the future of energy cooperation between Ukraine and other EU countries, especially Germany?

German-Ukrainian Energy Partnership was established almost 2 years ago as a political platform targeted at supporting green energy transition and decarbonisation of the Ukrainian and German energy systems. Energy partnership has proved to be an efficient vehicle for supporting Ukraine's energy sector, especially at such a challenging time as the time of cruel, unprecedented and unprovoked armed aggression of Russia against Ukraine. During the six months of the full-scale war, despite huge challenges, including bombing and damage of the critical energy infrastructure, as well as threats of nuclear terrorism, the Ukrainian energy system proved its resilience. The main activities under the Partnership were reformulated with a focus on providing emergency assistance to secure stability of the country's energy sector. This included humanitarian aid from German energy associations and companies, procurement of items related to emergency energy needs, provision of expert support and technical capabilities to increase the export potential of Ukraine's power system, as well as support in the development of a Recovery Plan for the Ukrainian Energy Sector.

Ukraine's recovery will cover the period of 2022-2032 and will take approximately 750 Bn USD in aggregate, excluding security and military expenditures.

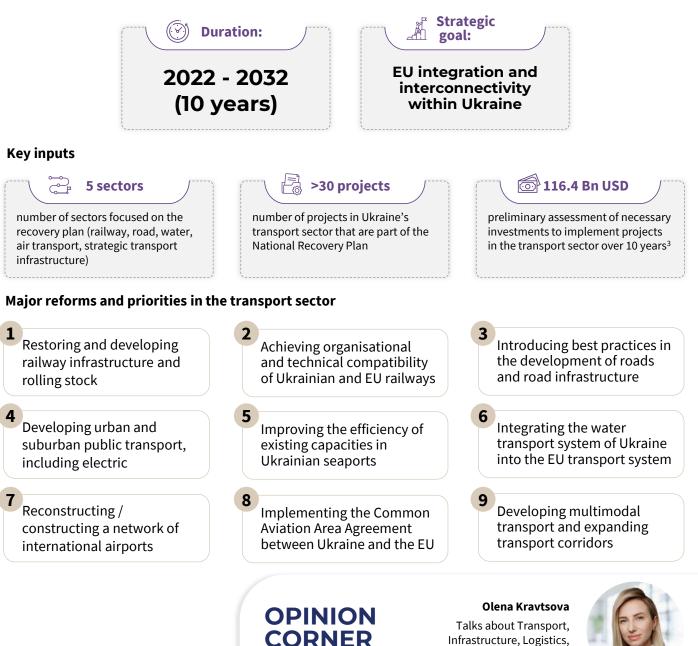
One of the biggest challenges is attracting financial resources. Another one is non-payments. Hence, it is crucial to find affordable financial instruments and donor support, and attract funding for the relocation of SMEs. Considering that a significant number of RES units have been disconnected, there is a need to support relocation and further development of renewable energy facilities, with an account of new conditions and opportunities given Ukraine's integration with ENTSO-E. Replacement of natural gas with sustainable bioenergy, production of biomethane, as well as swift electrification of transport and heating should be top-prioritised.

UKRAINE FOCUSES ON ENHANCING CONNECTIVITY AND INTEGRATING TRANSPORT SYSTEM INTO THE EU

In 2018, Ukraine started implementing a strategic plan to **transform transport infrastructure into the economy's technological and efficient sector.** Yet, the war has caused significant damage to the transport infrastructure, and the Ukrainian government still adheres to the selected course toward

increasing the transport & logistics industry's potential. Therefore, according to the National Recovery Plan, Ukraine aims to **restore**, **rebuild**, **and modernise transport infrastructure**, as well as gradually **integrate** the national transport network **into the EU transport network**.

The concept of the post-war Recovery Plan for the transport sector^{1,2}



The development of the transport system of Ukraine will facilitate the integration of the country into the European production and supply chain, as well as enhance the mobility of tourists, entrepreneurs, investors, students, scientists and other individuals. Ukraine has to leverage the opportunity of a favourable geographic location in order to become a reliable trade partner and attractive travel destination.

Infrastructure, Logistics, Business, and Trade

Source: The Cabinet of Ministers of Ukraine website; Ukraine Recovery Conference materials; Media overview

Notes: (1) A part of the National Recovery Plan 2022; (2) Based on the analysis of materials of the Ukraine Recovery Conference 2022 and press releases of the Cabinet of Ministers of Ukraine;

(3) Including confiscated Russian assets, partner grants, partner debt / equity, private investments, and state budget

RESTORED TRANSPORT SYSTEM OF UKRAINE WILL STRENGTHEN INTERCONNECTIVITY WITH THE EU

Modern and efficient transport system is one of the key enablers of economic development. Therefore, as part of the National Recovery Plan, **Ukraine is focused on enhancing the potential of the transport infrastructure,** as well as deepening integration into international transport networks. The implementation of recovery initiatives will help **strengthen connectivity between production facilities, markets, and communities,** both domestically and between Ukraine and the EU. This will lead to the expansion of supply chains, an increase in trade volume, and the active movement of people.

The future state of the transport sector in Ukraine¹



Railway infrastructure **ensures efficient transportation of passengers and cargo** throughout all the regions of Ukraine and **facilitates the export of goods** to European countries through the western border



High-quality road infrastructure in Ukraine connects all the required locations, enabling safe, comfortable, and rapid transportation of passengers, as well as fast and efficient movement of cargo in the country



Water transport in Ukraine operates at full capacity and is **deeply integrated into the maritime logistics system of Europe**. A developed network of ports enhances the export of large volumes of goods from Ukraine by sea



High capacity aviation system in Ukraine ensures the **active domestic and international transportation of passengers and cargo**. Modern airports infrastructure allows for serving the most widespread types of aircraft



Ukraine has a **developed multimodal transportation infrastructure** that provides efficient mobility of passengers and cargo logistics. The country is also deeply **integrated** with the European transport network of TEN-T²

Key targets in the post-war recovery of the transport sector in Ukraine by 2032³

Railway	1 Reconstruction and construction of 1,413 km of new rail tracks ⁴
🗮 transport	2 Purchase, repair, and modernisation of over 7,000 rolling stock units
Air	3 Reconstruction / construction of 5 international airports
transport	4 Restoration of passenger traffic in Ukrainian airports up to 16.2 million passengers
👼 Water	5 Modernisation of 3 seaports in the Danube region
transport	6 Modernisation of 6 navigation locks and construction of 1 lock
🔊 Road	7 Recovery / construction of 52,000 km of public motor roads
Road transport	8 Construction of over 1,400 bridges

Source: The Cabinet of Ministers of Ukraine website; Ukraine Recovery Conference materials; Media overview Notes: (1) Based on the analysis of materials of the Ukraine Recovery Conference 2022; (2) Europe-wide network of railway lines, roads, inland waterways, maritime shipping routes, ports, airports and railroad terminals; (3) Targets are selected based on the analysis of the National Recovery Plan 2022 (4) Including 585 e-km of high-speed rails

THE RECOVERY OF THE TRANSPORT SECTOR IN **UKRAINE IMPLIES A WIDE RANGE OF PROJECTS**

National programme on the recovery and development of transport in Ukraine¹



Upgrade infrastructure and strengthen interconnectivity

Funding needs





Key investment areas

- Construction of additional rails to the EU border
- Construction of EU cross-border agro-terminals
- Modernisation of railway sorting stations
- Modernisation of existing EU road border points
- Expansion of throughput of Danube ports

- Reconstruction and modernisation of rail tracks (including HSR²), roads, and bridges
- Renewal of railcars and locomotives
- Reconstruction of airports damaged by war
- Construction of green charging power stations

Expected results

Resumption of international trade in Ukraine through diversified logistics channels

The National Recovery Plan offers a number of opportunities to support the implementation of projects in the field of transport infrastructure in Ukraine. International partners can contribute to the development of infrastructure through Public-Private Partnership agreements, direct complex grant programmes for NGOs and regional development agencies, green finance Strong interconnectivity of the regions in Ukraine due to the developed transport infrastructure

High-speed

railway

instruments for sustainability projects in transport, etc. The variety of projects and financial instruments allow investors to allocate their funds in the most efficient way, as well as gain long-term benefits from the development of the transport network in Ukraine and its further integration with the transport system of the EU.

Selected investment projects in the transport sector of Ukraine



2.7 Bn USD funding needs

Construction of the concession road Krakivets - Brody -Rivne. The autobahn should be about 280 km, and the time of passing the route is projected to decrease from 4 hours to 2.5 hours.³



1.2 Bn USD funding needs

Reconstruction of 5-7 international airports that meet the latest ICAO⁴ standards and are capable of serving operations of new types of aircraft (A320/NEO and B737NG/MAX).



1.2 Bn USD funding needs

Construction of a high-speed railway on the route Kyiv-Warsaw (919 km). The implementation of this project will reduce travel time from 17-19 hours to 5-6 hours.



0.5 Bn USD Infrastructure of the Danube ports funding needs

Modernisation of the Danube ports (Izmail, Reni, Ust-Dunaysk) to increase their capacity by 1.7 times - to 25 million tonnes per year. Construction of new terminals in the ports.

uture

Source: The Cabinet of Ministers of Ukraine website; Ukraine Recovery Conference materials

Notes: (1) A part of the National Recovery Plan 2022; (2) High-speed rail; (3) The project was initiated in 2021. As part of the National Recovery Plan, construction of the concession highway aims to increase the capacity of roads to checkpoints in the western part of Ukraine; (4) The International Civil Aviation Organization regulations for aviation safety, security, efficiency, regularity, and environmental protection

AIRLINES WILL PLAY A CRUCIAL ROLE IN ENSURING TRANSPORTATION OF THE PASSENGERS IN UKRAINE

The post-war recovery initiatives in the field of air transport¹

Reconstruction and development of the **airport infrastructure** of Ukraine in line with current ICAO standards in order to service the most widespread types of aircraft.

Provision **of state support** for the air transport industry (airlines, airports, aviation personnel, etc.) to enhance the resilience and competitiveness of Ukrainian enterprises.



Liberalisation of the **regulations of the air transportation market**, aimed at expanding the

international air connections network, increasing the share of lowcost airlines, etc.

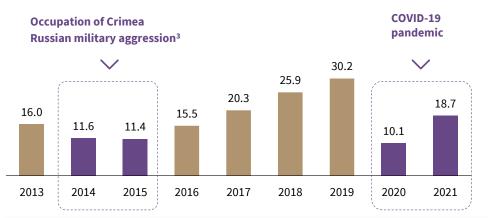
Resumption and development of **air navigation services** in the airspace of Ukraine to ensure the growth of its transit potential and integration with the EU air transport network.

Implementation of the **Common Aviation Area Agreement**, with the purpose of adapting national legislation in the field of aviation services to the EU legislation.

After the beginning of the Russian invasion and the imposition of martial law, **the airspace of Ukraine was closed for civil aviation**, making it impossible for both Ukrainian and international airlines to operate in the country. The suspension of air transport operations led to sufficient losses for airlines,

airports, and other enterprises of the industry. However, the National Recovery Plan of Ukraine implies **active expansion of air transportation of passengers and cargo** in Ukraine after the war by creating favourable conditions for all industry players to develop their operations.

The potential for future development of the air transport services in Ukraine



Passenger turnover in air transport in Ukraine, billion pkm²

Despite the negative impact of different external factors on the air transport system over the past decade in Ukraine, the industry demonstrated its **resilience and a high potential for further expansion and development**.



Source: The Cabinet of Ministers of Ukraine website; Ukraine Recovery Conference materials; Media overview

Notes: (1) Based on the analysis of materials of the Ukraine Recovery Conference 2022; (2) Passenger-km; (3) Beginning and active phase of the Russian military aggression in the east of Ukraine

Future

We can offer our partners mutually beneficial conditions of cooperation

୨୨

Part of the UIA fleet is engaged in wet leasing programmes for other airlines. It is possible due to the exceptional attitude towards the Ukrainian airline by the European aviation authorities under the current circumstances. We are permitted to fly on routes that in other circumstances we would not have counted on. This is a goodwill gesture, and we appreciate it. From a purely perspective, we have to and now we can offer our partners mutually beneficial conditions of cooperation. It is not easy to work outside our home base, but thanks to good teamwork and our partners' support, we continue to maintain a high level of flight safety, as we did at home with our subsidiaries.

YEVHENII DYKHNE

CEO, Ukrainian International Airlines (UIA)

Involvement during Russia's war against Ukraine: Ukrainian International Airlines, headed by Yevhenii, on 24 February have arranged the delivery of passengers who did not reach their homes on 24 February. Ever since the company has been involved in volunteer and humanitarian activities while trying to preserve its stability.

Does the state provide support to the airlines in Ukraine? What additional actions should the state take to support the aviation industry in Ukraine?

I know that the two state-owned airports receive assistance. I do not know about other airlines, but we are solving the problem of obtaining permission for personnel to go abroad on business trips rather quickly with the state authorities. And this is already a considerable help.

War is a badly predictable event: we cannot predict the condition of the aviation infrastructure when the war is over. I believe that we should think about investing in it as soon as we reach a stable state, based on the priorities of the post-war economy. Aviation is just one component of the transport infrastructure that supports the economy. The needs of the economy will have to be considered. There may be more important priorities, such as railways. In that case, with understanding, we will wait our turn.

According to your estimates, what amount of investment is required for the post-war renewal of air transport operations in Ukraine?

I do not estimate investment in the sector as a whole, as well as in individual airports, but I think that there will be no surplus money and it will be necessary to handle it very carefully. Priority will be given to airports that are ready to be opened. That way, we will be able to launch flights from Ukraine to European HUBs, and our citizens will not have to travel abroad for those flights. Further, as far as possible, we will return airports to their pre-war state. We were also pushed back 5 years before the war in traffic volumes, it is difficult to make projections of post-war demand for air transport, as I don't understand the level of decline in purchasing capacity of the population and the stages of development of the post-war economy.

In times of crisis, one thing is clear: rail freight is resilient and reliable

୨୨

This is especially evident during the ongoing Russian war and the successes of the rail bridge and solidarity lanes between Europe and Ukraine. Close integration with European infrastructure will increase economic activities between Ukraine and Europe even more thereby strongly figuring into the rebuilding of the country. Harmonised infrastructure standards are a key factor for a solid integration of the Ukrainian rail sector with the European Union. Ukraine's efforts to make its broad-gauge railway system compatible with the European narrow-gauge systems are highly relevant in this regard.

DR SIGRID EVELYN NIKUTTA

Member of the Management Board for Freight Transport DB AG Chairwoman of the Management Board of DB Cargo AG

Involvement during Russia's war against Ukraine: Together with Deutsche Bahn, Dr Sigrid

Evelyn Nikutta greatly supports Ukraine since the start of the war. Deutsche Bahn, the Germany's railway operator, has sent containers with urgently needed goods (food, warm clothing and medical products), helped Ukraine to export grain, as well as offered Ukrainian refugees employment opportunities.

What are the main trends that post-war Ukraine should take into account when rebuilding its railway industry in order to integrate it into the EU?

Close integration with European infrastructure will increase economic activities between Ukraine and Europe even more, thereby strongly figuring in rebuilding the country. Harmonised infrastructure standards are the key factor for a solid integration of the Ukrainian rail sector with the European Union. Ukraine's efforts to make its broad-gauge railway system compatible with the European narrow-gauge systems are highly relevant in this regard. An expansion of rail terminals in Ukraine will also help to make the necessary supply chains as efficient as possible and to establish strong intermodal transport. This will ensure that the numerous transport needs for reconstruction reach their destination quickly and smoothly.

How can the share of rail freight be maintained, competing with road freight?

To maintain (and increase!) the share of rail freight, rail freight operators must offer multimodal chains as one-stop services that are competitive with road transport in terms of frequency, reliability, flexibility, prices and service. An important policy framework is to ensure that all modes of transport across Europe bear an equal share of their external costs. Policymakers also have a role to play in providing additional incentives for companies to switch to rail and build sidings. The government should promote the extension of rail networks to new industrial areas (e.g. distribution centres, ports). In summary: railway companies, infrastructure managers and policymakers should join efforts on this issue.

DID YOU KNOW THAT UKRAINE IS THE FIRST STATE IN EUROPE TO ENABLE DIGITAL PROOF OF IDENTITY?

In 2020, Ukraine launched the Diia application, which enables Ukrainian citizens to use **digital documents** on their smartphones **instead of physical documents** for identification and sharing purposes¹.

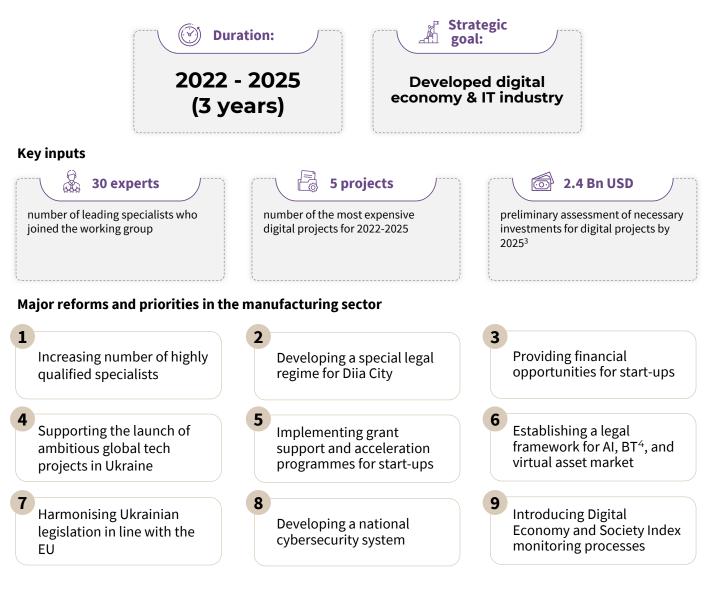


UKRAINIAN IT SECTOR IS EXPECTED TO BE ONE OF THE MOST PROMINENT, WITH HUGE POTENTIAL

In the National Recovery Plan, Ukraine places **significant emphasis on the development and modernisation of the IT industry**, considering it one of the most important value-adding sectors.

The **Ministry of Digital Transformation** is the **main driver** of **IT reforms** and the development of a **digital economy**. The Ministry actively raises **global awareness** of the Ukrainian IT sector and its **perspectives**.

The concept of the post-war Digitalisation Recovery Plan^{1,2}



OPINION CORNER

Ivanna Lima Talks about Information

Operations, and Digital Transformation



Ukrainian IT and digital professionals are renowned worldwide. Highly intellectual specialists helped Ukraine become one of the most digitalised countries in Europe, where all kinds of services are available at your fingertips via a slight scroll of the phone. The development of the IT and digital sectors in Ukraine shows positive dynamics as these sectors stabilise and IT hubs return to their operational activity, continuing to ensure Ukraine's economic security. However, not all startups will manage to maintain stability under the circumstances of ongoing war and may require support.

Technology, Start-ups, Business

Source: Ukraine Recovery Conference materials; Media overview Notes: (1) A part of the National Recovery Plan 2022; (2) Based on the analysis of materials of the Ukraine Recovery Conference 2022, press releases of the Cabinet of Ministers of Ukraine, and articles of the experts in the field of digitalisation; (3) Including confiscated Russian assets, partner grants, partner debt / equity, private investments, and state budget; (4) Blockchain Technology

UKRAINE AIMS TO INCREASE COMPETITIVENESS IN THE IT SECTOR AND SECURE INVESTMENT INFLOWS

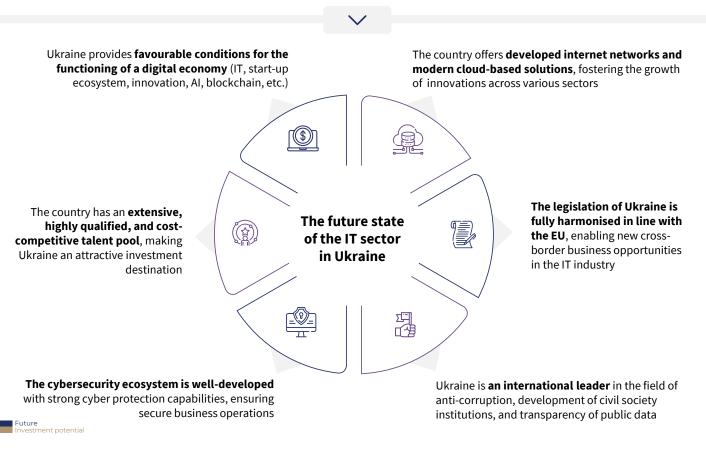
The Ukrainian IT sector poses high potential in the country's future recovery, as it was one of the fastest growing industries and one of the major drivers of the economy before the Russian invasion. The war caused significant disruptions to the IT industry, resulting from the destruction of digital infrastructure and the outflow of skilled IT personnel.

Despite the growing challenges, Ukraine plans to restore and further develop the IT sector in order **to offer favourable and competitive conditions for foreign investors.** During the 2022-2025 period, the country will focus on **growing the talent pool, stimulating start-ups, and attracting global R&D** as key projects of the National Plan.

Key targets of digital projects and reforms by 2025



The implementation of post-war recovery reforms aims to make Ukraine one of the world's leading tech powerhouses. With its combination of existing advantages and future improvements in the field of regulations, infrastructure capacities, and governance policies, the Ukrainian IT industry will become **a valley of opportunities for start-ups and global companies.**

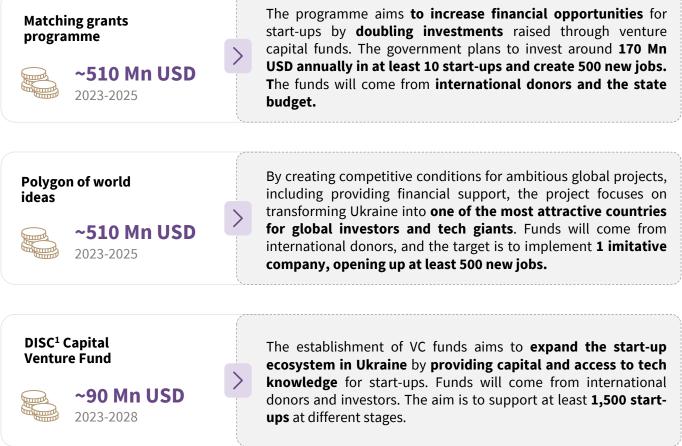


IT SECTOR WILL PROVIDE ATTRACTIVE INVESTMENT OPPORTUNITIES FOR INTERNATIONAL PARTNERS

Major steps on how to support the recovery of Ukraine's IT sector¹

The support of international partners will be **a major determining factor** in the successful implementation of planned reforms and projects. The international community can help restore the IT industry in Ukraine by **attracting global projects**, **developing partnership initiatives**, and providing technical consultations. As a result, foreign investors and global companies will benefit from a fast recovery process, as there will be more unique business opportunities to leverage in Ukraine.





Now is a proper time to strengthen engineering education system

୨୨

Ukrainian IT companies are very dependent on the following three factors: tax burden, availability of engineering education system, and safety factor for employees (i.e. both physical safety and the risk of conscription).

Therefore, the government should take care of these three factors in its policy of 'companies' return' to the Ukrainian market. I am convinced, that the majority of people / employees are willing to come back to Ukraine.

DR NADIIA VASYLIEVA

Co-Founder of Digital Transformation Consulting; CEO of Digital Transformation Institute of Ukraine

Involvement during Russia's war against Ukraine: Nadiia runs the Digital Transformation Consulting, which organises international assistance to the military people of Ukraine and Ukrainians who were forced to become refugees. Initiative contributes by organising international conferences devoted to issues of globalisation, digital economy, business transformations, and development of the state's economy, as well as in partnership with military product markets regarding possible investments, developments, scientific personnel, products, and business models.

According to a draft Recovery and Development Plan IT services are expected to reach a 10% share of Ukrainian GDP by 2025. How would you evaluate such a forecast?

The IT sector does not exist in isolation, it intensively contributes to the development of other economic sectors. Therefore it is necessary to calculate not only the cost of provided services but also IT-driven savings from optimisation and increased productivity.

Digital Economy is a very powerful tool for the country's growth, not only just a separate industry. So, my vision is that this figure (10% of the GDP) should be much higher due to the war and the impossibility of fully reviving the country's economy and reviving the industries and enterprises to the pre-war level.

How do you see IT companies' collaboration with the Ministry of Defence of Ukraine?

I believe that the prospects for cooperation between the MoD¹ with the leading technology and IT companies definitely exist if the MoD and the government work in an honest and open publicprivate partnership format. The MoD must be able to sign and execute not only MOU², but also fulfil valid agreements, trust its partners, and provide for equal mutual responsibility in contracts – these are mandatory conditions for successful cooperation. Being able to work in a free market means negotiating a win-win scenario for both parties. It is also important to be ready to work with non-standard business processes in a more flexible and innovative manner, not to impose own vision of doing business on the partner, i.e. setting requirements for the cost of the product. The only thing required from the state is a clearly formulated order, for which it commits to pay.

DID YOU KNOW THAT UKRAINE IS AMONG THE EUROPEAN LEADERS IN IN ACCESS TO OPEN DATA?

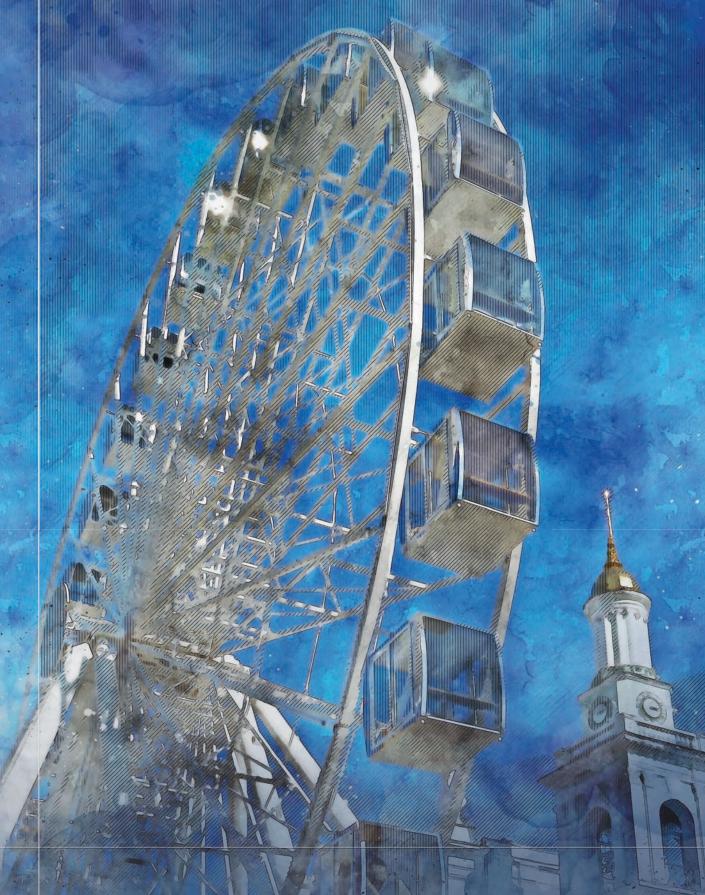


In 2021, **Ukraine** took **6th place** in the **Open Data Maturity rating** among 34 countries, rising from 17th in 2020, and **became a trend-setter** in the field of **open data**.



BALANCED EXPECTATIONS

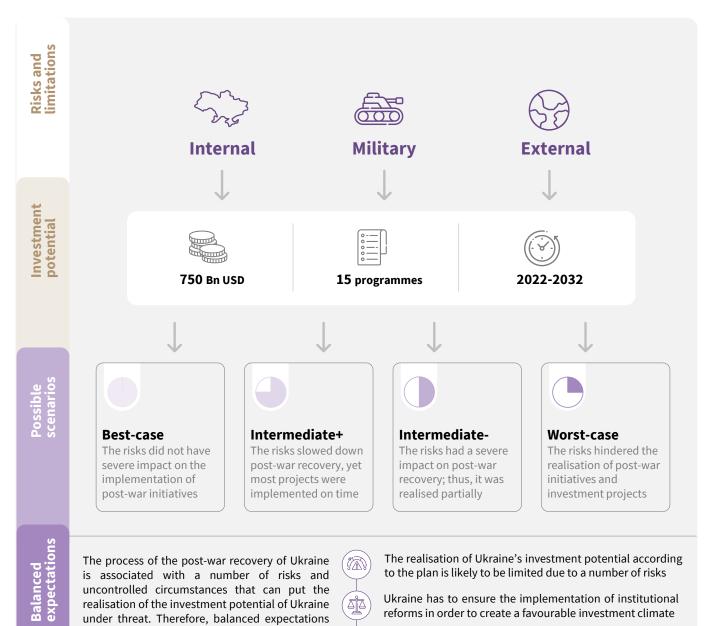
CHAPTER 3.2



NEW AGE UKRAINE WILL BE LARGELY SHAPED BY ITS ABILITY TO WITHSTAND POTENTIAL RISKS

The assessment of the investment potential of Ukraine in the amount of 750 Bn USD, according to the National Recovery Plan, is quite conditional since there are numerous military, internal, and external risks that can either delay or hinder the implementation of projects included in it. Depending on the probability and severity of these risks, there are different **possible** scenarios for the future development of Ukraine. These scenarios, in turn, will define the actual investment potential of Ukraine and the attractiveness of the country to investors. The Ukrainian government does not have the power to impact objective circumstances, yet it is able to mitigate possible internal risks through performing important institutional reforms, developing incentives for investors, and promoting Ukraine as a "magnet" for investments worldwide. International partners, in turn, can leverage emerging investment opportunities by focusing on projects from the sectors with the highest growth potential and ROI, as well as by applying to external advisors that can help navigate the challenging recovery landscape.

The framework for the realisation of the investment potential of Ukraine



(A)

۵ĵ۵

~7

£

The process of the post-war recovery of Ukraine is associated with a number of risks and uncontrolled circumstances that can put the realisation of the investment potential of Ukraine under threat. Therefore, balanced expectations of all the stakeholders are the key to ensuring a reasonable assessment of possible risks and benefits.

The realisation of Ukraine's investment potential according to the plan is likely to be limited due to a number of risks

Ukraine has to ensure the implementation of institutional reforms in order to create a favourable investment climate

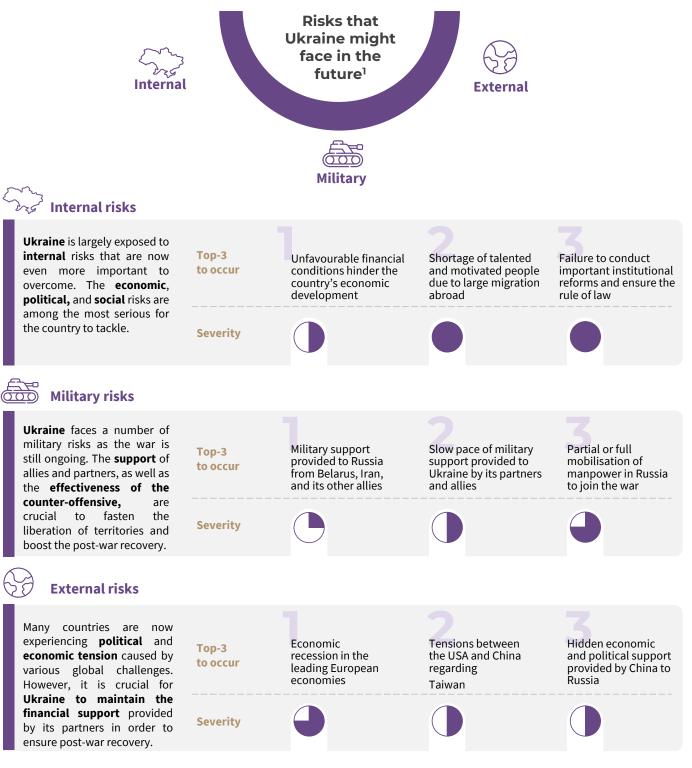
Investors have to focus primarily on the top priority sectors in terms of the number of projects, risks, and potential ROI

Stakeholders should consider attracting external advisors to navigate the risks and leverage investment opportunities

THE REALISATION OF A RECOVERY PLAN MAY SLOW DOWN DUE TO A NUMBER OF POTENTIAL RISKS

The economic and social development of Ukraine has always been influenced by **internal and external groups of risks**. After the beginning of the full-scale Russian invasion, one more additional group of risks has become a determining factor in the country's future development — the **military risks**. This group should be analysed, along with the current internal and external risks for Ukraine, as they will directly or indirectly impact the post-war

development of the country and its **ability to realise economic potential** according to the recovery plan. The risk analysis has demonstrated that **Ukraine has to show solid performance not only on the battlefields but also in conducting reforms** in order to withstand all the potential risks. It will allow Ukraine to both defeat Russia and maintain support from partners in the future period of the post-war recovery.



Future

Notes: (1) Potential risks in this publication are analysed as of mid-September 2022. The list of risks is not exhaustive; their probability and severity may change in the future under the impact of unpredictable circumstances. The purpose of the assessment is to provide the reader with a general understanding of the factors that may impede the post-war recovery process in Ukraine

Source: Kyiv Consulting analysis

INTERNAL RISKS EXACERBATED BY THE WAR MIGHT **NEGATIVELY IMPACT UKRAINE IN THE FUTURE**

Starting from 1991, the development of the Ukrainian economy has been limited by numerous economic, political, and social factors. These factors have not allowed the country to realise its economic potential in full, create a favourable investment climate, and ensure long-term sustainable economic growth. The Russian invasion of Ukraine has become a difficult challenge for all the spheres of the country's life and has led to the exacerbation and emergence of new and existing internal risks. Despite it, Ukraine has all the needed resources and prerequisites to mitigate and/or overcome all these risks during the post-war period. The internal risks should be addressed in a timely manner by the Ukrainian government in order to create a favourable investment climate and achieve sustainable economic development. Ukraine has to show a strong willingness to pursue fundamental institutional reforms in the course toward integration with the European Union.

Internal risks that might impact Ukraine on its way to recovery after the war¹

Probability	Risks		What it means for Ukraine			
High	Unfavourable financial conditions in the country after the end of war	\rightarrow	Inflation, the devaluation of the national currency, high external debt, and high interest rates will hinder the post- war economic development of Ukraine			
	Shortage of talented and motivated people due to large migration abroad	\rightarrow	The emigration caused by the war will lower the economic potential of Ukraine for decades since a large number of talented people might never return			
	Failure to conduct important institutional reforms and ensure the rule of law	\rightarrow	The inability of Ukraine to conduct fundamental judicial, anti- corruption, and public governance reforms will impede the creation of a favourable investment climate in the country			
	High level of monopolisation across the different sectors	\rightarrow	Monopolisation risks, along with the high corruption level, may significantly lower the potential FDI-inflow, thus limiting the realisation of the investment potential of Ukraine	•		
	Bankruptcy of SMEs due to a decline in demand and value chain disruptions	\rightarrow	Significant number of insolvent businesses during and after the war (especially among SMEs) will negatively affect domestic production, demand, employment etc.	•		
	Increased political tensions in Ukraine	\rightarrow	Increased political tensions in Ukraine may play favour to Russia by weakening the power in Ukraine and dividing the society, which might defocus the attention on external threats			
Low	Corruption in the field of military or humanitarian aid	\rightarrow	The possible corruption in the humanitarian and military aid spheres may lead to the reduction of the support provided to Ukraine, especially in the post-war period	0		
	High pressure on the state budget due to the need to provide social support	\rightarrow	Internally displaced people would be a high financial burden for the economy, thus increasing the budget deficit and lowering the economic growth in the future	0		
	The rise of war weariness across the Ukrainians	\rightarrow	The long war, which makes not only economic but also mental burnout, might force the Ukrainian government to sign the treaty on unfavourable terms for the country			

Source: Kyiv Consulting analysis

MILITARY RISKS MAY WEAKEN UKRAINE ON THE BATTLEFIELD AND POSTPONE THE END OF WAR

The economy and business environment of Ukraine are directly impacted by the **military risks**, which could escalate the situation on the battlefields in favour of Russia; hence, the delay in the implementation of post-war recovery plans in Ukraine. Even though Russia has not achieved its military targets for 8 months of the war, it might seek opportunities to end the war on its terms. **Russia actively tries to find financial or military support** from its few allies, such as Iran, Belarus, Syria, and any others that might supply Russia with military equipment. On the other hand, the effectiveness of the Ukrainian counter-offensive operation, which is mainly dependent on the **professionalism of Ukrainian soldiers and military support from the allies of Ukraine,** would directly determine the duration of the war and, therefore, the pace of economic and social recovery of Ukraine in the coming years. If the military support from the allies should diminish in the future, it **may postpone the long-awaited victory of Ukraine in this war**.

Military risks that might impact Ukraine on its way to recovery after the war¹

Probability	Risks		What it means for Ukraine	Severity
High	Military support provided to Russia from Belarus, Iran, and its other allies	\rightarrow	Russia's allies might supply occupiers with various weapons and ammunition, thus allowing Russians to partially cover their losses in the war in Ukraine	
	Slow pace of military support provided to Ukraine by its partners and allies	\rightarrow	Ukraine may receive military support from its partners later than it is expected, hence limiting the ability of the Ukrainian army to liberate all the territories of Ukraine	
	Partial or full mobilisation of manpower in Russia to join the war	\rightarrow	Russia might significantly increase its military capabilities by conducting partial or full mobilisation. This may significantly complicate the counter-offensive of the Ukrainian army	
	Slowdown of the counteroffensive operation of the Ukrainian army	\rightarrow	In case de-occupation measures of the Ukrainian army turn out unsuccessful (due to various reasons), the frontline will stabilise, which may lead to the freeze of the war	•
	Entry into the war in Ukraine of Russia's allies - Belarus, Iran, Syria, etc.	\rightarrow	Ukraine may face more intense hostilities in case the allies of Russia directly join the war by sending their troops on the ground (the highest threat is from Belarus)	•
	The use of a mass destruction weapon by Russia in the war	\rightarrow	The use of nuclear or chemical weapons by Russian occupiers against the Ukrainian army may pose a significant threat of losses in manpower and military equipment	

OPINION CORNER

Iryna Antonova Talks Talks about Military Threats, International Aid, and Future



The ability of Ukraine to enable the future full-fledged recovery in economic, social, and environmental spheres is actually defined by the **success of the Armed Forces of Ukraine on the battlefields right now**. Despite the recent liberation of the Ukrainian territories in the Kharkiv region, there is still a long and difficult way to the victory. Therefore, all the stakeholders both in Ukraine and abroad should keep in mind that primarily we have to **continue actively supporting the Ukrainian army** in the fight against the Russian occupiers.

Source: Kyiv Consulting analysis

Notes: (1) Potential risks in this publication are analysed as of mid-September 2022. The list of risks is not exhaustive; their probability and severity may change in the future under the impact of unpredictable circumstances. The purpose of the assessment is to provide the reader with a general understanding of the factors that may impede the post-war recovery process in Ukraine

EXTERNAL RISKS MIGHT IMPACT THE LONG-TERM SECURITY AND ECONOMIC RECOVERY OF UKRAINE

The implementation of initiatives as a part of the post-war recovery plan of Ukraine is expected to be financed to a large extent through funds received from foreign partners and investors. The ability of Ukraine to attract funds from foreign stakeholders depends significantly on the economic, political and social situation in their countries, as well as on global circumstances. Even in the case of the success of the Ukrainian army on the battlefield, implementation of institutional reforms and the creation of an attractive investment climate, there are still external risks that may hinder the attraction of a large number of funds from investors for the restoration of Ukraine. Therefore, the Ukrainian authorities should take into account various potential external risks that may affect the implementation of the recovery plan in order to balance the expectations of all stakeholders and ensure the most efficient allocation of available resources.

External risks that might impact Ukraine on its way to recovery after the war¹

Probability	Risks		What it means for Ukraine	Severity
High	Economic recession in the leading European economies, like Germany, France, and the UK	\rightarrow	Ukraine may not receive the expected amount of financial support for the post-war recovery due to a recession in Europe caused by energy shortages and elevated inflation	
	Tensions between the USA and China regarding Taiwan	\rightarrow	The USA might partially switch focus from assisting Ukraine to Taiwan, hence lowering the military power of Ukraine in the war against Russian occupiers	
	Hidden economic and political support provided to Russia by China	\rightarrow	The war in Ukraine may last longer if Russia is able to receive support from China in various forms, hence maintaining the capacity to continue the war	
	Political instability within the EU due to the economic crisis and war in Ukraine	\rightarrow	The financial and humanitarian support for Ukraine from the EU may become weaker if the attention of political leaders shifts to internal political struggle	
	Strengthening of economic ties between Asian and African countries with Russia	\rightarrow	Russia could sustain less damage to the imposed sanctions by receiving support from some Asian and African states, hence becoming more powerful on the battlefield in Ukraine	
	Upcoming US Congress and Senate elections	\rightarrow	Elections to the Congress and Senate might shift the focus of US politicians to domestic political struggle, thus lowering the attention on Ukraine	$\mathbf{\Theta}$
Low	New refugee crisis in Europe from Middle East and North Africa	\rightarrow	The inflow of refugees from the Middle East or North Africa will lower the capacity of the EU to provide financial support to Ukraine	
	The outbreak of another pandemic crisis, similar to COVID	\rightarrow	The new pandemic would make the other nations more focused on fighting the outbreak of it, leaving Ukraine without the needed support	Θ
	The direct military aggression of Russia against the country member of NATO	\rightarrow	The potential military conflict provoked by Russia against a country member of NATO may shift the focus from supporting Ukraine to supporting another country	Ο

Source: Kyiv Consulting analysis

Notes: (1) Potential risks in this publication are analysed as of mid-September 2022. The list of risks is not exhaustive; their probability and severity may change in the future under the impedic funpredictable circumstances. The purpose of the assessment is to provide the reader with a general understanding of the factors that may impede the post-war recovery process in Ukraine

uture

POTENTIAL RISKS OUTLINE THE FUTURE SCENARIOS OF THE POST-WAR DEVELOPMENT OF UKRAINE

The analysis of risks has demonstrated that the process of the post-war recovery of Ukraine may happen according to **various possible scenarios**, depending on the probability and severity of the impact of certain threats on the economic, political and social situation in the country. All the possible scenarios for each of the risk groups (internal, military, external) can be conditionally **divided into four cases, from the worst to the best**. Each of

these scenarios will determine the number of resources that can be attracted to invest in the recovery initiatives in Ukraine, the priority sectors of focus, as well as the goals and results that can be achieved. **Due to the changing circumstances, it is almost impossible to predict the most likely scenario**. However, all of them should be considered when balancing the expectations of all the stakeholders of the post-war recovery in Ukraine.

Scenarios that could shape the future growth and development of Ukraine¹

	Scenario A	Scenario B	Scenario C	Scenario D
	Best-case	Intermediate +	Intermediate -	Worst-case
Internal	Ukraine has conducted all the needed institutional reforms and created a favourable investment climate, ensuring the attraction of partners for the post-war recovery	Ukraine has created a favourable investment climate for investors. However, due to certain internal obstacles, some initiatives and reforms have not yet been implemented	Ukraine aims to implement all the needed reforms to ensure a favourable investment climate. However, due to numerous obstacles, the pace of change is quite low	Ukraine has not created a favourable investment climate and conducted fundamental institutional reforms. Other risk factors have hindered the implementation of post- war recovery initiatives
Military	The Armed Forces of Ukraine have managed to liberate all the temporarily occupied territories of Ukraine by the end of 2022. Russia has been defeated in the war and is not able to continue the invasion	The Ukrainian army has managed to liberate the majority of occupied territories in the South and East of Ukraine by the end of 2022. Military support from the West is solid and increases	The Armed Forces of Ukraine have liberated some territories occupied by Russia by the end of 2022. However, the hot phase of the war is still continuing. Ukraine gets no increase in military support from its partners	The Ukrainian army has not conducted any significant counteroffensive operations in 2022. The war has shifted to a stationary phase, and Russia has got time to regain power and repeat the invasion
External	Foreign partners provide significant financial support to Ukraine. Investors actively finance projects across various economic sectors in Ukraine	Ukraine gets financial support from international partners and attracts investors. However, due to certain external obstacles, the amount of received financing is lower than planned	Ukraine has managed to attract certain volumes of investments and financial support. However, due to the negative impact of external circumstances, the scale of financing is not sufficient to realise the majority of recovery initiatives	Ukraine has not received the needed financial support from partners and has not managed to attract investors due to the global political, social, and economic tensions
	\downarrow	\downarrow	\downarrow	\downarrow

What it means for Ukraine's economic recovery and growth

Ukraine has achieved its economic growth targets and realised its investment potential in full (750 Bn USD). The risks have not impacted the implementation of the post-war initiatives severely.

The risks have slowed down the post-war recovery process in Ukraine. However, the majority of initiatives have been implemented due to effective governance and strong financing from partners and investors. The risks have severely impacted the post-war recovery process. Thus, it has been realised only partially. Ukraine has managed to attract only an insignificant part of the expected financing.



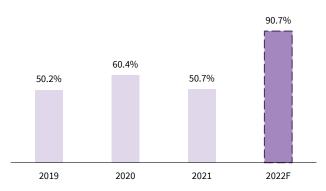
Future anced expectations

Source: Kyiv Consulting analysis Notes: (1) Potential scenarios in this publication are analysed as of mid-September 2022. The purpose of the assessment is to provide the reader with a general understanding of the possible scenarios of the post-war recovery process in Ukraine

UKRAINE IS LIKELY TO EXPERIENCE UNFAVOURABLE FINANCIAL CONDITIONS AFTER THE END OF WAR

During the ongoing war, the threats of **expanding debt burden** and reducing possibilities to refinance it with the domestic resources have increased significantly in Ukraine. In addition, the need to ensure the exchange rate stability and control the inflationary processes during the war has led to a significant **increase in the interest rate** set by the National Bank of Ukraine, which in turn adversely affects business activity in the country. Deterioration of the state of public finance amid the **decreasing**

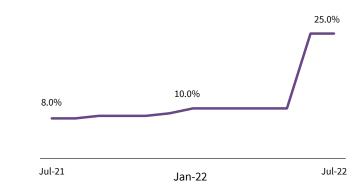
Ukraine's external debt to GDP



defense costs is inevitable, and in the short term it will require effective solutions from the government along with the financial assistance from partners. However, in order to ensure the long-term economic growth of Ukraine after the end of war and the improvement of its financial conditions, it is necessary to focus on the reforms aimed at creating **favorable business environment and investment climate** in the country.

state budget revenues, export earnings, as well as increasing

Key policy interest rate in Ukraine



What it means for Ukraine's economic recovery and growth

As long as the war continues (as well as in the first months after its end), financial conditions in Ukraine will remain difficult, the level of public debt will increase, and business activity will be significantly lower compared to the pre-war level. Debts will put pressure on the budget of Ukraine, diverting significant financial resources from the post-war recovery initiatives and projects

In the current financial conditions, Ukraine has to continue cooperation with international partners and creditors regarding the restructuring of external debt through postponing payments, reducing the amount of liabilities or interest rate etc.. Except for it, Ukrainian government has to use the macrofinancial assistance, which is provided by partners, as effectively as possible

However, in the long-term perspective, the most sustainable way to improve financial conditions in Ukraine is to conduct structural reforms in the country, which will allow to create favourable business and investment climate. The increase in tax revenues will provide the budget with the resources needed to repay the remaining country's liabilities to the creditors

OPINION CORNER

Karyna Voloshyna Talks about Economy, Public Finance, and Recovery



The deterioration of the state of public finance of Ukraine is an **inevitable process caused by the overall economic downturn and damages** that were brought to our country by the war. In these conditions, it is important to focus on leveraging effectively the financial assistance and opportunities of the debt restructuring provided by international partners, as well as on the **structural economic and institutional reforms**. These measures will allow both to address the immediate financial needs of Ukraine and ensure its long-term economic growth.

Ukraine needs a realistic transformation strategy – now or never

୨୨

The jungle of shareholders and stakeholders today is already challenging. We will see a very diverse portfolio of interests related to Ukraine soon. North American interests as well as European interests will partially clash when unfiltered addressed to Ukraine. There will be a lot of expectations after the war from both sides: from the Ukrainians on the West. but likewise from the West on the Ukrainians. In both directions, it will not be easy. Ukraine needs to change and will change. Not only caused by the EU candidacy. Clear and realistic expectation management is necessary for citizens, politicians, and decisionmakers on both sides.

NICOLAI KISKALT

CEO of Kyiv Strategy Consulting

Involvement during Russia's war against Ukraine: Nicolai has worked almost non-stop since 24 February 2022. In the last eight months, he not only evacuated most of the employees safely to Europe but also stabilised the business operations of the business consultancy he is in charge of. Nicolai, known for preferring to stay more in the background, decided to change this approach and became 'loud for Ukraine'. Since Summer he has built a professional network of experts and consultants who are ready to R(Y)SE Ukraine again after the war.

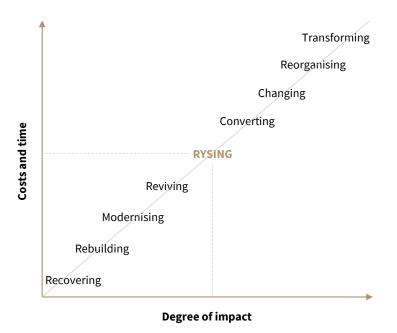
No successful transformation can happen without the skills of consultants. Is it the same when transforming an entire country?

Based on my experience, changes are always causing resistance across decision-makers. That is 100% the case in the private sector transformations as well as 100% in the public sector transformations. Decision-makers have naturally different interests, and any change will push them out of their comfort zone or their area of control. This will cause resistance and therefore risk for the entire transformational approach – sometimes visible but too often invisible. In all cases it is causing damage. To avoid this damage a strong transformation team is needed which will guide the various stakeholders professionally through the transformation agenda. We have developed with our tailored transformation consulting approach 'R(Y)SE' (Rapid Y Solution Environment) the necessary approach for Ukrainian decision-makers to secure the success of the upcoming transformation programme.

What professional capabilities are needed in Ukraine to 'R(Y)SE' the country again?

Most important is that Ukraine needs to agree on a manageable roadmap with realistic milestones and a proper expectation management. It is to expect, that all international consulting firms and big advisory firms will line-up at the President Office with their own transformation ideas for Ukraine. Knowing Ukraine quite well but also being in transformation consulting for more than 16 years, I daub that this would be the right approach, as the only way to secure a sustainable change in Ukraine, should be maintained by Ukrainians themselves. Therefore, we have developed the 'R(Y)SE' approach for Ukraine which secures the buy-in of all stakeholders based on international transformation standards which will lead to a manageable and transparent progress in the interest of everyone.

EXPECTATIONS MANAGEMENT IS REQUIRED TO ENABLE POST-WAR RECOVERY INITIATIVES



The process of the post-war economic development of Ukraine is associated with a number of **external and internal uncontrolled circumstances** that can put the implementation of initiatives at risk and break down the expectations of numerous stakeholders involved in the process. Therefore, **balanced expectations** of Ukrainian and international governments, investors, businesses, and communities are the key to ensuring a reasonable assessment of potential risks and benefits.

The post-war National Recovery Plan implies the gradual realisation of initiatives across various sectors within a 10-year period, aimed at transforming them to a qualitatively new level. However, the way from 'Recovering' to 'Transforming' is exceptionally costly, time-consuming, and depends on a large number of objective factors.

In this regard, we prefer to use more specific wording when describing the future path of Ukraine — 'Rysing'. This definition means a **balanced approach to the postwar economic development of Ukraine** in terms of set goals, existing opportunities, potential risks, and available resources.

Expectations management regarding post-war opportunities in Ukraine

Investment potential of Ukraine

Assessing the total investment potential and identifying the vision for future development

The estimated total investment potential of Ukraine accounts for 750 Bn USD during 10 years within 15 major national programmes. Ukraine aims to become a magnet for international investments and accelerate sustainable economic growth at 7% annually.

Possible risks

Analysing the possible risks that may put the realisation of investment potential at threat

The involvement of stakeholders in the implementation of post-war initiatives may be restricted due to a number of military, external, and internal risks. This may postpone the realisation of some projects and, therefore, negatively impact the achievement of planned targets.

Balanced expectations

Identifying priority areas and the particular steps needed to achieve targets

The prioritisation of sectors and projects with the highest potential, as well as the implementation of reforms aimed at enhancing the investment climate in Ukraine, will ensure the effective and transparent allocation of resources, taking all the risks and limitations into account.

OPINION CORNER

Talks about Strategy, Partnership, Change Management, Trust, and Transformation

Jens Ekopf



The **world stands with Ukraine**, which means the world believes **Ukraine is capable to withstand these horrible times to rise** and become even stronger than it was before. Same as Europe believes that Ukraine has it all to become a reliable partner and a fully-fledged member of the European family. This trust is the starting point of tremendous changes for the entire country. Through joined efforts, we will **manage to implement a huge number of mutually beneficial projects in a balanced and gradual way**.

UKRAINE HAS TO ENSURE THE RULE OF LAW BY PERFORMING MAJOR INSTITUTIONAL REFORMS

The implementation of the post-war recovery and transformation initiatives of various spheres in Ukraine implies **attracting 750 Bn USD of financing from different sources by 2032**, a significant part of which is expected to be obtained from foreign partners. In view of the existing risks and possible scenarios, this task seems to be quite difficult. However, the development of a **favourable investment climate** in Ukraine may help to attract a significant part of the planned funding. In order to create such conditions for investors, Ukraine has to **overcome the structural problems** that have limited its growth over recent years. The most significant among them is the mistrust of judicial and law enforcement systems, such as high levels of corruption, monopolisation of markets, unstable legislation, etc. Based on this, ensuring **institutional effectiveness and the rule of law** by conducting judicial, anti-corruption, and public administration reforms should become fundamental priorities in the recovery plan.

Major pre-war obstacles to foreign investments in Ukraine, points, as of 2020¹

ATA		a ⊐_l_a ŵ						S	
Lack of trust in judiciary	Widespread corruption	Markets mono- polisation	Frequently changing legislation	law		Unstable currency and financial system	Russian military aggression	Restrictive capital and forex controls	Large-scale labor emigration
8.5	8.2	6.2	5.8	5.2	5.0	4.9	4.5	3.8	3.0
High				-					Low

Overview of the major institutional reforms in Ukraine

	Year of sta	rt Status	Further steps
ے Judicial reform	2016	The judicial reform became the largest in the history of Ukraine. It included amendments to the Constitution and the creation of several new institutions. Despite this, it was implemented only partially and not qualitatively enough to form a judicial power that ensures the rule of law.	Ukraine has to ensure a transparent procedure for selecting judges of the Constitutional Court, as well as to complete changes in the High Council of Justice and the High Qualification Commission of Judges.
Anti-corruption reform	2014	Since the beginning of the Anti-Corruption reform, Ukraine has created structures to fight corruption among top officials that, in general, positively affected the level of corruption in the country. However, the pace of implementation of some other measures remains very low.	Ukraine has to ensure a transparent selection process for the position of director of the National Anti-Corruption Bureau of Ukraine, as well as implement an Anti-Corruption strategy until 2025.
Public administration reform	2016	The decentralisation and implementation of the initial stages of the public administration reform, along with the digitalisation of public services, allowed to enhance the effectiveness of the Ukrainian public administration system and provide stability after the start of the war.	Ukraine has to continue the implementation of a comprehensive public administration reform aimed at building local governance, capable of realising initiatives as part of the National Recovery Plan.

OPINION CORNER Dr Stanislava Matvieieva Talks about Law, Reforms, Compliance of Ukrainian legislation with European standards



The **legislation** is a form that **should reflect the Rule of Law**. The investment climate of Ukraine directly depends on **investor confidence**, which **is guaranteed by effective legislation**. Ukraine as an EU candidate **has to fulfill seven blocks of requirements**, the key of which are **anti-corruption and judicial reforms**. The instruments of successful reforming will be the inclusion of the Acquis Communautaire² in the system of legislation of Ukraine at the national level and the **implementation of European standards of Ethics and Compliance** at the local level (in business).

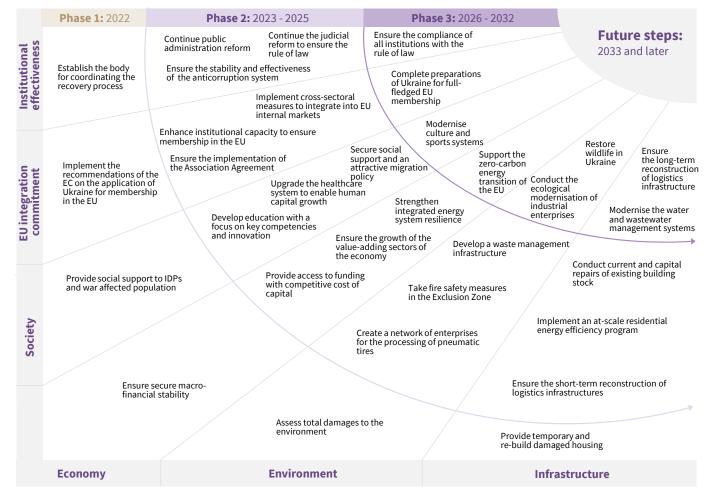
Source: EBA — Foreign Investor Survey — [2020]; Media overview Notes: (1) According to EBA survey of investors, n=117; (2) A mandatory minimum of EU legislation, in accordance with which the domestic legislation of the country must be adapted to become a member of the EU

INSTITUTIONAL EFFECTIVENESS SHOULD BECOME A BASIS FOR THE REALISATION OF A RECOVERY PLAN

The analysis of prerequisites for the implementation of the National Recovery Plan of Ukraine indicates that **institutional effectiveness should become a basis** for the integration into the EU, as well as for the implementation of numerous projects in the social, economic, environmental, and infrastructural domains. The development of each domain will be project-based and will continue for the selected **time horizon of 10 years**. The time horizon is divided into 3-year phases, starting from 2022.

Each phase, having projects from all the considered domains, allows for the understanding of the scope of work for a particular point in time, as well as resource allocation. Considering all the possible risks and constraints, it is also necessary to **prioritise planned projects** regarding the number of required resources, potential benefits, and the expected terms of implementation. Institutional reforms, in turn, should be carried out continuously along with the implementation of projects in each domain.

The largest projects and initiatives as a part of the National Recovery Plan of Ukraine¹



Assessment of funding needs according to the National Recovery Plan



Financing of projects at all three stages of the National Recovery Plan is estimated at **750 Bn USD**, and it is expected to be sourced from confiscated Russian assets, private investments, funds of partners, and the state budget. However, the analysis demonstrated that existing military, internal and external risks might prevent the attraction of such a large volume of resources in full. In order to ensure the maximum inflow of foreign investments and partners' funds, Ukraine has to create a favourable investment climate, primarily by strengthening the anticorruption and judicial systems.

266 Notes: (1) Selected projects. Some of the projects specified in 2020 or the 2023-2025 phase are expected to continue in 2026-2032

Source: Ukraine Recovery Conference materials; Media overview

During the last decade, Ukraine made quite a few steps to fight corruption

୨୨

The National Anti-Corruption Bureau, the Asset Recovery and Management Agency, and the High Anti-Corruption Court should finally receive their permanent heads in transparent and competitive selection. It is also necessary to prioritise the reform of self-governing judicial bodies, use transparent procurement systems for reconstruction efforts, and strengthen the asset recovery systems to help fuel the reconstruction efforts.

OLENA OGORODNIK

Transparent Cities Programme Manager, Transparency International Ukraine

Involvement during Russia's war against Ukraine: Olena Ogorodnik is engaged in volunteer activities, speaks at international forums and conferences on the war in Ukraine, as well as raises questions of the people's safety. Together with the team of Transparency International Ukraine, she provides humanitarian aid to those, who suffered from the war, as well as assistance to the Armed Forces of Ukraine.

What are your overall expectations of how the war will affect the transparency of business and social environments after it ends?

Significant efforts toward greater transparency have already been made. Ukraine and its allies have spent the last decade building a diverse and impressive institutional infrastructure to fight corruption. Moreover, Ukrainian municipalities showed unprecedented city councils' openness in the history of our Transparent Cities programme. As a result, over the last 5 years, the average transparency indicator of the 100 largest cities increased by 62.2%. And there will be even more transparency, as I believe every Ukrainian is interested in fair reconstruction. In particular, there is a working system of anti-corruption bodies — NABU¹, SAPO², HACC³, NACP⁴, and ARMA⁵. In addition, there are various anti-corruption tools — e-declaration, electronic system of public procurement Prozorro, and public property sale / lease system Prozorro.Sale, open state registers, institute of whistleblower protection, a single portal for the use of public funds, etc.

What are the most critical issues that need to be addressed after the war regarding anti-corruption regulations and overall transparency?

While it is unrealistic to expect the country to progress with all outstanding anti-corruption reforms as long as the war is raging, some must be tackled immediately. With robust, enabling, and independent anti-corruption infrastructure, as well as a working system of the inevitability of punishment for corruption, the rebuilding process will become more effective.

The National Anti-Corruption Bureau, the Asset Recovery and Management Agency, and the High Anti-Corruption Court should finally receive their permanent heads through a transparent and competitive selection process. Transparency International Ukraine continues to emphasise that Ukraine needs to provide safeguards against corruption in the reconstruction processes and to ensure there are no abuses.

UKRAINE CAN REALISE INVESTMENT OPPORTUNITIES IN THE PRIORITY INDUSTRIES OF THE ECONOMY

Competitive advantages of the economy of Ukraine for investors

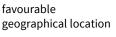


high coverage of consumer markets



A

labour force



large base of natural resources and raw materials

skilled and competitive

opportunities in

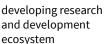
various sectors

investment

favourable cost of living and doing business

Despite the existing risks and limitations regarding the attraction of resources for the recovery of Ukraine from foreign partners, the country's economy offers **a wide range of competitive advantages for investors**. These advantages, combined with the necessary financing, should form the basis for building an economy integrated into global production chains, with a high share of value-added products exported to foreign markets. At the same time, it is necessary to focus on investments in **the most** highly promising





numerous investment incentives schemes

ecosystem of international companies

priority sectors of Ukraine (manufacturing, IT, agriculture, energy, transport & logistics) since they have the **highest potential in terms of competitiveness, number of opportunities, and return on investment**. International investors can highly benefit from leveraging the existing and future opportunities in these sectors, as well as facilitating the recovery and transformation of Ukraine, multiplying the number of business opportunities across various industries and markets.

Priority sectors for international investors in the economy of Ukraine



Manufacturing: The country offers a number of investment opportunities in various manufacturing sectors, including machinery and metallurgy, aerospace, fashion, automotive, and pharmaceuticals. A large manufacturing base, as well as access to talent and markets, create favourable conditions for international investors.

IT sector: An extensive pool of IT professionals, favourable geographical location, strong R&D ecosystem legacy and cost benefits are among the major drivers of investments in the IT sector of Ukraine. More than 100 companies on the Fortune 500 list are the clients of IT services providers from Ukraine.

Agriculture: Ukrainian agricultural sector, being one of the largest sectors in the economy, offers a number of advantages for investors due to attractive land rent prices, extremely fertile soil, competitive wages and logistics. Moreover, Ukraine has a number of opportunities in the high-value-added segments, such as agritech, food processing, and biofuels.

Energy: The way of Ukraine towards energy independence opens up a range of new opportunities for both global energy players and small investors in different segments, from increasing gas production to developing renewable energy sources and enhancing energy efficiency.

Transport: Concession mechanism provides a lot of investment opportunities for the restoration and development of transport infrastructure in Ukraine. The favourable geographic location of Ukraine makes it an important transport corridor for trade between Europe, Asia, and the Middle East.

International investors should also consider investing in production facilities, outsourcing market, and domestic consumer market in Ukraine since projects in these sectors might provide investors with solid returns



Ukraine as a manufacturing hub



Ukraine as an outsourcing hub



Ukraine as a large consumer market

Future Balanced expectation

UKRAINE HAS THE POTENTIAL TO BECOME ONE OF THE LEADING MANUFACTURING HUBS IN EUROPE

The role of Ukraine in global manufacturing supply chains¹

Key products	Share in the global trade	Мс	ost de	pend	ent m	narkets
Neon gas	45-70%)	۲	_	•
Pig iron	22%	ŧ		¢	C	
Steel products	13%	*	U	0		<u></u>
Titanium ore	9%			•		
Ignition wiring sets	4%	•				

Ukraine has already been deeply integrated into the global manufacturing supply chains, especially in the semiconductors, steel, heavy manufacturing, automotive, and aerospace sectors. However, the majority of exported products from Ukraine are low-value-added items and represent only the primary levels of the supply chain. Despite this, Ukraine has the potential to expand high-value-added production, integrate more deeply into supply chains, and become a regional manufacturing hub, especially within the European market.

Opportunities for European investors in the manufacturing sector of Ukraine

Developed R&D network and business ecosystem

Ukraine has a wide network of R&D centres and industrial parks that facilitate the development of the manufacturing sector. Taking into account the trends for digitalisation and the use of high technologies across various spheres in Europe, investors can highly benefit from having access to talent, an R&D network, and a business ecosystem in Ukraine.

Cost efficiency

1

2

3

4

5

European investors can take advantage of efficient competition in the case of developing production capacities in Ukraine. For example, the production of cars in Ukraine is 4 times cheaper compared to Germany, and the cost of labour is almost 3 times lower compared to China, making Ukraine an attractive destination for optimising expenses.

Reliable supply

COVID-19 pandemic, along with the polarisation of China and the USA into the two global geopolitical and economic centres, has seriously affected the supply chains of European companies. Therefore, Ukraine has a unique opportunity to become a key European technological, infrastructural, and manufacturing base, which ensures the resilience of supplies.

Large production capacity

The country's economy has been historically represented by a large manufacturing base, which is currently underutilised due to numerous reasons. Taking into account that many plants in Europe are running at full capacity (for example, in the automotive sector), Ukraine can enable the effective exploitation of under-used capacities in the region.

Highly skilled experts

Ukraine has a large number of qualified engineers who are capable of developing projects in various manufacturing sectors. For example, Ukraine has about 130,000 engineering graduates compared to 22,500 engineers in EU countries annually.

Selected figures on the manufacturing sector in Ukraine²

a a a	A mining	E.R	Ē.	M.
Automotive parts	Aerospace	Fashion industry	Pharmaceuticals	Metallurgy
 More than 30 automotive plants located in Ukraine 60 thousand employees 	 5 engineering and design bureaus 8 manufacturing enterprises located in Ukraine 	 More than 15 global fashion brands have production facilities in Ukraine 70 thousand employees 	 Market growth at a CAGR of 12% over 2016-2020 110+ licensed pharma manufacturers 	 44% in the total export value³ of the manufacturing sector 185 thousand employees

Future

HIGH VALUE WORK AT FAIR COSTS PROVIDES **OPPORTUNITY FOR THE OUTSOURCING HUB**

Ukraine, over the past years, and especially during Russia's war against Ukraine, has shown strong resilience towards the crisis in the IT and outsourcing sector. The so-called Knowledge hub unites subsectors that, in some way, relate to the IT sector and outsourcing. The strong trend on digitalization and Ukraine's capabilities to withstand the most severe risks and threats highlight the Knowledge hub as a favourable area to invest in. A highly educated workforce with rather low compensation and close proximity to the EU would pay off in the future.

IT & outsourcing sector at a glance





The 1st largest export service category >240 K of IT and outsourcing specialists

The 1st

in Eastern Europe by the number of outsourced developers

>5,000

IT companies operate in Ukraine



100 of Fortune 500 companies with remote development teams in Ukraine

Opportunities for European investors in the outsourcing hub in Ukraine

Skilled labour

Ukraine has vast skilled labour force that is capable of doing high value added work. In 2021, over 1 million of people were studying at Ukrainian universities. Most of students to some extent study English, thus have more opportunities to work for international companies

Creative environment

Ukraine has vastly developed startup environment with over 571 Mn USD funding in 2020. Startup accelerators and incubators are developing as well. At least 4 unicorns with Ukrainian roots are currently present of the market

Specialised legal b framework

The Government of Ukraine established Diia.City special legal framework for the technology companies. It is unique framework that provides an opportunity for paying the five times lower taxes while investing in development, education, and IT

Cost efficiency

Ukraine giving its close proximity to the EU and the West has an unique costbenefit conditions. The country salaries remain on quite low level compared to other Eastern Europe countries. In Q3 2021, the average salaries in the IT sector were on average of 931 USD

IT goals and projects under development



Other opportunities for outsourcing in Ukraine





Manufacturing

outsourcing



Professional



40

Process-specific

outsourcing



Project outsourcing



Operational outsourcing

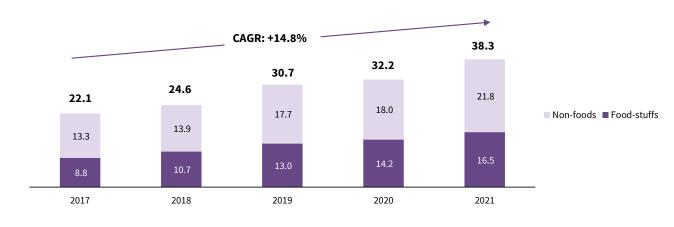
LARGE CONSUMER MARKET IN UKRAINE OPENS UP A WIDE RANGE OF OPPORTUNITIES FOR INVESTORS

Population in selected countries of Eastern Europe, million people

	Country	2000	2021	Change, 2000/2021
-	Ukraine	49.2	43.8	-10.9% 👢
-	Poland	38.3	37.8	-1.2%
	Romania	22.4	19.1	-14.8% 👢
۲	Slovakia	5.4	5.4	+1.1%
	Lithuania	3.5	2.8	-20.1% 👢

Ukraine has an approximately 40-million consumer market, which is almost **2-4 times larger** than any other country in the region. Despite the relatively lower purchasing power of Ukrainian consumers compared to consumers from European countries, investors should consider that such a high number of potential customers may have a positive impact on the demand in some sectors, such as food, drink, tobacco, apparel, pharmaceuticals, personal care, etc.

The decrease in population may become a significant threat to the development of the consumer market in Ukraine. However, the implementation of initiatives aimed at ensuring the post-war economic development of Ukraine and improving the quality of life may slow down or reverse this trend in the future.



Retail turnover of consumer products in Ukraine, Bn USD¹

Retail turnover of the consumer market in Ukraine has been growing at a CAGR of 14.8% over the past years, reaching almost 40 Bn USD in 2021. In 2022, the market is expected to experience a significant decline. However, it has the potential to **recover rapidly after the end of the war**. Therefore, the Ukrainian consumer market is an attractive opportunity for foreign retailers. Until 2006, domestic trade networks significantly prevailed over foreign on the Ukrainian retail market. However, over the past 15 years, the situation in the domestic market has changed dramatically, and now almost **150 foreign brands from more than 25 countries** have opened their stores in the territory of Ukraine. Almost 75% of foreign brands are European trademarks.

Competitive advantages of the consumer market in Ukraine



Ukraine is one of the largest consumer markets in Central and Eastern Europe



The population in the large cities of Ukraine has relatively high purchasing power



Ukraine has a strong domestic food processing and drinks production industry



Ukraine has a large and developed infrastructure for retail trade (trade and shopping centres, etc.)



The growth of e-commerce in Ukraine will become one of the drivers of the consumer market



Consumer market may have high growth potential amid the post-war recovery of the economy



Some market segments in Ukraine are still far from mature, offering new opportunities for entrants



The retail sector in Ukraine has already attracted a number of large multinational brands.

Future Balanced expectations

KYIV CONSULTING IS A RELIABLE PARTNER THAT CAN FACILITATE TRANSFORMATION OF UKRAINE

The post-war recovery of the economy of Ukraine opens up a **wide range of opportunities** for the public and private sector, however it is associated with numerous **risks and unpredictable circumstances**, which can become a significant obstacle to the implementation of planned projects and initiatives. When making management decisions regarding each particular project, business and public sector leaders should make thorough analysis of risks and benefits to ensure the efficient use of resources, and achieve the expected results. **Kyiv Strategy Consulting has the capacity and expertise** to support decision-makers with navigating the challenging post-war business landscape in Ukraine, and maximising the economic and social effect from every project. **The spheres of competence of Kyiv Strategy Consulting** include, inter alia, investment, government delivery, EU readiness check, advanced analytics and decision support, trade and partnerships, as well as sector and cluster development.

As reputable business consultants, our mission is to facilitate efficient and self-sustaining entrepreneurial systems throughout Ukraine based on our values of excellence, reliability, and culture. We support high-impact business entrepreneurs and senior public sector management. In addition, we advise and assist individual and organisational clients in aligning with EU standards. International partnerships include influential economic development organisations with whom we collaborate and acquire valuable insights.





Julia Tatarchenko Talks about Consulting, Business Development, Reforms



We surely do not know when the war will end – no one can predict that. We assume that even the change of the current Russian political elite will not lessen the degree of danger constantly looming over Ukraine. But we know how to adapt to a rapidly changing environment and the consequences thereof – we have experienced that with COVID-19, almost immediately followed by the full-scale Russian invasion. **We know better than anyone else that daunting 'black swans' sometimes bring immense opportunities on their wings.**

uture alanced expectations

WE ARE CAPABLE OF SUPPORTING BUSINESSES AND PUBLIC SECTOR ACROSS VARIOUS MATTERS

Kyiv Strategy Consulting plans to bring together its existing skill sets, broad experience, and noted experts to support Ukrainian reconstruction. By offering Economic Development Consulting (more on what this involves below), the Kyiv-based business consulting group will work to help rebuild the nation's public and private sectors. It will support local, national, and regional government and the public sector as the country moves

The post-war recovery process in Ukraine will offer a large number of investment opportunities in the public and private sectors, which can be funded by international private investors. In order to overcome the possible obstacles during the investment process, here at Kyiv Strategy Consulting we will support leaders and captains of business with designing incentives and strategies to attract private foreign investment into various sectors. Undoubtedly, seeing the big picture is as important as mastering the detailed organisation and processes that will come with new working methods and technologies.



After the end of war, it will be necessary to design and improve delivery systems and procedures to speed up the recovery process in Ukraine. Kyiv Strategy Consulting possesses the expertise and resources needed to enhance government delivery at different levels, by introducing a performance-oriented organisation, culture and metrics. The improved government delivery will be more likely to implement new strategies and deliver on plans in different spheres timely and efficiently, either infrastructure and security projects, or digitalisation, climate-related investments, diversification of energy resources etc.



EU readiness check

The European Commission has already formally admitted Ukraine as a candidate for EU membership and plans to contribute significantly to financial assistance for the postwar recovery. However, representatives of the existing twenty-seven EU countries have made it clear that they also expect Ukraine to make meaningful progress in the reforms in institutional, economic, and environmental fields. Kyiv Strategy Consulting has the necessary expertise to assist government departments and quasi-governmental organisations in their preparations to align with EU integration and funding requirements.

towards integration with the European Union. The consulting group's credentials and connections in the Ukrainian capital are advantageous in delivering focused and effective economic development consulting. Moreover, its hand-picked staff already possess the skill sets and experience - gained in various business sectors - to guide senior decision-makers, public organisations, and commercial entities toward success.

Advanced analytics and decision 🖗 support

By developing analytical and organisational capabilities, Kyiv Strategy Consulting can ensure that business leaders and public policymakers have all the essential information and details to make intelligent decisions in today's rapidly changing situation. New technologies, shifting business models and competition for foreign investment will mean complexity and a degree of urgency. We are ready to advise, guide and support investors, businesses and government departments in reaching their goals with a unique combination of business gurus, strategic partnerships and insightful economic development consulting tools.

Trade and partnerships

According to the National Recovery Plan, the post-war economy of Ukraine should become deeply integrated into the regional and global value chains, driven especially by the EU integration and the development of high value-added manufacturing and agriculture sectors. In this regard, the team of Kyiv Strategy Consulting will be able to facilitate business and public sector leaders in Ukraine with developing international trade partnerships, facilitating trade negotiations, and identifying frameworks to support export development and improve the trade balance.



Sector and cluster development

In order to bring about inclusive economic growth at the national, regional, and city levels, Ukrainian leaders have to identify the sectors, clusters and enablers on which they are to focus. At the same time, the extent of the damage caused by the war means that the traditional approach to economic development is no longer as relevant. Kyiv Strategy Consulting will help policymakers to bring about growth and individual well-being under the new circumstances. By creating work, developing skills and improving access to opportunities and services for all, the country should be able to build foundations for sustainable economic development.

CONCLUSION

The Ukrainian nation has been resisting oppression by Russia for hundreds of years. Beginning from Cossack times in the XVIIth century, Russia tried to transform Ukraine into an 'imperial suburb' and destroy Ukrainian identity. Despite the attempts suppress numerous to the national spirit of Ukrainians, it was not eliminated and awaited for its chance to rise. Therefore, the establishment of the newly independent state by Ukrainians in, oriented at the European course of development, became the beginning of the modern phase of Ukraine-Russia relations that reached its culmination on 24 February 2022 as a full-scale Russian invasion.

The Russian invasion of Ukraine became a difficult challenge for all the spheres of the country's life. The Russian occupying forces committed a number of war crimes and terrorist acts in Ukraine, which caused the death of civilians, destruction of infrastructure objects, disruption of economic chains, pollution of the environment, etc. All the gains and achievements of the Ukrainian nation for the past 30 years were put under the threat of total destruction by terrorists and occupiers from Russia.

At the same time, **the war had a negative impact not only on Ukraine but also on the economies and societies of many countries** around the world, especially in the European Union. This war caused a dramatic reassessment of the global security system and also became a real challenge for the unity and resilience of the civilised democratic world.

Nevertheless, millions of Ukrainians refused to surrender and decided to defend the sovereignty, independence. and territorial integrity of their homeland with weapons in their hands. Side by side with the allies, they are doing their best to bring closer the long-awaited victory over the hundred-year-old enemy and ensure the development of New Age Ukraine, which will be fully integrated into European society.





Despite the ongoing war, Ukraine has already developed and presented the recovery plan along with its partners. It implies developing New Age Ukraine, a strong and independent country with an equal and inclusive society, a sustainable and resilient economy, as well a clean and safe environment. This concept is based on the two strategic imperatives of institutional effectiveness and EU integration.

The implementation of this plan will allow Ukraine to achieve sustainable economic growth and high living standards by 2032, driven by further integration with the European Union, which will make Ukraine an attractive investment destination for foreign businesses. However, it is important to remember that the post-war recovery process is associated with a number of internal and external risks that may delay or hinder the realisation of planned initiatives. Therefore, Ukraine has to demonstrate solid results not only on the battlefields but also on the reformation fields in order to withstand all the potential risks in the coming years.

The recovery process of the economic, social, and environmental spheres in Ukraine **opens up a range of opportunities for foreign partners.** They can contribute to the recovery of Ukraine by providing technical support to the government, making investments in recovery projects, creating equal opportunities for Ukraine as a partner of Europe, as well as delivering financial and other support. **Ukraine is fairly called 'The shield of Europe'.** Since 2014, it has been restraining the imperial ambitions of Russia in the European region, which has taken at least 60,000 lives of Ukrainians. Therefore, Ukraine has already proved its right to become an equal partner of the European countries and a full-fledged member of the European community.

A strong and developed post-war Ukraine of the future will become a reliable economic partner of the EU. Due to a favourable business environment and investment climate, European entrepreneurs will be able to gain access to new markets, a skilled labour force, funding opportunities in different economic sectors, an R&D and industrial ecosystem, as well as other benefits. Ukraine also has a rich mineral base, a highly industrialised economy, and a large agricultural sector. The country is deeply integrated into the global and regional supply chains and plays a vital role in ensuring global food security. Both the public and private sectors in Ukraine are engaged in the development actively and implementation of post-war recovery initiatives. The Ukrainian government, opinion leaders, investors, industry experts, professional services companies, think tanks, research institutions, and others are cooperating closely to leverage the opportunities that will arise in the post-war economy of Ukraine.

Ukraine has strong potential that can be materialised through common efforts to rebuild the country.

CLOSING MESSAGE



<-----

I once again want to take this opportunity to reiterate the importance of KYIV RYSING which is aimed at harnessing the power of information as a driver of awareness and change, as well as educating the global community about what Ukraine is and who the Ukrainian people are.

Under the umbrella of Kyiv Strategy Consulting, it is our duty to the country to highlight and inform the global community that Ukraine is a sovereign nation and it is up to the Ukrainian people to decide their form of government, determine their own foreign policy, strategic alliances, etc. It is not up to Russian Federation or any other third party to dictate the terms of Ukraine's geopolitical existence, now or any time in the future.

In closing, let me share our story during the war. On 24 February 2022, the looming fear of war hung over our employees and the people of Ukraine. The management swiftly started to evacuate our staff and their families. Our journey led us to Krefeld (Germany) and later to Wroclaw (Poland), where we set up a temporary work base in partnership with our shareholders from Germany.

In August 2022, when Kyiv city and the region were liberated, we started to move our operations back to Ukraine. I am proud of all Ukrainians, including our staff, who have been brave enough to go back. As I speak to you today in October, our office in Kontraktova-Square is open, and this is only the first stage of our coming back to Ukraine. Businesses resuming operations, despite the ongoing war, are the lifeline of the country. And we are more than happy to have an opportunity to contribute to Ukraine's recovery through our daily effort.

We salute all those businesses that decided to face the situation head-on through acceptance and adaptation to adverse business conditions. In a scenario where the obvious choice was to close a company and wait for tensions to settle down, they sought an alternative route – where its risk greatly outweighed the reward. We salute all those companies that have graciously shared their income with the Armed Forces of Ukraine simply because they care.

We laud foreign investors who chose to keep their operations running even in the middle of a humanitarian crisis. We thank you, the global audience, for this opportunity to address the situation in Ukraine through sharing the Ukrainian people's common vision for the future.

KYIV RYSING is our call to the international community, donor countries and organisations, investors, and multinational corporations to come to Ukraine and work with us for mutual benefit, assured prosperity, and long-lasting partnerships for years to come.

Respectfully, Nicolai B. Kiskalt Chief Executive Officer Kyiv Strategy Consulting, LLC

WHO WE ARE

Company snapshot

Kyiv Strategy Consulting was established in 2018 by Nicolai Kiskalt. Nowadays, the company is one of the Kviv-based business consultancies, largest employing a team of 130 professionals, having a global footprint of more than 40 countries, and providing consulting services worldwide. The company operates within 6 competence spheres: Strategy & Transformation, Corporate Finance, Digital Consulting, Sales & Marketing, Nearshoring, and Project Management Practices. During 4 years of successful operation, Kyiv Consulting has successfully delivered to its clients around 350 research materials and consulting documents.





Our CEO

Nicolai is an Equity Partner with BDO Germany and, since 2018, Chief Executive Officer of Kyiv Strategy Consulting LLC and BDO Centers in Kyiv. He has 20 years of consulting experience within different top management consulting firms. Nicolai's areas of expertise include strategic and operational transformation processes, as well as performance improvement & turnaround management by leveraging the whole digital world. He is widely recognised as an expert in Outsourcing Advisory Services, Nearshoring Consulting, as well as Sales Transformation. Given his background, he knows how to leverage outsourcing hubs and shared service centres to solve special challenges for clients within the Professional Services Industry, ranging from Audit and Tax Firms, Law Firms, Management Consultants, Asset and Private Wealth Firms, Corporate and Investment Banks, as well as Private Equity and Venture Capital Firms.

History of creation

Nicolai Kiskalt visited Kyiv thrice before he conceived the idea to set up a consulting company there. His first visit took place in 1989 when he primary came as a member of an international health aid project for hospitals in Kyiv. In 2015, in the role of Vice President, he came back to explore Kyiv as a future outsourcing spot for Capgemini, a French IT company that employs more than 340,000 people worldwide. In early 2018, right after he joined the BDO international network as an equity partner, Nicolai Kiskalt launched Kyiv Consulting. In 2019 its first international project took flight - a Shared Service Center (SSC) for the international BDO network of public accounting, tax, consulting, and business advisory firms. The SSC was registered as a Ukrainian legal entity under the name of BDO Centers LLC, a 100% subsidiary of BDO AG (Germany).



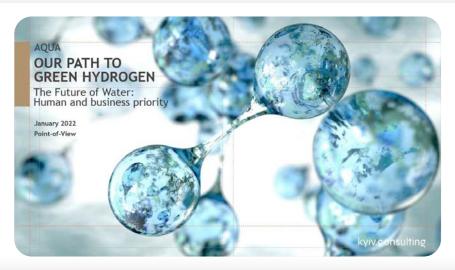
OUR INSIGHTS (1/2)

Twice a year – in Summer and in Winter – Kyiv Strategy Consulting publishes a Point-of-View on important topics, **spreading these pro-bono reports across more than 160 countries.**

Our latest Point-of-View reports (PoV) were translated into 20 languages and have reached 100,000 readers around the world:



PoV 'Water Essential' is the first part of the trilogy 'AQUA. The Future of Water: A Human and Business Priority'. It evaluates and analyses the role of water on the planet and for humanity. The document provides a comprehensive analysis of the risks and challenges related to the uneven distribution of fresh water around the globe. Among the considered topics are political conflicts caused by limited access to fresh water in some regions, as well as the impact of water resources on the countries' social and economic development.





PoV 'Our Path to Green Hydrogen' is the second part of the trilogy. The report reveals the peculiar features of Green Hydrogen as a source of energy and estimates perspectives on its wide-scale production and utilisation. The prospective cost-effectiveness of green hydrogen and its higher energy output & sustainability makes it a fuel of the future. The study also provides overview of the regulatory an environment already implemented worldwide, alongside countries' and corporations' initiatives regarding green hydrogen production.

The aerospace industrv is as prominent today as ever before. Private companies and government agencies are eager to gain more knowledge of the Solar system and, to this end, prepare revolutionary space PoV 'Extraterrestrial missions. **Water'** — the third part of the trilogy covers the history of water in space exploration and key future missions that will have enormous potential to revolutionise the space industry. It also highlights how the further discovery of space water will help boost space tourism.

OUR INSIGHTS (2/2)



Technology and processes of space exploration have changed significantly during the last 50 years. Humanity has realised that moving from nations' competition to cooperation would have higher synergy. **PoV 'Space Race'** is dedicated to the commercial era of the space industry, where private investors step in, taking it to a new level of development. The report's focus is the modern pioneers in the commercial space race — Elon Musk, Jeff Bezos, Richard Branson, and others. It provides a deep dive into the future of the in-space economy and the benefits it will bring to other industries.

COVID-19 is one of the most impactful 'black swans' of the XXIst century — a phenomenon that has changed everything in the world literally: people's ways of life, habits, government policies, economies, and much more. **PoV 'How Does COVID-19 Impact The Environment'** includes a comprehensive analysis of the controversial impact of COVID-19 on the global environment. It covers environmental prerequisites of COVID-19 emergence, both negative and positive effects of the pandemic on the environment, and related future perspectives and challenges.





As the world is on a track to tackling the COVID-19 consequences with numerous vaccines being created and distributed, there is a number of notable process challenges in the of population immunisation across all countries. PoV 'Preparing For The Challenge To Immunise Ukrainians Against COVID-19' was designed to give insights regarding the COVID-19 situation in Ukraine, The report narrative is built around key challenges and solutions of getting the vaccine, its transportation and storage, and mass population vaccination.

PoV 'The Gold Market Future Perspectives' provides an analysis from the past and future perspectives, offering insights regarding the evolving role of gold as both a commodity for industry usage and as a strategic asset for investment and Central Banks usage. The report analyses the possibility for gold to become the protector of investors during crises, considering the impact of the COVID-19 pandemic on the market. The report highlights the gold market's long-term prospects based on actual trends and challenges.



OUR STORY DURING THE WAR (1/2)

Dedication, responsibility, sacrifice — this war has forced us to re-evaluate everything. When we think about the abovementioned concepts now, a bundle of things, decisions, and actions come to our minds: people who have decided to stay in Ukraine and rebuild it; businesses that are permanently dedicated to sharing their net income with the Armed Forces of Ukraine; foreign investors that have never left Ukrainian market despite the highest danger of losing physical assets and human capital here; foreign partners and clients, that have never turned their backs on Ukrainian counterparts, and many other. We are inexpressibly happy and proud today to stand in line with the businesses that have managed to survive and go on serving their clients while supporting the economy of Ukraine. Like other companies, together we have come through the most morally acute phases – the phases of collective acceptance and adaptation – and managed to save jobs, to provide safe working conditions for our employees and their families abroad. KYIV RYSING was created by specialists, from two locations: one in Wroclaw and another one in Kyiv. Here is how we got where we are now:



22 February 2022, Kyiv, Ukraine

Kyiv Strategy Consulting team could not keep calm far before 24 February 2022. Day after day the looming threat of war was becoming more and more evident and realistic, when finally a number of warnings and preparatory measures from the side of the Kyiv Strategy Consulting management team got relevant. 'In case of a case'¹ has come. Next, the company has organised 5 evacuation buses to Krefeld, Germany.



24 February 2022 – off to Krefeld, Germany

In the early weeks of the war, our Management team, in cooperation with our Shareholders from Germany, focused on organising the evacuation and transportation of employees and their relatives to safer locations both in Ukraine and Europe. As a result of the intense efforts, the company has managed to organise a preliminary first stopover in Krefeld, Germany (for 50 employees, 17 children, and 15 family members), ensuring safe and comfortable living and working conditions for the team.



OUR STORY DURING THE WAR (2/2)



February 2022, Krefeld, Germany

Upon arriving at Krefeld, the CEO and the team have levelled off the company's operations, meanwhile organising: a working space, temporary kindergarten managed by the mothers of the employees, a temporary school managed by the mothers of the employees, and donation spots.

 \bigcirc



1 May 2022 - Wroclaw, Poland

In April, the company focused on identifying a second stopover closer to Ukraine, so it was decided to continue the journey in Wroclaw, Poland. The Kyiv Consulting team was accommodated at the hotel in the historical city centre. Joint efforts of management, employees, and partners of Kyiv Consulting determined the resilience of the company in subsequent months of the war.

August 2022 – partial return to Kyiv, Ukraine

After the liberation of the Kyiv region from the Russian occupiers and the strengthening of the city's defence system, the security situation in Kyiv has become more stable. Due to this, Kyiv Strategy Consulting employees expressed a desire to return back to Kyiv. The office in Kontraktova Square is now open again; the company is operating at its full capacity and is ready to support its clients with a full range of consulting services.



CONTRIBUTORS (1/2)

Internal Contributors / Kyiv Strategy Consulting

Aleksandruk Kostiantyn Andrieiev Leonid Antonova Iryna Artemchuk Dmytro Bielia Ivan **Bihar** Natalija Bobrikova Tetiana **Boiprav** Yuliia Bortnikova Sofiia Buidenko Natalija Dr Buresh Inna Cherednichenko Bohdana **Chornobrov** Polina Chornobrovkyna Hanna Demydenko Yevheniia Denysenko Anatolii Diakova Nadija Didenko Anna **Dudliv** Nadija **Dun** Iryna Dykyi Oleh **Dzerun** Oleksandra Fomichov Oleksii Furta Mariia Gavrylenko Sergii Gerasymchuk Nataliia Gryshchenko Igor Hanhanov Kyrylo Herasymenko Larysa Hnydiuk Anna Hontar Denys Horban Marta Horlov Yevhen Hrymak Elvira Hvenetadze Liia Ivchenko Iryna Kalenska Natalija Khomenko Viktorija Klymenko Inna

Kolesnyk Iryna Kolomiiets Darija Dr Koreiba Inna Korobko Anna Koskovetska Iryna Koverdiuk Natalija Kozhara Anna Kravchenko Anastasiia Kravchenko Anastasiya Kravchenko Vladyslav Kravtsova Olena Krupa Alina Kryvozub Kateryna Kuibida Alona Kuleshova Daria Kurilenko Anton Kursik Valentina Kuzmenko Kateryna Lima Ivanna Los Tetiana Lushchyk Viacheslav Maksymenko Oleksandr Marchenko Ivan Martyniuk Yelyzaveta Dr Matvieieva Stanislava Melnikova Anastasiia Melnyk Viacheslav Miroshnychenko Yuliia Mitrokhina Myroslava Muchkina Kateryna Mykhailova-Zinchenko Alina Napkhaniuk Valeriia Ostrovska Veronika Ostryk Andrii Panasiuk Andrii Paramonov Oleksandr Pashchuk Tetiana Petrenko Iryna Poliakova Sofiia

Povrezniuk Dmytro Pylypiuk Alina **Roma** Andrianna Romanchuk Svitlana Rushkovskyi Mykhailo Satko Ivan Shcherbyna Inna Shcherbyna Olha Shevchuk Natalija Shnepa Yuliia Sivkova Kristina Sokolviak Ruslan Sparish Alisa Stepanenko Yevhenii Sudareva Diana Sukhovii Natalia Suslenko Yehor Svystun Yelyzaveta Tatarchenko Yulija Tereshchenko Alona Timchenko Pavlo Tropina Maryna Tsebryk Antonina Vlasova Anna Voloshchenko Olha Voloshyna Karyna Yaroshenko Anastasiia Zabrodska Kateryna Dr **Zhorova** Yevhenija Zolotarenko Yulija

CONTRIBUTORS (2/2)

External Contributors: Interviewees

Averin Dmytro Dr **Babst** Stefanie Dr Baranovska Lesia Dr Baumeister Andrii Boiko Olha Bondaryev Timur Dr Chervonopyskyi Serhii Chykin Ihor Degnera lhor Dehghani Ario Derevyanko Anna **Dickinson** Peter Dr Drobovych Anton Dykhne Yevhenii Fotesko Ivan Fursa Serhii Dr **Gordiienko** Alla Gozak Natalia Herasymchuk Victor Dr Hrytsak Yaroslav Dr Ignatyuk Anzhela

Dr Kapitonenko Nickolay Karpenko Oleksandra Kiskalt Nicolai Klimkin Pavlo Klymchenko Serhiy Dr Klymenko Yulia Korikov Oleh Kovkina Tetiana Kozemyaka Kostiantyn Krasii Yurii Kudin Denys Lindquist Mark J. Longobardo Mauro Lubinets Dmytro Maksymchuk Mariia Matiiash Oksana Dr Misiats Oleksandra Dr Nikutta Evelyn Sigrid **Ogorodnik** Olena Dr Ostrovska Bohdana General David H. Petraeus Dr Podgorna Victoriya Polishuk Lydmila Poroshenko Yulia Rice Dan Dr Rybak Yuliia Ryzhenkov Yuriy Sedler Vitaly Shamrytskyi Hryhorii Dr Sheremeta Roman Smelyansky Igor Sotnyk Olena Dr Swiecicki Marcin Dr Vasylieva Nadiya Vlasova Khrystyna Dr Vykhor Bohdan Dr Yakushik Valentin Yasko Yelyzaveta Zhupanyn Andrii **Ziborov** Oleksii

External Contributors: Communication Committee Members

Hrazhdan Olena Konsevych Olha Luchka Olha Mazur Nadiia Mirochnik Irina Murphy Brendan Christopher J. O'Shea V Prodaniuk Taras

SOURCE OF INSPIRATION

BIOGRAPHIES | INTERVIEWS

DMYTRO AVERIN

Expert Zoï Environment Network (War impact analysis and data management)

Biography: Dmytro Averin is a Ukraine-based environmental expert of Zoï Environment Network. With more than 20 years of experience, he specialises in environmental security, monitoring, assessment, and communication.

Dmytro's professional expertise spans though introduction of information technologies for environmental protection, project development, and creative solutions.

He has hands-on experience and long-standing cooperation with the OSCE on environmental issues in the Donbas region. By introducing a Shared Environmental Information System in Ukraine, Dmytro supported the European Environment Agency and the Ministry of Environmental Protection and Natural Resources of Ukraine.

Kyiv Consulting: Question #1

How would you evaluate the impact of war on the environment of Ukraine and its current state compared to that before the war began?

Dmytro Averin: When military operations are conducted, environmental pollution issues are far from being at the forefront, although the consequences will be long-lasting and tangible for many future generations, not only for Ukrainians but also for the inhabitants of its neighbouring countries.

The war in Ukraine has negatively affected all components of the environment — soils and landscapes, surface and groundwater, air, biodiversity, etc. Military operations in the industrial regions of Ukraine with a large number of environmentally hazardous objects increase the risk of emergencies at industrial enterprises and critical infrastructure facilities.

The main danger to the environment during the war is associated with pollution through accidents and disruptions at industrial enterprises. Since the outbreak of the war, almost all industries have experienced attacks across the country, ranging from Donbas, where cities and factories were destroyed, to the central and western regions of Ukraine. Numerous oil depots, power stations, metallurgical, chemical and petrochemical plants, machine-building, food processing, and agricultural enterprises have been targeted or have been in a situation, where it was impossible to continue operations due to disruption of logistic routes, electricity and gas supplies, lack of water, raw materials, or qualified personnel. Several enterprises have been forced to stop production or evacuate their personnel and equipment.

Since the outbreak of the war, 760 cases of destruction or disruption of operations at more than 400 industrial enterprises and critical infrastructure facilities have been recorded by now, some of which imply potential danger to the population and the environment.

Among the many industrial enterprises that have suffered damage are some of the most environmentally hazardous: Chornobyl and Zaporizhzhia NPPs, Kryvyi Rih, Luhansk, Zaporizhzhia and Vuglegirska CHPs, Avdiivka and Zaporizhzhia coke plants, Mariupol steel plants Azovstal and Illicha, Odesa, Lysychansk and Kremenchuk oil refineries, Severodonetsk 'Azot' plant, etc.

There have also been numerous recorded cases of damaged infrastructure and disconnection of power supply of coal mines, which led to stoppages of mine water drainage systems and, in some cases, to complete flooding of mines.

The war had made it difficult, and in many cases impossible, to deal with waste, especially in settlements along the front line. The traditional household waste has been supplemented with the remains of military equipment, buildings and infrastructure which disposal requires additional capacity and is not possible without preliminary demining and munitions clearance.

Military maneuvers, construction of fortifications, explosions and burning of ammunition have disturbed the surface layer of soil. Use of damaged land, including agricultural land, will be complicated by the need of its reclamation, demining and munitions clearance.

Due to fires, mechanical damage, and logging, most of the forest and forest-protection plantations have already been lost. This leads to a critical reduction in both forest cover and the field-protective, soil-protective, water-protective and recreational functions of forests.

Moreover, changes in biodiversity are being recorded, including extinction of some species and the uncontrolled spread and proliferation of others, in particular those that pose threat to the sanitary and epidemic state of territories and agriculture.

DMYTRO AVERIN

Expert Zoï Environment Network (War impact analysis and data management)

The cost of the war for Ukraine's environment might only be fully assessed when the war is over and access to dangerous areas is obtained. However, it is already clear that this price will be enormous and, in addition to the elimination of the damage caused to the environment, the reconstruction of the destroyed industrial and municipal sectors will also be necessary. Of course with consideration of the modern ecological and climatic requirements.

Kyiv Consulting: Question #2

What are potential consequences of nuclear incidents at one of Ukraine's nuclear plants or other nuclear facilities (both for Ukraine and its neighbouring countries)?

Dmytro Averin: For the first time in the history of mankind, war is taking place on nuclear infrastructure sites. The reality of this has called into question the rules that govern the operation of nuclear plants and other radiation-hazardous facilities during wartime, as well as the ability of the international commonwealth to respond to such challenges.

Among Ukraine's five nuclear power plants and two research subcritical reactors, three were directly affected by the war, namely: the Chornobyl NPP, Zaporizhzhia NPP, Europe's largest and the world's third-largest nuclear power plant by capacity, and 'Dzherelo neytroniv', the neutron source nuclear subcritical facility in Kharkiv.

Other hazardous radiation facilities, located in Ukraine and being therefore at risk, embrace storages of used nuclear fuel and other radioactive waste, sites of underground nuclear explosions, uranium mining and processing facilities, as well as a wide range of research, medical and industrial sources of ionising radiation.

For example, in the occupied territory of Donetsk region, there is 'Junkom', an inactive coal mine, where an underground nuclear explosion was carried out in 1979 as a part of an experiment to reduce tension in the mountain massif. In 2018, the occupation authorities stopped pumping mine water, which resulted in complete flooding of the mine and increased risks of radioactive contamination of both ground and surface water in the region.

Concerns about the occupation of the Chornobyl nuclear power plant on 24 February 2022 were mostly related to risks to the integrity of the sarcophagus, built to protect the environment from radiation in the core of the damaged reactor.

Fortunately, the sarcophagus was not affected. However, the fighting disrupted the power lines that supplied power to the spent fuel pools. As a result of the incident, backup generators had to be used to support cooling.

The occupation of the Chornobyl NPP led to the loss of special hardware and software that supported operation of the radiation monitoring network, as well as of almost all firefighting equipment, vehicles and radiation dosimeters.

Today the Chornobyl zone has been liberated, but there is a growing concern over the actions of the Russian occupiers at the Zaporizhzhia NPP, who resorted to shelling of its territory and threatening to halt operation of the plant. All principles of nuclear safety have been violated: high-voltage lines and the nitrogen-oxygen station have been damaged through provocative shelling by the occupiers, weapons and munitions are stored at the plant, and the dry storage facility for used nuclear fuel is at risk of a damage.

Such actions can lead to considerable radiation contamination of territories not only in Ukraine, but also in the countries of the Black Sea region and Eastern Europe. Therefore, the occupation of the Zaporizhzhia NPP should be stopped immediately and its territory be given over to the Ukrainian authorities. It is critically important that independent inspectors and international organisations are given access to Zaporizhzhia NPP, and its territory gets demilitarised and demined.

DR STEFANIE BABST

Former NATO Deputy Assistant Secretary General

Biography: Dr Stefanie Babst is an internationally renowned publisher and speaker on international security issues and a Board Member of the German Council on Foreign Relations and the Danish Center for War Studies.

Dr Stefanie Babst held different positions in the Public Diplomacy Division which she was appointed to lead as NATO Deputy Assistant Secretary-General during 2006-2012. This made her the highest-ranking German woman in the International Secretariat.

In 2012-2020, she led NATO's Strategic Foresight Team, advising the NATO Secretary-General and Chairman of the Military Committee on strategic unknowns and potential upcoming crises in geographical and functional areas of relevance to the Alliance.

Kyiv Consulting: Question #1

How stable is the current political system in Russia, and what impact the war will have on its dynamics in the next 1 to 2 years?

Dr Stefanie Babst: Over the past twenty years, the Russian President has created a system that carries his name: Putinism. Under Putinism, Russia has turned into an authoritarian, expansionist, backward-looking, and aggressive country. A country ruled by a kleptocratic gang of revisionist FSB agents. Cracking down Putinism can only be done by the Russian people. But we, the democratic world, must not stand idle. Putin seems to believe that he is on the road to victory. He does not show any signs of abandoning his sick fantasies of subjugating Ukraine; nor has he altered his strategic goal of changing Europe's political map with military force. Regardless of the Russian forces' immense losses, the Kremlin seems confident that the West will not be able to sustain a prolonged, indirect military conflict with Moscow for a long time and that solidarity with Kyiv will sooner or later crumble.

He is wrong. The combination of the Western economic and financial sanctions, as well as our multi-layered support for Ukraine, will become a substantial challenge for Putinism. Cracks in the system will not appear overnight. But I am confident they are having an impact on today's Russia. Sooner or later Putinism will falter – simply because people seek to look forward, and not backward.

Kyiv Consulting: Question #2

What is the most effective way of interaction between the two neighbouring states if they have drastically different kinds of political behaviour?

Dr Stefanie Babst: Russia's reckless aggression has created a new reality for the European security, where fundamental principles are contested using brute force. The Kremlin's ambition to recreate a sphere of influence and deny other countries the right to choose their own path is set to remain a fundamental challenge for the European democracies as long as Putin reigns over Russia. Designing a broader and internationally well-coordinated strategy against the regime in Moscow is therefore a must-do for the transatlantic community.

The core objective of a dedicated 'Roll Back Russia' strategy should first and foremost be to insist on the preservation of Ukraine's full and unconditioned state sovereignty and territorial integrity. Only Ukrainians, through their elected political leaders, should freely decide about their future form of governance, security status and external relations. Ukrainian refugees, and in particular those thousands of Ukrainians having been deported to Russian 'education camps', must return to their homes. Acts of war crimes committed by the Russian forces must be prosecuted through the United Nations and the International Criminal Court. These and other related key objectives should be integral elements of a western 'Roll Back Russia' strategy.

DR STEFANIE BABST

Former NATO Deputy Assistant Secretary General

In military terms, this means to prevent Russia from forcibly reducing Ukraine to a rump state, which, without its industrial base in the east and free access to the Black Sea, would suffer the fate of permanent political and economic degradation. Moscow's current course of action is obvious: since it is failing to break Ukraine's determination to defend their country, the Putin-regime seeks to establish a permanent grip over the occupied territories. But Russia's intent to create another Iron Curtain in Europe's midst by force and through ethnic cleansing will not succeed. Re-establishing Ukraine's sovereignty within the pre-2014 borders must therefore be a core objective for Ukraine and its supporters.

Kyiv Consulting: Question #3

In your opinion, what are the Top-3 decisions to be made by the Ukrainian government once the martial law is lifted?

Dr Stefanie Babst: I do not feel well positioned to give any policy concrete advice to the Ukrainian government. But here are a few general thoughts: I have followed quite a few international donor conferences where senior political leaders deliver pompous speeches and make financial commitments. But all too often the disconnect between good intentions and concrete requirements on the ground remained unaddressed. I truly hope this will not be the case for Ukraine. Once the country has re-surfaced from the war with Russia, I believe it will particularly require three things:

The first one is time: time to heal the emotional and physical wounds of millions of Ukrainians who had to endure Russia's terror; time to mourn their personal losses; time to digest the trauma of war; and time to re-establish personal ties, trust, and confidence between all ethnic communities living in the Ukrainian state.

The second one is ownership and participation: while Ukraine's national government and state institutions will be in the driving seat to develop the political and economic framework for the country's reconstruction, the participation of civil society, NGOs, and individual Ukrainians in this process is key. Ukrainians, regardless of their personal background, need to feel empowered to participate actively in the rebuilding of their country.

And the third one is transparency and accountability: whatever political and economic decisions the Ukrainian government is set to take after the war, they must be governed by the principles of transparency and accountability. Without them, trust and confidence in Ukraine's state institutions and governing practice will erode, both internally and externally.

DR LESIA BARANOVSKA

Chair of the Sectoral Expert Council (Mathematics and Statistics) at NAQA; Programme Director at Institute for Applied System Analysis (National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute')

Biography: Dr Lesia Baranovska is a Chair of the Industry Expert Council (Mathematics and Statistics) at the National Agency for Higher Education Quality Assurance. She is a Programme Director in Sectoral System Analysis and Control at National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute' and an External Expert by the Slovenian Quality Assurance Agency.

Lesia has been awarded as the best Associate Professor at National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute'.

She is a member of the American Mathematical Society, a member EWM (European Women in Mathematics) network, a member of the London Mathematical Society, and a member of the Data Science Association (USA).

Dr Lesia Baranovska is a certified mathematician by Imperial College London, Stanford University, the University of British Columbia, the University of Tokyo, and the Hong Kong University of Science and Technology. She is an author of four monographs on Game Theory, as well as 30 textbooks on Higher Mathematics.

Dr Baranovska is an Editor and Reviewer of several international scientific journals in the USA, Japan, Brazil, Estonia, and India. She is a certified expert by Thomson Reuters and Clarivate Analytics.

Kyiv Consulting: Question #1

The COVID-19 pandemic and, subsequently, the war made many Ukrainians shift to online learning platforms. Do you think that online learning is as effective as face-to-face? What has been changed or improved in the online learning model?

Dr Lesia Baranovska: If several conditions are met, online education can be as effective as face-to-face education. First of all, the digital competence of teachers needs to be improved, which is now actively done through various professional development courses. But, of course, not all teachers will be able to acquire these skills, for obvious reasons. It is worth noting that Ukrainian applicants have no problems with it. Second, to introduce high-quality distance learning, universities need to have both material and technical capabilities. By the way, according to licensing conditions, a licensee shall meet the requirements for staff and educational-methodological support, ensure establishment and operation of a management system for such distance learning, as well as for web resources of educational components. Therefore, it is now relevant for universities to create their distance learning platforms and fill them with high-quality content. Just like Stanford has once created its 'Best Start-up 2012', 'Coursera', the National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute', created its online learning platform. Other universities are actively working on it as well.

Kyiv Consulting: Question #2

The war in Ukraine has affected every institution. In your opinion, what impact has the full-scale war had on universities and the KPI in particular? What problems have the universities faced?

Dr Lesia Baranovska: The war has entered every home, every family, and every organisation. Everyone had to face many difficulties, especially at the beginning of the full-scale war. Some universities have been destroyed or relocated to other cities, which entails both financial and psychological issues. Certain reorganisation of the universities has been launched, but, unfortunately, an outflow of talented young people abroad has also been taking place.

At the same time, I would note a certain consolidation of society, in its readiness to withstand challenges. It should also be noted that the Ukrainian education system has greatly accelerated the process of its European integration.

Hopefully, Ukraine, like the phoenix, will revive and resurrect to its best potential.

DR LESIA BARANOVSKA

Chair of the Sectoral Expert Council (Mathematics and Statistics) at NAQA; Programme Director at Institute for Applied System Analysis (National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute')

Kyiv Consulting: Question #3

International trends in the applied and social sciences get changed on an ongoing basis. In your opinion, which fields are in demand now and which ones are going to be in the coming years? Have the priorities changed during the war?

Dr Lesia Baranovska: Yes, over the last twenty years the job market has changed and is going to transform even faster. On its website, Forbes magazine has recently published the most demanded skills and abilities for the next ten years. They include digital literacy (which we have already mentioned), data literacy, critical thinking, emotional intelligence, creativity, collaboration, flexibility, leadership skills, time management, curiosity and continuous learning. Currently, even numerous military experts note these skills with the Ukrainian armed forces, which explains their success on the battlefield.

The US Bureau of Labour Statistics predicts that from 2020 to 2030, the aggregate rate of job creation will be 7.7%. Specifically, for digital control programmers, the growth rate will amount to 27.4%; for operative research analysts, it will be 24.6%; 35.5% for statisticians, and so on. I believe that the priorities in the most in-demand professions have changed during the war, and Ukraine will now need professionals in such areas as IT (in particular, cybersecurity specialists), labour services, such as construction, healthcare, 3D architecture, engineering, Big Data analytics, as well as various military activities – which the entire Ukrainian society has badly felt the need for.

DR ANDRII BAUMEISTER

Philosopher; Public Intellectual; Professor at Taras Shevchenko National University of Kyiv

Biography: Dr Andrii Baumeister is a Ukrainian philosopher, public intellectual, and representative of the public turn in philosophy. He is an expert in ancient and medieval philosophy, ontology, metaphysics, philosophy of law, philosophical textology, and also a translator of philosophical texts from Latin, Ancient Greek, German, and French into Ukrainian.

Andrii Baumeister is a Doctor of Philosophy, Professor of Theoretical and Practical Philosophy at Taras Shevchenko National University of Kyiv. In 2011, his monograph 'Philosophy of Law' was awarded the N. L. Zlotina Prize 'For the best philosophical monograph of the last decade' by Hryhoriy Skovoroda Institute of Philosophy and the Ukrainian Philosophical Foundation. By the national rating 'Book of the Year', his monographs 'At the Origins of Thinking and Being' and 'Thomas Aquinas: An Introduction to Thinking' were recognised as the best books of 2012 under 'Sophia' nomination.

Kyiv Consulting: Question #1

How can the state and society influence the education process in the temporarily occupied territories of Ukraine?

Dr Andrii Baumeister: The government and the public must do everything possible to strengthen the image of the Ukrainian education as being aligned with the European standards and values. This should be the image of education of free and responsible citizens, open to the world, able to defend their own position and oppose all forms of propaganda and external domination. One should emphasise Ukraine's European identity.

Kyiv Consulting: Question #2

How can we stop the outflow of the Ukrainian students to Europe?

Dr Andrii Baumeister: This is not an easy question to answer. The state, society, business, and the public sphere have to work together. It is important to create an environment in which young people feel that they are needed and important. It is clear that it is still difficult for the Ukrainian universities to compete with those in the USA and Europe. But their advantage might be their involvement in the building a modern, intellectual and developed country. It is important to bridge the gap between a university and the labour market, between a university and social life, between a diploma and the possibility of creative self-realisation of young professionals. Everything will depend on what country we are going to build after the victory.

Kyiv Consulting: Question #3

How do you see the education sector after the victory? What issues should the academic community focus its attention on?

Dr Andrii Baumeister: After the victory, the education sector should be more flexible, more connected to practice, and more integrated into the Western education and labour system. There should be less imitation, less bureaucratic requirements and more academic freedom and creativity.

One should consider specific issues of the academic community... Perhaps, what makes us unique? What can we offer Europe and the world? What could become our priorities and advantages?

DR ANDRII BAUMEISTER

Philosopher; Public Intellectual; Professor at Taras Shevchenko National University of Kyiv

Kyiv Consulting: Question #4

Since the start of the full-scale invasion on 24 February 2022, has the mindset of students experienced significant transformation?

Dr Andrii Baumeister: Without a doubt, the mindset of students has undergone transformation. Perhaps, having experienced the war, we should be more authentic, open-minded, ready for serious debate and respectful to one another. An individual's dignity, sovereignty and responsibility must be at the forefront.

Kyiv Consulting: Question #5

How should the education respond to the challenges that the society has faced since the outbreak of the full-scale war?

Dr Andrii Baumeister: I think the answer stems from what has already been said. We are undergoing a test for maturity, both public and private. An autonomous, free and responsible individual should be put at the centre of education.

I would not want educational institutions to impose a 'correct' worldview and intrude on university practices.

We do not need any 'correct' ideologies and state programmes of some 'patriotic' education. This is archaic, in my opinion. Once again: an autonomous, free, and responsible individual should be at the centre of the educational process, able to resist all forms of authoritarianism and propaganda of undemocratic forms of social life.

OLGA BOIKO

Coordinator of the Committee for Industrial Ecology and Sustainable Development of the European Business Association (EBA)

Biography: Olga Boiko has 9 years of experience in the field of Sustainability in the business environment.

In 2013-2020, she managed projects on Diversity & Inclusion, as well as reducing plastic use, waste management and CO2 emissions at Auchan Retail Ukraine.

In 2019, Olga was elected co-chair of EBA Corporate Social Responsibility Committee to promote sustainable business practices.

In 2020, she took the position of a Manager at EBA Industrial Ecology & Sustainable Development Committee, where she continues to promote the implementation of the UN Sustainable Development Goals in Ukraine by working on regulatory changes and establishing a dialogue between the government and business. Olga develops the concept of the EU environmental and climate legislation implementation for Ukraine (carbon border mechanism, EU environmental taxonomy, industrial pollution prevention, emission trade market, biodiversity preservation, circular economy).

As an expert, Olga contributed to development of the National CSR plan of Ukraine, National economic strategy 2030 (Environment and Diversity & Inclusion section), National Recovery Plan of Ukraine (Environmental Safety section).

Olga is a member of the Barrier-Free Environment Council under the Cabinet of Ministers of Ukraine. She participated in the development of the National Barrier-Free Strategy, the Business without Barriers platform and continues working on legislative initiatives on disability employment.

Kyiv Consulting: Question #1

How will the war impact Ukraine's green transition and the alignment of its environmental policy with the European Green Deal?

Olga Boiko: Ukraine has always been supportive of the European Union green transition ambitions to become the first carbon-neutral continent, according to the European Green Deal.

In 2021, several significant steps to the decarbonisation of the economy were made. First, Ukraine has adopted the Second Nationally Determined Contribution under the Paris Agreement to reduce its greenhouse gas emissions by 65% by 2030 from the 1990 levels. This target is more ambitious than the previous ones and even than the commitments undertaken by the EU and other developed countries.

Second, Ukraine has launched the monitoring of the greenhouse gas emissions, which is the initial part of the reporting and verification system, leading to establishment of a market for greenhouse quota trading.

Third, the climate change topic received unprecedented attention at the highest political level in Ukraine, due to which several high-level working groups have been established, including the Intergovernmental Working Group on Climate Change Coordination under the European Green Deal initiative and the Green Deal Focus Dialogue. Another important achievement was the raise of public awareness. According to the results of various sociological surveys, in 2021, 78% of Ukrainians expressed concern about the problem of global climate change and 93% believed that adaptation of measures such as increase in green spaces are necessary in cities and communities. Business community was a real driver of the green transition in Ukraine. According to a survey, held by the European Business Association, climate related issues were among the priorities for all businesses, especially waste management (81%), tree planting (64%), energy efficiency programs (49%) and environmental modernisation (40%).

Russian invasion on 24 February has not only affected the well-being of millions of Ukrainians, but has also set back the efforts in our fight against climate change for decades.

Green transition is now put on hold as state defense, energy security, supply chain restoration and support of people in need are among Ukraine's priorities for the coming years. It would be incorrect to claim that climate issues have been displaced from the political agenda though.

OLGA BOIKO

Coordinator of the Committee for Industrial Ecology and Sustainable Development of the European Business Association (EBA)

The government wants to implement the EU environmental and climate standards into the national legislation by the end of 2022, but the feasibility of these reforms remains unclear. For example, shortly after the outbreak of the hostilities, the government adopted a series of deregulation initiatives, such as temporary suspension of all kinds of reporting, permission to import trucks, buses and special machinery having lower environmental standards, etc. It means that at least this year, there will be no verified data for the greenhouse gases emission and the green transportation reform is delayed, which is also caused by the Russian blockade of Ukraine's ports.

Climate finance has also suffered from the war. The government had an ambitious plan to reconsider the use of funds, obtained from the environmental tax, and the establishment of special environmental funds to finance projects aimed at enhancing energy efficiency. In 2021, 5.9 Bn UAH of environmental taxes were paid to the Ukrainian budget, of which 1.2 Bn UAH for the CO2 emissions. Unfortunately, only 0.216 Bn UAH has been allocated to CO2 emission reduction measures, mainly for renovation of municipal hospitals facades. Current legislation does not provide any access to climate finance for industry and probably won't allow it in the near future. The situation may worsen even for companies that placed green Eurobonds last year. Most of them handle huge, unexpected expenses for the restoration of damaged facilities, which can lead to being late on payments and to reduction of trust of foreign investors.

In 2021, the **energy mix** in Ukraine was also more climate favorable with 55% of energy obtained from nuclear generation, 14% from renewables, 6% from gas and 23% from coal. 66% of Ukrainian renewable energy facilities located mainly in Odesa, Zaporizhzhia, Kherson, Mykolaiv, and Dnipropetrovsk regions, as well as the biggest nuclear power plant in Europe, responsible for around 20% of country's total electricity production. Due to hostilities, majority of the green power production capacities are inaccessible, occupied or destroyed, which may cause a 46% loss of the aggregate renewable energy production. And if the Russians manage to disconnect Zaporizhzhia nuclear power plant from Ukraine, missing kilowatts may be replenished through increased production at coal power plants.

In the pre-war times, **industrial sector** was responsible for most of the CO2 emissions in Ukraine. According to the Kyiv School of Economics (KSE), since the beginning of Russia's war against Ukraine, at least 412 enterprises and factories have been damaged, destroyed or captured by the occupiers. Most of them are large industrial facilities located in the east and south of the country. Plants that survived or that were not damaged continue operating at 30-50% of their capacity or have suspended their operations. Estimated volumes of emissions from industry have decreased by more than 45% from the pre-war levels and continue falling. Due to reduction of the production potential, emissions from the industry and the energy sector are not a major problem for the environment.

Ukraine's environmental sector struggles with severe **staffing shortage**. Many scientists, industrial engineers, environmental experts and other professionals had to join the military forces or have stayed on the occupied territories. Some of them left the country because of a temporary loss of employment and the longer the war lasts, the lower the chances to turn them back.

There is some good news though. Ukraine established a **zero tax rate for imported electric vehicles**. Still, they remain unaffordable for most of the Ukrainians, given their high prices.

Kyiv Consulting: Question #2

What are the major steps that should be taken by the Ukrainian society (government, NGOs, people, businesses) after the end of the war to return Ukraine on the path to climate neutrality?

Olga Boiko: Ukraine would not be able to reach its climate neutrality without external financial support. That is clear now. The international community must join forces to not only defeat the aggressor state, but to meet the climate neutrality target of the continent by implementing the following 7 principles.

- 1. Ukraine must be excluded from the EU carbon border adjustment regulation. Moreover, as an EU member candidate and member of the EU energy system ENTSO-E, Ukraine considers establishing a similar mechanism at its northern and southwestern borders to prevent carbon leakage.
- 2. Reconstruction must be energy-efficient and consider principles of circular economy. The amount of damage to civilian infrastructure reached a staggering 100 Bn USD. More than 10% of this amount accounts for industrial enterprises, about 30% for roads and infrastructure and almost 40% for residential buildings. For example, the use of industrial waste, such as ash, slag and rock materials in cement road construction will not only reduce costs of construction, but will also be beneficial for the environment: first, by decreasing the volume of new dumps for industrial waste; second, by shrinking the size of existing dumps for industrial waste storage; third, by reducing consumption, and, in perspective, extraction and production of sand and gravel. The use of 1 tonne of dry ash in cement production will reduce the CO2 emission by 860 kg, fly ash materials instead of sand by 4 kg/t. And going even further, cement plants can use RDF / SRF alternative fuel from municipal solid waste and industrial waste, as well as the waste of war, to substitute coal and reduce CO2 emission.

OLGA BOIKO

Coordinator of the Committee for Industrial Ecology and Sustainable Development of the European Business Association (EBA)

- 3. The regulation of the electricity market must be changed. Current subsidised consumer tariff for heating from fossil fuels, based upon the framework of special obligations imposed on suppliers of electricity for households, must be replaced with consumptionindependent and more targeted subsidies for vulnerable groups of consumers only. By the way, this measure should help with alignment of the electricity tariffs set for the industry and the population.
- **4.** Accessible financing is vital for climate-neutral recovery. The cost of capital was high in Ukraine before the war and lower operating costs often did not outweigh higher capital costs for 'green' investments. The solution can be found in financial assistance by way of providing soft loans, grants, funding at affordable interest rates or with tax relief. For example, low mortgage rates on certified energy-efficient housing can both revitalise the 'hibernating' construction sector and change consumer habits.
- 5. International private investment must be protected from political risks. According to the latest study of the European Business Association, almost 80% of CEOs noted the deterioration of the investment climate in Ukraine over the past six months. However, 91% of companies plan to stay in Ukraine, and 55% are going to invest in the country even in wartime. The issue concerns, first of all, the renewables industry, which is politically sensitive in Ukraine. The sector still remembers the Nikopol solar power plant case, when after two years of trial Canadian investors have dismantled their equipment and left the city, arguing the justice system was unable to protect their investment from raider attack. During the large-scale war, the sector is trying to resolve the issue of the indebtedness, which has arisen due to restricted payments to the producers of renewable energy and probable cancellation of the green tariff by the government. Judicial reform and investment insurance, covering war risks, will be a prerequisite for attracting new post-war investors.
- 6. Enhancing resilience to climate change through ecological restoration is needed. Climate neutrality goal cannot be achieved without binding and storage of carbon by its natural absorbers (forests, peatlands, soil accumulation). Forests play a crucial role in mitigating the effects of climate change, as they are the main absorbers of CO2. The UN Economic Commission for Europe notes that one tree can absorb up to 150 kg of CO2 per year. Since the beginning of the full-scale war, the ecological damage caused to Ukraine by the Russian occupiers have been at least 202 Bn UAH worth, of which 13 Bn UAH to Ukrainian forests, with 3 Mn hectares occupied and burned. The restoration of nature-protected areas must not affect the economic development though.
- **7. Post-war recovery does not tolerate overregulation.** Probably, deregulation will be pivotal for Ukraine's return on the path of climate neutrality. The more environmental procedures are implemented on both 'people-less' and paperless basis, the faster the economy will recover. Business needs some sort of moratorium on environmental inspections, tightening of environmental standards, environmental tax raising etc. At least for the first years after the war ends.

No one knows when this atrocious and unfair war could end. Hopefully, soon. Nevertheless, everybody can contribute to minimisation of its negative impact. Reasonable regulation policy, international financial support, protection of business activity, as well as support of the Ukrainian military forces, will help us to overcome this difficult time and get back to the path of sustainable growth.

TIMUR BONDARYEV

Arzinger Law Office, Attorney-at-Law, Founding & Managing Partner, Ukraine

Biography: Timur Bondaryev is a Co-Head of Antitrust and Competition, Real Estate, and Construction practices at Arzinger law firm, working with large companies representing various domains, including energy, agribusiness and automotive.

Timur has more than 20 years of professional experience, including working at state authorities and large corporations. He is highly ranked by authoritative international rankings, including The Legal 500, Chambers and Best Lawyers.

Timur is a member of a number of associations, both Ukrainian and international, holding also a position of a Member of the Board of SUP (Ukrainian Entrepreneurs Community), as well as that of a senior lecturer at the National University of Kyiv-Mohyla Academy.

Kyiv Consulting: Question #1

In what format does interaction with customers take place today and what legal services are the most indemand in the conditions of the war?

Timur Bondaryev: From the first days of the war, it was crucial for us to stay in constant touch with our team and our valuable clients, especially those, who left Ukraine and have been scattered all around the world. Regular calls, mailings and webinars have been helping us to support each other in these difficult times and even strengthen our relationship to some extent. Ukrainian business has lived through various crisis situations over the last decades. However, this one is, without a doubt, the most serious test for resilience which we have ever seen. It has therefore shaped the demand for legal services accordingly. Almost all major businesses were forced to go through corporate & financial restructuring, downsizing and adoption of new business models, as well as to revise their supply chains, customer & distribution channels, look for new markets and business opportunities abroad, etc. Some business & personal assets have been damaged or totally destroyed in the course of the russian aggression and it was our role, as trusted legal advisers, to take our clients by hand in this difficult situation and lead them through all these challenges.

Kyiv Consulting: Question #2

In your opinion, what role will the legal business play in the post-war recovery of the Ukrainian economy? Which services will be in the highest demand from businesses and the public sector? Which sectors of the economy will require them most?

Timur Bondaryev: Already at this stage we see numerous serious requests from both public & private sectors related to future rebuilding of Ukraine. We are confident that services provided by major diversified law firms will be very much in demand in the new post-war Ukraine. Property & Construction, Public-Private Partnership, Project Finance, Capital Markets, M&A, Employment, International & Domestic Tax and other expertise will be in great demand in the years to come. Needless to say, significant emphasis will be in the area of damages, russia will have to pay for all crimes & atrocities committed in Ukraine and this process will keep the Ukrainian lawyers and their colleagues from all over the world very much busy for the next decade or two.

TIMUR BONDARYEV

Arzinger Law Office, Attorney-at-Law, Founding & Managing Partner, Ukraine

Kyiv Consulting: Question #3

How do you assess the future of the legal services market in Ukraine? Will the war launch new trends in the market, as well as new business processes at legal companies?

Timur Bondaryev: The post-war legal services market will most probably look very much different, since not all existing players will survive the war. Having said this, those firms which will be able to swiftly adopt and adjust themselves to the new reality, and therefore to survive the war, will be the actual winners. I believe that the world will be very much interested in a new and strong Ukraine. New / old foreign investments will arrive, market shares in all sectors of the economy will be redistributed, new strong players will emerge in every industry and we will see the economy growing dramatically. This will require proper legal support, which shall be provided according to the best international standards.

DR SERHII CHERVONOPYSKYI

Chairman of the Ukrainian Union of Afghanistan Veterans; Lieutenant General; Hero of Ukraine

Biography: Dr Serhii Chervonopyskyi holds the rank of a Lieutenant General and a PhD in Political Science. Being a member of the World Federation of Veterans, other international organisations of combat veterans and the head of the Ukrainian Union of Afghan Veterans, Dr Chervonopyskyi is a well-known state and public figure both in Ukraine and abroad. He is an author and co-author of several books on the History of the Soviet war in Afghanistan. For his courage displayed in combat operations, active civic position, as well as personal contribution to the state activities, he has been awarded numerous orders of Ukraine and was conferred with the title of 'Hero of Ukraine'.

He was elected as a Member of Parliament of the USSR in 1991 and then of the Verkhovna Rada of Ukraine in 2005-2007. In 1992-2005, he was a head of Ukraine's State Committee on Veterans' Affairs.

Today Dr Serhii Chervonopyskyi holds the position of the head of the Ukrainian Union of Afghan Veterans ('soldiers-internationalists'), the most powerful and well-structured civil society organisation of war veterans.

Dr Serhii Chervonopyskyi has considerable experience in preparation and implementation of humanitarian and economic programmes on elimination of the consequences of wars, like release of prisoners of war, establishment of a memorial field and development of historical museums in Ukraine, cooperation with religious organisations, as well as promotion of creative activities among combat veterans to facilitate their psychological rehabilitation. He insists on the need of establishment of a Code of State Social Guarantees, including those for combat veterans of all generations.

Kyiv Consulting: Question #1

There are various power rankings of the world's armies, which usually assess them capacity quantitatively but not qualitatively. Given the character of the modern wars, where countries with a more technologically advanced, but a smaller in size, army have obtained advantage on the battlefield, do you think it would be affair to say that a significant military advantage in terms of numbers can be offset by high-precision and innovative weapons?

Dr Serhii Chervonopyskyi: Power rankings of the world's armies based on the criteria of quantity, quality, technological effectiveness of weapons, etc. can only assess the ability to destroy the enemy and to win a fight or a battle.

However, it is always important to retain the results of conquests. Other established criteria should be used to estimate a state's ability to win a war and reach its ultimate political and economic goals.

Armies of a new type are now at war.

The key factors are still soldiers and officers themselves, their motivation, resilience and courage. It is difficult to transform them to quantitative criteria.

The well-known 'Afghan experience' of the wars of the XX century (the UK and the USSR) and of the XXI century (the USA and the NATO countries) has proved that the number of weapons and the availability of new technologies is a necessary condition, but is still not enough to win.

DR SERHII CHERVONOPYSKYI

Chairman of the Ukrainian Union of Afghanistan Veterans; Lieutenant General; Hero of Ukraine

Kyiv Consulting: Question #2

As military actions with different scales of intensity have been waged since 2014, the issue of reintegration of veterans is important for Ukraine. After the start of the full-scale invasion, this topic has become even more relevant. In your view, what state initiatives and programmes need to be implemented to bring the military back to a full civilian life?

Dr Serhii Chervonopyskyi: Considering such future issues, this has to be tackled at the very beginning of the military service. A wellprepared soldier is more resistant in overcoming various negative situations and cases at military service. He or she gets less traumatised both physically and psychologically.

On top of that, the state must steadily implement the social guarantees which it has undertaken for veterans. In the medical sphere, we should first of all switch to state-sponsored health insurance for the veterans.

In rehabilitation programmes, priority should be given to the families of the deceased soldiers, and to the families of those who became disabled as a result of the war, for whom provision of housing must be a priority.

For most of ex-servicemen who have not been wounded, the main thing is to find a job with a decent wage. This requires programmes of jobs creation and appropriate vocational training.

For soldiers who became disabled due to the war, treatment and prosthetics programmes are essential. At the same time, opportunities for socially useful activities and accessible work must be provided to them.

Kyiv Consulting: Question #3

Ukrainian military personnel are rehabilitated in medical centres located not only in Ukraine, but also abroad, in particular in Europe. How do you see the short- and long-term effects of such assistance from the Ukrainian allies?

Dr Serhii Chervonopyskyi: In the past and now, foreign assistance is used by a limited number of people, fragmented by a diagnosis and timing. We are grateful to our partners for it. But now and after the war, this work needs a systematic and massive approach. It is therefore necessary to develop, on a wider scale, our own national and local medical, psychological and occupational rehabilitation centres, with technological assistance (in the form of equipment and treatment protocols), as well as with account of foreign experience in medical treatment and the material provision of healthcare professionals.

IGOR CHYKIN

Director of Agribusiness, Kernel

Biography: Igor Chykin graduated from Kharkiv National University and National University of Life and Environmental Sciences of Ukraine.

In 2013, Igor joined Kernel as Agribusiness Director. He has an extensive experience in agribusiness.

During 2003-2013, he held Senior Management Positions in the group of companies East-West and was a Vice President of Agrotrade company.

In 2017, he was awarded the Order of Merit of the third grade.

Kyiv Consulting: Question #1

What changes are expected in the production of the main crops in Ukraine, including climate change? Will all the main crops in Ukraine (corn, wheat, barley, sunflower) be the leaders in terms of production volumes in 5-10 years? Which crops will dominate the market?

Igor Chykin¹: All forecasts and production estimates should take into account the military actions on Ukraine's territory, which have a significant impact on the agriculture. The blockade of Ukrainian ports in the Black Sea continues to put pressure on agricultural sector, encouraging farmers to restructure planted areas considering the level of economic independence in the production of various crops.

The most significant changes will be in sunflower and maize crops. Relatively low energy intensity, a high proportion of internal processing, historically high yields, and resistance of plants under stress conditions — high temperatures and moisture deficit – are the factors that encourage Ukrainian agro-producers to choose to increase the planting of sunflowers.

The expected reduction in maize planted area is caused by the high level of energy intensity of the crop, the significant increase in logistics costs due to the collapse of steady supply lines, and the unprecedented rise in the price of gas and mineral additives. This will be a logical way to optimise the land area of agricultural enterprises.

Kyiv Consulting: Question #2

Since March 2022, Ukraine has been exporting grain by rail through Russia's blockade of Ukraine's seaports. How do you assess the prospects for exporting agricultural products by rail, is it a forced decision or does rail transport have potential?

Igor Chykin¹: Development of alternative or otherwise unpopular distribution channels always opens new perspectives. Indeed, after the stress test of the railway infrastructure and awareness of the importance of relocation of logistic routes towards Europe, Ukraine started to create a new important logistics chain. However, we should not expect that export deliveries via the railway and European seaports will fully replace exports via Ukraine's seaports, as railways have different volumes and costs of logistics. Today, this route is a quicker solution due to limited access to the supply channels. On the other hand, shipments of agro-products by railways could become an additional route to the main sea route of export from Ukraine, increasing its potential.

IGOR CHYKIN

Director of Agribusiness, Kernel

Kyiv Consulting: Question#3

What reforms should be implemented in Ukraine to improve business conditions and profitability for crop producers and grain traders?

Igor Chykin¹: Despite all the trials and tribulations of war, Ukraine continues to live: The economy is working, because the businesses are working where it is possible. The agricultural sector is among them. Since the independence of Ukraine, the development of this sector has been ensured by the market players without the help of the state with additional subsidies, which are used to encourage agro-producers in other European countries.

This is the best way to ensure the sustainability of the agribusiness model, which allows the payment of taxes to different levels of budgets, the development of the social sphere, the creation of new jobs, and the advancement of the most powerful sector of the economy. This is a demonstration that simple and clear rules as well as transparent and effective mechanisms of the tax system enable businesses to grow.

Agribusiness today requires stable support more than ever, in particular, a fair, simple, predictable, and transparent tax system based on a permanent tax model, as well as simplified relations between business and the state. The so-called 'resource' law on the balance of budgetary revenues must work, which envisages the implementation of a minimum tax obligation.

This is a good initiative that encourages agricultural producers to pay taxes fairly at different levels by eliminating 'grey' schemes. Combating unfair competition through the implementation of a new tax model with simple and clear rules for all market participants will help the responsible business to survive and continue its development, and, consequently, strengthen the country.

Head of the State Labour Service of Ukraine

Biography: Ihor Dehnera is a graduate in law, accounting and auditing, who dedicated his professional career to Ukraine's labour and employment issues.

He enjoys a long track record in labour service, first at the State Labour Inspectorate of Ukraine (2006 – 2015) and later at the State Labour Service of Ukraine (2015 – present day).

Leveraging 16 years long subject-matter expertise, Ihor Dehnera was appointed as the Head of the State Labour Service of Ukraine in July 2022.

In his new position, Mr Dehnera scaled up the implementation of complex measures aimed at legalisation of employment, as well as improving employees' protection.

Kyiv Consulting: Question #1

On 19 July 2022, the Law of Ukraine 'On Amendments to Certain Legislative Acts of Ukraine concerning Optimisation of Labour Relations' came into force. Should we expect more checks conducted by labour inspectors?

Ihor Degnera: This law amended the Labour Code of Ukraine and the Law 'On organising labour relations under the martial law'.

It regulates several issues of labour relations which had remained unsettled for a long time (e.g. a mechanism for termination of labour relations in case of death of an individual entrepreneur or because of an employee's long-term absence from work for unknown reasons), as well as supplemented the specifics of labour relations during the martial law.

The amendments also provide that, during the martial law, the State Labour Service and its territorial bodies may carry out unplanned measures for checking compliance with the labour legislation (in particular the 'Law on organisation of labour relations during the martial law'), detection of unregistered labour relations, as well as lawfulness of termination of labour contracts. This applies to both legal entities (regardless of their form of ownership, type of activity or economic activity), and individuals who use hired labour.

At the same time, by paragraph 1 of its Resolution # 303 as of 13 March 2022, the Government decided to suspend measures of state supervision and state market supervision (both planned and unplanned) until the end of the martial law period.

At present, the State Labour Service focuses primarily on supporting employers and employees, working under conditions of martial law.

Kyiv Consulting: Question #2

Since the start of Russia's full-scale war against Ukraine, cases of non-compliance with standards of labour conditions and payment of wages have become more frequent. How does the State Labour Service deal with this issue? Is there any way to influence companies to make them respect workers' rights?

Ihor Degnera: Incompliance with labour legislation is not always a result of an employer's deliberate desire to violate the regulations. Very often violations arise from a simple misunderstanding or ignorance of the legal requirements. For this reason, labour inspectors primarily focus on making both parties of labour relations aware of their rights and obligations.

For this purpose, an information portal pratsia.in.ua was created this spring. There, one can find answers to 145 most frequently asked questions regarding organisation of work under the martial law. On top of that, anyone can use the online consultation service and get a specific answer to their question in the shortest time possible.

Head of the State Labour Service of Ukraine

If employees contact the State Labour Service regarding violation of their rights, a labour inspector can contact their employer and explain the requirements of applicable legislation, as well as to warn him/ her about the possible consequences of the violation. The relevant notice may be in writing, or the inspector may come directly to the company for this purpose.

Heeding the labour inspector's advice is the best way to avoid penalties and other consequences of a violation, such as court proceedings, industrial accidents or injuries at work.

Kyiv Consulting: Question #3

On 1 July 2022, the information campaign 'Go to Light!' was launched, to encourage workers and employers to make their employment relations official. In your opinion, how effective is it?

Ihor Degnera: The shadow economy and undeclared work relations do not only limit the state's ability to implement modern social policies in the areas of education, healthcare, skills development, employment, social protection or pensions. They also create and maintain unfair competition with businesses that are fully compliant with the tax and labour protection requirements and provide social security benefits for their workers.

Undeclared labour relations give employers unlimited opportunities to exert pressure on workers and facilitate tax evasion. It also reduces revenues to the national and local budgets. People working unofficially are deprived of their right to decent working conditions, protection of their interests at work and guarantees of social protection.

According to the most recent data published by the State Statistics Committee, the number of unofficially employed people in Ukraine reached 3,061,600 (17.6 % of the total working population). However, compared to 2020, this number dropped by 6.8%. At the same time, share of the officially employed population aged 15-70 rose from 79.7% in 2020 to 80.7% in 2021.

The 'leaders' in terms of unofficial employment relations are (in absolute numbers):

- Agriculture 1,417,200 people (46.3% of the total number of those employed unofficially)
- Wholesale and retail trade 465,400 people (15.2 %)
- Construction 523,500 people (17.1 %)
- Industry 174,500 people (5.7%)
- Transport, postal and courier services 131,600 people (4.3%)
- Hospitality and catering 67,400 people (2.2%)

Since 2014 (excluding 2015), there has been a downward trend in the number of undeclared employment, with its share having decreased from 25.1% of the total working population to 17.6%.

In 2021, the number of those working in the shadow economy was 1,947,200 people (63.3% of all unofficially employed or 12.4% of the total working population).

Employment in the shadow economy declined in absolute terms but increased as a percentage of the total employed unofficially: 53.1% in 2014 (the year when the observations were launched) to 63.3% in 2021.

The highest share of the unofficially employed in the shadow economy is in agriculture, construction, trade, temporary accommodation and catering, as well as transport and courier services. Work aimed at reducing the rate of unofficial employment (including within the shadow economy) will have proper effectiveness only in case all parties unite their efforts. In 2020, the State Labour Service initiated establishment of a permanent working group to discuss further joint actions and develop a joint action plan in respect of the undeclared work issue.

The group came up with the National Joint Action Plan, seeking to reduce the scale of unofficial working relations. A special feature of this plan was its composition at the regional level and presentation in the form of a single document at the national level. More than 500 workers from government agencies, including the State Labour Service, were involved in this work.

The plan envisages organisation of work in risky areas of economic activity in two stages: information and inspection.

Head of the State Labour Service of Ukraine

At both stages, representatives of other state bodies get involved in measures taken by the State Labour Service, within the scope of their competence. The State Labour Service has signed a memorandum of cooperation with the State Tax Service of Ukraine, the State Service of Ukraine for Transport Safety, the National Police of Ukraine, the State Service of Ukraine on Medicines and Drugs Control, the State Migration Service of Ukraine and others.

During the information phase, a large-scale information campaign is conducted, whereas economic agents get informed on risks and consequences of undeclared work, procedures of registration of employment relations, as well as other requirements of the labour and labour protection legislation.

That is why an information campaign entitled 'Go to Light!' was launched on 1 July 2022. It is aimed at employers and those who work during the war, but avoid establishing formal employment relations and are not always aware of the risks and consequences of such actions. At the time, when our country is putting all its energy into fighting the invader, timely payment of taxes is more important than ever, as it helps sustain the county's combat capability.

During the campaign, labour inspectors visit employers, inform them about the requirements of the law, and then monitor the status of their labour relations. Based on the results of the monitoring, lists of risky business entities, which are likely to use undeclared labour, are compiled for exerting control measures within the campaign.

Since the beginning of the campaign, 42,000 information visits to employers have been made, with 23,000 workers legalised by their employers.

If employers do not follow a labour inspector's advice and do not register their workers, they will become subject to sanctions, including fines.

Kyiv Consulting: Question #4

In the past, many companies registered their employees as individual entrepreneurs (IE). Now, with the introduction of the Diia.City regime, regulating IE s in the IT business, businesses are gradually shifting to this new legal model. Do you think this will have an impact on the practice of registration of employees as IEs going forward? Does using IEs as employees constitute a violation?

Ihor Degnera: The legal regime of Diia.City has been introduced to stimulate development of the digital economy in Ukraine by creating favourable conditions for innovative businesses, development of digital infrastructure, as well as attraction of investments and talents. The regime allows using gig contracts, which are essentially civil law contracts. The latter provides that a gig specialist undertakes to perform work or provide services as per requirements of a Diia.City resident. In turn, the Diia.City resident undertakes to pay and provides the gig expert with social guarantees and the appropriate conditions for the performance / provision of the respective works/ services. In other words, a gig contract is not an employment agreement and the conditions of entering it are clearly defined by the law.

In areas other than computer programming, IT consulting, computer hardware management, data processing and the like, gig contracts are not allowed.

If a person performs work or provides services for the benefit of another individual (either physical or legal), doing so as per an established mode and under the direction and supervision of another party; is integrated into the structure of a company; regularly receives remuneration for his/ her work; is entitled to a day off; must perform the respective work personally and cannot outsource it to a third party, this constitutes an employment relationship, regardless of what document has been signed.

Head of the State Labour Service of Ukraine

Kyiv Consulting: Question #5

As of May 2022, more than 250 enterprises in Ukraine have benefited from advisory support from the State Labour Service of Ukraine. What is your estimate of the effectiveness of this support? Have there been any peculiarities or problems with it in the conditions of martial law?

Ihor Degnera: Giving advice and assistance in organising production processes, to preserve and strengthen Ukraine's economy, is the main vector of the activities undertaken by the State Labour Service.

In March 2022, a pilot project of advisory support for the relocated enterprises was launched (Lviv region was the pilot, Vinnytsia, Zakarpattia and Ivano-Frankivsk regions joined in April).

Within the framework of the project, labour inspectors provide, within the scope of their competence, the required consultancy support to all enterprises which need it and have been willing to take part in the project. The subjects of consultations ranged from labour remuneration, dismissal, transfer, idle timekeeping, creation of secure and healthy working conditions, to provision of administrative services, etc.

At the beginning of May, such advisory support was extended to all economic agents.

Any employer can receive counselling on, inter alia, organisation of labour relations, occupational safety, provision of administrative services, investigation of accidents under martial law, etc.

State bodies and local authorities have also joined the initiative of the State Labour Service and contributed to dissemination of information on the possibility to get assistance directly from the authority which handles these issues and exercises control in the relevant areas.

Any enterprise operating in Ukraine can apply for assistance and receive it in a convenient form. For this, an individual needs to visit the 'Employer Advisory Support' section of the information portal and leave an application for advisory assistance. Afterwards, specialists of the State Labour Service will contact the applicant to specify the way of assistance or answer the employer's questions.

Qualified specialists are involved in the provision of counselling, which ensures the work is organised as required by the law. To date, 61,498 enterprises have been informed about the project and the possibility of using the services of the State Labour Service, specifically:

- a) 294 dislocated enterprises
- b) 327 enterprises are partially displaced or in the process of being relocated and 52562 enterprises are carrying out current activities (not relocated).
- c) 44,641 enterprises have agreed to be accompanied and advised.

On 20.05.2022 a separate strand of the project was launched: the provision of advisory support to economic operators who have restricted certain activities or operation of machinery with increased risk due to violations of occupational safety legislation, including the lack of permits and declarations of conformity. The total number of economic operators who restricted their activities is over 400 enterprises; at the same time, from June-July 2022, 444 enterprises used the simplified procedure.

This support for businesses ensures that they can carry out their activities by the law. Such support guarantees that the undertakings will operate by the legislation. And its effectiveness has been proved in practice.

The main problem in organising cooperation between businesses and public authorities is a low level of trust. Recently, we have been trying to change the situation and prove to the business entities that we have one common goal: to ensure compliance with legislation when conducting business activities to ensure the stability of operation and development of the enterprise and the creation and preservation of jobs.

Head of the State Labour Service of Ukraine

Kyiv Consulting: Question #6

What are the prospects and priorities for the State Labour Service of Ukraine after the war?

Ihor Degnera: The main task of the State Labour Service is to ensure compliance with labour legislation to create decent working conditions for every employer both in peacetime and under martial law.

After our victory all the efforts of the State Labour Inspectorate will be to assist in the reconstruction of the country's economy, considering the legislation. Long-term experience shows that once adjusted mechanism can operate for many years.

We plan to continue with employment counselling and online counselling projects. In addition, a set of measures is being developed to eradicate the phenomenon of informal labour as much as possible. In such a civilised country, there is no place for a phenomenon that prevents the economy from developing and for workers and employers to build their relations on the level of partnership and mutual respect.

We are also planning an awareness-raising campaign to build and strengthen public respect for labour protection legislation.

Kyiv Consulting: Question #7

During martial law, businesses and workers are forced to temporarily shut down their operations during air alerts. Or any mechanisms to compensate for downtime?

Ihor Degnera: During an air alert, workers must leave their workplace and stay in special places (bomb shelters) to guarantee the preservation of life and health. In most cases, with a few exceptions, workers cannot continue to carry out their work duties in a bomb shelter. This time is therefore simply not the employee's fault and is subject to payment of at least two-thirds of the employee's pay rate or official salary for all the time the employee is out of work. The collective agreement with a particular economic operator may provide other terms and conditions of payment for downtime, but they may not be less than those stipulated by law. Payment for the downtime period shall be made from the employer's payroll funds.

ARIO DEHGHANI

Counsel at Baker McKenzie

Biography: Ario Dehghani is a Counsel of the Kyiv office of Baker McKenzie and a Head of the Compliance and Investigation Practice Group.

Ario is a Germany-qualified lawyer, admitted to practice in Germany and across the EU.

Ario has worked for Ukrainian law firms as a Head of their Compliance practice and at the Munich office of a leading international law firm for its European investigations, white-collar and fraud team.

Ario is a Co-Director of the Institute of German Law at the National University of Kyiv-Mohyla Academy, an interdisciplinary institution of comparative research focused on German and Ukrainian law. He provides courses on German private and public law and holds open lectures on Compliance and EU law topics.

Kyiv Consulting: Question #1

Against the background of the reducing business activities in all economic sectors after the beginning of the Russian invasion of Ukraine, the demand for professional services including legal services has significantly decreased. What measures have been taken by your company to support the business and secure its functioning in new conditions?

Ario Dehghani: The major resource of our business is our employees. Our management did everything possible to protect our employees from the threats posed by the war, including the relocation of our colleagues and their entire families to other countries (more than 13 countries in the EU). The colleagues that are staying in Ukraine are being supported to continue their work while staying safe and secure.

Since the beginning of the Russian war against Ukraine, the Baker McKenzie Kyiv office has received tremendous support from the Baker McKenzie offices worldwide. Ukrainian colleagues were provided with a safe haven and immense practical support by Baker McKenzie offices in other European countries to which they fled after leaving Ukraine. Many colleagues were included in business projects of other Baker McKenzie offices. Our Kyiv office also had new areas of work due to the changed conditions in our country.

In particular, in the first months of the illegal war, we supported our clients with managing the new conditions. For example, we supported them with corporate restructuring of their entities, the continuation or closure of all business activities in Ukraine, import of humanitarian aid and regulatory compliance issues, especially connected to the changing import / export requirements.

We believe in the great economic future for Ukraine ahead of us. Its future is the further and deeper integration into the EU and the world's economy. Our government's blueprint called 'Ukraine's Recovery Plan', also based on the results of the Lugano conference of 5 July 2022, is expected to raise the number of international investments to the highest level.

Kyiv Consulting: Question #2

In your opinion, what role will the legal business play in the post-war recovery of the Ukrainian economy? Which services (and of which economic sectors) will be in the highest demand from the side of businesses and the public sector?

Ario Dehghani: It is expected that Ukraine will attract approximately 750 Bn USD in external investments through interstate grants, debt / equity loans and private investments such as public-private partnerships. The legal business will have to serve not only the execution stage of these projects but also become engaged in their practical deployment. The legal business will be a necessary pillar for building up the post-war economy structure. We expect that foreign investment will increase to a level never seen before and with it the demand for legal support, also applying to foreign, mainly European, standards.

ARIO DEHGHANI

Counsel at Baker McKenzie

As to the public sector, we expect a higher amount of state tenders. In particular, the infrastructure sector will place an almost indefinite list of tender projects to rebuild the entire infrastructure in our country destroyed by the illegal Russian war. We will also see a peak in foreign private sector investments. In addition, in this regard, it will be imperative to address the higher demand for legal support, also including legal services under Western, mainly European, standards.

We anticipate high demand in the M&A service sphere paired with all corporate legal services necessary to establish and run new business activities in Ukraine. We also see a higher demand for legal services covering anti-corruption support, as well as support in the area of increasingly Europeanised regulatory compliance and data protection. Foreign investors will try their utmost to protect their investments under the rules they need to apply and follow. The legal service provider industry will have to adjust to this new reality to be able to serve the new needs of foreign investors heavily driven by foreign law.

Kyiv Consulting: Question #3

How do you assess the future of the legal services market in Ukraine? Will the war cause the emergence of new trends in the market and business processes of legal companies?

Ario Dehghani: We see a future shift in the legal sector to more Western-driven law support. Ukrainian law itself is expected to become more compliant with European standards. However, the demand for foreign investors will drive changes in the legal market. The war casualties and the overall breakdown of the local economy will hit the purely local-oriented law firms. Global law firms will probably have a competitive advantage to cover the 360-degree scope of needs, also heavily driven by foreign law.

It's likely that more foreign law firms will enter the legal market. They will offer their services, based on their experience with Western law, to the local market and especially to foreign investors.

The product range of the legal services will change as well. The protection of foreign investments in Ukraine will be in strong demand and Ukrainian law firms will adjust to a more European law-driven approach to service, knowledge, experience and standards. Compliance with foreign anti-corruption and Western corporate governance standards will play a key role in protecting the interests of foreign and local investors.

ANNA DEREVYANKO

Executive Director of the European Business Association (EBA)

Biography: Anna Derevyanko is an Executive Director of the **European Business Association** since 2003. The European Business Association is the largest and most influential association of business in Ukraine, uniting around 1000 Ukrainian and international businesses that create over 2 million jobs in Ukraine. Under her leadership, the Association has grown almost 4 times and has expanded to 4 regional branches (Dnipro, Lviv, Odesa, and Kharkiv) – besides Kyiv. Today, the Association is actively involved in the implementation of best European business practices to improve the investment attractiveness of Ukraine. Moreover, Anna is a member of the Supervisory Board of Raiffeisen Bank, Advisory Board Vacuum Deep Tech, member of the GLOBSEC Support Council.

Kyiv Consulting: Question #1

In early August, the Cabinet of Ministers of Ukraine started drafting a bill on an additional, 10% duty fee on currency exchange transactions for the purchase of all imported goods and services. The NBU supported this idea. What impact can the implementation of this initiative have on the economic situation in the country?

Anna Derevyanko: Indeed, the issue is very complex and we do not see a single answer within the business community regarding the effect of this initiative. Of course, business understands the complexity of the situation, in which the country finds itself, as well as the fact that through such initiatives the authorities are trying to stabilise the country's macroeconomic situation and its balance of payments. However, businesses, the population and the entire country have found themselves in unprecedented conditions. Therefore, for the majority of businesses, this initiative will have a negative effect, and in the current conditions, some businesses may not be able to bear the burden, which could result in downsising or closure. The EBA issued a statement in which we described possible negative consequences. In particular, the business sector is concerned that this initiative could be considered by importers (countries) as an extra imports tax for their goods - a discriminating measure for goods and services coming from the countries that previously have applied the 'most-favoured-nation' treatment and abolished their duties for the Ukrainian goods. In addition, the extra tax will inevitably affect the prices for end users.

Moreover, it can lead to increased pressure exclusively on the 'white' business – the tax-payers. In a nutshell, such an extra tax looks like a tax on investments in Ukraine, etc. Therefore, before making decisions, it is important to fully assess all risks stemming from the introduction of such tax, both for the state and for the business. And nowadays we in the Association see the dialogues with the authorities in this regard.

Kyiv Consulting: Question #2

What government initiatives can help re-launch the business, which has been hit hardest by the country's economic decline?

Anna Derevyanko: In fact, the quickest way for businesses to resume their activity is to have an open, transparent and continuous dialogue with the state authorities, since the entire country is in rather difficult circumstances nowadays.

Sometimes taking unpopular decisions is the only way to leave difficult times behind. However, it is important to discuss such decisions (to understand their benefits, as well as associated risks and side effects) and to provide solid argumentation to the parties that will get affected by such decisions. This should be coupled with the rule of stable and consistent norms and procedures, as they are important for the business sector. And these norms and procedures should not be subject to a permanent change. There should be no pressure on the transparent business.

ANNA DEREVYANKO

Executive Director of the European Business Association (EBA)

Now, more than ever, dialogue between business and authorities is required, since we all have to stay afloat together. If we talk about large businesses – they do not expect financial support from the country. Every business owner understands that the country needs to sponsor the Armed Forces and the medical sector. However, for micro and small businesses, financial support is vital, as their safety margin is not as high as that of large companies.

It is worth mentioning that grant programmes, such as 'eRobota' and similar, have been launched and this is an important signal of support for the business sector. However, in order to apply for such programmes, businesses should have confidence and faith that they will get the needed funds. Now, according to a survey of microentrepreneurs, who are members of the Unlimit Ukraine project of the Association, we see that 63% of the surveyed entrepreneurs have used neither governmental nor international programmes to support their businesses. Whereas 16% used the option to pay a 2% single tax, 6% used other tax benefits, 5% used the 5-7-9 lending programme, 3% said they applied for the 'eRobota' programme and 1% used reimbursement for the employment of IDPs. Building confidence is probably what is still worth working on.

Kyiv Consulting: Question #3

What are the main types of problems that Ukrainian businesses face during the war and how has the interaction between business, law enforcement and fiscal authorities changed since the start of the full-scale invasion?

Anna Derevyanko: In early August, the European Business Association measured the investment attractiveness of Ukraine, which considered, inter alia, factors that affected business performance and the overall investment climate of the country.

It is clear that the first place in the ranking was attributed to the war, the second – to corruption and the third – to the weak judicial system, followed by purchasing capacity of the population and logistical issues.

As for the interaction with the authorities, in most cases, we can see that business is heard, and the proposals of the community are ready to be taken into consideration. And this is a good indicator that society is gradually changing and growing. There are certain issues in the dialogue with the public authorities. However, we can see that if we speak honestly and openly about these difficulties, and use arguments and facts, then, for the most part, these issues can be resolved and a compromise can be found. For example, until recently, there were indeed some difficulties in communication with representatives of the Tax Service.

However, the business has started to talk about this situation, and we now see that dialogue is gradually resuming. Dialogue with law enforcement authorities is also taking place. Therefore, we thank the authorities for their work and willingness to cooperate with business!

PETER DICKINSON

UkraineAlert Editor at Atlantic Council

Biography: Peter Dickinson is the editor of the UkraineAlert blog at the Atlantic Council. He is also the publisher of Business Ukraine and Lviv Today magazines.

In UkraineAlert, Peter Dickinson regularly covers the most recent news and analytics on the developments in Ukraine's politics, economy, civil society, and culture. He sources data and insights from a wide pool of thoughtleaders, politicians, experts, and activists from Ukraine and abroad. UkraineAlert holds one of the leading positions in Ukraine's news landscape for its top-notch content and collaboration with other multi-language media in Ukraine.

In 2008, Peter Dickinson launched Lviv Today magazine with its main focus attributed to business and entertainment domains of Lviv's and Ukraine's life, as well as life stories of foreign businessmen, politicians, tourists and residents.

Kyiv Consulting: Question #1

Not many countries, including European ones, seemed to expect that Russia would really invade Ukraine. How could you explain this phenomenon given the track record of Russian international political and military activities in other countries?

Peter Dickinson: Despite the widespread availability of what proved to be highly accurate intelligence reports regarding Putin's intention to launch a full-scale invasion of Ukraine, a mood of widespread scepticism prevailed right up until the launch of the invasion on 24 February. This was true in Ukraine itself and was also the case in Western capitals. Indeed, the available information strongly indicates that very few members of the Russian establishment felt an invasion was imminent.

This scepticism was primarily rooted in the assumption that a full-scale invasion would be disastrous for Russia and would therefore not be a rational option for Putin to pursue. While Putin has a record of using military aggression as a foreign policy tool, he is typically opportunistic and does not like to take undue risks. Events in 2014 illustrate this risk-averse opportunism. The spring 2014 seizure of Crimea was an audacious operation that capitalised on political paralysis in Kyiv due to Ukraine's Euromaidan Revolution and the overthrow of the Yanukovych government. However, when Putin subsequently faced Ukrainian military resistance in eastern Ukraine, he did not escalate further and instead sought to freeze the conflict to achieve his objectives via more conventional diplomatic means. Many concluded that as he did not choose to fight in summer 2014 when Ukraine was weak, he would not risk a full-scale invasion in 2022 when Ukraine was incomparably stronger.

Putin had also called the world's collective bluff in spring 2021 with a prolonged period of sabre-rattling on the Ukrainian border. For over a month, the international media and world leaders watched the Russian military build-up and speculated over whether Putin was about to order a full-scale invasion. However, the confrontation ended in anti-climax with Russia withdrawing most of its troops and downplaying the entire episode. This added to the sense in early 2022 that Putin was merely bluffing and was attempting to bully the West into offering Moscow some kind of concessions.

On a more fundamental level, there was (and remains) a lack of understanding in most Western capitals over the strength of Putin's Ukraine obsession. The Russian dictator's political worldview was formed by his experience as a KGB operative in East Germany during the tumultuous years of the Soviet collapse. He remains haunted by the fall of the USSR and is deeply paranoid about people power movements, which he regards as tools of hostile powers. This has shaped Putin's fixation with Ukraine. He firmly believes that Ukraine has been artificially separated from Russia and sees the emergence of a democratic, European Ukraine as a deliberate attempt to spark the next stage of a Russian imperial retreat which began in 1989. In other words, Putin is convinced that preventing the loss of Ukraine is a matter of existential importance for the survival of the Russian state. Very few Western politicians appreciate this, which explains why they are so often surprised by the drastic measures he is prepared to take in order to prevent Ukraine from escaping.

PETER DICKINSON

UkraineAlert Editor at Atlantic Council

Kyiv Consulting: Question #2

In your opinion, what was the reason for other states to perceive Ukraine as a victim that would not stand against Russia in the first days and weeks of the invasion? What went wrong with the Ukrainian brand image in the past, what lessons can be taken out of this, and how do you expect this to change after the war?

Peter Dickinson: Prior to the invasion of February 2022, Ukraine was probably the most misunderstood country in Europe. Much of this can be traced to the dominant position of Russia in international perceptions of the wider post-Soviet region. This has traditionally been the case in politics, academia and the media. Post-Soviet specialists in the West have typically been primarily interested in Russia and have tended to view other countries in the region through a Russian prism. Likewise, almost all international media coverage of Ukraine since the country first became independent in 1991 was produced by Moscow correspondents whose reports frequently served to perpetuate common Russian stereotypes and negative perceptions of Ukraine.

Ukraine must accept a significant degree of responsibility for the country's low international profile during the first three decades of independence. Successive Ukrainian governments neglected the country's international image and very little was ever done to establish a Ukrainian brand among outside audiences.

Russia has also played a crucial role in shaping Ukraine's unfavourable international image. During Putin's reign, Moscow has placed great importance on information warfare and has become a global innovator in the field of disinformation operations. For much of the past two decades, one of the main thrusts of Russia's infowar activities has been the blackening of Ukraine's reputation on the global stage. Russia has pushed a range of narratives that have sought to portray Ukraine as divided, corrupt and intolerant. These efforts were largely successful in shaping perceptions in early 2022 that Ukraine had no hope of withstanding the might of the Russian military.

The war has shattered many of the myths about Ukraine and dramatically increased global interest in the country. The world now knows Ukraine as a courageous and innovative country and recognises Ukrainians as members of the wider European family with a strong civil society and broadly democratic culture. This will have a major impact on how the country is perceived for many years to come. Postwar Ukraine will likely be seen as a land of opportunity as vast sums of international aid money flood in and Ukrainians look to rebuild their shattered country. Interest in Ukraine will remain high, with all manner of books, films, and other Ukraine-related content expected.

DR ANTON DROBOVYCH

Head of the Ukrainian Institute of National Remembrance

Biography: Dr Anton Drobovych is a Ukrainian public and statesman, expert in the field of communications, education, and culture, head of the Ukrainian Institute of National Remembrance.

During 2013-2016, he was an Assistant to General Director and then a Head of Strategy Service for Museum Planning and Development at Mystetskyi Arsenal. In 2016, he worked as an advisor to the Minister of Education and Science of Ukraine. In 2019, he directed the educational programmes at Babyn Yar Holocaust Memorial Center.

Since December 2019, he has been appointed the Head of the Ukrainian Institute of National Remembrance. He is an alumnus of the leadership seminars 'Values and Society' (Aspen Institute Kyiv), author of more than 50 scientific publications, as well as five educational courses and programmes in philosophy, culturology, and history of culture. He has published a number of expert materials on social development, education, and culture for the leading Ukrainian media.

Kyiv Consulting: Question #1

What influence the state should have on the formation and development of Ukrainian identity?

Dr Anton Drobovych: The government should support initiatives aimed at studying the cultural and national identity of the Ukrainian nation, as well as encourage scientific research that sheds light on the historical, cultural, and political foundations of the formation of Ukrainians as a nation. And of course, those things, which are a part of the national pride and characterise Ukrainians the most, should be promoted by the state and incorporated into the country's brand.

At the same time, it is important to support events aimed at discussing difficult topics and strengthening dialogue about the opposite stories of our past and present because the process of self-reflection and public debate is one of the pillars on the way to formation of a collective identity.

Kyiv Consulting: Question #2

What main stages in the history of Ukrainian identity formation can you single out and what direct influence have they had on Ukrainians?

Dr Anton Drobovych: There are many of them, and it is difficult to single out objectively the main ones. But if we talk about the historical retrospective, there are eras from which we have taken a lot. From the Kyivan Rus times, we took national symbols, a sense of equality of our geographical space to our cultural space, and our most ancient cities (Kyiv, Chernihiv, Galych). It was then, the adoption of Christianity that defined the civilisational orientation of our lands, belonging to the European civilisation.

From the times of the Cossacks, we have military traditions, valuable practices of local self-government, heraldic practices, and traditions of patronage of the arts. From the times of the Ukrainian National Republic, we took the history of our first full-fledged statehood, traditions of democracy, and elements of the military system.

In a nutshell, this experience of statehood and struggle was important for the next national liberation movement in the 20th century. It also forced the communists, at least in the early stages of the USSR's creation, to reckon with national needs. This conditioned the format of the union of individual republics, even if their separateness was declarative. It, therefore, laid the foundations for the emergence of an independent Ukraine within the internationally recognised borders that we have today.

DR ANTON DROBOVYCH

Head of the Ukrainian Institute of National Remembrance

Kyiv Consulting: Question #3

In your opinion, what are the core values of Ukrainians and what factors have influenced their development?

Dr Anton Drobovych: The main ones are freedom, dignity, justice, and self-sufficiency in the understanding of economic independence. A long history of being suppressed by empires and the memory of the glorious times of Cossacks have created an immense desire for freedom — to live as they have decided for themselves, without a king, lord or oppressor.

Such things as rethinking the experience of World War II or the Revolution of Dignity have created strong respect for human dignity, human rights, and the unconditional value of the individual. For a long time, Ukrainian land was in the hands of foreign lords, whose rule provoked an immense urge for Ukrainians to have their land and desire to be economically independent and autonomous.

Kyiv Consulting: Question #4

For nearly 400 years the Ukrainian language has suffered 134 bans and oppression attempts. What explains this permanent desire to destroy the Ukrainian language and why it still exists and develops to this day?

Dr Anton Drobovych: The given number of oppressions can hardly be accurate and scientifically correct. Language is one of the key markers of identity, which is why everyone who established control over Ukrainian territories tried to assimilate the local population and reduce the level of cultural identity, and especially displace the Ukrainian language. This has failed: complete and natural character systems of great communities do not emerge at random; they are formed over centuries; hence it is not so easy to supplant or destroy them. But the main factor of the language's survival is its authenticity and relevance to Ukrainians. It is something intrinsic and important, something that is perfect and different, therefore valuable.

YEVHENII DYKHNE

CEO, Ukraine International Airlines (UIA)

Biography: Yevhenii Dykhne is a transport industry expert with over 10 years of management experience in large state-owned enterprises. He is the Head of the Union of Infrastructure Committees at the Ukrainian Chamber of Commerce and Industry and a member of the Supervisory Board of the National Aviation University.

Before he was appointed as CEO of UIA, Yevhenii Dykhne was the Senior Manager of Boryspil International Airport State Enterprise. As a Director General of Boryspil International Airport State Enterprise in 2014-2017, Yevhenii Dykhne reached record profit, which doubled payments inflow to the budget of the enterprise, met all loan obligations in a timely manner and reached a profound understanding with the basic airline. Since 2017, he worked as the First Deputy Director General of the airport.

Before joining Boryspil International Airport he held managerial positions in Ukrzaliznytsia, actively reforming the enterprise, and contributing to strategy development and management of passenger services.

Kyiv Consulting: Question #1

What actions have been taken by the Ukrainian airlines (particularly, UIA) to preserve their business and assets during the war? How do you assess the efficiency of the UIA's partnership programme that offers to use the airline's planes for charter and humanitarian flights outside Ukraine during the war?

Yevgenii Dykhne: First of all, we did not disappear. I remember the morning of the day when Russia invaded Ukraine. The day when explosions could be heard everywhere. On 24 February 2022, we received information about Ukrainian airspace closure, still, some of our flights were in the air approaching Ukraine. Given the circumstances, under our internal company procedures, we had to arrange an Emergency Management Center meeting. The same day, at 7 am, when exits from Kyiv were already overloaded, as thousands of people started to flee, all the members of the UIA Emergency Management Centre were at the meeting room of our headquarters instead of taking their families out of the city. And this was not about duties and loyalty, this was about our responsibility for each other, our team, clients and partners. At that time I realised that no external factor could destroy this spirit.

We faced some operational issues regarding how to arrange delivery of passengers who did not reach their homes that morning, as well as how to relocate our fleet and crew who landed at an alternate airport in neighbouring Moldova which also closed its airspace together with Ukraine for the next month.

We arranged our work remotely from the very first days. Fortunately, the company was fully prepared for remote work, given the previous COVID limitations. Our daily operational conferences started with a roll call and concern for each other, as the biggest part of the team did not leave Kyiv or Kyiv region and continued to work from bomb shelters. It was difficult to think and plan. Each member individually and the entire organisation passed all stages of anxiety which quickly enough reached the acceptance stage.

This is the time when we started to seek ways to keep the company operative and its employees secured with work. Part of our fleet was outside Ukraine, and we managed to send other crew members out of the country as well. However, we had to find ways to work. This is not the case when you have a name, a website, a network of sales agents, or a GDS, and passengers can easily find and choose your airline. So every member of our UIA family, together with our sales team, started to search for new partners, even using their private social networks.

Without assigning specific tasks, everyone showed initiative and between volunteer and humanitarian activities carried out negotiations and correspondence with major suppliers of products and services, without which the company would cease to exist, because in our digital era, shutting down mail servers, as well as closing access to the software for navigation routes planning can completely stop any of the most robust airlines.

YEVHENII DYKHNE

CEO, Ukraine International Airlines (UIA)

We have completed an additional unplanned IATA safety audit and confirmed our current IOSA certificate, which opened the way for us to enter the wet leasing market. During this time, we have seriously optimised all our business and operational processes without loss in quality and without conceding operational safety. We have significantly increased our experience in cargo transportation in the cabin, used our maximum capacity, and carried hundreds of tonnes of humanitarian aid that was very important at that time for Ukraine. We have also carried Ukrainians from our neighbouring countries, operating charter flights, of course not without governmental support in getting permission for UIA as a non-resident. Now, having 4 aircrafts of various capacities in operation in Europe, we work with a known Polish tour operator and carry out charter flights from Polish cities to the resort cities of Turkey, Spain, Albania, Egypt, and Tunisia. We closely monitor all sporting events in the world to offer our services not only to Ukrainian sports clubs but also to international teams. We keep an eye on concerts and offer our wings to great orchestras for their tours, as we have a large experience in careful transportation of all possible concert equipment and musical instruments from the past life. So all our new customers, who tried UIA wings once, come back to us again.

Part of the fleet is engaged in wet leasing programs for other airlines. Of course, it became possible due to the exceptional attitude towards the Ukrainian airline by the European aviation authorities under the current circumstances. We are permitted to fly on routes which in other circumstances we would not have counted on. This is a goodwill gesture, and we appreciate it.

For everything else, purely business logic applies. We have to offer our partners mutually beneficial conditions and, due to processes optimisation in the company, we are a competitive market player. I will not say that it is easy to work outside our home base, but thanks to good teamwork both internally and with partners in airports and maintenance organisations we continue to maintain the high level of flight safety, as we did at home with our subsidiaries.

Kyiv Consulting: Question #2

What kind of assistance does the state provide to airports and airlines in Ukraine? How do you estimate its effectiveness? In your opinion, what additional actions should be taken by the state to support the aviation industry in Ukraine during the war?

Yevgenii Dykhne: I know that the two state-owned airports are being supported. However, this question should be addressed either to the Ministry of Infrastructure of Ukraine or the airports' management. I am not aware of the situation with other airlines, but we are solving the problem of obtaining permission for personnel to go abroad on business trips with the state authorities rather quickly. And this is already a considerable help. War is hardly predictable. We cannot predict the condition of the aviation infrastructure when the war is over. I believe that we should think about investing in it as soon as we have reached a stable state, based on the priorities of the postwar economy. Aviation is just one component of the transport infrastructure that supports the economy of the entire country. The needs of the economy will have to be considered. There may be more important priorities, such as railways. In that case, with understanding, we will wait our turn.

Kyiv Consulting: Question #3

According to your estimates, what amount of investment is required for the post-war renewal of air transport operations in Ukraine (including the restoration of the damaged infrastructure), and how much time may be needed for the passenger flow to return to the pre-war level?

Yevgenii Dykhne: I do not estimate investment in the sector as a whole, as well as in any individual airport, but I think that there will be no surplus money. So it will be necessary to handle it very carefully. Priority will be given to airports that are ready to be opened. That way, we will be able to launch flights from Ukraine to European HUBs, and our citizens will not have to travel abroad to take those flights.

Further, as far as possible, we will return airports to their pre-war destinations. We were pushed back 5 years before the war in traffic volumes, it is difficult to make projections of post-war demand for air transport, as I do not understand the level of decline in purchasing capacity of the population and the stages of recovery of the post-war economy.

YEVHENII DYKHNE

CEO, Ukraine International Airlines (UIA)

Kyiv Consulting: Question #4

According to the National Transport Strategy until 2030, Ukraine had specific targets to achieve in the aviation sector (50 operating airports, 50% of the travelling population, one-hour drive to reach an airport from any place in the country). How do you think the future development strategy for this sector needs to be adjusted because of the war? What should be the key priorities of the Ukrainian aviation industry in the future?

Yevgenii Dykhne: It is time for adaptability, we will use the maximum of the opportunities given to us. I do hope that we will be able to make the transition to long-term plans in a couple of post-war years. It is objectively clear that the strategies of the past years will require adjustments both in the goals themselves and in the stages of development. I have great hope that Ukraine's aviation development strategy will include a provision for the support of Ukrainian airlines.

IVAN FOTESKO

Fashion designer, Ukrainian Fashion Week

Biography: Ivan Fotesko is a Ukrainian fashion designer and founder of the IF brand that since 2009 has been releasing collections presented at Fashion Weeks in Ukraine and abroad.

In 2009-2010, Ivan used to work as a leading designer of the Ukrainian brand UNO jeans in Guangzhou, China.

In 2010-2011, he consulted various brands at pre-launch and launch stages, lecturing for professional colleges in Odesa till 2018.

Ivan stepped into the volunteer path in 2020, when he produced and supplied covid departments of hospitals with medical gowns for doctors.

With the start of the full-scale invasion of Ukraine, Ivan immediately re-arranged his production capacities to help the army.

Kyiv Consulting: Question #1

What signs of support for the Ukrainian cultural product expressed by the world's celebrities were the most remarkable? What is the significance for Ukrainians of every appearance of a world-class celebrity wearing clothes from a Ukrainian designer?

Ivan Fotesko: In my humble opinion, from the side of the world-renowned celebrities, Madonna (as always, indeed) was at the forefront of providing support to Ukrainian fashion designers.

However, it should be noted that any support is important, and I respect everyone who provides financial or political assistance to our country that opposes the aggressor.

Kyiv Consulting: Question #2

Many Ukrainian designers, including yourself, are switching to the needs of wartime start producing bulletproof vests, military clothes, shoes, etc. As there are no clear prospects for the end of hostilities any time soon, do you plan to produce winter clothes for defenders of Ukraine?

Ivan Fotesko: Indeed, in early days of the full-scale invasion, I faced a dilemma of what to produce to meet the needs of the Ukrainian army. Having sorted through several options, within a month I managed to rearrange the existing workshop and production capacities to sew plate carriers, pouches for first-aid kits, helmet covers, trunks, sleeping bags, etc., approved by the defenders.

I am not sure whether I want to continue what I started during the war in the post-war peaceful time, but life will show. Meanwhile, everyone does what he/ she can, and I myself don't want to stand aside.

Kyiv Consulting: Question #3

What form of assistance and support (including from the state) is critical for clothing manufacturers and designers that have switched to the needs of wartime since the full-scale invasion?

Ivan Fotesko: Like any non-profit enterprise, volunteer activity is in vital need of financing, and grant support from the state. So support of the government in terms of army supplies would be greatly welcomed. But looks rather like a dream.

IVAN FOTESKO

Fashion designer, Ukrainian Fashion Week

Kyiv Consulting: Question #4

Has the attitude to Ukrainian designers and their products changed in the recent years, especially during the war? What determines popularity of Ukrainian designer clothes abroad?

Ivan Fotesko: Obviously, today Ukraine is not only the capital of freedom, courage, and honour, but also fully-fledged brand itself! Currently, we are witnessing a tremendously growing interest in everything that is labelled 'Made in Ukraine'. And this interest has not bypassed the fashion industry. How long will it last? It is difficult to answer. However, it seems that interest in our products and the country has solid prospects to last at least a decade.

Kyiv Consulting: Question #5

Realisation of which initiatives and programmes is critically important for the development of Ukrainian fashion brands in the post-war recovery period?

Ivan Fotesko: Support for domestic producers from the state – no matter how trivial it may sound. Ukrainian Fashion Week should become a positive signal to the entire world and global fashion community and introduce Ukrainians as a nation of winners and freedom-lovers.

SERHII FURSA

Economic expert, and specialist of the sales department of the Dragon Capital

Biography: Serhii Fursa is an investment banker, financial expert and publicist.

In 2011, he joined Dragon Capital from Astrum Capital, a Ukrainian investment bank, where he had worked as a bond market analyst.

Before that, during 2005-2008, Serhii worked at the Investment Banking department of UkrSibbank (BNP Paribas Group), having been appointed a head of industry research in 2007. In 2016, he co-founded the Ukrainian Association of Economic Freedom, an NGO.

In 2017, Serhii Fursa published a fiction book — 'The Way Home'. The plot of the book tells about the war in the Donbas and the annexation of Crimea.

Kyiv Consulting: Question #1

On 28 July 2022, Verkhovna Rada adopted law draft No. 7451, which aims to simplify and speed up privatisation and facilitate business relocation. Which objects, in your opinion, can be privatised first and how do you see the impact of privatisation on the country's postwar recovery?

Serhii Fursa: Well, let us not confuse one with the other and lump everything into one pile. Privatisation will play an important role. So will the anti-corruption reform. Privatisation will be one of the factors that will make post-war Ukraine attractive to investors.

Of course, no investor would buy anything here during the war. Now, as far as I understand, it is all about unblocking the small-scale privatisation. It means opening access to what is sold through Prozorro Sales.

Usually, it handles small objects which are purchased by small and medium-sized businesses. It is this type of privatisation that will be taking place now, small and medium-sized businesses have had time to come to their senses, or at least are trying to do so.

As a rule, privatisation has become an additional factor in the revival of small and medium-sized businesses. After the war, the privatisation process will play an important role.

Firstly, because Ukraine still has a lot to privatise, and secondly, because I think some of the Russian assets will be nationalised and will also be subject to privatisation.

The function of privatisation will be equally important. This is not merely about money. Above all, it is about fighting corruption. Since, in fact, the more state structures are integrated into economy, the more corruption is there. If you hold a fair and transparent privatisation tender, this will subsequently lead you to having a significantly improved investment climate.

And it is only the third factor which relates directly to money. So far, unfortunately, we can recall only one honest and transparent privatisation tender held in our country. That is the story with Krivorozhstal, dated 2005.

There is hope that after the war this positive trend will continue in the right direction. This is the only way that privatisation has any chance of becoming one of the growth engines of the Ukrainian economy.

Kyiv Consulting: Question #2

What steps do you think are the priority ones to maintain Ukraine's macroeconomic stability under conditions of war?

Serhii Fursa: The key problems here are the pressure on the hryvnia and the huge budget deficit, which are interlinked. In this context, it is very important to get Western aid. Most of the budget deficit, which now stands at 5 Bn USD, must be financed by our Western partners.

SERHII FURSA

Economic expert, and specialist of the sales department of the Dragon Capital

It is required to have dollars flowing into the country every month and to escape printing national currency by the National Bank of Ukraine. Because there are no other sources to fill the budget. Ukraine's entire military expenditures exceed its total revenues during the war.

And when Western aid from donor countries stops coming, it will be very important for us to sign a new cooperation programme with the IMF as the next source of covering the deficit.

We need continuous financing in large volumes until the war is over. If the deficit is 5 Bn USD, with 1 Bn USD printed every month by the National Bank, that means we need 4 Bn USD in monthly aid from the partners.

Kyiv Consulting: Question #3

After Naftogaz of Ukraine failed to make payments to bondholders, the company defaulted on its Eurobonds. This deprived it of access to the international capital market. How will the default of this energy holding company affect the economic situation in the country and lives of its citizens? Will the consequences be felt as early as this winter?

Serhii Fursa: Nobody will feel any default by Naftogaz. The NJSC did poorly manage investors' expectations. For some reason, bondholders expected that the company would redeem its Eurobonds even during the war.

The government did not let things go quite right because it was in the process of restructuring its debt itself. In August, the Ministry of Finance completed restructuring of its commercial debt liabilities. All of them have now been frozen for 2 years.

This situation allows Naftogaz to return to negotiations with bondholders and agree somewhere on a compromise.

So, Naftogaz's default is a temporary thing. Shortly, I think the parties will agree with each other. In this way, our company will be able to receive loans from the EBRD. They will be needed to buy additional volumes of gas.

However, whether we need to buy additional gas now is a philosophical question. Given the current price, being over two thousand dollars per 1,000 m³, there is probably no reason to buy gas. It is better to switch to economy mode and use as little fuel as possible. There are certain technological aspects, according to which there must be a certain amount of gas in the storage facilities for pumping out.

We understand that this winter Russia is likely to completely stop the transit of its blue fuel through the Ukrainian territory to Europe. This way, the enemy will want to create an artificial energy crisis. So, Naftogaz must be ready to reduce energy consumption by households and businesses, if necessary.

Kyiv Consulting: Question #4

What mechanisms do you see for ensuring transparency and accountability in the management of funds during Ukraine's post-conflict development?

Serhii Fursa: The ideal model, it seems to me, would be the one in which the EBRD has financed construction of road. That is, the Western partners themselves form a company, a fund or a management company. Call it what you like. The company will oversee the distribution of funds, holding tenders, as well as choosing what to finance and in which way.

Which projects should be financed, and which ones should not? Of course, the Ukrainian government must submit these projects. It owns them. It is the Ukrainian authorities who determine what needs to be done and submit it to the fund.

If everything is fine with the project, the fund approves it and consequently allocates money for it. This is how the EBRD has worked in Ukraine.

SERHII FURSA

Economic expert, and specialist of the sales department of the Dragon Capital

Such a mechanism will reduce influence of the Ukrainian politicians on the distribution of these funds and will allow Western governments to control employment of their taxpayers' money. And for Ukraine, as a state, it will imply an increase in the level of trust through minimising corruption risks.

We have examples of the use of such special-purpose funds. Think of the Marshall Plan after the World War II. When, due to corruption scandals, the same Greece received far less aid.

Kyiv Consulting: Question #5

At the end of July, the international rating agency S&P lowered Ukraine's long-term sovereign rating from CCC+ to CC with a negative outlook. In your opinion, could Ukraine default or enter a state of selective default?

Serhii Fursa: On the one hand, we have already reached an agreement with the security holders. We have already made all preliminary restructuring of debt and have frozen payments for the next 2 years. The investors have agreed to this.

That means it is inappropriate to talk about declaring default.

Kyiv Consulting: Question #6

In your opinion, what will be the most important sectors of the Ukrainian economy in the long term (up to 2032)? Will Ukraine continue to be the world's breadbasket or will the IT sector still account for the lion's share of the Ukrainian exports?

Serhii Fursa: I have no idea what will drive the national economy in the future. No one knows.

Will the agricultural sector remain an important part of exports? Of course, it will. The only question is whether it will continue to dominate or whether other sectors will take over.

It is not really important. We must simply require the state to create liberal rules for doing business. To make doing business in Ukraine as simple as possible. The rule of law must be the foundation for this. Everything else will follow. Businesses will then be able to develop valuable sectors for themselves. As a result, we will be able to see which sector will develop more rapidly than others.

DR ALLA GORDIIENKO

General Director of the National Library of Ukraine for Children

Biography: Dr Alla Gordiienko holds a PhD in Cultural Studies. She is a Director General of the National Library for Children, President of the National Section of the International Council on Children and Youth Books and President of the Ukrainian Association of Library Workers for Children.

In 2009, Dr Alla Gordiienko was awarded the honorable title of 'Honored Worker of Culture' recognising her personal contribution to the public library development and notable achievements in professional activities.

For significant individual contribution to the state building, socio-economic, scientific, technical, cultural and educational development of Ukraine, as well as outstanding labour achievements, she was awarded the Order of Merit of the third (2017) and second (2020) class.

Kyiv Consulting: Question #1

Since the beginning of the Russian invasion in 2022, the occupiers have been actively destroying Ukrainian literature. Do you have any data on the approximate number of books having been destroyed? Are there any mechanisms to protect the Ukrainian literature from Russian invaders?

Dr Alla Gordiienko: The Russian occupiers are trying to destroy what they are afraid of, what they think is an ideological weapon and has a significant impact on people's minds. They are trying to get rid of the Ukrainian printed word, since this word has a great power.

According to the official information, 41 libraries have been destroyed so far. This number includes libraries in the city of Chernihiv (M. Kotsubynskiy Municipal Central Library and O. Dovzhenko Municipal Library for Children); libraries in the Kharkiv region, including library №35 for children in the Shevchenko district; libraries in the Zaporizhzhia region (officially, it is known about destruction of the Polohivska public library fund and the burned fund of the library in Chernihivka village); libraries in the communities of Kyiv region (Obukhovichi in the Vyshgorod district, Makarov, Borodyanka in Buchanskiy district); children's library branch in the city of Mykolayiv.

The geography of losses is extensive, although this list of examples is far from being complete. Particular pain for us is the destiny of the Donetsk Regional Library for Children in Mariupol, which was built only a few years ago and destroyed by the occupants. Of course, the funds of these libraries have been lost.

There are now more than 4,000 libraries in the temporarily occupied territories, and there is no doubt that their funds have already been 'cleaned out'. We are proud of our colleagues, the librarians of the temporarily occupied Kherson region, who, despite the significant pressure from the invaders, did not agree to cooperate with the enemy.

We understand that after the victory, after our territories are liberated, one of the most important tasks will be to supply the libraries that suffered from the war with Ukrainian books of high quality. It is achievable. I am convinced it will be done with the greatest commitment from the state.

Ukraine Recovery Programme puts a strong emphasis on the cultural sector, including renewal of the library sector. Plans include developing and implementing the 'Perfect library' project and the introduction of mobile libraries to provide the best possible library services in those areas where libraries have been destroyed.

DR ALLA GORDIIENKO

General Director of the National Library of Ukraine for Children

Kyiv Consulting: Question #2

Today, the topic of reading, especially child reading, and consequently that of libraries, is undergoing substantial transformation. In your opinion, what will the library sector look like in future? Are there any development initiatives that might be of interest to investors?

Dr Alla Gordiienko: The world is changing. The framework of library activities undergoes transformation, especially those that relate to children. The latter which are the first to respond to demands of time and variability of user requests. The main message of the children's libraries regarding popularisation of reading is that children must be interested and read in any available form and format. Updating collections with modern books for children, employment of new technologies, expansion of space for communication with users, including via online (making it possible to continue provision of services, even under restricted conditions), a large number of interesting activities, creative competitions, book quests, constant sense of being 'on the same page' with children, suggests that children's libraries are an integral part of the 'future', as they create it for their readers every day.

As for investment in library initiatives, this is certainly the case, as, throughout the recent years, the trend has been to expand the number of library partnerships, including those with local governments, public organisations and businesses. In addition, it has become a common practice for libraries to receive donations for implementation of various initiatives voiced by the Ukrainian and foreign donor organisations.

As many libraries have been destroyed, the prospect for investors lies, first and foremost, in rebuilding and modernisation of library facilities. Additional potentially attractive for investors areas of focus nowadays are:

- Establishment of centres of psychological rehabilitation through books and reading in the premises of public libraries for children
- Development and implementation of library projects aimed at children having physical disabilities, both inborn and as a result of the war
- Creation of learning centres for foreign languages study and improvement of the Ukrainian language leveraging the library platforms

I am convinced that today and in the future libraries will be in public demand and will be shored up by the state and partners representing various spheres of public domain, advocating promotion of Ukrainian identity.

NATALIA GOZAK

Executive Director, Ecoaction

Biography: Natalia has the background in ecology, climate and conservation, and experience in the environmental civil society movement.

Since 2013, she has been the coordinator of WWF projects in Ukraine, working on diverse aspects of biodiversity conservation in Ukraine and the region.

In 2019, Natalia joined Centre for Environmental Initiatives 'Ecoaction' as its Executive Director. Ecoaction is the biggest environmental NGO in Ukrane, which aims to ensure that humanity develops in a safe and clean environment. NGO specialises in promoting transition to renewable energy sources and abandoning coal and nuclear energy, energy saving and energy efficiency, cutting down pollution from transport through effective government policies, standards and reduction of harmful emissions from industrial enterprises.

Kyiv Consulting: Question #1

How would you evaluate the impact of war on the environment of Ukraine and its current state, as compared to that before the war?

Natalia Gozak: I have participated in Ukraine's environmental civil society movement for over 18 years. And I have witnessed slow but persistent movement towards higher public interest to environmental safety and transformation of popular social discourse from 'let's clean up the park and recycle waste' to 'how to deal with batteries' and finally towards 'climate change adaptation solutions for cities' and 'zero waste municipalities'. Moreover, Revolution of Dignity in 2014 has opened many 'official doors' for civil society and has installed a powerful engine of EU-approximation by accelerating reforms in the environmental sphere of Ukraine.

Now, even though a clear EU candidacy perspective is creating more possibilities for progress in environmental reforms, the war priorities + severe economic decline + martial law limitations are putting the entire environmental sector to the very end of the priorities lists. Limitations for Environmental Impact Assessment procedure, absence of environmental control/inspection procedures, closure of public registers of environmental monitoring and shrinking of the civil society space are all negative tendencies that we can see at the national policy level.

The longer the war continues, the higher risks that this situation would be a 'new normal' and could be extended beyond the martial law period. And it means extra degradation of the environment, as well as stronger pressure on natural resources due to attempts to compensate the lack of arable land, lack of available resources and lack of proper environmental management in the situation of higher-than-usual demand.

When we talk about the 'physical' impact of the war on the environment, nuclear risks are definitely the number one issue - the largest in term of scope and impact, the most long-term and affecting most people. It's totally mind-blowing how nuclear energy is still perceived as safe and cheap, being totally neither safe (remember Chornobyl, Fucusima and now Zaporizhzhia NPP plus the 'eternal' problem of nuclear waste, as after more than 80 years there is still no technology to store it safely), nor cheap (almost no funds are accumulated for decommissioning of 12 outdated Ukrainian reactors). It does not bring energy independence either (as we just changed supplies from Rosatom to Westinghouse). Thanks God, today, these risks remain potential. But building new nuclear facilities in a country in fighting is a very bad idea.

In the second place I would put the environmental impact caused by damage of industrial facilities. The monitoring done by Ecoaction shows that the damage of industrial facilities has accounted for more than half of all cases of a potential impact. On-site air, water, and soil pollution, caused by combustion of products at industrial facilities create massive pressure on the local environment, with the pollutants staying there for decades.

Following these two massive impact categories, others could be mentioned, in particular military waste, waste originating from the ruined houses, degradation of ecosystems, mining of territories, damage caused to marine environment and terrestrial biodiversity, etc.

NATALIA GOZAK

Executive Director, Ecoaction

Following these two massive impact categories, others could be mentioned, in particular military waste, waste originating from the ruined houses, degradation of ecosystems, mining of territories, damage caused to marine environment and terrestrial biodiversity, etc.

Summarising the above, I can see that the devastating impact of the war on our environment is combined with highly unsupportive political set-up. To ensure that the highest possible price Ukraine is paying for its freedom and democracy will not bring full devastation of its natural resources, will not undermine wellbeing of our children, and the most educated people are brought back to the country, we do need to rebuild our country in a better way. It means (as seen by more than 50 NGOs):

- Integration of the environmental and climate policy into all sectors
- Reconstruction that meets needs of the Ukrainians and promotes sustainable development of Ukraine
- Development of the low-carbon, energy-efficient, nature-oriented economy
- Integration of best environmental standards at all levels
- Adherence to the European environmental planning tool
- Active participation of local governments, transparency, and involvement of the public and communities in the decision-making processes
- Effective functioning and use of targeted/donor funds

Strategic decision-making, affordable and conditional financing, effective management and continuation of reforms are crucial prerequisites to ensure that 'green' post-war reconstruction of Ukraine is possible (more here).

VICTOR HERASYMCHUK

Head of repair and maintenance department in TREI-UKRAINE, construction subsidiary of ArcelorMittal Kryvyi Rih

Biography: Victor graduated from the Institute of Technology with the qualification of a mechanical engineer. Upon graduation, he spent 3 years working as an engineer at a mining-cement factory. Another 10 years of his career he dedicated to the Kryvbasproekt State Design Institute, working as a Group Head. Victor's overall work experience in metallurgical industry exceeds 30 years.

Currently, Victor holds the position of Head of Electrical Engineering Department in TREI-UKRAINE. The company specialises in implementation of modern engineering systems of automation of technological processes and power supply systems to enable the most efficient technological and economic performance at the facilities of metallurgical, mining and processing complexes of Kryvyi Rih and Zaporizhzhia.

Since its foundation, the company's specialists have carried out more than 300 projects in industrial enterprises in Ukraine.

Kyiv Consulting: Question #1

How has the war affected your work directly? How has the workload of your company changed compared to the pre-war times?

Victor Herasymchuk: With the outbreak of large-scale invasion, the workload of the company decreased sharply — by more than a half. There were difficulties with the logistics component, namely supply of equipment and spare parts, especially those of foreign production. Besides, the management decided to partially switch to a remote work mode.

Kyiv Consulting: Question #2

How do you estimate the role of the steel sector, and steelmakers in particular, in ensuring the functioning of the Ukrainian economy under the wartime conditions?

Victor Herasymchuk: The influence of the steel sector has always been an important factor in the development of the country's economy. In the absence of large construction needs in the wartime conditions, the steelmakers' task is to meet the needs of the Ukrainian enterprises, export metals and retain their production potential.

Kyiv Consulting: Question #3

In your opinion, is it possible to resume the functioning of Mariupol metallurgical plants (Azovstal) after de-occupation of the Donetsk region?

Victor Herasymchuk: Now it is very difficult to estimate its scale of destruction. However, I think that relaunch of metallurgical plants in Mariupol is indeed needed, given the location of metallurgical facilities in Mariupol, with the developed port and rail infrastructure. On top of that, supply of iron ore and coke is conducted from the Donetsk and Dnipropetrovsk regions. Plant in Mariupol?

Kyiv Consulting: Question #4

As the state plans developing Ukraine's industry, in particular its metallurgical sector, how do you assess the prospects of those employed in the steelmaking / metallurgical sector once the war is over?

Victor Herasymchuk: Metallurgy is a large industrial complex that includes mining and smelting, coke and chemical, pig iron, steelmaking, metal rolling, transport and energy production. This requires integration of expertise of engineering and technical personnel in numerous branches of the industry. Hence, education and working experience in all professional fields of the metallurgical sector look to be very promising and sought-after. Especially after the end of the war.

JÖRG HOSSENFELDER

CEO of Lünendonk & Hossenfelder GmbH

Biography: Jörg Hossenfelder is a communications and political scientist and studied at the Universities of Mainz and Bologna until 2000.

After his studies, he worked as a communications consultant for business-to-business companies.

In 2004, he became head of the research department at Lünendonk & Hossenfelder.

Hossenfelder has been managing director since July 2005 and managing partner since 2009.

Jörg Hossenfelder is responsible for the market segments auditing, tax consulting, advisory and business consulting.

Kyiv Consulting: Question #1

No successful transformation can happen without the skills of consultants. Is it the same when transforming an entire country?

Jörg Hossenfelder: With the exception of the purchasing process, the consulting activities of companies and government institutions are very similar. The larger the client, the more complex the challenges. Furthermore, not only the on-site situation, but also the exogenous framework conditions such as global supply chains, energy and production factors, technical and service staff, etc. are among the factors that must be taken into account. In addition, agility and speed play a special role, which is now very much taken up by the consultants. Especially with regard to the reconstruction of Ukraine, these are essential success factors.

Kyiv Consulting: Question #2

What key consulting capabilities do the future consultants of Ukraine need to bring?

Jörg Hossenfelder: As mentioned before, besides the consultant skills, years of knowledge of Ukraine are part of the basis of the consultants. In addition to political and economic skills, cultural and social aspects must also be taken into account if projects are to run successfully together with the clients. Management consultants who want to establish a successful consulting business in Ukraine should take this into account.

DR YAROSLAV HRYTSAK

Historian, Doctor of Historical Sciences, and professor of the UCU

Biography: Dr Yaroslav Hrytsak is one of the leading Ukrainian historians and progressive thinkers, professor in the Department of Modern and Contemporary History of Ukraine at the Ukrainian Catholic University in Lviv, where he also holds a position of Director of the Jewish Studies Programme.

He is an honorary professor at the National University of Kyiv-Mohyla Academy and was previously a visiting professor of the Central European University in Budapest.

Dr Hrytsak regularly participates in international conferences on issues of Holocaust remembrance. He is a codirector of the German-Ukrainian Historical Commission. He is also the Chief Editor and the founder of the scholarly journal 'Ukraina Moderna' and an author of a number of books and articles on the history of Eastern Europe. He has been listed among the Top-100 most influential Ukrainians.

Kyiv Consulting: Question #1

In your opinion, what can be characterised as a Ukrainian identity? How has it changed since the Declaration of Independence in 1991, especially since the start of the full-scale invasion on 24 February? How do you see Ukrainian identity in 2030?

Dr Yaroslav Hrytsak: I will repeat here the main thesis of the Ukrainian liberal thinkers – Mykhailo Dragomanov, Vyacheslav Lypynsky, and Ivan Lysyak-Rudnytsky: the major difference between Ukrainians and Russians is not the language, religion or culture, but it lies in different political traditions and relations between the authorities and the population, the state and the society. Ukrainians have never treated power as something sacred, but often as something alien — and therefore they have had a strong experience of self-organisation, which the Russians do not have. In modern conditions this formula can be rewritten as follows: in Ukraine someone like Putin or Lukashenko is impossible (Yanukovych tried two times, but failed), while in Russia impossible is something like the victorious Maidan.

This is a general formula. However, it takes different forms as per historical circumstances. For a long time, the main marker of the Ukrainian identity was the language: to be Ukrainian meant to be a Ukrainian-speaking person.

Another formula emerged and gained momentum throughout the XX century: Ukrainians are all those who, regardless of their language or ethnic origin, are loyal to the idea of a Ukrainian state. Scientifically speaking, Ukrainian identity emerges initially as an authentic (language) nation, but later evolves into a civic (political) nation.

Nowadays, Ukrainian identity functions in line with these two formulas. Many Ukrainians see them as mutually exclusive, as 'either/or': if you do not know the Ukrainian language, you cannot consider yourself a Ukrainian, even if you are a citizen of Ukraine. It is possible that these two models are not mutually exclusive but are co-existent. The task of the Ukrainian elite is, in my opinion, moving these two forms from a state of mutual conflict to a state of mutual compromise.

This is where the fact that, in this world, there are virtually no purely ethnic or purely civic nations comes into play. Even civic nations must have an ethnic nucleus – for example, the Anglo-Saxon is the nucleus of the American nation. Similarly, Ukrainians are a civic nation, with the Ukrainian-speaking Ukrainians as its core.

DR YAROSLAV HRYTSAK

Historian, Doctor of Historical Sciences, and professor of the UCU

Kyiv Consulting: Question #2

Since Ukraine gained its independence in 1991, the number of Ukrainians and those who consider the Ukrainian language their native language has been growing steadily. In your opinion, what are the main factors influencing this trend, primarily a result of state policy or a change in the generations of Ukrainian society?

Dr Yaroslav Hrytsak: Among all, I would put first the emergence of Ukraine as an independent state. The existence of an independent Ukraine as a new reality inevitably causes a tendency for the number of the Ukrainian speaking people to grow, especially among the ruling elite. I should mention that even Yanukovych had to learn the Ukrainian language when he became President. As far as this factor is concerned, the three-generation rule applies here: full language assimilation is in place among the generation of grandchildren.

I would put Russia's politics in the second place: in the recent years, and especially in the recent months, nothing has so much Ukrainianised the Ukrainians as Putin's missiles and shells. But I want to emphasise it again: unlike France, Hungary or Poland, the language in Ukraine is not clearly linked to identity. It is linked in the case of the Ukrainian language: Ukrainian speaking are Ukrainians. But it is not in the case of the Russian language: most Russian speakers in Ukraine are not Russians.

A significant part, if not most of them, feels they are Ukrainians. Antonovych, Grushevsky's teacher, also compared Ukrainians with the Irish: even if all Ukrainians spoke Russian, it would not make them Russians, just as the English language did not make the Irish English. He also gave the example of the Americans and the Britons and other nations speaking the same language. If you believe that language is the main criterion, then you are probably putting yourself in Putin's position: he also thinks that all Russian-speaking people in Ukraine are Russians in some way.

Kyiv Consulting: Question #3

After the occupation of Crimea and ORDLO, the Russian authorities initiated closure of the Ukrainian schools. Since November 2022, Russian language is to the teaching language in schools in the temporarily occupied territories. What impact will these decisions have on those Ukrainians who remain there? How do you see the reintegration of citizens, especially children, studying in these schools after the end of the war?

Dr Yaroslav Hrytsak: I will reformulate this question in another way: to which Ukraine will these people return? If it is a country of the 2013 model, with high corruption, weak opposition and authoritarian rule, I myself – and, I assume, the majority of Ukrainians – would not be willing to come back. It has to be Ukraine of the 2023 or 2033 model, depending on how long it will take: a European state with a stable political system and stable economic development – like South Korea in Central-Eastern Europe.

We must also take into account that not only will Ukraine be different, but also Crimea will change after the war. There is a fear of unofficial general military mobilisation, as the Russian authorities are doing in the ORDLO. Fear that it could become a place of military operations. The same applies to Russia itself after the war. I admit, or even I am convinced, that after the war Russia will lose a lot of appeal that had so much attracted the Russian-speaking population of the Crimea. Ultimately, this population will be ready to take the side of the winner. I would like to remind you that at the 1991 referendum the majority of Crimeans voted in favour of Ukraine's independence. But again, it must be a different Ukraine.

DR YAROSLAV HRYTSAK

Historian, Doctor of Historical Sciences, and professor of the UCU

Kyiv Consulting: Question #4

Most often, Ukrainians mention freedom and justice as their core values. In your opinion, has the war affected the values of the Ukrainians and how do you see them when the war is over?

Dr Yaroslav Hrytsak: I have not seen any sociological research where Ukrainians describe freedom and justice as their core values. If you have such studies, I would ask you to share them with me.

I am in the habit of talking about values on the basis of Ingelgart's theory and the World Value Survey. The part related to Ukraine shows a clear tendency: a shift from values of survival to values of self-expression. It is important to note that, even after the start of the war in 2014, this development did not cease, although one could have expected the situation to change. This, in my opinion, is an illustration of how Ukraine can be an unexpectedly beautiful country, which, in Franko's words, is standing against the wind and swimming against the waves. This movement means that Ukraine is on the right path to freedom and justice.

We can see the same trend in Belarus: mass protests of the Belarusians in 2020 did not emerge out of nowhere. Both in Ukraine and in Belarus the mechanism is the same: the emergence and growth of the share of young and educated people who, because of their lifestyle, belong to the middle class and work in the sectors where the main product is not produced from the factory pipes, but from a cup of coffee. That is, not with muscles, but with the intellect. The only significant difference is that in Ukraine this generation grew up in an environment of political freedom, while Belarus remains an authoritarian state.

I have written extensively about this, including in the last section of my global history of Ukraine. Besides, this year, a book by Sergey Guriev telling about spin dictators was published, in which he and his co-author write the same about this young middle class, being the principal driver on the move from authoritarianism to democracy.

Having said all this, we cannot foresee the impact of the current war on this generation and on the Ukrainian society. We are now organising a survey in order to assess the values of the Ukrainians after more than a half year of the war. However, for now - and hopefully further on— the Ukraine's pattern of values provides grounds for optimism.

Kyiv Consulting: Question #5

Ukraine has developed a strong volunteer movement, which directly or indirectly involves many citizens. In your opinion, have values of the Ukrainians had an impact on creation and development of this phenomenon?

Dr Yaroslav Hrytsak: The volunteer movement is mainly a manifestation and consequence of this value changes. Let us put it this way: the spirit of a cup of coffee has not evaporated, but now it primarily works for the Ukrainian victory.

I want to emphasise that we are not talking about all of the Ukrainians, but only about the most conscious and mobilised part of them, which wants changes and a free Ukraine. However, the spirit of this part is transmitted to the rest of the Ukrainians whose children, brothers and sisters, parents, relatives and friends are fighting at the frontline.

I do not know how values will be changed after the war, but I will point out two risk factors. The first factor is that, as the history of wars shows, everybody dies in a war — but, in the first wave proportion of those being the most active, motivated and honest is the highest. This means that this class, which I am talking about, will be inevitably shrinking.

Secondly, values are formed in adolescence. Ukrainian teenagers have already lived through two years of COVID and six months of the war. Many of them have fled their parents' homes or even left Ukraine.

One way or another, they have experienced trauma, and this trauma may influence their behaviour when they become adults. This is where a value regression can happen.

To counteract this, we need to institutionalise the value shift — there needs to be a growing network of institutions where these values can be anchored. This could be educational institutions that provide education with values, like NaUKMA or UCU, established public organisations, professional army, etc.

The main thing, as far as I am concerned, is that all the volunteers who went to the frontline and the volunteers who help retain it will form a new political project or even projects. This has not happened after Maidan, but it may or should happen after the war is over.

Finally, I would like to reiterate in order for the children's rights and values to be stable, they have to be 'put on' on institutions, first and foremost on institutions that grow from below, on the back the humans' demand, and not on the back of prescriptions given by bureaucrats. The entire history of the Ukrainian movement shows that its strength depends on its ability to develop this kind of institutional system.

DR ANZHELA IGNATYUK

Dean of the Faculty of Economics, Taras Shevchenko National University of Kyiv

Biography: Dr Anzhela Ignatyuk is an economist, Doctor of Economics, Dean of the Faculty, Professor of the Department of Economic Theory, Macro- and Microeconomics at Taras Shevchenko National University of Kyiv.

She has started her teaching career at Taras Shevchenko National University in 1997 and continues working there till now. In 2018, she was elected Dean of the Faculty of Economics at Taras Shevchenko National University of Kyiv.

Her research projects include those dedicated to market sector development in the context of globalisation, market concentration processes, domestic enterprise competitiveness in the global industrial market, competition, and monopoly restrictions in the context of globalisation and network economy.

Also, Dr Ignatyuk is the Deputy Chairman of the EFBM Organising Committee.

Kyiv Consulting: Question #1

How will the universities of Ukraine transform their accreditation systems to bring them in line with the European standards? Which approaches and reforming steps will be taken?

Dr Anzhela Ignatyuk: In 2019, the accreditation system of educational programmes in Ukraine went through drastic changes. The new approach and the criteria for accreditation are now based on the European Standards and Guidelines for Quality Assurance in the European Higher Education Area and on the best European practices. For example, sixteen programmes of the Faculty of Economics were accredited under the new procedure, and another 25 are now in the process of accreditation. The new accreditation procedure requires re-evaluation of the content and organisation of education, fairness and transparency of assessment, quality of teaching vs. the European standards. All this becomes a driver for ensuring the quality of higher education, based on the principles of the European Association as one of the obligations of Ukraine within the framework of the Association Agreement with the EU. For the accreditation purposes, we may ask our European colleagues for independent evaluation of our educational programmes, and we did it for those in Management and Public Sector Finance. We see getting accreditation for some of our Faculty's educational programmes from international agencies as our strategic aim in this area. Our joint degree English-language programmes with Macerata University (Italy) and Nord University (Norway) are the most likely candidates for this kind of accreditation.

Kyiv Consulting: Question #2

For those seeking university admission, which specialties are better to choose now? Which type of professions will be relevant after the war?

Dr Anzhela Ignatyuk: Undeniably, economic specialties remain relevant today and will be in demand in the future. Professionals in economics are indispensable for shaping a balanced economic agenda of a country, as well as for developing reforms that will be required for the recovery of the Ukrainian economy. At the same time, we see that in its further development higher education should focus on strengthening students' skills in information technology. Today, economists and experts in the field of programming and information technologies are working each on their frontlines, countering the aggressor's propaganda. However, these are usually two separate tasks. Our task is to enhance this educational component so that the students of the Faculty of Economics graduate with a high level of skills in IT, in addition to their professional ones. In our opinion, this combination of knowledge and skills among young professionals will help to speed up Ukraine's economic recovery, as well as to come up with effective, competitive products and solutions for the Ukrainian post-war economy.

DR ANZHELA IGNATYUK

Dean of the Faculty of Economics, Taras Shevchenko National University of Kyiv

Kyiv Consulting: Question #3

In what way can the Faculty of Economics improve its collaboration with the Professional Services sector of Ukraine with a view to rebuild Ukraine?

Dr Anzhela Ignatyuk: The university, and the Faculty of Economics in particular, pursues a policy of collaboration with professional organisations. For quite a number of years, the Faculty collaborates with the Expert Council of Employers and Graduates of the Faculty of Economics. It is a consultative and advisory body that we cooperate with strategically, in order to ensure the high quality of the educational process, compliance with the latest trends in the labour market, as well as endowing our graduates with a relevant professional skillset. With the support of the Council of Employers, the Faculty of Economics organises various events such as forums, round tables, conferences and meetings to discuss strategic economic issues relevant for the country and the world. Career-related events, including the Economics Career Day, exhibitions, workshops, and quests, are also held in partnership with members of the Council. The latter are involved in reviewing and evaluating educational programmes implemented at the Faculty of Economics, and this helps us build an educational trajectory focusing on the latest labour market trends. In addition to the Employers' Council, we cooperate with professional organisations such as the Union of Small, Medium-sized and Privatised Enterprises of Ukraine, the Chamber of Commerce and Industry of Ukraine, the German-Ukrainian Chamber of Commerce, the CFA Institute, the Chartered Institute of Management Accountants (CIMA), the Association of Marketing Professionals of Ukraine, the Ukrainian Association for the Development of Management and Business Education and a number of others with whom we have a long history of collaboration and joint projects. The Faculty of Economics is open to cooperation with other professional organisations in order to accelerate our victory, rebuild and strengthen the economy of Ukraine and shape conscious and progressive society having strong values based on our national identity.

DR NICKOLAY KAPITONENKO

International Relations Expert at the Tactics Institute for Security and Counter-Terrorism

Biography: Dr Nickolay Kapitonenko is an Associate Professor at the Institute of International Relations of Kyiv National Taras Shevchenko University and advisor to the Parliamentary Committee on Foreign Policy.

He's also a Director of the Center of International Studies and an associated expert with the International Center for Political Studies.

He has been invited as a visiting professor to the University of Iowa (the USA) and was a lecturer at the Diplomatic Academy of the Ministry of Foreign Affairs of Ukraine.

Since 2015 Dr Nickolay Kapitonenko has been co-editing UA: Ukraine Analytica. The main area of his professional interest is international conflicts and the foreign policy of Ukraine.

Kyiv Consulting: Question #1

Which event(s), in your opinion, became the 'point of no return' in the relations between independent Ukraine and Russia? Is there any chance for improvement in the relations between the two countries in the foreseeable future or aggravated hostility on a nationwide level would permanently cease the relations between the two states?

Dr Nickolay Kapitonenko: No two countries are destined for war. Wars are always resulting from political choices. With that said, I don't think that there is a moment in history, which made Russia's invasion of Ukraine inevitable. However, some points in bilateral relations have certainly made a bigger impact on further developments, shaping mutual expectations, perceptions and strategies.

Among such points, I'd pick the annexation of Crimea in 2014 by Russia. That was a moment of truth for a variety of reasons. By opting for annexation, Russia has violated the fundamentals of international order. The moment has also been a test for the Russian society, tempted by the propaganda of greatness; a test that it failed. I still believe that the only right thing for the Russian citizens was to reject the annexation. By accepting it they launched a chain of events making war much more difficult to escape.

Imagining relations between Ukraine and Russia in a year or a decade is extremely challenging. It has been difficult to do before the war as well and even more so now when emotions are everywhere. But no matter how difficult it may be, a clear vision of such relations is a key to both Ukraine's and European security.

Hostilities and violence may not last forever; however, they may last quite long. Atrocities never go unnoticed, but shape the future. Protracted conflicts are much more difficult to resolve when the history of hatred plays on the side of violence. In that sense, Russia's decision to go to war gets another dimension of responsibility. I don't think Russia and Ukraine will remain hostile forever; but I do believe that overcoming mistrust, hatred and fear in bilateral relations will be close to impossible in the next decade.

DR NICKOLAY KAPITONENKO

International Relations Expert at the Tactics Institute for Security and Counter-Terrorism

Kyiv Consulting: Question #2

What, in your opinion, would be Ukraine's future today if it had continued the course on strengthening connections with Russia and its allies pursued by a pro-russian administration of Yanukovych (as a Prime Minister before the Orange Revolution and as a president before the Revolution of Dignity)?

Dr Nickolay Kapitonenko: I believe president Yanukovych was not so much pro-Russian, but looking for an opportunity to emulate Russia's political model and stay in power. He tried to avoid over-reliance on Russia's support and was manoeuvring in his foreign policy the way his former boss, president Kuchma, did. Unfortunately for Yanukovych, he did not notice that the world has changed significantly over time. Russia has become stronger and more assertive, and balancing between Moscow and the West has become much more dangerous. Old decisions didn't work under new realities.

Thus, getting closer to Russia in 2010-ies was much different from the experience of the 1990-ies.

Thus, proceeding with this strategy would most likely have resulted in limitations of Ukraine's foreign policy and eroding democracy within. Limitations would have included staying away from NATO and minimising the ties with the Western institutions in general. The scope of limitations would have been dependent on Moscow's assessment of its current needs and interests. At the same time, Yanukovych could have had a chance to oppose Ukraine's full-scale participation in Eurasian Economic Union.

The key problem with this strategy would have been a rising dependence of Ukraine on Russia in energy area, trade, and support of the political regime. Ukraine's political and economic model was ineffective, and the only chance to improve it was by integrating with the West.

Kyiv Consulting: Question #3

What are your expectations on the evolution of Ukraine-Russia and the EU-Russia post-war relations? Would you be able to draft a single basic scenario, or it is too early to forge any specific expectations as yet?

Dr Nickolay Kapitonenko: Relations between Ukraine, the EU and Russia in the future will heavily depend on the outcome of the ongoing war. If the war is turned into a protracted frozen conflict, then hostility and deterrence would be keywords for framing relations between Ukraine and Russia. The EU will continue its support for Ukraine with the view to not let it lose. A bigger part of key decisions on Ukraine and on security and foreign policy, in general, will be taken on a national level, in the capitals of member-states rather than in Brussels.

I don't think that Russia is likely to undergo fundamental transformations after or during the war against Ukraine. It would hardly resemble the post-Soviet model, but rather look like an Iranian one. Sanctions will make Russia's economy poorer and more primitive, but as long as it will be able to sell energy resources, the regime will sustain itself. An authoritarian, aggressive and dangerous Russia would require measures of containment from the Europeans. Thus, there will be a division line in Europe, which probably will make the current grey zone of security diminish or disappear. If that's the case, Ukraine will get good chances of joining the EU, a perspective unthinkable before Russia's invasion.

The war is a great challenge for the EU. The Union's security is especially vulnerable to such challenges; while its hard power is comparatively small. One of the major lessons European countries may learn is that hard security demands much bigger effort and investments. Thus, the cost/benefit analysis of acceptance of a country like Ukraine as an EU member may fundamentally change.

It may still be the case that Europe will get back to old-style geopolitics of great powers rivalry and zones in between. However, managing security system of that sort requires too much diplomatic precision and a certain level of mutual trust. Both prerequisites are hard to meet.

DR NICKOLAY KAPITONENKO

International Relations Expert at the Tactics Institute for Security and Counter-Terrorism

Kyiv Consulting: Question #4

What is your expectation on the evolution of Ukraine's relations with the EU and NATO countries, as well as Ukraine's role in the international arena in general after the war comes to an end?

Dr Nickolay Kapitonenko: This war is not making Ukraine stronger. When it comes to an end, a long period of restoration will be lying ahead, while Ukraine's role and influence in international politics will be limited. Ukraine's focus will be on enhancing its security and minimising the risks of another invasion by Russia.

Search for allies is going to make Ukraine seek NATO membership because no other alliance can offer reliable security commitments. Already today, when the issue of security guarantees for Ukraine is being discussed, it is becoming clear that when it comes to deterring Russia, effective protection can be provided only by the US.

During the war, Ukraine's cooperation with NATO exceeded all previous levels. NATO's commitment to assisting Ukraine is strong. It is often believed that Ukraine gets everything from NATO member-states except troops on the ground.

But the absence of the troops on the ground is accompanied by another important gap – lack of security guarantees and thus lack of deterring potential. Moscow's awareness of the fact that troops from NATO countries won't fight in Ukraine gives it enough reason to gamble with a war. That's the way it worked in 2022, and that's the way it may work later if Ukraine is left outside NATO.

Chances are high that things will go exactly in that direction. Accepting Ukraine would be too risky for the Alliance, just the way it was before the invasion. Many countries will be unwilling to risk NATO's integrity, efficiency and the very existence. Some of them have quite complicated relations with Ukraine on a bilateral level. All in all, it seems that the membership perspective is way too distant for Ukraine. But both Ukraine and NATO are interested in finding a mode of a close partnership providing Ukraine with as much assistance as possible.

Kyiv Consulting: Question #5

As Ukraine has obtained the EU-candidate status, what are the next steps to be undertaken and how long it might take for it to become a fully-fledged EU-member state? And, in your opinion, what is the possibility that if Ukraine does meet the criteria, the EU will remain reluctant to grant membership to Ukraine?

Dr Nickolay Kapitonenko: Before the war, it has been highly unrealistic to expect Ukraine becomes an EU member in a foreseeable future. Economic problems, weakness of democratic institutions, geopolitical obstacles – all those factors played against. It looked like Ukraine had to get as much use as possible from the Association Agreement signed in 2014 and continue with slow reforms and with a hope that one day things may change and membership perspective may somehow appear.

However, the war has created a different framework. The EU, as well as specific member-states, from the very beginning, provided Ukraine with all possible support. Instead of walling off Ukrainian problems, Europe has taken them as close as possible. All of a sudden, the problems of Ukrainians have become common to Europeans. The borders have practically disappeared. And Ukraine's (in)security has become Europe's (in)security. Under these circumstances, EU candidacy status for Ukraine has become a natural response. It reflected commonality in the destiny of Ukraine and Europe, at least for some years to come.

At the same time, candidacy reserves some time. In order to become an EU member, Ukraine needs to get approval from all current member-states. For some of them, this is still a huge risk. Some others would demand conditions and specific terms. Some would feel the pressure from Moscow. And also the EU in general will have to understand how ready it is to change traditional approaches and procedures when it comes to enlargement under unusual circumstances of war in Europe.

OLEKSANDRA KARPENKO

National Reforms Council under the President of Ukraine

Biography: Oleksandra Karpenko is a legal expert, manager of economics and politics.

As a legal expert at the National Reforms Council under the President of Ukraine, Oleksandra composed several draft laws that contributed to deregulation, economic and social reforms. She was called-in to advise on the development and drafting of complex legislation that effected all sectors of the economy, including individuals and small businesses.

Oleksandra is a manager of the War crimes investigation project, initiated by a coalition of more than 30 Ukrainian human rights organisations.

Being alumna of the National University of Kyiv-Mohyla Academy, Oleksandra is a member of the Ukrainian Student League, the largest student organisation in Ukraine.

Kyiv Consulting: Question #1

You have been successful in helping internally displaced families and their children by organising daycare centres and summer camps for children. Now, how many families and children have you been able to help?

Oleksandra Karpenko: As of September 2022, we were able to help around 120 displaced children of ages 6 to 16. Together with the Logos Centre for Applied Education, we organised one shift of a summer children's camp and three shifts of a day education camp. Every day the teachers worked hard to bring the children back to life and to teach them new ones . Activities included: art therapy, swimming pool, spoken English, mathematics, Ukrainian, fashion shows, workshops, various training sessions, vocals, magic chemistry, salt caves, sports tournaments, creative activities, board games, field trips, acting classes, parodies and a lot more. Our mission was to give the children psychological support and help them to start the school year in a stable emotional state.

Kyiv Consulting: Question #2

Organising summer camps and kindergartens on a volunteer basis is financially burdensome. In your opinion, could the state or the municipalities support your project? What are the most pressing problems you experience now, except funding?

Oleksandra Karpenko: The main challenge for us is, of course, the safety of Ukrainian children. The risk of rocket attacks remains all over Ukraine, and the enemy continues to apply psychological pressure by targeting crowded places, schools and kindergartens. However, having seen how hard it is for children to stay in shelters all the time, we decided to take the children out of the cities (towns) to the countryside complexes, where they can have a proper rest and an emotional release. This is very important because they have recently arrived from regions and areas where active fighting takes place. They are shutting themselves, being in a constant state of anxiety.

So far, we have received no help from the state or municipal authorities. The patrol police of the Dnipropetrovsk region provided an escort for our bus with children, for which we are very grateful. At the same time, the issue of financing remains a pressing problem for us.

OLEKSANDRA KARPENKO

National Reforms Council under the President of Ukraine

Kyiv Consulting: Question #3

Now you are organising summer camps and kindergartens for children. Do you have any plans to help children in other areas? What do you think are the most pressing problems for parents and children being internally displaced? Where could you and other volunteer organisations be of help?

Oleksandra Karpenko: Of course, there is a school year ahead, so we have many plans for the educational development of children. The main problems for the internally displaced parents and children remain housing, employment and socialisation.

People found themselves in a very difficult situation, where they have to take care of their kids, get used to the new environment, look for housing and how to make their living. It is gratifying that many initiatives are already being launched in this direction, but not yet enough to help all those in need.

PAVLO KLIMKIN

Ukrainian diplomat; Former Foreign Minister of Ukraine (2014-2019)

Biography: Pavlo Klimkin is a Ukrainian diplomat who served as the Minister of Foreign Affairs of Ukraine in 2014-2019.

Pavlo Klimkin entered the diplomatic corps in 1993. Ever since he has held positions of an attaché and second secretary in the department of military control and disarmament. In 2004 Mr Klimkin was appointed Minister-Counselor of the Ukrainian Embassy in the UK and held the position for another 4 years.

In March 2008, he was named the Ukrainian Foreign Ministry's director for the European Union department.

In 2010, he became Deputy Foreign Minister and played a central role in negotiating the Ukraine–European Union Association Agreement.

In 2020, he co-founded the Centre for National Resilience and Development, a communications platform for public discussions of the best practices and solutions in the justice system, national security and professional public administration in Ukraine.

Kyiv Consulting: Question #1

Was it possible to avoid Russia's military invasion of Crimea and Donbas in 2014?

Pavlo Klimkin: The answer is yes. If the West had taken a much tougher position from the very beginning. And set red lines for Russia and Putin. However, since the West wanted to reach compromises, the war could not be avoided.

Therefore, in terms of the geopolitical situation, the position of the West is decisive.

Kyiv Consulting: Question #2

In your opinion, how beneficial was the Minsk 2 Agreement for Ukraine?

Pavlo Klimkin: From the very beginning, they were such that it was impossible to implement them. But, at the same time, they allowed Ukraine to preserve and develop our forces and abilities, as well as provided an opportunity to win some time.

In terms of implementation, this set of documents was primarily about Russia's desire to control Ukraine through Donbas. Therefore, Minsk cannot be considered separately from the Russian regime's overall desire and plans to impose control on us and destroy us as a country, as a nation. For Russia, this agreement has always been a tool, not an end. Germans understand this very well.

Kyiv Consulting: Question #3

Do you think it was possible to avoid a full-scale Russian invasion of Ukraine and resolve the tension through diplomacy?

Pavlo Klimkin: I believe that it could be. Again, only if the West had taken the hardest possible line. If they had started supplying weapons much earlier. If they had considered the deployment of at least limited Western military contingents on the territory of Ukraine.

Now Ukraine is de facto already a country of NATO's eastern flank. For this reason alone, we should have been provided with all the necessary assistance earlier. No compromises would have helped to avoid this war.

Russian elites, in particular the Kremlin, are focused on the destruction of Ukraine and the Ukrainians. They see us as some sick and wrong Russians. This vision is part of Russian ideology.

That is why a more decisive and consistent position of the West, having no fear of raising the stakes, could have changed the situation. The West was not ready for this.

PAVLO KLIMKIN

Ukrainian diplomat; Former Foreign Minister of Ukraine (2014-2019)

Kyiv Consulting: Question #4

Do you think that the escalation of the Russian-Ukrainian war has managed to consolidate European countries and change the geopolitics of Europe?

Pavlo Klimkin: Indeed, the West became consolidated after the outbreak of open war. At the same time, the threat of a split in Europe remains to this day. It is necessary to fight it rather consistently and rigidly.

Solidarity is not given that is provided for free. It is always necessary to explain to everyone that the struggle has its cost.

Kyiv Consulting: Question #5

How will Russian-Ukrainian relations change after the war? Can you describe possible scenarios?

Pavlo Klimkin: Everything will depend on what kind of regime will be in Russia. I do not see any sane relations in the future. The reason for this is primarily the negative emotion that our society feels towards the Russian enemy.

Moreover, I do not even see an effective peace agreement in the future. The current Russian regime is not ready for real negotiations. We, in turn, will not be ready for any compromises.

Kyiv Consulting: Question #6

How do you see the development of relations between Ukraine and Western countries after the war?

Pavlo Klimkin: I see rapid integration of Ukraine into the Western system of coordinates. We will play our role in the West as a passionate country and nation. We will develop faster, and our emotions will also be paid attention to.

Therefore, we will not be such a mediocre or ordinary nation within the West. Integration should be as fast and decisive as possible.

Kyiv Consulting: Question #7

What would you name as the biggest diplomatic victories of Ukraine?

Pavlo Klimkin: There were many victories. Starting with visa-free travel, breaking the agreement with Russia on the so-called friendship, as well as that on participation in the CIS, and ending, at least for the moment, with the granting of candidate status in the EU.

Many things make Ukraine cooler. First of all, it is, of course, the YES thing. There are a lot of achievements in recent years. It is impossible to single out something most important and something secondary.

Over the years, we have become stronger. But this is only the beginning. We have an ambitious program ahead, which must be implemented. Otherwise, we will not be able to achieve anything in the future.

SERHIY KLYMCHENKO

Truckdriver

Biography: Serhiy was born on 7 November 1992 in Novosvetivka village, Odesa region.

He studied in the village of Novosvitivka from the 1st to the 9th grade, he continued his education at the Tsebrekiv Professional Agrarian Lyceum. In 3 years he became a professional tractor driver, driver, and locksmith.

During 2010-2011, Serhiy completed military service in Kharkiv, where his track record as a truck driver began.

Up to date, he covers both internal and external routes.

He is happily married and has two sons and a daughter.

Kyiv Consulting: Question #1

How has the war affected your work? How has the number of trips changed compared to pre-war times, and what additional difficulties have been encountered in transport operations during the war?

Serhiy Klymchenko: The war had an extremely negative impact on our work. Because of the need to support our country's economy during wartime, the number of trucks travelling abroad has greatly increased, forming long queues at the borders. However, the number of operated routes has decreased considerably. This has led to a reduction in the number of trips per month, which has affected drivers' monthly payroll.

Kyiv Consulting: Question #2

What impact has the shortage of fuel, and the resulting increase in its price, had on your work?

Serhiy Klymchenko: After the invasion of Ukraine by the Russian Federation, our state faced a shortage of fuel. Fuel is the most important component for logistics, which ensures the vitality of our profession. During the acute phase of the shortage, we had very big problems, as the vast majority of our time was spent not on the road, but in the queues at petrol stations. Consequently, all trips were running late. This led to a reduction in the number of trips for the month, which had an impact on the drivers' monthly payroll.

Kyiv Consulting: Question #3

How do you assess the role of the transport sector, as well as that of drivers/ truck drivers in particular, in ensuring the functioning of the Ukrainian economy under wartime conditions?

Serhiy Klymchenko: With the outbreak of war and martial law in Ukraine, everyone felt the importance of the transport sector in ensuring operation of the economy and the life of our state as a whole.

During the first days of warfare, all of our employees got involved in delivering humanitarian aid from Europe to different parts of Ukraine.

In the beginning, all the trips were made on a charity basis. Eventually, when it became economically onerous, we returned to making commercial shipments so that our economy could begin to wake up and the carriers would have the financial means to deliver the humanitarian aid all Ukrainians needed as quickly as possible.

Thus, humanitarian aid and goods were delivered, moreover, entire businesses were evacuated. Those that could not remain operative under a threat of destruction. Although **shipment volumes** transported by trucks cannot be compared to those carried by ships, in these difficult times resilient on-land transportation contributes to the overall success of the country.

Transportation is the lifeblood of Ukraine's economy. And only through our joint efforts will we win and become a successful country.

DR YULIA KLYMENKO

Member of Parliament of Ukraine; First Deputy Head of Transport & Infrastructure Committee at the Verkhovna Rada of Ukraine

Biography: Dr Yulia Klymenko has 18 years of experience in management of large companies and institutions in private and public sectors. She is a Member of Parliament of Ukraine, 'Voice' Faction. She is the First Deputy Chairman of the Committee on Transport and Infrastructure and Deputy Minister of Economic Development of Ukraine.

She has held managerial positions in companies with foreign investments, in particular, the European Bank for Reconstruction and Development (EBRD) and East Capital (Sweden). She was a member of the Supervisory Boards of the Center for Economic Strategy, Transparency International Ukraine, and the state enterprise 'Administration of Sea Ports of Ukraine. In 2015-2016, she was a Member of the Permanent Delegation to the Parliamentary Assembly of the Black Sea Economic Cooperation Organisation, and a member of the groups for inter-parliamentary relations with Germany, the UK and India.

In 2018, Yulia became a Vice President of the Kyiv School of Economics (KSE) where she led the development of business education.

Kyiv Consulting: Question #1

According to preliminary estimates, the total amount of losses incurred by the Ukrainian transport infrastructure due to the Russian invasion exceeds 40 Bn USD. According to your estimates, how much time might Ukraine need for its restoration? What will be the key priorities of the post-war recovery of the Ukrainian transport sector?

Dr Yulia Klymenko: First of all, I would say that infrastructure losses are much higher than 40 Bn USD. Only in railways we have lost over 23% of the infrastructure. This is supplemented by the destroyed roads, bridges, and airports, as well as blocked, mined and destroyed ports. One should add also the economic losses which were caused by the blocked export of grains, sunflower oil, metal, chemicals, etc., which amounted to 2-3 Bn USD. A rough estimate of losses from the russian invasion (excluding occupied territories since we cannot calculate there) already exceeds 1 Tn USD.

But we must start reconstructing our country right now because, on the one hand, we have to defend our land and, on the other hand, rebuild and keep the economy running. And we have to rebuild a NEW Ukraine: modern, efficient, green, comfortable and competitive globally.

Kyiv Consulting: Question #2

In June 2022, the EU and Ukraine signed the Agreement on the liberalisation of road transportation on the Ukraine-EU routes. Do you think it will allow to improve and speed up logistics between Ukraine and the EU significantly?

Dr Yulia Klymenko: Yes, I do believe it will improve and speed up logistics between Ukraine and the EU. This is critically important right now when our sea ports are blocked by Russia and the Ukrainian economy is completely dependent on sustainable logistics through its western borders.

Ukraine feeds 400 million people, mostly in low-income countries. In global consumption, Ukraine accounts for:

- 10% of wheat
- 15% of corn
- 47% of sunflower oil

Ukraine exports 58 million tonnes of agricultural commodities annually. 90% of it was shipped through the seaports of Azov and the Black Sea, through a developed infrastructure ecosystem of river- and seaport facilities equipped with storage and export laboratories.

DR YULIA KLYMENKO

Member of Parliament of Ukraine;

First Deputy Head of Transport & Infrastructure Committee at the Verkhovna Rada of Ukraine

On 24 February 2022, russia started bombing Ukrainian cities, killing civilians. It purposely mined and blocked all Ukrainian ports, as well as systematically targeted our grain storage facilities, laboratories, railway infrastructure, fuel storage and oil refineries.

That led to the interruption of the global food supply chains. It was not collateral damage of the war in Ukraine, but a planned hybrid weapon to further massively destabilise the global economy and political order through the instigation of famine in Africa and Asia that would result in flooding migration to North America and Western Europe. We have observed this scenario having been played in the past by russians in Syria, which has caused massive migration to Europe and has deformed the European political processes. This time food is the weapon, and the scale of the crisis will be much larger. An additional benefit that russia expects will be extra revenues resulting from skyrocketing of global food commodity prices, in the same way as they benefit from growing energy prices. That is why in Kherson and Donetsk regions russians have already stolen more than 700,000 tonnes of Ukrainian grain and moved it to russia for further export.

Understanding how critical our food supply is for many countries (as an example, Egypt depends on Ukraine, as the latter accounts for 80% of its wheat consumption), despite the war, Ukraine has invested to triple its river, railway and road transportation capacity. Now we can export through our western borders 1.5-2 million tonnes of grain monthly (vs. 0.5 million tonnes before).

However, we still have 22 million tonnes of the previous harvest and a few million tonnes of the new one. So, in parallel to enhancing our land logistics, we have to deblock our ports to stop the global food crisis and curb inflation. For that, Ukraine has to defeat russia in the sea, in the air and on the ground.

To unblock Ukrainian sea routes, the Armed Forces of Ukraine has to sink 25 more russian warships and submarines with anti-ship missiles, MLRS (multi-launch rocket systems), as well as to demine the sea routes.

To protect our agricultural land, infrastructure and arrange sustainable transportation corridors, we will need to strengthen the air defence, as well as conduct ground defence operations against russia's advances in Eastern and Southern Ukraine. That is why we call for further supply of LAV armed vehicles, UAVs, artillery rounds of 155mm NATO standard ammunition, M777 Howitzers, and robotic demining systems.

To support Ukrainian agriculture export capacity, we need to reconstruct destroyed grains storage facilities, railway and road infrastructure, repair, reequip and increase the number of export phytosanitary and veterinary laboratories.

All help mentioned above will allow us to end the war. It will allow Ukrainians to return to their homes and jobs to harvest and feed the world, to teach, treat and create our new bright future. It will be much cheaper to invest in heavy weapons for Ukraine than to try to resolve prolonged global famine, migration, unrest and geopolitical turmoil.

Head of the State Atomic Energy Regulatory Commission

Biography: Oleh Korikov is a nuclear and radiation safety expert with an extensive experience in this field. He started his career in 1993 as a young specialist at the Zaporizhzhia NPP. He worked his way up from a machinist — a turbine equipment inspector of the 6th group of the turbine department of the operational division of power unit 3 of the Zaporizhzhia NPP to the director of investments and prospective development of SE 'NNEGC 'Energoatom'.

During 2018-2020, he worked as the Director of the Department of Nuclear Energy and Atomic Industrial Complex of the Ministry of Energy and Coal Industry of Ukraine. During 2020-2021, he worked as a Deputy General Director — Technical Director, in State Specialised Enterprise 'Central Enterprise for the Management of Radioactive Waste'.

Since July 2021, he had been working as the First Deputy Chairman of the State Nuclear Regulatory Inspectorate of Ukraine. According to the order of the Cabinet of Ministers of Ukraine from 15 December 2021, he was appointed as Acting Chairman of the State Nuclear Regulatory Inspectorate of Ukraine — Chief State Inspector for Nuclear and Radiation Safety of Ukraine.

Kyiv Consulting: Question #1

How did the war affect the level of radioactive contamination in Ukraine, especially in the exclusion zone, as well as in the neighbouring countries?

Oleh Korikov: Within the framework of cooperation of the SNRIU with the nuclear safety regulatory authorities of Norway, experts of the Technical Support Organisation of the State Regulatory Inspectorate are implementing a project on radiation surveys of the territories of the Kyiv region. These are the territories that were under Russian occupation.

Heavy equipment of the Russian army was advancing on the capital through the exclusion zone and the zone of unconditional resettlement. It moved through the contaminated territories with violations of the radiation safety regime. In addition, due to looting and pogroms at some enterprises, located in the exclusion zone, there was a significant increase in the risks of transferring radioactive contamination and radioactive materials.

During the project, the main roads connecting the exclusion zone with the Ukrainian capital, Kyiv, were inspected. In particular, those running through the nearby settlements.

Point measurements were also carried out in the southern part of the Exclusion Zone. Besides, surveys have been carried out on a number of road sections, in parks and squares, remnants of military equipment, private estates and apartment buildings. All this has been done following the statements of residents who wished such surveys to be carried out.

At this stage, some conclusions can already be made. First, the sources of ionising radiation, reported by enterprises located in the Exclusion Zone, do not pose significant hazard to people and the environment, since the amount of radioactive substances is insufficient for severe radiation contamination.

The most likely danger is the movement of large amounts of contaminated soil from the exclusion zone, as well as contaminated objects, parts of structures and scrap metal. However, as of today, no radioactive substances have been detected in Kyiv.

I would like to emphasise that the survey did not reveal significant amounts of radioactive substances outside the exclusion zone, which could be explained by the fact that they were transferred during the movement of military equipment or actions of the occupation forces.

The detected foci of Cesium-137 isotope presence were very local. Accordingly, they were investigated. Experts concluded that these centres are the consequences of the 1986 accident at the Chornobyl NPP.

Head of the State Atomic Energy Regulatory Commission

Surveys of the Exclusion Zone showed that the exposure dose rate and soil contamination density did not increase compared to last year.

As for other facilities on the territory of Ukraine, the radiation situation is monitored by several state institutions under their competence. These are the Hydrometeorological Service, NNEGC Energoatom and the State Specialised Enterprise Ecocenter.

Today, according to the available indicators of the monitoring system, the radiation situation in Ukraine remains stable. Ukrainian NPPs, of course, except Zaporizhzhia NPP, operate in normal mode. Emissions and discharges of radiation substances into the air do not exceed their permissible levels.

Automated radiation monitoring stations located in the observation zone (within 30 km of each NPP) operate in the normal mode. No increase in radiation background was detected in the observation zones.

In addition, we have the nuclear subcritical facility 'Neutron Source' in Kharkiv and the enterprise 'Radon'. The radiation situation there also remains within normal limits, even though some buildings were damaged as a result of shelling by Russian troops.

However, the potential risks of pollution remain high due to constant rocket and artillery shelling.

It should be noted that industrial ionising radiation sources were previously operated in the occupied territories. Now regulatory control over these sources is lost. And there are risks of damage to these sources, which will lead to contamination of the surrounding areas.

Kyiv Consulting: Question #2

Military actions of the Russian army significantly disrupted the operation of nuclear power plants in Ukraine. How did the rules and standards of NPP operation change during the war?

Oleh Korikov: Yes, the hostilities and the occupation of Zaporizhzhia NPP affected the work, but only of this one plant - Zaporizhzhia NPP. Other Ukrainian nuclear power plants operate in normal mode.

Coming back to Zaporizhzhia NPP, I will say that the staff there works under pressure, shelling continues and the infrastructure is partially destroyed. At the same time, during six months of occupation, there was no accident at the facility. And this is due to the professionalism of the Ukrainian staff. They make every effort to ensure the safety of power units.

Yes, as a result of shelling and damage to the external power supply networks, diesel generators at the station were switched on in an emergency. But, again, there was no accident. Employees managed to keep the situation under control following all instructions and requirements. Nuclear fuel cooling systems are operating stably.

Regarding changes in rules and standards, I can say that the war did not affect them at all, and did not reduce them in the context of obligations and safeguards. Ukraine continues to faithfully implement international conventions and obligations in the field of nuclear and radiation safety.

Of course, our bitter experience related, in particular, to the occupation of nuclear facilities, which happened for the first time in world history, should be reflected in international documents.

Just as the world once reacted to the accident at the Chornobyl nuclear power plant and the accident at Fukushima-1. Everyone should draw appropriate conclusions. I am convinced that there will be changes in international documents. They are simply necessary after the situation with the seizure of Ukrainian nuclear facilities.

Such actions committed by the Russian Federation undoubtedly fall under the concept of nuclear terrorism. Therefore, it must be investigated and punished properly.

Head of the State Atomic Energy Regulatory Commission

Kyiv Consulting: Question #3

What potential consequences can nuclear incidents at one NPP or other nuclear facilities have for Ukraine and the world?

Oleh Korikov: The answer to this question depends on many factors. It depends on which of the four NPPs will have an accident, on how many power units, what kind of accident it will be - whether the core will be damaged or not, what the weather will be like, and so on. There are too many factors that can determine possible consequences in case of a conditional accident.

In our opinion, for example, Zaporizhzhia NPP is potentially the closest to an emergency situation. Currently, a potential scenario with a complete blackout looks most likely. Three out of four power lines connecting the nuclear power plant with the Ukrainian energy system have been interrupted.

In addition, there is no information on the status of operability and fuel reserves in diesel generators. In case of complete de-energisation of at least one power unit, and the absence of diesel generators, the core may be damaged. That is its melts within the first three hours from the beginning of the emergency.

In the most difficult scenario - with damage to the containment - it may be necessary to evacuate the population within a radius of up to 40 km around the plant. Depending on weather conditions, the radioactive cloud may be carried to Europe or Russia and Belarus.

It should be remembered that the occupied NPP is located on the shore of the Kakhovka Reservoir, which is part of the Dnipro River cascade of reservoirs. Thus, the accident may lead to further radiation contamination of the lower reaches of the Dnipro River and the Black Sea. Then the accident will become transboundary in nature.

In general, today we are considering two options for the course of events in case of an accident. The first one is de-energisation with the simultaneous absence of diesel engine operation. Then there will be severe damage to the core. The second scenario is the damage to the spent fuel storage facility by Russian occupants. At the same time, the first scenario will be the most dramatic of the two.

Kyiv Consulting: Question #4

How can the war affect the future development of the nuclear industry in Ukraine and the world?

Oleh Korikov: I am convinced that nuclear energy is the future. It is the most affordable compared to electricity produced, for example, at hydroelectric power plants. The world will increase the volume of nuclear energy production. Especially against the background of rising oil and gas prices. And also at a time when we see a gradual refusal of European countries from Russian energy resources.

Ukrainian nuclear reactors are gradually transferred to fuel assemblies manufactured by the American company Westinghouse.

In July this year, the fuel of this holding was loaded into the core of reactor No.3 of Rivne NPP for the first time. And now 7 out of 13 power units of Ukrainian NPPs operated by Energoatom are loaded with American fuel. I would like to note that no safety conditions have been violated during the entire period of operation of this fuel.

We have already started the process of introducing Westinghouse nuclear fuel for VVER-440 reactors. As you know, two such reactors are operated at Rivne NPP. We plan to load fuel to this type of reactor unit next year.

Regarding further development of nuclear energy in Ukraine, I would like to note that agreements on the construction of nine AP-1000 power units have been signed. AP-1000 is a proven generation III+ reactor. Two such reactors are already in operation in China. These reactor units have unique passive safety systems, modular design, as well as the best performance in the industry.

Head of the State Atomic Energy Regulatory Commission

In addition, AR-1000 reactors can operate in maneuver mode, i.e. the load of the power unit automatically changes depending on the needs of the power system.

And finally, I will say that the possibility of building small modular reactors in Ukraine is being studied. It is quite obvious that the U.S.-Ukrainian cooperation in the field of nuclear technologies is only deepening. But Russian technologies should become a thing of the past.

Kyiv Consulting: Question #5

What are the main steps to be taken by the Ukrainian government and the international community to ensure nuclear safety in the future?

Oleh Korikov: In my opinion, the international security system in the field of nuclear energy use needs a really serious update. Before the full-scale invasion of Russia, no one thought those reactor facilities or spent fuel storage facilities could be at the epicentre of hostilities. All NPPs in the world were built to operate in peacetime.

Therefore, new norms and rules should be developed taking into account the Ukrainian experience. First of all, the international community should work to prevent the recurrence of such situations in the future.

Any country that might want to repeat nuclear blackmail should understand all the consequences of its actions. Similarly, Russia must be punished for what it is doing now. There can be no cooperation with a terrorist country. All existing agreements must be terminated.

Kyiv Consulting: Question #6

The Russian army occupied at Zaporizhzhia NPP and plans to disconnect it from Ukraine. In your opinion, was the response of the international community to this threat effective enough?

Oleh Korikov: Indeed, constant shelling and damage to the existing power lines may indicate the intentions of the Russian occupiers to switch the plant to the Russian energy system. This is nothing more than the theft of our NPP and the electricity it produces. It is a crime that creates huge risks, which I have already mentioned. Attempts to disconnect the plant from the Ukrainian energy system may lead to the complete de-energisation of the nuclear facility.

The world community was not ready for such a development of events. It is not only about the fact of occupation of Zaporizhzhia NPP, but also about the full-scale Russian aggression against Ukraine.

We see that the absolute majority of the world is already on our side. As for the involvement of the IAEA mission, I think it should properly record all events and the situation at Zaporizhzhia NPP, and the causes of threats to nuclear and radiation safety.

And, of course, the work of international experts should contribute to the de-occupation and demilitarisation of Zaporizhzhia NPP, adjacent territories and the satellite town of Enerhodar. All things that happened and are happening at Zaporizhzhia NPP must be called by their proper names. The world should not turn a blind eye to the crimes of Russia.

TETIANA KOVKINA

First Officer at SkyUp Airlines

Biography: Tetiana Kovkina is one of the four female SkyUp Airlines pilots. She entered the flight academy of the Kropyvnytskyi National Aviation University in 2003. After graduation in 2008 she went to work as an engineer of aeronautical information, assistant to an air traffic controller in the administration of the State Enterprise 'Ukraerorukh'.

While working at 'Ukraerorukh', Tetiana obtained a private pilot's certificate allowing to operate small private planes. Later, to pilot passenger planes, she received a required commercial certificate.

In 2018, Tetiana joined SkyUp Airlines for a cadet program and started working as a First Officer. Tetiana flew along various routes, including Antalya, Hurghada, Alicante, Barcelona, Paris, China, as well as domestic flights inside Ukraine.

Kyiv Consulting: Question #1

What changes did your company go through to adjust to the new reality? What measures were implemented to keep pilots and other crew-members current (e.g. reallocating resources abroad)?

Tetiana Kovkina: Since the full-scale Russian invasion of Ukraine, SkyUp Airlines had to cease all its flights in Ukraine.

From the very beginning the company's efforts were headed at establishing new contracts and finding new possibilities to continue operations. Finally, the first wet lease flights departed just a few months later. The results of tremendous job can be observed today, as our company's aircrafts fly all around Europe, as well as in Türkiye, Egypt and other countries.

Despite everything, the company continues to operate and support Ukraine by paying taxes. To make it possible, our pilots and cabin crew members were relocated to different base-countries where aircrafts were being hosted.

There is one more important project SkyUp is working on at the moment, registration of SkyUp Airlines in the European Union.

Of course, it is still not easy to engage all the company's staff at the moment, but all the crew members are able to keep proficiency and get their salaries. All of us are trying to look forward with optimism.

Kyiv Consulting: Question #2

How did your professional life change after 24 February 2022?

Tetiana Kovkina: Obviously, my professional life has changed drastically since 24 February 2022. Today there is no possibility to fly from our home base in Kyiv or other Ukrainian airports. Instead, I fly from other countries under the aegis of the companies that SkyUp has wet lease agreements with.

Just like other crew members, I have short- and medium-term business trips to various bases, followed by a period of time spent at home. Since SkyUp does not have one permanent base at the moment, all its pilots and cabin crew members should be really flexible and ready to travel a lot, even to change locations during one business trip. It may look challenging, but that is our way of life now. And I am trying to get used to it.

A lot of things go wrong today, but I prefer to stay positive and optimistic. Even when it is hard. I am happy to have a job and ability to keep my professional competence.

KOSTIANTYN KOZHEMYAKA

President of Fund for Cultural Initiatives ArtHuss

Biography: Being the initiator and a participant of a number of cultural and art projects, Kostiantyn Kozhemyaka is actively involved in promotion of the Ukrainian art.

In early 2014, Kostiantyn Kozhemyaka founded a 'Fund for Cultural Initiatives ArtHuss', a charitable organisation which aims to promote and support contemporary Ukrainian art among Ukrainian business representatives 'Art and Business communication'.

Together with his partners, within the ART-FRONT public initiative, in October 2014, ArtHuss held a charity auction in support of the fighters injured in the anti-terrorist operation zone.

Kyiv Consulting: Question #1

What do you think can be characterised as Ukrainian identity? How has this Ukrainian identity changed since the declaration of independence in 1991, especially since the start of the full-scale invasion on 24 February 2022? How do you see the Ukrainian identity in 2030?

Kostiantyn Kozhemyaka: In its origins, the Ukrainian identity was shaped by the historical principle and, to a lesser extent, by the geographical principle. Since 1991 a Ukrainian political nation has been formed, based on the identity of the core nation and on the principles and the values, shared by all who live in the country, regardless of their nationality. Such values are freedom, democracy, empathy, inclusiveness, etc. In 2030, these trends will continue and I hope that the current dramatic events will add such features as responsibility for one's choice, as well as an ability to exert consolidated control over authorities. This will be the modernised Ukrainian political nation that is emerging now.

Kyiv Consulting: Question #2

For nearly 400 years, the Ukrainian language has experienced 134 prohibitions and attempts of oppression. What explains this permanent desire to destroy the Ukrainian language and why does it still exist and develop to this day?

Kostiantyn Kozhemyaka: Language oppression is a common part of the colonisation of territories from the side of the Moscow metropolis. Ukraine was fortunate that part of its territory was under the command of the Austro-Hungarian Empire with a more loyal attitude to the national provinces. This has allowed cultural centres to be retained and this area has provided a shelter for cultural activists from the Left Bank part of Ukraine. In times of political turbulence (2004, 2013, 2022) people / nations who suffer, consciously and subconsciously, unite around conservative ideas (the UK in the 1930s, Ukraine in 2014), based on self-identification either within a territory, religion, ethnic groups or political nation. In the Ukrainian reality, even today it works under the slogan 'I believe in the Armed Forces of Ukraine, Ukraine is above everything', etc. One of the political forces has formulated the slogan this way: 'army, faith, language'. The words are different, but it does not change the meaning.

KOSTIANTYN KOZHEMYAKA

President of Fund for Cultural Initiatives ArtHuss

Kyiv Consulting: Question #3

Since Ukraine gained its independence, the number of Ukrainian-speaking citizens, coupled with those who consider the Ukrainian language as their mother tongue, has been growing steadily. In your opinion, what are the main factors standing behind this trend? Is it, primarily, the policy of the state, or is it the change of generations in the Ukrainian society?

Kostiantyn Kozhemyaka: This is a clear form of self-identification, affiliation to a political nation. It is like a military aircraft 'friend-orfoe' recognition system. This is also facilitated by a sense of national unity in the face of external threats.

Kyiv Consulting: Question #4

What do you think are the core values of Ukrainians and what factors have shaped them?

Kostiantyn Kozhemyaka: Throughout the ages, the core value of the Ukrainians has been, is and will be FREEDOM. Some of the first cities with the Magdeburg Law were located, in particular, on the territory of modern Ukraine, the Lublin Unity as a prototype of parliamentarism.

Kyiv Consulting: Question #5

Following Russia's full-scale invasion, the Ukrainian communications campaign 'Be Brave Like Ukraine' was launched with a series of themed billboards and posters outside Ukraine. What do you think of its impact on the perception of Ukrainians abroad and how do you see a further development of the process of spreading Ukrainian values around the world?

Kostiantyn Kozhemyaka: I cannot answer, because I have not been outside Ukraine since 24 February 2022. And as for the spreading of values around the world – it is a multi-vector thing. The victories of the Armed Forces of Ukraine are an effective way of such spreading per se. The external cultural activity, soft power, is yet another way of it. It is clear that in the West, Ukraine is on trend and a man in the street is interested to know more about Ukrainians: cultural heritage, modern culture, customs an traditions, etc. That is why in our publishing house we currently have four working projects that aim to give answers to some of these questions outside Ukraine.

Kyiv Consulting: Question #6

19 June 2022, Ukrainian Parliament passed a law banning imports of Russian literature. What impact will this decision have on the Ukrainian book market and readers? And is it a timely decision?

Kostiantyn Kozhemyaka: Same as the visa regime with the Russian Federation, this should have been imposed much earlier. But we should not pin all the blame on politicians, before 24 February 2022, 38% of the Ukrainians tolerated Russia with varying degrees of loyalty. Despite that the war has been on for 8 years. We can now witness the process of catharsis. Everything undergoes radical and dramatic changes, including changes of attitude.

KOSTIANTYN KOZHEMYAKA

President of Fund for Cultural Initiatives ArtHuss

This decision, from my point of view, will not have any significant impact since, even without this law, the imports have gradually died during those eight years. Looking at the reading audience of my publishing house, I can assure you that over the last 7-8 years the most active readers seeks to read Ukrainian-language publications. And those who shout about the 'oppression of Russian books', do not, as a rule, read books at all, neither in Russian nor in Ukrainian.

Remark: I am so pleased that putting the President's signature on this law has been so actively advocated exactly by those who had been the major importers of books from Russia: Yakabu and Knygarnya Ye. Does it mean they are out of sorts, or what?

Kyiv Consulting: Question #7

Even before the full-scale invasion began in February 2022, series of projects aimed to promote Ukrainian literature in the world's leading libraries were planned, but did not come to life until the beginning of this year. What do you expect from such projects and how do you see their development?

Kostiantyn Kozhemyaka: The idea is good. 6 million readers abroad is a potential audience for these libraries. This will be complemented by a programme of translation of Ukrainian books into European languages. Together, this will bring results. There is one BUT: do we have enough high-quality, up-to-date content for this proposal? Let me tell you frankly – no. We cannot even put together a catalogue offering at the level and volume of any medium-size European publishing house. The creation of Ukrainian content is the key point which will determine the effect of all the initiatives.

YURII KRASII

Taxi driver, volunteer

Biography: Yurii Krasii is a private entrepreneur. His professional interest covers cars and transportation, namely: searching and purchasing pre-owned or second-hand cars under an individual request.

Yurii has a Master's degree in law and spent several years in public service.

Among other activities, he has been working as a taxi driver in Kyiv for many years.

Kyiv Consulting: Question #1

The war has affected all businesses in Ukraine, making them either adapt to a new reality or shut down. What impact does the war in Ukraine have, and will have, on Ukraine's taxi market?

Yurii Krasii: War is a big challenge for society and the state. It significantly disrupts any business. Naturally, changes have also affected my fields of activity: availability of pre-owned or second-hand cars, rental of real estate objects and, of course, taxi service.

The purpose of any state is to create comfortable and equal conditions for the coexistence of its citizens with the help of laws and regulations. In this aspect, for many reasons, our state is not ideal, and many activity areas remain unregulated. With the beginning of the war, our 'dormant' problems of imperfect legislation, governance and corruption have come to the surface, and since war is a competition of systems for efficiency, we have to work and improve ourselves on an ongoing basis. The same applies to society since the state functions efficiently because there is a public demand for it. In Ukraine, the market of taxi transportation services is an example of a business activity that requires changes. Current legislation on passanger transportation by taxi exist but doesnt work, does not have effective. It does not provide effective control over its enforcement and definitely does not keep up with the scientific and technical progress which swept the industry after the mobile aggregator apps entered the market. Well-known are the cases of 'Uberisation' of taxi markets in Europe, as we all heard about the notorious repeated protests regarding this issue, the reaction of governments to them and so on. In fact, the taxi industry in Ukraine looks like one big Uber (Bolt / Uklon / other, there are plenty of them, but it doesn't matter - they are all the same). Drivers do not pay taxes and, at the same time, they are not socially protected. They are not subject to pensionable service and they have tax benefits neither for fuel nor for the purchase of a new car. At the same time, passengers are not insured against accidents or incompetence of a driver. Drivers who are not familiar with the routes or do not even know the language of the country they work in (at least at the elementary level) are commonplace. And this is not ok, since passengers cannot get quality service. Nobody controls drivers, as one can get a job through a messenger. Cab services compete by offering the lowest price only. That being said, the calculation of travel fares takes place behind the scenes, without considering the formula of economic feasibility. This way, everyone compromises on his / her own safety. This is a vicious circle of the wild market. The Ukrainian taxi market should undergo a quality reform or copy the US, Germany or Israel model, for example.

Kyiv Consulting: Question #2

When the full-scale invasion of Russia into Ukraine started on 24 February, did you continue working as a taxi driver or did you switch to a volunteer activity, transportation in particular? What does this war mean for you personally? What has it changed?

Yurii Krasii: Since the start of the full-scale invasion on 24 February, I transformed my everyday life into a regime of helping the country. At least I had such motives, and it could not be otherwise. But how can I help effectively?

YURII KRASII

Taxi driver, volunteer

As I am a private person and not a military man, I had to organize myself. I have a passenger minivan, so I turned it into a cargo van on the first day of the war, having left only the front seats. Through Telegram chats and friends, I searched for help requests and fulfilled them. Some of the tasks that I remember well are the delivery of bags of flour to the church, the purchase of products for the café that was cooking food for Territorial Defence soldiers, the delivery of equipment to checkpoints, the purchase of medicine for pensioners, and all the rest connected with transporting things.

I remember that at some point my motivation went down, as it was difficult to realise the significance of fulfilling the undertaken tasks. Once I brought medicine to an old man I had not seen before. He thanked me and said that both his sons went to war. His words sounding along with exploding shells on the outskirts of the city greatly impressed me, and the 'circle of usefulness' closed in my imagination. It gave me the strength to act further.

On 28 February, my friends and I enrolled in the Territorial Defence, prepared Molotov cocktails (petrol bombs), and were ready to carry out military orders, but the recruitment office told us that the plan was outperformed by 300% and dismissed us. So, I continued to do volunteer delivery. It was scary, but I couldn't call our dismissal a relief – sometimes I feel like I should be there, in the war. But if it happened like that, that is how it should be. I am very grateful to the soldiers that are defending our country now and during all the eight years since 2014.

I could not imagine my own evacuation, but I moved out on 17 March to take my elderly parents to the west. I came back in two weeks and have been in Kyiv since that time. After the repulsion of the Russians and the de-occupation of the Kyiv region, for a month or two, I gathered people and we took part in clean-up operations organised by other volunteers in Irpin, Bucha, and Vorzel. Later we set up positions in that area, dug trenches, and built dugouts. I could feel that everyone began to work for the public benefit, for defence and victory, and not for themselves. I think that my contribution was humble – people around me did much more than me.

As I did all the tasks at my own expense, I took several taxi orders after the completion of each task (in fact, the taxi service has been one of my income sources since 2008). It allowed me to stay afloat and fuel my car for the next tasks. I took several families whom I know and just customers to the railway station for evacuation. People sat in the cabin, on the floor, on canisters and boxes with Molotov cocktails. The smell of gasoline could be felt for a couple of months in the cabin. I was afraid that the fuel could explode, but nobody thought about it at that time – saving lives was more important.

As of September, the war in Kyiv feels no longer like before, and I have largely returned to my usual life: I work in a taxi and look for used cars for customer orders; I did a small repair in my apartment. I also continue to respond to volunteer tasks: I am writing this text from the bus to Warsaw, where I am going in order to bring a car for the military from there.

DENYS KUDIN

First Deputy Minister of Economy of Ukraine

Biography: Denys Kudin has graduated with honors from Taras Shevchenko National University of Kyiv with a master's degree in 'International Private Law'. He also holds an MBA degree from London Business School (UK) and Columbia University Business School in New York (USA).

He began his career in 2002 at the United Nations Office in Ukraine, working there in parallel with his university studies. In 2004, he founded a company called 'Diplomat Service'. For some time since 2013, he worked in senior positions at WOG, a company holding one of the largest networks of gas filling stations in Ukraine.

In 2020, Denys Kudin was appointed a Deputy Head of the State Property Fund of Ukraine, and in May 2021 he took the position of the First Deputy Chairman there. In November 2021, he was appointed as the First Deputy Minister of Economy of Ukraine.

Denys Kudin has been awarded the Honorary Diploma of the Cabinet of Ministers of Ukraine.

Kyiv Consulting: Question #1

During the full-scale Russian invasion, a big number of Ukrainian industrial enterprises got into the epicentre of military operations. What is your estimation of losses that the Ukrainian industry has incurred? Which sectors (mining, metallurgy, machine building, chemical industry, etc.) have suffered the most?

Denys Kudin: Heavy industry is one of the sectors of the economy that has been hit the hardest. First, active hostilities are currently ongoing in the industrialised areas of Ukraine: Donetsk, Zaporizhzhia, Kharkiv, Kherson and Luhansk regions. The share of these five regions in Ukraine's industrial production is about 27%. Second, the heavy industry is often represented by large enterprises that have a significant production base, which is almost impossible to relocate. Third, industrial production consists of a large number of processes. Therefore, any breach in a supply chain leads to a halt in production.

Considering the industrial specialisation of the regions where hostilities are still taking place, metallurgy (Donetsk region), chemical production (Luhansk region) and mechanical engineering (Donetsk, Zaporizhzhia and Kharkiv regions) suffered the biggest losses. According to findings of our joint program with the Kyiv School of Economics, the most damaged industrial assets are:

- in metallurgy Ilyich Iron & Steel Works, as well as Azovstal
- in production of coke Avdiivka coke plant
- in production of chemicals Severodonetsk Azot Association
- in mechanical engineering Ukrainian Energy Machines (former Turboatom), Antonov, Zorya Mashproekt, as well as Energomashspetsstal
- in production of oil products Ukrtatnafta

DENYS KUDIN

First Deputy Minister of Economy of Ukraine

Kyiv Consulting: Question #2

Since the beginning of the invasion, what kind of support has the state provided to industrial enterprises? How do you estimate the scale and efficiency of relocating industrial enterprises from those regions where active hostilities are taking place?

Denys Kudin: The war became an extraordinary challenge for the economy. To address it, the Government introduced a wartime economic policy. The priority of this policy is to ensure fast renewal of business activities, including those of industrial enterprises. The followings policy programmes were launched:

- 5-7-9 Affordable Loans Program, which has co-financed 11,890 loans for a total amount of 48 Bn UAH since the martial law was enacted;
- 'eRobota', a programme which embraces six cash incentive schemes for SMEs and is intended to stimulate entrepreneurial activity in various fields (in particular in manufacturing) and creation of jobs. In aggregate, 10 116 people have applied, and today we have 1 115 winners. The most popular type of activity has been wholesale and retail trade, as well as repair of motor vehicles and motorcycles, which accounted for 26% of the approved applications. Manufacturing accounted for another 22%, temporary accommodation and catering for 12%, provision of other types of services for 7%, and professional, scientific and technical activity for 6%;
- Public Procurement Localisation programme, according to which domestic producers are given preferential terms when participating in electronic auctions, held for the public procurements.

Besides, several fiscal incentives were introduced. At the beginning of the war, enterprises were transferred to a simplified taxation system, which provides for a turnover tax of 2%. Entrepreneurs in the war zone were exempted from certain taxes. Special incentives were applied to residents of industrial parks, including a 10-year exemption from income tax (provided that all income is reinvested in the development of the respective projects), exemption from VAT and import duty for new equipment imported for the use on the territory of an industrial park, as well as establishment of preferential property tax rates.

We believe our Enterprise Relocation Program is a success. As of 1 September 2022: 1,823 applications for relocation have been processed, 727 enterprises have moved their facilities from areas of active hostilities, and 529 enterprises have resumed their activities in the safe territories. Among the relocated ones, which have already relaunched their activities at their new locations, 30% are in manufacturing.

Now we prepare several new programs. The most anticipated one is Production Facilities Renewal Loan Program. This program has been initiated by Yulia Svyrydenko, the Minister of Economy, and is aimed to provide financial support to entities whose property has been destroyed or stolen in the course of hostilities. The program will provide businesses with loans for investment purposes and/or for working capital financing to assist them to launch their restored capacities. Loans shall be secured by a Government guarantee on a portfolio basis, for a period of up to five years.

Kyiv Consulting: Question #3

In your opinion, in what way should the process of the post-war reconstruction of the Ukrainian industry take place? Which steps and initiatives, as well as which sectors, should be in focus to make Ukraine become one of the leading industrial hubs in Europe?

Denys Kudin: Reconstruction of Ukraine as a whole, including industry, will take place within the framework of the Ukraine's Recovery Plan. In the course of its preparation (and, specifically, composition of the 'Recovery and development of the economy' section), specialists of the Ministry of Economy, along with a wide range of experts, domestic scientists and representatives of several industries, identified sectoral directions capable of ensuring the achievement of the set goal - making Ukraine become one of the leading industrial hubs in the European region.

Those include the defence industry, metallurgy and metalworking, as well as food and agriculture (the three whales). These sectors have all the necessary advantages to realise the set goal.

First, they are traditional for Ukraine. To this end, they take a significant share in its economy and are material drivers of Ukraine's GDP and employment.

DENYS KUDIN

First Deputy Minister of Economy of Ukraine

Second, for ensuring the development of the agricultural sector, metallurgy and metalworking in Ukraine, we need a sizeable volume of raw materials, having which is a significant competitive advantage in itself. In case of the defence industry, there are established machine-building traditions, relevant scientific and production personnel, as well as the unique experience of their field application.

Third, given that all the said industries are exporters, their development can be stimulated through other competitive advantages that we have – logistics, which embrace a short way to Europe, as well as presence of the river and sea transportation corridors. These are industries that will lead to development of many other sectors, in particular, energy, where Ukraine also has significant advantages of available energy.

So, we offer a combination of three powerful traditional sectors with three existing competitive advantages – raw materials, logistics, as well as diversified and sustainable energy.

Using an indicative planning tool and model calculations, we created an industrial investment menu of Ukraine, which collected over 614 promising investment projects in such areas as defence, metallurgy and metalworking, energy, mechanical engineering, logistics, furniture and woodworking, and others.

In general, investments in more than 614 projects, totalling 425 Bn USD (about 33% of capital investments to GDP in 2021 over 5 years), will create almost 1 million jobs, and this figure can double if counted with 'spillover' effects (cross-sectoral development).

Among the important steps that are expected to ensure the realisation of our ambitious tasks, I would mention the following.

Introduction of war risk insurance or guarantees.

We understand how important war risk insurance is for investors during wartime. We are negotiating with the Multilateral Investment Guarantee Agency (MIGA), which is part of the World Bank Group. This organisation has programmes to insure investments against terrorist threats.

An investor will buy insurance, which cost will be calculated based on the amount of investment. In case of force majeure, the investor will be entitled to receive compensation.

In future, we expect state guarantees to be implemented by the governments of the G7 and EU countries for those investing in Ukraine. A government that pays under such a guarantee will have a priority right to obtain compensation at the cost of the confiscated Russian assets. Our ambitious goal is to get government guarantees of 0.2% of each of the G7 and the EU countries' GDP over a 5-year term (i.e. nearly 100 Bn USD per year). Therefore, we urge you to invest in Ukraine today. Whoever comes first, will have the greatest opportunities and the greatest benefits.

Development of a network of industrial parks.

Rapid creation of infrastructure for the manufacturing industry will stimulate accelerated recovery of enterprises that have relocated from the occupied territories and areas where military operations have been taking place. Besides, creation of a network of industrial parks will help attract large-scale domestic and foreign investments. This, in turn, will lead to an increase in production, both for export and for the domestic market.

MARK J. LINDQUIST

Veteran | Guest performer: NFL / NBA / MLB / NCAA | As seen on LOST, Hawaii Five-O | Entertainer / Host

Biography: Mark J. Lindquist is a nationally recognised motivational speaker, world-touring entertainer, writer, and volunteer.

He has spoken for the largest companies in America (McDonald's, Walmart, Starbucks, IBM), sang for the largest crowds in America (NFL, NBA, MLB, NCAA), and performed for the President of the USA. Mark is a former Sergeant in the US Air Force and an Afghanistan War Veteran.

Once traveling to Ukraine, he was inspired by the strength of the Ukrainian people and started to help Ukrainian children and provide specifically requested humanitarian assistance to specific families.

Currently, Mark is living in Kharkiv and working on a humanitarian mission inside Ukraine. Also, he has founded a volunteer hub in Lviv and sets up his logistical command there.

Kyiv Consulting: Question #1

In the USA, veterans are often attracted to the business environment where they can act as advisors, as entrepreneurs, or both. What government initiatives could be developed in Ukraine to make this a Ukrainian practice too?

Mark J. Lindquist: One of the distinct advantages a veteran of this war has is the support of the greater society in their collective fight for freedom. I would like to see the Ukrainian government capitalise on this universal respect of the soldier and do a post-war 'hire a veteran PR campaign' with billboards and media highlighting the attributes veterans bring to the table. The goal would be to make it a cultural standard of business excellence to hire a veteran on the leadership team or support a veteran who started a business. Another opportunity exists in the implementation of a 'veteran owned business' certification that can signify to the buying public that the integrity and excellence of a military member is ingrained in this business.

Soldiers learn discipline, determination, and leadership skill that is priceless to an employer. I sincerely hope that Ukrainian veterans are given opportunities to showcase what they have learned in the ranks of the military because I think it can strengthen your business culture for decades to come.

Kyiv Consulting: Question #2

What is your advice on the development of a governmental veteran protection programme in post-war Ukraine? What are the top 3 topics that should never be overlooked?

Mark J. Lindquist: The biggest challenge a battle hardened soldier faces when readjusting to civilian life is the mental side of life as a veteran. Soldiers face trauma that is unique to most members of society and they adapt to high levels of stress and adrenaline fueled battles for survival that become their new normal. The three topics I would fund immediately are: 1) A post-traumatic stress therapy grant program for all businesses who hire veterans and include this as a part of a veteran's employee benefit package, subsidised by the government. 2) Create a place for veterans to gather by forming civic organisations made up of veterans much like our American Legion or VFW (Veterans of Foreign Wars). Soldiers need to be surrounded by those who understand them and can relate to one another. That support system is essential for post-war reacclimation. 3) Make soldier suicide prevention a national priority. Form a hotline for soldiers to be connected directly to a therapist with no red tape. Implement a community support training program whereby friends and relatives can enroll and learn how to support a veteran dealing with trauma or suicidal ideations.

MAURO LONGOBARDO

Chief Executive Officer of ArcelorMittal Kryvyi Rih

Biography: Mauro Longobardo appointed as Chief Executive Officer of ArcelorMittal Kryvyi Rih, effective February 18, 2020.

From 2002 to 2006 he worked for Tenaris (Italy) in the area of quality, technology and product development. He then moved to Argentina, where he oversaw different manufacturing sites at the local plant. In 2010, he was transferred to Dubai, to the position of Worldwide Coordination Director for OCTG. He also worked as Commercial Director and Regional Manager for some prospective countries in the Middle East (Iraq, Qatar, Oman, Yemen, Pakistan, Syria, Lebanon and Jordan). From 2013 to 2015, Mauro joined Chelpipe as deputy CEO for strategy, technology and development in the Russian Federation. After that, he joined Interpipe, becoming Chief Operating Officer, based in Ukraine. Mauro Longobardo joined the Group in February 2018, as Chief Executive Officer of ArcelorMittal Tubular Products Jubail.

Mr. Longobardo graduated in Materials Engineering from the Polytechnic University of Milan, Italy. He holds the ACE from MIT Sloan School (Boston). He also received accelerated education at International School of Business and Management the AMP from Argentina University (Buenos Aires).

Kyiv Consulting: Question #1

Considering that Ukraine is one of the keynote suppliers of metallurgical products for some regions (particularly, the countries of Europe and the Middle East), how will the reduction in Ukrainian exports influence the international supply chains and how will the markets adapt to it?

Mauro Lobgobardo: Of course, now I can say in general that Ukraine can produce about 24 million tonnes of steel at its current capacity. Most of it is exported. Now, unfortunately, all capacities are reduced.

I think you know that some of the plants have been damaged and cannot be produced in the short term. In general, the country currently has enough capacity to produce 14 million tonnes of various metal products. Our company accounts for half of this volume. Here, in Kryvyi Rih, we produce 7 million tonnes of hot metal, of which 6 million are used to produce steel products and 1 million are sold as pig iron products.

As for this entire volume, namely 7 million, 80% was previously exported. In general, the Ukrainian market is not large enough to absorb such a quantity. Given that here, at ArcelorMittal Kryvyi Rih, we mostly produce long products, that means rebars, wire rods, which are generally later transformed into finished products, and some sections. In total, the volume of products used in Ukraine amounted to 1-1.5 million tonnes. The other part was intended for export, in particular through Ukrainian ports.

Talking about Ukrainian ports, we have our own port in Mykolaiv, and we also used Odesa ports. Depending on the load, we chose one of the ports there. Currently, the part that was previously exported is now waiting for its time. First, because the ports are not available for the export of mining and metallurgical products.

We had to develop a new route to export from Ukraine and supply our customers with products. In particular, the route through Poland and others, which we used a little less - through Izmail, through the port of Constanța. But these ports have several limitations. Limitation in terms of quantity and limitation in terms of extra costs, which this generates for us.

Extra costs was the biggest challenge for us. Actually in the beginning of the war the capacities of those new routes were arranged. That means there were capacities enough for our current production. But we had to pay more to use this route because it is simply longer. And we didn't quite fit into the market because our costs were higher than the final price at which we could sell our product to the market.

MAURO LONGOBARDO

Chief Executive Officer of ArcelorMittal Kryvyi Rih

Kyiv Consulting: Question #2

At the beginning of May 2022, the USA announced the suspension of import duties on Ukrainian steel and steel products for the period of one year. How do you estimate the potential benefits of such liberalisation for the Ukrainian metallurgical sector?

Mauro Lobgobardo: In fact, the US enacted Section 232 several years ago to protect its own market. This clause included additional duties of 25% on all steel products imported into the US from a specified list of countries. There were not only these duties, but also antidumping duties. And specifically for Ukraine. So, for the long products we had about 39% additionally. So, we didn't consider the North American market because we had double extra duties.

Later, after the start of the war, this Section 232 was canceled for Ukraine. And we did not have to pay that extra 25%. At the same time, an anti-dumping duty was still in force.

I know that there are some senators who are working on this and trying to find an exception to remove the anti-dumping duty. This is still quite a large number for us, and it makes us not so competitive.

That is, the door seems to have been opened, but not completely. Compared to the situation that was, it is already better, but not enough. I attribute this to logistical issues. Because of logistics, we have huge extra costs. And these additional costs prevent you from being competitive in the USA now. Without this duty of 39% it would be much better.

Kyiv Consulting: Question #3

In your opinion, how should the process of the post-war reconstruction of the Ukrainian metallurgy take place? What actions and initiatives are important to increase the share of added value in the final structure of the manufactured metallurgical products and to improve their competitiveness in the international markets?

Mauro Lobgobardo: After the war, you should pay attention to two things. First, we produce most of the steel for construction. The building materials market will naturally grow after the war. It will be bigger, compared to today's state of things. We don't expect it to be a very big market. And I will explain why. Because it is not only about the availability of steel products, but also about the availability of personnel who can perform these types of work. Last year, everything was generally very good for construction. At the same time, the market was saturated. In the sense that there were not enough construction companies and workers to carry out the work. There were projects, but not enough people.

After the war, the amount of the projects can increase, as well as the number of human resources that will perform the work. In any case, we do not expect that everything will be completely rebuilt in a year or two. I think it will take a longer period. And because of this, there will be a distribution of demand for steel products somewhere within five years. And maybe longer. And perhaps domestic demand will grow by 20% every year. This will not be a problem for us, because instead of exporting part of the material we will direct more material to the domestic market. We expect an increase in demand in the construction market and hope to occupy an important place in this market.

Kyiv Consulting: Question #4

How do you assess the prospects of opening a sea corridor for the export of metallurgical products? Is it possible to increase the capacity to export metal and ore by other means of transport in the near future?

Mauro Lobgobardo: I know that now the problem of opening ports for mining and metallurgical products is very urgent. I know that the Ministers of Infrastructure and Economy are allocating a lot of resources to find some concrete solution on this topic. I think you understand that this will also mean a positive trend for the country's leadership.

The more we produce, the more taxes we pay. Metallurgy and the mining industry is a big industry for Ukraine, which provides a large part of taxes. We are currently trying to get this opportunity. To this end, we have submitted our request for review. Understanding while some negotiations will proceed in the same way as it was with agricultural products. We hope for a positive decision as a result. We'll see when it happens.

MAURO LONGOBARDO

Chief Executive Officer of ArcelorMittal Kryvyi Rih

Once it is all in hand, I think it will play a key role in both the relaunch of the steel and mining businesses.

Of course, it is possible to export some quantity of our products through Poland and other routes, but there are some limits. Because now we are not talking about working at the full capacity of our enterprise. And when we want to and can restore full power, we will not be able to do it without ports. The reason is that all this is connected not only with the export of products, but also with the import of a sufficient amount of coal, which will be required for the production of such products.

It can be said that this has more to do with coal, the limitation, rather than with exports. All the coal that we can bring to Ukraine, we bring here. Also, we additionally buy everything we can here. But even in this situation, when we are only 20% loaded, we still have to buy from foreign markets as well.

And if we are already 100% loaded, we will be forced to bring even more of everything we need from outside. For example, through Kazakhstan or from the States through the Odesa port. Currently, we deliver via Poland or Constanța. There is also a railway, but currently, these possibilities are very limited. So, the real bottleneck is the coal that we transport to the plant. And whatever coal we can transport to the plant, is the same amount of wagons that can go out with the steel products, as we might use the same wagons to transport the export products.,. Without opening ports, we constantly face limitations. And I think we won't be able to go more than 50% of our capacity.

Commissioner for Human Rights of the Verkhovna Rada of Ukraine

Biography: Dmytro Lubinets is a Ukrainian lawyer and politician.

In 2010-2014, he was a Deputy of the Volnovakh city council of the 6th convocation.

From 2014 to 2019, he was a People's Deputy of Ukraine of the VIII convocation. Secretary of the Committee of the Verkhovna Rada of Ukraine on the Rules and Organisation of the Verkhovna Rada. Member of the Permanent Delegation to the Parliamentary Assembly of the Council of Europe from Ukraine. First Deputy Chairman of the Board of the People's Patriotic Union of Donbas.

Since 2019, he has been a People's Deputy of Ukraine of the 9th convocation. Chairman of the Committee of the Verkhovna Rada of Ukraine on human rights, deoccupation and reintegration of temporarily occupied territories in Donetsk, Luhansk regions and the autonomous Republic of Crimea, the city of Sevastopol, national minorities and inter-ethnic relations. Member of the Temporary Special Commission of the Verkhovna Rada of Ukraine on issues of formation and implementation of state policy on restoring territorial integrity and ensuring the sovereignty of Ukraine. Member of the Permanent Delegation to the Parliamentary Assembly of the Council of Europe. Co-chairman of the group on inter-parliamentary relations with the Hellenic Republic. Member of the group on interparliamentary relations with the Republic of Indonesia, the United Arab Emirates, the Republic of Slovenia, the Republic of Chile, Georgia, the Republic of Estonia and the Kingdom of Belgium.

On 1 July 2022, he was appointed as the Commissioner for Human Rights of the Verkhovna Rada of Ukraine.

Kyiv Consulting: Question #1

As of July 2022, more than 1.5 million people from Ukraine have left for Russia. Although it is either difficult or impossible to find out if it was voluntary or forced. In your opinion, how should Ukraine ensure protection of rights and freedoms of Ukrainians in Russia, when in fact its embassy is not functioning there? Will the fact that Switzerland has agreed to represent Ukrainian interests in Russia help?

Dmytro Lubinets: It is not difficult for us to determine that Russia has forcibly exported and continues to export Ukrainian citizens to its territory. The way it does it - is very simple. RF does not allow Ukrainians to leave the temporarily occupied Ukrainian territory and go straight to Ukraine.

People undergo a filtering procedure. It starts with all family members showing up at certain premises if they want to leave all together. In that building, they are initially detained, documents are taken away, family members are brought into different rooms. Men are kept separately from women and children. We have got much evidence of the fact that everyone is stripped to their underwear to see if there are marks from weaponry use. After that, interrogations are conducted and the answers to the questions are compared.

If the answers do not coincide fully, the russians resort to mass torture.

They are looking for former law enforcement officers, soldiers of the Armed Forces of Ukraine. Enemies are interested in judges, workers of certain list of professions. For example, doctors, teachers, railway workers. Such categories are not allowed to travel at all. The rest, if overall everything is good, although how good it can be considered in such a situation?... They are shown the best way to reach russia.

For example, if filtering measures take place on the territory of the temporarily occupied Kherson region, our citizens there will be instructed to transit through the occupied Crimea on the way to Russia. In case with Donetsk or Luhansk region there is a straight way to russia.

Commissioner for Human Rights of the Verkhovna Rada of Ukraine

Can it be assumed that people go there voluntarily? No, it cannot. In fact, they are forced to do so. There are many examples when buses were organized by the Russian military allegedly to evacuate the local population by to the checkpoint. And afterwards, as it were, there will be an opportunity to go to the territory, controlled by Ukraine. This approach was applied to the residents of the city of Mariupol. Initially, they were told that they would go to the Dnipropetrovsk region, but in fact they got to the Rostov region.

The problem is that for the aggressor country there are no such agreements as the Geneva Conventions at all. Therefore, answering your question, I can clearly admit that forced deportation of Ukrainians is taking place. Children included.

Speaking of an example for children, we have created an online platform 'Children of War'. According to our data, it was confirmed that more than seven thousand children had been forcefully deported to Russia. We managed to get 55 of them back. We are consistently working on return of the rest.

However, we can see that even here the russians are doing everything to prevent the return of the deported children.

It is a fact, that the aggressor simplified the procedure for the adoption of abducted Ukrainian children by russians. According to our evidence, this is happening throughout the russian territory. Firstly, children are settled in russian families, and later they are told that they are not Ukrainians, but russians on the contrary.

Legally, we are to interpret this as genocide of the Ukrainian nation.

And as for the representation of our interests in Russia by Switzerland, we have already received a response from the occupiers. And it turned out to be negative. Moscow does not grant an opportunity for Swiss diplomatic missions to provide consular services to citizens of Ukraine. The reason for this being that they recognized Switzerland as a country that is hostile to the Russian Federation.

So, unfortunately, the Russian Federation has completely neglected these levers of international humanitarian law.

Kyiv Consulting: Question #2

The Government of Ukraine states that heating season will be challenging with low temperatures ahead. Across front-line territories, forced evacuation will be announced. In your opinion, what should the Ukrainian authorities do to evacuate the civilians promptly and smoothly? How to convey to people properly the importance of temporary relocation, as many still do not leave their hometowns, despite the shelling?

Dmytro Lubinets: The heating season will be extremely difficult. And this is not due to lack of gas or electricity. The problem will be different. We are witnessing this at the moment. The Russian Federation directs its cruise missiles to the infrastructure that provides heating for civilians and to power plants.

We were observing this in the Dnipropetrovsk region. The russians will resort to this in the future, during the heating season across all over Ukraine. That was the reason why we turned to our international partners with a request to close the Ukrainian sky starting from the very beginning of second stage of the war, since 2014.

The reason was not to protect our soldiers. The whole world is now witnessing how courageously the Ukrainian armed forces repel the enemy. Surely, with military assistance from our partners. So, we requested to close the sky precisely in order to prevent civilian casualties and the destruction of civilian infrastructure.

We can see how Russia completely neglects the rules of warfare. That can be proved by massive destruction of civilian infrastructure. At the very beginning, we could see, for example, how strikes were constantly aimed at the fuel infrastructure. After that, we will observe the same happen to TPPs and CHPPs or NPPs.

Taking this opportunity, I would like to appeal to Germany in particular: kindly provide us air defense equipment. We need it for preventing civilian casualties in winter due to cold.

And as for the evacuation. It's taking place here. And it is not called forced, but mandatory. There is a difference. We cannot employ coercion. Instead, we can definitely apply measures. For example, supply of evacuation buses, trains, paying individual visits to families with an offer to leave. We do not take anyone out by force.

Commissioner for Human Rights of the Verkhovna Rada of Ukraine

At the same time, we urge citizens to understand that russia has already destroyed electricity and water supply in the front-line territories.

One can understand people who refuse to leave their homes, where they stayed all their lives. This is a widespread situation almost in every town. Along with that, as an ombudsman, I constantly monitor the living conditions where our citizens, who are in need, can be relocated.

Yes, perhaps we lack something in terms of supply. Nevertheless, in my opinion, the state provides internally displaced persons with minimum necessities. We are very grateful to various international organisations that assist our compatriots in many ways. I kindly ask to keep those programs running.

Kyiv Consulting: Question #3

After the end of the war with Russia, millions of Ukrainians will stay abroad, but it is crucially important for the state that as many people as possible are able and willing to return home. What should Ukrainian government do to encourage people to return and rebuild the country in the future?

Dmytro Lubinets: The state needs to create conditions for them to return. This is the shortest possible answer to a very complex question. In fact, according to my observations, all Ukrainians who I managed to communicate with during my international trips want to come home.

The only thing they state is that they will return as soon as the war ends, and they are informed that basic living conditions are sustained. To achieve this, all necessary infrastructure, which was destroyed by Russia must be restored.

The second component is work for decent pay. Clearly, we rely heavily on economic support of our partners, which will help us to restore everything. Any help provided by them benefits them in return. It is as simple as that.

Kyiv Consulting: Question #4

There were about 2 million internally displaced persons in Ukraine at the end of July. In your opinion, what were the main difficulties during the first months of the war in terms of financial support and resettlement of internally displaced persons? What do you think the state should do to provide people with basic needs?

Dmytro Lubinets: Regarding the first challenges. You can imagine that more than a third of the population of the state relocates at the same time. Not because of their will, but because of the threat of simply being killed.

Out of 45 million, 15 moved elsewhere. Some left for the west of the country, the others - for the territory of Europe. In my opinion, we were struck by that large massiveness, which no one could have expected. Just as no one expected the enemy to try to seize us from virtually all sides. Even from the Belarusian side. Clearly, we are facing an extremely huge challenge. Did we do everything for 100%? Probably not. Did the state do everything it could? Probably so.

I am constantly scanning the situation and I can surely say that everyone is working to get things done. To fulfill the basic needs of our citizens. This work must be continued. It's necessary to initiate new programs. It is clear, that monetary help serves as direct and fast aid.

Housing remains the biggest issue for idps. As houses were destroyed and unsuitable for living even on the territories already liberated or in process of liberation. This is a financial issue again. It is necessary to find building materials, workers and so on as soon as possible. This is all being done as far as the state can manage now. As I see it, work in this direction continues at the levels of the Cabinet of Ministers and Parliament.

Commissioner for Human Rights of the Verkhovna Rada of Ukraine

Kyiv Consulting: Question #5

It was proposed recently by deputies of the Verkhovna Rada of Ukraine to double the monthly allowance up to UAH 900 for families helping to receive IDPs. How do you think this initiative will benefit families? What other incentives would you suggest for families accepting internally displaced persons?

Dmytro Lubinets: Understandably, this will further support idps due to mechanism of providing monetary assistance to the receiving families. This is, you know, the kind of solidarity that is additionally supported by the state.

I believe it will have positive feedback. But in fact, those families who received refugees, were not doing that for money. And there is big number of such families. In general, this war showed once again that society tends to unite right away in shared desire to help each other. And when we see that the state is also embracing extra initiative in this matter, well, surely, this is encouraging.

Kyiv Consulting: Question #6

As of the beginning of August, it's known, about at least 7,000 children, illegally deported to Russia. So far, we have evidence of only 50 successfully returned children. In your opinion, what can be done to facilitate the return of illegally deported children back to Ukraine? Is it possible to bring Russia to justice for these crimes?

Dmytro Lubinets: According to our not yet confirmed data, 200 thousand children have already been deported as of today. We will gradually go through the identification procedure of all children, we will do everything to return them. But unfortunately, we see that Russia, as I said, is doing everything to prevent their return. Russia will bear responsibility for this. A separate section in the international criminal tribunal will be designated for it.

Kyiv Consulting: Question #7

Now there are many speculations about possible radiation pollution of a large part of the territory due to the potential danger that the Russians are posing at ZNPP. In your opinion, what potential impact will the leakage of nuclear fuel from reactors have on the growth of the number of refugees from Ukraine? Is it possible that not only part of Ukraine's population will have to be evacuated due to the extensive pollution, but also the population from other countries of the region?

Dmytro Lubinets: In my opinion, this threat is real. Our enemy has repeatedly demonstrated the direct usage of terrorist methods. Here we can see the very example of using these methods.

If the Russian military blows up the ZNPP, not only citizens of Ukraine, but also other countries of the world throughout the planet will suffer from this. The whole world is aware of the Chernobyl disaster. I would like to remind everyone that only one reactor exploded back then. We currently have got 6 reactors at risk. If they, God forbid, explode, the impact will be as big as the planet.

MARIIA MAKSYMCHUK

Psychologist

Biography: Mariia Maksymchuk is a PhD in psychology with over 10 years of experience in psychological counselling and psychotherapy. She is a lecturer at Borys Hrynchenko Kyiv University.

Since 2012, Mariia has been engaged in scientific research in the field of clinical psychology, neuropsychology and special education. In 2017, she defended her PhD thesis on sex education of adolescents with ASD and received a PhD degree in clinical psychology. Since 2015, Mariia has been involved in lecturing and research activities, first at Kyiv National Linguistic University and, since 2018, at Boris Hrynchenko Kyiv University.

Since 2013, she has also been involved in psychological counselling and psychotherapy. In 2014, Mariia worked as a clinical psychologist at the 'Doctors without borders' mission in Kyiv, leading psychological support groups and training on post-traumatic stress disorder PTSD prevention and psychological first aid. Since 2018, she has also worked with children with ASD, ADHD and learning difficulties, conducting neuropsychological correction and communication group meetings to promote better socialisation of children with special educational needs.

Kyiv Consulting: Question #1

According to information revealed in July 2022, more than 60% of Ukrainians need psychological support, and 44% are separated from their families. In your opinion, will this figure increase go forward? What is being done now to provide psychological assistance to Ukrainians?

Mariia Maksymchuk: It is difficult to predict whether this figure will increase going forward, everything will depend on how events develop at the frontline. The human psyche is very flexible, and some people in Ukraine have already adapted to the current state of affairs, but some will not be able to - they will need psychological support. Although there is much talk about PTSD, this disorder, as a reaction to traumatic events, occurs only in 1/3 of cases, and another 2/3 will experience neither acute nor delayed stress disorder. This is because our intelligent psyche has a very high potential for self-healing and adaptation, even in extremely difficult circumstances. Of those who do develop acute stress disorder or PTSD, only a third will need the help of a psychologist or psychotherapist, and the rest will be able to cope on their own.

Another issue is that Russia's war against Ukraine destroys many aspects of everyday life: families are separated, jobs are lost, and the usual way of life deteriorates - these problems do not cause acute stress disorder or PTSD, but they significantly affect psychological well-being. From this point of view, yes, psychological support will be useful for many Ukrainians who have been directly or indirectly affected by the war.

Today, many specialists (psychologists and psychotherapists) work on a volunteer basis, supporting the mental health of Ukrainians. In addition, the National Psychological Association (NPA) provides free psychological support to Ukrainians in 10 European countries. These are online sessions with highly qualified Ukrainian specialists.

Kyiv Consulting: Question #2

In your opinion, is there now enough attention paid to psychological education in Ukraine? What aspects of psychology do you see as a priority for research at this time?

Mariia Maksymchuk: Over the past 10 years, psychological literacy of Ukrainians has increased significantly. However, of course, psychoeducation is something that should be in schools (as a separate subject), at selected enterprises, and in general hospitals. In my opinion, it would be extremely important to study the phenomenon of post-traumatic growth. This is a phenomenon that explains not only the processes of healing and adaptation of the psyche after living through an acute traumatic event but also the processes of significant growth and development of an individual. Post-traumatic growth explains why some people do not 'break down' psychologically after experiencing a trauma, but, on the contrary, get the resource and strength to make a significant 'leap forward', to change their lives for the better.

OKSANA MATIIASH

CEO at Teach For Ukraine

Biography: Oksana has a combination of experience gained in the public, private and international development sectors, ranging from leading the judiciary reform component of an EU-funded programme in Ukraine to serving as an advisor to a Member of the Ukrainian Parliament and the former Minister of Foreign Affairs.

Oksana is the executive director of 'Teach for Ukraine', an NGO, which involves teaching graduates and young professionals in various fields in small towns and villages. Matiiash helped raise 500,000 USD in funding and increased the number of faculty tenfold.

In 2022, the American Forbes published the '30 under 30 Europe' 2022 rating. Six Ukrainians under 30 were included in it. Oksana was included in the category 'Social impact'.

Kyiv Consulting: Question #1

How did the war affect your organisation's operations, and what adjustments did you have to implement to continue your functions?

Oksana Matiiash: Teach For Ukraine is a non-profit organisation, working to ensure that every child in Ukraine can realise his / her potential, regardless of their place of birth or residence. Our program works to inspire and engage top graduates of Ukrainian universities to teach for at least two years in schools in Ukraine's most disadvantaged communities. Our teachers act as mentors and role models for children, helping them to unlock their potential through education.

Most of our staff and teachers remain in Ukraine and do everything they can to ensure the emotional well-being and continuation of education of their students.

We have launched Emergency Response Projects to support children's mental health, help teachers to adapt to teaching in an emergency context, as well as provide academic support to displaced kids. Much of the team has fled their homes, and many individuals are volunteering to support the war effort. We are devastated to report that one of Teach For Ukraine's teachers, Yulia Zdanowska, was killed by shelling in Kharkiv on 3 March while providing humanitarian aid to residents. A gifted mathematician and a talented computer scientist, she was only 21 years old.

Currently, 'Teach For Ukraine' is working on a post-crisis plan. Even in best-case scenarios, Ukraine's school system faces enormous challenges, including significant damage of schools' infrastructure, population-wide trauma and loss of thousands of teachers. 'Teach For Ukraine' anticipates playing a central role in addressing challenges posed to Ukrainian children. We will need significant support from partners to execute our recovery plans.

Kyiv Consulting: Question #2

What are the main challenges that Ukrainian schools face in the context of relocation of staff and children, both within Ukraine and abroad? From both short- and long-term perspectives.

Oksana Matiiash: The large-scale war against Ukraine has had a devastating impact on children's education. Ukraine's Ministry of Education and Science reported that, as of August 2022, more than 2,300 educational facilities had been damaged, with 286 institutions destroyed. The war has forced more than 640 thousand Ukrainian schoolchildren to flee Ukraine to neighbouring countries, with only 30 thousand coming back. This means that 15% of Ukrainian learners are still abroad. Not to mention that over 20 thousand teachers are also staying outside of Ukraine, though this number is not huge compared to the total number of teachers in Ukraine. Before the full-scale invasion, the aggregate number of teachers was nearly 440 thousand.

OKSANA MATIIASH

CEO at Teach For Ukraine

So far, this has been the most significant disruption to the education of children in the history of independent Ukraine. The large-scale war immediately shut down all schools. In the short term, all Ukrainian children have been deprived of their usual routines and safe learning spaces. They are forced to live with the constant risk of shelling, accompanied by the air raid sirens that cause many kids to suffer from severe trauma and fear about their present and future.

Although approximately 3.7 million children have accessed some form of online learning since the beginning of the war, the effectiveness of such learning is questionable. It is especially true for thousands of Ukrainian children who spent weeks, if not months living in bomb shelters. Many have lost at least five months of school time, which may result in substantial learning losses.

In the long run, Ukraine may lose its human capital. Children's education is one of the major reasons why Ukrainian families decide to leave the country or to be in no rush to return. Rebuilding and restoring educational infrastructure will take time and will require significant resources, but it will be critical to prevent us from having the lost generation. The long-term consequences of children's and young people's mental health are no less worrying. There is an extensive body of research on the negative impact of war on children's cognitive development and well-being, which is why establishing a robust mental health support system is a priority.

The new school year is beginning in just two weeks, and the number one concern is the safety of children since educational institutions continue being attacked by Russian forces. Only those schools that have proper bomb shelters will be able to reopen for in-person learning. Ukraine has almost 14,000 schools, and only 30% of this number will be able to get back to teaching offline, according to the Ministry of Internal Affairs. Despite the new reality and increased responsibility, Ukrainian educators feel motivated to continue providing education for their students because it gives children a sense of critical stability and normalcy during wartime.

Kyiv Consulting: Question #2

What improvements in school curriculums and schooling practices could be implemented in Ukraine to close the gap with those of the EU? In your opinion, how big is this gap and what are the key differences?

Oksana Matiiash: I believe it is too early to talk about improvements in the school curriculum as long as 2/3 of Ukrainian children are displaced from their homes, with no access to regular schooling. Thousands of them need basic food and hygiene supplies, and many more require psychosocial support to help them cope with the enormous stress and return to the learning routine. We must prioritise children's mental health and help them develop resiliency, for them to live and learn through the war.

DR OLEKSANDRA MISIATS

Head of public procurement, international trade, SDM Partners

Biography: Dr Oleksandra Misiats is leading the practices of public procurement, antitrust and competition law, international trade law with the SDM Partners for more than 14 years.

She has profound experience offering advisory services on all stages of the public procurement process to public authorities, companies and private investors in Ukraine.

Oleksandra has extensive experience advising multinational and domestic clients on a wide range of antitrust law matters, including mergers and acquisitions, antitrust investigations, abuse of dominance, unfair competition, cartels before the Antimonopoly Committee of Ukraine.

Oleksandra also specialises in trade defence instruments: anti-dumping, anti-subsidy, safeguards, representing both exporters and domestic industry in trade defense investigations.

Dr Misiats has scientific degree: PhD in international private law: e-commerce, attorney at law, authored numerous publications, had lectures on international private law at the Institute of International Relations, Taras Shevchenko Kyiv National University.

Kyiv Consulting: Question #1

Over 400 polish companies announced that they will help rebuilding Ukraine after the war ends. To your point of view what industries could be the most interesting for the polish business and in what locations in Ukraine?

Dr Oleksandra Misiats: Polish companies are mostly interested in infrastructure projects, including financed by international institutions. We expect substantial investments into Ukrainian market at least from 5 financial institutions: EBRD, European Investment Bank, International Monetary Fund, World Bank Group, Council of Europe Development Bank and others. We also expect substantial US investments and widely discussed Marshall Plan for Ukraine. The other industries include - construction, energy projects, agriculture.

Kyiv Consulting: Question #2

The Government of Ukraine announced that the Recovery Plan would be financed by both international investments and arrested Russian money. However, in a recent history there was no legal precedent of such decisions. To your point of view how complicated this procedure could be? How long could it take?

Dr Oleksandra Misiats: The most complicated issue is to deal with arrested Russian money. Many law firms and businesses are searching for an efficient tool to reimburse damages using the arrested Russian money.

The issue is that the state property is protected abroad under the doctrine of state immunity, so it is a complicated political and legal issue to appropriate Russian assets and transfer them to Ukraine.

However, Ukraine, Canada, the United States and other jurisdictions already take the initial steps to find the ways to reimburse damages caused by Russian invasion.

We welcome Canada measures on its national level, which on 23 June 2022 has amended a Special Economic Measures Act. Canada made it possible to forfeit frozen Russian assets to compensate for losses caused by Russia`s invasion.

We expect the other countries will enact similar laws on confiscation of frozen Russian assets. This already been widely discussed by other states, the United States and the United Kingdom are already drafting respective laws. We also welcome initiatives of the United States in this respect, namely H.R. 7205, Ukrainian Sovereignty Act of 2022. The act could ensure that Ukrainians, whether they are US citizens or not, could apply to a US court and seek that any losses, incurred as a result of the Russian invasion, be reimbursed to them. On the other hand, the adoption of special legislation and litigation process is time-consuming and may take years.

DR OLEKSANDRA MISIATS

Head of public procurement, international trade, SDM Partners

There are also initiatives on international level, where Ukraine is lobbying the UN General Assembly to adopt a resolution that will become the basis for the creation of an international compensation mechanism that could lead to the seizure of Russian state assets overseas. We all are enthusiastic about the all above steps that makes reimbursement possible

Kyiv Consulting: Question #3

The Government of Ukraine says that about 750 Bn USD are needed to rebuilt the country after the war. To your opinion what the Government of Ukraine could do to facilitate the foreign support and investment? What investment factors are important for polish companies?

Dr Oleksandra Misiats: In my opinion the most important issues is to combat corruption, ensure fair courts, ensure efficient mechanism of private property protection and low taxes.

DR SIGRID EVELYN NIKUTTA

Member of the Management Board for Freight Transport DB AG Chairwoman of the Management Board of DB Cargo AG

Biography: Dr Sigrid Evelyn Nikutta is a German manager, who in 2011 was included in the list of 'Top-25 business women' by Financial Times Deutschland.

Dr Sigrid Evelyn Nikutta joined Deutsche Bahn in 1996. She was soon appointed Head of Production and became a spokeswoman for the management of block train transport in Mainz. Subsequently, she held the position of a Board Member for Production at DB Cargo Polska.

In October 2010, Dr Sigrid Evelyn Nikutta left DB to become a Chairperson and Chief Operating Officer at Berliner Verkehrsbetriebe (BVG), Germany's largest municipal public transport company. The company's first female Chairperson, she made the company operate profitably for the first time.

In late 2019, she was appointed a Member of the Management Board of Deutsche Bahn. On 1 January 2020, Dr Sigrid Evelyn Nikutta joined the DB Management Board as its Board Member for Freight Transport.

Kyiv Consulting: Question #1

As the rail freight market always adapts itself to new circumstances and the type of goods being transported, what are the main trends that post-war Ukraine should consider when rebuilding its railway industry, to integrate successfully into the EU?

Dr Sigrid Evelyn Nikutta: In times of crisis, one thing is clear: rail freight is resilient and reliable. This is especially evident during the ongoing Russian war and the successes of the rail bridge and solidarity lanes between Europe and Ukraine. Close integration with European infrastructure will increase economic activities between Ukraine and Europe even more, thereby strongly figuring in rebuilding the country. Harmonised infrastructure standards are the key factor for a solid integration of the Ukrainian rail sector with the European Union. Ukraine's efforts to make its broad-gauge railway system compatible with the European narrow-gauge systems are highly relevant in this regard. Furthermore, we are currently developing a uniform standard for control and safety technologies (ETCS) in Europe – this is an ideal opportunity for Ukraine to focus any rail infrastructure reconstruction on the newest available technologies. An expansion of rail terminals in Ukraine will also help to make the necessary supply chains as efficient as possible and to establish strong intermodal transport. This will ensure that the numerous transport needs for reconstruction reach their destination quickly and smoothly. But rail is not a one-way street. Ukraine is not only the breadbasket of Europe but also has large quantities of raw materials such as ore and coal, which are ideal for rail transport. Ukraine is certainly also an exciting production country for the European industry. Therefore, container transport from Ukraine is also becoming increasingly important.

Kyiv Consulting: Question #2

How can the share of rail freight be maintained, given its completion with road freight?

Dr Sigrid Evelyn Nikutta: To maintain (and increase!) the share of rail freight, rail freight operators must offer multimodal chains as one-stop services that are competitive with road transport in terms of frequency, reliability, flexibility, prices and service.

Of course, this only works if an interoperable and sufficient infrastructure is available that is as easy to use as European roads and has as few bottlenecks as possible. How can this be managed politically? I am firmly convinced: If the most ecologically sensible supply chain is also the most economically sensible solution, the industry will very quickly switch to rail. An important policy framework is to ensure that all modes of transport across Europe bear an equal share of their external costs. Policymakers also have a role to play in providing additional incentives for companies to switch to rail and build sidings. The government should promote the extension of rail networks to new industrial areas (e.g. distribution centres, ports). In summary: railway companies, infrastructure managers and policymakers should join efforts on this issue.

OLENA OGORODNIK

Program Manager at Transparency International Ukraine

Biography: Olena is an expert in the city council's activity monitoring, a local development consultant, and a proponent of the interaction of citizens and local authorities to ensure good governance.

Currently, she leads the Transparent Cities Programme in Transparency International Ukraine. The programme aims to reduce corruption by increasing government transparency and accountability under the oversight of a competent community.

Kyiv Consulting: Question #1

What are the most critical issues that need to be addressed after the war in the context of fight against corruption and movement towards transparency? In your opinion, how much time is required to achieve the first tangible results?

Olena Ogorodnik: Every reconstruction effort brings along massive corruption potential. Ukraine's plan for the post-war recovery, presented in Lugano, is already estimated at 1 Tn USD. To this end, ensuring anti-corruption defense is vital.

While it is unrealistic to expect the country to progress with all outstanding anti-corruption reforms as long as the war is raging, some must be tackled immediately. However, with the robust, enabling, and independent anti-corruption infrastructure, as well as a working system of the inevitability of punishment for corruption, the rebuilding process will become more effective.

The National Anti-Corruption Bureau, the Asset Recovery and Management Agency, and the High Anti-Corruption Court should finally receive their permanent heads through a transparent and competitive selection process. It is also necessary to prioritise the reform of self-governing judicial bodies, use transparent procurement systems in the context of reconstruction efforts, and strengthen the asset recovery systems to help fuel them.

Transparency International Ukraine continues to emphasise that Ukraine needs to provide safeguards against corruption in the reconstruction processes and to ensure there are no abuses. Clear rules and digital instruments can assist in this matter.

For example, in Ukraine, we have Prozorro and Prozorro.Sale systems for e-procurement and the disposal of state assets. Both already saved the government billions of USD, improved public integrity and trust, as well as encouraged fair competition. They could become a model for how reconstruction must be carried out and navigate towards achieving the first tangible result within a short period of time.

To oversee transparency, citizens and businesses should be involved in planning, monitoring, and oversight of the recovery costs. For instance, the relevant mechanism could be created based on public feedbacks, such as the Dozorro network of civic monitors.

It is hard to predict when the war will be over. However, fully operational anti-corruption institutions, electronic tools to ensure transparent reconstruction, and solid oversight of the local government can effectively tie corruption impulses.

OLENA OGORODNIK

Program Manager at Transparency International Ukraine

Kyiv Consulting: Question #2

What are your expectations of the effect the war will have on the transparency of business and social environments, after it ends? Will there be more transparency on the back of more foreign players coming to the Ukrainian market and requesting transparent reporting? Or greater economic activity will create more opportunities for corruption?

Olena Ogorodnik: Significant efforts toward greater transparency have already been made. Ukraine and its allies have spent the last decade building a diverse and impressive institutional infrastructure to fight corruption.

In particular, there is a working system of anti-corruption bodies — NABU, SAPO, HACC, NACP, and ARMA. In addition, there are various anti-corruption tools — e-declaration, electronic system of public procurement Prozorro, public property sale/lease system Prozorro.Sale, open state registers, institute of whistleblower protection, a single portal for the use of public funds, etc.

Ukrainian cities, including Mariupol, Lviv, Dnipro, Drohobych, and Ternopil, have made important decisions concerning data publication, budget, e-democracy, development strategies, and regulatory policies. In addition, and most importantly, not only did cities comply with the legislation requirements, but they also initiated creation of additional services for the comfort of their residents. The result of these efforts is an **unprecedented level of city councils openness**, ever observed in the history of our Transparent Cities program. In general, over the 5 years, **the average transparency indicator of 100 cities increased by 62.2%**.

As a result of numerous bombings, destruction of civilian infrastructure, and killings by Russian invaders, the topic of transparency and accountability of the Ukrainian cities has taken a back seat. When cities are physically razed to the ground or are under siege, the issues of publications of strategies or updating reports seem irrelevant. Yet, more than ever, transparency and accountability of authorities ensure effectiveness of the local governance.

As the Ukrainian government proposes that cities are directly supported to accelerate their postwar rebuilding, local governments expect to receive a significant amount of money through grants and subsidised loans from partner countries and international financial organisations. And cities must fully reveal their partners the ways such funds are used. Such a patronage project can create a new, and equally historical, example of interaction and partnership between the states of the free world, regions, cities, and companies. So, again, total transparency and accountability can gain international partners', businesses', and investors' trust. And offer an unprecedented chance to reform, change, and become better.

There will be more transparency, as I believe every Ukrainian is interested in fair reconstruction. Our citizens can and even should be involved in discussion of priorities and proper planning, monitor implementation, and, if necessary, report on potential corruption or risk thereof.

At the Transparent Cities program, we see our role in promoting total transparency in regions. To turn expectations into reality, our program has teamed up with other Ukrainian and international organisations and government agencies in the RISE UA coalition. Together, we promote open and constructive dialogue across Ukraine's civil society and civic tech community, government agencies, international partners, donors, and other authorities to achieve these objectives. We will lay the foundation for digital solutions and build accountable, transparent, and inclusive processes to enable participation of all actors and create an appropriate level-playing field for businesses, while ensuring responsible and fast decisions.

Our common goal is to rebuild cities free of corruption, not just to restore the walls.

DR BOHDANA OSTROVSKA

Doctor of Science of Law ('International law')

Expert of the UNESCO Chair Human Rights, Peace, Democracy, Tolerance and International Understanding at National University of Kyiv-Mohyla Academy (NaUKMA) Leading Researcher, Kyiv Regional Center of the National Academy of Legal Sciences of Ukraine

Biography: Bohdana Ostrovska is a Doctor of Science of Law (specialty 'International law'). Scope of her scientific interests: human rights, bioethics, theory and history of the state and law, canon law, as well as theory and practice of translation of legal terminology and literature.

Bohdana is a leading researcher in the Department of Research on the Problems of Interaction between the State and Civil Society at Kyiv Regional Center of the National Academy of Legal Sciences of Ukraine. Since 2019, she has been an expert of UNESCO Chair 'Human Rights, Peace, Democracy, Tolerance, and International Understanding' at National University of Kyiv-Mohyla Academy, and a leading researcher at the International and Comparative Law Department of V.M. Koretsky Institute of State and Law of the National Academy of Sciences of Ukraine. Since 2021, she has also been an associate professor at the Department of International, Civil and Commercial Law of Kyiv National University of Trade and Economics.

Kyiv Consulting: Question #1

With the freedom of expression and pluralism of thoughts kept in place, what regulatory mechanisms could be implemented around the world to prevent instilling hatred, as well as to promote tolerance among those vulnerable to manipulation?

Dr Bohdana Ostrovska: The ideals of nations are the basis of the great idea of the UN. War destroys the natural order of peacebuilding and human coexistence, being a powerful unifying factor. As a litmus test, it shows the true values of a nation that chooses freedom and peace, and at the same time shows the true face of an aggressor. Currently, Ukraine is more than ever a united nation and a nation that has united the whole world and demonstrated the exemplary power of resistance in unity.

A new future of the international community is being born on the foundations of this war in the geographical centre of Europe. The world will never be the same again. The most desirable victory is the victory not in a war, but over the war; thus we shift the focus from the problem to the prospects.

Hybrid war, as a war of a new generation, forces the need to create a new unprecedented mechanism of collective security and defence, which should be based on the principle of immediate response 'one for all, and all for one', without compromise and without 'deep concern'. To this end, it is important to warn and resolutely curb hate speech as a threat to the international community.

Security and development have a close and consistent relationship. Now is the time to reform the UN's security sector for supporting sustainable development, well-being and peace, which is a guarantee of the effectiveness of the entire UN system in fulfilling its mission for states and their citizens without discrimination and with full respect for human rights and the rule of law.

Kyiv Consulting: Question #2

What lessons can the world draw from this war? In your opinion, why did the promise of 'never again' happen to be unrealistic?

Dr Bohdana Ostrovska: 'Never again' is a beautiful loud declaration, but it is also an oath written and sanctified in blood, which is currently being tested in real time. Such words had to be supported by actions. Otherwise, what value do the empty slogans about democracy, peace, freedom, equality, and fraternity have?

What lesson is learned from the war, and does history teach a lesson? It depends at who teaches it and how it is interpreted. Today, Ukraine teaches a lesson of courage and dignity that has already gone down in history. The prophetic words of our national anthem – 'we will lay down our soul and body for our freedom' — best demonstrate the genetics of the indomitable spirit of Ukrainians and our values, for the defence of which we pay with our lives every day.

Maybe right now, Ukraine is saving the whole world, while the world is supporting Ukraine. Although, unfortunately, a part of the international community is still not fully aware of the true scale of the threat to peace and security – until the war comes to their homes.

GENERAL DAVID H. PETRAEUS

Partner, KKR & Chairman, KKR Global Institute, USA

Biography: General David H. Petraeus is one of the most prominent US military leaders of the post-9/11 era. He has been described as a leading warrior-intellectual and one of the great battle captains in American military history. Following his military service, he served as Director of the CIA. He is now a Partner with the global investment firm KKR and Chairman of the KKR Global Institute, which he established in 2013.

A graduate of West Point with a doctorate from Princeton, General David Petraeus held leadership positions in airborne, mechanised, and air assault infantry units in Europe, the USA, and the Middle East, leading US and NATO forces in Afghanistan.

After 37 years of uniformed service, General Petraeus became the 20th Director of the Central Intelligence Agency. Retired from public life, he remains a sought-after authority on strategic leadership.

Kyiv Consulting: Question #1

How dangerous would be to freeze the conflict as per the 2014 scenario instead of restoring the Ukrainian borders fully? What would you say to those European politicians who prompt the opposite solution?

General David H. Petraeus: I think it is increasingly clear that the grinding, costly, and slow advance of the Russian forces has to be stopped — and pushed back. And it has been very heartening to see Ukrainian forces conduct such impressive counter-offensive operations in Kharkiv Oblast and now into Luhansk, as well as to begin the process of retaking Kherson. Western countries need to enable Ukraine to retake all that has been lost since 24 January and 2014.

We have to keep in mind that Putin clearly wants not only to seize much of Ukraine, he has greater ambitions in his effort to restore Russia to greatness. He wants to irrevocably weaken Ukraine and, ultimately, take away its independence. He does not accept Ukraine's legitimacy as an independent state. And, if successful in that, he would go farther.

I believe that the USA (where Ukraine enjoys strong bipartisan support), Europe, and the western world will, despite the challenges of inflation, energy issues, and slowing economic growth, remain steadfast in their support for Ukraine, its forces, and its people — for whom all citizens of the free world have come to feel great admiration.

My country has now provided over 15 Bn USD just in arms, ammunition, and other military equipment, and I am confident that we will continue to support Ukraine as long as it takes.

Putin's worst nightmare is, of course, a vibrant, prosperous, democratic Ukraine on Russia's border, showing the Russian people what their country could be if the kleptocratic regime ruling Russia was replaced by a democratic, free market system that functioned properly. Needless to say, the ultimate irony is that in setting out to make Russia great again, Putin has actually made NATO great again, generating unity and resolve among NATO members not seen since the end of the Cold War and prompting Finland and Sweden — two historically neutral, very capable, and geostrategically important states — to seek to join NATO.

DR VICTORIYA PODGORNA

Member of Parliament of Ukraine

Biography: Dr Victoriya Podgorna is a Ukrainian entrepreneur and politician. She is engaged in expert, advisory and scientific activities. Viktoria is a member of the Verkhovna Rada Committee on Digital Transformation, and Co-chairman of the group on interparliamentary relations with Denmark.

Victoriya has experience in the development of political brands / projects of parties (strategy and ideology) — the European Party, UDAR party, DEMOCRATS parties programmes. She also participated as a political consultant in 14 election campaigns at the national and local levels.

During 2015-2016, she was a coordinator of the Kyiv Smart Grid strategic group and one of the authors of the Kyiv Smart Grid Concept. One of the developers of the Strategy for Economic Development of the City of Bila Tserkva (2016). She is also a Head of the group of developers of the Strategic Action Plan for the Odesa region 'Smart Region' (2017).

Kyiv Consulting: Question #1

With the future in focus, the destruction caused by the war will accelerate some of the trends of Ukrainian city development. In your opinion, what are the main concepts that will drive the post-war cities' reconstruction and development in Ukraine?

Dr Victoriya Podgorna: It is extremely important not only to restore the ruined Ukrainian cities but also to set a new urban trend, as this war marks the end of the long period of disintegration of the Soviet legacy, namely the state, economy, and cities of the industrial era. Most Ukrainian cities were either built as industrial cities or were designed for industrial development rather than as an environment for communities and citizens. As a result, after the collapse of the USSR and the Soviet industry, Ukrainian towns faced a big crisis – instability, low quality of services, problems with ecology, chaotic construction of buildings and planning of urban development, high resource consumption (energy, heat, water, space) in cities. The war showed the urgency of security problems in towns – the lack of bomb shelters, protection of towns from air strikes, robust warning systems, seamless functioning of infrastructure, etc. But more importantly, the problems with the effective protection of people and businesses from the consequences of the war – economic, loss of job, health, and limited access to education.

After the war, it is vital to review the vision of city development in Ukraine with the efforts of town authorities, urbanists, architects, and property developers – to reorient them towards the needs of the people, towards unlocking their economic and social potential, towards ensuring greater protection and stability of cities and to carry out the modernisation of cities to meet these goals.

This trend has been already formed over the last decade, and the decentralisation reform has increased the demand for the renewal of cities, transforming them into a comfortable environment for citizens, and making the governance of cities more people-oriented and smart (based on data).

The war is intensifying these demands and trends because the main challenge after the end of wartime is not only the restoration of the infrastructure and housing but also the preservation of human capital in towns. The war implies big human losses and a big outflow of citizens abroad, driven by the fear to live in towns close to the borders with Russia. For this reason, the main task after the war is to bring the people back to towns and to do so, it is important not only to make the necessary reconstruction and renewal of destroyed facilities but also to ensure a higher level of safety and life quality, the resilience of cities. For this purpose, it is important to use and develop innovative technologies and approaches to the governance of cities.

DR VICTORIYA PODGORNA

Member of Parliament of Ukraine

Kyiv Consulting: Question #2

What are the top three directions of legislative changes required to ensure that foreign investors are attracted to investing in post-war Ukraine construction and planning?

Dr Victoriya Podgorna :

- To complete the judicial reform to ensure the functioning of the independent judiciary, which will serve as a guarantee of fair justice and real protection of investors' rights.
- To adopt the law 'On the Security Service of Ukraine', according to which the SSU will not handle economic issues.
- To make amendments to the legislation, which will create real conditions for the implementation of the public-private partnership model.

Kyiv Consulting: Question #3

What are the first candidates in Ukraine to become smart cities after reconstruction, and what is the expected time horizon of the first modernised smart city to appear in Ukraine?

Dr Victoriya Podgorna : Dozens of cities and communities were implementing smart city technologies and concept before the war. Kyiv, Dnipro, and Kharkiv were the leaders among Ukrainian cities. Most cities were actively introducing the digitalisation of urban services, developing smart systems for managing the city and infrastructure. These processes will accelerate after the war, as the smart city concept represents the best approach to ensure better resilience of cities, quality of life and security, and effective management.

Kharkiv, where a significant part of housing and infrastructure will have to be restored, has a chance to become one of the smartest cities in Ukraine after the reconstruction. It should be done with the use of the most state-of-the-art approaches and technological standards. However, such a reconstruction will require much time – at least 10 years.

Kyiv Consulting: Question #4

In your opinion, how could Ukraine become the new trendsetter in the global community in the area of city development?

Dr Victoriya Podgorna : The main thing for Ukrainian cities is to become more open to digital and city (urban) innovations. We have a great potential for IT specialists and architects, who could offer innovative solutions for cities, especially in the field of smart and safe environment technologies, digital service systems, and urban planning.

Yes, Ukraine can become a global pilot project in creating a new type of smart and safe urban areas, separate settlements for citizens that have lost their permanent housing because of the war (internally displaced persons) or natural disasters. It will be of different quality and comfort than the typical projects that exist in the world today. Ukrainian architects, urbanists, and IT specialists are already working on this. Emphasis will be placed on digital security and mobility technologies, new construction technologies and environmental standards, and comfort level.

Besides, considering the real work experience of emergency services (State Emergency Service of Ukraine, emergency medical service, communications services) in conditions of the war, Ukrainian cities show a high level of responsiveness and efficiency. These systems will continue to develop further, using a wide range of new technologies that already exist in the world and innovative technologies that are being developed by Ukrainian specialists today.

LIUDMYLA POLISHCHUK

Nurse at the Centre of primary medical and sanitary aid, Vinnytsia, Ukraine

Biography: Liudmila Polishchuk was born on 18 December 1983 in Vinnytsia region of Ukraine.

In 2001, she graduated from Pokutyn secondary school and entered Vinnytsia Medical College.

In 2004, she graduated from the medical college with honours and received the qualification of a midwife.

During 2006-2011, she studied at the Vinnytsia State Pedagogical University.

She has worked for 17 years as a nurse in the centre of primary medical and sanitary aid in the city of Vinnytsia. Lyudmila is married, and has a daughter.

Kyiv Consulting: Question #1

What benefits have you gained from the implementation of the medical reform in your medical practice? What disadvantages have you noticed in the new system?

Liudmyla Polishchuk: After the implementation of the medical reform, the e-system has become a priority. Namely, the introduction of an electronic patient record, which contains absolutely all data about the health status of a patient and treatment received throughout his or her life. The introduction of electronic prescriptions and an electronic medical opinion as to temporary inability to work is also an achievement. Unfortunately, there are occasional delays in the operation of the electronic system.

Kyiv Consulting: Question #2

How has the war affected the work of medical institutions? Is there enough medical staff in hospitals? What help is most needed during the war for people having numerous chronic diseases?

Liudmyla Polishchuk: During the war, medical facilities, especially hospitals, went into a special mode of operation. The number of requests from patients with chronic diseases, as well as those from internally displaced persons, has increased. One should also note regular medical assistance is provided to wounded combatants, brought back from the combat zone. Medics are under great pressure, but they are fulfilling their functions. Nowadays, a large number of people require medical, as well as psychological, assistance.

Kyiv Consulting: Question #3

What do you know about the situation of hospitals in the occupied territories? Which medicines are most often in shortage in the occupied territories?

Liudmyla Polishchuk: Unfortunately, the situation with medical care in the occupied territories is critical. A large number of medical institutions have been looted. There are problems with the logistics of medicines. Patients with chronic diseases are in need of medication, especially patients receiving hormone therapy, cancer patients, insulin-dependent patients and people with cardiovascular problems.

YULIA POROSHENKO

Founder of Agrohub Platform; Co-founder of 'Radar Tech' technological cluster, McKinsey&Co alumna

Biography: Yulia Poroshenko has more than 10 years of international experience in consulting in 10 countries globally.

Being an ex-consultant at McKinsey & Company, she completed the 3-year internal prime GE leadership programme.

In 2017, Yulia founded the Agrohub platform that delivers innovations in the agriculture business. Agrohub is the first and largest data-sharing platform in Ukraine, that helps agriproducers become more efficient, sustainable, and resilient through advanced analytics and productivity optimisation.

Yulia is also a co-founder of the technological cluster Radar Tech, an innovative company that helps start-ups, corporations, and ecosystems to identify their way to grow and innovate, as well as implement new products and business models.

Kyiv Consulting: Question #1

What changes are expected in production of Ukraine's main crops, considering climate change? In 5-10 years, will all major crops of the previous years (corn, wheat, barley, sunflower) remain leaders in terms of production volumes? What crops will prevail?

Yulia Poroshenko: Considering the occupation of some of the Ukrainian territories and the conduct of active hostilities in some of its regions, the volume of production and, accordingly, the export of grain will be reduced shortly, compared to the pre-war levels. In addition, it was in the eastern and southern regions that a significant amount of export-oriented wheat and barley was grown. Therefore, the structure of exports will shift to a greater extent in favour of corn and soybeans.

As for the climate change, in those eastern and southern regions, susceptibility to global warming is more evident due to the growing deficit of precipitation, as well as an increase in average daily temperatures during the growing season.

Looking at the unoccupied territories of Ukraine only, with the inherent crop pattern, there may be an initial shift towards wheat-cornsoybeans, as well as sugar beet and vegetables, at the expense of sunflower and niche crops. The key reasons are the complexity of outbound logistics, reduction of processing capacities, a possibility of long-term storage without additional infrastructure to be put in place, shortage of working capital, as well as shortage of personnel.

At the same time, in the next couple of years, a decrease in the intensity of cultivation technologies is expected due to a decrease in margins and problems with logistics (both in supply of materials and shipments of finished goods), and therefore a decrease in yields of all crops. The profit margin of Ukrainian agricultural producers has been significantly reduced due to the increase in the cost of logistics (70-120+ USD per tonne) due to the blockade of seaports.

In western Ukraine, given the problems with the logistics of commercial grain, a functioning land market and opening access to the European markets, there may be a shift in production structure towards horticulture, berry and vegetable growing. This process is nevertheless quite inertial and requires a significant influx of investments.

In the next 5-10 years, the structure of agricultural production will significantly depend on the timing and consequences of the war, as well as the progress and conditions of integration into the EU.

YULIA POROSHENKO

Founder of Agrohub Platform; Co-founder of 'Radar Tech' technological cluster, McKinsey&Co alumna

Kyiv Consulting: Question #2

How do you assess the impact of Ukraine's EU candidate status on the development of our agricultural sector? What principal opportunities will get opened? What segments of the Ukrainian agricultural products are the most interesting and promising for the European market?

Yulia Poroshenko: A positive, though not rapid impact is expected. The main requirements of the EU regarding Ukraine's candidacy will imply removal of key obstacles to large-scale investment: predictable fiscal and monetary policy, a transparent judicial system to protect investor rights, etc.

Also, the candidate status requires a transition to compliance with basic standards and regulations in production. The current abolition of quotas on exports to the EU was an advance that increased the effective selling prices of a number of export items. It allows compensating the logistical discount from sales of grain to more distant destinations and facilitates additional processing of agricultural products in Ukraine right now.

Compliance and high standards are basic constraints to expanding supplies to Europe. Yet, for non-EU members, they are more stringent on a number of parameters: banned pesticides, GMOs, animal welfare requirements, antibiotics and hormones in feed, traceability of origin, etc.

Amid significant restrictions, which are insufficiently compensated by subsidies, the cost of land and labour in Ukraine is a medium-term competitive advantage.

The main opportunities, in our opinion, include livestock and poultry products, application of more than one processing stage to pulses and oilseeds, investments in logistics infrastructure (transhipment, storage, transport, fruit and vegetable storage), bio-energy, as well as the use of alternative energy sources for processing raw materials. In this case, cattle breeding and biofuels can be the segments with a cumulative effect for investment, i.e. feed production, processing of waste into biofuel, and production of semi-finished products with controlled technology. Most likely, multinational corporations with expertise and access to global markets and supply chains will be engaged in the development of these segments.

The prospects for deep processing of agricultural products, as well as the development of livestock/poultry farming, largely depend on the duration of the warfare and rates of implementation of the EU accession measures.

Kyiv Consulting: Question #3

Ukraine imports around 40% of hybrid seeds, which makes its crop sector dependent on foreign supplies. What are the prospects for construction of plants for hybrid seed production inside Ukraine? And how can it influence the country's food security?

Yulia Poroshenko: Even before the war, Ukraine was developing its domestic production of seed materials, either under licenses from originators or directly by large originators. However, almost everything produced was intended for domestic sales and not designed for exports to other countries.

Some of the reasons for that were the above-mentioned problems in Ukraine with the observance of a licensee's rights, production standards, as well as lack of protection of investors' assets in the long run. Another limitation was the absence of the land market to ensure a sustainable process of hybridisation and cultivation of parent lines.

In addition, regional offices of the major originators were more focused either on the Russian Federation or on Eastern Europe. After the end of the war, lifting of the ports blockade and rapid implementation of all measures required for EU membership, a number of restrictions will be overcome and international corporations will potentially be interested in development of seed production in Ukraine (for example, at the expense of Türkiye or Hungary).

The factors described above (cost of the land lease, improved investment climate and qualified inexpensive labour), combined with the extensive soil and climate potential of hybridisation testing grounds, are sufficient to prompt investments into this segment.

Such a trend will have a positive impact on food security, although not definitive. Seed production in Ukraine will mainly reduce the cost of production for farmers due to the absence of import duties and VAT. The fact is that a substantial part of the produced crops is varietal and the seed material is grown from elite seeds by producers themselves (wheat, barley, soybeans, rye, etc.). Even during active hostilities, the necessary volumes of seeds were delivered (this is a fairly capacious commodity that does not place a significant burden on logistics).

DAN RICE

President of the Thayer Leadership; Special Advisor to the Commander In Chief Ukraine Armed Forces

Biography: Dan Rice actively supports Ukraine on its way to Victory. In April 2022, he was named Special Advisor to General Valeriy Zaluzhnyy, Commander-in-Chief of the Ukrainian Armed Forces. Dan Rice started visiting Ukraine in May 2022 to directly learn about the leadership, leader development transformation of the Ukrainian Armed Forces from 2014 to the present day. He travels back and forth between Ukraine and Washington DC speaking, writing and lobby for more lethal, precision guided weapons on behalf of Ukraine. He is registered with the US Justice Department as an agent of Ukraine.

Dan voluntarily re-joined the Army in 2004 to serve a year in Iraq as an Infantry officer in the Sunni Triangle. His military awards include the Airborne Badge, Ranger Tab, Combat Action Badge, and Purple Heart. He is a member of the Veterans of Foreign Wars (lifetime member), MENSA, and is a board member of the Children of Fallen Patriots Foundation.

Kyiv Consulting: Question #1

In June 2022, you published the article called 'THE UNTOLD STORY OF THE BATTLE FOR KYIV'. What are the main lessons for military people worldwide that could be taken from the case of Russia's war against Ukraine?

Dan Rice: The lessons learned from the Ukraine-Russian war are many and will be studied for generations. A smaller, motivated army with the will to fight can defeat a numerically superior army if it has better leadership, and leadership development throughout the organisation, and has just enough precision-guided weapons to effectively implement a superior strategy. Stingers, Javelins, NASAMS, HARMs, Neptunes, and HIMARS, together, with a smaller army, can defeat a far larger army.

At this stage of the war, in September 2022, the war has ground down to a 2,000 km front and an artillery duel. Russia still holds an enormous numerical superiority in howitzers and tanks (which can fire indirect fire). The west has given nearly all the howitzers it can to Ukraine. But since the west cannot increase the number of artillery guns, the key to winning this artillery duel is to increase the lethality of the artillery rounds.

The entire NATO defence of Europe against a planned Russian invasion was planned to be outgunned, but have far more lethal artillery rounds with Dual Purpose Improved Conventional Munitions (DPICM) which have 88 submunitions. These are between 5-15 times more lethal than the High Explosive artillery rounds currently being provided to Ukraine. With DPICM, Ukraine can go on the offensive and take back Donbas and Crimea. Without DPICM this war of attrition will likely remain an artillery war in which Ukraine is significantly outgunned. Ukraine, the United States, Russia, Poland, Romania, Latvia and Estonia did not sign the Convention for Cluster Munitions agreement and should not be withholding DPICM from Ukraine using that convention as a reason.

This war should put into question the benefits of the Convention on Cluster Munitions (CCM) and if the CCM has emboldened Russian/Chinese/North Korean aggression, and weakened the West, by taking away one of the primary defensive weapons designed to deter their aggression. Ukraine needs DPICM to help win this war.

DR YULIIA RYBAK

Co-Head of Secretariat of German-Ukrainian Energy Partnership

Biography: Dr Yuliia Rybak has over 15 years of experience in advisory, investment management and government relations. She also has solid experience in bilateral government cooperation on energy reform.

Her academic background includes a Master's degree in international business management and a PhD in World Economy and International Economic Relations.

In 2020, Yuliia was responsible for the development of international cooperation and coordination of technical assistance, in the capacity of an Adviser and a member of the Expert Council at the Ministry of Energy.

Since 2021, she has been managing the Secretariat of the German-Ukrainian Energy Partnership as its Co-head on the Ukrainian side, dealing with the implementation of energy cooperation in the priority areas: hydrogen economy, overhaul of the coal-mining regions, decarbonisation, energy efficiency and renewable energy.

Kyiv Consulting: Question #1

How do you see the future of energy cooperation between Ukraine and EU countries, especially Germany? Nowadays energy and climate policies go 'hand in hand'. In post-war Ukraine, what will be the main priorities in terms of energy system transformation to bring the country on the path to carbon neutrality?

Dr Yuliia Rybak: German-Ukrainian Energy Partnership was established almost 2 years ago as a political platform targeted at supporting green energy transition and decarbonisation of the Ukrainian and German energy systems. Energy partnership has proved to be an efficient vehicle for supporting Ukraine's energy sector, especially at such a challenging time as the time of cruel, unprecedented and unprovoked armed aggression of Russia against Ukraine. During the six months of the full-scale war, in spite of huge challenges, including bombing and damage of the critical energy infrastructure, as well as threats of nuclear terrorism, the Ukrainian energy system proved its resilience. The main activities under the Partnership were reformulated with a focus on providing emergency assistance to secure stability of the country's energy sector. This included humanitarian aid from German energy associations and companies, procurement of items related to emergency energy needs, provision of expert support and technical capabilities to increase the export potential of Ukraine's power system, as well as support in the development of a Recovery Plan for the Ukrainian Energy Sector.

Ukraine's recovery will cover the period of 2022-2032 and will take approximately 750 Bn USD in aggregate, excluding security and military expenditures. Definitely, the principal foundation for the recovery of the energy sector is the transition to clean, affordable and reliable energy. But we should consider the risks of taking steps towards it during wartime. First of all, such as possible damages and risks of further destruction.

Therefore, prompt repair of damages to energy infrastructure is the core measure to be in place permanently. One of the biggest challenges is attracting financial resources. Another one is non-payments. Hence, it is crucial to find affordable financial instruments and donor support, and attract funding for the relocation of SMEs. Considering that a significant number of RES units have been disconnected, there is a need to support relocation and further development of renewable energy facilities, with an account of new conditions and opportunities in view of Ukraine's integration with ENTSO-E. Replacement of natural gas with sustainable bioenergy, production of biomethane, as well as swift electrification of transport and heating should be top-prioritised.

I am confident that biomethane and hydrogen are the key tools for reaching Ukraine's and Europe's independence from the russian energy resources, as well as their fast transition to the use of green energy.

For Ukraine, it is also a chance to become one of the main suppliers of 'clean fuel' to Europe. We need to unlock our enormous potential of green energy. It is possible to establish a competitive green hydrogen ecosystem in Ukraine, including production, storage and transportation of hydrogen.

I strongly believe that, in spite of the tragic, unfair and cruel events, we should gather momentum to build a better Ukraine. Doing it in a sustainable way, using new, green technologies, in order to strengthen the entire European energy system in achieving decarbonisation goals and energy independence.

YURIY RYZHENKOV

CEO, Metinvest Holding

Biography: Yuriy Ryzhenkov is one of the most influential managers in Ukraine, having extensive experience in crisis management, particularly during the pandemic and amid warfare. In 1996, he began his career as an assistant to the CFO at Donetsk Iron and Steel Works. Later, he joined Mini Steel Mill ISTIL as a manager of economic analysis and informatics. Over 2002-2007, he worked as Deputy CFO and then as Finance Director of ISTIL Group.

After that, Yuriy received an offer to become CFO at DTEK, before being appointed as COO and a member of the Board of Directors in 2010. Since December 2013, he has been CEO of Metinvest Holding. In 2020, he was included in the Forbes Ukraine ranking of the country's top 25 CEOs. Under his leadership, Metinvest has achieved the highest growth rates in its history.

Kyiv Consulting: Question #1

Will it be possible to resume operations at the steelworks in Mariupol (particularly Azovstal) once the Donetsk region has been de-occupied? In your estimation, how much time and resources could it take to rebuild the destroyed plants and return to the pre-war output and export volumes of steel products?

Yuriy Ryzhenkov: We believe in Ukraine's victory and plan to restart the steelworks in Mariupol once the war is over. To find out how much time and resources this will take, we need to estimate the amount of damage caused by the Russians. We cannot do this now. We took care of the possibility of resuming production as early as the first day of the Russian invasion by putting the mills into hot conservation mode. This solution will make it possible to restore the production facilities even in case of damage. The situation is more complicated with the workers of the plants and their living conditions, as houses will have to be rebuilt. Metinvest shareholder Rinat Akhmetov has already said that after Ukraine wins the war, he will invest in restoring the infrastructure of Ukrainian cities.

Kyiv Consulting: Question #2

Given that Ukraine is a key supplier of steel products for some regions (particularly Europe and the Middle East), what implication will the reduction of Ukraine's exports have on international supply chains? In what particular way will the markets adapt to the new reality?

Yuriy Ryzhenkov: Ukraine remains one of the largest suppliers of metal products to European markets, although the country's export opportunities are extremely limited because of logistics issues. Over the first half of the year, Ukraine halved its exports of metals. To compensate for the loss of Ukrainian steel, EU countries have increased steel imports from Brazil.

India, Turkey, Taiwan and other countries are large suppliers of steel products to Europe as well. The war in Ukraine will have longlasting consequences for the global steel industry. They include likely adjustments in the global trade flows and supply chains, as well as changes in energy trade.

YURIY RYZHENKOV

CEO, Metinvest Holding

Kyiv Consulting: Question #3

In early May 2022, the US announced a one-year suspension of import duties on Ukrainian steel and steel products. How do you assess the potential benefits of such liberalisation for the Ukrainian steel sector?

Yuriy Ryzhenkov: We welcome the US initiative to remove the special duty of 25% on supplies of rolled steel from Ukraine. At the same time, we hope that the US will remove other trade barriers, particularly the anti-dumping duty applied to Ukrainian metals.

After the cancellation of the duty on imports of Ukrainian steel products to the US, this market will become a promising area for Ukraine. In particular, the Group will be able to increase exports to the US instead of making shipments to Latin America and Asia. We are considering entering the US market with square billet and welded pipes, as well as wire rods and rebar, subject to market conditions.

Kyiv Consulting: Question #4

In your opinion, in what way should the post-war reconstruction of the Ukrainian metals and mining sector take place? What activities and initiatives should be prioritised to increase the added value of metallurgical products, as well as enhance their competitiveness on international markets?

Yuriy Ryzhenkov: Even now, Ukraine needs to focus its efforts on maintaining the production potential of its metals and mining complex. To be competitive in the current environment, Ukrainian steelmakers have to reduce their production costs. To do that, the sector needs government support. Above all, this relates to resolving logistics issues: unblocking seaports, increasing the throughput capacity of rail border crossings and decreasing rail transportation tariffs. Moreover, the cost of production is significantly affected by the expensive electricity and gas, as well as high iron ore extraction rents.

We also hope that given the huge damage caused by the Russian occupiers, Ukraine will receive special conditions for the application of the Carbon Border Adjustment Mechanism. Otherwise, it will become another barrier between Ukraine and the EU.

CEO and co-founder, Intellias; President of IT Ukraine Association

Biography: An entrepreneur and a business leader, Vitaly started his career in the mid-1990s by joining a small group of local IT industry pioneers.

He co-founded Intellias in 2002 and has grown the company from a small agency to one of the leaders of the industry, a trusted technology partner to Fortune 500 enterprises and top-tier organisations around the world.

As its CEO, Vitaly is the driving force behind the company's strategy and business development activities. He is actively promoting Intellias as a speaker and a panelist at high-profile industry events.

Today, Vitaly is also a President of IT Ukraine Association. He takes part in consolidation of efforts of the IT sector, undertaken to drive changes in legislation, government relations, IT education, and channeled towards its further development, while giving back to the community.

Vitaly is a strong supporter of educational and cultural initiatives and has great appreciation for contemporary art.

Kyiv Consulting: Question #1

During the wartime, the number of companies that joined Diia.City increased, compared to the pre-war period. How does the development of Diia.City affect the IT industry? What is the potential impact of Diia.City, as a tool for stimulating direct investments in Ukraine going forward?

Vitaly Sedler: Indeed, over 300 companies have already joined Diia.City. That's a pretty big number. And many of these companies have indeed joined Diia.City after the full-scale invasion began.

The fact is that this nationwide platform has been officially launched early this year only. In January, the first companies began joining Diia.City little by little. During the first two months of work, this service did not have any noticeable impact on the Ukrainian IT sector, simply because too little time had passed. And in February, the full-scale invasion began, so, for most IT professionals, the whole experience of interacting with Diia.City came during the war.

Diia.City is an instrumental mechanism. It is an innovative product, which was created by the Ministry of Digital Transformation in collaboration with the industry. Various companies in the IT Ukraine Association have contributed a great deal to the creation of the remarkably effective legislation. We provided the officials with various feedback and suggestions while working on the legislative base.

Several changes were made from day one to the point where the basic draft law governing the platform became acceptable.

In general, development of Ukraine's IT industry will greatly depend on implementation of the initiative for the development of Ukrainian specialised education. On its own, Diia.City creates an additional tax regime similar to the one currently operating in the IT industry. The two regimes: the PE- system and gigs in Diia.City are combined to provide flexibility and freedom of choice for professionals and specialists working in companies that participate in Diia.City. Indeed, even a company joins Diia.City, 100% of its employees can remain PEs till the end of 2023, 50% till the end of 2024, and 20% till the end of 2025.

We have always insisted that freedom of choice is a key principle that must be retained. Now we now it will be respected.

It is too early to talk about the impact of Diia.City on the development of the industry as a whole. War times have adjusted all aspects of public life. For example, investors now think more about the risks of military action and the legal specifics of cooperation. There is a possibility that companies joining Diia.City will be able to book their IT staff and get permission for them to travel abroad on short-term business trips. This is something that Western clients and partners need, to be assured that a project development team will remain in place. Accordingly, such guarantees will also have a positive effect on the volume of foreign investments in the IT sector. The resolution of these issues will depend on further actions and decisions of the government. As for other potential effects of Diia.City on the IT industry and its ability to unblock the sector's full potential, we will see it this after victory. But even having Diia.City as a tool to attract investments, we will still need a radical reform of Ukraine's legal system.

CEO and co-founder, Intellias; President of IT Ukraine Association

Kyiv Consulting: Question #2

Key Ukrainian IT companies have been forced to open their temporary or permanent development centers and representative offices abroad to minimise risks and continue fulfilling contracts. The companies formalise employees as per local legislation, based on employment contracts with local offices or through their registration as private entrepreneurs. In your opinion, will this lead to an outflow of Ukrainian specialists abroad in the future and the reduction of employment in Ukraine? Do companies have strategies to return workers back to Ukraine?

Vitaly Sedler: In the beginning, it should be noted that it is predominantly women who have permission to go abroad. Their husbands, brothers, parents or adult children stayed in Ukraine and that is a good reason to go back after our victory. In terms of other factors influencing the decision to return, I can highlight the following few of them.

Firstly, there is a security factor. People leave Ukraine because they are worried about their safety, and the safety of their families. They assess the risks of missile attacks by themselves and decide whether they can tolerate them or choose to stay in a safe place abroad. This is something that we, as a company, cannot influence.

Secondly, there is a tax factor. Here the situation is as follows: everyone understands that, if a specialist moves to another country, he becomes a tax resident of the country where he has gone to. And, accordingly, he pays taxes in that country. It is no secret that in Ukraine, thanks to the PE system and Diia.City, the tax situation was very attractive. Taxes on IT were much lower than in other countries. For example: in Poland, specialists must pay 15-20%, in Germany it is 20-35%, and in Ukraine only 5% of income shall be paid. In addition, the cost of living in our country is much lower than in Central, Eastern and Western Europe or the USA. Therefore, the tax factor may have a positive impact on people's decision to return to Ukraine.

At the same time, there is another factor - the patriotic one. There are many patriots among IT specialists, who consider this country their homeland and therefore do not leave it. For a large percentage of specialists who stay here this reason is not the least one. There is an interesting study by an IT cluster in Lviv, called 'IT Research Resilience'. It says that so far about 20% of Ukrainian IT professionals, mostly women, have left. At the same time, a significant proportion of those who have left wants to go back. We can already see that people are returning to those cities where the situation has mostly stabilised.

In any case, companies need to stay in contact with their employees all the time. Regarding Intellias, we have about 17-20% of specialists who have left. Now we see a trend of returning to Kyiv and Odesa. About 30% of our specialists who worked here before the war is already back in the capital, and this number is 40% for Odesa. Given the current momentum, Intellias is gradually preparing to resume operations of its development centers in those cities. Our Kyiv office has recently reopened.

Our task is to maintain continuous communication. We are in constant contact with those who have evacuated abroad or to the western regions of Ukraine from the active war zone. Our partners, administrative team, and internal communications team make sure these people feel part of Intellias wherever they are.

Freedom of choice is a key principle that we have always insisted on maintaining. We now hope that it will be respected.

It is too early to talk about the impact of Diia.City on the development of the industry as a whole. War times have adjusted all aspects of public life. For example, investors are now thinking more about the risks of military action and the legal specifics of cooperation. There is the possibility that companies joining Diia.City will be able to book their IT staff and get permission for them to travel abroad on short-term business trips. This is something that Western clients and partners need to be assured that the project development team will remain in place. Accordingly, such guarantees will also have a positive effect on the volume of foreign investment in the IT sector. The resolution of these issues will depend on further actions and decisions of the government. As for the other impact of Diia.City on the IT industry and unblocking of its full potential, we will be able to see this after victory, when the service is operating in peacetime. But even then, using Diia.City as a tool to attract investment, we will need a radical reform of the legal system.

CEO and co-founder, Intellias; President of IT Ukraine Association

Kyiv Consulting: Question #3

How has your company adapted to wartime conditions? How quickly did business process recover? Tell us about relations with clients, recruitment of talents and other peculiarities of IT business development under conditions of war.

Vitaly Sedler: We have been able to adapt to wartime conditions fairly quickly. In this, we were helped not only by the experience accumulated during the COVID pandemic but also by having a detailed Business Continuity Plan.

Therefore, on 24 February, we were able to respond quickly to Russia's large-scale aggression by giving clear and coherent instructions to our employees.

In just four days, we evacuated most of the team to safe areas of western Ukraine or abroad. In the first weeks of the full-scale invasion, we were able to restore the operational level of our deliberative processes to almost 100%.

Overall, the IT business proved to be very resilient and able to resume operations quickly. I think this was facilitated by the fact that most IT companies work with global rather than domestic clients. In other words, most local clients were not affected by the war and could continue ordering IT services. The only question was whether we could deliver those services. By evacuating the team, we helped the business processes get back on track, but the trust and support of our partners also played a major role.

Customers understand our position and don't stop their contracts with us despite even minor disruptions. Customers are surprised at how we have handled this crisis. I often cite the example of one of our customers who constantly reminds us that we have exceeded his expectations. For example, we have recently signed a contract with DKV Mobility, the leader in the field of on-the-road payment services in Europe. The continued success of IT companies with global clients will depend on many factors, such as their ability to book specialists during mobilisation or the ability of their staff to make short-term business trips to clients.

For its part, Intellias, despite the difficult circumstances in the country, continues its development. We provide jobs for more than 2,600 people, of whom just about 20% are abroad.

We actively recruit new developers in Ukraine; more than 100 positions are open now, specifically for Ukrainian engineers. In spring we opened a new office in Uzhhorod. We also continue our global growth. In spring, in addition to our office in Krakow, which has been open since 2019, we opened three new ones in Poland - in Warsaw, Wroclaw and Gdansk. Also, in spring, we opened developers' offices in Sofia, the capital of Bulgaria, and Zagreb, the capital of Croatia. We have recently announced the opening of our offices in Spain this autumn and will soon be announcing the opening of our offices in Portugal, Colombia and India.

Kyiv Consulting: Question #4

Has the government contacted you with a request to develop something similar to Sky Atlas for the needs of air intelligence? Perhaps you were involved in development of other projects for the Ministry of Defence?

Vitaly Sedler: I will say right away that we were not involved in the development of Sky Atlas, but we have joined other initiatives that help the country. For example, there's a project of the Lviv IT cluster called 'Sky'. It's helping to re-equip the Air Forces Command of the West. As part of this project, we provide funds and equipment to make this refurbishment possible.

In addition, there are several volunteer projects to organise logistics for the Ministry of Defence, handled by our engineers. Moreover, our specialists gather all necessary equipment and machinery for the AFU and provide humanitarian assistance to those who need it most. For example, our Talent Management Roman Gapachylo, together with other activists, has organised the search and delivery of vehicles for the frontline. Recently, they have delivered their 100th vehicle for our defenders already.

Intellias has been providing funds, equipment and vehicles to the Ukrainian military since the start of the full-scale invasion. The total benefit has already amounted to around 30 Mn UAH and is growing every day. Most of the aid has directed at purchasing drones, equipment and protective gear for the military, modernisation of the command and analysis centres of Air Command West and the purchase of off-road vehicles. Also, on its 20th anniversary, Intellias donated about 5.5 Mn UAH to Serhiy Prytula Charitable Foundation for them to purchase a Fly Eye unmanned aerial system consisting of two aircraft and a ground control station. The complex helps the defenders disarm the enemy in Kherson region.

CEO and co-founder, Intellias; President of IT Ukraine Association

Kyiv Consulting: Question #5

When and in what way did you start preparing for a full-scale invasion? Have you established an emergency response team? Is the practice of setting up such teams common at all among IT companies? Including in the West.

Vitaly Sedler: We have had a Business Continuity Plan since 2013-2014. It is indeed common practice among big companies, seeking to ensure their stability and customer satisfaction.

Back in the autumn of 2021, the company set up an Emergency Response Team, a working group of CEOs, directors and managers. This group reviewed and updated the Business Continuity Plan, developing different scenarios. One of those scenarios was set in motion immediately after Russia launched its large-scale invasion of Ukraine. This allowed people to evacuate quickly, ensure business continuity and protect existing projects. Consequently, a few hours after the start of the full-scale invasion, our buses already left Kharkiv and Kyiv with our employees and their families towards west of Ukraine. Since that time, we have transported around 1,400 people into and out of Ukraine.

Intellias has a bomb shelter in its Lviv office. There, we have organised a temporary shelter for internally displaced people. Some people lived in the office while we settled them in various hotels and apartments.

A group like the one we set up for rapid response is nothing new. It is a completely normal thing. At first, we met every morning to coordinate our joint actions. As time passed and the situation became clearer, we began to meet less frequently.

Kyiv Consulting: Question #6

How do you estimate the readiness of the Ukrainian high-tech industry for war now? How badly has the IT sector suffered and what are its successes under the new circumstances?

Vitaly Sedler: In principle, the sector has shown a high level of vitality. 85% of companies have managed to fully or almost fully recover their business activity. This is evidenced by a study of IT Research Resilience, which I have already mentioned. Two-thirds of the companies report growth, of which one-seventh record significant growth. The only exceptions are those companies which were working solely with the Ukrainian market. They were forced to get closed.

So far, the situation remains stressful and complicated. The big challenge for everyone, with no exception, has been the evacuation of tens of thousands of specialists from dangerous regions of the country. And the Emergency Response Team, which had been composed in advance and had a clear business continuity plan, which got implemented immediately, helped us survive the most difficult times of late February and the first months of the war more easily. Despite everything, we continue working and filling the country's budget.

Kyiv Consulting: Question #7

What are the prospects for the industry in the next year or two? What should the government do to support it?

Vitaly Sedler: The industry has made itself. In 30 years, we have grown into an industry that generates 8 Bn USD in revenue annually. Even now, in these extremely difficult times, the IT industry generates stable foreign exchange earnings for the state budget.

Now we desperately need some initiatives from the government. I am talking first all about the possibility of booking specialists during mobilisation, as well as the possibility of making short-term trips abroad to meet clients. We need less regulation, a stable working environment and the possibility to visit clients in different countries.

We also realise that we must win the war and rebuild the industry. Therefore, all efforts, including those of Intellias, are now focused on supporting the AFU and bringing us closer to victory.

HRYHORII SHAMRYTSKYI

Chairman of the 'Congress of Farmers of the Poltava region', farm owner

Biography: Hryhorii was born in Zinkiv, Poltava region (Ukraine), in an 8-children family. After leaving school, he entered the National University of Bioresources and Environmental Management of Ukraine to study as an engineer and a technologist. Before graduating from the university he went to Finland, where he worked for 3 years for a farmer, who owned about 5,000 pigs. Hryhorii worked his way up from being an odd-job man to managing a farm with 700 sows and 5,000 heads of animals in total.

In 2011, Hryhorii returned to Ukraine and worked at Rise Agro Holding. Afterwards, he was employed for 3 years as chief zootechnician in Sencha LLC, where he, together with the owner, developed the direction of livestock breeding, implementing innovative technology. He then became head of Stokolos Agroinvest Ltd.

In 2015, Hryhorii set up his farm 'My Land 2015'. Today, the team of the farm is 15 employees. The farm itself consists of 500 hectares of land, domestic and foreign machinery, and storage facilities. Before the war, the farm intended to engage in livestock breeding in earnest, but after the war, its management shifted to the development of storage facilities to store the produce. Hryhorii and his team now go through a difficult period, but not a single employee has been sacked.

Hryhorii is also the Head of the Poltava farmers' congress, comprising over 50 members.

Kyiv Consulting: Question #1

How was the sowing campaign this year? What problems have the farmers of Poltava region faced this year, given the war?

Hryhorii Shamrytskyi: It was the most difficult sowing campaign in the history of independent Ukraine. Typically, farmers would hold their crops until spring, to sell them at higher prices, compared to those during the harvesting season, to get money for the sowing campaign and to pay off their debt liabilities. But we were faced with the fact that with the outbreak of the war the prices of grains, such as sunflower and wheat, plummeted twofold. Farmers became several times poorer. In addition, in February banks reduced lending or stopped lending altogether, despite the long-term relationships and prior agreements. This factor has also complicated the sowing campaign. The third issue, which has aggravated the situation, has been the prices for diesel fuel, which increased threefold, and prices for mineral fertilizers. Accordingly, the number of fertilizers used during the sowing campaign was lower. We were forced to save money on fertilizers, cultivation, logistics and crop protection products. Instead of original products, we were forced to use generics and buy seed from cheaper producers, to conduct, at least, the sowing campaign at any cost.

Kyiv Consulting: Question #2

In your opinion, what investment projects in the agricultural sector of Poltava region may be of interest to a foreign investor? Why should one invest in Ukraine's agriculture, and which niche areas might be the most attractive?

Hryhorii Shamrytskyi: More than 15% of the world's black soil is concentrated in Ukraine. Accordingly, our country feeds and will feed the significant part of the world, including 10-15 countries like ours. Before the war, we had been an export-oriented country and most of the grains we produce had been sent abroad and processed there. However, today we have realised how important it is to process wheat within our country: not just export wheat to other countries, where it will be used for making different products, but to produce groats, flour, flakes, etc. here, in Ukraine.

HRYHORII SHAMRYTSKYI

Chairman of the 'Congress of Farmers of the Poltava region', farm owner

The same situation is with buckwheat. It used to come to us from Belarus and Russia, and, with the borders closed, the price of buckwheat has increased 5-6 times. We have therefore realised that buckwheat is a profitable investment, being packaged and sold in the domestic market. The same goes for oil and various kinds of cereal. Therefore, in my opinion, today both domestic and foreign investors should invest in Ukraine's agriculture, namely: in processing products that we grow, their delivery within the country, and, possibly, exporting them already in the form of processed goods. It is urgent now because we have not reached our pre-war export volumes. The export prices have risen many times, but there is not enough transport for export and we still have leftovers from the previous year. Hence, there are no prerequisites for price increases.

There is also an immediate need to increase the volume of livestock production since today its headcount is many times lower than it was 15-20 years ago. In my opinion, the issue of livestock breeding should be reviewed by the Ministry of Agriculture. Farmers and producers should work out programmes for the development of livestock since during the war the price of meat rose by about 30-40%, and the price of milk has also grown up, while the price for grain has fallen twofold. Accordingly, there are all preconditions for the establishment of cattle breeding complexes and processing plants for dairy and meat production.

Kyiv Consulting: Question #3

How do you assess the effectiveness of the state's support of the agrarian business? Particularly in overcoming challenges caused by the war. Is this assistance sufficient?

Hryhorii Shamrytskyi: Without the state's involvement, farmers and agricultural producers would not be able to invest in livestock breeding or processing so quickly, because they simply do not have money. Today, we take new loans and do not, therefore, have to sell products, which we harvest now, at prices 20-30% lower than their production cost. As for the Ministry of Agriculture, in my opinion, it has been quite effective during the war period in helping farmers and agricultural producers. Specifically, right after the enactment of martial law, we had credit facilities, accessible via state-owned banks, with 0% interest rates, which made it possible for us to conduct the sowing campaign.

Moreover, the Ministry of Agriculture extended this facility for another half year, which enabled us to retain products and not sell them in September and October. Additionally, the Ministry of Agriculture reassured the reservation of employees. There was a catastrophic shortage of workers in the agricultural sector before the war, and even more so during the war period. So, the reservation has enabled us to continue working in the agricultural sector which is now the 'Second Front' in the literal sense - we will not grow, we will not harvest, we will not have anything to eat and then hunger may appear, next to the war.

To date, a programme of support for 'small farmers' (up to 120 hectares) in the amount of UAH 3,100 per one hectare of land has been adopted with non-refundable aid from the state. In addition, since 1 September 2022, the government has launched a programme of livestock farming support, stipulating that cow owners can receive the aid of UAH 5,000 per cow. On top of that, various funds help to get harvesters, sleeves, and even tractors, to help farmers with harvesting and storing their crops. One of the biggest problems today is the lack of storage capacity. Before the war, elevators used to rotate 2-2.5 times per season, but today, as the grain from the previous year has not been removed from the silos, there is no place to store new products. Therefore, there is hope that the Ministry of Agriculture will help farmers to get storage sleeves for the laying of grain and products in their territories, at their facilities and farms. I would like to add that in my opinion, help from the Ministry is important, but I would like to see more of it, and we bring it to the Ministry exactly in need of capacities for grain storage. First of all, it should be sleeves in sufficient quantities and for the future, there should be a help for farmers to build elevator and storage capacities.

There is also a problem of insufficient lending since banks have reduced it. In the meantime, funds are needed to conduct the autumn on, the spring sowing campaign, as until that time we will not be able to sell products at market prices. Accordingly, farmers need government assistance in the form of investments or grants. The All-Ukrainian Congress of Farmers has proposed that the Ministry should create a program for purchasing grain from small producers at pre-war prices or world market prices. It is precisely small producers who cannot compete with the big players. Big agro holdings have their elevators for storage, they have export contracts and the ability to export their products, and transport to provide logistics, and they also have partial processing capacities. Small producers don't have such capabilities, and we have always been dependent on big players and grain traders.

DR ROMAN SHEREMETA

Associate Professor of Economics at Weatherhead School of Management at Case Western Reserve University, USA; Founding director of American University, Kyiv Founding Member at the Global Ukraine Foundation

Biography: Dr Roman Sheremeta is a Ukrainian scientist and one of the most quoted Ukrainian economists in the world. He is an Associate Professor in the Department of Economics at the Weatherhead School of Management at Case Western Reserve University (USA).

During 2013-2019, he was a research affiliate at the Economic Science Institute at Chapman University, Cleveland, USA. In 2021, he became the Founding Rector of American University Kyiv.

Dr Roman Sheremeta is a recipient of many research and teaching awards, including the 2018 Smith Ascending Scholar Prize, as well as multiple grants, including those from the National Science Foundation and the Max Planck Institute.

He was listed as a Top Economic Thinker of Ukrainian descent by Forbes in 2015, and a top-rated young economist in the world according to the IDEAS ranking in 2018.

Kyiv Consulting: Question #1

In your opinion, what are the Top-3 priorities that should be addressed at the government level to preserve and strengthen the educational system of Ukraine?

Dr Roman Sheremeta: The number one priority is that we need to change the model of higher education. We need to move away from the Soviet Union-style Universities, where it was always from top to bottom. Where the Ministry makes all the decisions and the Universities have to follow the decisions, made by the Ministry. Instead, the universities must have freedom, as well as their own vision and mission, through which they would be competing with one another. That is the first thing that has to be done. There has to be a change, where you move from a top-bottom to bottom-up approach in the governance of universities.

The second thing is that I do believe that (and it is not just because we are in wartime, but because the world is moving in that direction) we need a very significant digital transformation of our universities. It will help us get more resilient. When a university can longer hold classes in person, because of infrastructure damage or its relocation from Ukraine's east to its western part, it is still able to continue lecturing, since its system is built online. This means you need to have LMS (Learning Management System). You need to have Learning Management System like Canvas or Moodle or Blackboard, that will help you operate and buy all classes. For example, right now we are starting the first semester at American University Kyiv and are able to do it either off- or online, and for us, the quality of delivery would not change because all of our courses are built in Canvas. They have high-quality professional videos and a lot of interactive elements, so students can learn online as if they learn in person. Many students prefer to learn online, as long as those online products are of high quality.

I am not talking about Zoom or Microsoft Teams meetings, I am talking about an actual product, which is of high quality, from the beginning to the end. So, what we need to do is to have this digital transformation for all the universities of Ukraine. Not just American University Kyiv but all of them in Ukraine.

And the third thing, which I think is crucial, is to make a reform, similar to that made in the medical system when Ulana Suprun was the Minister. In which the government gives vouchers to the students and the money goes after a student. So, the idea is, that if a student wants to go to the Kyiv-Mohyla Academy, they can do that. If they want to go to the American University Kyiv, they can do that and they have a certain amount of money that goes after them because of the governmental support. But it is the student who decides where this money goes to. This will create competition for the students and will make universities compete for them, and create better products. This should consequently strengthen our educational system. That's given that some universities will lose, and this should be the case since we have almost three times as many universities as in Great Britain, but their quality is way lower.

DR ROMAN SHEREMETA

Associate Professor of Economics at Weatherhead School of Management at Case Western Reserve University, USA; Founding director of American University, Kyiv Founding Member at the Global Ukraine Foundation

Kyiv Consulting: Question #2

What additional cooperation opportunities with the US and other countries in the education sector should Ukraine start working on now?

Dr Roman Sheremeta: There are a couple of initiatives already on the cards. Because of the war, there are a lot of universities in the 'parallel world', especially in the United States, that have offered to host Ukrainian researchers and Ukrainian students. There is an initiative 'Global University Ukraine', which is a good thing, and I support it, but at the same time, I do want to make sure that students that participate in that sort of programme come back to Ukraine. This is also a goal of the American University Kyiv is not to get people overseas, but to help Ukrainians get a good education in Ukraine and stay in Ukraine. So, this is one fear that I have, but I think that these ways of cooperation are essential. We need to establish a direct partnership with American universities as, for example, it has been done with the American University Kyiv, where we have a direct partnership with Arizona State University. Arizona State University has promised and helped us to build a curriculum that is based on its own. The courses from Arizona States University will be at American University Kyiv, and the faculty from Arizona State University will be engaged with us. We, therefore, build this incredibly closed partnership. I am not talking about the memorandum, signed on paper. I am talking about deep partnership that enables the transfer of courses, transfer of knowledge, and transfer of research. So, these partnerships need to be built, and a lot of universities in the US are very open today to those partnerships because they want to be a part of the 'rebuilding Ukraine' motion. Another thing, besides those close partnerships with American institutions, is that we need to implement very strict standards of proficiency in English in our universities. I mean there is no to cooperate with American institutions, as well as other institutions in the world, without perfect English. Our students and our faculty must have a C+1 level of English, to be able to work on joint research ventures and to be able to go freely and stay for one year or a season via exchange programs. At this moment, when we are moving away from the russian culture, from the russian language, the perfect substitute, I think, would be English.

Kyiv Consulting: Question #3

What role can the American University Kyiv play, along with other think tanks, in supporting the recovery of Ukraine?

Dr Roman Sheremeta: We have a couple of initiatives on their way already. The number one initiative is with Arizona State University. We have been in touch with half a dozen of prominent Ukrainian universities. We also have been in touch with big companies in the US and with the US government. On top of that, we have been working with the Ministry of Education and the Ministry of Digitalisation. So, we got all of these different stakeholders to come together under the guidance of Arizona State University and American University Kyiv and put our proposal to do the digital transformation of all Ukrainian universities. It is a massive proposal, it is very expensive, but it is very much needed to transform our universities. As we are taking the lead in that, I visited the Reconstruction Forum in Lugano and met with the Minister of Digitalisation, Mr Fedorov, as well as spoke with the members of Parliament, heading the committee of Science and Education. We have all agreed that Arizona state is a perfect lead in the effort to digitally transform Ukrainian higher education since it is the Arizona State University which has been number one in innovation for the past 7 years in the USA and the world – ahead of MIT, ahead of Harvard and Stanford. A part of their innovation came specifically from digitalisation. They have 140 thousand students – 70 thousand online and 70 thousand offline. So, they're the best students to help us with this digital transformation and, together with American University Kyiv, I think we can do it. That is the first initiative. And we are already working on that.

We want to go even further and are partnering with the Global Ukraine Foundation to open up an accelerator at the American University Kyiv, which will draw venture capital, private investments and funds from the US governmental programs, the World Bank, the European Bank of Reconstruction and Development, that will be invested into companies, start-ups and new ideas in Ukraine. We are building this accelerator, as such accelerators always exist with universities, like Stanford. Lots of companies, like Google and others, have pioneered the market due to such accelerators. So, we want to create the same accelerator with a lot of money, and a lot of capital for the Ukrainian students. Students will take our courses on global venture creation and we will motivate them to start a company, write a business plan and collaborate with, perhaps, IT students in our School of Visual Technologies. Then our business students will need to come up with a proposal, a business plan, with a startup idea and we will partner them with the actual companies and venture funds that will invest in them and help them bring their ideas to life. That is how we are going to rebuild a Ukraine, that is how we are going to build new companies, that is how we are going to be a part of this rebuilding process.

IGOR SMELYANSKY

CEO, Ukrainian National Postal Operator (Ukrposhta)

Biography: Igor Smelyansky has more than 17 years of professional experience in strategic, management and financial consulting. He is a US licensed attorney and a CPA (Certified Public Accountant). In 1995, he moved to the USA, where he worked with Cantor Fitzgerald, KPMG and Citibank. In 2005, Igor joined Boston Consulting Group in the CIS in the field of management consulting. Later, he was managing several successful banking mergers in Ukraine.

In April 2016, he was appointed as a General Director of Ukrposhta. Under Smelyansky's leadership, Ukrposhta has managed to increase its profit by establishing cooperation with online stores, purchasing new fleet of vehicles and closing unprofitable rural branches.

Kyiv Consulting: Question #1

What were some of the toughest decisions you had to make as a CEO in the first weeks and months of the war?

Igor Smelyansky: The toughest decisions are always the ones where people's lives can be in danger. The decision to resume work on the second day of the war, including near military zones and within the temporarily occupied territories, was tough to make, but I am confident we made the right choice, as millions of people depend on our work.

Our heroic employees delivered food, pension and humanitarian aid in the hardest-to-reach places from occupied cities to the smallest villages. We are the last company to leave and the first to come back after a city or a village is liberated from the enemies.

Kyiv Consulting: Question #2

In what way will the imminent integration of Ukraine into the EU impact Ukrposhta, at both operational and strategic levels?

Igor Smelyansky: When we talk to our colleagues in the EU about speeding up deliveries and improving services, many of them are amazed that we even continue working. So, we see the EU integration as an opportunity, which can allow us to improve the quality and speed of services for our clients.

I only hope that we can maintain our adaptability and flexibility and would not get bogged down in bureaucratic procedures. It will also, hopefully, enable us to adopt leading European technologies and raise funding for our development and growth.

Kyiv Consulting: Question #3

Does your team already have the idea of a postage stamp that Ukrposhta will release on a victory day?

Igor Smelyansky: It will be the greatest stamp to design and we certainly feel the responsibility for doing it at the appropriate creative level, while communicating the right message. But the history of our wartime stamps has shown that the stamp to celebrate our victory, which our team (jointly with the Ukrainian people, since they are our co-designers and contributors) will design, is going to be an exceptional one. And who knows which format it will take: physical, NFT or something else.

The heroism of our troops and our people deserves commemoration that will be known across the globe. And I feel confident we will have the largest number of stamps ever issued. So that all people around the world could celebrate the victory with us.

OLENA SOTNYK

Member of Parliament of Ukraine (2014-2019), Advisor to the Deputy Prime Minister of Ukraine

Biography: Olena Sotnyk, a Ukrainian politician, lawyer, and human rights defender, currently serves as an Advisor to the Deputy Prime Minister of Ukraine.

As a former member of the Ukrainian Parliament, she is a well-known legislator and public policy maker in areas such as the rule of law, judicial system reform, anticorruption, and youth policy.

Olena also represents Ukraine in the international arena and is one of the leading voices against Russian aggression. She holds prominent positions in the working bodies of several international organisations, including the Council of Europe, and focuses on issues including the Euro-integration of Ukraine and female empowerment.

Kyiv Consulting: Question #1

What can the Ukrainian government do to motivate the Ukrainian refugees to come back to Ukraine? What is the reasonable time horizon, in your opinion, for Ukraine to get back to the pre-war level of population?

Olena Sotnyk: I know from my own experience that even under all the conditions of insecurity I am really happy only at home, I feel better here than anywhere else. I have been convinced hundreds of times that Ukraine is a country of unique opportunities. I am sure that the return of our people and the reunification of families is not a unilateral matter for the government / authorities. This is a two-way street: the authorities have to create such conditions that people feel the basic security for their families, especially children, but, just as importantly, that Ukrainians will see a clear perspective. 'Perhaps now we are not as comfortable as in the European Union, but we are moving in this direction, and we are creating all the conditions to achieve this, and even more, better'. In their turn, people also need to feel in themselves the responsibility for the unique opportunity to become a part of the history of success, of building and renovating their Ukraine, of realising their dreams, instead just being foreigners and living somewhere else.

Kyiv Consulting: Question #2

In your opinion, what programmes could be implemented on the governmental level for the broad Ukrainian population to ensure that people are better equipped to cope with force majeure situations, including the war, in the future?

Olena Sotnyk: The Ukrainian strategy for success in the future is an alloy of security and development. Many of us have felt the value of independence and the right to choose, and are grateful for what we have had. At the same time, many experienced fear and despair, helplessness at the outbreak of a full-scale war.

After the victory there is a difficult task: to develop under conditions of limited resources and with a constant threat at the borders. There is no other way out but to prepare the Ukrainians to the appropriate tactical, psychological reaction to the threats. I believe it is necessary for all citizens, regardless of their sex and age, to be trained accordingly. At the same time, we should use this disaster as an opportunity - that's our chance and responsibility to make 'a home fit for heroes'. We can create an inclusive and ambitious commission generating radical ideas for Ukraine's future and build on the sense of unity and common purpose the war has created, and help with the difficult job of extending it into peacetime. And if the processes are transparent and our intentions are clear and consistent, the whole world will join us in this unique project. We will not need to ask anyone - the best architects, engineers, physicians, scientists, medics themselves will want to be part of the civilisational project to honour the victory over evil!

DR MARCIN SWIECICKI

Ukraine Business Ombudsman (2019-2021); Former Deputy Minister of Economy; Former Minister for Foreign Economic Relations; Former Mayor of Warsaw

Biography: Dr Marcin Swiecicki is a Polish politician and economist, the former Minister for Foreign Economic Relations and the Deputy Minister of Economy, and the Mayor of Warsaw.

He served as the Deputy Chair of the Ukrainian Parliamentary Group in Poland's Sejm for the last eight years. He also consulted the Ukrainian government on the decentralisation reform during 2014-2015 and chaired the EU-UNDP 'Blue Ribbon' project in Kyiv during 2007-2011. He also has been a Business Ombudsman in Ukraine in 2019-2021.

Kyiv Consulting: Question #1

According to Ukrainian business surveys, 11% of businesses have relocated abroad. What, in your opinion, should be the Ukrainian state policy to create favorable conditions for these businesses to come back to Ukraine?

Dr Marcin Swiecicki: I do not think that business returning to Ukraine after the war requires too many special conditions. The most important, what is needed already now, is to facilitate border crossing for trucks and trains. I presume that quantity of goods crossing the borders with EU will be growing but conditions on borders are dramatic. Hundreds of vehicles are waiting several days for custom checks, fitosanitary and veterinary control, etc. Corruption is booming. Any company that has trade ties with EU partners will stay abroad, if it can, rather than return behind the border again. Ukraine, Poland and other EU countries bordering with Ukraine should agree on standards for border crossing, e.g. no more than 3 hours and do everything to achieve and keep such standards.

Kyiv Consulting: Question #2

On February 28, 2022, President Vladimir Zelenskiy signed Ukraine's application for EU membership and as early as June 23, the Council of Europe gave Ukraine the status of the candidate for membership. In your opinion, what prospects and opportunities for Ukrainian business can the country's membership in the EU bring?

Dr Marcin Swiecicki: EU will open negotiations on accession after Ukraine fulfills several preliminary conditions. They deal with fair competitive nominations to the Constitutional Court, NABU, and special prosecutor office, and with laws on media and national minorities, and reform of self-governing judicial bodies and anti-oligarch reform. Ukraine declares that can fulfill these conditions by the end of 2022 so that negotiations on accession could be opened in 2023.

In the past enlargements such negotiations took usually not less than 4 years. Then 1-2 years for ratifications by all member states is needed. Ukraine is in privilege conditions since it has been implementing Deep and Comprehensive Free Trade Agreement with the EU since 2014. DC FTA is based on Acquis Communautaire almost like membership requirements.

We don't know how and when Russian aggression on Ukraine will end up. Nevertheless, even if there is no formal peace established and some Ukrainian territories will remain under Russian occupation, accession to EU should be made possible. Ability to implement EU laws on territories effectively controlled by Kyiv government should suffice to allow Ukraine's accession. There are precedencies. Cyprus entered EU despite lack of settlement of its territorial integrity.

In optimistic scenario Ukraine can become member of the EU in 5 years.

DR MARCIN SWIECICKI

Ukraine Business Ombudsman (2019-2021); Former Deputy Minister of Economy; Former Minister for Foreign Economic Relations; Former Mayor of Warsaw

In the EU in several areas unanimity is required; in other words, each member state has a veto right. Perspective of having new members before EU reform reduces areas of required unanimity (such reform seems extremely difficult) is used as reason for postponing any new enlargement. To remove such obstacle Ukraine could resign from veto for some transitional period. It is very unlikely that any decision that threatens Ukrainian interest can be unanimously taken by the present EU member states.

Membership in EU will open great market opportunities for Ukrainian entrepreneurs, for agriculture, any industrial production, services. Border problems will disappear. Ukrainian products will become EU products. Deep intra-industrial cooperation and specialisation will be made possible. Ukrainian companies will become attractive partners not only for all EU companies but also for off- EU companies that would like to be present within EU.

DR NADIIA VASYLIEVA

Co-founder of Digital Transformation Consulting; CEO of Digital Transformation Institute of Ukraine

Biography: Dr Nadiia Vasylieva is a CEO of Digital Transformation Institute.

She is an MTI graduate in the programme of digital transformation, as well as Kellog and IMD programmes of The effectiveness of supervisory boards.

Nadiia is a candidate of economic sciences and has a master's degree in international law, completed a postgraduate course in marketing at the British CIM, and obtained an EMBA.

She is a member of the commercial and state Supervisory Boards of Ukrainian and foreign companies, in particular a member of the Supervisory Board of Prozorro.Sales, where she heads the Strategic Committee.

Dr Nadiia Vasylieva was the General Director at Microsoft Ukraine, Amway Ukraine, and held management positions in Ukroboronprom and Kyivstar.

Kyiv Consulting: Question #1

During the Ukraine Recovery Conference in Lugano Ukraine presented a draft Recovery and Development Plan. By 2025, IT services are expected to reach a 10% share of Ukrainian GDP. How would You evaluate such a forecast in terms of the goal formulation and its timeframe?

Dr Nadiia Vasylieva: One needs to have a proper understanding of what the 'IT' definition implies. The sector does not exist in isolation: it contributes to the development of other sectors of the economy. To this end, it is important to count not only the value of services provided merely within the IT sector but also to think about how to calculate the economic effect of the IT services launched by enterprises of industrial sectors, banks, etc. This economic effect is disregarded, which is wrong since it creates process optimisation, reduces the cost of production due to productivity growth, and, is generally a very powerful tool for the growth of the country's entire economy, and not just of a separate sector. So, I think that this figure (10% of the GDP) should be much higher due to the war and the inability to fully revive the country's economy and raise the existing industries and enterprises to the pre-war level. There will definitely be more digitalisation, mobile-virtual business models, and an increase in the share of the digital economy not only due to the IT sector but also through the development of telecommunications services, robotisation, innovative developments, and other high-tech industries, including defence, which currently do not work without IT.

Kyiv Consulting: Question #2

Key Ukrainian IT companies had to set up temporary hubs and representative offices abroad to minimise risks and maintain seamless execution of contracts. Foreign legislative peculiarities suggest that companies hire employees on the basis of labour contracts with local offices or by registering private entrepreneurship. In Your opinion, will it lead to the outflow of Ukrainian specialists abroad in the future and fewer hires in Ukraine? Do companies have strategies for returning employees to Ukraine?

Dr Nadiia Vasylieva: Such companies are already highly dependent on the following 3 factors:

- Tax burden on labour
- Quality and availability of the system of engineering education
- Safety for employees: both physical safety and assurance of not being drafted during the most intence period of product creation or contract completion

These three factors must be considered by the government in the first place when elaborating on the investment attractiveness initiatives. I'm convinced, that the majority of people intend to come back to Ukraine, but the proper consideration of the three abovementioned factors would substantially better encourage Ukrainian citizens to come back home. We have to remember that the outflow of professors of engineering specialities will create big problems. The problem of professor outflow existed even before the beginning of a full-scale invasion. During the war, we have a great opportunity to strengthen the engineering areas of education by creating military orders of super-innovative things that are always attractive.

DR NADIIA VASYLIEVA

Co-founder of Digital Transformation Consulting; CEO of Digital Transformation Institute of Ukraine

Kyiv Consulting: Question #3

One of today's initiatives is the development of technologies in Military Industrial Parks and the launch of the Tech & Defence Accelerator to solve the problem of territories' demining. How do You see IT companies' collaboration with the Ukrainian Ministry of Defence? Can such joint efforts lead to the development of both software and hardware components?

Dr Nadiia Vasylieva: Firstly, I believe that the prospects of cooperation of the Ministry of Defence of Ukraine with the leading technology and IT companies certainly exist. However this cooperation might only be possible if the Ministry of Defence and the government would work in an honest and open public-private partnership format: fulfill agreements, provide access to information, allow to use their polygons at reasonable prices. The government and its authorities must be able not only to sign and execute Memorandums of Understanding, but also to fulfill valid agreements, be able to negotiate on government's behalf, trust in partners, and provide for equal mutual responsibility in contracts – these are mandatory conditions for successful cooperation. Once impossible to help with information – help with money, impossible to help with money – help with people, or agreements with other partners, or grant protection and immunity for certain taxes, fees, the share of income, etc. Being able to work in a free market means negotiating a win-win scenario for both parties.

Secondly, it is important to be ready to work with non-standard business processes in a more flexible and innovative manner, not to impose own vision of doing business on the partner, i.e. setting requirements for the cost of the product or the ways of its creation. The only thing required from the state is a clearly formulated order, for which it commits to pay.

KHRYSTYNA VLASOVA

Mother of two boys, decorator, and interior designer

Biography: Khrystyna Vlasova is a decorator, interior designer, and a mother of two boys.

Together with her husband, an architect and artist Nikita Vlasov, in 2015 she founded their design studio 'Faino Décor'. The studio's works are known in Ukraine and abroad, thanks to international publications in various prestigious magazines, including Elle Decoration and AD USA.

Khrystyna has a Master's degree in Cultural Studies from the National University of Kyiv-Mohyla Academy.

Kyiv Consulting: Question #1

Today all Ukrainians are going through a difficult period, which reflects on their psychological state. Do you observe such changes in your children?

Khrystyna Vlasova: Unfortunately, our children have been living against the backdrop of war since their birthdates. Our older son Yan was born in 2014 when the war started, and our younger son Ustym- in 2017, when fierce battles already raged in the East.

When the full-scale invasion began, our boys were 5 and 7 years old: they were no longer too young to be fully involved, worry, and mirror the mental state of their parents, but at the same time not mature enough to reflect on events that surrounded them. They cannot realise the war to the extent an adult can. Nor do they have the experience of a loss and the understanding of death. I believe that we were lucky — they have not seen death with their eyes and they do not follow the news yet. Sounds of sirens and explosions are the only things they have experienced empirically. When I was scared, they rather felt curious. Since this was the time to run to the corridor and follow the rule of 'two walls'. It was a place where children could do anything — play with gadgets with no limits (usually, we strictly limit this time), have fun, or suddenly have a tea party on blankets with something delicious — there was always a backpack with hot tea in a thermos, nutritious quick snacks ready at the exit (and documents in case of an emergency). Besides, we slept in our small hallway over the course of the first 40 nights. Explosions were thundering all around, but we had our own cosy lair with blankets, pillows, books for the night – of course, with a flashlight, as we adhered to the light-masking regime. One day, after a rocket landed relatively close to us (we live in Kyiv, Lukyanivka district), our youngest said, 'Mom, do you remember how much afraid I was of fireworks? I am not afraid of them anymore.' I never wanted my child to say goodbye to phobias in such a perverse way. It is very painful.

Overall, almost every day I was thinking about Benigni's film 'Life Is Beautiful', which I watched back in the late 1990s. Could I imagine then that the film about the stay of a Jewish father with his young son in a Nazi concentration camp would become my guideline? Literally, my instruction for survival? So that all of us would remain sane if survived. I could see that my children had no fear, and this allowed me not to leave everything, not to run, but to stay in the city, next to my husband. It was important for me to be near him, to be in my place, on my land, in the best city in the world — in my mystical and extremely powerful Kyiv. Together with my husband, we chose the only way to save ourselves — to be here and help others. Relatives constantly demanded that we take at least the children to them, but I know for sure that the best thing for my children is to be near us under any circumstances. Despite the surrounding tension, almost nothing changed for them in their everyday life — they were in their usual environment, at home, with their toys, games, etc. They missed only their friends because in the first month they did not see other children at all as everyone in our yard and our close family friends had fled. Instead, there were old ladies in the neighbourhood and visits to people they never met before. Before the war children had never visited others so frequently. It was fun for them and, at the same time, they felt their involvement as they were doing something like adults, they were helping. They are still involved in our volunteer activities, handing over their drawings of tanks and powerful weapons to the soldiers at the front.

Sometimes it seems to me that I preserved and saved them in this twisted way, without driving them out of the country, without uprooting them from their space, from their vision of the world, life, and culture. Intuitively, I felt that nothing bad would happen to my family and that we would stay alive. I hope that we managed to save the children psychologically as well.

Did the war affect them? I think they grew up way too fast.

DR BOHDAN VYKHOR

CEO, WWF Ukraine

Biography: Dr Bohdan Vykhor is a Candidate in Biological Sciences, specialisation Ecology. He gained experience in the industry working as a Deputy Technical Director for Environmental Protection at Lviv Coal Company (2014-2017), as well as in Lviv state department of environmental protection of the Ministry of Ecology and Natural Resources (2010-2013), taking care of rare species, eco-network, protected areas, hunting, land legislation, and subsoil exploitation.

In 2008, Bogdan joined WWF as a volunteer for a floodplain ecosystem research project. For several years, he was invited as an external expert to create a database of Ramsar sites. Later on, he joined the forest department of WWF-Ukraine, and since 2019 he has headed one of the departments — wildlife. Since 2021, he has held the position of CEO of WWF-Ukraine.

Bohdan's multifaceted professional experience and expertise are particularly important in strengthening WWF-Ukraine's influence in shaping the national agenda for the conservation of natural systems and adaptation to climate change through the development of nature and human well-being solutions.

Kyiv Consulting: Question #1

How do you see the recovery of Ukraine to ensure that the country becomes environmentally friendly and climate neutral in the future?

Dr Bohdan Vykhor: As we know, at the state level, the National Council for the Recovery of Ukraine from the Consequences of the War has already been established. It develops programmes in various fields — infrastructure, energy, economy, agriculture, and regional development. This is a large area of work, within which many projects are planned in the context of future recovery.

The focus of post-war reconstruction efforts should not be simply put on the reconstruction of what has been destroyed, but rather on investments for the future, involving all spectrums of the society in a transparent and accountable manner.

Ukrainian post-war reconstruction efforts must enable and promote building back better and, through this, support Ukraine's fulfilment of its international commitments and harmonisation with EU regulations (acquis communautaire), including the EU's Green Deal requirements and further best available policy implementations.

Reconstruction is an opportunity for changing the development pathways of Ukraine's key sectors, including housing, transport, energy, sanitation infrastructure, education and social services, agriculture, key industries, as well as nature conservation and restoration. This is a unique chance to build nature and climate-positive future, where nature is thriving for the benefit, health and well-being of all Ukrainians.

The investment must take into account evolving challenges, including climate change, as well as growing challenges related to water and food security, as well as loss of biodiversity and ecosystem services. For example, the reconstruction of urban areas should take into account climate adaptation, energy efficiency and renewables. Nature-based solutions (NBS) should be considered for agricultural lands, water and forest management. Ukraine's rich natural resources are not inexhaustible and cannot be considered a source of rapid recovery and quick economic benefits after the war. Instead, investments should be made to create a system of wise use and successful management, to ensure sustainable development of all sectors.

After the end of the war, restoration of the territories and institutions that were affected by hostilities will be very important. It is necessary to restore the integral structure of objects and rebuild administrative buildings where possible. Analysis of the biodiversity of nature conservation objects must be made only after demining of the respective territories as been completed and a safe stay there has been secured. For areas that cannot be restored due to complete destruction, it is necessary to change their use status and ensure protection from human access; establish effective management of protected areas and centralised subordination with support from the Ministry of Environmental Protection and Natural Resources of Ukraine, and other stakeholders.

DR BOHDAN VYKHOR

CEO, WWF Ukraine

Kyiv Consulting: Question #2

Are there any actions that the Ukrainian society (government, NGOs, people, businesses) has already undertaken or should undertake to reduce the impact of war on Ukraine's biodiversity?

Dr Bohdan Vykhor: The undivided heritage of the Ukrainian people is our land, and something which makes it so loved by us is Ukraine's nature. What makes our nature unique is the composition of the environmental conditions and the combination of live creatures, spanning from bacteria to mammals living there. Any of us depends on food, fresh water and clean air, produced by ecosystems and processes taking place across them, which creates environmental security factors crucial for our survival. The focus of post-war reconstruction efforts should not be placed simply on preservation of the existing natural treasures, but also on restoration of parts of nature affected by war. **Reconstruction is an opportunity to make environmental security a mainstream idea for all Ukrainians and their future generations, as well as to change development ways for Ukraine's key sectors. To be successful in this, we need to safeguard the system which gives us everything we need for life. Part of the solution is the Biodiversity strategy.**

The Ministry of Environment and Natural Resources of Ukraine, other authorities, WWF-Ukraine, scientists, and other civil society organisations participated in the process of creating the draft of the Biodiversity Strategy for Ukraine till 2030 based on 'EU Biodiversity Strategy for 2030: Bringing nature back into our lives'. Unfortunately, due to the war, work on the Biodiversity strategy has been frozen. The purpose of the Strategy is to ensure monitoring of the state of biodiversity in Ukraine as a basis for balanced management decisions; implement the concept of ecosystem services; form a comprehensive approach to species conservation, and fulfil international obligations regarding biodiversity conservation. The strategy will become the basis for all decisions in the field of nature conservation and will correspond to the Convention on the Protection of Biological Diversity, the European Green Deal, and other MEAs. In the long-term perspective, the Biodiversity strategy will provide an algorithm for creating environmental security for all Ukrainians.

Another crucial issue which should be part of the Biodiversity strategy is legislation enabling the conservation of unique pieces of Ukraine - the Emerald Network law. This is the habitat approach of biodiversity conservation, and the provisions of the Bern Convention claimed to conserve natural ecosystems and their connectivity. Therefore, implementation of the Emerald Network law in Ukraine will become a solid foundation for the conservation of biodiversity according to EU principles and, at the end of the day, inclusion of the national protected areas network into the EU nature conservation system.

Ukraine must develop a national Biodiversity strategy and implement it to achieve the protection of 30% of Ukrainian territory through the implementation of the Emerald network law on our way to approximation to the EU environmental regulations. Such an approach will engage the public in management planning and allocate funding to proper natural resource management and restoration, for the benefit of local communities and every Ukrainian.

Kyiv Consulting: Question #3

How would you evaluate the impact of war on the biodiversity of Ukraine and its current state, compared to its pre-war condition?

Dr Bohdan Vykhor: The war in Ukraine is still raging, changing the world beyond comprehension. It has not only caused immense human suffering and extensive socio-economic damages, but has also made a devastating impact on the natural environment and biodiversity, in particular. A quarter of Ukraine's protected areas have been affected by the war. Military attacks on oil depots, industrial plants or ships, as well as ammunition scattered across vast areas of land, pollute the air, soil and water, making them toxic not only for animals and plants, but also to people, threatening the environmental security of all Ukrainians. About 200 territories of the Emerald Network - home to rare animals and plants — with an area of 2.9 million hectares are under threat of extinction due to the harm caused by military actions, pollution, physical habitat destruction or lack of protection.

Protected areas and Emerald Network play an important role in safeguarding biodiversity and stabilising the climate. **The habitats of** many rare and endemic species are situated within the zones of active hostilities, which threatens their existence. For example, virgin unplowed steppes, chalk slopes in Donetsk region, coastal habitats in the southern regions, swamps in the north, marine ecosystems of the Black and Azov seas. As a result, thousands of wild animals (fishes, amphibians, reptiles, birds and mammals) died due to a direct or indirect impact of the war, and millions of animals fled from their habitats, just like people who escaped from war to seek shelter in peaceful parts of the world.

DR BOHDAN VYKHOR

CEO, WWF Ukraine

As of June 2022, more than 240 crimes against the environment have been recorded since the beginning of the large-scale invasion, which consequences may have to be overcome for decades. Military activities in the south and east of Ukraine have affected the wetland ecosystem and important bird migration areas. Due to the disturbance factor, many birds fled away from their home habitats to safer places to produce their offspring. If such disturbance continues, it may affect bird migration pathways and the survival of crucially endangered birds, nested in unique environmental conditions of southeast ecosystems of Ukraine. Crimes against the environment may be less visible immediately, but in the long run, their consequences are going to be rather sad. Such a catastrophic situation affects not only Ukraine, or even Europe, but the whole world. We are approaching a climate catastrophe due to massive carbon emissions, fires, etc. caused by military actions. Western Europe is suffering from devastating droughts, but it is just the beginning. So, this is obviously not only our war.

The war has almost eliminated the environmental agenda of the country. Environmental security is under threat of being neglected in favour of fast economic growth, which is understandable, as the country and people are trying to survive. But we need to find compromises since, without nature, without a healthy environment we live in, we have no future. The Ukrainian Parliament has postponed seven critical decisions on the environmental legislation; there is a risk of a merger of antagonist Ministry of Environment and the Ministry of Energy, as well that of a merger of the Ministry of Agriculture and the Ministry of Economy, which may threaten Ukraine's security, which stays on three basic pillars: military security, economic security, as well as health and environmental security.

DR VALENTIN YAKUSHIK

Chairman of the Supervisory Board of Ukrainian Institute of Politics, Ukraine

Biography: Dr Valentin Yakushik is an intellectual and political scientist in Ukraine. From September 2020 till March 2022 he was a Professor at the Department of International Relations and Social Sciences at the National University of Life and Environmental Sciences of Ukraine.

During 1993-2020, he was a professor of Political Science at the National University of Kyiv-Mohyla Academy, Doctor in Political Sciences.

His research interests include interdisciplinary studies in the fields of the general theory of the state in transition, comparative political and legal systems, national reconciliation, and peace-building.

Valentin Yakushik has published over 200 articles and several books, including: 'An introduction to political science' (2012); 'Problems of theory of the revolutionary and democratic state; (1991); 'The state of a transitional type: Problems of theory' (1991); 'Social reformism in the contemporary world: Ideology and politics[(1990); and many others in co-authorship.

Kyiv Consulting: Question #1

What should be the role of the international development and reconstruction organisations in rebuilding Ukraine's economy? What approaches Ukraine should adopt to be a smart and effective use of international financial aid?

Dr Valentin Yakushik:

1) To let Ukraine have a chance for its own 'autonomous' (relatively 'self-reliant') development, avoiding the role of a just dependent peripheral element of the networks of transnational corporations. Using the examples of the post-WWII Japan, Taiwan and West Germany, guarantee that the land and main infrastructures would be owned primarily by the nation, local communities and Ukrainian legal entities and citizens.

2) To establish an efficient national banking system with accessible and transparent crediting of businesses and households, and a socially acceptable modern system of tax collection, creating a multi-functional agro-land bank, writing off Ukraine's national foreign debt.

3)Decentralisation and deconcentration of international investment projects, creation of international mechanisms for stopping the widely-spread post-soviet practices of 'splitting' budgetary money by corrupt administrative elites.

4) Within the system of balance of powers, establishing a branch of 'examination authority' controlling the quality of civil servants and top political appointees. Implementing strict universal anti-corruption measures in various spheres, including in education and science, and in particular, detailed checking of the quality of dissertations and the correspondence of each person to the already awarded academic degrees (that area has been especially vulnerable to plagiarism, falsification and banalisation).

5) Special mass support for small and medium businesses (e.g. using the models of Britain and Taiwan); promoting implementation into economy of the national technical though achievements.

6) Organising programmes of a mass employment of the demobilised Ukrainian soldiers and military officers at various international peace-keeping task forces, at international and foreign national military institutions and democratically controlled private military and security companies.

DR VALENTIN YAKUSHIK

Chairman of the Supervisory Board of Ukrainian Institute of Politics, Ukraine

Kyiv Consulting: Question #2

In your opinion, what are the Top-3 decisions to be made by the Ukrainian government once the martial law is lifted?

Dr Valentin Yakushik:

1) A set of measures aimed at 'social equality and justice' vis-à-vis citizens, local communities and regions, with initial strict rationing of consumer goods and investments into reconstruction, and balanced fair distribution of all types of international aid, guaranteeing 'basic income' and chances for survival and self-development of persons, families, local communities and productive units, supporting grass-root initiatives, small and medium businesses.

2) Tough measures against criminal gangs; purges of corrupt, incompetent and irresponsible administrators; institution-building of grass-root, professional and international controls.

3) Decree on gradual transition to policies of fostering political and cultural pluralism in social life, including in mass media, political movements and organisations.

YELYZAVETA YASKO

Member of Parliament of Ukraine; Member of Foreign Affairs Committee; Member of the Ukrainian Delegation at PACE

Biography: Yelyzaveta Yasko is a Ukrainian politician, member of the Ukrainian Parliament, expert in cultural affairs and a film producer. The first Ukrainian who obtained a Master's Degree in Public Policy from Blavatnik School of Government, University of Oxford. In 2016-2017, she was the president of the Oxford University Ukrainian Society.

Yelyzaveta is a member of Parliament's Committee on Foreign Policy and Inter-Parliamentary Cooperation, and a member of the Ukrainian delegation to the Parliamentary Assembly of the Council of Europe (PACE). She is a member of the Swiss Caux Initiative of Change. Yelyzaveta is a producer of the documentary film 'Crimea: Russia's Dark Secret' and a founder of the 'Yellow Blue Strategy' initiative. Yelyzaveta Yasko is also a lecturer at the Ukrainian Catholic University (UCU).

Kyiv Consulting: Question #1

What do you think the government should do right after the war to stimulate return of foreign businesses?

Yelyzaveta Yasko: Show transparency and no corruption.

Kyiv Consulting: Question #2

Apart from economic policy, what kind of bold reputational steps could be taken to inspire foreign investor confidence?

Yelyzaveta Yasko: Continue showing the spirit of the Ukrainian nation. Resist any attempts to put us in a cage of slavery. We love freedom and will defend it as much as it takes.

Kyiv Consulting: Question #3

In your opinion, what international partnerships of post-war Ukraine could present a big potential and are yet to be developed? What existing partnerships can be taken to a new level?

Yelyzaveta Yasko: Ukraine's material losses are approaching 1 Tn USD. If the war turns into another World War II, the losses will be catastrophically higher.

People who in so many creative ways, including those via international cooperation, contribute to the victory of Ukraine will write their names in history. The world will remember them not only as humanitarians and philanthropists but also as those who made a successful investment — in freedom and democracy.

Post-war Ukraine is not only about a powerful army. It is also about large-scale recovery and construction opportunities, multi-industry development, a large agro-industrial complex and an enormous market.

Existing partnerships should become more available for Ukraine's local communities. Strengthening accountability through the development of an institutional framework, which enables collaboration for changing the systems, is also important.

YELYZAVETA YASKO

Member of Parliament of Ukraine; Member of Foreign Affairs Committee; Member of the Ukrainian Delegation at PACE

Kyiv Consulting: Question #4

How to ensure that the support of international lenders and donors continues for as long as it is needed for Ukraine to defend its sovereignty and step on the steady development path?

Yelyzaveta Yasko: Effective work of government and Parliament institutions will make sure that international support does not shrink. The civil society of Ukraine will not also allow this support to be discontinued.

ANDRII ZHUPANYN

Member of Parliament of Ukraine

Biography: Andrii Zhupanyn is a Ukrainian lawyer and politician. He is a member of the Parliament's Committee on Energy, Housing and Communal Services, Chairman of the Subcommittee on Gas, Gas Transportation Industry and Gas Supply Policy, as well as a Co-chairman of the group on inter-parliamentary relations with the UK and the Netherlands.

During 2012-2019, he worked as a legal counsel at Sayenko Kharenko law firm and the Ukrainian office of DLA Piper, an international law firm. In 2018, he was elected a member of the committee on corporate law and the stock market of the Association of Lawyers of Ukraine.

Andrii was a founder and head of 'First Ukrainian Services' LLC and 'Ocean UE' LLC.

Kyiv Consulting: Question #1

In your opinion, what is the future of the natural gas industry, and the energy sector in general, in Ukraine? What changes in the energy sector will be accelerated by the war?

Andrii Zhupanyn: Ukraine's potential to increase its domestic natural gas production is more than enough. It can achieve energy independence and start exporting to EU countries. We have already exported gas to Europe, as in the mid-1970s Ukraine produced 68 bcm, and will definitely be able to do it in future.

The regions in the east and west of the country, as well as the Black Sea shelf, are promising for development. More than 700 bcm of natural gas are available for production, and trillions of cubic meters are potential resources. The State Geological Survey of Ukraine emphasises that the Black Sea shelf has nearly 2.3 bcm tonnes of conventional fuel, which is equivalent to 2.3 trillion cm and makes up about 40% of all energy reserves of our country.

Of course, it is impossible to realise the available resource potential in the conditions of active hostilities and the territories being captured, but soon after the victory, this should transform into a critical goal. We understand, and the war outlined it even more, that Ukraine can no longer depend on gas imports. This is a question of national security, not only of energy.

This is exactly what our European partners consider to be clear. Russia's war against Ukraine accelerates Europe's rejection from the russian bloody energy resources, as, before the full-scale invasion, Europe was 40% dependent on russian gas and 65% on Russia's oil and petroleum products. In the nearest future, the introduction of the oil embargo will lead to a ban on 90% of the oil imports from the occupier country.

As for natural gas, the European Union has already ensured an overall reduction in the share of russian gas imports from 40% at the beginning of the year to approximately 20% as of early August. In the coming years, Europe wants to abandon russian gas by diversifying supplies, increasing its own production, expanding production of energy from renewable sources, as well as through implementing energy efficiency measures.

ANDRII ZHUPANYN

Member of Parliament of Ukraine

Kyiv Consulting: Question #2

In post-war Ukraine, how will the landscape of the heavy industries change, given the changes in the energy sector?

Andrii Zhupanyn: Since the beginning of the war, many large industrial consumers have been damaged or destroyed. Given the extent of damage, having been caused to some of them, we should not expect any quick recovery of demand for natural gas from the heavy industry. On the back of the war, natural gas consumption decreased there by approximately 50%. A reduction in demand is also observed in production of electricity, as metallurgical plants accounted for the largest share of the pre-war consumption volumes. That being said, Azovstal, Ukraine's second largest metallurgical plant, was destroyed, while other facilities have greatly reduced their production capacities. In metallurgy, the war caused a 75% drop in output, compared to its pre-war volumes.

The closure of seaports, through which almost all metals had been previously exported, has contributed to the decrease in production.

Heavy industry is forecasted to revive mainly in the west of Ukraine. This, however, is a very long-lasting process. Considering the high cost of energy, new facilities will, first of all, focus on improvement of their energy efficiency and reduction of waste. Such approach will allow Ukrainian products to be sold freely and compete in the European market.

Kyiv Consulting: Question #3

How will implementation of the EU Green Deal in post-war Ukraine impact the development path of the Ukrainian energy sector?

Andrii Zhupanyn: In the perspective of the next 15-20 years, natural gas will be the key fuel on the way to the green transition. Its consumption will grow in developed countries. So, for Ukraine, this will be a significant incentive to develop its natural gas production and to increase output.

Natural gas is important for Europe and will be used for many years to come, which is evidenced by its inclusion in the EU taxonomy. This means that investments of both private companies and financial institutions will be directed to natural gas projects.

Ukraine itself is attractive for investment. After our victory, the country will not be threatened by its cruel neighbour, which in fact was one of the major obstacles for international investors to come in. We will be able to implement a number of investment projects, including greenfields on the Black Sea shelf, conclude and sign PSA tenders, where one of the winning companies has already launched production, continue granting licenses via transparent e-auctions, etc. Thereby, Ukraine will consolidate its position as a reliable supplier of natural gas and will start exporting natural gas. Hence, if all projects are implemented, we will be able to export almost 5 bcm of natural gas within six years only, while internal consumption will not exceed 20 bcm . Within 10 years, production may increase to 32 bcm.

Kyiv Consulting: Question #4

What changes in legislation are required for natural gas to facilitate successful integration of post-war Ukraine with the EU?

Andrii Zhupanyn: Ukraine is a desirable partner for Europe in three sectoral directions, at least. Specifically:

- A significant increase in natural gas production may allow Ukraine to become an exporter of this resource to the EU.
- Ukrainian UGSs are the largest in Europe and are always available to foreign companies.
- The gas transmission system of Ukraine is one of the largest in the world and has potential for modernisation, hydrogen transportation, etc.

ANDRII ZHUPANYN

Member of Parliament of Ukraine

The relevant changes in the legislation include those directed at simplification of doing business, as well as stimulation of investments and facilitation of contributions to the development of the sector. We have already prepared several documents, which include:

- Draft law #4187 which received support from the members of Parliament, and was adopted in the first reading. It envisages the launch of a license circulation market, as well as major changes aimed at deregulation.
- Draft law #4344 which eliminates legislative gaps, partially deregulates the industry Increases the minimum period of submission of applications, ensures transparency of the work of the Inter-departmental Commission, and provides for a clear mechanism for selection of tender winners,
- Technical regulation of natural gas, which unifies Ukrainian gas legislation with European.

In general, after the victory, Ukraine's gas industry will need large-scale investments, which attraction is quite real, especially due to the rapid movement to Europe and the obtainment of the status of a candidate for membership in the European Union. Therefore, economic rapprochement and unimpeded movement of capital should become one of the elements of Ukraine's integration into the European gas market.

Before that, it is however critical for Ukraine to resolve the issue of the tax base inconsistency since the price of the gas on the domestic market is significantly lower than that in the European hubs. This, in turn, does not encourage companies to reinvest funds to cover their costs, because an amount of taxes will be higher than profit received from gas sales.

Kyiv Consulting: Question #5

What amendments to legislation can be made to attract more foreign investors to reconstruction of damaged natural gas infrastructure?

Andrii Zhupanyn: Investment envisages the return of funds in the form of profit. Owing to the reforms in the industry, Ukraine has already made a number of steps towards creation of a market and clear conditions, but there is still much to do. Currently, the state's goal is to achieve energy independence – in particular, via the synergy of the investor and the state, at which the rules of the game will remain unchanged for a long time.

OLEKSII ZIBOROV

Community Policing and Communication Expert; Police Operations and Training Advisor Community Policing and Communication

Biography: From January 2021, Oleksii Ziborov holds the position of Police Operations and Training Advisor at the Canada-Ukraine Police Development Project.

Mr Ziborov contributes to the development and implementation of semi-annual work plans for the Community Policing component, In-Service Training component, Combatting Domestic Violence Initiatives, Juvenile Police Reload Process, and Combatting Human Trafficking Initiatives.

Oleksii provides advice to regional partners and cooperates with international partners, governmental bodies, and non-governmental organisations.

Also, Oleksii provides advisory and technical support to the CUPDP team and a number of Canadian short-term technical advisors and trainers. He has extensive experience of working in the Patrol Police Department of the National Police of Ukraine.

Kyiv Consulting: Question #1

Since the beginning of the Russian invasion, the allied states have significantly increased the amount of military aid to Ukraine. In your opinion, how important was the contribution of the allies to the success of the Ukrainian army on the battlefield? In your opinion, what kinds of weapons from our partners are required to ensure an efficient process of de-occupation and restoration of the territorial integrity of Ukraine?

Oleksii Ziborov: It is worth mentioning, that even before 24 February 2022 the USA and the UK provided Ukraine with Javelins and NLAWs (as far as I know), which proved their efficiency as anti-tank weapons during the first weeks of the full-scale invasion. Today we can see results, according to the information from the media and different social networks, how 155mm, as well as 105mm, long-range artillery is working on the frontline. M142 HIMARS and M270 MLRS with high precision rockets fueled by the skills of the Ukrainian soldiers have saved many lives of both the defenders and civilians.

Ukraine is fighting against the enemy that took a long time to get itself prepared for the war. Russia spread propaganda inside their country as well as all over the world. The enemy developed and built new weaponry. To resist and restore territorial integrity, Ukraine needs to level that gap by spreading information about russian military crimes and their new weaponry.

While on the media field we have already gained this victory, on the battlefield we still need new weapon systems. Artillery with enough amount of ammunition and counter-artillery systems will give our army an advantage to support infantry on hotspots of the frontline. High-precision rocket systems are necessary to destroy enemies' ammunition warehouses. Ukraine is still using old planes and helicopters that significantly reduce its air support capability. The same can be said about military UAVs (intelligence, surveillance and strikes). Tanks and LAVs will be used to regain control over the occupied territories. Last but not least Ukraine needs long-range antiair systems to protect its cities from enemy missiles.

OLEKSII ZIBOROV

Community Policing and Communication Expert; Police Operations and Training Advisor Community Policing and Communication

Kyiv Consulting: Question #2

Since the beginning of Russia's war against Ukraine, the saying 'Ukraine is the shield of Europe' has gained higher relevance. How can you comment on it? In your opinion, what will be the role of Ukraine in developing the future upgraded global/regional security system?

Oleksii Ziborov: Now we all have seen the way russia is dealing with its neighbours. Stupid imperial ambitions and 'the right of force' led russians to where they are now. Ukraine is not the only country that suffered from bordering russia, however, we managed to stop them. I am not sure if any of the NATO counties could be attacked openly without any military consequences, the way the russians did it in Ukraine. But russians are also skilled in a hybrid war, so attacking NATO member-states can be just a matter of time.

Because of the war in Ukraine, russia has lost a huge part of its military potential and its image as the 'second army in the world'. In fact, russians have broken their spears against the 'shield of Europe'.

Ukraine definitely should be a part of NATO or a new security system that will be efficient and ready to respond to modern challenges. In future, experience and specialists from Ukraine will be the resources that will be in high demand.

Kyiv Consulting: Question #3

In your opinion, how Ukraine should develop its army and increase its defence capability after the victory in the war? What will be the key priority(-ies) for the development of Ukraine's security and defence sector for the next 5-10 years?

Oleksii Ziborov: We need to change a lot in the bureaucratic procedure by reducing it and preserving the experience and knowledge obtained during this war. The most crucial decision that needs to be done – we need to switch to NATO standards completely or become a part of it (or another security system that will be instead). After this war, we need to build a strong defence system with everything that we lack now. We need to keep monitoring and considering new threats. And, of course, we need to be ready to protect ourselves and the entire civilised world.

SOURCE OF INFORMATION

RESEARCH METHODOLOGY | INVESTOR'S TOOLKIT | LEADING CHANGE | REFERENCES| LIST OF ABBREVIATIONS

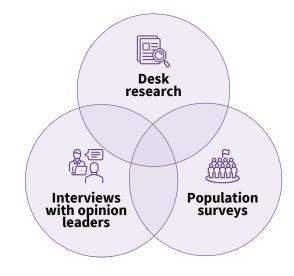
/11

RESEARCH METHODOLOGY

Our study is based on the combination of primary and secondary research that allows us to gather qualitative and quantitative information regarding the historical prerequisites that led to the war, as well as the impact of the war on various areas of life in Ukraine and globally.

We provide the audience with insights, figures, and analytics based on the results of the **desk research**, **interviews with key opinion leaders**, and results of the Ukrainian population survey.

This combination enables us to evaluate the situation from **a 360-degree** perspective and share it with the Ukrainians, as well as the international audience.



Desk research

The approach to this study was based on the desk research of **publicly available data**:

- Information from organisations' websites
- Governmental / non-governmental reports (USAID, World Bank, FAO, UkraineInvest)
- Statistics websites (Statista, State Statistics Service of Ukraine)
- Ukraine Recovery Conference materials

اnterviews with opinion leaders 🖉

In order to strengthen the results of the primary desk research, **we have conducted interviews with opinion leaders** regarding the past and present state of Ukraine, as well as the future recovery plans and opportunities in post-war Ukraine. The interviews were conducted with the use of a structured online questionnaire that included four major open questions on the research topic personalised for each interviewee.

Press releases and other media sources

Desk research implies the use of **different types of analytical techniques**, such as descriptive, exploratory, diagnostic, and predictive analysis.

Please note that some data used for the research may not be perfectly consistent in terms of periods, sources, etc., due to the limited availability of information.

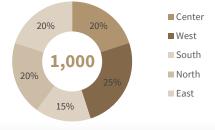
There have been more than 60 interviews with Ukrainian and international opinion leaders, including top business representatives, international politics experts, military experts, and public activists.

Based on the results of the survey, a number of topics were elaborated to deepen the focus of the research. The texts of the interviews are integrated into the content of the study.

🛗 Ukrainian population survey

The online survey of the Ukrainian population regarding the past, present and future of Ukraine **was conducted in July-August 2022 among 1,000 respondents.** It was conducted with adult citizens of Ukraine (aged 18 and older) regardless of their place of residence and took into account the dynamics of internet use among different age groups.

Structure of respondents by region of Ukraine



STATE REPRESENTATIVES DEVELOPED A NUMBER OF ECONOMIC INCENTIVES FOR INVESTORS

During 2019-2021, the Ukrainian government made many efforts to activate investment processes in the country. Ukraine has improved the mechanism for attracting investments through industrial parks¹, introduced state support for projects with significant investments², implemented tax and customs incentives for the e-transport industry, launched the State Program of Affordable Loans at 5-7-9% interest, and created competitive tax incentives for IT and other economic sectors. With international financial aid combined with economic incentives from the Ukrainian government, foreign investors can get many new and lucrative fields for investment activities while not only making money but helping Ukraine.

Selected incentives overview (1/2): state incentives for projects with significant investments

Ukraine provides state support for **Projects requirements** significant investment projects¹ 20+ Mn USD <5 years 80+ investments jobs to be implementation 5-year corporate income land tax exemption / to be made created period tax exemption lower land tax rate **Eligible industries:** Processing industry R&D % Extraction of natural resources Healthcare VAT^{2,3} exemption for the lease of state or communal (except hard coal, lignite, crude Arts and culture import of new equipment land plots without auction petroleum, and natural gas) Sports Waste management Tourism Transportation Hospitality Warehousing Postal and courier exemption³ from import duty amount of state support is Logistics activities on new equipment up to 30% of the CAPEX⁴ Education Selected incentives overview (2/2): tools for the development of industrial parks in Ukraine

Projects requirements

A foreign citizen or a foreign company may initiate the creation of an industrial park in Ukraine if they:

- Own or lease a land plot designated as industrial land with an area of 10 to 1,000 ha
- Hold a share in a Ukrainian company that owns or leases a land plot designated as industrial land with an area of 10 to 1,000 ha
- The company initiating the creation of the industrial park, the management company, and the member of the industrial park may not be founded by citizens of the Russian Federation, companies that are registered in the Russian Federation, companies subject to sanctions, companies in which residents of the Russian Federation own more than 10% of shares or are ultimate beneficiaries

The following incentives are eligible for managing companies of industrial parks



full or partial compensation of interest rates on loans

VAT exemption for imports of new equipment



non-refundable financing for industrial park arranging



favourable land tax rates (upon the decision of a local government)



compensation for connecting to engineering grids

pany that owns or ndustrial land with an

Source: Ukrainelnvest website; The Law of Ukraine 'On Industrial Parks'; Media overview Notes: (1) The Law of Ukraine 'On Amendments to the Law of Ukraine 'On Industrial Parks' and some other legislative acts on attracting investments into the industrial sector of the economy by stimulating the creation of industrial parks; (1) The Law of Ukraine 'On State Support for Investment Projects with Significant Investments in Ukraine' and accompanying legislation; (2) Value added tax; (3) The list and volumes of equipment are approved by the Cabinet of Ministers for each project; (4) Capital expenditure

DIIA.CITY IS A FIRST AND MAJOR STEP IN TURNING UKRAINE INTO A SERVICE-ORIENTED STATE

The virtual economic zone of Diia.City was established subject to the Law of Ukraine 'On Stimulating the Development of the Digital Economy in Ukraine'. It combines effective tax conditions along with other tools that allow companies to build a transparent corporate structure, attract foreign investments more easily, and utilise additional mechanisms to protect intangible assets. 'Diia.City' is a legal regime of e-residence that grants not only tax benefits but also more flexible employment regulations, better intellectual property rights protection, application of best practices of Law of England and Wales in regard to venture capital investments, etc., for a period of not less than 25 years.

If company A employs 10 people with equal salaries — 1,400 USD per month; earned 200,000 USD in one year, including 25,000 USD in profit (including \$20,000 in dividends, then the final contributions to the budget will be the following:

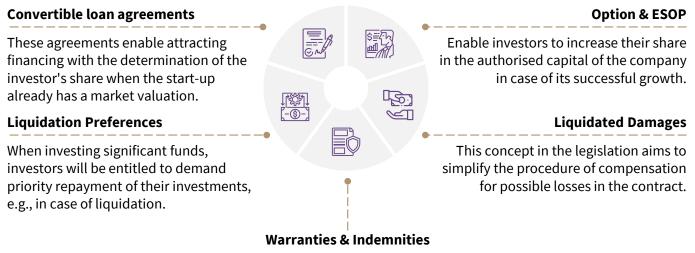
Benchmarking of the Diia.City economic zone against other countries' tax systems (sample calculations), USD

			-	۲		-	
	Diia	City	Ukraine	India	Belarus	Poland	Estonia
Corporate income tax	0%	_	^{18%} 4,500	22% 5,500	1% 250	9.2 2,298	0%
Distributed profit tax	9%	1,800	0%	0%	0%	0%	20%
Personal income tax	5%	8,400	^{18%} 30,240	5% 8,400	13% 21,840	^{32%} 53,760	21.6% 36,288
Social contributions	23.5% ¹	4,729	23.5% ² 39,480	4% 6,720	^{34%} 57,120	27% 45,360	37.4% 62,832
Total		14,929	74,220	20,620	79,210	101,418	103,120

Diia.City tax regime allows businesses to pay **5 times fewer taxes** than the general taxation system in Ukraine and is **competitive on a global scale**. Transition to Diia.City is completely voluntary. Another important advantage of this regime is **better IP rights**

protection and **access to legal elements of English law,** making investment and management mechanisms familiar to foreign venture investors.

Elements of English law legal system



The tool provides the possibility of compensation in favour of the party who relied on false assurances.

UKRAINEINVEST WAS CREATED AS A ROADMAP FOR INVESTORS PLANNING TO INVEST IN UKRAINE

Ukrainelnvest, which is an investment attraction and support office, was created in 2016 as a consultative and advisory body under the Cabinet of Ministers of Ukraine, and in 2018, it was transformed into a full-fledged state institution accountable to the Prime Minister. Ukrainelnvest works with investors, providing them with objective, practical advice, helps in organising meetings with representatives of state bodies or institutions and helps in solving problematic issues. The office also works closely with government agencies to identify, generalise, and resolve systemic problems that negatively affect doing business in Ukraine. As a result, since its establishment, UkraineInvest has managed to attract more than 5 Bn USD of investments from existing and new foreign companies and encouraged such global brands as HEAD, IKEA, GE, Scatec Solar, and many others to enter the Ukrainian market.

Advantages of UkraineInvest for foreign investors



Recommendations

The UkraineInvest team provides qualified support in identifying investment opportunities in Ukraine and solving problematic issues, providing investors with reliable information about doing business in Ukraine



Informing

Each investor usually has a list of criteria that must be met by the region or where the investment project will be implemented. Such information could be provided by UkraineInvest regional representatives



Making connections

To successfully start a business in a new country, investors should establish a network of connections. UkraineInvest undertakes the function of connecting investors and key stakeholders



Industry expertise

The experienced UkraineInvest team has valuable information about the best investment opportunities in high-growth sectors and market niches and can provide reliable advice



Regional support

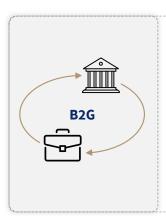
The UkraineInvest team provides support to investors in all regions of Ukraine, helps in finding the necessary objects for investment, and contributes to the establishment of communication with authorities



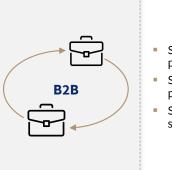
Assistance

Ukrainelnvest is a powerful voice of business because the team communicates directly with the Ukrainian Government, helping investors solve their problems and present their initiatives

Key services of UkraineInvest for foreign investors



- Establishment of effective cooperation with state authorities and local selfgovernment bodies
- Solving problematic business issues
- Support for amendments to legislation to simplify doing business under martial law
- Support in the process of relocation of enterprises and staff evacuation



- Search for reliable business partners
- Selection of a location for placing a business
- Support in recovery or setting up supply chains

kyiv.consulting

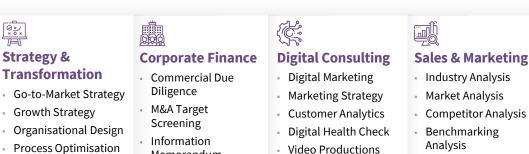


The process of the recovery of Ukraine has already started, opening up a range of opportunities for the development of Ukrainian and foreign businesses in the country. Meanwhile, the realisation of this potential requires a vast amount of expertise and resources from all the stakeholders. Kyiv Consulting can become a reliable partner of businesses and the public sector in leveraging opportunities arising in New Age Ukraine.

Kyiv Consulting is one of the leading Ukrainian business consultancies, which serves clients from different industries both in Ukraine and worldwide. We can provide you with the right and valuable insights, as well as help you navigate through the dynamic and challenging environment.

We offer a wide range of services that can deliver value-added outcomes for your organisation, whether you are focusing on the transformation of your business processes, strategic investment decisions, digital transformation, or new market opportunities.

Our selected consulting solutions



SEO

Website Creations

-(£):

- **Process Optimisation**
- **Cost Improvements**
- **PMI Implications** Analysis
- **Independent Business** Review
- Information Memorandum
- Investment Teaser

- Analysis
- **Key Account Plans**
- Ad-hoc Research

Economic

Development

- Advanced Analytics
- Investment
- Restructuring
- Government delivery
- Sector & Cluster development
- EU readiness check
- Trade & Partnerships

LET'S TRANSFORM UKRAINE TOGETHER!

LEADING CHANGE: RAPID SOLUTION ENVIRONMENT – [R(Y)SE]

Kyiv Consulting offers its clients a Rapid Solution Environment – [R(Y)SE]. R(Y)SE is our method to solve complex problems faster and achieve a more sustainable implementation of their solution. At R(Y)SE events all key stakeholders simultaneously develop a realistic solution that is based on the broad acceptance and alignment of all participants. Our expertise allows us to support such kinds of workshops in a variety of spheres comfortably at our company office on Kontraktova Square, 10A, Kyiv. The employment of the R(Y)SE method is especially useful when a project is under time pressure, is of high priority, faces complex problems, or requires a creative solution.

You might need to try R(Y)SE in case:

- The project has tight time limits: external and / or internal deadlines, benefits case for implementation, new business trends demanding fast response
- The project is of a top priority: is under the attention of senior management within the organisation, with high expectations of implementable results
- Broad alignment is required: a large group of stakeholders for decision finding, a collaboration of many areas required, broad alignment and agreement of different functions necessary, solution impact on many business units
- Creative approach is required: a company shows a willingness to design current workflows more innovatively and to act differently than in the past, and has not yet been able to find a solution through traditional facilitation and is open to new concepts

Why does your business need R(Y)SE?

R(Y)SE is primarily about:

- Higher quality of decisions and feasible solutions based on sound analyses and the involvement of all relevant decisionmakers, experts, and stakeholders
- Reduced coordination cycles as all topics are consolidated at one point in time and in one place as well as the acceleration of the implementation itself by reducing potential resistance
- Security of investments is achieved by facilitating the joint definition of priorities
- Alignment and commitment: a broad willingness for change and implementation by aligning all participants on the jointly developed solution

The key phases and tasks of the R(Y)SE process: Scan, Focus, and Act



SCAN

At this stage the participants:

- Understand project context
- Learn from experts (trends, bestpractices, innovations etc.)
- Change perspectives and discuss project inputs
- Develop a common understanding of issues



FOCUS

At this stage the participants:

- Deploy the scenario: 'what if'
- Develop and consolidate first ideas
- Iterate and improve the quality and robustness of the solutions
- Test solution proposals / visualise prototypes
- Evaluate and eliminate options



ACT

At this stage the participants:

- Discuss priorities and proposed decisions
- Make decisions
- Develop short-/ mid-/ long-term activity plans
- Create a roadmap for the transformation
- Make a joint commitment to the implementation

REFERENCES (1/3)

Legislation

1. EU-Ukraine Association Agreement

2. The Law of Ukraine 'On Industrial Parks'

Government agencies and public authorities

- 1. Cabinet of Ministers of Ukraine
- 2. Diia / Diia.City
- 3. European Commission
- 4. European Environment Agency
- 5. European Parliament Research Service
- 6. Eurostat
- 7. Gas Transmission System Operator of Ukraine
- 8. International Trade Administration
- 9. Ministry of Agrarian Policy and Food of Ukraine
- 10. Ministry of Defence of Ukraine
- 11. Ministry of Economy of Ukraine
- 12. Ministry of Education and Science of

Ukraine

- 13. Ministry of Environmental Protection and Natural Resources of Ukraine
- 14. Ministry of Finance of Ukraine
- 15. Ministry of Health of Ukraine
- 16. Ministry of Infrastructure of Ukraine
- 17. Ministry of Internal Affairs
- Ministry of Reintegration of Temporarily Occupied Territories of Ukraine
- 19. Ministry of Social Policy of Ukraine
- 20. Naftogaz
- 21. National Bank of Ukraine
- 22. State Aviation Administration of Ukraine
- 23. State Customs Service of Ukraine

- 24. State Employment Agency of Ukraine
- 25. State Statistics Service of Ukraine 26. UATOM
- 27. Ukrainelnvest
- 28. Ukrainian Parliament
- 29. Ukrainian Railways
- 30. Ukrainian State Air Traffic Services Enterprise
- 31. UkrGazVydobuvannya
- 32. Ukrposhta
- 33. UkrTransGaz
- 34. United States Department of
- Agriculture
 - 35. United States Institute of Peace

International organisations

- 1. Atlantic Council
- 2. Food and Agriculture Organization of the United Nations
- 3. International Atomic Energy Agency
- 4. International Labour Organisation
- 5. NATO
- 6. Nuclear Energy Agency
- 7. Nuclear Information and Resource Service
- 8. The United Nations Development Programme
- 9. UNESCO Intangible Cultural Heritage
- 10. UNESCO World Heritage Centre
- 11. UNICEF
- 12. United Nations
- 13. United Nations High Commissioner for Refugees
- 14. United Nations Principles for

Responsible Investment

- 15. World Bank Group
- 16. World Health Organisation
- 17. World Intellectual Property Organisation
- 18. World Nuclear Association
- 19. World Wildlife Fund

REFERENCES (2/3)



REFERENCES (3/3)

Reports and publications

- 1. Advanter Study of the state of SMEs in Ukraine [2022]
- 2. British Petroleum Statistical Review of World Energy — [2021]
- Dixi Group, USAID 100 Days of the War: The Consequences for Ukrainian Environment — [2022]
- 4. EBA Foreign Investor Survey [2020]
- 5. Economist Ukraine Reform Tracker — [2022]
- 6. Goldman Sachs Carbonomics [March 2022]
- 7. Health Cluster Ukraine Public Health Situation Analysis — [2022]
- 8. IDC The Impact of the Russia-Ukraine War on the Global ICT Market Landscape — [March 2022]
- 9. IEA Ukraine Energy Profile [2021]
- 10. IOM Ukraine Internal Displacement Report. Round 6 — [2022]
- 11. IOM World Migration Report [2022]
- 12. IT Ukraine Association Ukraine IT report — [2021]
- 13. KATAPULT 100 Karten über die Ukraine — [June 2022]
- 15. L.V. Burman et al. Oil & gas potential of the Ukrainian Black Sea

region — [2014]

- 16. Latifundist Agribusiness of Ukraine — [2020, 2021]
- 17. M.D. Simmons et al. Petroleum geology of the Black Sea [2018]
- National Bank of Ukraine Macroprudential Policy Strategy — [2020]
- 19. Odesa Offshore Conference 2021 materials
- 20. Rating Group Employment sociological survey — [March, May 2022]
- 21. Rating Group The 10th national survey: Ideological markers of the war [April 2022]
- 22. State Employment Centre The situation on the labour market [2022]
- 23. The Federation of Employers of Ukraine — State of the Industry in Ukraine — [2021]
- 24. Transport Strategy Centre Transport Book — [2021]
- 25. Ukraine Recovery Conference Extended Background Analytics — [2022]
- 26. Ukraine Recovery Conference materials
- 27. UkraineInvest Rebuilding Ukraine with Private Sector [June 2022]
- 28. Ukrainelnvest Ukraine's Mining sector: Investment opportunities –

[2021]

- 29. Ukrainelnvest Ukrainelnvest Guide — [2022]
- 30. UkraineInvest Ukrainian IT industry — [February 2020]
- 31. UNDP The Development Impact f the War in Ukraine [2022]
- 32. UNHCR Ukraine: Internally Displaced Persons — [2015]
- USDA Ukraine Agricultural Production and Trade — [April 2022]
- 34. World Bank Doing Business Ranking — [2014, 2020]
- 35. World Bank Global Economic Prospects — [June 2022]
- World Bank The Impact of the War in Ukraine on Global Trade and Investment — [2022]
- Yale University The 2022 Environmental Performance Index (EPI) — [2021]

LIST OF ABBREVIATIONS (1/2)

B2B	Business-to-business
B2G	Business-to-government
BBC	British Broadcasting Corporation
BC ³	Billion cubic meters
bcm	Billion cubic metres
Bn	Billion
BSE	Basic Secondary Education
CAGR	Compound Annual Growth Rate
CAPEX	Capital expenditures
CEE	Central Eastern Europe
CEO	Chief Executive Officer
CEPR	Center for Economic and Policy Research
CIS	The Commonwealth of Independent States
СО	Carbon monoxide
CPI	The Consumer Price Index
CPSU	Communist party of the Soviet Union So-called Donetsk People Republic, territory of Ukraine, temporarily occupied by Russian troops
DNR	since 2014
ECB	European Central Bank
ECI	Economic Complexity Index
ECtHR	European Court of Human Rights
Ed⪼	Education and Science
EEZ	Exclusive Economic Zones
EGD	European Green Deal
EIE	External Independent Evaluation
EPI	Environmental Performance Index
Etc.	Et cetera
EU	European Union
Euro	Euro
FAO	The Food and Agriculture Organization
FDI	Foreign direct investments
FTA	Free Trade Agreement
G7	The Group of Seven
GDP	Gross Domestic Product
GHG	Greenhouse gas
GSE	General Secondary Education
GTSO	Gas Transmission System Operator

GTSOU	Gas Transmission System Operator of Ukraine
GW	Gigawatt
На	Hectare
HCI	World Bank Human Capital Index
HIMARS	Highly Mobility Artillery Rocket System
HIV	Human Immunodeficiency Viruses
HSR	High speed rail
ICAO	International Civil Aviation Organization
ICT	Information and Communications Technology
IDP	Internally displaced person
IFI	International Financial Institutions
IMF	International Monetary Fund
IT	Information Technology
KIPT	Kharkiv Institute of Physics and Technology
km	Kilometer
LLC	Limited liability company
LNG LNR	Liquified natural gas So-called Luhansk People Republic, territory of Ukraine, temporarily occupied by Russian troops since 2014
LSE	London Stock Exchange
M&A	Merger& Acquisition
M ²	Square metres
MLRS	Multiple Launch Rocket System
Mn	Million
МОН	Ministry of Health of Ukraine
Mtoe	Million tonnes of oil equivalent
MW	Megawats
NBU	National Bank of Ukraine
NCD	Non Communicable Disease
NGO	Non Governmental Organization
NHSU	National Health Service of Ukraine
NOx	Nitrogen Oxides
NPP	Nuclear Power Plant
NTUU	National Technical University of Ukraine
NUS	New Ukrainian School
OECD	Organisation for Economic Cooperation and Development

LIST OF ABBREVIATIONS (2/2)

OSCE	The Organization for Security and Cooperation in Europe
PISA	Programme for International Student Assessment
pkm	Passenger km
PMG	Programme of Medical Guarantees
QS	Quantity Surveyor
R&D	Research and Development
RES	Renewable energy sources
ROI	Return on investments
SME	Small and medium enterprises
SO2	Sulfur dioxide
SOE	State owned Enterprise
sqm	Square meter
ТВ	Terabyte
tcm	Thousand cubic meters
Ten-t	Trans-European Transport Network
tkm	Tonne km
TPES	Total primary energy supply
ТРР	Thermal Power Plant
TTF	Title Transfer Facility
UAH	Ukrainian Hryvna
UGS	Underground Gas Storage
UISSA	Unified Information System for Social Assistance
UISSS	Unified Information System Of Social Sphere
UK	United Kingdom
UN	United Nations
UNDP	The United Nations Development Programme
UNGEGN	United Nations Group of Experts on Geographical Names
UNESCO	United nations educational scientific and cultural organization
UNICEF	United Nations International Children's Emergency Fund
USA	United States of America
USAID	United States Agency for International Development
USD	United States Dollar
USSR	Union of Soviet Socialist Republics
VET	Vocational education and training
WHO	World Health Organization
WTO	World Trade Organization
WWF	World Wide Fund for Nature

Let us speak LOUDLY AND STRONGLY,

so that people around the world hear our Voices.



kyiv.consulting

ີ່ພິ www.linkedin.com/company/kyiv-consulting



Contact



Nicolai Kiskalt CEO | Kyiv Strategy Consulting LLC www.kyivconsulting.com