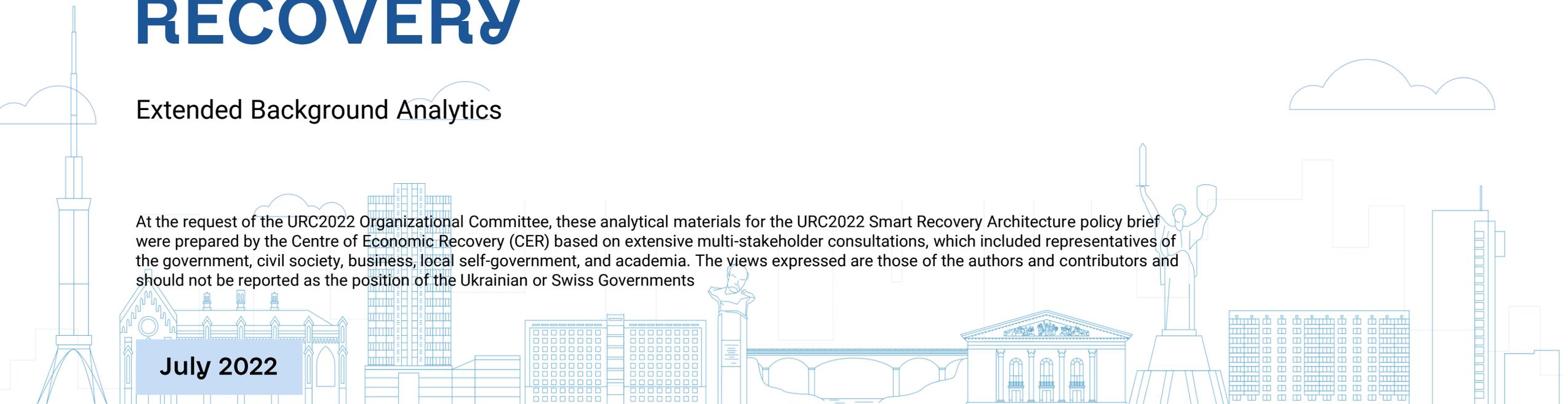


# POLICY BRIEFS ON UKRAINE'S RECOVERY

## Extended Background Analytics

At the request of the URC2022 Organizational Committee, these analytical materials for the URC2022 Smart Recovery Architecture policy brief were prepared by the Centre of Economic Recovery (CER) based on extensive multi-stakeholder consultations, which included representatives of the government, civil society, business, local self-government, and academia. The views expressed are those of the authors and contributors and should not be reported as the position of the Ukrainian or Swiss Governments

July 2022

A light blue line-art illustration of a city skyline at the bottom of the page. It includes various buildings, a bridge, a statue holding a sword, and a clock tower. A small cloud is visible in the upper right.

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# INTRODUCTION

General description of Ukraine Recovery Conference and structure of topics which will be considered at the conference

July 2022

# Ukraine Recovery Conference at a glance

## CONFERENCE DESCRIPTION AND HISTORY

Since 2017, Ukraine Reform Conference was a landmark international event that gathered friends of Ukraine from all over the world.

Over the years, it has been hosted by the UK, Denmark, Canada, and Lithuania. Each conference managed to generate substantial interest in Ukraine's reform effort and mobilize support on its road to transformation.

## LUGANO MODIFICATION

The initial approach to the Conference was to gather seven advisory groups that were about to produce jointly, in the course of a series of online and offline meetings, policy briefs on the suggested topics.

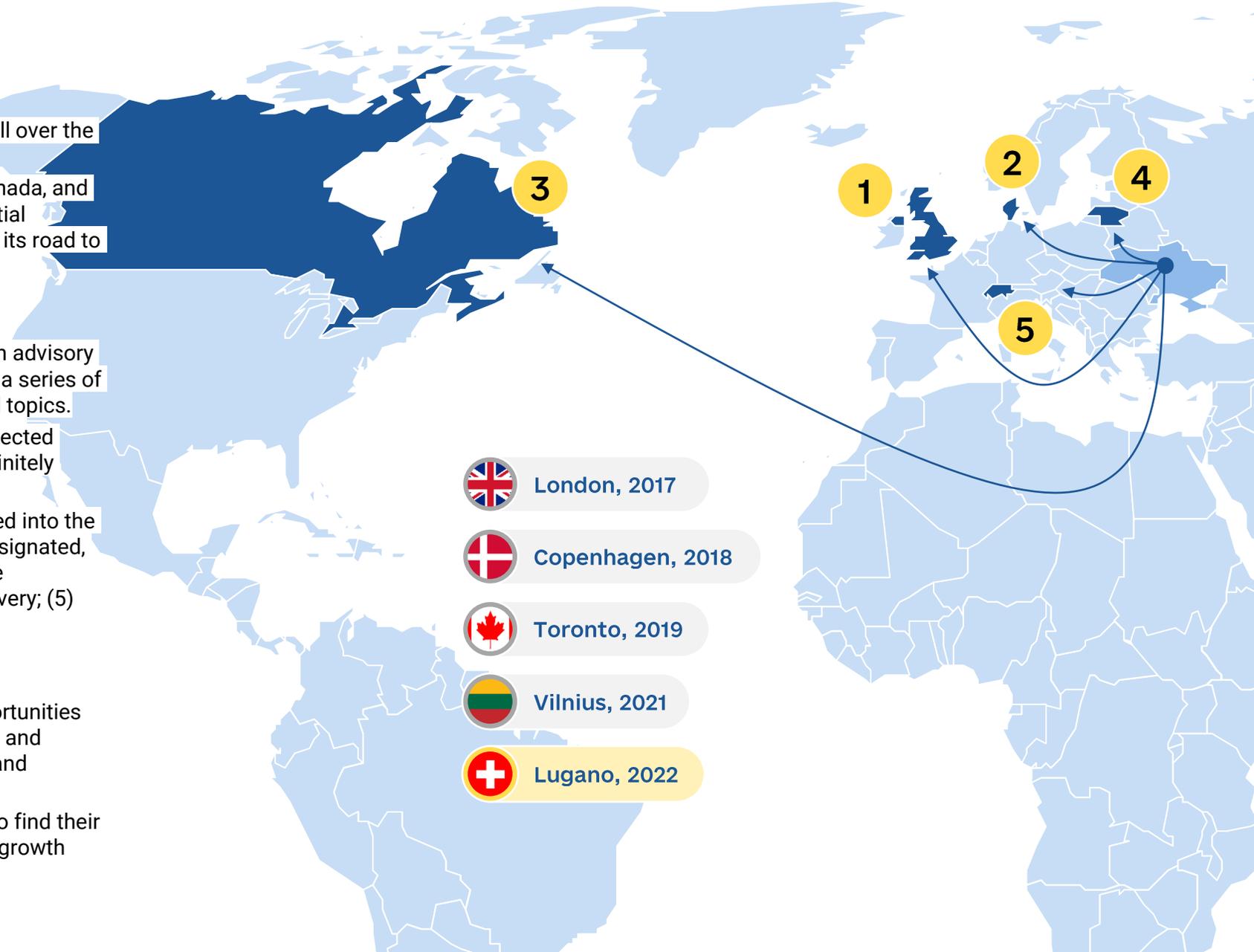
However, the war has changed the plans and made the selected approach unviable. Besides, the focus of the state has definitely shifted.

Therefore, the Ukraine Reform Conference was transformed into the Ukraine Recovery Conference and five new topics were designated, namely: (1) Smart Recovery Architecture; (2) Infrastructure Recovery; (3) Economic Recovery; (4) Environmental Recovery; (5) Social Recovery.

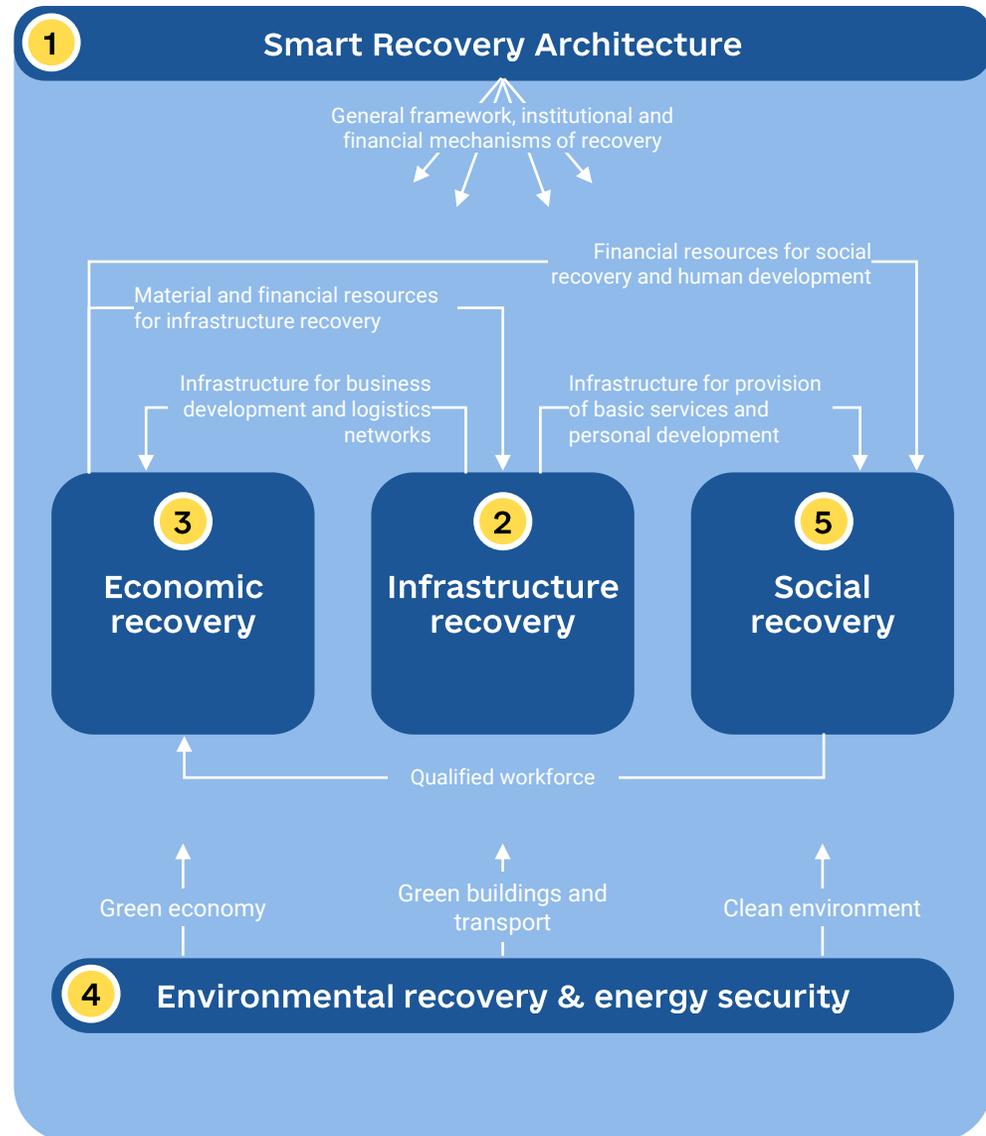
## NEXT STEPS

Ukraine Recovery Conference aims at demonstrating opportunities for the partners to engage in the reconstruction of Ukraine and produce food for thought on basic principles, framework, and possible vectors of recovery.

In the course of the URC, each participant should be able to find their own way to contribute to Ukraine's restoration, and future growth and prosperity.



# Ukraine Recovery Conference structure



**SMART RECOVERY** | Smart Recovery Architecture is an overarching topic for the other four. Smart Recovery Architecture aims to describe the overall framework of the recovery in terms of institutions, people, money, and long-term vision of the recovery process. The reconstruction principles in each of the mentioned areas are common to the other four topics, which will be described in more detail below.

**INFRASTRUCTURE** | Infrastructure recovery is closely interlinked with other topics as it is at the core of reconstruction. Based on the smart recovery architecture principles, Infrastructure Recovery serves as the base for efficient and effective functioning of the economy, as well as for the development of the social sphere, both in providing basic services to men and women and advancing human development. Moreover, according to the 'build back better principle', recovery of infrastructure should happen in accordance with environmental standards of green deal, energy efficiency, etc.

**ECONOMY** | The economy is the core of the future recovery of Ukraine. Conducted in accordance with smart recovery architecture, economic recovery will boost human development of men and women, will enable Ukraine to conduct social recovery, and being grounded in the green transition principles, will serve the sustainable development of Ukraine. Effective functioning of the economy will generate enough money to cover reconstruction processes in all other spheres.

**ENVIRONMENT** | As with all other topics, environmental recovery finds its base in the designated smart recovery architecture. At the same time, environmental recovery is also an overarching topic for the recovery of the Economy, Infrastructure, and Social sphere. Economic activities conducted in accordance with the green transition agenda will help Ukraine grow swifter and in a more sustainable manner, the energy-efficient infrastructure that uses clean energy will create a safer space for people to live, work and develop, which in turn boosts the quality of life if we speak about the social sphere and social recovery. Moreover, social recovery would also need substantial environmental component connected with mine contamination, water pollution, etc.

**SOCIAL** | Social recovery will be successful if the state will be able to provide all the needed infrastructure and reinvigorate economic activity to fuel this recovery. Focus on environmental recovery creates a more safe environment for the people and enhance the quality of life. Surely, Social Recovery should be rooted in the principles of smart recovery architecture as well.

Ukraine have come a long way to create a Recovery Plan, having made a substantial effort to create an actionable framework of the Recovery Process through engaging into multi-stakeholder consultations. Although this process is far from complete, huge work is already done to ensure that the Recovery happens in accordance with international standards and accountability and transparency principles. Concrete initiatives, plans, and projects are already ready to be discussed and elaborated into more detailed actions plans.

# SMART RECOVERY ARCHITECTURE

Extended Background Analytics for the URC2022 Smart  
Recovery Architecture Policy Brief

July 2022

1

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# BACKGROUND

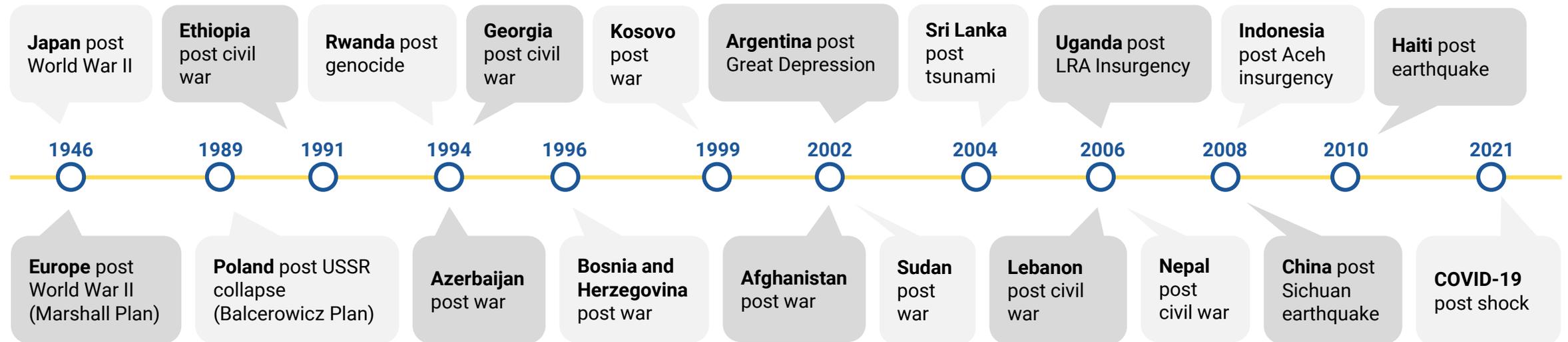
Description of pre-war and current state of governance  
architecture



# There are numerous examples of post-conflict and post-disaster recovery packages that Ukraine can learn from

Ukraine is not the first country to undergo post-war recovery. Historic overview and especially the second half of 20th century presents a wide range of post-conflict that went through the recovery process. The common feature of all below mentioned cases is the presence of recovery support packages aimed at the post-conflict or post-disaster recovery of a damaged country's economy. Such packages typically consist of a range of internal support programs as well as of an outside financial and advisory support from other countries and international financial organizations. Ukraine may use the instruments and insights from this cases to compose the most relevant plan for the recovery.

## SELECTED CASES OF POST-CONFLICT AND POST-DISASTER RECOVERY IN 20<sup>TH</sup> CENTURY GLGOBALLY



# Ukraine should deepen public administration reform to provide rapid recovery and sustainable economy growth

During the last 8 years Ukraine managed to provide several reforms in field of governance and public administration. These reforms increased capacities of Ukrainian state and provided additional stability after the start of full-scale Russian invasion on February 24. At the same time, there are still several challenges in governmental bodies, and now, it is critical to overcome these challenges to provide the most efficient planning and implementation of the post-war recovery of Ukraine. These improvements may be divided into three blocks: planning, public administration and budget planning.

## PLANNING

- During the last decades, a lot of **sectoral plans and strategies have been developed**. The most of them covers significant issues to accelerate economic growth and improve the living conditions of Ukrainian men and women.
- After the start of war, a lot of new plans and concepts of recovery were developed but it became obvious that there is **a need to achieve common vision of the recovery process** and codify this vision into one unified plan.
- To achieve this goal the **National Recovery Council (NRC)**, collegial body that develops guidelines for the recovery, has been established. NRC consists of 2 working groups divided by areas of Recovery, where each group includes both officials and expert community representatives. **NRC has developed a draft recovery plan with concrete initiatives and ideas that are to be discussed and elaborated.**

## PUBLIC ADMINISTRATION

- Due to the decentralization, several stages of public administration reform and digitalisation of public services, **Ukrainian public administration system is more prepared for the nation-scale post-war Recovery.**
- Although there is still a lack of qualified managers within the public administration team, especially in the regions. **Ukraine has to maintain public administration reform**, including introduction of result-based management and improvement of working conditions for civil servants.
- Moreover, there is a **necessity to provide effective cooperation between state and non-governmental sectors at all stages of the recovery process**. Finally, trust and transparency should be fundamental principles of the future justice system of Ukraine.

## BUDGETING

- During the last years, **Ukraine managed to build stable macro financial system and achieve progress in the field of budget planning**. Although, this process should still be deepened to provide more efficient mid-term budgeting of the state expenditures.
- Decrease of the budget revenues and additional military and social expenditures after the start of the full-scale **war led to the budget deficit**. At the same time, the recovery process will need even more funding.
- **International partners supports Ukrainian financial stability** providing unprecedented amounts of financial support.
- In turn, **Ukraine creates convenient options of international support**. One of them is state crowdfunding program – United 24.

# ACTIONABLE FRAMEWORK

**Description of smart recovery architecture framework,  
background, international experience and proposed initiatives for  
each element of framework**



# Smart recovery architecture framework should include vision definition and planning, capacity building and financing

The framework below describes the overall structure of the smart recovery architecture. The whole architecture can be divided into three blocks: (1) vision and plan, (2) people and institutions and (3) financing



Following slides will describe (1) background and (2) proposed actions for each topic of infrastructure recovery framework. Next slides will be marked that will show affiliation to abovementioned types of slides →

background

actions

# 1 According to analyzed post-war recovery cases, long-term comprehensive vision was present in all successful recovery cases

Europe 1946-1948  
Marshall Plan

Bosnia and Herzegovina 1996-1999  
Post-war recovery

Afghanistan 2001-2019  
Recovery

Rwanda 1994-1996  
Post-war recovery

## Key insights from analysis of international experience

The post-war recovery program should not be only a short-term humanitarian relief program or infrastructure reconstruction program.

The most **successful post-war recovery plans contained comprehensive vision and multilayered long-term plans** designed to achieve the economic recovery.

**There is a need to incorporate effective coordination among official agencies** to avoid overlapping mandates and rivalry. The parallel management leads to the chaos in governance and loss of accountability.

There is a need to establish an efficient management system of the distribution funds before the start of recovery program.

After the start it is important to track and control the donation inflows **to make sure that decision-making process is open to more social groups and communities.**

It is important not only to rebuild infrastructure, but also focus on the long-term perspective, specifically fundamental reforms, with a **purpose of building strong national institutions capable of effectively managing the reconstruction process.**

For the effective implementation of the post-war recovery there is a need to have a clear, long-term comprehensive vision that includes both reconstruction and fundamental reforms for the modernization of the state

# 1 There are a lot of pre-war strategies and post-war plans that should be synchronized under the common **vision**

## Pre-war strategic documents

- During the last decades, **a lot of sectoral plans and strategies have been developed**, including long-term National Economic Strategy of Ukraine 2030. Moreover, Ukraine started a process to move to the mid-term planning on the principles of the result-based management.
- However, part of these documents do not correspond to each other and are duplicated or do not contain information about funding. This leads to **inconsistencies in the decisions of the Government**, as well as leads to insufficient funds for their implementation.
- Despite of the inconsistencies, a lot of this document **contains significant measures and programs that shouldn't be lost** in the process of the creation of the Recovery plan.



## International obligations

- Ukraine is a part of a lot **of international projects and global efforts** (e.g., Sustainable Development Goals or Paris climate change conference). Obligations within these efforts should be implemented in Ukrainian strategies to provide its integrity.
- Moreover, while Ukrainian European path is recognized as a strategic direction of development, **Ukraine must align its policies with EU standards**.
- In the adaptation of strategies, **the global component should not drop out**, to develop closer integration and cooperation for sustainable development.



## Changes due to the war

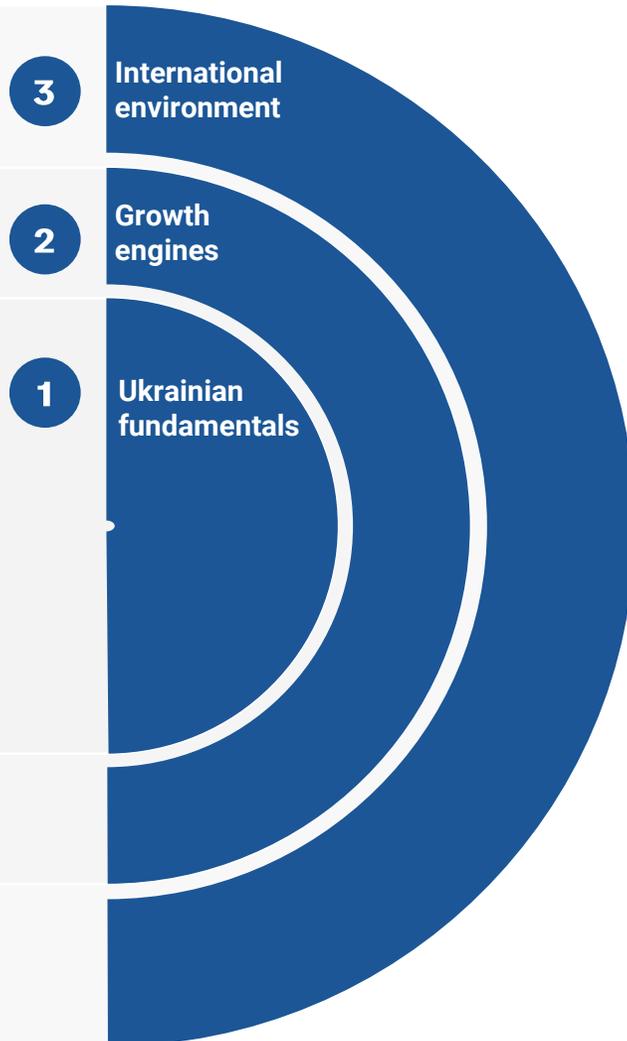
- After February 24. Ukrainian needs changed, **increasing the need in the reconstruction of infrastructure and the most damaged sectors**. Moreover, Ukraine changed itself – **millions of refugees fled abroad**. New strategic documents need not only to take into account the direct causes of war, but also estimate indirect influence.
- At the same time, the recovery **creates a chance to rebuild modernized infrastructure** and to provide barrier-free, innovative and environmentally friendly premises for a sustainable development.



Previous developments should be reassessed to create a new plan that includes all relevant and effective measures, while dropping redundant or inconsistent with a general plan

# 1 The **vision** of new post-war Ukraine can include three levels: fundamentals, growth engines and international environment

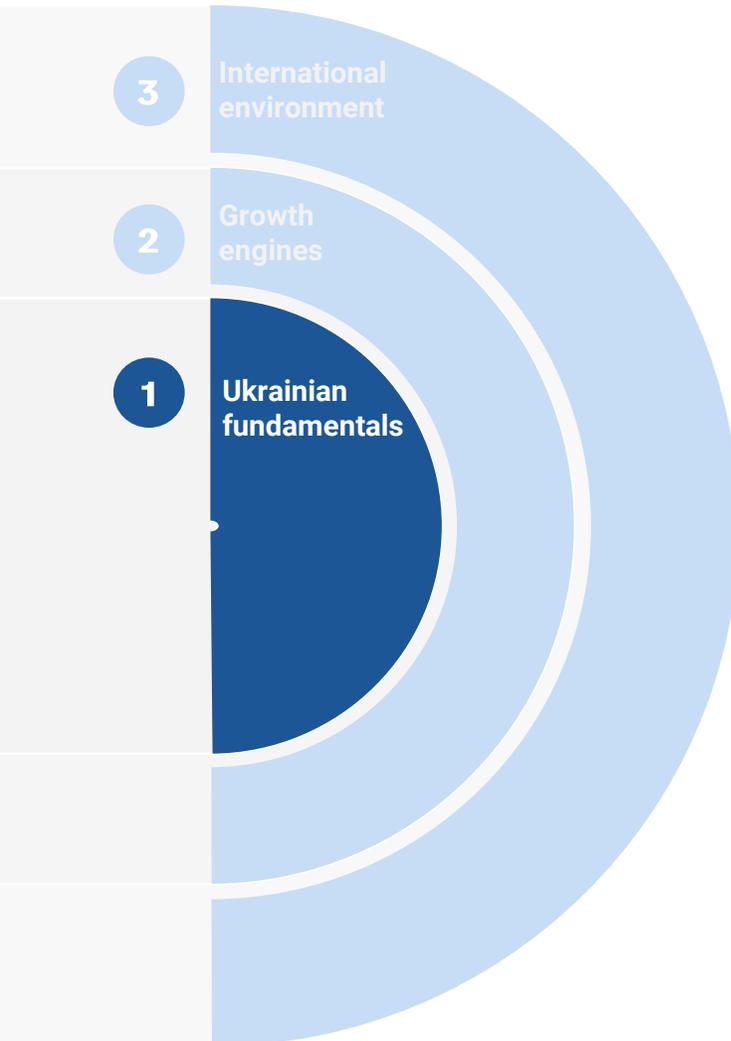
## POSSIBLE FRAMEWORK FOR THE POST-WAR VISION OF UKRAINE



1. **Ukrainian fundamentals** – it is what creates a value foundation and forms the preconditions for the restoration and development of Ukraine. These are the principles and directions that Ukraine has historically adhered to in the process of reform and the importance of which it has proved even during the full-scale invasion of the enemy, in conditions of threat to the existence of the state.
2. **Growth engines** – these are areas that will ensure the growth of the Ukrainian economy and create decent living conditions, employment and development of Ukrainian men and women.
3. **International environment** – these are factors that, on the one hand, create a scenario field for Ukraine and may form constraints in the recovery process, and on the other hand, they are in fact catalysts / multipliers of the plan implementation and achievement of the set goals.

# 1 Ukrainian fundamental values can be in the core of the post-war Ukraine vision

## POSSIBLE FRAMEWORK FOR THE POST-WAR VISION OF UKRAINE



### 1.1. DEMOCRACY AND DECENTRALIZATION

The people of Ukraine are committed to the values of democracy and have repeatedly argued this in critical situations. Decentralization is vital for increasing the stability and efficiency of the country.

### 1.2. FREEDOM AND RULE OF LAW

Realizing the price of freedom, society is making an unprecedented demand for change – Ukraine must become a country with zero tolerance for corruption, a country of fair justice and a high level of economic freedom.

### 1.3. DIGITALIZATION AND TRANSPARENCY

In 2022 most of public services can be obtained online in a few clicks, from paying taxes to registering a child. E-procurement, open budgets, most registers are digitized and interoperable.

### 1.4. CREATIVE HUMAN CAPITAL

The Ukrainian creative middle class is the key to sustainable democracy and the demand for the rule of law. Innovation and entrepreneurship are the catalysts for the future development.

### 1.5. GREEN TRANSITION

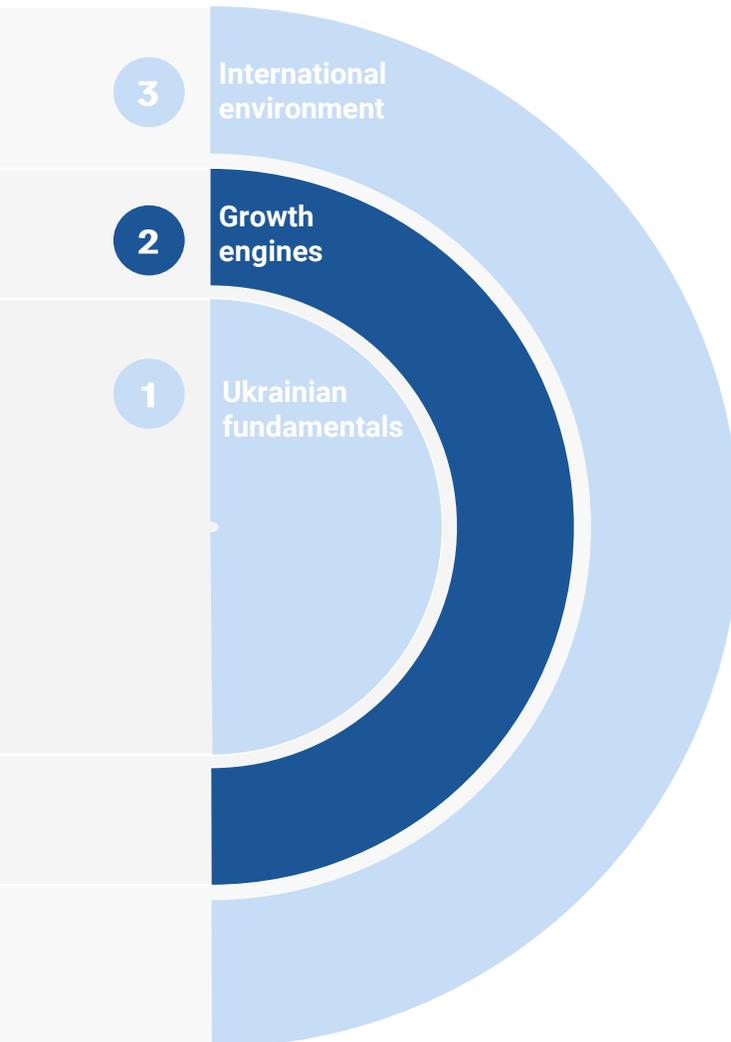
Ukraine understands the importance of sustainable development and climate neutrality, so the whole process of reconstruction will be based on these principles.

### 1.6. INCLUSIVENESS

Ukraine intends to provide equal opportunities for all so that all Ukrainians can live with dignity and develop in the new Ukraine.

# 1 Long-term sustainable development of Ukraine can be provided via enhancement of infrastructure, economy and human capital

## POSSIBLE FRAMEWORK FOR THE POST-WAR VISION OF UKRAINE



### INFRASTRUCTURE

Ukraine will invest in the **reconstruction of infrastructure for the functioning of the economy, housing and population development**. Infrastructure opportunities will be created for greenfield projects based on industrial parks and brownfield projects based on revitalized state-owned facilities. Ukraine will connect with Europe and the world through highways, renewed railway infrastructure and developed ports. Ukraine will provide people with housing and create effective social infrastructure networks that will ensure the availability and quality of services to meet basic needs and personal development of the population.

### ECONOMY

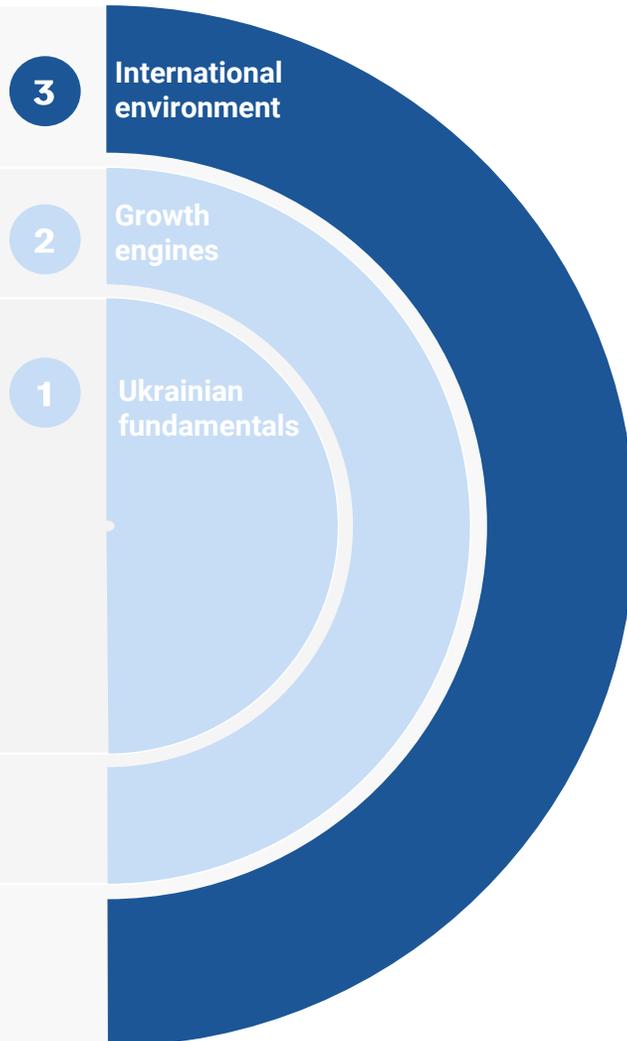
In the economic context, Ukraine **will focus on ensuring economic freedom, access to markets, capital and know-how, as well as sound sectoral policies**. The best conditions for doing business will be created through reasonable regulation, antitrust policy, the rule of law, reducing the role of the state in the economy and attracting global business and investors. Integration into value chains will focus on locating production in Ukraine, concluding new mutually beneficial trade agreements and promoting Ukrainian products on international markets. Ukrainian business will have access to finance to accelerate recovery and further development. Ukraine will launch catalytic projects in various sectors of the economy aimed at diversifying the economy and participating in global value chains

### HUMAN POTENTIAL DEVELOPMENT

In order to fully strengthen the human capital of the people of Ukraine, it is necessary **to support the personal development of men and women and ensure a high standard of living**. Ukraine will provide inclusive access to education and skills development, promote cultural development, preserve cultural heritage and counter misinformation. The sports infrastructure will be restored, a system of incentives for the return of young people to Ukraine will be created. Ukraine will ensure the post-war restoration of the health care system, the development of a network of institutions based on needs of different social groups. Support will be provided to all victims of the war and especially the socially vulnerable, thanks to digitally targeted tools.

# 1 The vision can be aligned with strategic EU integration path and include international security and economic cooperation

## POSSIBLE FRAMEWORK FOR THE POST-WAR VISION OF UKRAINE



### EU INTEGRATION

**Ukraine will open new opportunities for the EU** thanks to its own green energy, food production, large creative class, materials of the future and security and defense forces. Accession to the EU is not only a confirmation of society's choice, but also the prospect of raising living standards and opportunities for business and investors, who will be confident and the invariability of the country's vectors and rules of the game, access to markets and financing. **The speed, quality and comprehensiveness of integration will determine the success of Ukraine as a whole**, but this path is economically and strategically important for the countries of the European Union because of the great opportunities it opens.

### SECURITY

Ukraine's recovery must be largely due to private capital. **Security risks will determine how attractive Ukraine will be for investment, integration into global value chains and the return of citizens.** This situation requires a joint reaction of the world community regarding security guarantees for Ukraine. The format of these guarantees can be very different: from joining NATO, starting regional security alliances to strengthening the Ukrainian army to a level where Russia does not dare to invade again.

### INTERNATIONAL ASSISTANCE

**The amount of funding that Ukraine will receive as part of the recovery process will directly affect the speed of recovery and further development.** For mutual benefit, international partners will be able to raise partly their own funds, and partly frozen assets of Russia and other sources of funding to support Ukraine. Lack of funding and low speed in its implementation can lead to a significant slowdown or even impossibility of recovery processes. At the same time, **the reconstruction of Ukraine is both a large market for Western companies and the strengthening of the EU, increasing security in the world and the best proof of the strength of democratic countries.**

# 1 Development of the common **vision** and comprehensive plan should be the primary goal for the long-lasting recovery

Initiative	Details	Success criteria
<b>Formulation of common vision on the post-war recovery</b>	<ul style="list-style-type: none"> <li>• Development of the comprehensive framework with all streams of vision</li> <li>• Alignment of the vision with the EU integration path of Ukraine</li> <li>• Agreement on the common vision among all stakeholders within and beyond Ukraine</li> </ul>	Ukraine has common post-war recovery vision agreed by all stakeholders
<b>Finalization of comprehensive Recovery plan</b>	<ul style="list-style-type: none"> <li>• Finalization of the Recovery plan within existing working groups</li> <li>• Alignment of the Recovery plan with the Ukrainian programs and international obligations</li> <li>• Approval of the plan among all stakeholders</li> </ul>	Ukraine has comprehensive, achievable and approved by all stakeholders Recovery plan
<b>Definition of coordination mechanisms of the Recovery</b>	<ul style="list-style-type: none"> <li>• Definition of the mechanisms of recovery on the national and local levels</li> <li>• Creation of the technical assignments for the all involved governmental bodies</li> <li>• Creation of the mechanism of parliamentary, international and public supervision for the recovery process</li> </ul>	Ukraine has detailed mechanisms that prevents parallel management and lack of accountability

**Generally agreed vision for a long-term post-war reconstruction and a comprehensive recovery plan will allow to provide sustainable framework for reconstruction and modernization.**

## 2 The coordination of all stakeholders and strong public institutes are vital for the successful implementation of the recovery process

It is important not only to rebuild infrastructure, but also focus on the long-term perspective, specifically a structural reform, with a purpose of **building strong national institutions capable of effectively managing the reconstruction process.**

In Bosnia, the recovery mechanism lacked an institution that would combine the actions of international donors and the government, which resulted in failed communication and ineffective distribution of aid.

As a result, the management component has been incorporated in each program, which led to a huge transactional costs. **About 20% of international aid was spent on technical cooperation** and did not actually reach the country.

### Key insights from analysis of international experience

**Bosnia and Herzegovina 1996-1999**  
Post-war recovery

**Lebanon 2006**  
Recovery

**Rwanda 1994-1996**  
Post-war recovery

There is a need to **build institutional capability and accountability of the distribution funds before the start of recovery program.** Otherwise, the trust into the recovery process would be damaged.

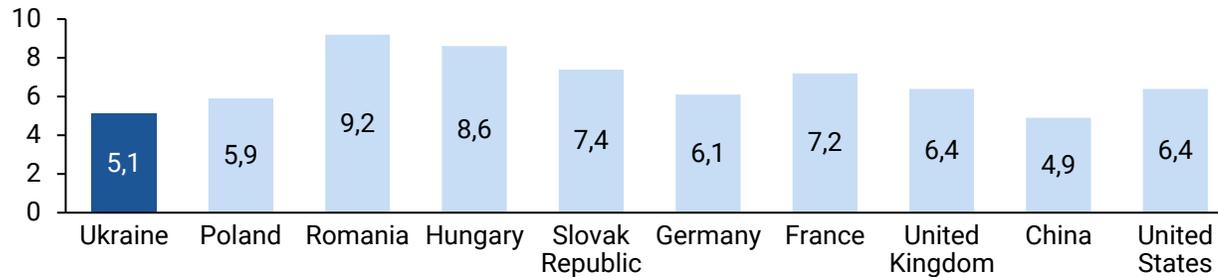
**Recovery process not always should rely only on the state.** In Rwanda, a relatively small amount of the money for rehabilitation of economic and administrative capacity has been provided directly to the government, mainly due to the government's limited absorptive capacity. At the same time, such decision may lead to the drain of the most talented people to the international organizations.

Also, it is crucial to **incorporate effective coordination among and by official agencies.** This is needed to avoid overlapping mandates and rivalry.

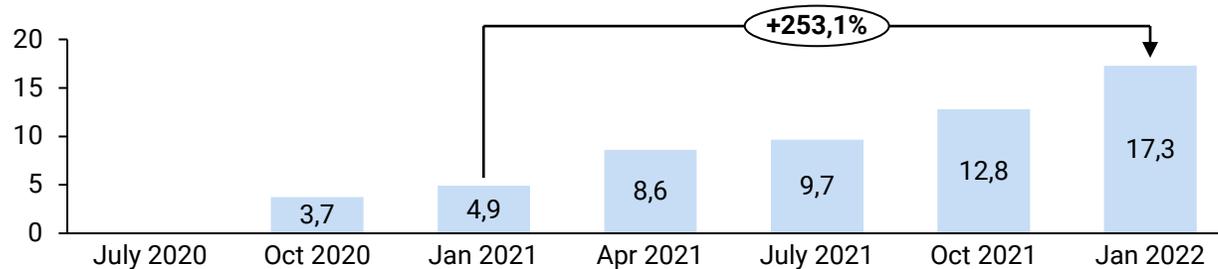
Creation of effective coordination mechanism is necessary to reduce transactional costs, secure feasibility and provide accountability of each participant of the recovery process

## 2 For the productive implementation of the recovery plan Ukraine should play its strength and enhance vulnerable points of public service

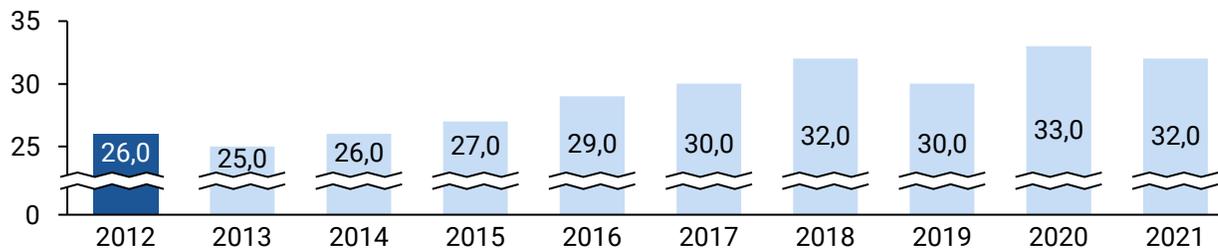
### 1 NUMBER OF CIVIL SERVANTS PER 100 POPULATION, 2020



### 2 NUMBER OF UKRAINIANS THAT RECEIVED ONLINE PUBLIC SERVICES, MLN



### 3 CORRUPTION PERCEPTION INDEX OF UKRAINE



- During the last 7 years there were **several reforms in the field of public administration**, including creation of HR tool for civil servants, etc.

- 1 For now, there are around 205 thousand of civil servants in Ukraine. The **figure of number of public servants per capita is less than in European countries**, although Ukraine has significantly less resources to spent for maintaining such amount of stuff.

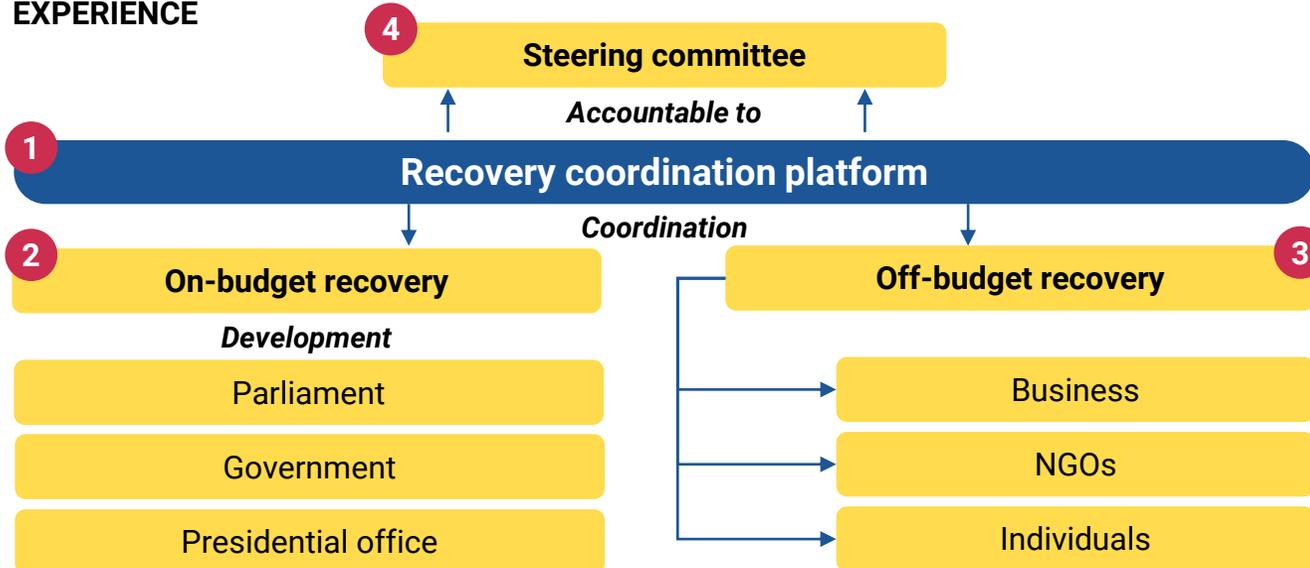
This leads to **low (in comparison with private sector) salaries**, reducing the number of people willing to work in the public sector. Moreover, distribution of this salaries is not result-oriented and often depends on loyalty.

- 2 At the same time, Ukraine managed to achieve success in the implementation of digital public services and digital instruments for public procurement. **Nearly third of Ukrainians interacted with Diia** – platform for the digital public services. Ukrainian system **Prozorro proved to provide transparent process of public procurement** for several last years. Success in digital solutions is Ukrainian strength in field of governance, so it may be beneficial for the efficient recovery process.

- 3 During the last decade Ukraine had several significant achievements in building of Anti-corruption infrastructure. Although, this **infrastructure is still fragile** and needs a progress in appointment of the **head of Specialized Anti-Corruption Prosecutor** and **provision of transparent and fair competition** for the National Anti-corruption Bureau's director.

## 2 Coordination of all recovery process stakeholders is vital for the most efficient implementation of the recovery plan

### POSSIBLE OPTION OF COORDINATION ARCHITECTURE BASED ON INTERNATIONAL EXPERIENCE



- Enhancement of the **public administration reform**
- Alignment of public administration standards to the **European Principles for Public Administration**
- Create a viable system of **accountability and monitoring**
- Provision of the system of **financial assistance distribution**

- **Involvement of business and non-governmental** stakeholders within the recovery process
- **Support SMEs and other business** in international assistance attraction
- Support international organizations in the **direct assistance to the vulnerable populations**

- Creation of **unified coordination platform** (1) is **important** to provide general high-level coordination of all stakeholders involved in the recovery process. This platform should be responsible for coordination and monitoring, while each stakeholder will be responsible for operational management of its sphere of recovery.
- State **recovery programs** (2) should be developed in **close cooperation** of Ukrainian government, Ukrainian Parliament and Presidential Office to avoid parallel efforts and track responsibility on each program.
- For the most effective implementation of the Recovery plan, the **capacity of public administration should be enhanced** both on national and local levels.
- Multi stakeholder approach can enhance each stage of recovery. **Inclusion of business and non-governmental sector** (3) can enhance effectiveness and provide additional trust to the recovery process.
- **The recovery should be accountable both to the Ukrainian people and international partners.** While the former process can be built in the existing architecture of power distribution, the later requires additional bodies, e.g., **steering committee** (4).

## Public administration reform and improvement of the rule of law are crucial priorities both for the recovery process and long-lasting development

Initiative	Details	Success criteria
<b>Establishment the responsible for coordination body</b>	<ul style="list-style-type: none"> <li>Establish the responsible body for the coordination of the recovery process</li> <li>Establish unified coordination mechanisms of the recovery process that will prevent inefficiencies of parallel management</li> </ul>	Ukraine has common platform for the recovery coordination
<b>Deepen public administration reform</b>	<ul style="list-style-type: none"> <li>Develop and implement a comprehensive public administration reform and build local governance capacity</li> <li>Align public administration standards to the European Principles for Public Administration (SIGMA Principles);</li> <li>Introduce principles of the result-based management and evidence-based policymaking in the process of public policy development</li> <li>Digitalize and automate the process of recovery (including e-contracts, reporting, fundraising, etc)</li> <li>Continue digitalization of public services and reduce red tape in public services</li> </ul>	Ukrainian public administration and local governance are capable to implement recovery programs
<b>Maintain and deepen the judicial reform</b>	<ul style="list-style-type: none"> <li>Maintain cleansing of the High Council of Justice</li> <li>Make a transparent selection for the High Qualification Commission of Judges</li> <li>Provide continuation of legal education reform</li> </ul>	Ukraine finalized and deepened judicial reform
<b>Provide the anti-corruption system stability, independence and effectiveness</b>	<ul style="list-style-type: none"> <li>Appoint head of Specialized Anti-Corruption Prosecutor and provide transparent and fair competition for the National Anti-corruption Bureau's director</li> <li>Implement Anti-Corruption strategy for 2021-2025</li> </ul>	Ukrainian has effective and independent Anti-Corruption system

**Capable institutions and highly professional public administration will allow Ukraine to implement full-scale recovery in acceptable timeframe.**

3

# Well-timed appropriate international assistance, mechanisms of transparent public procurement are two prerequisites of effective recovery financing

background

actions

Europe 1946-1948  
Marshall Plan

For the successful recovery, **the share of grants should prevail loans to decrease mid-term debt burden** and provide sustainability of recovery.

The USA imposed an occupational government in Japan and provided financial support to recover the economy, mainly in grants (77%) and loans (23%).

Japan 1948-1952  
Post-war recovery

**In a long-term period, private sector should play a crucial role of recovery.** The Marshall Plan relied on private channels rather than governments for procuring resources.

It operated with the participation of business representatives and private advisory committees, in which industry and labor representatives collaborated with senior civil servants.

Key insights from analysis of international experience

Uganda 1996  
Recovery

**The priority should be establishing an active and transparent mechanism of funding distribution** oversight in order to prevent corruption and collusion by the central government

Rwanda 1994-1996  
Post-war recovery

It is important to assure **rapid availability of flexible resources for key recovery purposes.** In Rwanda, flexible, fast-disbursing aid needed by the government to restore basic capacities was slow in materializing.

Effective and transparent mechanism of fund distribution should be established before the start of the recovery process

## International assistance should include a variety of channels and instruments to cover different recovery needs

### OVERVIEW OF POSSIBLE CHANNELS OF INTERNATIONAL SUPPORT

RECOVERY CHANNELS			
NON-FINANCIAL	FINANCIAL		
<ul style="list-style-type: none"> <li>In kind support with goods</li> <li>Organizational expertise - builders, lawyers, etc.</li> <li>Trade preferences</li> <li>Support with equipment</li> </ul>	DOMESTIC	INTERNATIONAL	
	<ul style="list-style-type: none"> <li>Reallocation</li> <li>Development bonds</li> <li>Surcharges and taxes</li> <li>Private domestic donations</li> </ul>	OFF-BUDGET	ON-BUDGET
		<ul style="list-style-type: none"> <li>Personal grants</li> <li>Support of NGOs</li> <li>Loans for business</li> </ul>	<ul style="list-style-type: none"> <li>Macrofinance stability</li> <li>Debt relief</li> <li>Recovery programs</li> </ul>

### OVERVIEW OF RECOVERY INSTRUMENTS

INSTRUMENTS	TYPE	FINANCIAL / NON-FINANCIAL	ON/OFF-BUDGET
Debt restructuring	Macrofinancial	Financial	On-budget
Economic transition	Overall	Financial	On-budget
Multilateral irrevocable assistance	Macrofinancial	Financial	Off-budget
Multilateral loans	Macrofinancial	Financial	Off-budget
Self-Reliance Accelerator Package	Sectoral	Financial	Off-budget
Counterpart Funds	Overall	Financial	Off-budget
Trust Fund	Macrofinancial	Financial	Off-budget
Project Management Units / Project Financing / Technical assistance	Infrastructural	Financial	Off-budget
High-level donor Coordination unit	Infrastructural	Financial	Off-budget
Foreign aid portal	Infrastructural	Non-financial	Off-budget
Post Disaster Needs Assessment (PDNA)	Overall	Non-financial	On-budget
NGO boom	Infrastructural	Non-financial	Off-budget
General procurement (commodity assistance)	Sectoral	Non-financial	Off-budget

There is no universal instrument for international assistance during the recovery. Portfolio of instruments should be selected due to the period, relevance and general scope of the recovery

### 3 Diversification of funding sources for recovery can provide additional sustainability

#### MATRIX OF THE FINANCIAL AID SOURCES



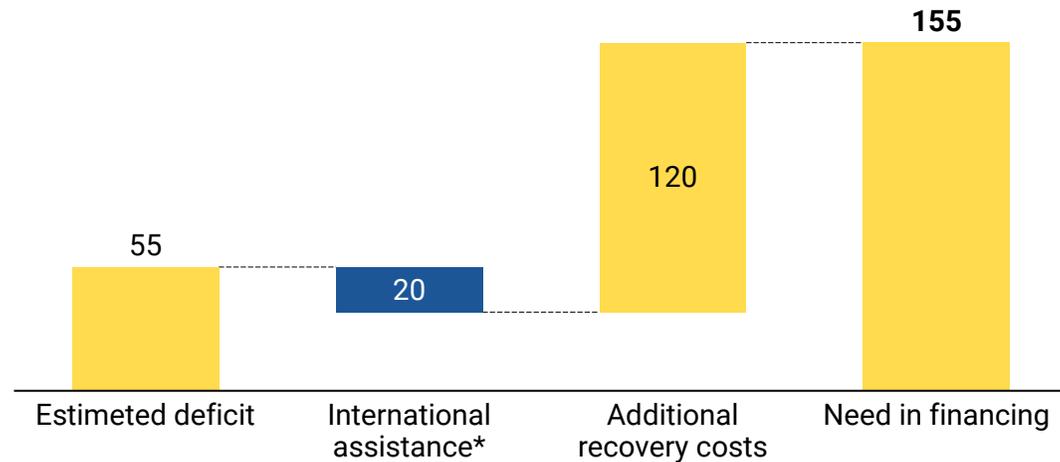
Generally, sources of financial aid are grouped into **two major categories: internal sources** – aid provided from within the post-war country, and **external sources** – sources that have foreign origins. Both internal and external sources of **financial aid could have either public or private nature**. While the role of state is significant during the recovery funding, **private sector is a main engine for the economic relaunch**.

- 1. International financial institutions** (IMF, WB, EIB etc.) – such resources are predominantly directed towards macroeconomic stability and business renewal (within cheap loans or debt restructuring).
- 2. Bilateral assistance from governments and state agencies** (e.g. USAID) – this source in most cases is aimed to finance state reconstruction projects.
- 3. International business organizations** – donations from business and business associations directed on the defined reconstruction projects.
- 4. International charitable organizations** – this source mostly directed on the decrease of post-war burden on vulnerable social groups.
- 5. Personal donations** – international donation crowdfunding predominantly directed on humanitarian aid.
- 6. Reparations** from the aggressor state to compensate for damage done by war.

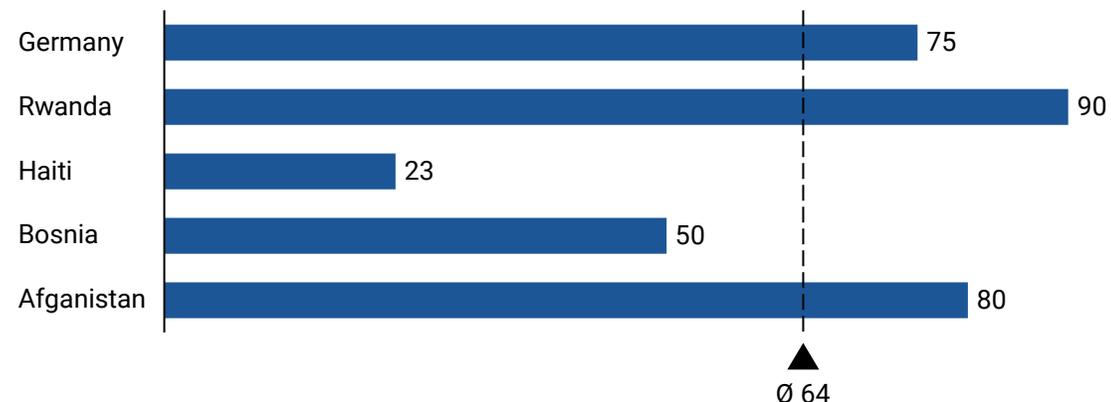
While recovery process demands huge amount of capital investments, the only way to achieve proper funding is to combine all possible sources

### 3 Effective funding of Recovery will need a substantial engagement of international partners

#### DEFICIT OF INTERNAL RESOURCES FOR RECOVERY, ESTIMATIONS



#### YEARLY AID / GDP IN ANALYZED CASES, %



- Decrease of economic activity, tax breaks and flee of more than 5 million Ukrainians **reduced budget inflows significantly**.
- Moreover, it is expected that expenditures in some spheres will grow significantly (**defense, additional payments to the military, social protection**), which may lead to fiscal deficit of nearly 55 billion dollars in 2022.
- However, international partners **have already provided significant financial support for Ukrainian macroeconomic stability** and pledged even more.
- Nevertheless, the recovery process will be costly due to the needs for economic and infrastructure reconstruction, social programs etc. **This may cost to Ukraine additional 120 billion dollars yearly**.
- As a result, **Ukraine is unable to provide full recovery process on its own** and needs support of international partners.
- According to analyzed cases, the average share of international aid packages can be **about 60% of GDP per year or about \$ 440 per capita per year**. The **share of GDP is a more relevant measure** in this case, as it considers the overall growth of welfare during this time.
- According to such estimates, Ukraine's annual support could amount to **about \$90-100 billion with the lowest bar at \$20 billion**. At the same time, overall support may vary according to the amount of direct damage the country has suffered during the war.
- Finally, it should be noted that the amount of aid is important, but not a key factor. It is much more important to understand through which channels this assistance will be provided, under what conditions and by whom and under what conditions it will be used.

### 3 Long-term plan of rotation from international to internal sources of funding could add more sustainability for the Recovery

While international assistance should become emergency tool for early reconstruction phase, it is important for Ukraine to move to internal sources in long-term period. To provide such a transition Ukraine should start to work on the creation of investment climate and stimuli for economic activity from the beginning of recovery.



#### POSSIBLE INTERNATIONAL FINANCE SOURCES

There are five main streams of international funding for recovery: (1) support from IFIs and states, (2) support from international business, (3) support from charitable organizations, (4) individual donations, (5) seized Russian assets.

There are **three key principles** of effective international assistance management:

- **Transparency and accountability.** Monitoring and control mechanisms will increase confidence in the recovery process among both international donors and Ukrainians.
- **Flexibility for donors.** The donor's choice of direction and purpose of care will increase the level of involvement.
- **More grants, less loans.** Increasing grant aid during the recovery phase will allow Ukraine to move to domestic sources of funding in the medium term.

#### POSSIBLE INTERNAL FINANCE MECHANISMS

- After receiving of funding there is a need to provide **effective distribution to the recovery streams**. This can include mechanisms of such distribution and clear division of responsibilities between different governmental bodies to avoid parallel financing.
- It is important to include **mechanisms of distribution to the local level**. Part of the recovery program funding may be distributed between communities on the competitive basis.
- There is a need in the **implementation of performance-based budgeting** for decision making for Key Spending Units for more efficient budget planning.
- There is a need to establish as transparent process of public procurement as possible. To achieve this effect there are several options, including **creation of IT tool that provides possibility to monitor public spending** on recovery on each phase.

3

## Mechanisms of the Recovery financing should be transparent on all stages for all stakeholders

background

actions

Initiative	Details	Success criteria
<b>Seizure of Russian assets for the Ukrainian post-war recovery</b>	<ul style="list-style-type: none"> <li>• Discuss possible mechanisms of seizure of Russian assets with international partners</li> <li>• Develop mechanisms for the seizure of Russian assets to support the Ukrainian post-war recovery</li> </ul>	Established mechanisms for the extraction of Russian assets to support recovery process
<b>Create mechanisms for international financial support</b>	<ul style="list-style-type: none"> <li>• Create flexible options for partners, where they may choose the sector or region benefitting from their donations</li> <li>• Create a mechanism for the transfer of funding for the rebuilding of the regions</li> </ul>	International partners have appropriate number of options to support Ukraine
<b>Attract non-financial support</b>	<ul style="list-style-type: none"> <li>• Discuss trade preferences with international partners</li> <li>• Develop cooperation in fields of science and education, discussion support with technologies</li> </ul>	Ukraine has access to the new international markets and technologies
<b>Create a viable mechanism of accountability for public spending within the recovery</b>	<ul style="list-style-type: none"> <li>• Create monitoring mechanisms for the international partners and public</li> <li>• Provide an IT tool to monitor public procurement on all stages of recovery, for inclusive, transparent and competitive public procurement procedures;</li> <li>• Introduce phase-to-phase support mechanisms based on clear KPIs of the reforms that allow donors to link part of assistance with reforms progress;</li> </ul>	Ukrainian recovery process is transparent on all stages

**Timely and appropriate funding as well as accountable public spending system will allow the post-war reconstruction of Ukraine to be fully implemented.**

# How international partners can join

- 1** **Sectoral experience** | Provision of the valuable sectoral experience in optimization of the service provision in different areas, especially in terms of public administration reforms
- 2** **Financial support** | Provision of financial support, especially in the field of restoration of the physical infrastructure
- 3** **International integration** | Support in the process of European integration of Ukraine and provision of favorable trade regimes
- 4** **Support in seizure of Russian assets** | Development of the arrested Russian assets seizure mechanisms and their implementation to provide additional funding for recovery
- 5** **Assistance in monitoring** | Assistance in monitoring the social recovery processes for them to happen in accordance with best practices and the EU standards

# INFRASTRUCTURE RECOVERY

Extended Background Analytics for the URC2022  
Infrastructure Recovery Policy Brief

July 2022

1

2

3

4

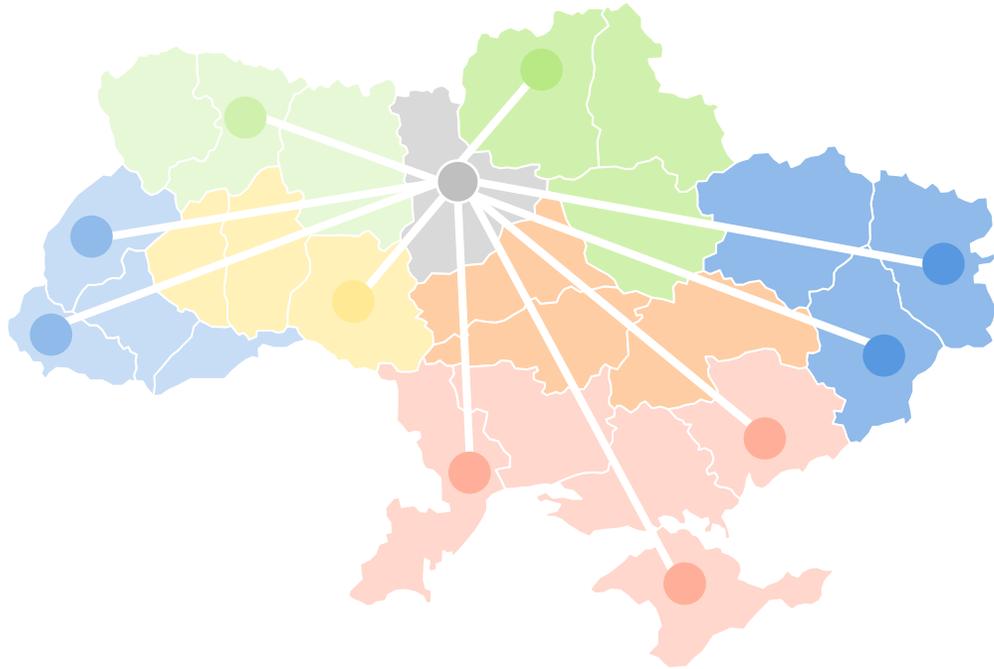
5

# BACKGROUND

**Description of pre-war and current state of regional development  
and overall damages caused by full-scale Russian invasion**



# The decentralization reform has shown the maximum result, providing the regions with flexibility and independence to make important decisions



- Since 2016 the **decentralization of power** from Kyiv to communities and regions has formed 1470 communities across 24 regions, being the most effective reform process in Ukraine so far.
- **Communities have received the more than 20% of taxes** and functions to operate, which made the development planning more inclusive to local needs and opportunities.
- By assessing and understanding the existing social, environmental and economic disparities, the State Regional Development Strategy 2027 has defined the new approach to the country management, based on the territorial context of different functional types of territories.
- Each region has approved the Regional Strategy 2027 with the **defined SMART-specializations** under the national framework.
- Following the regions, communities have built **their own strategies**, synchronizing the 3-level planning system.
- Coming out of the reform, Ukraine has developed its vision of the development as a prosperous country, defining the formula that prosperous 1470 communities in prosperous 25 regions will allow Ukraine to call itself as a successful state.
- Under this formula, with the territorial planning of the state programs and decentralized conditions communities and regions are equipped to provide female and male residents with opportunities for **life, work** and **development**.

Prosperous **united** country



Prosperous **25** regions

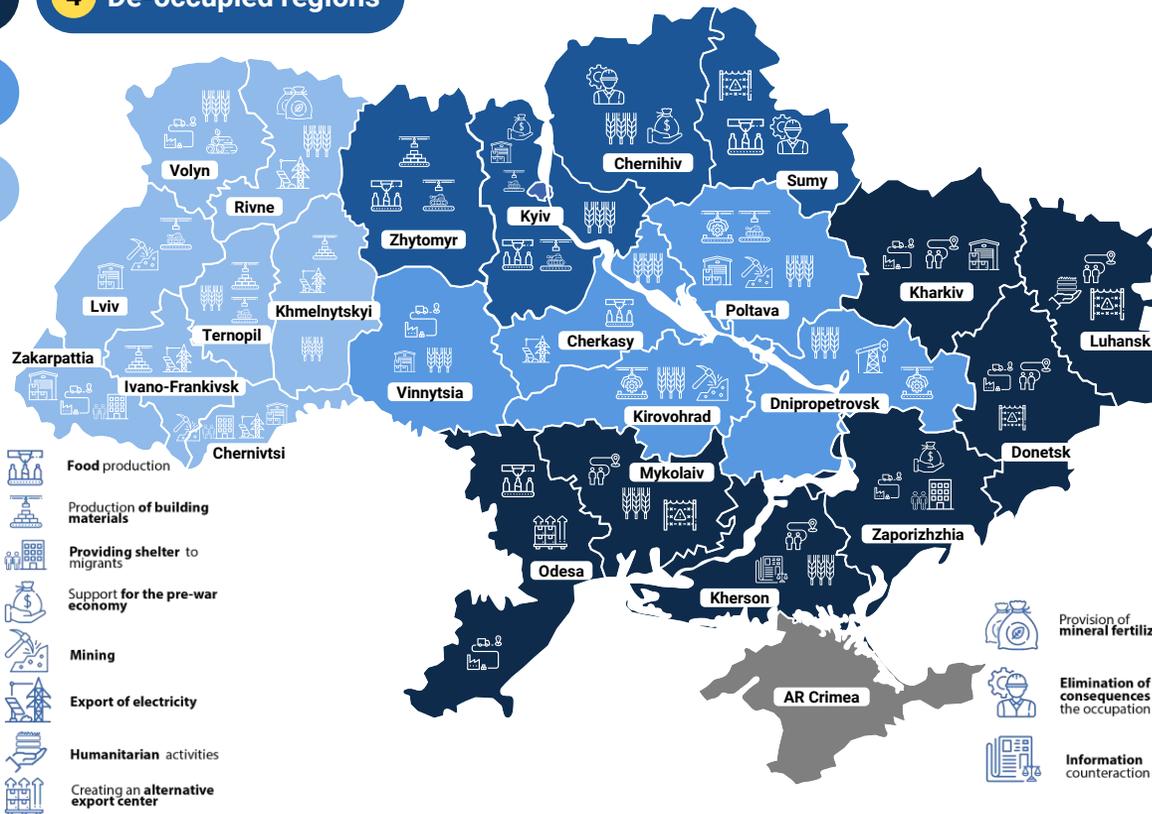


Prosperous **1470** communities

# Thanks to decentralization strong Ukrainian communities ensured flexibility during the full-scale Russian invasion and covered specific urgent needs of the state

The existing threat of hostilities and the damage that is already caused by them unites the territorial approach towards the economic, humanitarian and security activities for Ukraine into 4 regional groups. Each group is viewed through its priority functions and needs.

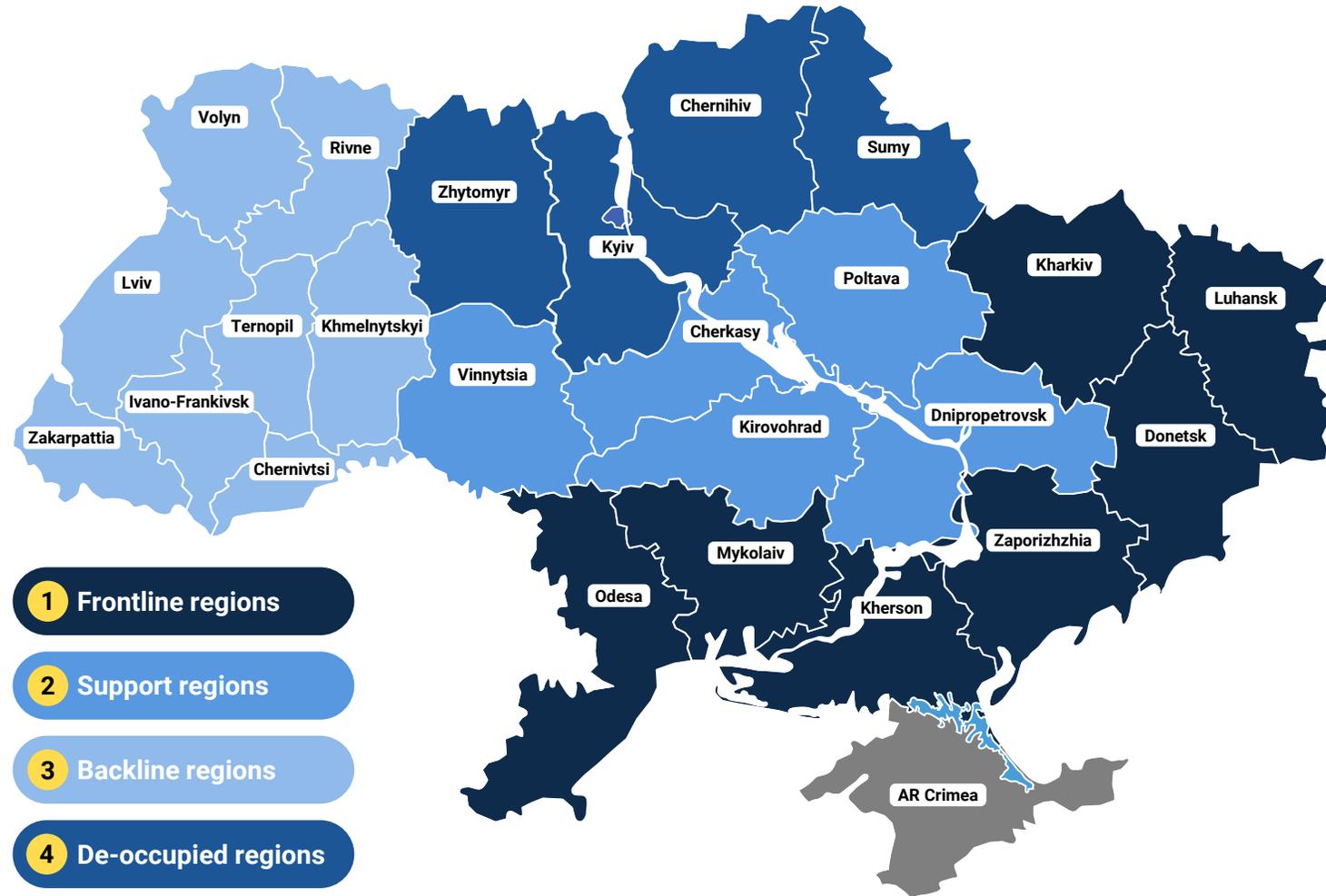
- 1 Frontline regions
- 2 Support regions
- 3 Backline regions
- 4 De-occupied regions



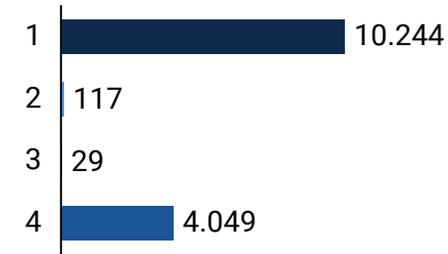
- 1 **Frontline regions are restraining the enemy.**  
Ensuring the functioning of communities and state services. Need for humanitarian assistance. Provision of support for housing and communal services. Provision of priority services, along with the security actions.
- 2 **Support regions are providing logistics for defense and humanitarian cargoes.**  
Formation of humanitarian aid. Ensuring self-sufficiency in food. Providing placement of evacuated enterprises. Re-profiling of enterprises to support the military-industrial complex. Ensuring the support of the local economy.
- 3 **Backline regions are ensuring export/import logistics hub.**  
Ensuring the import of critical food and goods. Functioning as a logistics base. Placement of evacuated enterprises. Re-profiling of enterprises to support the military-industrial complex. Ensuring the support of the local economy and development of social infrastructure.
- 4 **De-occupied regions are recovering from the damages**  
Ensuring the gradual transition of regions to the Support regions group. Ensuring security as well as law and order. Formation of new defensive points to prevent re-invasion. Restoration of work of local self-government bodies and assessment of the situation regarding support of residents. Determining and eliminating the consequences of the invasion in the shortest possible time by a comprehensive restoration of critical infrastructure and relaunch of the local economy.

# At the same time, communities suffered significant damages that require a countrywide recovery program to ensure conditions for work, life, and development of the population

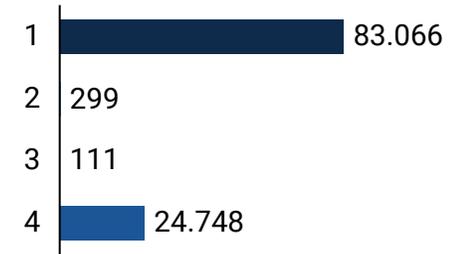
Number of damaged infrastructure objects



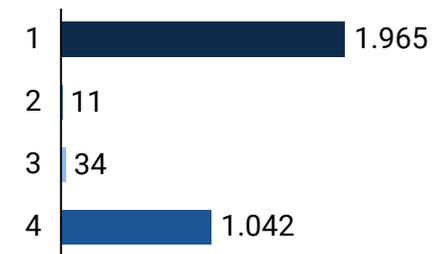
Apartment buildings



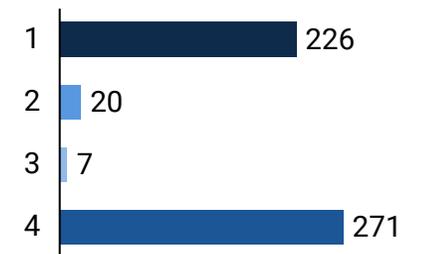
Private houses



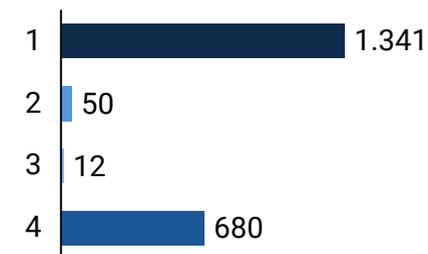
Life-support infrastructure



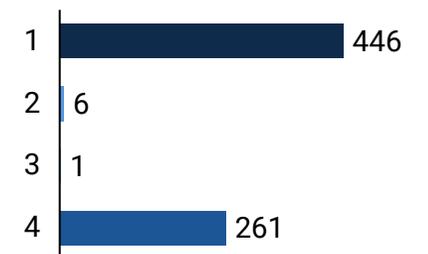
Industry facilities



Educational institutions



Healthcare institutions



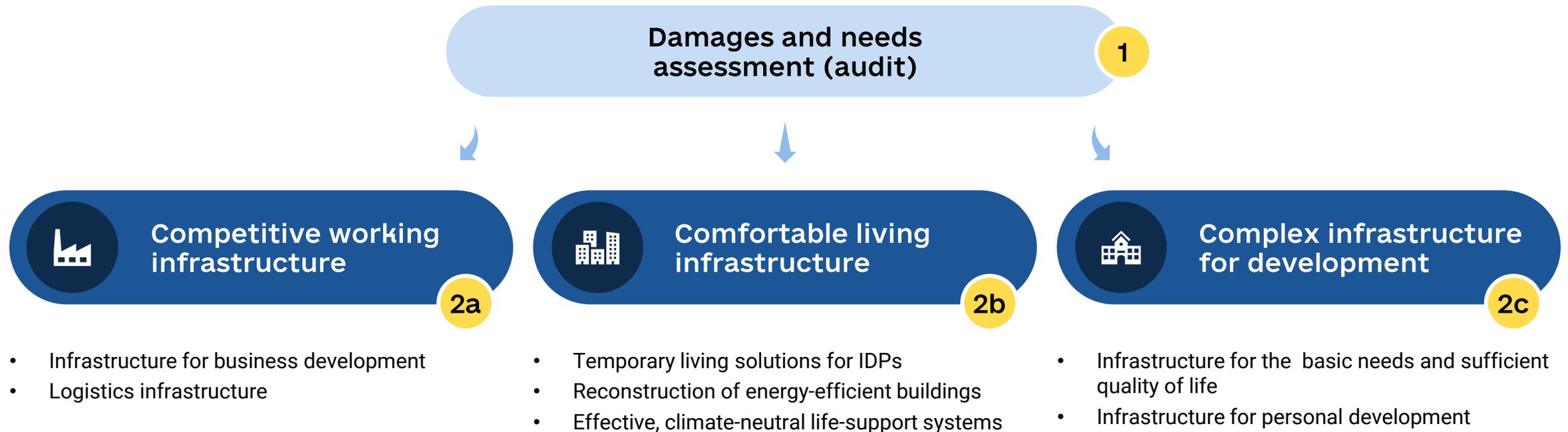
# ACTIONABLE FRAMEWORK

Description of infrastructure recovery framework, background and proposed initiatives for each element of framework



# Infrastructure recovery framework consists of damages and needs assessment followed by projects for working, living and infrastructure for development

The framework below describes the overall structure of the infrastructure recovery. Process should start with the (1) an assessment of damages in different spheres, analysis of the pre-war state of infrastructure networks and an assessment of population and business needs followed by (2) project development for working and living infrastructure, and infrastructure for development.



Following slides will describe (1) background and (2) proposed actions for each topic of infrastructure recovery framework. Next slides will be marked that will show affiliation to abovementioned types of slides →

background

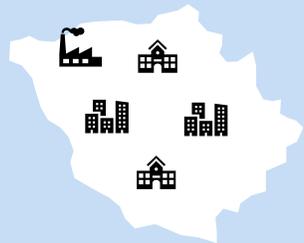
actions

1

# Damages and needs assessment aims at identification of gaps in infrastructure networks for planning further recovery and modernization

## Illustrative visualization of damages and needs assessment process

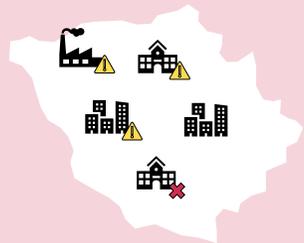
### PRE-WAR STATE



20 000

- The population of the local community was 20 000
- The community was served by 2 infrastructure objects (e.g. schools), that could be optimized through the expansion of one object

### CURRENT STATE



12 000

- 1 After the Russian invasion, one infrastructure object was destroyed, another one was damaged, several residential districts were damaged and several enterprises paused their activities
- 2 8 000 citizens leave their houses, local government is not sure about their return and the expediency of restoration of both infrastructure objects should be assessed

### LEGEND



Infrastructure object



Residential buildings



Enterprises / factories



Partially damaged



Fully destroyed

1

Obtaining prompt and comprehensive information on the total amount of damage and losses caused to Ukraine as a result of the war will **assess existing gaps in infrastructure and will allow lawsuits for compensation to be filed with international courts.**

- The process will be enhanced with **innovative instruments and multi-agent coordination**: (1) open public resources (State Statistics Service, Prozorro, media publications, etc.); (2) operational information from national, regional, and local authorities; (3) Earth remote sensing data; (4) reports on technical inspection by objects; (5) acts on of the surveys by the commissions; (6) the results of enterprises, a comparative inventory of damaged (destroyed) fixed assets and goods; (7) information from procedural documents (court rulings, law enforcement decisions, other materials of criminal cases), etc. **By introducing the inclusive and multisource data gathering, the obtained information will be cross-validated.**

2

**Post-war recovery won't only be focused on the restoration of damaged and destroyed buildings and structures.** The expediency of each infrastructure project will be decided according to the pre-war state of infrastructure and the current needs of different groups of population and businesses in each region. Projects will be prioritized and aligned with the complex plans of territories and general plans of cities and communities. The community-based assessment will allow to analyze the damages and needs with the territorial context which is crucial for further efficient recovery and development planning

- Projects in 3 priority areas will follow a **transparent and inclusive process of project development**, with the engagement of local self-government, local citizens and businesses, sectoral expert unions, and international partners.

2a

## Current state of business development infrastructure doesn't allow regions to fully develop social-economic potential

### Defined SMART-specialization of regions



#### Legend

1. Mechanical engineering, production of equipment, machinery
2. Introduction of agrotech with the use of IT innovations
3. IT-sector development
4. Innovative production
5. Creative industries
6. Biotech
7. Renewable energy
8. Chemical production
9. Agriculture
10. Food industry
11. Woodworking and furniture industry
12. Light industry
13. Tourism
14. Medical industry, rehabilitation, recreation

- The effective planning is a basis for a sustainable and competitive economic ecosystem. Following this concept **each Ukrainian region has defined SMART specializations** (visualized on the map) to enhance the existing potential into modern and innovative value chains. But most of regions didn't begin to fully use it
- Before the war, **Ukraine focused on two types of platforms for the development of new production facilities** or any other economic activities: brownfield based on ineffective or abandoned state property and greenfield based on industrial parks
- Officially around **50 industrial parks are registered in Ukraine. Only 4 of them are functioning and have active residents**. Key barriers to the factual launching of the industrial parks are legal uncertainties, absence of the alignment of plans of industrial parks development with the National and regional economic strategies, therefore low government support, and incomprehension of local communities on how and where to efficiently use those instruments.
- According to the audit of the State Property Fund of Ukraine, there were **hundred thousands of state legal entities and state property objects**. SPFU activated a process of big and small privatization and sold more than 1400 objects. Currently, around 1000 small (which cost less than UAH 250 m) and 27 big objects are ready to be sold in the further auctions to provide economic agents with development platforms.
- All **those platforms need support** from innovation / scientific centers, centers of creative economy and business support centers to boost regional economic development, produce and sell competitive goods and services around Ukraine and abroad. Abovementioned support infrastructure wasn't established or widespread in Ukraine

#### Components of regional development ecosystem



2a

## Current challenges require the continuation of pre-war activities and the launch of completely new initiatives that will accelerate the process

Initiative	Details	Success criteria
<b>Smart specialization reboot</b>	<ul style="list-style-type: none"> <li>War has destroyed not only the production infrastructure but several sectoral value chains, restoration of which needs to be conducted based on the economic efficiency. The development of strategic national economic priorities, followed by reviewed and updated regional strategies with updated SMART-specializations will form the basis for the sectoral development in each region</li> </ul>	25 Regions have updated and nationally synchronized SMART-specializations as a basis for efficient planning
<b>Industrial parks</b>	<ul style="list-style-type: none"> <li>Improve legislation about industrial parks</li> <li>Launch a nationwide program for the establishment of industrial parks in regional growth poles for greenfield recovery and modernization projects throughout the whole country</li> </ul>	Industrial parks ecosystem is a transparent and attractive platform for socially and territory impactful investments
<b>State property objects</b>	<ul style="list-style-type: none"> <li>Relaunch the process of state property privatization or renting process, which will lead to the creation of hundreds of brownfield opportunities</li> </ul>	The privatization process is finished by creating investing projects for each state and communal unused property
<b>Zones of economic activities</b>	<ul style="list-style-type: none"> <li>Along the brownfield and greenfield production platforms, the development of the national parks and recreation zones with supplies and roads will allow small entrepreneurs to fill empty zones with economic activities</li> </ul>	National parks and recreation zones are filled with conditions for business activities
<b>Business development infrastructure network</b>	<ul style="list-style-type: none"> <li>Develop a network of Business support centers for provision of consultations, Center for Creative Economy for diversification of local economies and Scientific centers for stimulation of technological production and strengthening regional SMART-specialization</li> </ul>	The regional business ecosystems are filled with consulting and scientific network to obtain needed resources for the development

**The restored production will provide the economy with job opportunities for women and men and resources to carry on the recovery of the communities and regions on all industry levels.**

2a

## Mostly obsolete, not optimized and not diversified transport infrastructure was worsened after full-scale invasion

Type	Pre-war state	War context*
	<ul style="list-style-type: none"> <li>50% (11 000 km) of railroads were obsolete and required repair; 53% weren't electrified</li> <li>50% (87 000) of freight cars were in unsatisfactory condition</li> <li>Ukrainian railway tracks weren't adapted to the European track width</li> <li>~10% of the export goes through railways</li> </ul>	<ul style="list-style-type: none"> <li>6 300 km of railway tracks and 41 bridges were damaged</li> <li>Railways capacity was insufficient for increased demand on freight export</li> <li>Ministry is working on urgent restoration of railway bridges and construction of railways with European track width</li> </ul>
	<ul style="list-style-type: none"> <li>The quality of road (169 000 km) and bridge (16 155) infrastructure was low: about 85% of roads were worn-out</li> <li>During the previous two years 13 000 km of road were repaired</li> <li>~20% of goods were exported by auto transport</li> </ul>	<ul style="list-style-type: none"> <li>23 900 km of roads and 304 bridges were damaged. Hundreds of cities and villages were cut off from humanitarian aid and other freight delivery</li> <li>Ministry is working on urgent restoration of critical roadways and expansion of road capacity for transportation to the Western border</li> </ul>
	<ul style="list-style-type: none"> <li>More than 30 automobile and ~20 railway checkpoints on the border required modernization and optimization</li> <li>Facilities for multimodal logistics on the border weren't developed</li> </ul>	<ul style="list-style-type: none"> <li>Pre-war capacity of checkpoint became insufficient due to extremely increased refugees and freight export flows through Western border</li> <li>Ministry is working on construction of reloading facilities on the Western border, expanding checkpoints capacity and their optimization</li> </ul>
	<ul style="list-style-type: none"> <li>All 13 seaports required modernization. Inefficient regulation and management of the port industry hindered maritime transport development</li> <li>The reopening of river traffic was slowed by outdated and depreciated infrastructure and insufficient funding</li> <li>Seaports ensured ~70% of export</li> </ul>	<ul style="list-style-type: none"> <li>Infrastructure of 4 seaports was damaged and 18 seaports (including 5 Crimean ports) in Black and Azov seas which ensured 70% of export were blocked</li> <li>Ministry is working on increasing capacity of available seaports (Izmail, Reni, Ust-Danube) and agreement on freight logistics through EU seaports</li> </ul>
	<ul style="list-style-type: none"> <li>19 airports functioned in Ukraine, but only 8 of them served more than 1000 flights per year</li> <li>~1% of freights were exported by air</li> </ul>	<ul style="list-style-type: none"> <li>12 airports were damaged</li> <li>Air transportation was fully stopped after full-scale invasion and won't be resumed up to the end of martial law</li> </ul>

2a

# The war shows imbalances in the logistics network and requires actions that will ensure the sustainability of the transportation system

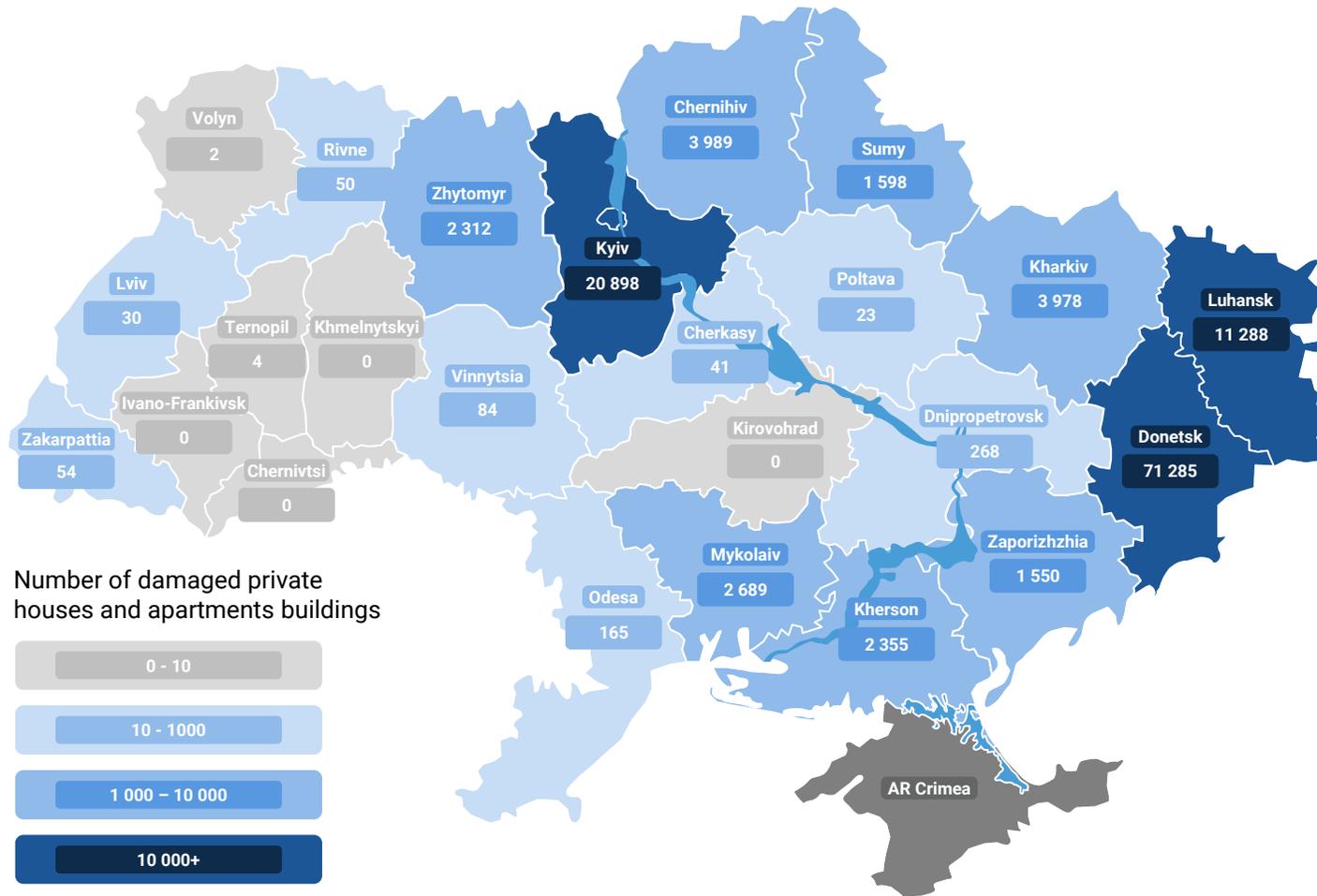
Initiative	Details	Success criteria
<b>Urgent actions to support the economy during the war</b>	<ul style="list-style-type: none"> <li>• Provide immediate repair of roads, railways tracks and bridges</li> <li>• Construct railroad connection between Izmil and Reni (Odesa region), Berezyne (Odesa region) and Basarabeasca (Moldova), in order to allow Ukrainian trains to arrive to the Danube river ports</li> <li>• Construct of reloading terminals and other infrastructure near Western borders for increasing export capacity</li> <li>• Ensure further simplification of regulatory procedures related to transporting goods from Ukraine to the EU and related issues</li> </ul>	The existing exporting potential of metals and agro goods is supported by the needed infrastructure, altering the blocked seaport delivery
<b>Development of the railway infrastructure</b>	<ul style="list-style-type: none"> <li>• Reconstruct and lay new railway tracks with the European track width, improving the coordination of the transport process with EU countries for the ability to diversify export logistics through the western border</li> </ul>	Ukraine – EU trade is supported by the efficient railway infrastructure
<b>Development of the auto infrastructure</b>	<ul style="list-style-type: none"> <li>• Introduce the best world practices in the design and construction of auto roads and bridges, own production of bitumen, development of infrastructure for electric cars, cyclists, and personal electric transport users</li> <li>• Reform urban and suburban passenger transport for ensuring sustainable and high-quality mobility for agglomerations and making sure it is accessible for different groups of passengers, including low-mobility groups;</li> </ul>	Ukrainian high quality road infrastructure connects all demanded locations allowing the implementation of the multimodal transportations
<b>Development of the sea and river infrastructure</b>	<ul style="list-style-type: none"> <li>• Integrate Ukrainian water transport system into the EU transport system, increase in capacity, modernization, and development of ports in the Danube region, and continuation of the planned PPP projects</li> </ul>	Ukrainian water systems are used by their full potential to provide efficient transporting service for the multimodal logistic infrastructure
<b>Development of the air infrastructure</b>	<ul style="list-style-type: none"> <li>• Reconstruct or construct the optimized international airports network (5-7 airports)</li> </ul>	Air infrastructure increases its capacity to transport goods and people to all demanded locations
<b>Cooperation with the EU</b>	<ul style="list-style-type: none"> <li>• Enhance cooperation with the European Union in transport sector, inter alia ensure further harmonization of Ukrainian legislation with EU law</li> <li>• Improve the checkpoints across the state border to increase their capacity, comfort, and diversify export flows</li> </ul>	Ukrainian transport system fully integrated into the EU logistics network

**The restored logistics infrastructure will connect production facilities between each other and with final customer and will support economic development in all communities and regions on all industry levels.**

2b

## Millions of people left their houses and thousand of residential buildings were damaged which requires solving housing issues

### Damages of residential buildings in regions

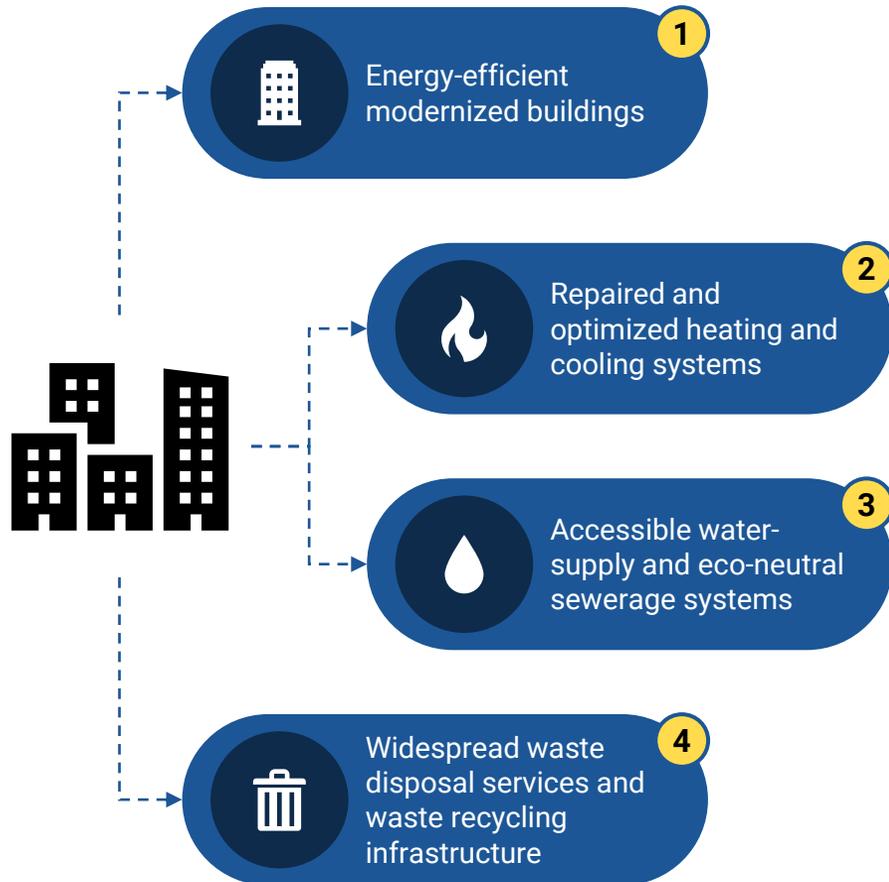


- Even before the full-scale war, there was a problem of housing affordability for citizens. Since the beginning of the war, about 8 million have become internally displaced persons (IDPs). **Shelters and other temporary solutions do not address housing issues in the long run** and do not allow IDPs to fully integrate into the new environment.
- According to preliminary estimates, in mid-June 2022, **more than 122 thousand residential buildings were destroyed and damaged** (including 107.8 thousand - private houses; 13.1 thousand - apartment buildings; 0.1 thousand - dormitories). Direct material losses from the destruction and damage of residential buildings account for more than 35% of all losses caused by hostilities as a result of the armed aggression of the Russian Federation.
- As a result of the war, **about 25% of the territory of Ukraine was damaged, some settlements were completely destroyed.** Reconstruction of destroyed towns and villages requires the establishment of new approaches to building planning, construction of buildings and structures and the location of production facilities of enterprises.
- The current **civil protection system does not protect the civilian population from the risks associated with hostilities.** The vast majority of shelters located in settlements can be classified as the simplest shelters, a significant part of them are not equipped with evacuation exits, do not have access to autonomous water supply and sewerage systems, are not suitable for low-mobility persons and are not adapted for long-term stay of people.

2b

## Living infrastructure and life-support systems in Ukraine are physically obsolete and require complex modernization

### Components of comfortable living infrastructure



- 1** In general, the building sector accounts for 40% of final energy consumption (about 32% is consumed in residential buildings). **More than 80% of existing buildings were built before 1994. Over the last 30 years, no major repairs have been made to the buildings and proper maintenance has not been provided.** This has led to critical wear and tear on indoor networks that do not withstand the stresses, threatening human health and life and by not meeting energy efficiency requirements, leading to excessive costs. The pace of thermal modernization of buildings remains extremely low. Without proper management and maintenance, all buildings will stay in poor technical condition.
- 2** **Heating systems are technologically obsolete, energy intensive and inefficient.** About 50% of boiler equipment and heating networks have reached the planned endurance age and need to be replaced. More than 90% of thermal energy for heating buildings is produced from natural gas. The cooling sector is developing haphazardly and chaotically, without considering future energy market and climate challenges.
- 3** **Only about 65% of the population has access to drinking water supply systems,** of which less than 30% of settlements are provided with centralized water supply. Less than half of the population has access to sewerage systems. **Only 50% of wastewater undergoes a full cycle of biological treatment.** 1/3 of wastewater is discharged directly to water bodies without any treatment.
- 4** Only 80% of the population is covered by solid waste disposal services. **Less than 8% of household waste is recycled,** although it has significant resource and energy potential. Most waste is disposed of in landfills, making waste management the only growing source of CO<sub>2</sub> under the Paris Agreement monitoring since 1991, which does not meet the key principles of the waste management.

2b

## Immediate solutions to provide accommodation and strategic initiatives to improve living conditions should be implemented

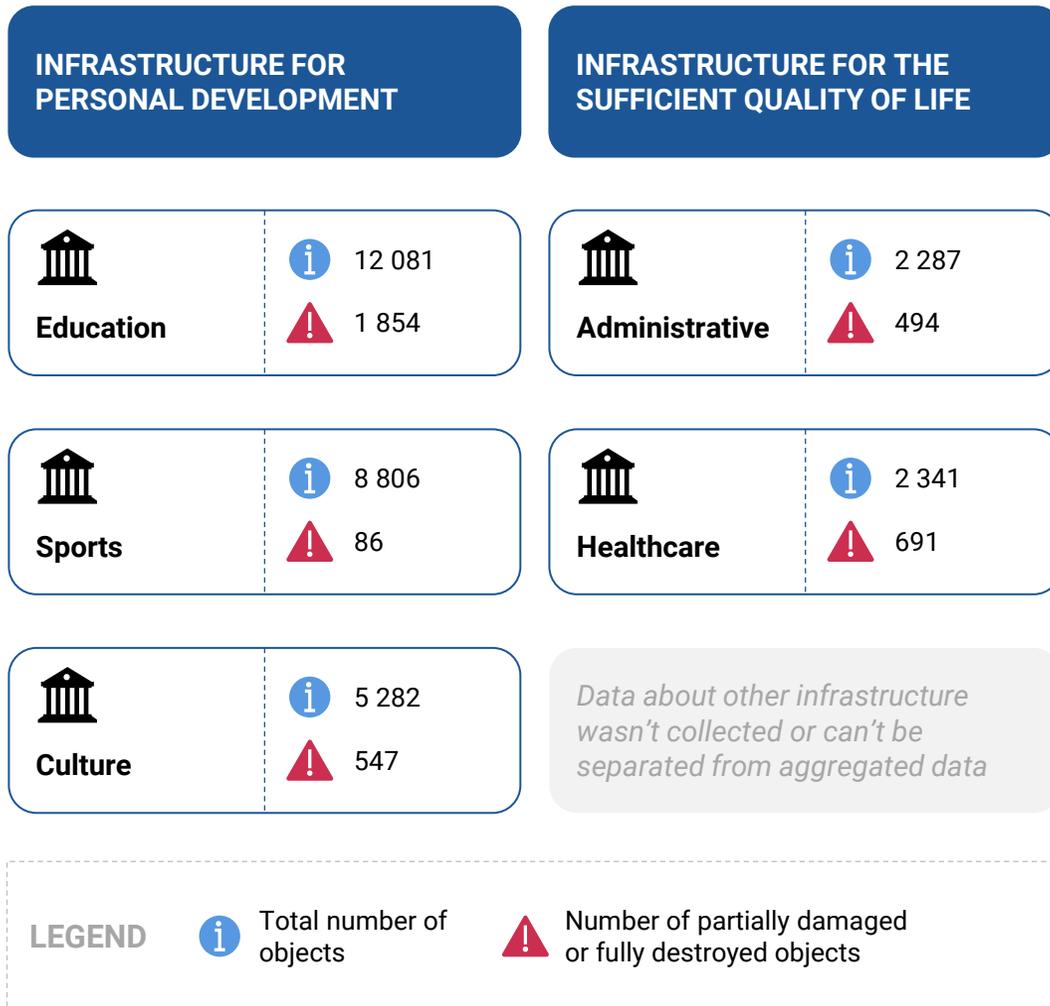
Initiative	Details	Success criteria
<b>Urgent actions during the war</b>	<ul style="list-style-type: none"> <li>Temporary living infrastructure for the Internally displaced citizens in the Western communities</li> </ul>	All IDPs have a short-term place to be accommodated
<b>Providing the accommodation</b>	<ul style="list-style-type: none"> <li>Restore damaged buildings based on the complex and general plans of territories</li> <li>Launch social housing program (repurchase of apartments by state, reconstruct non-residential buildings into residential accommodation solutions) and provide the population with accommodation</li> </ul>	Target groups of population provided by long-term accommodation
<b>Ensuring energy efficiency</b>	<ul style="list-style-type: none"> <li>Construct the nearly zero-energy buildings by conduction of a large-scale energy renovation of buildings with the modernization of district heating to reduce natural gas use, introduce the efficient heating and cooling (renewable energy, waste heat, cogenerated heat)</li> </ul>	Communities consume energy more efficiently and people live with a high level of thermal comfort, consume less and spend less on heating.
<b>Development of the water supply systems</b>	<ul style="list-style-type: none"> <li>Modernization of centralized potable water supply and water sewage systems</li> </ul>	The people are provided with quality drinking water and sewage treatment to reduce the negative impact on the environment
<b>Development of the waste management systems</b>	<ul style="list-style-type: none"> <li>Restoration of damaged and destroyed means of household waste management and development of the facilities to provide recycling and utilization of at least 15% of the total amount of household waste by 2030</li> </ul>	Recycling and utilization of household waste is carried out in all the communities

**The recovered and developed living infrastructure with resilient, sustainable, and inclusive solutions will allow displaced Ukrainian women and men to return to their home communities and all Ukrainians to enjoy higher living standards.**

2c

## The social infrastructure network wasn't optimized and didn't fully meet the requests of the population which was worsen as a result of the war

### Current state of complex infrastructure for development



- Quality of life and personal development infrastructure was undergoing the development process before the war. **Networks of social infrastructure facilities were unable to provide quality services** due to their obsolescence. Networks were inflated, which increased budget expenditures for their maintenance and, however, did not increase the availability of services throughout Ukraine
- Most of the **health care facilities** were not technically and architecturally capable of providing quality and inclusive medical care. **Security infrastructure** was not able to provide a fast response to emergencies. And a network of **Administrative Service Centre** covered about 70% of territories. The **education network** of schools and kindergartens was inefficient, being characterized by a large number of ineffective institutions. Most **cultural infrastructure** facilities required full repairs. The state of affairs of **sports infrastructure** didn't stimulate the active lifestyle of the population.
- During 2020-2021 the **network of social infrastructure was significantly improved** under the program of the President of Ukraine "Large Construction": 182 modern schools, 47 kindergartens, 473 health care facilities, 1241 sports infrastructure objects, and 22 cultural objects were reconstructed or built. The same progress was reached in the safety and administrative infrastructure sectors. An even bigger scope of projects was planned for the next 2 years.
- After full-scale invasion **more than 3 700 social infrastructure institutions were partially damages or fully destroyed.**
- Ukraine should rethink its approach to social infrastructure development, introducing the analyzes of the needs of different groups of population in different territories before building or repairing. New Ukrainian social infrastructure will effectively meet the requests of different groups of population and satisfy their needs and will be able to provide high-quality services across all territories of Ukraine.

2c

## Following initiatives should be implemented to create a basis for the provision of public services and ensure personal development

Initiative	Details	Success criteria
<b>Urgent actions during the war</b>	<ul style="list-style-type: none"> <li>Ensure provision, restoration and digitalization of state, communal administrative services in the occupied territories, territories under active hostilities and for citizens abroad</li> </ul>	All citizens have access to the demanded state and communal services at any location
<b>Restoration of social infrastructure object</b>	<ul style="list-style-type: none"> <li>Restore damaged and destroyed infrastructure objects considering the expediency of each infrastructure project that should be assessed according to the pre-war state of infrastructure and the current needs of different groups of population in each region</li> </ul>	The effectively planned and developed social infrastructure is ready to be filled with high-quality content by responsible sectoral Ministries
<b>Modernization of social infrastructure networks</b>	<ul style="list-style-type: none"> <li>Develop typical projects for social infrastructure facilities, that will consider European standards of quality of services, sustainability, safety, and inclusivity and can be scaled up and adapted to the needs of different types of territories</li> <li>Develop new Ukrainian social infrastructure networks to effectively meet the requests of the population and satisfy their educational, cultural, and sports needs.</li> <li>Maintain and develop tourism infrastructure, including cultural sites to promote Ukrainian history and boost national memory, and ensure safety for tourism tours in Ukraine</li> </ul>	Developed infrastructure will be able to provide high-quality services based on accessibility and inclusion across all territories of Ukraine

**New social infrastructure will effectively meet the requests of different groups of population and satisfy their needs. It will create complex life systems in happy, vibrant communities with strong social connections, a sense of belonging and mutual responsibility, and high quality of life around Ukraine.**

# How international partners can join

The complex and multisectoral infrastructure recovery and development program will be backed by an efficiently coordinated set of diverse financial instruments, to which international partners can contribute. Territory-sensitive and needs-based planning will provide international partners with the opportunity to allocate investments in the most impactful way.

**1** Public-Private Partnership agreements for working infrastructure and infrastructure for development

**2** Credit programs from IFIs to the state and communities for their working and living infrastructure projects

**3** Direct complex grant programs for NGOs, regional development agencies, and local self-government to stimulate the recovery of territories and restoration of exact infrastructure objects

**4** Crowdfunding initiative United 24 targeted at the general rebuilding of Ukraine

**5** Municipal bonds for funding development plans of communities

**6** Green finance instruments for energy-efficiency and sustainable projects in each sphere

# ECONOMIC RECOVERY

Extended Background Analytics for the URC2022 Economic  
Recovery Policy Brief

July 2022

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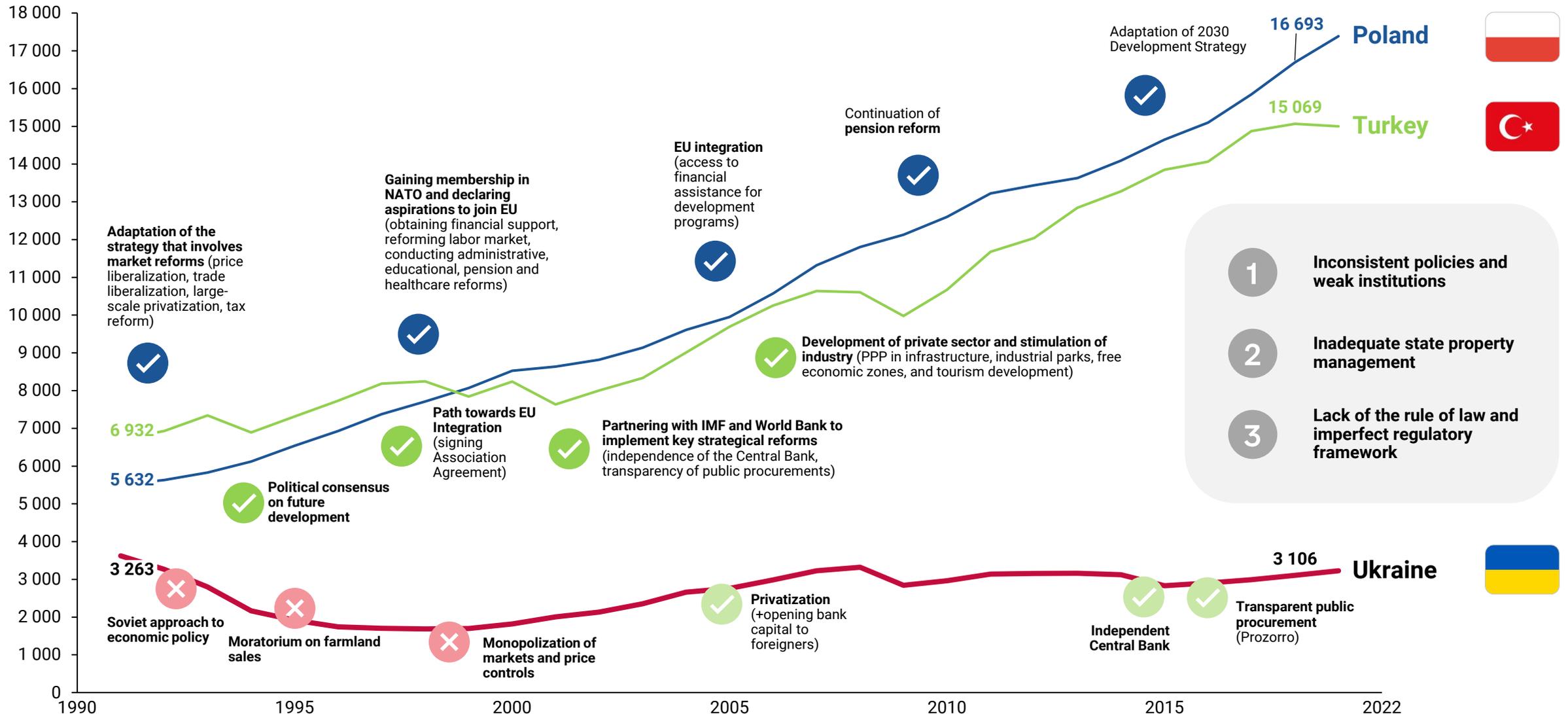
# BACKGROUND

Description of pre-war and current state of economy



# Years of inconsistent policies, inadequate state property management and weak regulatory framework **did not allow Ukraine to realize its potential**

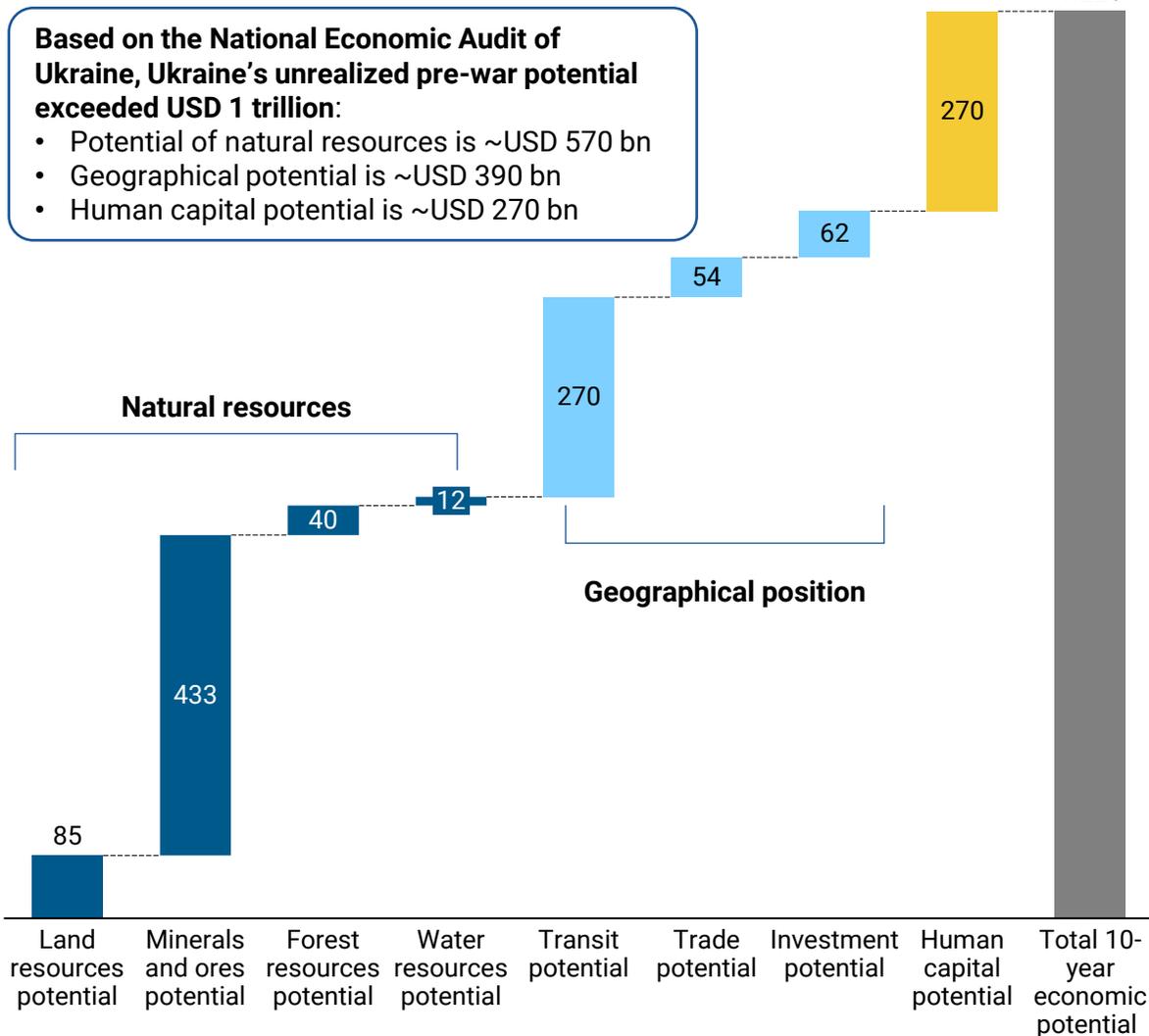
Real GDP per person, 1991-2019, thousand us dollars (constant 2010)



Source: National Economic Audit of Ukraine, calculations of Center for Economic Recovery and EasyBusiness

# Ukraine had huge pre-war potential and some progress in economic reforms

## Unrealized potential of Ukraine, 10 years period estimate, USD bn

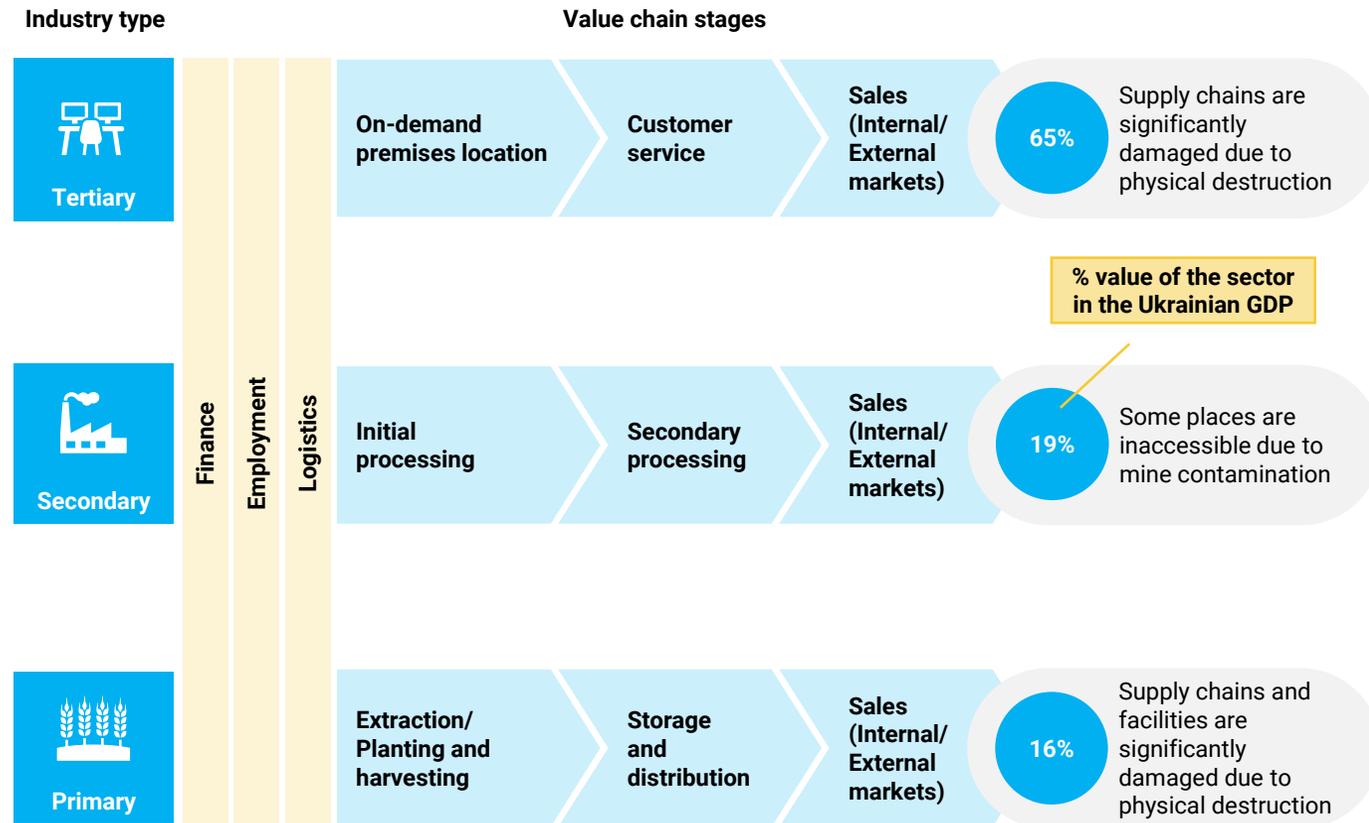


## Recent progress in economic reforms

- 1 New Free Trade Agreements.** Since 2014, Ukraine has signed FTAs with Canada, Turkey, and Israel. Also, in 2014 Ukraine and the EU signed the Association Agreement outlining both parties' obligations.
- 2 The EU candidate country status.** 2022 marks the historic milestone for the modern Ukrainian history. After 8 years since the AA was signed, the EU has granted Ukraine candidate country status.
- 3 Sound financial sector.** Ukrainian government built the institutional capacity of the National Bank of Ukraine thereby driving the financial sector transformation (currency liberalization; floating exchange rate; inflation targeting; stabilization of the banking sector).
- 4 Digitalization of public services.** Electronic platform Diia made 72 public services available online. As of 2021, more than 12 mn people used its services.
- 5 Transparent public procurement.** Since 2016, all state and municipal procurement are done through the electronic system of public tenders - ProZorro. According to ProZorro, the state saved around USD 255 mn in 2021.
- 6 Privatization.** More than UAH 11 bn was transferred to the state budget in the last 5 years as a result of successful privatization sales. The process continues with more than 3.5 thnd of SOEs still in place.
- 7 The land reform.** In 2020, the moratorium on the agricultural land sales was lifted. Land market liberalization continues.
- 8 Deregulation.** Successful reforms aimed at easing of the state control of businesses led to a rapid Ukraine's jump in Doing Business ranking – position 64 in 2020 compared to 112 in 2014.

# The war exacerbated Ukraine's economic situation

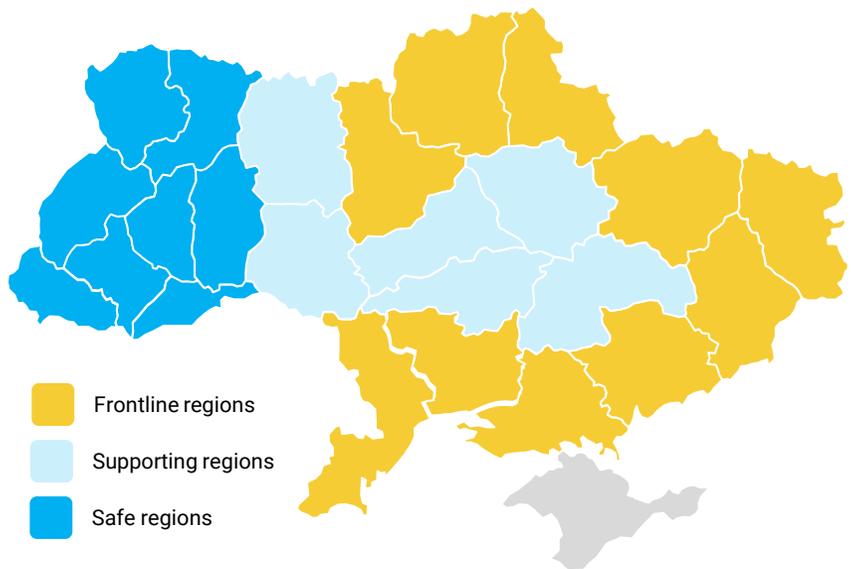
## War impact assessment by sectors of economy



- The Ukrainian war-time economy could be divided using three-sectors model - Primary sector (agriculture and mining), Secondary sector (manufacturing, including construction) and tertiary sector (services).
- **Ukraine has a strong primary sector:** the agricultural sector (up to 10% of GDP) combined with the extraction of raw materials, the total estimates of its contribution to GDP amount to 27%.
- **Enterprises from the primary sector are not eligible for relocation** for physical reasons (they depend on land and natural resources). The Ukrainian manufacturing sector is diverse and its contribution to the GDP ranges between 10% and 25%
- The **mobility of the secondary sector is also low**, as it is dependent on long supply chains, warehouses and other logistical infrastructure.
- Although precise numbers vary based on different methodologies **most of the sources confirm that the tertiary sector contributes over 50% of the Ukrainian GDP**. Due to the relatively short value chain and relatively limited equipment used, the services sector is highly eligible for relocation.

# Economic recovery should consider regional specifics

## War impact assessment by regions of Ukraine



A regional approach to interventions is more appropriate than a sectoral one

### FRONTLINE REGIONS

Regions that are directly threatened by the military invasion or invaded by Russia; business activities on such territories are minimal.

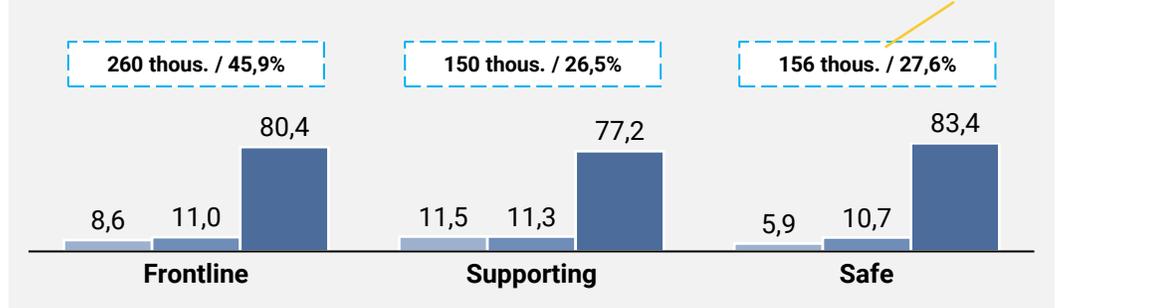
### SUPPORTING REGIONS

Regions that are relatively safe for business activities and play a crucial role in logistics for defence and humanitarian cargo.

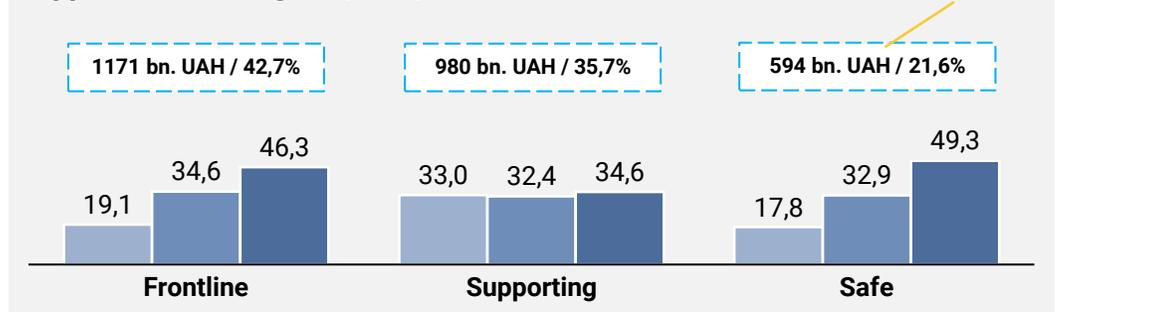
### SAFE REGIONS

Regions that are mostly safe for business activities with minimal risk of invasion.

Differences in sectoral contribution to the economy of frontline, support and rear regions, number of enterprises, %



Differences in sectoral contribution to the economy of frontline, support and rear regions, GRP, %



■ Primary ■ Secondary ■ Tertiary

- Historically, the **frontline regions of Ukraine had the largest population density** as well as its workforce.
- In the north-eastern regions of Ukraine, which were liberated by the Ukrainian armed forces in early April, **a large number of important transport facilities were physically destroyed, creating significant problems with supply chains** to these regions.
- The naval blockade of the Ukrainian sea ports significantly undermined Ukrainian exports. **Railroad turns into a backbone for cargo exports and passenger transportation in the country.**

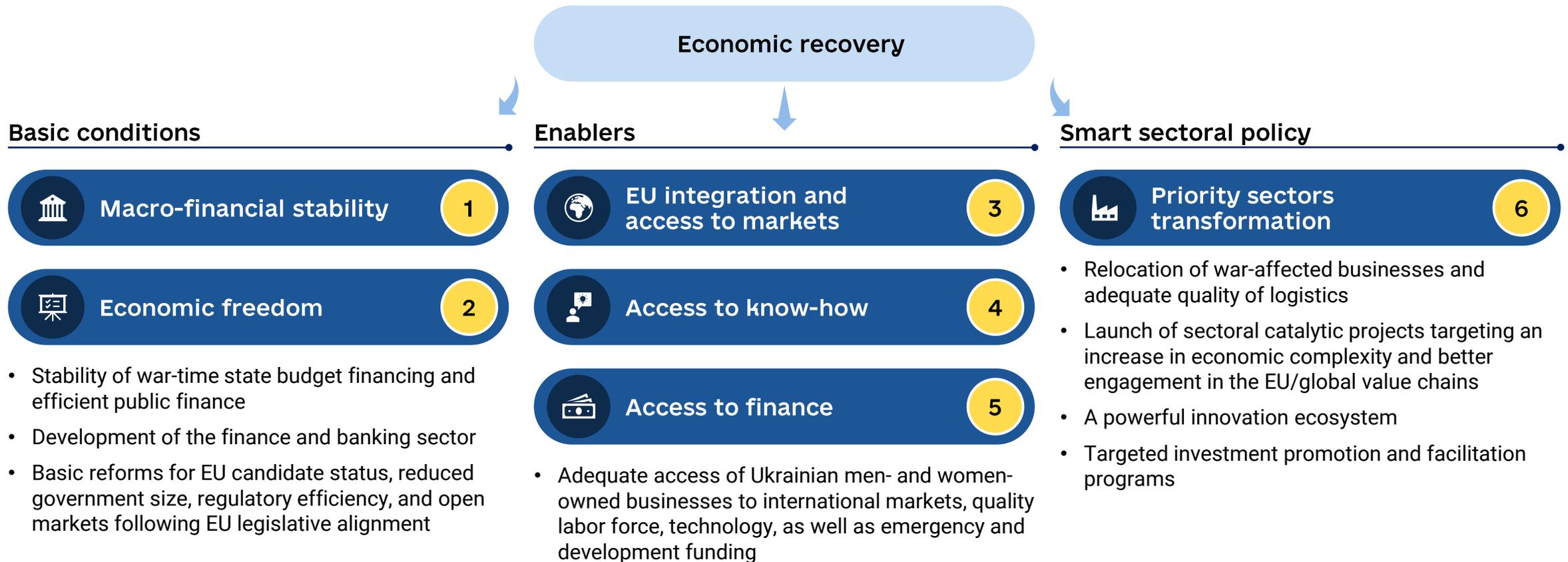
# ACTIONABLE FRAMEWORK

Description of background and proposed initiatives for each element of economic recovery



# Economic recovery covers basic conditions, enablers, and smart sectoral policy

Years of mismanagement and policy inconsistency turned Ukraine into a regional outlier in terms of economic development. The war exacerbated Ukraine's economic situation. Ukraine urgently needs innovative solutions for economic recovery and modernization. **Ukraine's thirst for freedom and self-organization coupled with unprecedented global partnership provides a once-in-a-lifetime opportunity to become a global leader in innovation and sustainable economic prosperity.** The proposed framework describes the approach to economic recovery, covering 3 pillars and 6 priority areas.

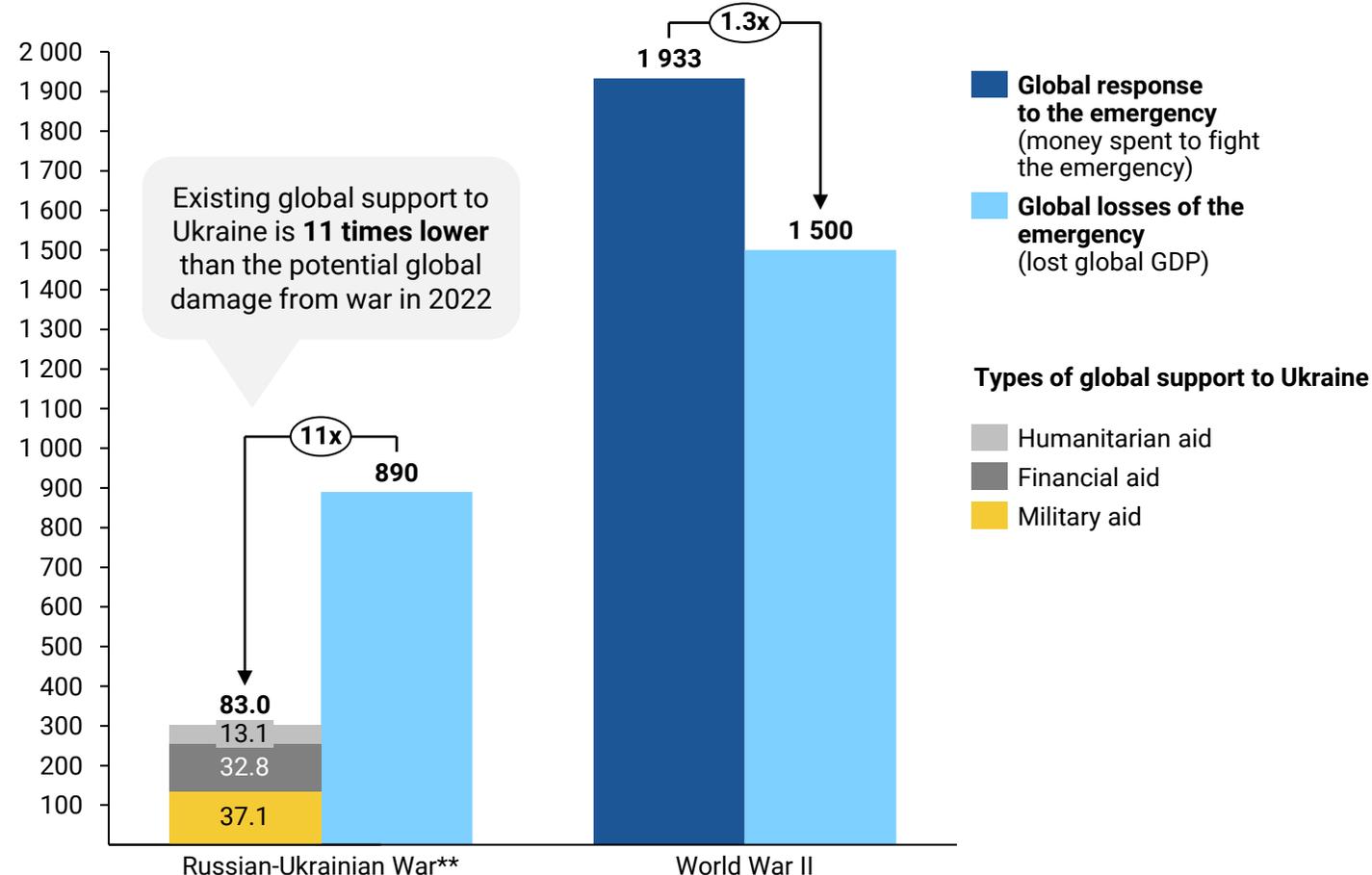


Next slides describe (1) background and (2) proposed initiatives for each priority area. The slides are marked accordingly → [background](#)

[actions](#)

# Macro-financial stability: Russian war against Ukraine is causing a many-sided economic shock

Comparison of the global response and global losses\* of the Russian-Ukrainian war and World War II, USD bn per year



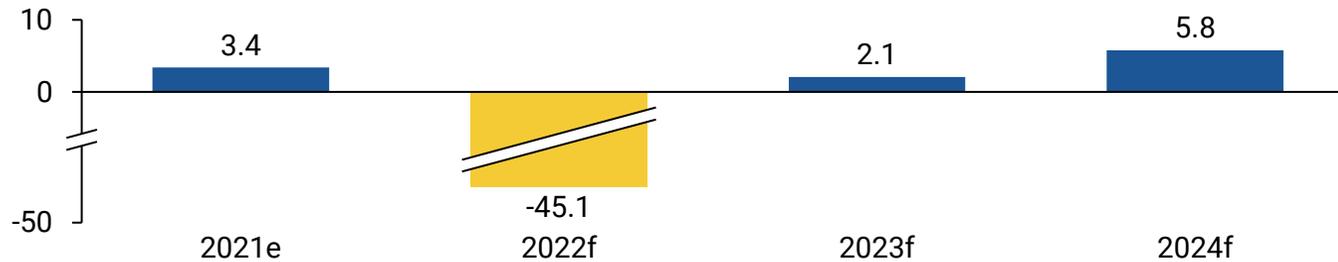
- The Russian full-scale invasion of Ukraine is a major threat to global economic growth. Based on different estimates, **the Russian-Ukrainian war will cost the global economy ~USD 900 bn of GDP in 2022.**
- Moreover, Russia causes major risks to global security: according to the polls, **almost 87% of Russians support attacking the EU countries after Ukraine, such as Poland, Baltic countries, and others.**
- Furthermore, **the Russian actions create a precedent for the intensification of disputes over other territories in Asia and other regions.** Today there is the biggest threat of World War III after the end of the Cold War.
- **Even though the international sanctions put inevitable pressure on the Russian economy, their effect is stretched in time and cannot stop the war in a short term.** Therefore, the key intervention expected from the global community is strengthening Ukraine's capacity to oppose the aggression.
- **It is crucial for the world to facilitate its response now as global costs will only grow until Russian aggression is stopped.**

\* - international aid to Ukraine is as of June 7; calculations on the WWII costs are based on military expenditures of major Allies forces, while material, human and occupational costs are based on the academia papers' estimations for the major Allies countries

1

# Macro-financial stability: Ukraine's economy is expected to shrink by an estimated 45% this year

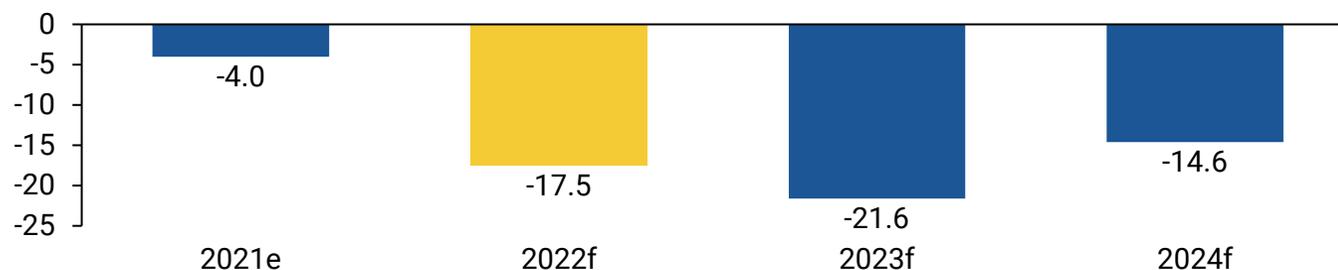
Projected real GDP growth, at constant prices, %



Projected inflation (CPI), %



Projected government budget deficit, % of GDP



- **Due to the successful macroeconomic, fiscal and financial reforms, Ukraine has tackled the COVID-19 pandemic better than it was anticipated and effectively started economic recovery in 2021.** The Ukrainian economy grew by 3.4% in 2021 as domestic demand was supported by the easing of pandemic restrictions.
- **However, Ukraine has suffered a massive economic and humanitarian crisis following the Russian invasion.** To prevent macro-fiscal collapse, the government has imposed capital control, banking sector restrictions, announced tax deferrals, and other measures aimed to support the business and financial sectors.
- **A large fiscal gap opened as tax revenues dropped sharply.** In response, international partners have provided substantial funding (grants, loans, etc.).
- **Moreover, as a result of the crisis, the inflation rate started growing rapidly.** To restrain inflation, the National Bank of Ukraine has increased the key rate to 25%.
- The further projections are subject to high uncertainty. **Assuming the war continues for several months, a 45% GDP contraction is anticipated in 2022 according to the World Bank.**

# Macro-financial stability: Ukraine needs effective measures to ensure macro-financial stability, public finance efficiency, and banking sector development

Initiative	Details	Success criteria
Ensure the macroeconomic stability	<ul style="list-style-type: none"> <li>• Work effectively with international partners to <b>attract needed macro-financial aid</b></li> <li>• <b>Return to the inflation targeting policy</b> and <b>floating exchange rate</b> as soon as the situation allows</li> <li>• Gradually <b>abolish currency restrictions</b></li> </ul>	Level of prices in Ukraine is stable
Increase efficiency of public finance	<ul style="list-style-type: none"> <li>• Increase the <b>efficiency of the tax system</b> to reduce a tax burden on businesses</li> <li>• Gradually <b>decrease the level of government expenditures</b></li> <li>• Decrease the risks of <b>sovereign debt</b></li> </ul>	Level of redistribution of GDP through public finances equals ~35%
Lead the development of the banking sector	<ul style="list-style-type: none"> <li>• <b>Cleaning up the financial sector</b> from problematic financial institutions in all segments</li> <li>• Promotion of <b>bank financing of the economy</b>, as well as the <b>development of non-bank financing</b></li> <li>• Development and implementation of actionable <b>strategies for state-owned banks</b></li> <li>• Development of the <b>insurance market</b></li> <li>• Improvement of the <b>financial literacy of the population</b> including elderly</li> <li>• Creation of trustful infrastructure for the <b>stock market and organized commodity markets</b></li> </ul>	Ukraine has efficient financial sector that facilitates the overall development of the economy

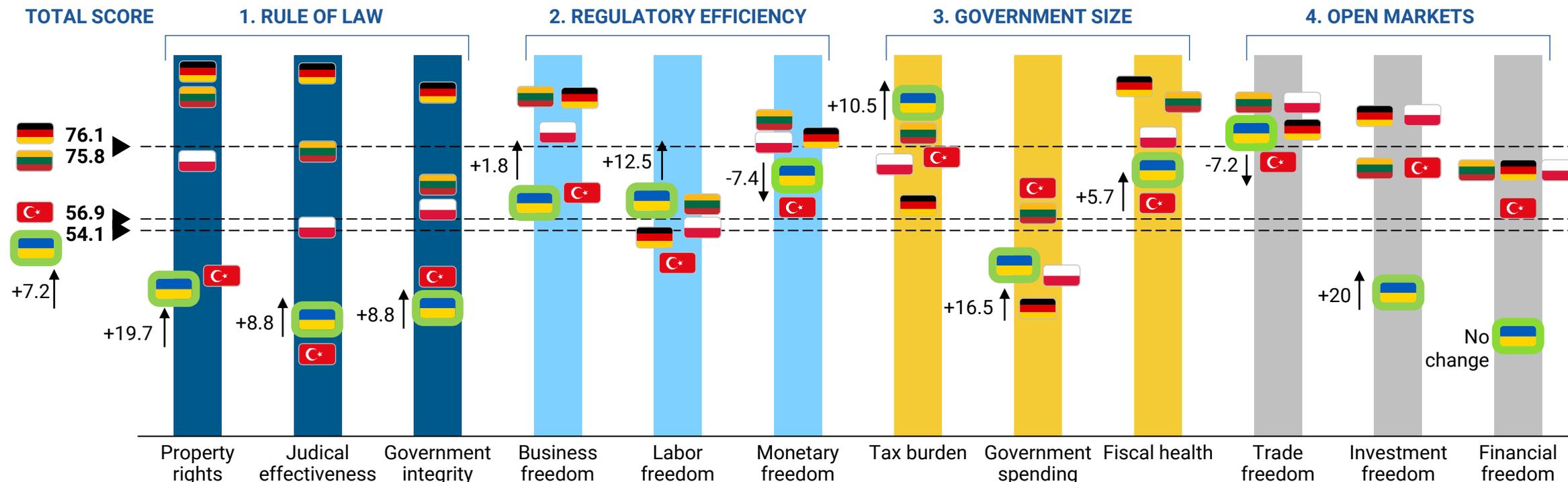
Macro-financial stability as well as an efficient finance and banking sector will contribute to the adequate functioning of the state, restoring business activity, increasing investors' confidence, and ensuring sustainable economic growth.

## Economic freedom: Despite progress, Ukraine scores low in economic freedom

background

actions

The Index of Economic Freedom by The Heritage Foundation in 2022



Since 2015, Ukraine has managed to improve its overall Economic freedom ranking with 7.2 points growth. However, Ukraine's rank is still below the world's average (60).

**The rule of law is the weakest performing section for the Ukraine.** Despite property rights being protected by the law, there is low trust in the judicial system due to corruption taking place as well as political pressure on the regulatory system.

Ukraine has greatly improved its labor freedom rank partially due to the developments in the IT sector. **Regulatory decisions are often arbitrary** which undermines business freedom potential. In addition, **there are numerous loss-generating SOEs** with other subsidized areas (natural gas) in place that drag monetary freedom down.

Ukraine performs well in terms of the tax burden with 18% corporate and 20% of individual taxes. However, **the government spending increased** over the last several years accounting for **more than 40% of GDP** and the budget deficits of more than 3% of GDP leading to a lower score in other criteria of the section.

**There are 20 FTAs in force in total** with several major (DCFTA, Canada, Turkey) signed after 2014 which lowers the weighted average tariff rate to 3.2% for Ukrainian goods. On the other hand, **the absence of needed reforms and bureaucracy hinders the potential of private, foreign investments,** and development of the capital market.

## Economic freedom: Ukraine needs to ensure economic freedom: rule of law, limited government size, regulatory efficiency, and open markets

Initiative	Details	Success criteria
Ensure rule of law	<ul style="list-style-type: none"> <li>• <b>Implement the institutional reforms</b> to ensure property rights, judicial effectiveness, anti-corruption, and government integrity</li> </ul>	Ukraine fulfilled all judicial criteria to obtain the EU membership
Reduce the size of the government	<ul style="list-style-type: none"> <li>• <b>Privatize all non-strategic state-owned assets</b></li> <li>• <b>Complete a corporate governance reform in state-owned enterprises</b></li> <li>• <b>Centralize ownership of assets that remained in state property</b></li> <li>• <b>Ensure a transparent and efficient public procurement</b> (using Prozorro system for the purposes of post-war reconstruction)</li> <li>• <b>Reduce government intervention in the medium-to-longer run</b> (gradual liberalization of prices to avoid shortages and stimulate production)</li> </ul>	Ukraine is an effective country providing quality services
Ensure regulatory/tax efficiency	<ul style="list-style-type: none"> <li>• <b>Decrease the immediate regulatory burden on businesses, during the wartime</b> (transfer to online procedures, terminations of inspections, etc.)</li> <li>• <b>Ensure a full digitalization of public services in line with EU accession</b></li> <li>• <b>Launch a large-scale deregulation to ensure a long-term business and labor freedom in line with EU accession</b> (modern labor laws, minimized bureaucracy, simplified tax administration)</li> </ul>	Ukrainian businesses operate in an economically free environment and benefit from the free movement of goods, services, capital, and people with the EU
Facilitate open markets	<ul style="list-style-type: none"> <li>• <b>Minimize export and capital controls</b></li> <li>• <b>Complete land reform</b> (extending the right to purchase agricultural land to legal entities, including foreign ones)</li> </ul>	

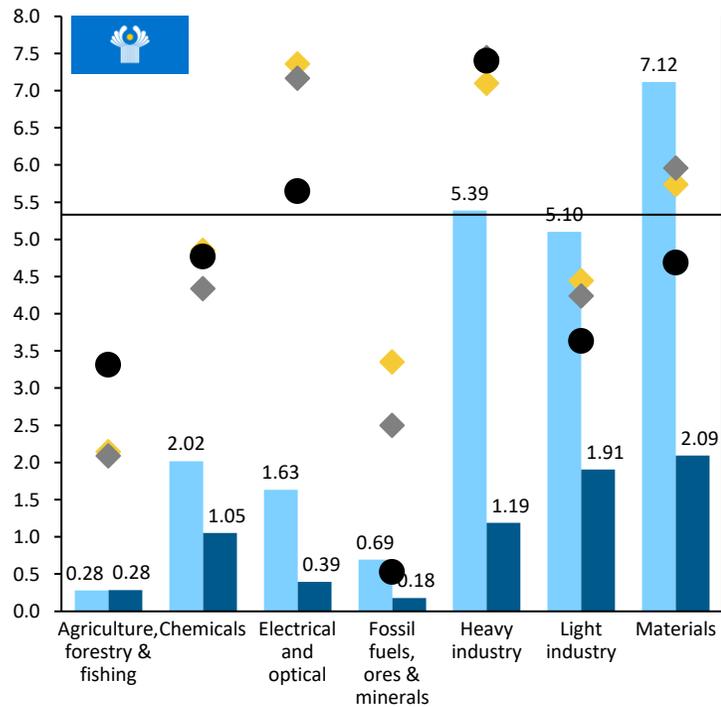
Immediate actions will keep men and women-owned businesses afloat during the war whereas EU legislative alignment will translate into a better and more familiar investment climate for EU and global direct investment, modernized infrastructure, and improved governance.

## EU economic integration and access to markets: Ukraine is gradually reorienting its exports towards the EU and emerging markets

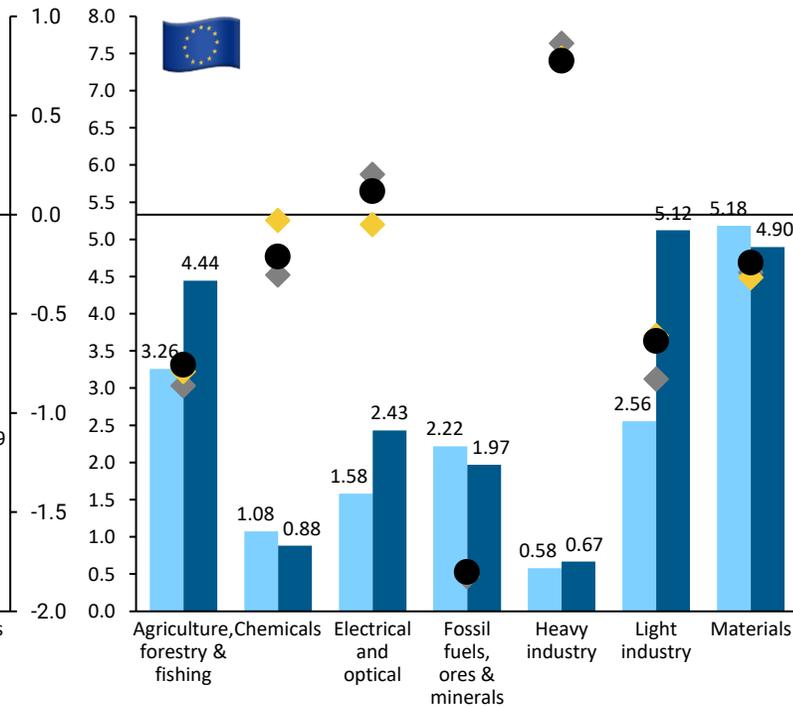
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actions

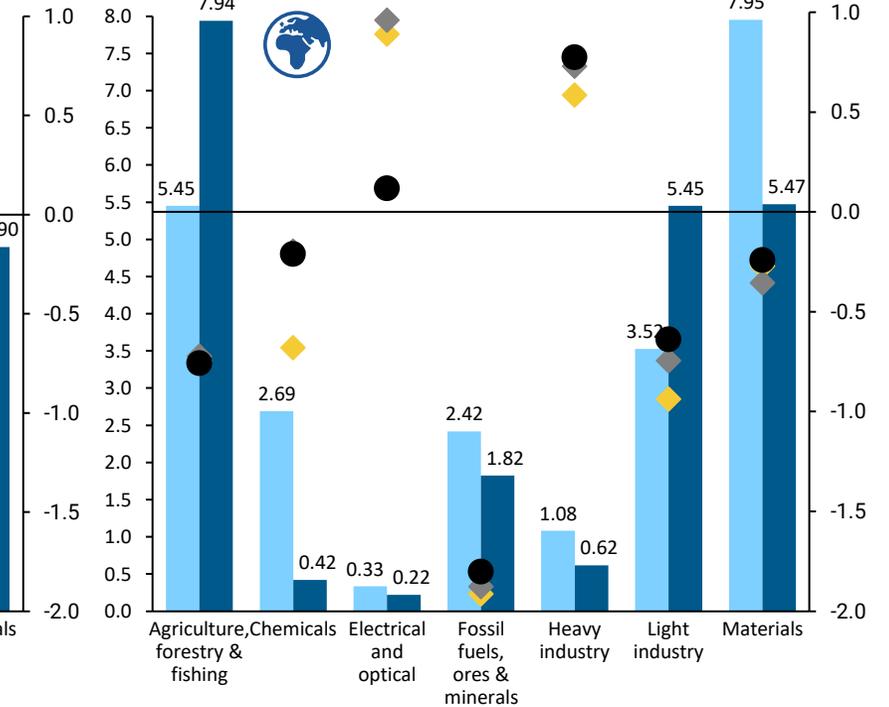
### Ukrainian export to the CIS countries



### Ukrainian export to the EU



### Ukrainian export to the rest of the world



Export value, USD bn (LHS) : 2013 2019 Product complexity index or PCI (RHS): PCI 2013 PCI 2019 PCI 2019 (Ukraine average to the world)

- After the Revolution of Dignity in 2013, Ukraine started to reduce exports to the CIS countries (12 states including Russia).
- All sectors experienced a decline, except agriculture, where demand was initially low due to the developed domestic agricultural sector of post-soviet countries.

- In 2016, Ukraine signed a DCFTA with the EU trying to reorient export from the CIS to the EU.
- Some industries (agriculture, light, electrical and optical) managed to significantly grow export volumes. However, the product complexity of goods exported to the EU is mostly lower than to the CIS.

- Besides expanding to the EU, Ukraine tried to explore other international markets. Traditional agriculture, as well as the light industry, grew.
- All other industries (especially heavy industries and materials) did not manage to successfully reorient the production.

## EU economic integration and access to markets: Ukraine should pursue a consistent international trade policy

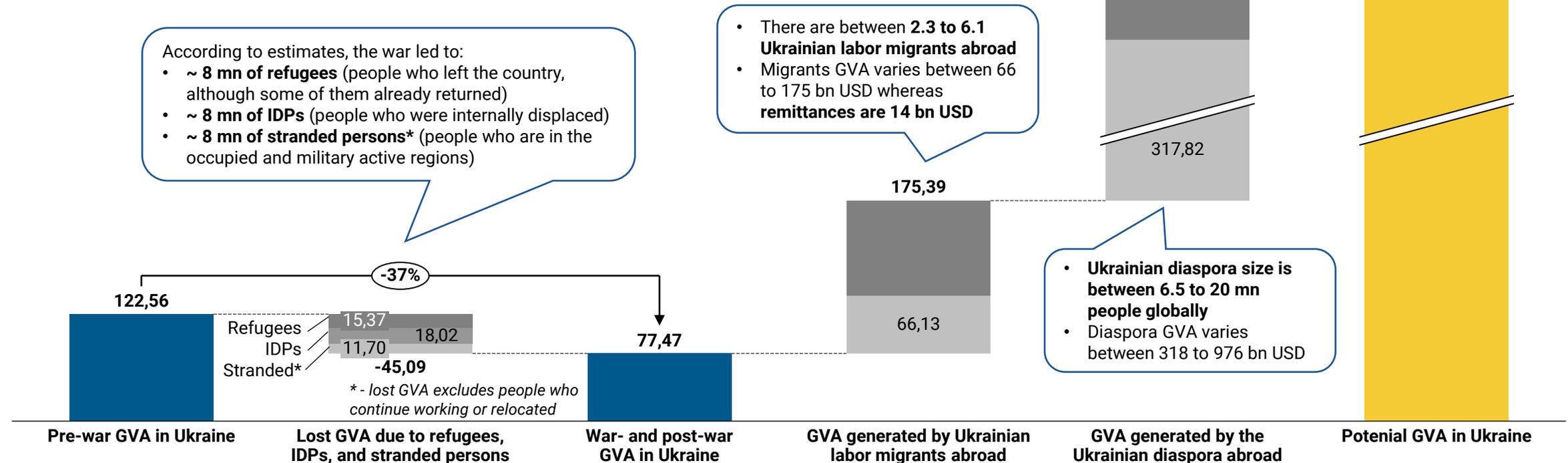
Initiative	Details	Success criteria
<b>Improve trade conditions with strategic partners</b>	<ul style="list-style-type: none"> <li>• <b>Develop and enact International Economic Strategy of Ukraine</b></li> <li>• <b>Audit the enacted international trade agreements (ITAs)</b> – renegotiate or conclude new ITAs covering all continents</li> <li>• <b>Negotiate extension of tariff-free trade</b> with selected countries</li> </ul>	Ukraine has favorable trade conditions with trade partners
<b>Implement the EU economic integration</b>	<ul style="list-style-type: none"> <li>• <b>Negotiate the removal of tariffs for all Ukrainian export in goods</b></li> <li>• <b>Harmonize the legislation to “eliminate”</b> all non-tariff technical barriers</li> <li>• <b>Negotiate the removal of non-tariff non-technical barriers</b> such as quotas</li> <li>• <b>Access EU structural funds for Ukraine’s transformation and to unlock EU private investments</b></li> </ul>	Ukraine is economically integrated into the EU
<b>Reactivate trade routes</b>	<ul style="list-style-type: none"> <li>• <b>Increase throughput capacity on the border with the EU and increase interconnectivity of Ukraine</b> (modernize railway and river ports)</li> <li>• <b>Leverage regional infrastructure and logistics projects</b> (TEN-T, Lublin Triangle, Three Seas Initiative, Belt and Road Initiative)</li> <li>• <b>Modernize Ukrainian customs</b> (modern physical and IT infrastructure)</li> </ul>	Ukraine has advanced export logistics
<b>Build a strong export support ecosystem</b>	<ul style="list-style-type: none"> <li>• <b>Define the actors of export support ecosystem and ensure their long-term institutional capacity</b></li> <li>• <b>Launch a full-scale export consulting program for Ukrainian exporters</b> (on the platform of Diia Business/EEPO in cooperation with top-level international consultants)</li> <li>• <b>Expand the portfolio of financial services offered for Ukrainian exporters</b> (within the Export Credit Agency)</li> <li>• <b>Relaunch a powerful representation of Ukraine and Ukraine’s business abroad</b> (via embassy/diaspora networks)</li> </ul>	Ukrainian exporters have sufficient access to know-how, finance, and support abroad

**Successful EU economic integration, as well as advanced access to international markets, will allow Ukraine to advance its economic development and substantially increase the overall quality of life**

## Access to know-how: Forced skilled emigration (“brain drain”) accelerates the demographic collapse threatening Ukraine’s economic future

### Estimation of real and potential gross value added (GVA) in Ukraine (USD bn)

- **Ukraine may lose around USD 45 bn of gross value-added** due to a significant number of people fleeing Ukraine (refugees), internally displaced people (IDPs), and stranded people on the occupied territories.
- **Ukraine's economy is losing from USD 66 bn to USD 175 bn annually due to labor migration.** Remittances amount to around USD 14 bn. **Notably, the productivity of Ukrainian workers abroad is at least 3 times higher than in Ukraine considering the same sector of the economy.**
- **Ukraine has a large skilled diaspora abroad, generating at least USD 318 bn of gross value-added annually for other economies.** The maximum estimates amount to USD 976 bn annually.



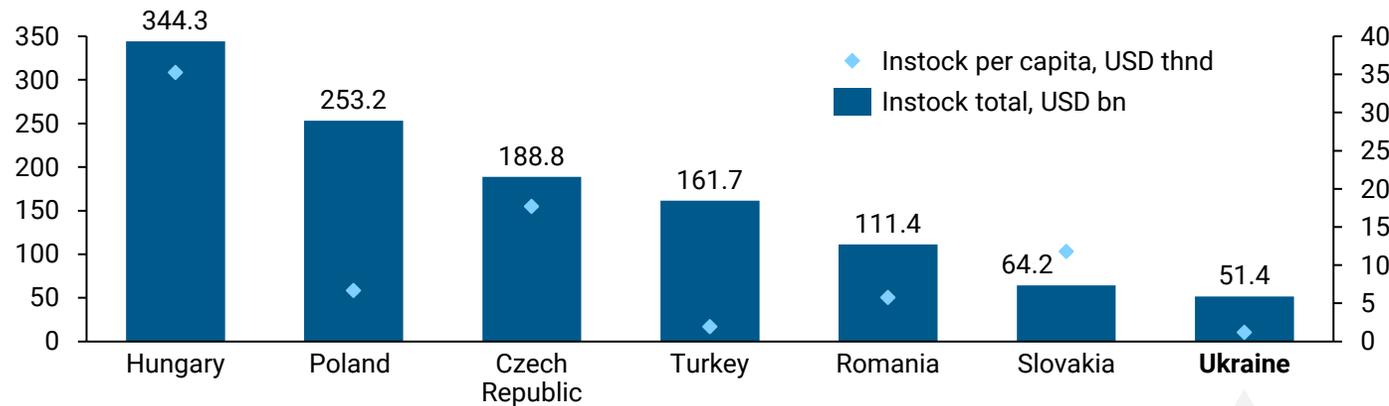
## Access to know-how: Ukraine should mobilize a critical mass of talents, thus “populating” the economy with know-how and fostering knowledge transfer

Initiative	Details	Success criteria
<b>Launch upskilling and reskilling programs</b>	<ul style="list-style-type: none"> <li>• <b>Launch a nationwide program for returned migrants, IDPs, and unemployed</b> (upskilling and reskilling programs in partnership with private sector; employment/business activity programs including with a focus on encouraging women to join sectors where they were traditionally underrepresented; financial support; housing and childcare services)</li> <li>• <b>Launch international grant programs for Ukrainian young professionals and entrepreneurs</b> to work at best international companies and institutions and return to Ukraine thereafter.</li> </ul>	Ukrainian workforce possesses advanced know-how
<b>Reconnect Ukraine with Ukraine’s diaspora</b>	<ul style="list-style-type: none"> <li>• <b>Build a network platform matching Ukraine’s diaspora and Ukrainians</b> (diaspora may provide business advice related to a particular country; provide internships; mentor Ukrainian students/young professionals)</li> <li>• <b>Allow a dual citizenship for all Ukrainian citizens</b></li> </ul>	Ukrainian diaspora fuels the economic growth of Ukraine
<b>Attract international talents to Ukraine</b>	<ul style="list-style-type: none"> <li>• <b>Launch international grant programs for Ukrainian companies to hire remote or on-site international skilled workers and volunteers</b> (the offer includes market salary and relocation bonus if applicable)</li> <li>• <b>Attract foreign citizens to reside in Ukraine while working overseas</b> via “digital nomads visa”</li> <li>• <b>Attract international students to study and work in Ukraine</b> via simplified immigration rules, tuition-free study, guaranteed workplace</li> </ul>	Ukraine is an attractive country for international talents
<b>Prepare the young generation</b>	<ul style="list-style-type: none"> <li>• <b>Launch/scale grant programs for Ukrainians to study at the best universities</b> and return to Ukraine thereafter</li> <li>• <b>Focus Ukraine’s education system on STEM and entrepreneurship</b> (increase STEM component in curriculum; attract international universities to open international branches in Ukraine as well as international teachers/professors to teach in Ukraine; encourage women and girls to pursue these professional domains; increase capacity of world-class institutions already operating in Ukraine)</li> </ul>	Young Ukrainians are skilled and motivated to rebuild Ukraine

Increasing access to know-how will result in accelerating economic development and making Ukraine more competitive in the global arena.

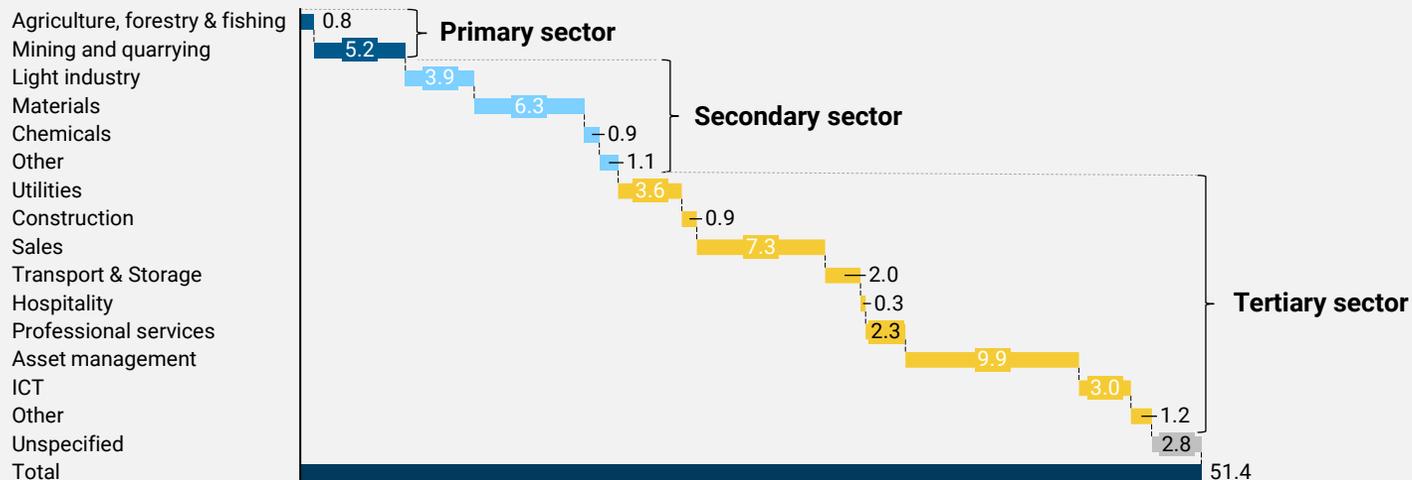
## Access to finance: Ukraine's FDIs inflows and FDI per capita are the lowest among the neighboring EU members

FDI stock inflows total and per capita, 2019/2020



- **Most investments in Ukraine are attracted to the tertiary sector (59%), where asset management (19%) accounts for the largest share.** Refinancing (particularly – in the banking sector that typically comes from tax havens) is the main reason the industry is the leader in FDIs attraction.
- Global and regional value chains are typically organized by MNEs. When expanding to other countries, MNEs bring not only FDIs to the economy, but also provide access to know-how and access to new supply chains. However, **the share of employment generated by foreign MNEs in Ukraine is only 2%, compared to 7% in Poland and 12% in the Slovak Republic.**
- **The primary and secondary sectors (production of physical goods) are heavily underinvested.** As a result, the growth in products' complexity is limited due to a lack of international knowledge transfer which usually accompanies the FDI.
- Also, **European FDIs are mostly targeted at Western regions, while FDIs of Russian origin - in Eastern regions of Ukraine.** This implies that the shift in the participation in European value-added chains also has a westward gravity within the country.

Structure of FDI stock inflow to Ukraine, 2019, USD bn

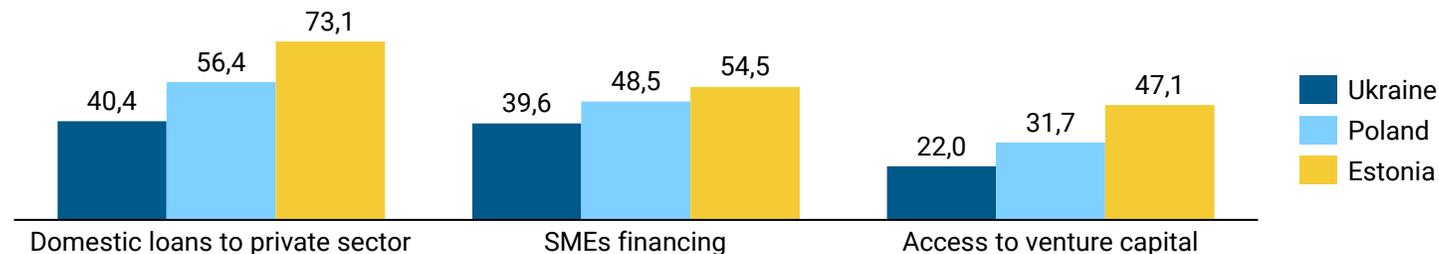


## Access to finance: Insufficient access to external funding urges Ukrainian businesses to rely mostly on own funds for development

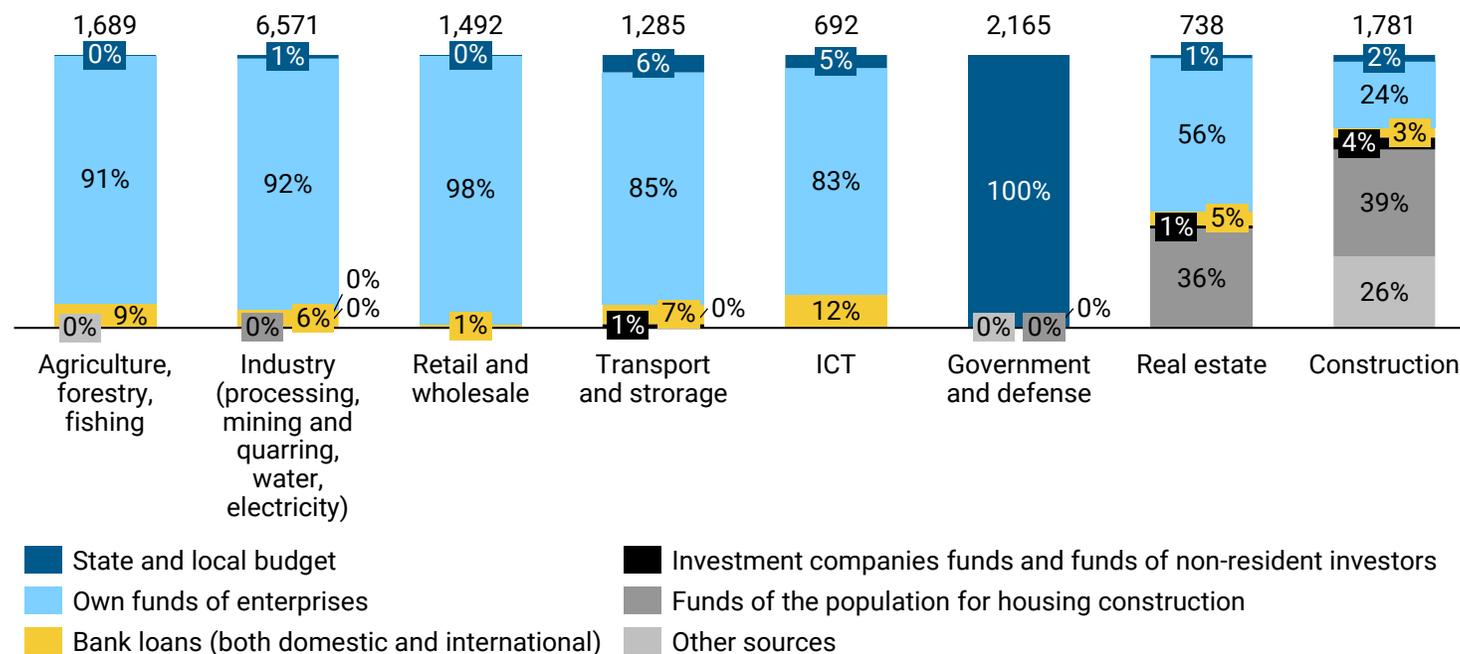
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### Global Competitiveness Index, 2019



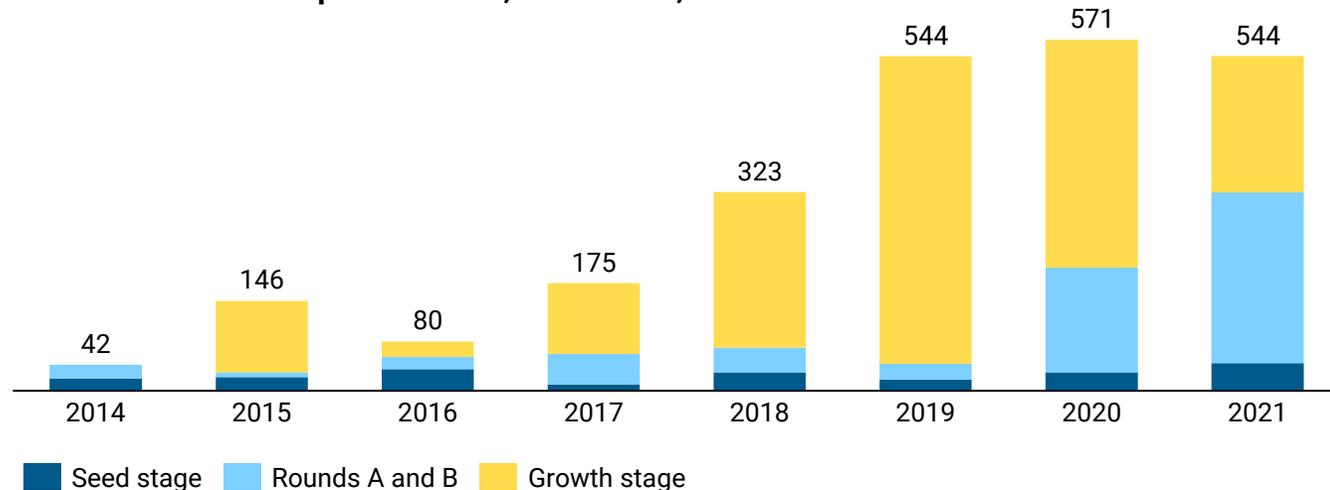
### Capital investment across major sectors of economy, 2021, USD mn



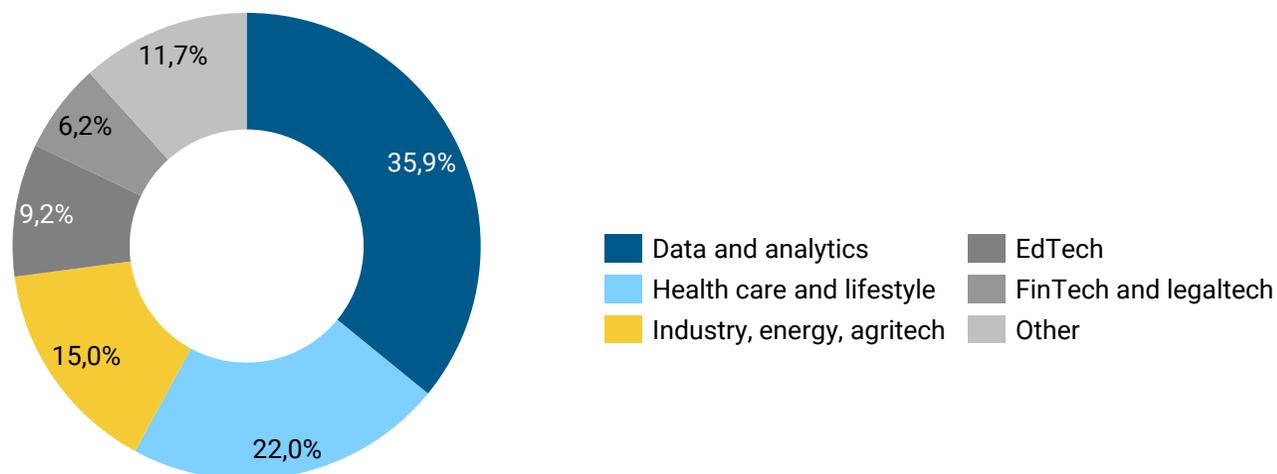
- In terms of the state of the financial system Global Competitiveness Index, Ukraine is significantly behind countries such as Poland and Estonia.
- According to the ECB's survey on the access to finance of enterprises in the euro area 2021-22, access to finance is mentioned by the least number of firms (5% of large and 6% of SMEs) among the most important problems faced by EU enterprises.**
- In early 2022, **30% of the EU firms applied for a bank loan**, while around 45% did not apply for a loan due to sufficient internal funds available.
- The situation varies across large firms and SMEs, where around 22% of the former and 38% of the latter applied for a loan. **Among those who applied for a loan, almost 80% received all funds required**, while only 5% were rejected or received a limited part.
- Compared to European countries, **businesses in Ukraine have to rely mostly on internally available funds** in order to undertake capital investments.
- The **largest share of obtained loans among Ukrainian businesses is observed in the ICT sector**, followed by transport, storage, and agriculture.
- The largest sector in terms of the capital investments value is manufacturing, however, **92% of firms in the sector rely on their own funds**.

## Access to finance: Despite a positive shift, Ukrainian startups have limited access to funding, especially in early stages

Investments in startups in Ukraine, 2014-2021, USD mn



Structure of Ukrainian Startup Fund financing, %



- Over the last 5 years, **the amount of investment in startups with offices in Ukraine is constantly growing.**
- **In 2021, Ukrainian investors have invested 54% of all capital at the Seed stage.** However, the round of attracting investment A is still dominated by international capital. In 2020 it was over 89% and in 2021 - 77%.
- As of the end of January 2022, **more than 250 startups received USD 6.3 million in funding from the UFS in the form of grants and vouchers**, of which 87 startups received acceleration support through the results of the pitches.
- **Alternative financing instruments are almost never used due to low awareness of entrepreneurs**, shortcomings in the regulatory framework, and lack of local providers.
- **Access to finance remains limited for innovative activities of small and medium enterprises**, as well as science-intensive projects. Participation in international grant programs is low.
- **Despite the war, the startup environment in Ukraine is not paralyzed** - most Ukrainian startups, 71%, remained in Ukraine. However, 41.1% have no savings to continue, so rapid implementation of enhanced support programs is necessary.

## Access to finance: Ukraine should ensure emergency funding to keep business afloat, as well as expand other funding programs and relaunch capital market

Initiative	Details	Success criteria
<b>Provide access to emergency funding</b>	<ul style="list-style-type: none"> <li>• <b>Introduce wartime government grants, loan guarantees, and interest rate reductions</b> to keep businesses afloat</li> </ul>	Ukrainian businesses have adequate access to emergency funds
<b>Expand post-war access to funding</b>	<ul style="list-style-type: none"> <li>• <b>Raise banking capital to support the growth of lending</b></li> <li>• <b>Introduce long-term covered financing</b> to encourage mortgage lending</li> <li>• <b>Expand de-risk lending to SMEs</b> through an extended program of government credit guarantees and reconstruction projects</li> <li>• <b>Develop procurement and supply chain financing for SMEs</b> participating in government procurement and reconstruction projects</li> </ul>	Ukrainian new and established businesses have adequate access to funds
<b>Support Ukrainian innovators</b>	<ul style="list-style-type: none"> <li>• <b>Bring regulations of venture capital and alternative financing</b> to international best practices</li> <li>• <b>Launch funding programs</b> for Ukrainian startups and innovative companies (e.g., a fund of funds or a program of matching grants)</li> <li>• <b>Train business angels for early-stage financing</b></li> </ul>	Ukrainian innovators have sufficient funds for development
<b>Relaunch capital market</b>	<ul style="list-style-type: none"> <li>• <b>Introduce capital amnesty and the exit capital tax</b> (instead of income tax)</li> <li>• <b>Implement pension accounts and a healthcare insurance system</b> to activate institutional and individual investors</li> <li>• <b>Improve domestic stock market infrastructure</b></li> <li>• <b>Raise deposit guarantee ceiling to attract deposits</b></li> </ul>	Ukraine has deep and efficient capital market ecosystem for saving and investing

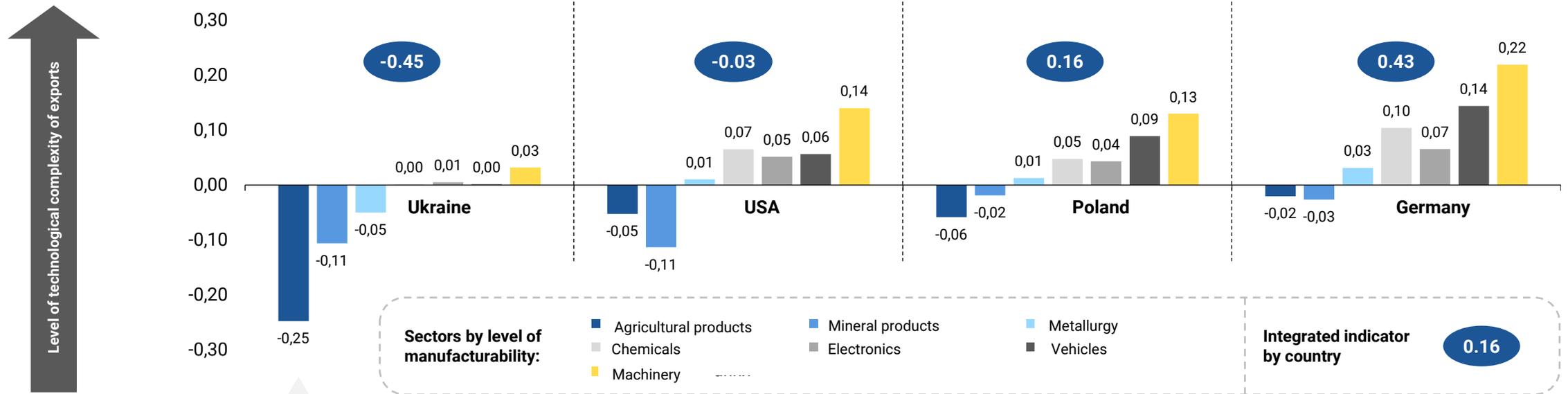
**Better access to finance will help businesses recover from the consequences of war and start delivering economic impact in Ukraine and beyond.**

## Priority sectors transformation: Ukraine underperforms among other countries in terms of economic complexity and diversification

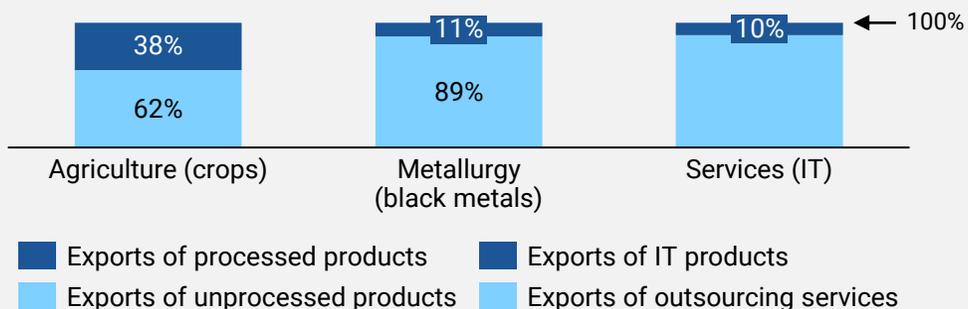
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Index of export complexity by sectors of economy in 2019



% of raw materials / products with low value added in the sectors' exports



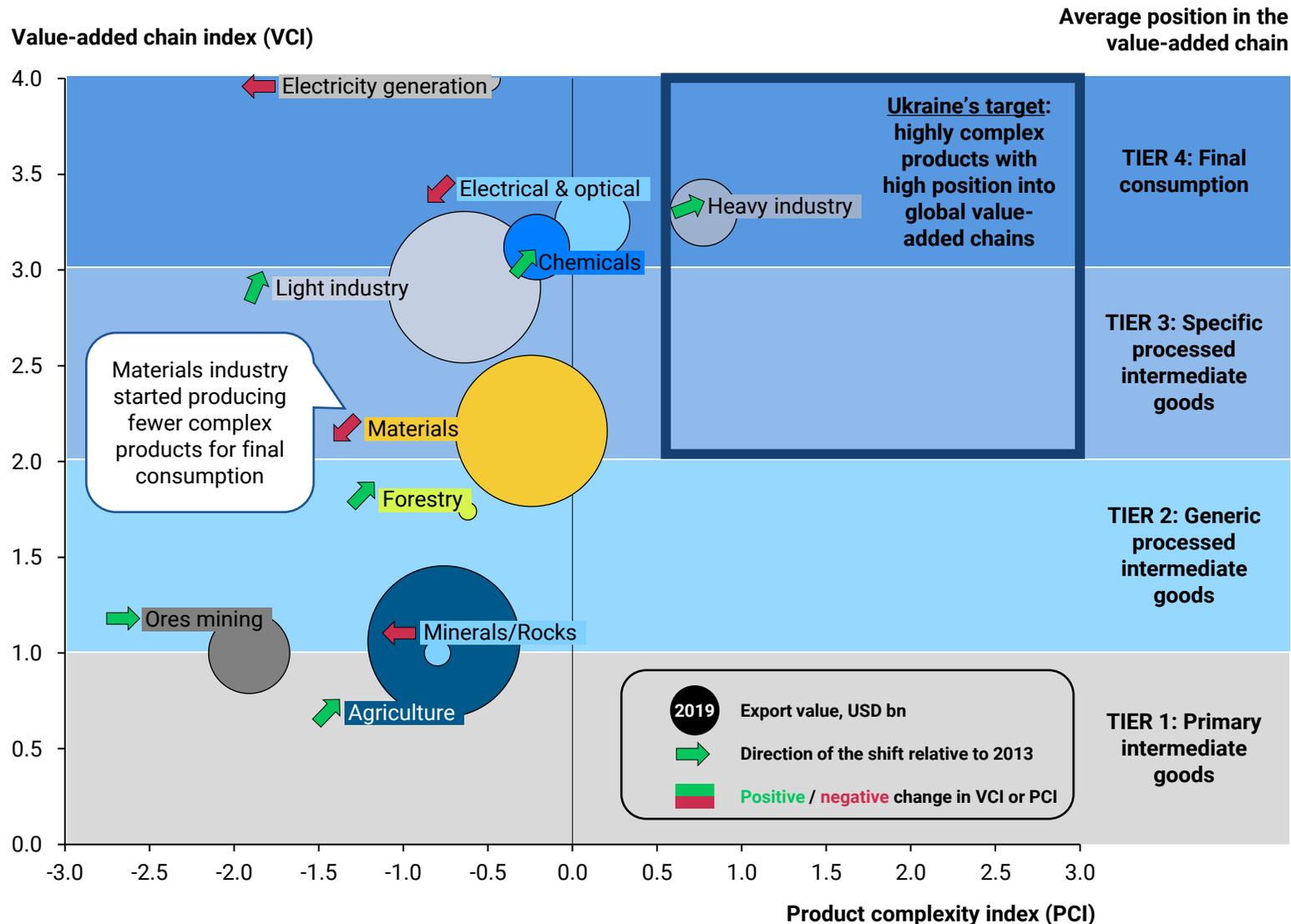
- Compared to developed economies, Ukrainian export is characterized by a relatively low product complexity. Even agricultural products that accounted for a quarter of total Ukrainian exports to the world in 2021 have much lower complexity compared to agricultural exports of Poland or Germany.
- For example, the agricultural sector in Ukraine produces mostly low margin and labor extensive goods, with low technology engagement. As a result, the productivity in the agricultural sector is much lower compared to developed economies. A similar situation is observed across industries that produce more complex goods, such as machinery or electronics, where Ukrainian engagement in global value chains is mostly presented by intermediate and lower value-added goods.
- Ukraine lacks the needed know-how, investments in technology, and appropriate financing that would drive domestic production towards more complex or 'sophisticated' goods being manufactured and exported.

## Priority sectors transformation: Ukraine should shift into producing highly complex products with a high position in global value-added chains

background

actions

### Ukrainian export to the world in 2013 vs 2019



- Ukraine exports mostly products of low complexity and not high engagement into global value-added chains. The best performing industries in terms of the global export value are agriculture, materials, and light industry with over USD 12 bn each.
- During 2013-19 the situation slightly improved as exports of several industries moved up along the product complexity index (e.g., light industry, chemicals, heavy industry).
- Ukraine should shift into producing highly complex products with a high position in global value-added chains (box at the top right corner). For this, Ukraine should pursue structural and sectoral reforms to stimulate the development of domestic production and attract FDIs.

To evaluate the complexity of Ukrainian exports, two measures are used:

Product complexity (x-axis, the larger indicator indicates higher product complexity). For example, heavy industry has the highest average capacity; the ores mining – has the lowest.

Value-added chain index (y-axis, the indicator ranks products from primary intermediate goods to final consumption). For example, heavy industry exports mostly goods of final consumption; agriculture – primary intermediate goods.

## Priority sectors transformation: Ukraine should pursue a smart sectoral policy by addressing immediate challenges, as well as inducing a long-term growth

Initiative	Details	Success criteria
<b>Address immediate sectoral challenges</b>	<ul style="list-style-type: none"> <li>• <b>Coordinate relocation</b> of war-affected businesses to safer territories and provide on-site support</li> <li>• <b>Provide technical support for logistics organization</b></li> </ul>	Ukraine businesses operate in regions with low or medium risk of war escalation
<b>Launch sectoral catalytic projects</b>	<ul style="list-style-type: none"> <li>• <b>Launch catalytic projects in priority sectors of economy based on economic complexity and available global opportunities</b> (“investment menu”): agriculture, metallurgy, machine building, IT, construction materials, etc.</li> <li>• <b>Adapt sectoral regulations to key global trends</b> such as sustainable development, green transition, and digital transformation, as well as <b>address sector-specific bottlenecks</b> (e.g., access to electricity)</li> </ul>	Ukrainian businesses produce highly complex products and are well-engaged into the EU and global value chains
<b>Build a powerful innovation ecosystem</b>	<ul style="list-style-type: none"> <li>• <b>Create preconditions for innovative ideas</b> via popularizing innovative entrepreneurship among the general public (incl. IDPs and veterans), prioritizing STEM/entrepreneurship education (including promoting women and girls in STEM), and implementing a science reform)</li> <li>• <b>Support the development of innovative ideas</b> via national and regional hackathons, early-stage financing, and mentorship</li> <li>• <b>Support commercialization of innovative ideas</b> via accelerator programs, sufficient funding, and favorable legal framework</li> <li>• <b>Scale-up innovative ideas</b> via corporate innovation, government procurement, and export promotion of Ukrainian innovators</li> </ul>	Ukraine enables innovators to effectively develop and commercialize innovations
<b>Facilitate FDI attraction</b>	<ul style="list-style-type: none"> <li>• <b>Introduce war insurance for investment projects</b> as well as special investment incentives</li> <li>• <b>Launch targeted investment promotion and facilitation programs</b> to bring largest companies to Ukraine (including relocation from Russia)</li> </ul>	Ukraine is a popular investment destination for businesses

Successful transformation of Ukraine's priority sectors by producing a greater diversity of highly complex goods and services will strengthen not only domestic production but will also positively impact global markets, in particular in the realm of food security.

# How international partners can join

- 1 Macro financial assistance** | Provide emergency financing to the Ukrainian government to cover temporary fiscal deficits and support price stability and a competitive currency
- 2 Technical assistance** | Provide technical assistance to align Ukraine's regulatory/legal environment to the EU standards (including anti-corruption frameworks), promote free trade, and attract foreign direct investment (FDI)
- 3 Grants and financial instruments** | Launch dedicated grants and financial instruments of EU and IFIs to ensure post-war reconstruction and EU-compatible sectoral transformation (sustainable development, green transition, and digital transformation)
- 4 Military risk insurance** | Launch MIGA military risk insurance program for the destroyed assets reconstruction and new investments in Ukraine
- 5 EU institutional innovations** | Enable Ukraine's participation in EU institutions during the accession (the election of associated Members of the European Parliament, who would be able to participate in all debates, but would not vote; holding some regular meetings in Ukraine; hosting Ukrainian experts in The European Commission and Court of Justice)
- 6 Partnership projects** | Facilitate knowledge transfer and people-to-people contacts (volunteering scheme for young EU citizens; school/university exchanges; professional training programs for young Ukrainian professionals and entrepreneurs)

# ENVIRONMENTAL RECOVERY

Extended Background Analytics for the URC2022  
Environmental Recovery Policy Brief

July 2022

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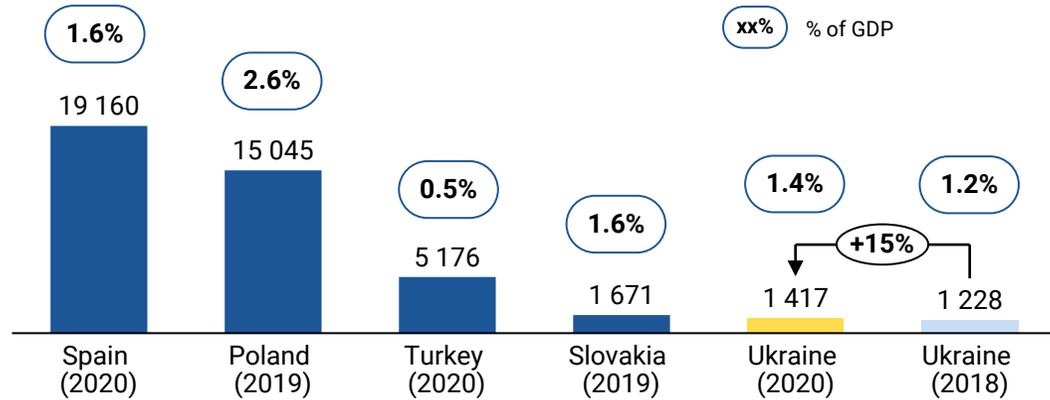
# BACKGROUND

**Description of pre-war and current state of environmental  
development of Ukraine**

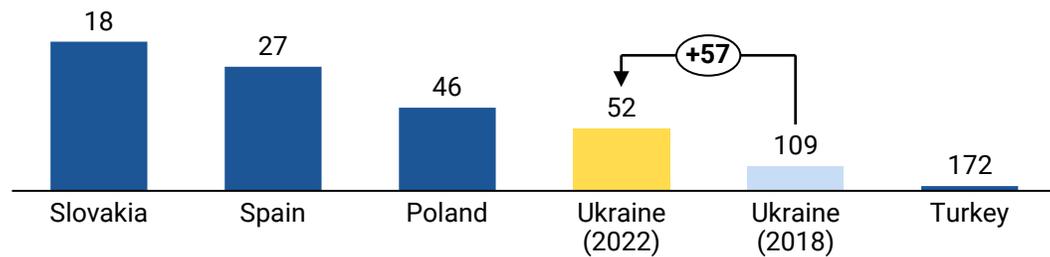


# Ukraine spends much less on environmental protection compared to developed countries, which leads to poor performance in the field

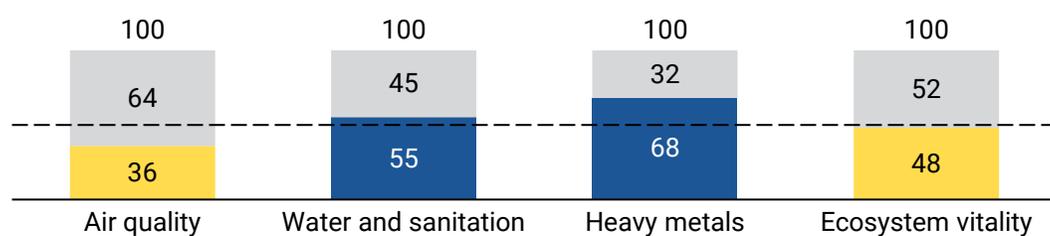
National environmental expenditures, USD mn



Rank in Environmental Performance Index (EPI) 2022, out of 180 countries



Ukraine's performance in selected components of EPI in 2022, out of 100\*



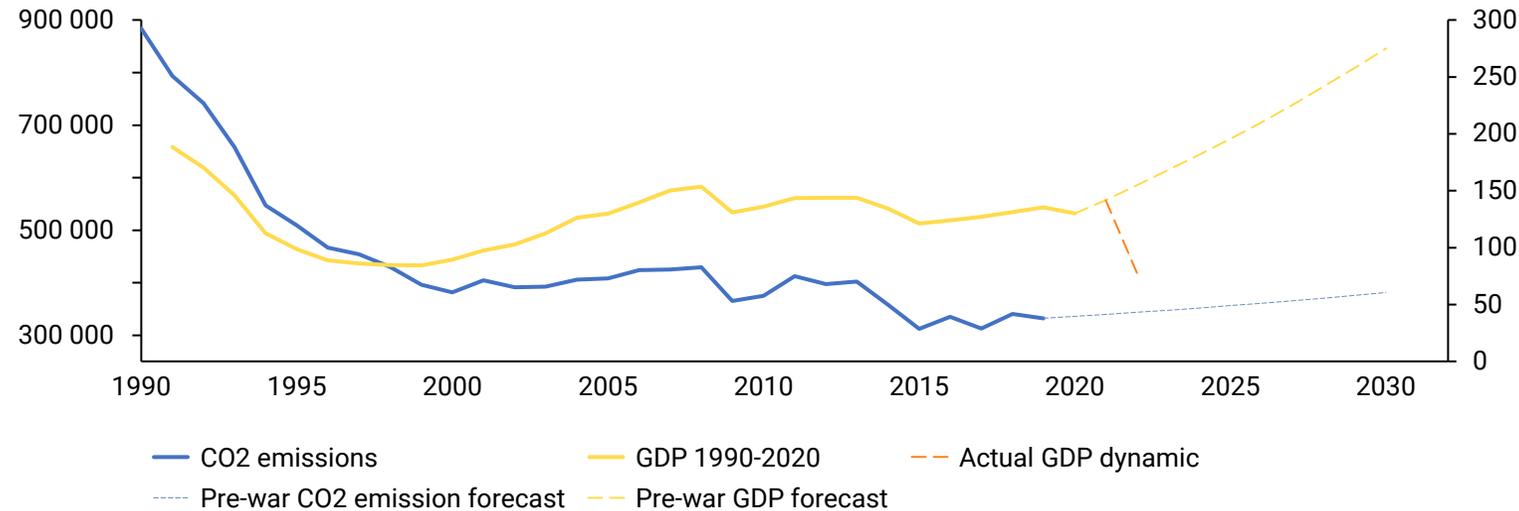
- In 2020, environmental protection expenditures in Ukraine amounted to UAH 41.3 bn, but only UAH 8 billion (or 19%) was spent from the state budget, and the remaining were own funds of enterprises. Despite a low share of state environmental expenditure, they almost doubled since 2018.
- Air pollutants are nitrogen oxide, carbon monoxide, dioxide and other sulfur compounds, and dust. In 2020, air pollutant emissions from stationary sources amounted to 2 239 thousand tons, which is 54% from the volumes before 2010 (4,131 thousand tons).
- Emissions from road transport amounted to 1547 thousand tons, which is 114% of the volumes from 2010 (1,358 thousand tons). Carbon dioxide emissions from stationary sources in 2020 amounted to 109 million tons, which is 66.1% from the volumes before 2010.
- Withdrawal of water from natural water bodies totaled 11.1 mn cubic kilometers in 2020, which is 75% of the volumes from 2010 (14.8 mn cubic kilometers) . In 2020, 60% of freshwater was used for industrial needs, 21.4% – for irrigation, 17.3% – for drinking and sanitary needs, the rest – for other needs.
- Ukraine has one of the lowest indicators of its own water resources among European countries – 1 thousand cubic meters of local flow per person (the USA – 7.4 thousand cubic meters, Germany – 1.9 thousand cubic meters).
- In 2020, 12.6 mn tons of household waste was collected in Ukraine, only 1.3% of which was incinerated and 40% was removed to specially equipped dump.
- According to the integrated Environmental Performance Index in 2022 Ukraine is ranked 52nd. Ukraine improved has its indicator and jumped from position 109 in 2018. The worst indicators are currently shown in the "Health" section.

Source: State Statistics Service, OECD, Legatum Prosperity Index, Yale EPI

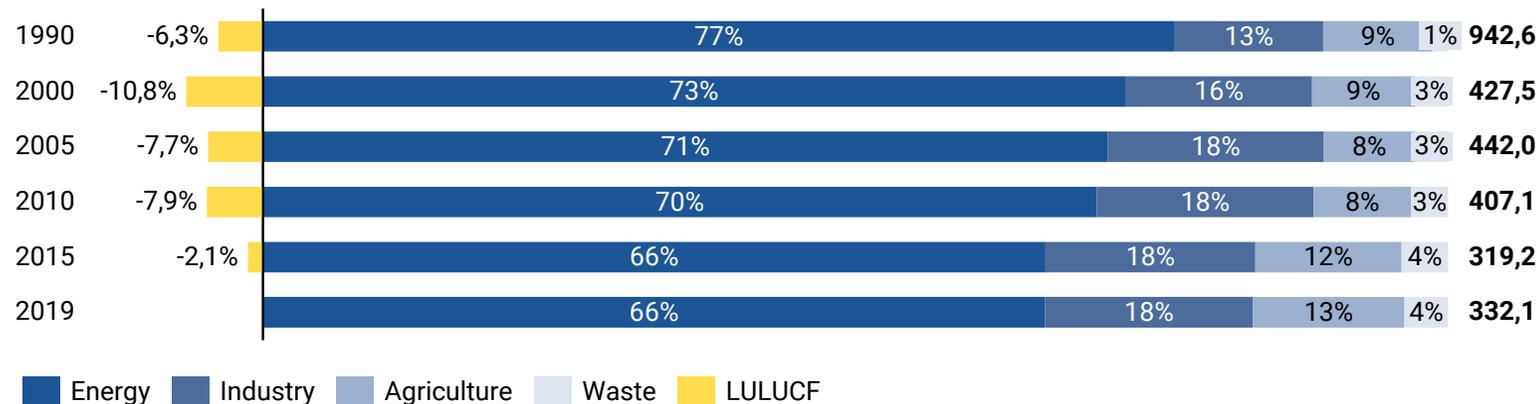
\* Ukraine's indicators by index components, the maximum value is 100

# Ukraine plans to use green technologies to minimize the growth of CO2 emissions due to rapid economic growth

GDP growth and emission dynamics over 1990-2030, thsd. tons of CO2-equivalent



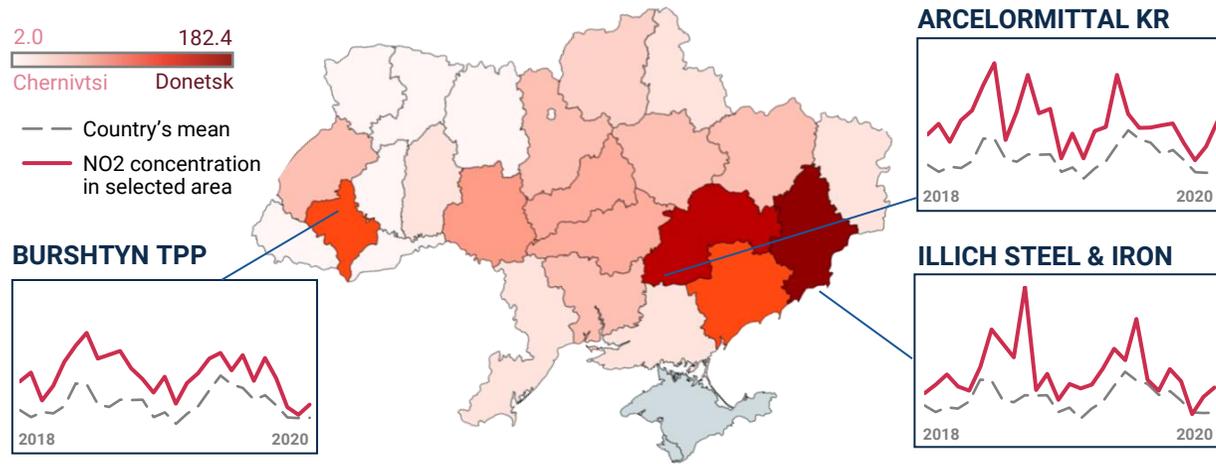
GHG emission dynamics by sector



- Over the last 30 years Ukraine has shown a **significant decline in CO2 emission**, mainly as a result of economic decline and structural shifts in the national economy – with a smaller share of industrial output and rapid growth of agriculture and services.
- In 2021 Ukraine declared a new goal within the Paris Climate Agreement to **reduce emission to 35%** from the base year (1990) and to reach carbon neutrality by 2060.
- According to the National Economic Strategy – 2030 **Ukraine expected to double GDP by 2030**. The strategy implied transformation of the energy sector and further develop of RES with development of industrial production.
- The war has led to decline in industrial emission but significant growth of emission from military actions, fires and resulting in **overall emission decline in 2022**.
- After the war Ukraine plans to **rebuild economy with the reliance on clean energy** resources and best available technologies and support from international partners in developing policy and obtaining access to capital.

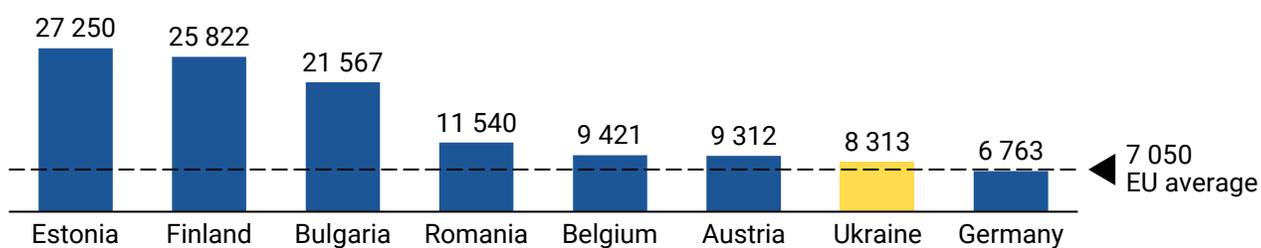
# Ukraine's air pollution and waste problems stemmed from unwillingness of the authorities to address environmental challenges

**Air emissions and GHG from stationary pollution sources by region, kg per capita, 2020**  
**NO2 concentrations [10<sup>-4</sup> mol/m<sup>2</sup>] against country's mean, 2018-2020**



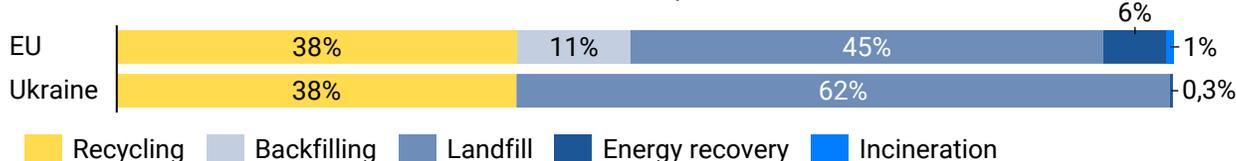
- Higher air pollution in Ukraine is linked to country's largest urban areas and industrial sites, with Donetsk-Dnipro industrial region accounting to **79% of the total emissions**, as well as showing significantly higher disease and morbidity rate due to their proximity to urban areas.
- The largest share of pollutant emissions (41.3% excluding CO2) is accounted for by the production and distribution of electricity, gas and water. Energy sector, metallurgical and coal industries account for **33, 25, and 23 per cent of all pollutants emitted into the atmosphere.**
- The three largest polluters in Ukraine, Illich Steel & Iron (Mariupol, Donetsk oblast), ArcelorMittal KR (Kryvyi Rih, Dnipropetrovsk oblast), and Burshtyn TPP (Ivano-Frankivsk oblast) show significantly higher levels of CO and NO2 than the rest of the country. These industrial sites were built in the Soviet era with little environmental installations – no dust filters and equipment to remove SO2 and Nox.

**Waste production, kg per capita of Ukraine and selected states, 2018**



- Despite generating less waste per capita than 8 EU states in 2018, **Ukraine remains among the top global waste producing states.** Most waste (86%) is generated by mining and quarrying, comparable to Romania and Bulgaria, but behind EU average of 26.6%.
- In total, **96.4% of waste generated in Ukraine account for non-household use**, with a high level of recycling, but a little share of backfilling, given the overpassed tradition of producing slagheaps. Ukraine also has little waste-to-energy and incineration capacities, with the only waste burning plant "Energiya" in Kyiv.
- **98% of Ukraine's municipal (household) waste in Ukraine is deposited in the landfills**, many of which are showing low environmental standards. Starting at the same low recovery capacity base, Ukraine lagged its Central European peers and no consistent policy addressed waste management since the regaining of independence.

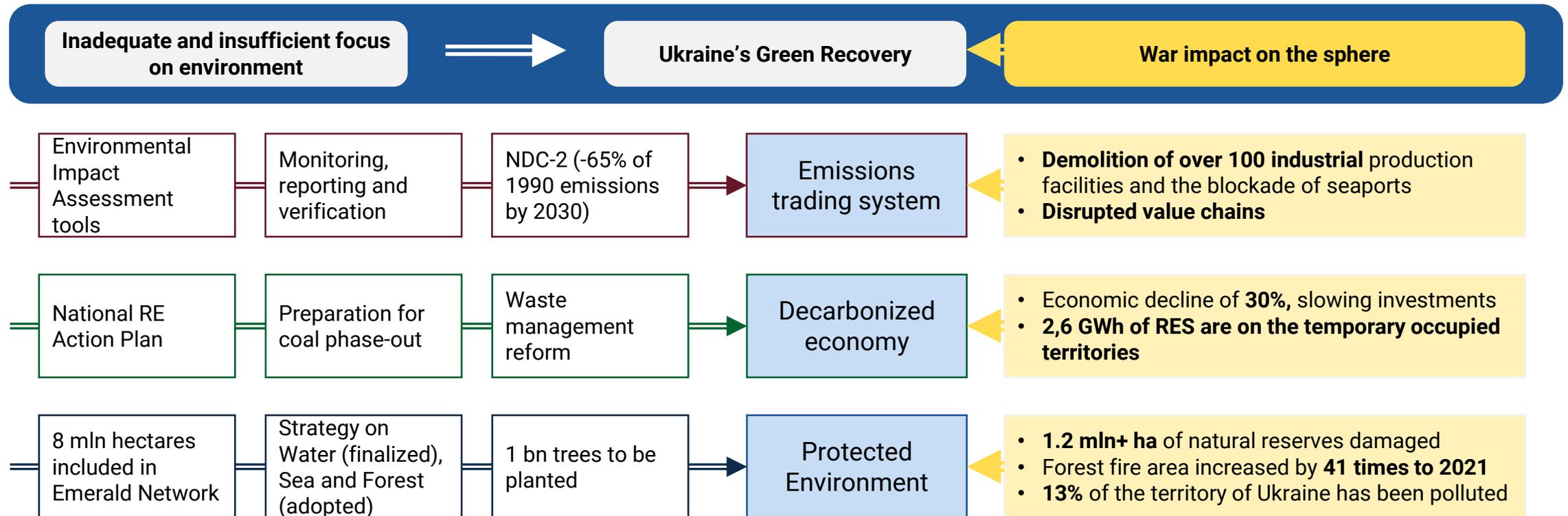
**Waste treatment breakdown in Ukraine and EU, 2018**



Source: State Statistics Service, Eurostat, WorldFromSpace based on Copernicus Atmosphere Monitoring Service data [2017-2020] and modified Copernicus Sentinel data

# Ukraine was on track to fulfil its green obligations and integrate with the EU

## Environmental policy vectors and recent progress



Implementation of the EU-Ukraine Association Agreement (Environment and Civil Protection)

**Ukraine's green transition ambitions**, subject to its international commitments under the Kyoto Protocol and the Association Agreement in the EU were **laid out in 2018 Strategy of Low-Carbon Development of Ukraine until 2050**, which declares decarbonisation of the energy system one of the main objectives of government policy

# ACTIONABLE FRAMEWORK

Description of environmental recovery framework, background  
and proposed initiatives for each element of framework



# To counteract the numerous challenges of environmental recovery the **comprehensive framework** was proposed

The framework below describes the overall structure of the environmental recovery. It consists of (1) high-level environmental governance architecture, and sectoral topics which cover (2) clean energy and green buildings, (3) green economy and (4) environmental protection



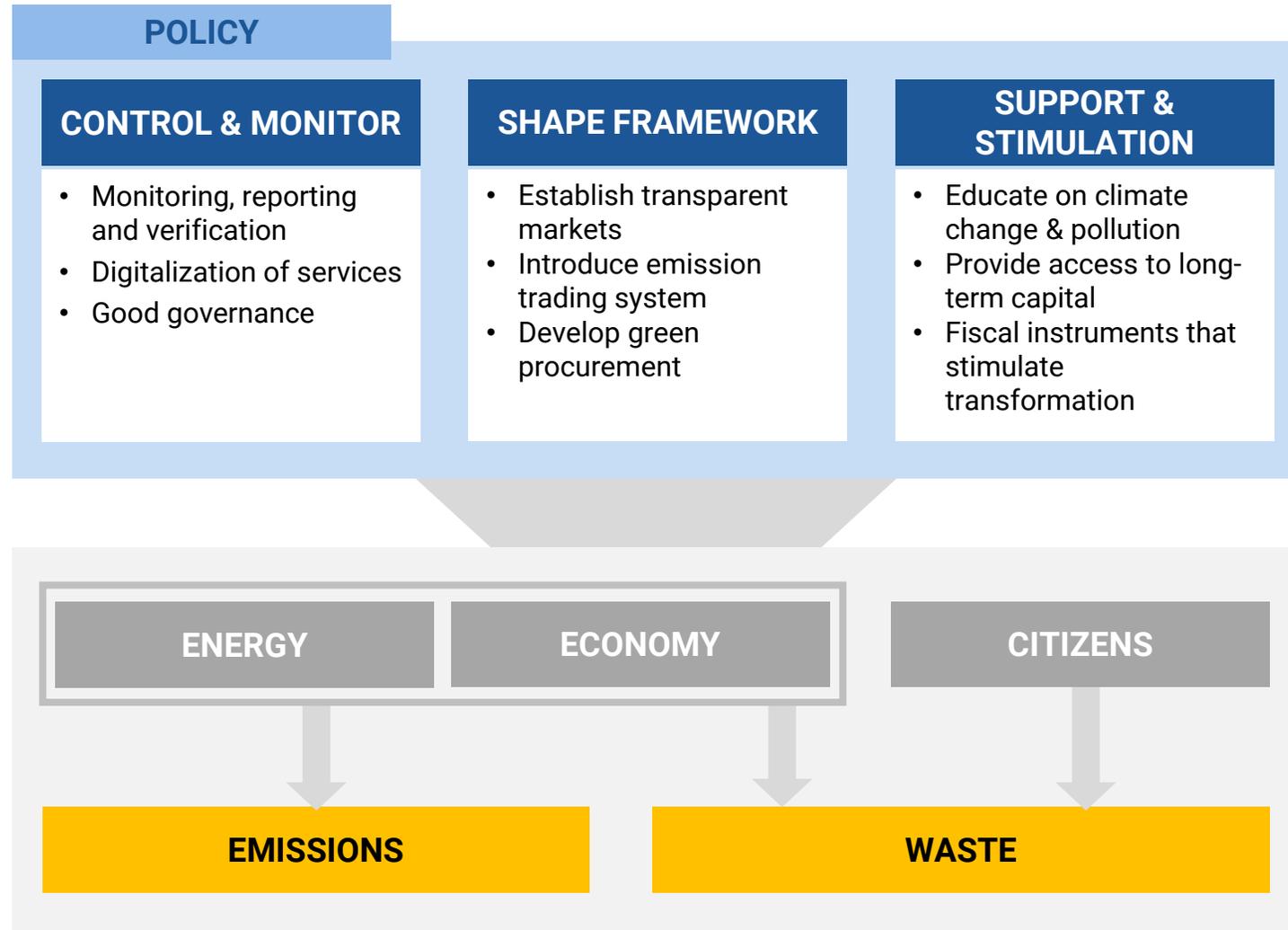
Following slides will describe (1) background and (2) proposed actions for each topic of environmental recovery framework. Next slides will be marked that will show affiliation to abovementioned types of slides →

background

actions

1

# Green recovery and development of Ukraine should ensure that all stakeholders have stimulus to be a part of the transition process



- Industrial companies, business consumers and citizens **have to find a balance between social security, economic gains and quality of life.**
- **3 groups of policy interventions will ensure the green recovery of Ukraine;** Group 1 – instruments that ensure control and monitor of emission and pollution, thus giving the government an opportunity to plan emission reduction and control implementation of the commitments. Control conducted by the government should be aligned with the OECD principles for good governance in order to build trustworthy relations with business, citizens and international partners;
- **Shaping the framework, implies establishment of a framework within which stakeholder (business/household) has an incentive to go green;** Introduction of emission trading system would make new economically viable to introduce new technologies and energy efficiency measures;
- **The green transition should be supplied with sufficient instruments** that would ensure the positive perception of green products a development of green products “education”, access to long-term attractive financial instruments including grants, loans, bonds, investments and fiscal instruments that would stimulate adoption of new technologies.

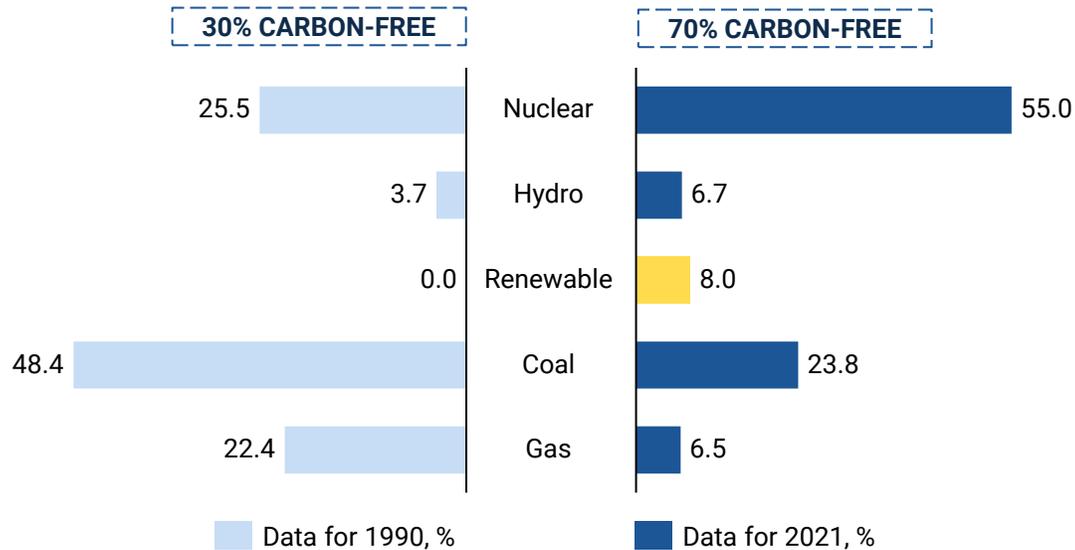
# 1 Creation of **viable instruments** will attract more resources to the green transition

Initiative	Details	Success criteria
<b>Develop policy instruments that stimulate Ukraine's green recovery</b>	<ul style="list-style-type: none"> <li>• Develop sectoral innovation policy for clean technologies</li> <li>• Adopt overarching policies stimulating circular economy</li> <li>• Ensure effective coordination between government bodies in Ukraine to manage green recovery</li> <li>• Invest in upskilling and reskilling of Ukraine's young men and women, including stimulating the engineering, IT capabilities</li> </ul>	Environmental factor and foresight is at the backbone
<b>Ensure effective management of GHG emissions and control of industrial pollution</b>	<ul style="list-style-type: none"> <li>• Launch the national emission trading system</li> <li>• Integration of environmental and climate components into the recovery projects</li> <li>• Introduction of new allowance system on industrial emission (integrated pollution prevention and control)</li> <li>• Introduction of the energy management system for companies and municipalities</li> </ul>	Emission trading system launched
<b>Mobilize green finance</b>	<ul style="list-style-type: none"> <li>• Initiate a National Green &amp; Climate Fund</li> <li>• Keep track of the transparency of the banking market</li> <li>• Invest in the institutional capacity of local government managers to increase financial sustainability and host workshops on preparing bankable infrastructure policies</li> </ul>	Ukraine attracted 100 bln of green investment
<b>Synchronize with the EU Green Deal</b>	<ul style="list-style-type: none"> <li>• Enhance cooperation with the European partners on scientific and innovation projects</li> <li>• Align the Ukrainian priorities with the European Green Deal and EU strategic autonomy</li> </ul>	Ukraine successfully fulfilled the requirements set according to the EU candidacy status
<b>Ensure good governance</b>	<ul style="list-style-type: none"> <li>• Ensure the governance in accordance with the good governance principles (OECD)</li> <li>• Complete the corporate management reform of state-owned energy companies</li> </ul>	Level of trust to the government from business and society at least 60%

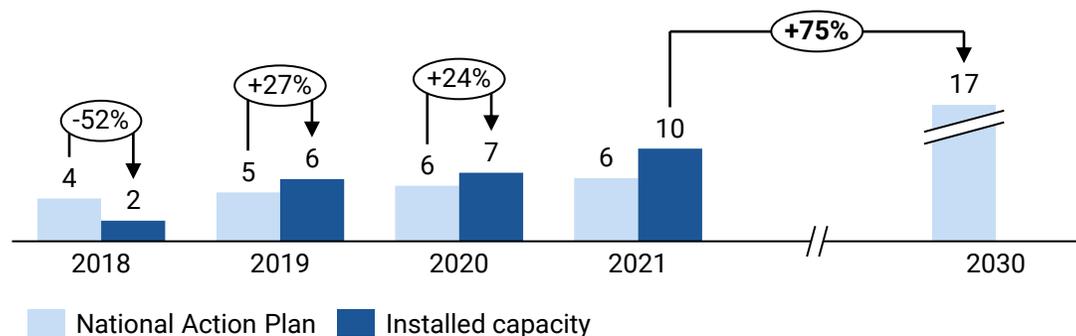
**Effective climate-governance architecture will ensure that Ukraine has effective stimulus to transform and is supplied by sufficient resources to finance those changes**

## Reforms in the energy sector have boosted Ukraine's sustainability, European integration, and economic growth

Energy generation structure in Ukraine, 1990-2021, % of total generation



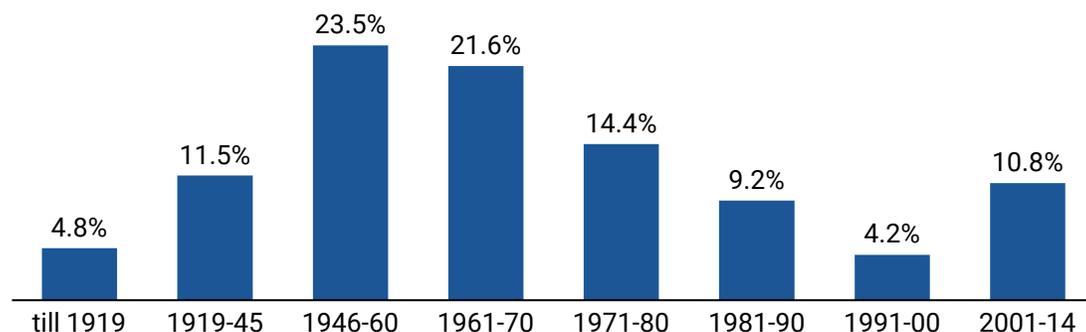
Renewable energy generation capacity in Ukraine, 2018-2030, plan vs fact



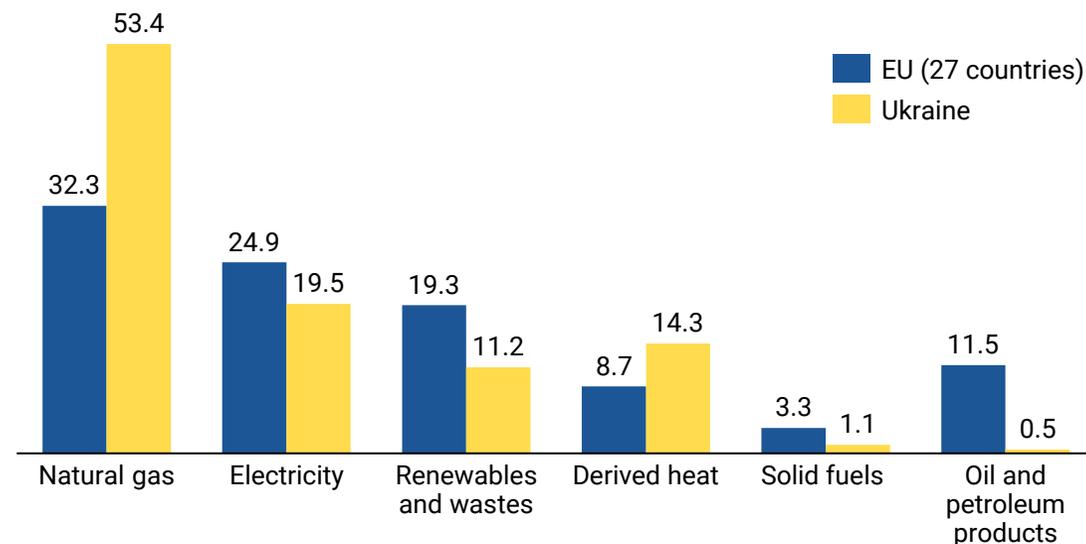
- Ukrainian energy sector has had significant transformation over the last 30 years as a result of economic decline and increased share of renewable energy sources (RES).
- Since 1990 the energy sector of Ukraine has changed with a significant reliance on nuclear power plants and **thus ensuring the 70% of carbon-neutral electricity produced**. Over the last 5 years **the share of RES has reached 8%** and exceeded the National Action Plan on RES development. However, market distortions have not provided sufficient incentives to invest in energy system flexibility to balance volatile RES, which are highly dependent on weather conditions.
- **Expected phase out of the heating power plants** due to high CO2 emission and high level of exhaustion may lead to generation capacity deficit. This creates energy balancing risks and challenges for cities where heat generation was a key employer and generated significant budget revenue.
- Power outages (SAIDI) in Ukraine are the longest in Europe and their duration reached **683 minutes in 2019**. Interruptions of power supply negatively affect the performance of the machinery and damage it.
- Recently **introduced RAB-tariff** in Ukraine will allow to increase the investment in modernization of the energy infrastructure, increase the budget income from privatization of the energy infrastructure projects and reduce the SAIDI to at least 300 minutes by 2030.
- Transformation of the energy sector has been hardened by the shrinking consumption of energy as a result of economic decline. **Recent market reforms ensured transparency on the gas and electricity markets** creating a competitive environment with a big number of suppliers. Still, regulated price on utilities caused by high level of energy poverty does not allow to ensure the full market liquidity.

## Ukrainian houses are 1.5-3 times more energy intensive in heat and electricity consumption than European ones

### Distribution of residential buildings by year of construction



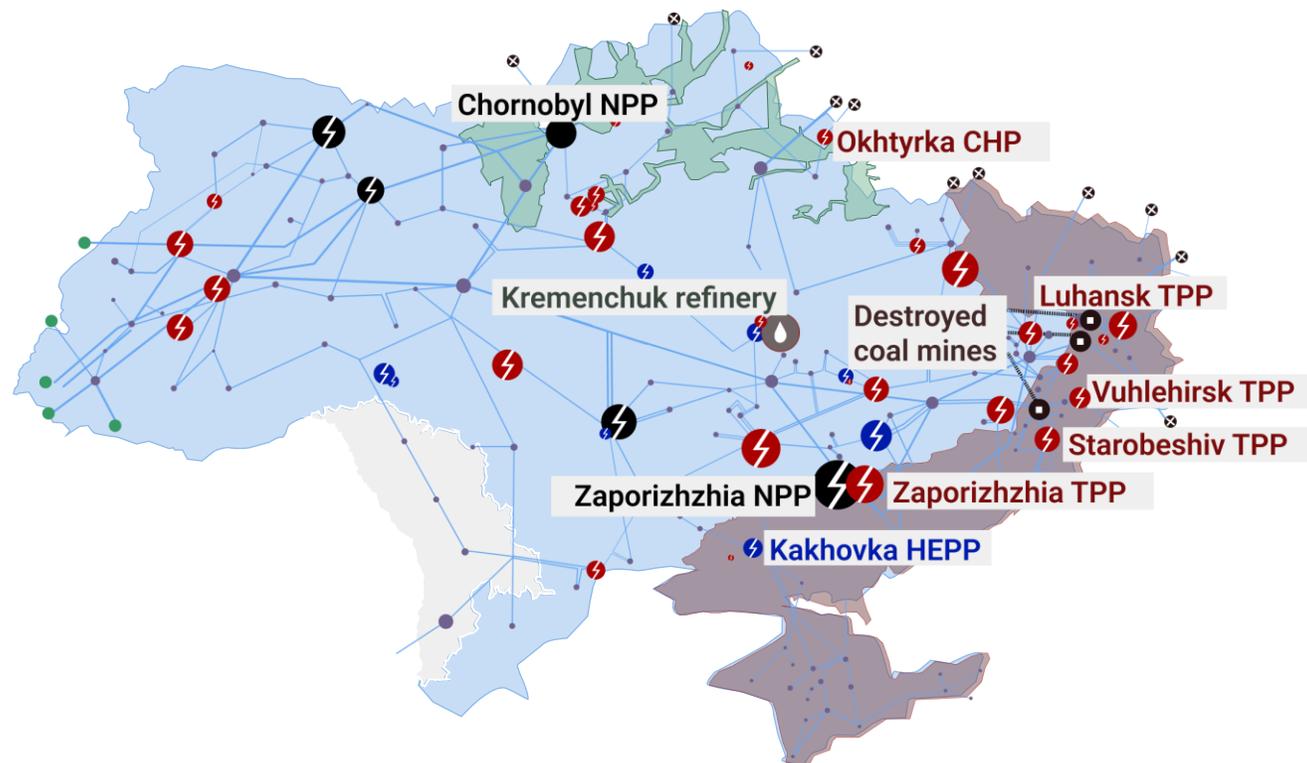
### Final energy consumption in households by type of fuel in Ukraine and EU-27, 2018, % of total



- The housing sector in Ukraine consists of 166,000 apartments and about 5.7 million private houses. Almost 70% of houses in Ukraine were built in 1946-1990 using **low energy efficiency standards**, which leads to excessive energy consumption by household that is 2-3 times larger than in the EU
- Homes account for almost **a third of final energy consumption** in Ukraine, **50%-60%** of which are used for space heating
- More than **80% of houses** in Ukraine were built before 1994, so most of them are fully depreciated. Hence, Ukrainian houses are **1.5-3 times** more energy intensive than houses in Poland and Germany
- In 2019, the total cost of heating in houses was estimated to be equal to **USD 12.1 billion** (around 9% of GDP). More than 50% of the heat was used inefficiently due to high losses in the residential apartment. According to experts, **about 90% of buildings and structures** in Ukraine do not meet the energy standards
- Most households in Ukraine do not use fluorescent, CFL or LED lamps in their houses. In addition, current outdoor lighting systems in the majority of apartment blocks does not include energy saving technologies like motion sensors and timers. In 2018, Ukrainian households **spent 73.3% of total electricity consumption** on lighting and electrical appliances that is 16 p.p. higher than in the EU-27 and twice the number in Sweden and Czech Republic
- The share of electricity consumption for space and water heating is much lower in Ukraine than in other countries, however gas and heat consumption for these purposes in Ukraine is much higher: **38% of households use central heating and 46% - gas**. The main share of total energy consumption by households is accounted for by natural gas - 53.6%. **High rates of specific heat consumption per m2 of housing indicate a significant potential for energy savings.**
- The investments required for a large-scale energy modernization of residential buildings in Ukraine **reach USD 51 billion**, and will save up to 9 million toe or USD 3-4 billion annually

## A large share of Ukraine's energy infrastructure is destroyed, damaged or under occupation

### Impact of war on energy infrastructure of Ukraine



57% Cogeneration heat plants & Thermal power plants

65% Installed renewable energy capacity

⚡ Nuclear power plants    ⚡ Thermal power plants / CHPs    ⚡ Hydroelectric power plants

◼ Coal mines    ◼ De-occupied territory    ◼ Occupied territory

65% Share of capacity destroyed by war/on the occupied territory

- War has led to significant damage of infrastructure and generation capacities and had put a threat to European nuclear security.
- Europe's largest nuclear power plant Zaporizhzhia NPP (6 GW) had been attacked and occupied by the Russian forces. Torture of personnel and inability to conduct proper scheduled services is a significant threat to the European security.
- Most RES are located in active hostility zone. Over 65% of renewable generation capacities on the temporarily occupied territory.
- Energy infrastructure has been severely damaged leading to **over 600 thousand households remaining with no access to electricity**.
- Liquidity issues on the energy markets have been caused by **decline of economic activity and worsened payment discipline**.
- Decline of economic activity due to undermined logistics channels, led to a **30% decline in energy consumption**.
- Supplies of fossil fuels had been significantly disrupted by **destruction of Ukrainian refineries and the need to seek new suppliers**.
- Oil and oil products market is characterized by significant deficit as a result both Shebelyn and Kremenchyk oil refineries destruction and significant dependence on Russian and Belarus prior to war that required development of new logistical chains through Western Ukraine.

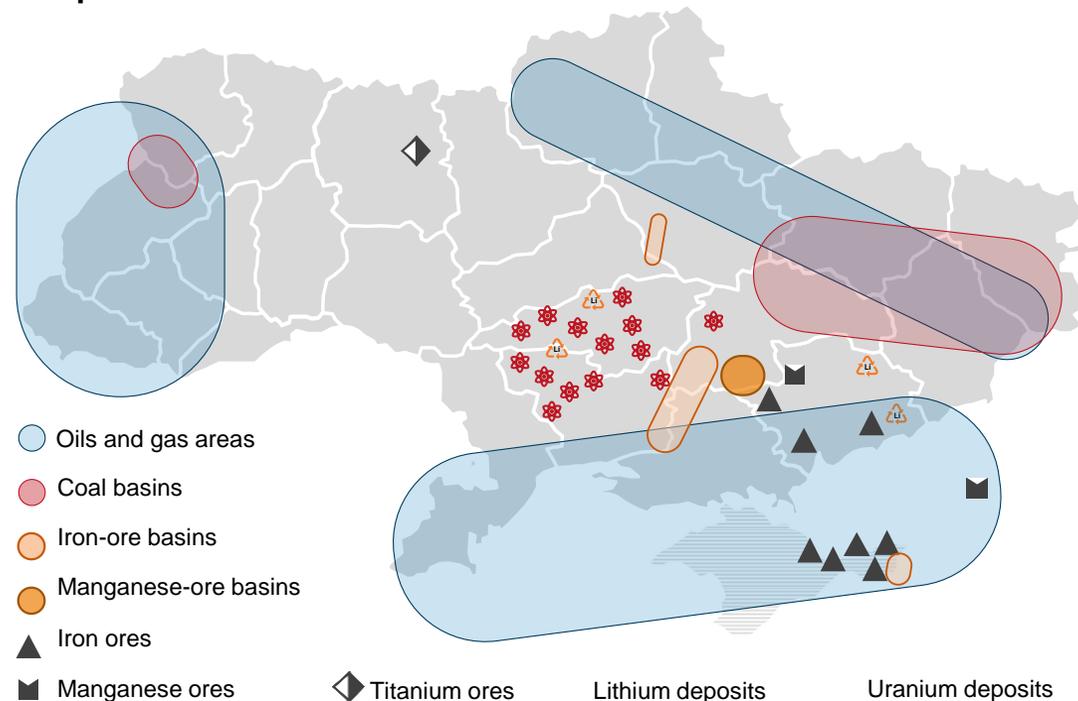
## Transition to energy efficiency and green clean energy will boost Ukrainian economy, strengthen security and improve quality of life for citizens

Initiative	Details	Success criteria
<b>Development of clean energy sources</b>	<ul style="list-style-type: none"> <li>• Development of RES, including distributed generation</li> <li>• Introduction of new additional nuclear blocks on Khmelnytska power plant</li> <li>• Decommissioning of coal mines and transformation of coal regions</li> <li>• Production of bioethanol and biodiesel to ensure 10% of internal market demand</li> <li>• Launch of the pilot projects on hydrogen production for 1-2 Gw</li> <li>• Shift on Heat generation capacities to biomass consumption</li> </ul>	Ukraine achieves 25% renewables by 2032
<b>Redesign of the infrastructure</b>	<ul style="list-style-type: none"> <li>• Construction of interconnections to expand the flow of energy within ENTSO-E</li> <li>• Redesign of gas transportation and gas transit system for the current and future economic needs</li> </ul>	Ukraine increases export of electricity to the EU up to 3Gw by 2025 and up to 6 Gw by 20
<b>Develop energy independence</b>	<ul style="list-style-type: none"> <li>• Modernize residential and private houses in accordance with energy efficient principles</li> <li>• Formed strategic reserves of oil and oil products for 30+ days</li> <li>• Increase extraction of gas from traditional and non-traditional sources</li> <li>• Development of energy storage systems to ensure the flexibility of the energy system</li> </ul>	Heat consumption within the central heating system reduced by 30%
<b>Liberalization of the markets</b>	<ul style="list-style-type: none"> <li>• Development of competition on markets of gas and electricity</li> <li>• Merge of Ukrainian trade platforms with European</li> </ul>	Full integration with EU energy markets

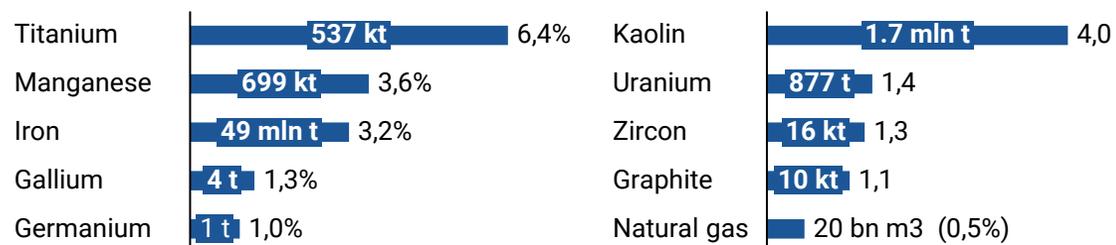
**Transformation of the energy system will ensure the competitiveness of the economy, foster the development of the Ukrainian economy and result in higher quality of life for citizens.**

## 3. Ukrainian rich natural resource base has a potential to attract foreign investors

### The potential of Ukraine's mineral resources



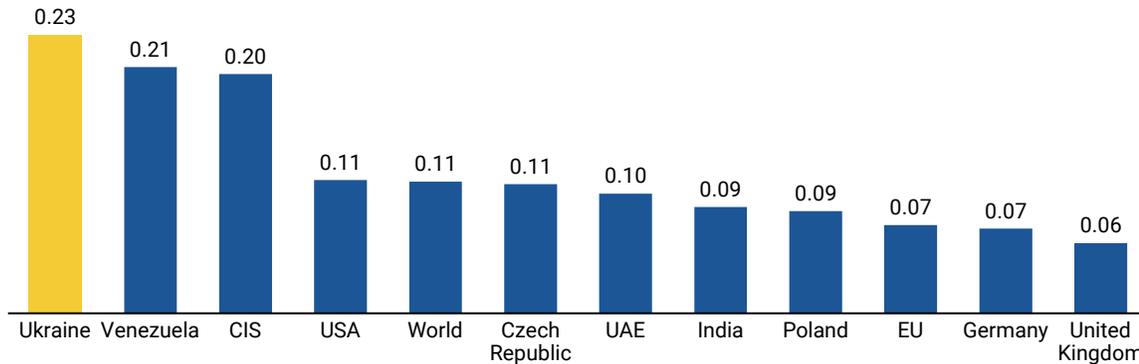
### Ukraine's mining in 2020, natural values & per cent of global extraction



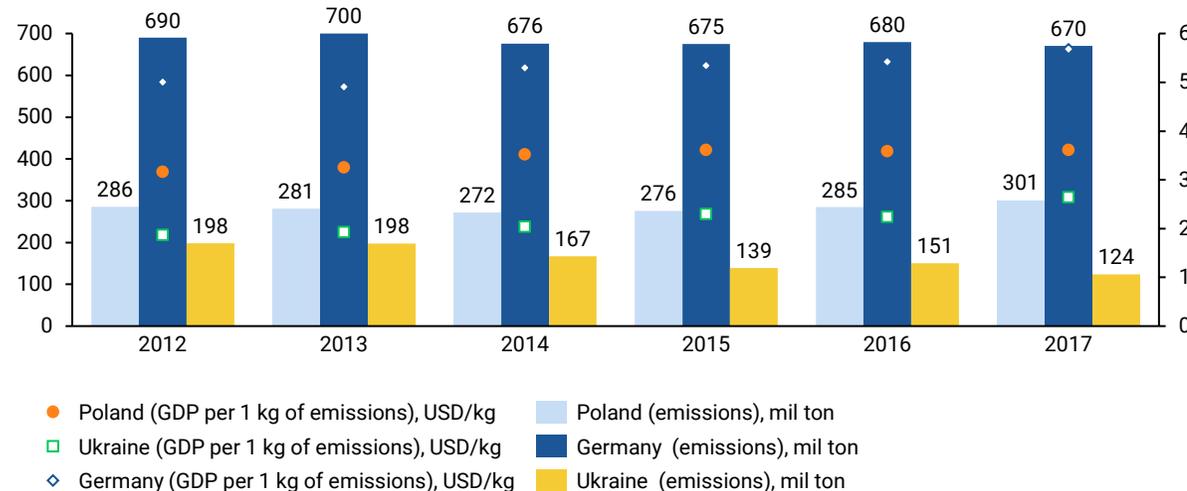
- According to the World Mining Data 2020 survey, in 2019 Ukraine ranked 26th by the extraction of minerals. The scope of production of minerals is estimated at 91.9 million tons, or 11.7 million US Dollars in monetary terms.
- By extraction of certain type of minerals, such as titanium, manganese, iron, germanium, kaolin, gallium, and zirconium, Ukraine ranks among top-20 states. Ukraine was marked as a potential partner of the EU in lithium deposits development.
- Ukraine produces 7% of the world titanium-containing raw materials: it is the largest country in Europe in the extraction of ilmenite and the only one for the extraction of rutile and zircon, which makes these industries interesting for potential foreign investors.
- According to the World Nuclear Association, Ukrainian uranium deposits amount to 108.7 thousand tons, which is 2% of world reserves, and rank 11th in the world. A total of 14 types of uranium ores and more than 100 uranium minerals are known, but only 12 of them are of industrial importance, among which the so-called "uranium tar", uranite and carnotite.
- Ukraine extracted about 455 tonnes of uranium in 2021, which was almost 47% lower due to the depletion of existing mines. The annual needs of Ukrainian nuclear power plants in uranium concentrate are about 2.4 thousand tons, while its domestic production was about 1 thousand tons. However, As the Ukrainian SOE "Energoatom" signed a memorandum on cooperation with American company "Westinghouse", there are undergoing talks on the increase in processing of uranium ore in Ukraine through the construction of an enrichment plant as well as increase of ecologically-sustainable mining in new sites and step-by-step conservation of old mines.

## Industry is one of the most energy-intensive sectors: it accounts for 30% of energy consumption and 36% of CO2 emissions

Energy intensity of GDP in Ukraine and world, 2019, cg no / \$ (in constant 2015 prices)



CO2 emissions from stationary sources and their intensity, 2012-2017



- In 2019 the energy intensity GDP in Ukraine was 0.238 kg of oil equivalent per dollar of output (in 2015 prices). It is **more than twice the world average and 2-3.33 times higher than in neighbor countries (Poland and Romania)**.
- **The key reasons for high energy intensity are the depreciated equipment and outdated technologies**, large share of energy-intensive industries in the country's GDP, underdeveloped areas of information technology and services.
- One of the most energy-intensive sectors of the Ukrainian economy is **industry**, which accounts for about **30% of the total energy consumption and 36% of all CO2 emissions**.
- CO2 emissions from stationary sources in Ukraine are relatively small and equals to 124 million tons in 2017. This is less than in Poland (301 million tons of CO2 emissions) and Germany (670 million tons). However, the coal intensity of industrial production in Ukraine is much higher than in the EU. **Ukraine has a much lower GDP per unit of emissions ratio than most EU countries**.
- Despite the availability of new technologies, most Ukrainian companies are in unequal position in comparison to competitors from developed countries and are **unable to carry out modernization of production facilities** due to a lack of access to long-term attractive financing, government support and economic stimulus created by the government.
- An effective incentive and source of funding for production facilities modernization is the CO2 emission tax. Until 2019, Ukraine had a tax on carbon dioxide emissions of **only UAH 0.41 per 1 ton**.
- In 2019 CO2 emissions tax increased by **24 times**: from UAH 0.41 per 1 ton to UAH 10 per 1 ton. It allowed to raise almost UAH 1 billion in tax revenues. However, these funds do not have target usage. All 100% of these revenues go to the general fund of the state budget.

## New green economy can improve quality of Ukrainian export and allow integration in European value chains

Initiative	Details	Success criteria
<b>Development of clean hydrogen and ammonia production</b>	<ul style="list-style-type: none"> <li>• Incentivize Naftogaz, an NOC, to diversity into hydrogen</li> <li>• Incentivize clean ammonia production at the Odesa Port Plant</li> <li>• Consider existing oil and gas transport infrastructure to transport hydrogen</li> </ul>	Production and export of hydrogen to Europe
<b>Incentivizing the exploration of the raw-earth materials under effective environmental control</b>	<ul style="list-style-type: none"> <li>• Assess the economically viable natural resource (cobalt, titanium, lithium)</li> <li>• Ensure reuse and recycle of 50% of wastes from the mining industry</li> <li>• Reduce the time spent on obtaining allowance for exploration</li> </ul>	100% of economically viable natural resources are assessed Reduce energy intensity of mining industry by 30%
<b>Development of new green industry</b>	<ul style="list-style-type: none"> <li>• Localize production of components and products for the green economy (batteries, wind blades and turbines, solar panels, electric vehicles)</li> </ul>	Active production of batteries, solar panels, turbines
<b>Large-scale decarbonization program of metallurgy, cement, ammonia</b>	<ul style="list-style-type: none"> <li>• Rebuild production facilities with energy efficient technologies that would ensure the competitiveness of the economy, reduction of the carbon footprint and prevent pollution</li> </ul>	Ukraine has decreased energy intensity of the GDP up to Over 60% of industrial wastes are utilized
<b>Develop electric mobility</b>	<ul style="list-style-type: none"> <li>• Develop clean transport and charging infrastructure that would ensure the reduction of the carbon footprint of products and reduce the energy dependence of Ukraine</li> </ul>	Increase share of electric transport

**Development of a new green economy would ensure the competitiveness of Ukrainian products on the global market and ensure European economic resilience by supplying Europe with critical resources, products and services.**

## Ukraine has a number of issues with deforestation, biodiversity, soil degradation and water security

### Forests



10.4 mln ha

Total forest area of Ukraine

14-16%

Forest cover rate (EU average – 39%)

### Biodiversity and ecosystem conservation



74k

Species of animals and plants present

41k km<sup>2</sup>

Under protection (=6.8% of Ukraine's area; 15% by 2027)

### Soil and land resources



42.9 mln ha

Total agricultural land fund (71.1% of Ukraine's area)

56%

Of country's area is under plowing (78% of soil; highest rate globally)

### Water resources



55 bln m<sup>3</sup>

Total land fund, of which 16% is withdrawn for human utilization

14%

Level of water stress

- **Long-lasting deforestation process** makes Ukraine more prone to adversary climate change consequence, such as destruction of sensitive water ecosystems (small lakes, rivers), extinction of endangered species.
- In 2020, 4,200 cases of **illegal logging** were recorded, with annual losses for the forestry industry amounting to EUR 46 mln.
- **Ukraine's biodiversity** is threatened by the impact of war: massive field and forest fires, which ruin unique ecosystems, like the Kinburn Sandspit (Mykolaiv oblast).
- Decades of inconsistent policies have caused significant landscape changes, with man-caused bio-intrusion processes: about 5% of Ukraine's territory is occupied by urban landscape, 54% are used in agriculture.
- **Soil degradation** remains an acute problem in Ukraine, with largest risks identified as erosion, soil compaction and loss of humus, exacerbated by a high plowing rate (78% of soil, 56% of land), and climate change impacts.
- Despite having 2<sup>nd</sup> largest arable land resource in Europe, the development of sustainable use of the soil have been limited by the land sale moratorium, lifted in 2020.
- **Ukraine's water security** is significantly behind other European countries: Ukraine ranks 52<sup>nd</sup> in the list of water stressed countries.
- Pollution of rivers, lakes, surface waters, as well as other issues have been addressed in the 2021 Water Strategy, which is yet to be adopted.

## 4 Russian invasion caused a major damage to the environment

### Threats to Ukraine's environment



Explosions causing harmful gas emissions and fires



Radiation threat due to the occupation of NPPs



Landmine contamination of >26% of Ukraine (160 ths km<sup>2</sup>)



Attacks on petroleum and oil storage facilities



Attacks on chemical infrastructure



Attacks on sewage and water supply systems



Soil and flora degradation



Damage to fauna, including mammals, birds, and sea animals

### Estimated damage



#### Fires

**471** cases recorded

**6.98** MT of emissions

**26** bn UAH, damage



#### Destroyed military equipment

**9387** total units

**25.3** kT of emissions

**192** kT of waste



#### Forests

**3.0** ths hectares (fire)

**20.0** ths hectares (cuts)

**440** mln USD, damage



#### Nature reserve funds

**20%** of protected areas under threat

**0.9** mln hectares

**102** bn UAH of damage



#### Oil & petroleum storage attacks

**5.5** ths tons (soil)

**1.4** ths tons (water)

**17.5** bn UAH of damage

**>200 bn UAH**

Total damage to Ukraine's environment

**254**

Crimes against environment

**1500+**

Recorded facts of ecocide

- An Emergency Task Force of over 70 scientists and analysts are devising the methodology of environmental damage calculation and updating the total damage estimate on a regular basis, with over **200 bn UAH of calculated damage as of May 2022, most of which accounts for nature reserve funds.**
- **Environmental damage reporting is available for any citizen** through a web-portal, following the assessment and estimation of the alleged crime against environment.
- Ukraine expresses its intention for **litigation with Russia on account of the ecocide.**

## Environmental protection can allow Ukraine to protect vital biodiversity to ensure higher quality of life of citizens

Initiative	Details	Success criteria
<b>Improve environmental security</b>	<ul style="list-style-type: none"> <li>• Increased levels of chemical, radiation and nuclear security</li> <li>• Complete the reform on waste management</li> <li>• Significantly reduce the recycle and reuse rate of household waste</li> <li>• Increase environmental sensitivity and improve environment protection skills of men and women</li> </ul>	Ukraine has developed biodiversity
<b>Effective conservation policy</b>	<ul style="list-style-type: none"> <li>• Rate of plowed soil area to be decreased</li> <li>• Ensure restoration of degraded lands</li> <li>• Rehabilitate 100% of the mining territories</li> <li>• Improve and develop the system on waste management; Increase the share of recycled household waste</li> </ul>	20% of the household wastes are recycled by 2024; Over 130 new waste management facilities established by 2024;
<b>Forest policy</b>	<ul style="list-style-type: none"> <li>• Forest coverage rate to increase</li> <li>• Prioritize the development of national parks and forest seed centers</li> <li>• Introduced sustainable management of forests</li> </ul>	Increase the level of forestry up to 18% by 2035
<b>Landscape and biological diversity</b>	<ul style="list-style-type: none"> <li>• Landscape planning system at the national and regional levels</li> <li>• Network of natural protection territories</li> <li>• New recreational projects developed</li> </ul>	New 72 recreation facilities created

**Adaptation to climate change would strengthen the resilience of Ukraine against natural disasters caused by climate change and ensure a higher quality of life in a clean, natural environment.**

# How international partners can join

With advanced experience in decarbonizing the economy and implementing best practices on mitigating human influence on the environment, international partners would be able to contribute to Ukraine's environmental recovery

**1** **Technical support to climate governance architecture** | Provide technical support to the Government of Ukraine in building the architecture of climate governance to help Ukraine ensure the green and just transition

**2** **Investment in environmental recovery** | Invest in environmental recovery projects and help boost the green economy of Ukraine to contribute towards Ukraine's swift reconstruction

**3** **Provision of equal opportunities** | Create equal opportunities for Ukraine as Europe's partner in finance, knowledge, market access to support its economic recovery

**4** **Financial and material assistance** | Financial and material assistance in overcoming consequences of hostilities in Ukrainian territory – mine clearance, including demining of sea routes, combatting water and soil pollution.

# SOCIAL RECOVERY

Extended Background Analytics for the URC2022 Social  
Recovery Policy Brief

July 2022

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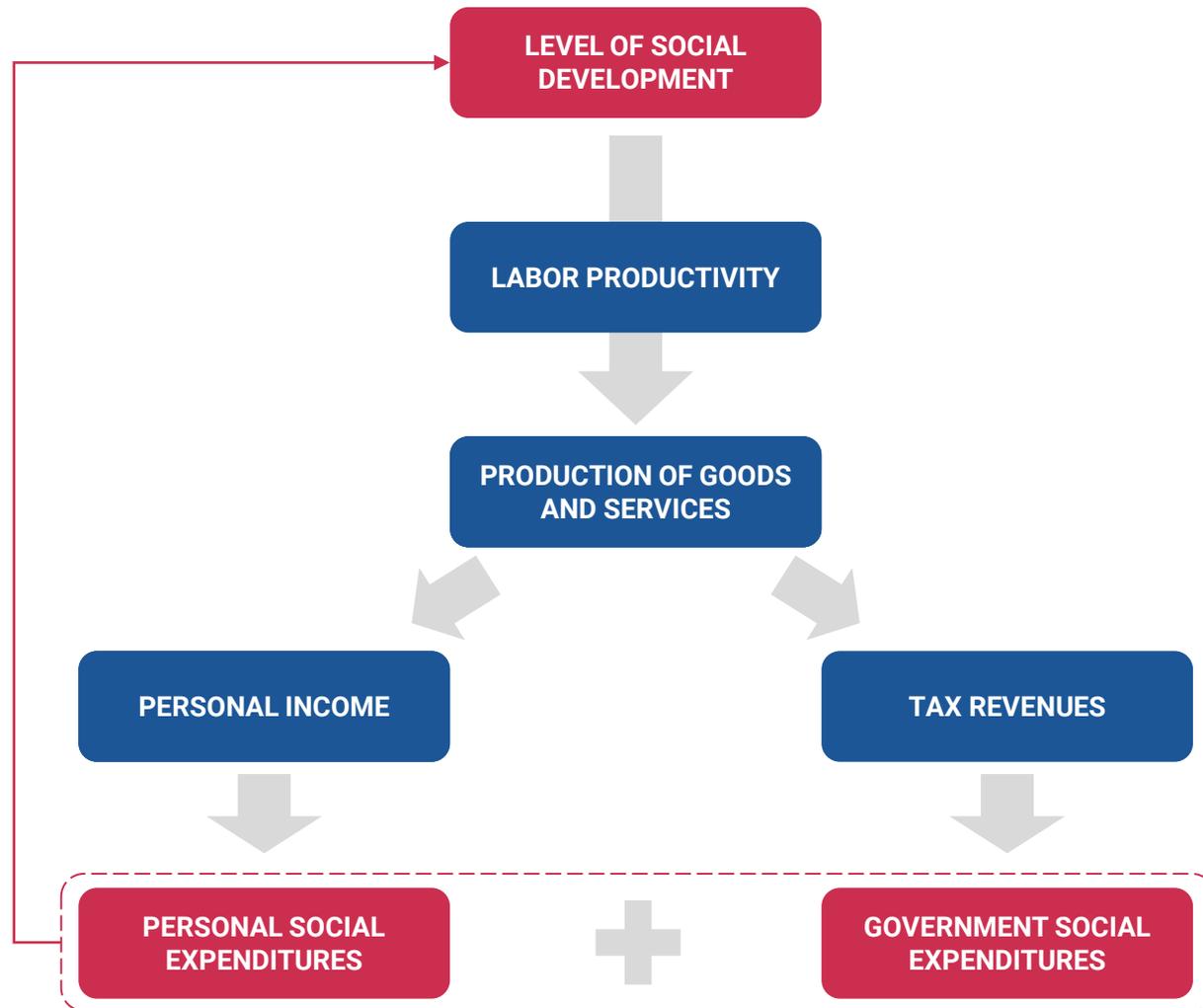
# BACKGROUND

Description of pre-war issues of the social development and direct influence of war on social sphere



# The welfare of population not only depends on economic development, but also is one of its key drivers

## Place of the social development in a country's economic growth

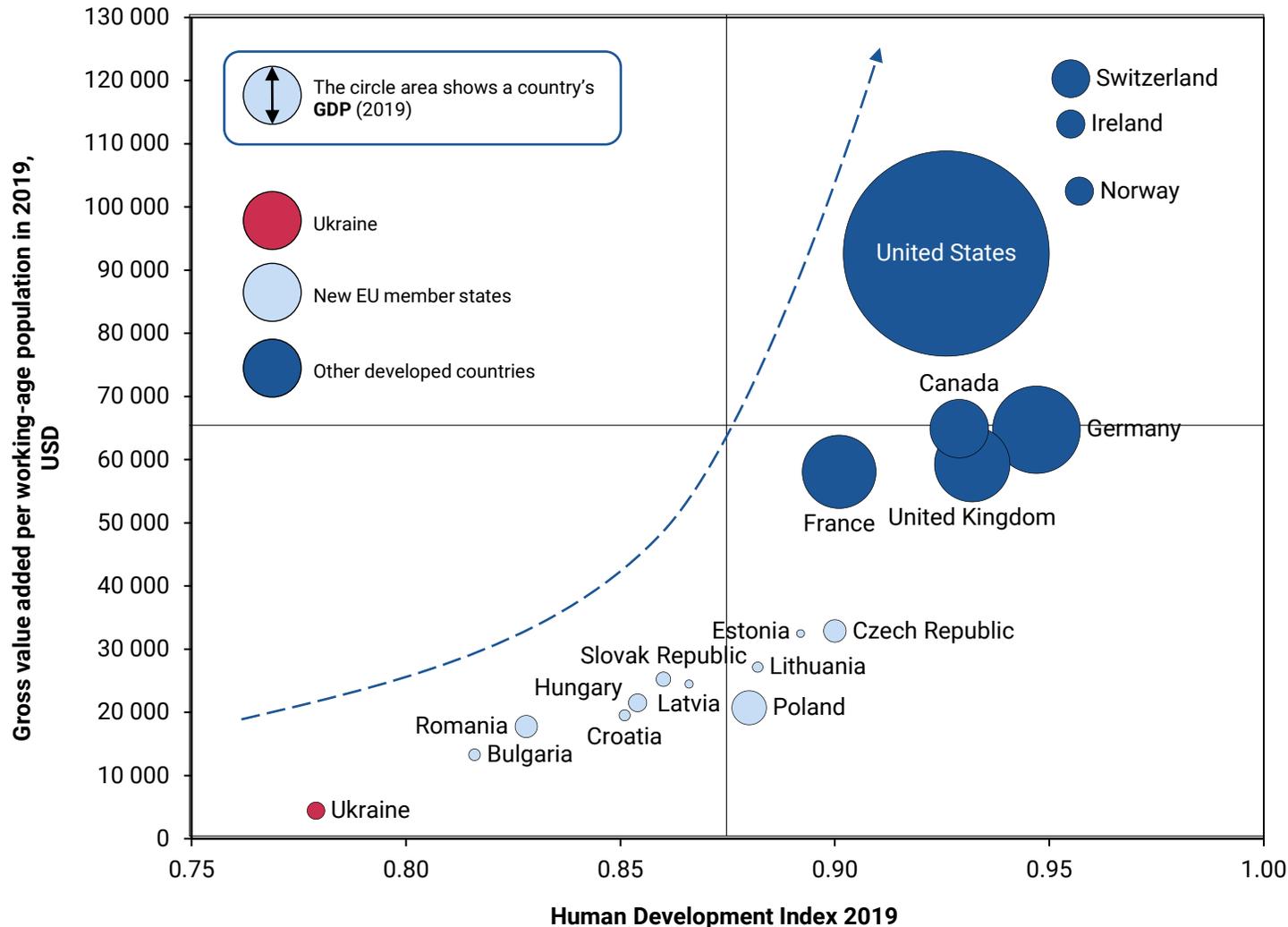


## Comments

- Ensuring decent quality of live through social development is an ultimate goal for each civilized state. Nowadays **the most developed countries are those which citizens have sufficient level of income, equality of opportunities, access to high-quality healthcare, education and can fully utilize their potential.**
- Social development directly affects an economic growth of a country: **states with better social standards tend to have higher productivity of its workforce.**
- On the other hand, there is also an inverse relationship between those two elements: **since countries with high productivity of workforce generate more value added, they are associated with higher personal incomes, as well as higher budget revenues.** This establishes preconditions for investments (both private and state) in improvement of the social development and quality of live. In more developed countries women and men tend to benefit more – and more equally - from state social expenditures, as well as more likely to invest their own funds to improve their living conditions.
- **Some developing countries may find themselves in a 'wishes circle' where their labor productivity is low due to a poor level of development of human capital, while its improvement is limited due to a lack of resources.** The situation is often complicated by low efficiency of governance in those countries (and, as a result, ineffective public finances), as well as a fact that 'return' on investments in social capital is usually indirect, subtle, and long-term.

# Countries with higher level of social development and equality of opportunities tend to have more advanced economies with higher labor productivity

Human Development Index and Gross Value Added in Ukraine and other countries

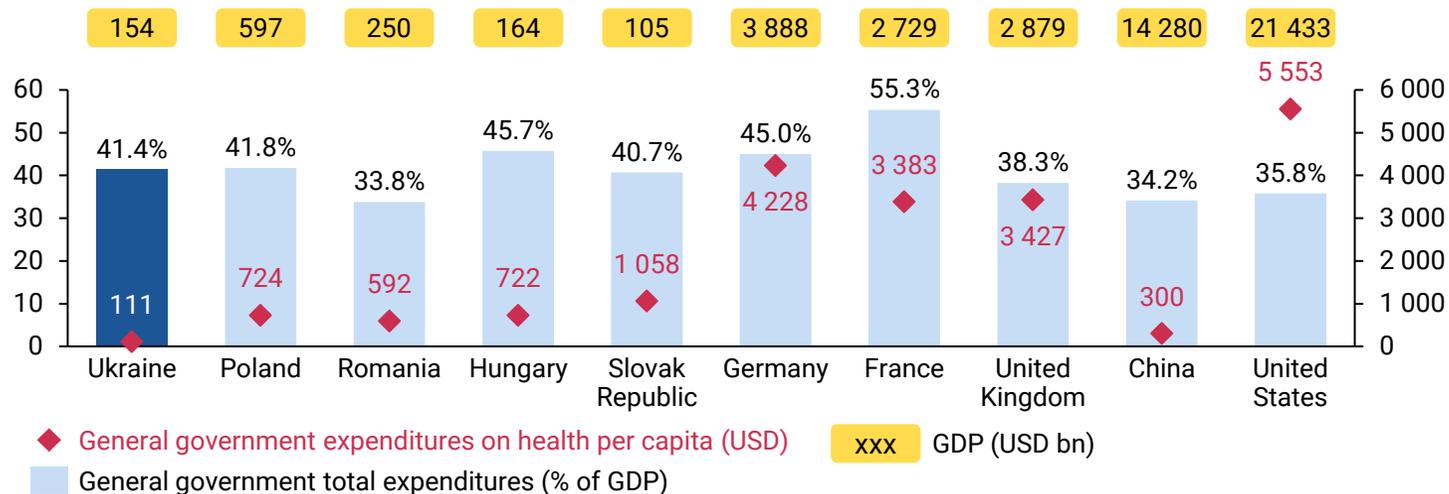


## Comments

- One of the most common ways to measure a level of social development of a country is **Human Development Index (HDI)** – composite indicator consisting of life expectancy, education and per capita income. It is amplified by Gender Development Index (GDI), measuring gender inequalities in achieving three dimensions of human development.
- **There is a strong correlation between HDI and productivity of workforce in a country:** countries with higher value of indicator usually have a higher output per one person of working age (15-64 years old).
- Meanwhile, the correlation may be also interpreted in reverse: countries that generate more added value can provide their citizens with more decent living conditions. **Improvement of quality of human capital of men and women increases economic output which, in turn, can be utilized to provide even better social standards.**
- The developed countries are associated with high quality of life and high labor productivity. Central European post-socialist countries that managed to implement structural reforms have significantly improved both indicators in recent years and **now can provide their citizens with decent social standards.**
- Meanwhile, even though Ukraine is qualified as a 'high human development' country according to the HDI methodology, **it still falls behind from its peer countries with similar socialist past.** As a result of untapped potential, labor productivity in Ukraine is also mediocre.

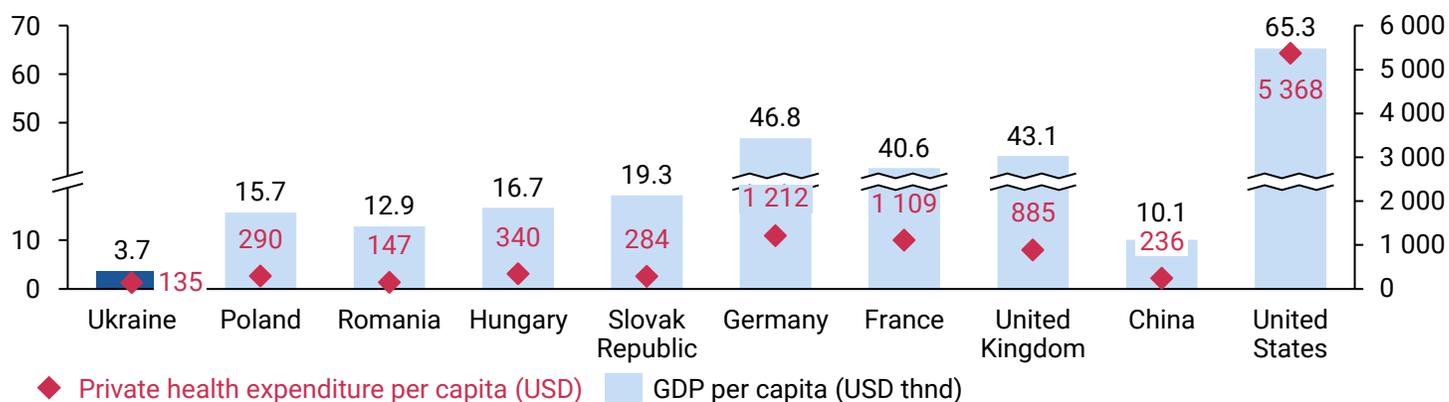
# In Ukraine, acceleration of human development is complicated due to a lack of resources in both public and private sectors

**General government total expenditures and general government health expenditures\* in Ukraine and other countries, 2019** Comments



- **Historically Ukraine has a relatively high level of economy redistribution through public finances** (~41% in 2019 according to the IMF). Even though it corresponds to the level of redistribution in peer countries, it is higher than in economies that demonstrate rapid economic growth (such as China).
- **Due to the Soviet past, the government sector of Ukraine is socially-oriented**, with high share of expenditures on health, education, social protection (including pensions).
- **At the same time, even despite the high role of public sector, in absolute figures financing of social expenditures is insufficient due to the underdeveloped economy.** For instance, in healthcare sector, in 2019 Ukrainian government spent ~USD 111 from budget for health per one person. This is few times lower compared to other analyzed countries.
- Considering the personal expenditures, the situation is similar. **With per capita GDP lower than USD 4 thousand, Ukrainians do not have enough resources to significantly improve their living conditions.** Considering private expenditures on health, in Ukraine they are also much lower compared to the peer countries. In other spheres (education, culture, etc.) the situation is similar.

**GDP per capita and private expenditures on health\* in Ukraine and other countries, 2019**



# The Russian full-scale war against Ukraine has led to a number of new challenges for Ukrainian social system

## Key figures

**~10.5 thnd** of Ukrainian civilians were **killed or injured**

**~14 thnd war crimes** of Russian soldiers are recorded

**~8 mn** people **fled** from Ukraine after the start of the full-scale war, **90%** of them women and children

**~8 mn** people temporary became **internally displaced persons**

**700 thnd** men and women **protect Ukraine** in the armed forces or other structures

## Comments

- As of end of June, the Office of the UN High Commissioner for Human Rights (OHCHR) recorded **over 10 thousand casualties among Ukrainian civilians**, with over 4.7 thousand people killed (including ~280 children) and another >5.8 thousand people injured (including ~300 children).
- At the same time, the **real figures are likely to be higher dozens of times**, since the OHCHR does not have an exposure to the locations where intense hostilities are currently in place (as well as locations that are currently under Russian occupation). For instance, according to the Advisor to the Mayor of Mariupol, **the total number of casualties in the city alone exceeds 22 thousand**.
- Thousands of Ukrainians have been physically injured as a result of Russian actions. Apart from injuries caused by using explosive weapons, there are numerous recorder cases of tortures, rape, and other war crimes. In early June, **the Prosecutor General's Office of Ukraine reported that over 14 thousand Russian war crimes have been documented**.
- **The United Nations (UN) reports that over 8 million people have left the country** as of late June. Over 5.2 million individual refugees from Ukraine recorded across Europe. Returning those people back to Ukraine will be a major challenge. **Even though now up to 90% of refugees report their willingness to go back to the country, the situation may change over time**.
- **Apart from refugees, as of May over 8 million Ukrainians have become internally displaced persons (IDPs)**, mostly concentrated in the Western part of the country.
- Finally, another category of population that was significantly affected by the war is **people who were mobilized into the Armed Forces or protect the country in other structures**. According to the President Zelenskyi, now ~700 thousand people protect the country against Russian aggression.

# The challenges caused by Russian aggression may be divided in three categories, and need prompt response from the Government of the country



## 1 Psychological and physical injuries

- **Over 5,800 Ukrainian civilians were injured** as a result of Russian aggression
- Even more Ukrainians have suffered from psychological trauma. According to the Ministry of Health of Ukraine, **not less than 60% of Ukrainians need psychological support.**
- The key goal of the Government of Ukraine should be ensuring that all of these people receive **sufficient care and rehabilitation services** and are able to be **reintegrated into society.**



## 2 Refugees and internally displaced persons

- **~8 million people fled from Ukraine** after the start of full-scale war, **90% of them are women and children**, another **~8 have moved within the country**
- The key goal of the Government should be creating sufficient **pre-conditions for returning refugees**
- Also, the Government needs to ensure that IDPs have access to **places of residence**, all **necessary services** (healthcare, education, childcare, social protection), as well as they are able to **find new jobs** (including through the state retraining programs).



## 3 Mobilized people

- **~700 thousand men and women protect the country** against Russian aggression.
- **Many of these people have left their normal jobs after the war has started.** Thus, after the war is over, reintegration of those people into the society and workforce is one of the crucial tasks for the Government.
- Soldiers that were injured during the war will need high-quality physical and social rehabilitation. Moreover, the Government needs to ensure that **families of dead Ukrainian soldiers are socially protected.**

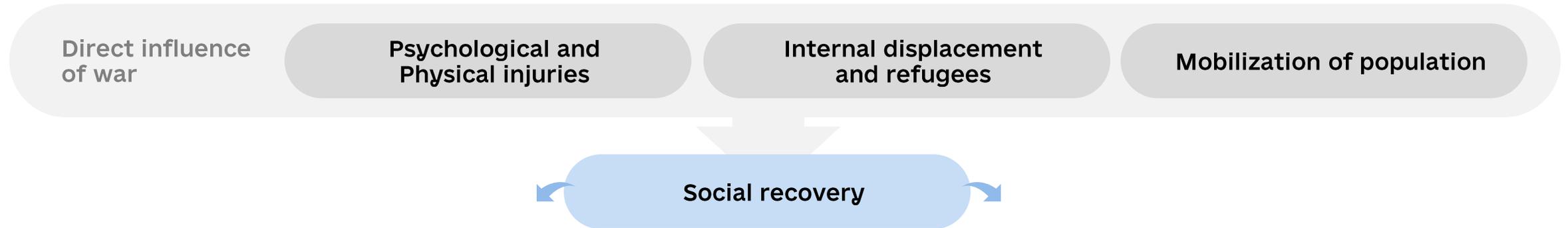
# ACTIONABLE FRAMEWORK

Description of infrastructure recovery framework, background and proposed initiatives for each element of framework



# To counteract the numerous challenges the comprehensive framework was proposed

Social recovery efforts will be structured into two major pillars: (1) ensuring high quality of life and (2) creating preconditions for personal development of each individual, covering five relevant policy spheres.



## Ensuring personal development

-  **Education & Science** 1
-  **Culture & Information Policy** 2
-  **Youth & Sports** 3

- Development of educational and scientific potential
- Instill cultural and value-driven competences
- Creating opportunities for youth and promoting sports

## Ensuring quality of life

-  **Healthcare** 4
-  **Social Protection** 5

- Ensuring access to the high-quality healthcare services, including mental health and rehabilitation
- Providing social protection to vulnerable groups, including IDPs, children, and people with disabilities

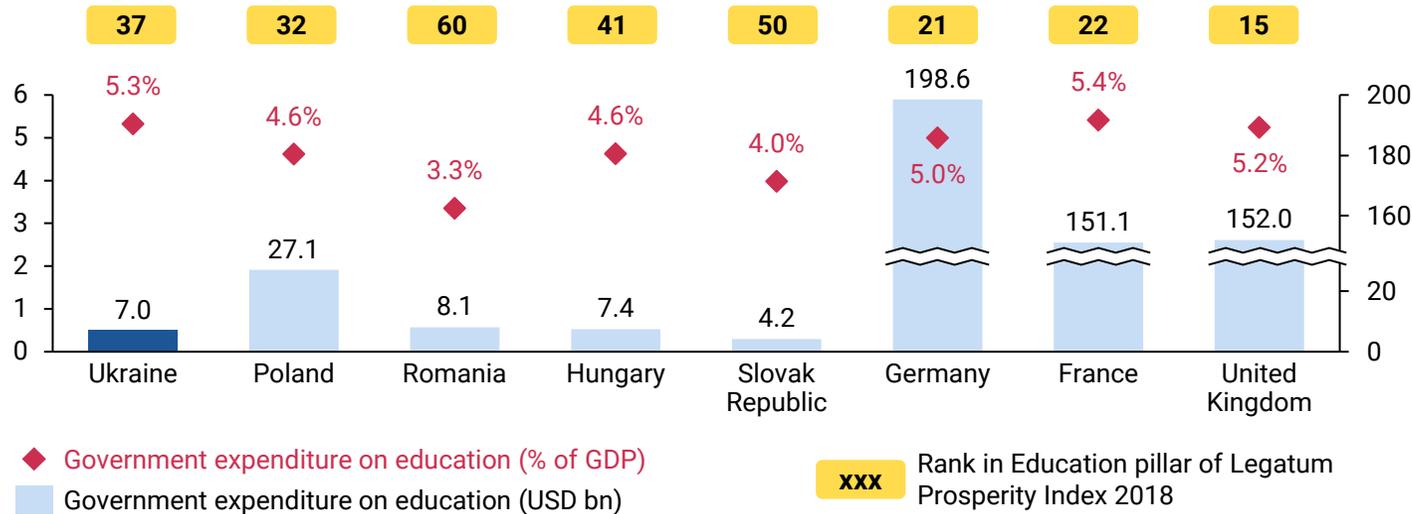
Next slides describe (1) background and (2) proposed initiatives for each priority area. The slides are marked accordingly →

background

actions

# Despite Ukraine demonstrates relatively high performance in terms on quality of education, it still falls far behind of other European countries

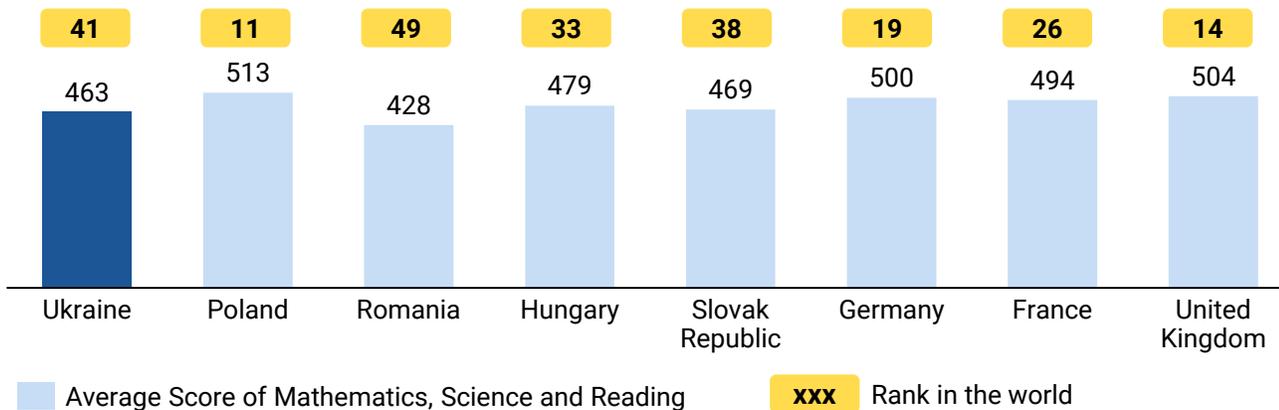
### Government total expenditures on education in Ukraine and other countries, 2018



### Comments

- **Ukraine allocates about 5% of its GDP for the Education, which is considerably higher than its neighbors and on the same level with the top European economies.** However, in absolute figures, Ukraine expenditures on education are about 25 percent of Poland's level and only 3,5% of Germany's level.
- **Despite the relatively low level of public expenditures on Education, Ukraine maintain a relatively high rank (37) according to the Legatum Prosperity Index, ahead of Romania (60), Hungary (41) and Slovak Republic (50).**
- A well-developed educational system accounted for a literacy rate of close to 100% and a rather satisfactory average 2018 PISA assessment **where Ukraine scored at rank 40 out of 78 countries.** As a result of the war the **educational process was significantly disrupted.** According to the Ministry of Education and Science of Ukraine, as of June 20, 2022, at least 650 thousand students and 22 thousand pedagogical staff of general secondary schools were forced to flee abroad, including over 2 thousand children with special educational needs.
- **Moreover, at least 2 082 educational institutions were damaged by shelling and bombing, 213 of them were completely destroyed.** Roughly 15% of the research infrastructure of higher education and research institutions was also destroyed

### PISA: average score of mathematics, science and reading, 2018



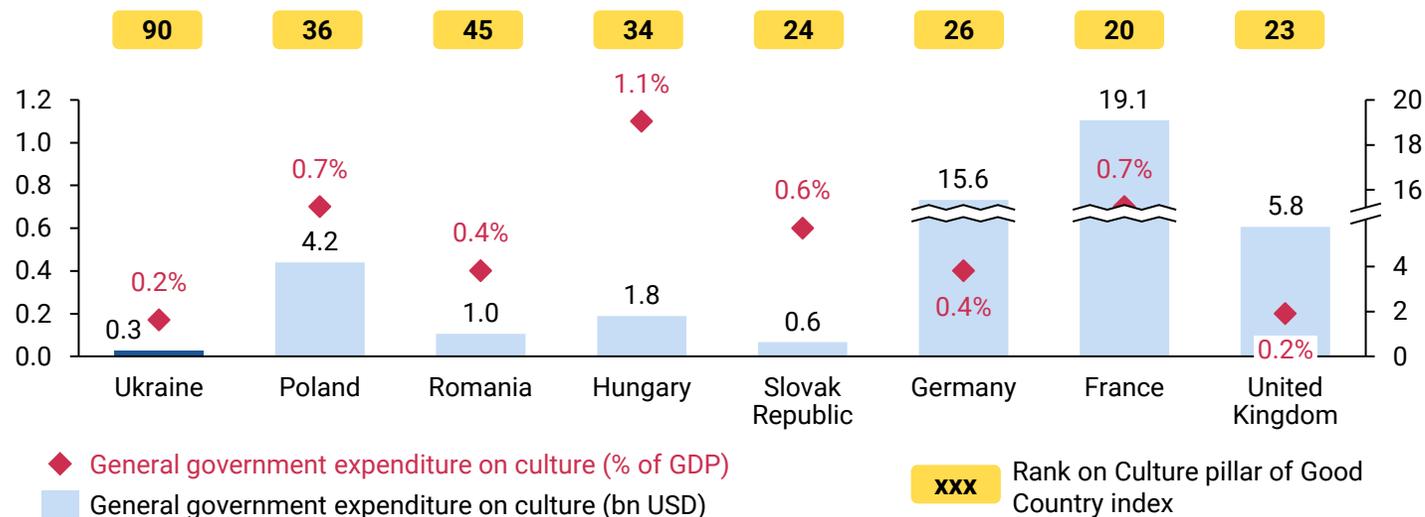
# Restoration of damaged and destroyed educational infrastructure should be accompanied with continuation of reforms in the sector

Initiative	Details	Success criteria
<b>Restore educational process and infrastructure</b>	<ul style="list-style-type: none"> <li>Resume the educational process in war-torn areas, restore the infrastructure of educational and research institutions (development of a modern network of educational institutions that meets the needs of communities; reconstruction and restoration of research and innovation infrastructure)</li> <li>Adjust educational programs in response to learning losses caused by war</li> <li>Restore full-scale independent assessment for admission and attestation of students</li> <li>Provide psychological support to educational process participants. Implement psychological rehabilitation programs, adapt and support children and other educational process participants in wartime and postwar period</li> </ul>	Fully restored educational process and scientific activities, rehabilitation programs provide sufficient services.
<b>Continue reforms in the area</b>	<ul style="list-style-type: none"> <li>Continue the New Ukrainian School reform. Build an accessible and secure digital educational and research environment</li> <li>Continue educational reforms in the areas of preschool, vocational, professional pre-higher and higher education</li> <li>Provide training of qualified specialists for the needs of the country's economy (dual education, financial autonomy of higher education institutions, public-private partnership)</li> </ul>	Reforms objectives are met.
<b>Provide support to the research institutions</b>	<ul style="list-style-type: none"> <li>Resume grant support for research, scientific and technical developments by the National Research Foundation of Ukraine</li> <li>Ensure involvement of scientific and scientific-pedagogical workers in academic mobility programs</li> </ul>	Scientific research is restored.
<b>Accelerate integration into the European and global education and research areas</b>	<ul style="list-style-type: none"> <li>Expand Ukraine's participation in EU programs and projects in the fields of education and science, including Erasmus +, Horizon Europe, etc</li> <li>Ensure comparability and recognition of Ukrainian educational qualifications in Europe and the world</li> </ul>	Ukrainian education and science are fully integrated into global policies and processes.

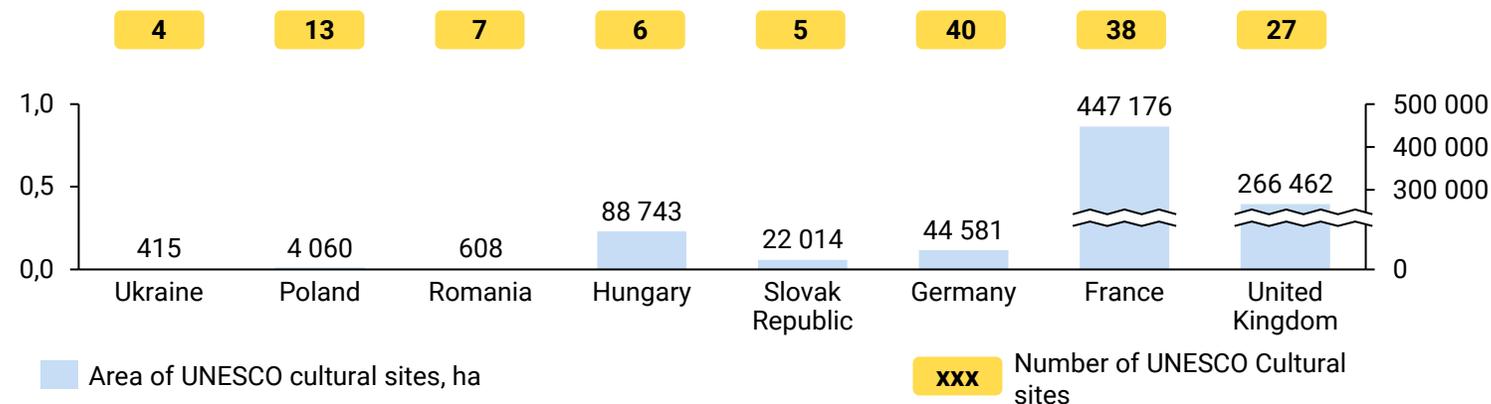
**An educated nation is fundamental to the country's human potential, contributing to an innovative society and thus enhancing economic growth, sustainable development, individual well-being and cohesion**

## Historically culture in Ukraine was out of the Government's focus and suffered from underfinancing

Government total expenditures on culture in Ukraine and other countries, 2019



Number of UNESCO Cultural sites and its area (fully located in one country), 2022



### Comments

- **In Ukraine, the cultural sphere is significantly underfinanced.** In 2019 the total the total government expenditures on culture were equal to only ~USD 0.3 bn, which is few times lower compared to peer countries in Central Europe. Moreover, Ukrainian expenditures on Culture are extremely low even adjusted by the size of economy (they equals to ~0.2% of GDP, which is lower compared to most of other analyzed countries).
- **Poor financing of the cultural sphere leads to poor engagement of citizens in cultural life.** Around 50% of the Ukrainian population does not attend any cultural and artistic events or use cultural services at all.
- **Current network of cultural centers and libraries is vast and resilient,** although mostly outdated and require renovations to function properly.
- **Despite a large country's area and long history, Ukraine has very few sites included in UNESCO cultural heritage list.** It may be related to insufficient efficiency of identification and verification of such sites.
- **The war caused significant destruction of cultural heritage sites.** As of June, more than 360 episodes of Russian war crimes against cultural heritage were documented, including destruction of memorials, religious sites, museums etc. In turn, using hybrid warfare practices, Russia produces a large number of fakes and manipulative messages on a daily basis that require refutation.

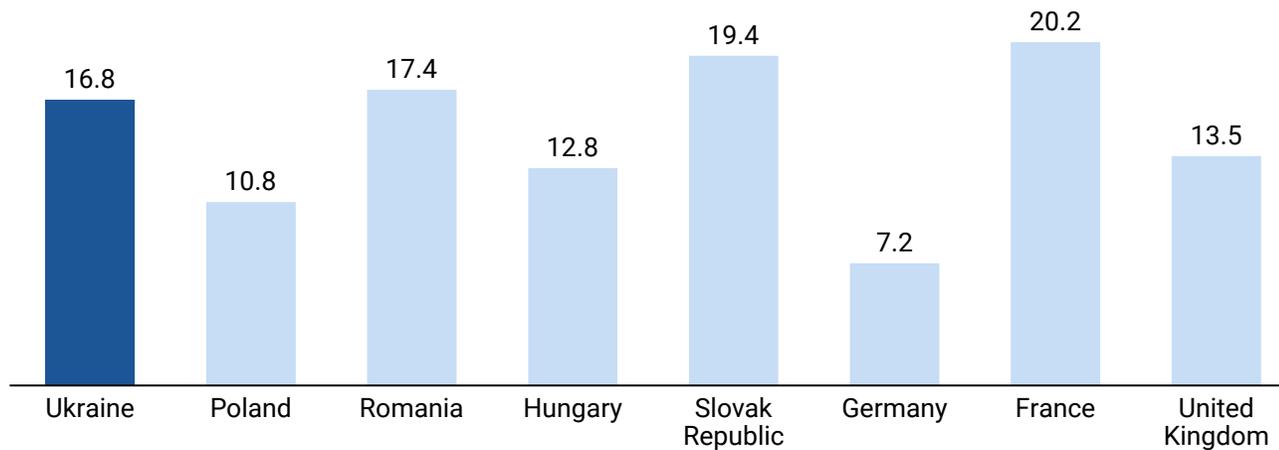
## Ukraine should focus on countering Russian disinformation, restoration of damaged sites, as well as ensuring development of the cultural sphere

Initiative	Details	Success criteria
<b>Counter Russian disinformation</b>	<ul style="list-style-type: none"> <li>• Counter Russian disinformation by restricting access to propaganda resources in the media</li> <li>• Substitute the Russian informational channels with Ukrainian channels, expand the production of content in European languages</li> </ul>	Ukrainians possess media literacy, Ukrainian content is available worldwide.
<b>Contribute to the preservation of cultural heritage</b>	<ul style="list-style-type: none"> <li>• Comprehensive program for the restoration and preservation of cultural heritage</li> <li>• Establishment of an international fund for the restoration of cultural heritage</li> <li>• Comprehensive inspection of the state of preservation of museum objects of the Museum Fund of Ukraine, determination of the degree of damage and further restoration</li> <li>• Return of stolen or lost as a result of wars cultural values of the people of Ukraine</li> <li>• Digitalize the registers of Ukrainian cultural heritage</li> </ul>	Cultural artifacts from the war-affected areas are preserved.
<b>Preserve the memory of the national history</b>	<ul style="list-style-type: none"> <li>• Conduct historical research in the field of memory and memorialization, make sure that the contribution of different ethnicities, sexes and regions to Ukraine's historical development is recognized, restore damaged artifacts and cultural monuments</li> <li>• Construction of memorial sites, honoring the Ukrainian history (including Russian invasion)</li> <li>• Restoration of objects of spiritual significance, cultural heritage of ethnic and religious communities of Ukraine</li> <li>• Introduction of elements of multicultural education in educational institutions by updating the content of educational programs</li> <li>• Research of the state of interethnic and interreligious relations in Ukraine</li> </ul>	Governmental policy in the field is based on relevant data, Ukrainians are aware of national history.
<b>Support culture and creative industries</b>	<ul style="list-style-type: none"> <li>• Development of the network of Centers of cultural services, creating a network of centers of modern culture</li> <li>• Update the mechanism of financing the system of providing the population with cultural services</li> <li>• Promote Ukrainian culture worldwide through emphasizing the diversity of Ukrainian culture and support of independent media</li> <li>• Creation of a professional institution for research and museification of contemporary art</li> <li>• Culture Exports and Ukrainian Culture Centers Abroad</li> </ul>	Ukrainian creators develop products for various audiences.

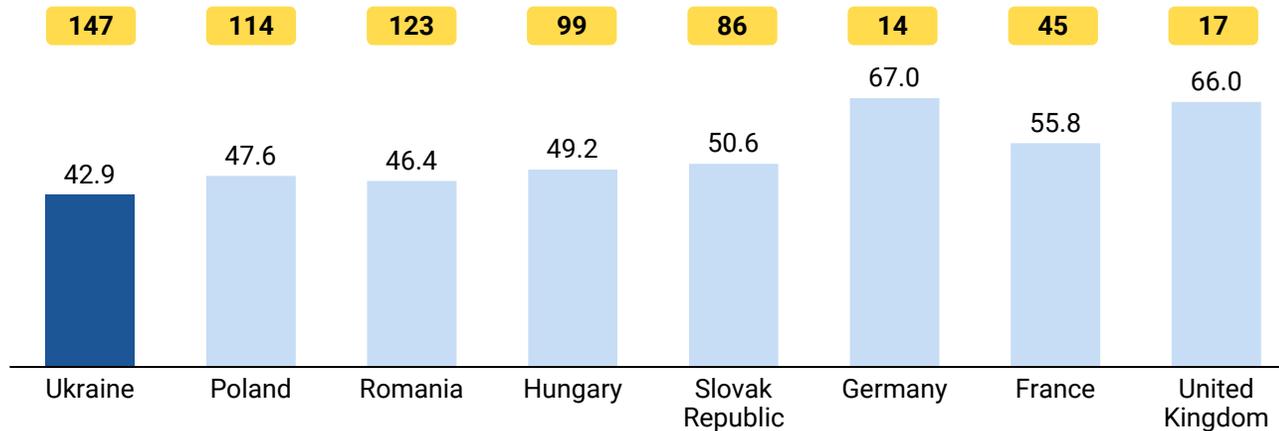
**Culture will help to strengthen the information space independent from Russia and contribute to long-term social cohesion and a diverse, inclusive and participatory Ukrainian society, as well as contribute to global heritage**

## Ukrainian youth insufficiently engaged in social and civil processes in the country

Youth unemployment in Ukraine and other countries, 2020



Rank and Score in Social Capital pillar in Legatum Index of Ukraine and other countries, 2019



Score in the index Rank in the index

### Comments

- **Ukraine has a relatively high level of the unemployment among youth**, which is higher than in neighboring countries - Poland, Hungary and significantly higher than in some of the Western countries. Also, unlike other assessed countries, unemployment level among males are higher than among females.
- **Ukraine demonstrate a low level of social cohesion – in terms of trust, social networks, and civic participation.** This factor is negatively affecting the implementation of the social initiatives, especially among youth.
- **War negatively affect the general well being of the men and women**, thousands of young people had to leave the country and search for shelter in other countries.
- **During 2020-2021, a number of projects were implemented aimed at attracting men and women to a healthy and active lifestyle, as well as creating conditions for preparing athletes for international competitions.** As a result of the invasion, the implementation of these projects was disrupted. The sports infrastructure was severely damaged, and many athletes were forced to interrupt the training process.

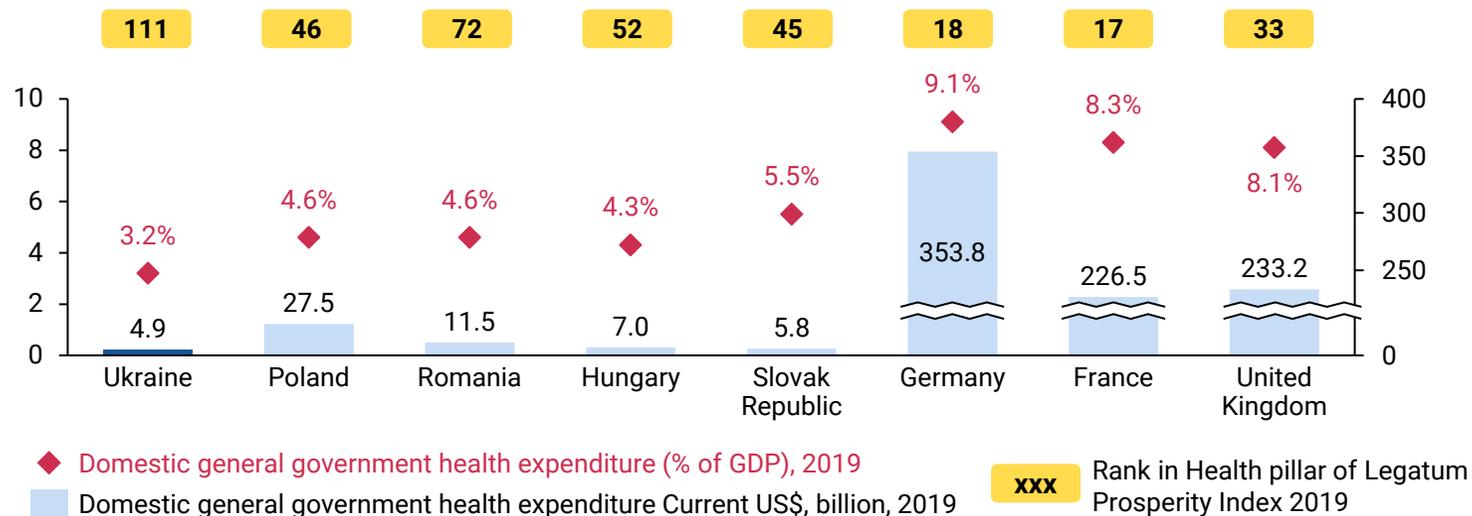
## To ensure cohesive development of the country, Ukraine should support initiatives aimed at increasing youth participation

Initiative	Details	Success criteria
<b>Return youth to Ukraine</b>	<ul style="list-style-type: none"> <li>• Create incentives system for the return of the young men and women to Ukraine, including through the activities of the Ukrainian Youth Fund</li> </ul>	Ukraine effectively provides support to young people returning to the country.
<b>Create mechanisms for engagement of youth to social processes</b>	<ul style="list-style-type: none"> <li>• Create a single narrative for the formation of Ukrainian civic identity in the population</li> <li>• Create mechanisms for the participation of young men and women in the process of reconstructing Ukraine at all levels (including through volunteering, youth centers and spaces, civil society organizations, etc.)</li> </ul>	Young men and women is actively participating in the recovery of Ukraine.
<b>Enhance international cooperation in the field of youth policy</b>	<ul style="list-style-type: none"> <li>• Promote close cooperation on youth policy with partner countries, international organizations, including the EU</li> <li>• Ensure participation of Ukrainian youth in European programs for integration into the European youth community</li> <li>• Adapt national-patriotic education to norms and practices of European citizenship.</li> </ul>	Number of joint projects implemented with international partners is rising.
<b>Promote physical culture &amp; sports among population</b>	<ul style="list-style-type: none"> <li>• Engage wide categories of population to physical culture and sports</li> <li>• Promote the Ukraine's image as a successful sport country</li> <li>• Improve the scientific and methodological base, as well as involve qualified and motivated professionals who train athletes</li> <li>• Restore destroyed and damaged sports infrastructure</li> <li>• Organize and hold international sport events and competitions in Ukraine</li> </ul>	Ukrainian men and women actively engaged to physical culture and sports.

**Thanks to a healthy lifestyle and active participation in the recovery processes, the youth will transform into a vibrant civil society that will eventually help reform the country and drive positive change**

## Ukraine demonstrated positive changes in healthcare sector for the last few years, the performance of the country's medical system was still insufficient

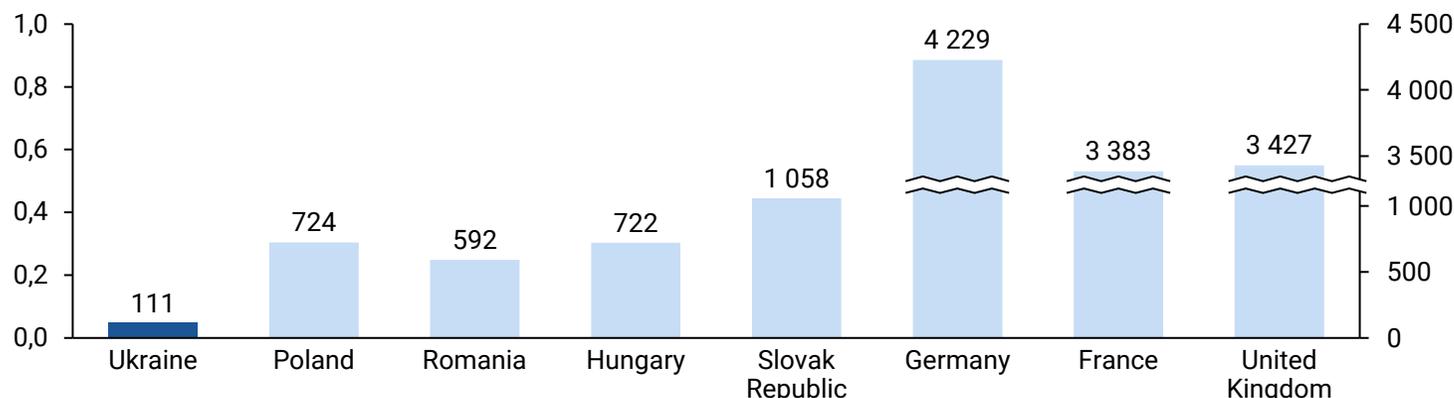
### Government health expenditures in Ukraine and other countries, 2019



### Comments

- **Healthcare sector in Ukraine is also underfinanced.** General government expenditures on health equal to only ~3.2% of the country's GDP. Moreover, per capita expenditures are few times lower compared to any of other analyzed countries.
- **Although Ukraine had been effectively implementing healthcare reform before the war, there is still a space for improvement.** In the 2021 edition of Legatum Prosperity Index Ukraine ranked 104th among 161 countries in terms of "Health" component. On average, Ukrainians live 9 years less than Europeans, Ukraine ranks among the top countries in terms of HIV incidence, level of vaccination of children is one of the lowest in the world, etc.
- **Ukraine's healthcare system has been hit hard by the war: more than 640 health care facilities have been destroyed or severely damaged.** According to the UN, during the 100 days of the war, more than 260 attacks were aimed directly at health facilities.
- **Due to the increased number of incidents the pressure on healthcare workers increased significantly.** Moreover, the war is also associated with a rising number of survivors of violence, including conflict-related sexual violence and "hidden victims": limiting the capacity of hospitals and, as a result, deteriorating conditions for people with severe chronic diseases.

### Domestic general government health expenditure per capita (USD), 2019



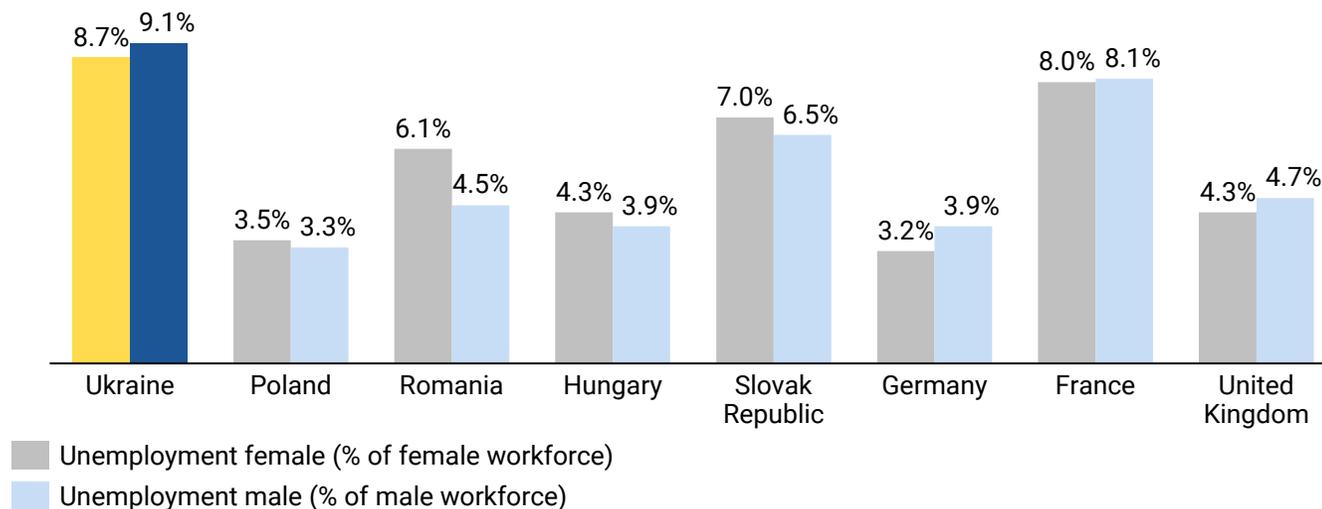
## Ukraine should focus on increasing institutional capacity of healthcare system, ensuring pharmaceutical security and strengthening public health

Initiative	Details	Success criteria
<b>Increase institutional capacity of healthcare system</b>	<ul style="list-style-type: none"> <li>• Strengthen policies and institutions of the national healthcare system to guide the recovery process</li> <li>• Ensure the financial stability of the healthcare system and the development of voluntary health insurance</li> <li>• Strengthen health services (including mental health services and physical rehabilitation) to meet the special needs of people (including IDPs, war veterans, survivors of conflict-related sexual violence, children, and wounded and traumatized) caused by the war</li> <li>• Strengthen health information systems, digitalization and cybersecurity</li> <li>• Strengthen the human resources of the healthcare system via educational reform and through integration of international practices</li> <li>• Restore and transform the healthcare facilities network based on patient-focused and value-based healthcare approaches</li> <li>• Develop and implement elements of the quality assurance system in health care at all levels</li> </ul>	Healthcare institutions are capable of implementation of the recovery projects and provision healthcare services.
<b>Ensure pharmaceutical security</b>	<ul style="list-style-type: none"> <li>• Ensure the country's pharmaceutical security and uninterrupted access to modern, effective and safe medicines and medical devices</li> <li>• Ensure the strategic stock of critical medicines and medical devices at the central level and their uninterrupted availability for the citizens of Ukraine in its own pharmacy network</li> </ul>	There is sufficient number of medicines and medical devices for the population.
<b>Strengthen public health system</b>	<ul style="list-style-type: none"> <li>• Strengthen the public health system, preparedness for health emergencies, health information systems and digitalization</li> <li>• Establishment of a national network of public health laboratories</li> <li>• Creating a network of rehabilitation centers</li> <li>• Encourage Ukrainian women and men to take better care of their health – avoid risky lifestyles and addictions, practice regular health check-ups and increase their health literacy</li> </ul>	Public health system is resilient and prepared for the shocks.

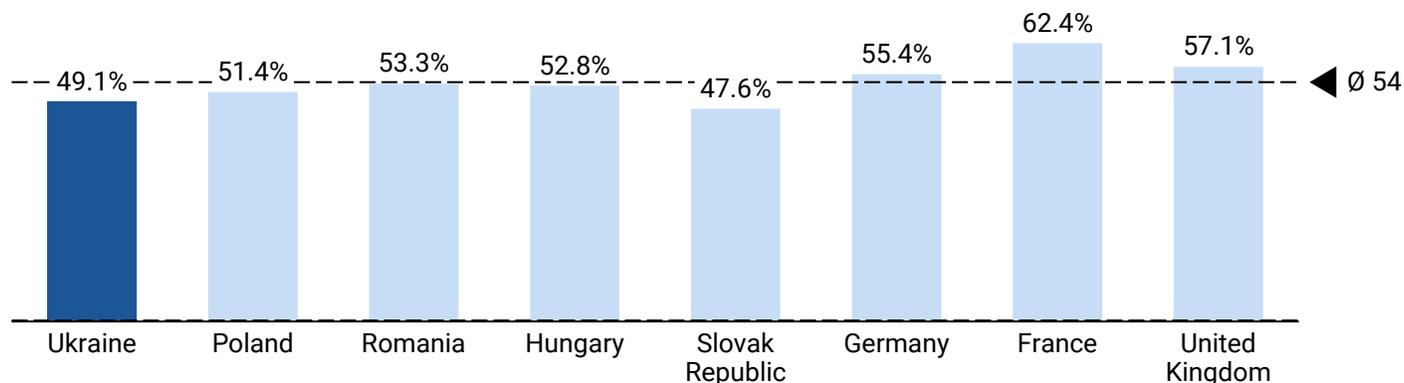
**A transformed healthcare system will enhance the overall quality of life and increase the number of active years that Ukrainian citizens could contribute to their country's growth and prosperity**

## Full-scale Russian invasion deepened existing challenges of Ukrainian social sphere

Unemployment of females and males in Ukraine and other countries (%), 2021



Age dependency ratio in Ukraine and other countries (% of working-age population), 2020



### Comments

- Social protection sphere in Ukraine have been suffering from a number of challenges historically. **Before the war Ukraine experienced a high level of unemployment among both male and female.** Although some of those unemployed may be engaged in 'shadow' sector of the economy, the value of the indicator is still very high for a country that needs rapid economic growth.
- Those unemployed persons often do not receive decent support from the state. Expenditures on social protection (except for pensions) in Ukraine as a percentage of GDP in Ukraine were on average more than 10 times lower compared to the EU countries.
- Moreover, Ukraine also has an outdated pension system. Although the age dependency ration in the country is lower compared to some of peer countries, it grows rapidly: the ratio increased by 6 p.p. for the last 10 years. At the same time, average pension in Ukraine is much lower compared to the EU.
- **The Ukrainian social protection system presented some challenges already before the war, but suffered greatly as a result of the war, having faced** 1) the destruction of social infrastructure; 2) mass departure of the population from permanent residence; 3) loss of property and means of subsistence of part of the population; 4) occupation of parts of the territory, which makes it impossible to provide services.

## Key Government's priorities should include addressing direct consequences of war, as well as long term improvement of social standards

Initiative	Details	Success criteria
<b>Create incentives for returning refugees back to Ukraine</b>	<ul style="list-style-type: none"> <li>Introduce new agenda for integration and mobility: creating attractive socio-economic and infrastructural conditions for Ukrainian men and women to return and stay in Ukraine</li> </ul>	Ukrainians are returning back to Ukraine.
<b>Support war-affected people</b>	<ul style="list-style-type: none"> <li>Develop effective mechanisms of compensation for all categories of war-affected population, including injured and traumatized</li> <li>Provide efficient psychosocial rehabilitation and psychological support to people who received physical and mental traumas</li> </ul>	War-affected groups of people receive targeted support.
<b>Create opportunities for the reintegration of veterans</b>	<ul style="list-style-type: none"> <li>Implement the system of motivations for self-realization in civilian life after military service according to the experience and standards of NATO countries</li> <li>Build a system of transition from military career to civilian life</li> </ul>	Veterans are integrated into peaceful life.
<b>Promote the barrier-free environment</b>	<ul style="list-style-type: none"> <li>Ensure the online availability of the majority of social services, digitalize the system of the social service provision</li> <li>Create opportunities for women and men with family responsibilities to reconcile professional and family duties</li> </ul>	All groups of the citizens can utilize their potential and have access to needed social services
<b>Increase targeting and efficiency of social assistance recipients</b>	<ul style="list-style-type: none"> <li>Develop a single state electronic system of accounting for personal files of persons / families in difficult life circumstances</li> <li>Design the Social Code of Ukraine, conduct analysis and updating the list of social services and types of social assistance, adapt the legislation according to the Code, develop the social services market</li> </ul>	Ukrainian citizens receive needed support which is targeted and tailored to the problems.
<b>Conduct the reform of pension system</b>	<ul style="list-style-type: none"> <li>Adjust regulatory framework for the introduction of the second level of the pension system</li> <li>Introduce the second level of the state mandatory accumulative pension insurance</li> </ul>	Pensioners receive a sufficient support.
<b>Ensure children's rights protection</b>	<ul style="list-style-type: none"> <li>Development of the state system of protection of children's rights through the creation of the State Service of Ukraine for Children</li> </ul>	Children's rights are protected.

**Providing a decent level of social protection to all categories of war-affected population and vulnerable groups, Ukraine will ensure building of a more just and equal society**

# How international partners can join

1

**Sectoral experience** | Provision of the valuable sectoral experience in optimization of the service provision in different areas

2

**Financial support** | Provision of financial support, especially in the field of restoration of the physical infrastructure

3

**Institutional expertise** | Provision of institutional expertise with planned and ongoing reform processes

4

**Joint projects** | Ensuring the availability of possibilities for the joint projects regarding restoration of the selected structures

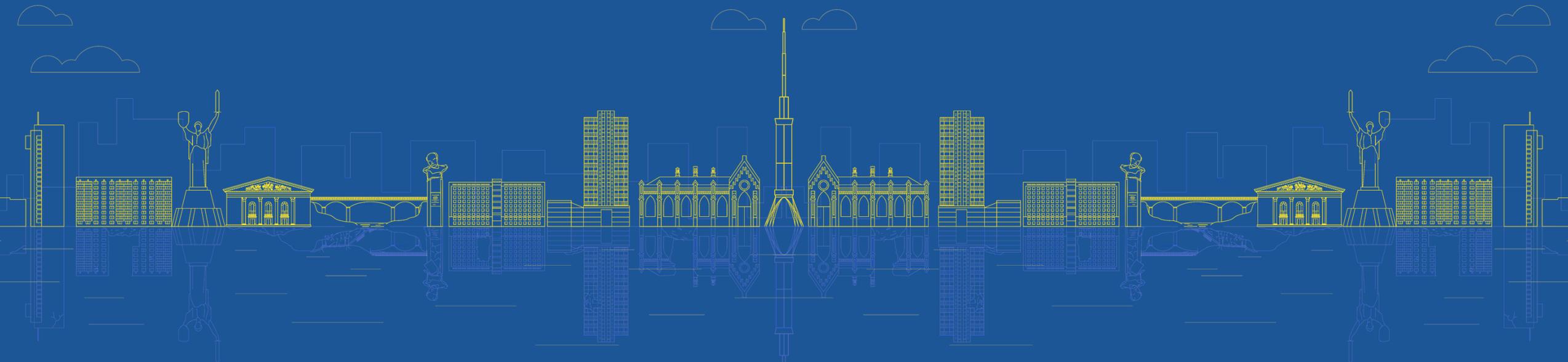
5

**Assistance in monitoring** | Assistance in monitoring the social recovery processes for them to happen in accordance with best practices and the EU standards



# Ukraine Recovery Conference

4-5 July 2022 - Lugano, Switzerland +



At the request of the URC2022 Organizational Committee, this information analytics materials for a policy brief was prepared by the Centre of Economic Recovery (CER) based on extensive multi-stakeholder consultations, which included representatives of the government, civil society, business, local self-government, and academia. The views expressed are those of the authors and contributors and should not be reported as the position of the Ukrainian or Swiss Governments