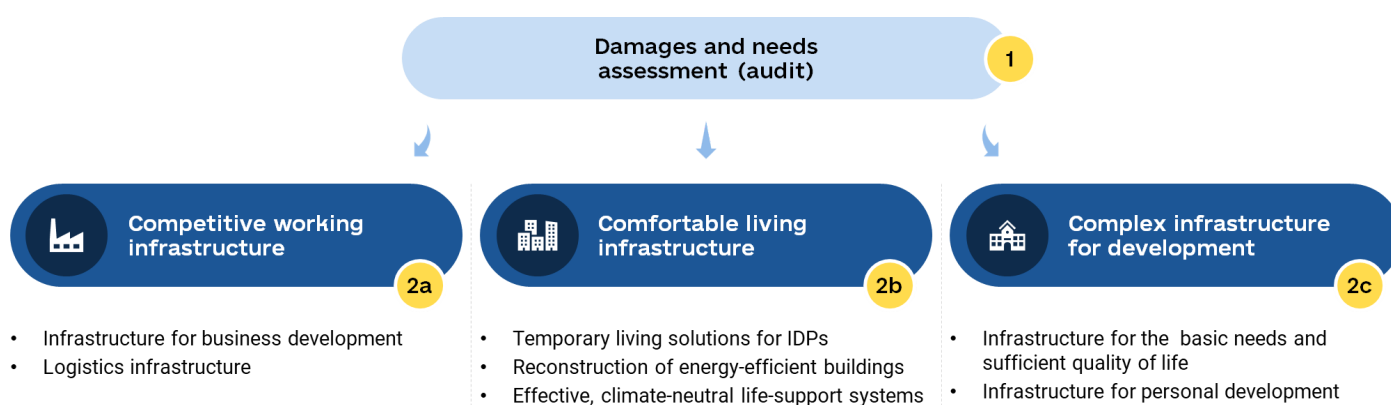


INFRASTRUCTURE RECOVERY

As a result of the ongoing war, Ukraine has endured enormous damage to the economy and public well-being in terms of working, living, and infrastructure for development. Ukraine faces a new reality that requires an adaptive approach to the restoration and development of different regions. The current territories-oriented approach will need to be adapted to account for the variation between regions and territories in the level of destruction, the concentration of IDPs, and safety risks. In particular, territories near the border with Russia and Belarus, temporarily occupied territories and neighboring regions, and territories, where military and critical infrastructure are located, will require a special focus from Government and international partners to ensure recovery and further development of territories.

This brief discusses the main principles and instruments that will be undertaken to recover and enhance infrastructure in Ukraine, in order to encourage Ukrainian citizens' return and to provide them with the conditions to work, live and prosper. The brief is aligned with the materials developed by the National recovery council.

The framework below describes the overarching structure of the infrastructure recovery. The process should start with (1) a comprehensive audit of the current state of affairs, which will assess damages and needs for urgent recovery and further restoration and development, followed by (2) projects to develop working and living infrastructure, and infrastructure for development.



#1. THE DAMAGES AND NEEDS ASSESSMENT (AUDIT) will consist of two parts: (1) an assessment of damages in different spheres, (2) an analysis of the pre-war state of networks of working, living infrastructure, and infrastructure for development, and an assessment of population and business needs.

(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 audit will be inclusive (as a result of a multisource data gathering process) and obtained information will be cross-validated by different actors.

(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 the population and businesses in each region. Projects will be prioritized and aligned with the complex plans of territories and general plans of cities.

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. The state will rely on capable municipalities in the implementation of infrastructure recovery projects. The projects will promote the green and digital transition of the country to achieve resilience in line with the latest European policies and standards.

#2A. COMPETITIVE WORKING INFRASTRUCTURE consists of sustainable production infrastructure and logistics.

Production | Before the war, Ukraine focused on two types of production platforms: brownfield, based on ineffective or abandoned state property, and greenfield based on industrial parks. After the Russian invasion, state property and industrial parks were converted into platforms for the relocation of production facilities. Due to the poor condition of state property and parks, the process of relaunching business activities was not as effective as it could be. Now Ukraine has a critical need for economic recovery and the creation of new workplaces for women and men. This requires the continuation of pre-war activities and the launch of completely new initiatives that will accelerate the process, including:

- Improvement of legislation concerning industrial parks and the launch of a nationwide program for the establishment of industrial parks for greenfield projects throughout the whole country;
- Relaunch of state property privatization or renting process for the creation of brownfield opportunities;
- Development of a network of business support centers, a Center for Creative Economy for the diversification of local economies, and scientific centers for the stimulation of technological production and the strengthening of regional SMART specialization.

Logistics | Since the beginning of the war, a significant amount of transport infrastructure has been damaged and freight transportation has been slowed (roads and railways) or even fully paralyzed (seaports). The war shows imbalances in the logistics network and requires actions that will ensure the sustainability of the transportation system:

- Reconstruct and lay new railway tracks with the European track width;
- Improve the checkpoints across the state border to increase their capacity, comfort, and diversify export flows;
- Integrate the Ukrainian water transport system into the EU transport system, increase capacity, modernize, and develop ports in the Danube region, and continue planned PPP projects;
- Introduce the best world practices in the design and construction of roads and bridges, own production of bitumen, and develop infrastructure for electric cars, cyclists, and personal electric transport users;
- 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;
- Reconstruct or construct an optimized international airports network (5-7 airports);
- Enhance cooperation with the European Union in transport sector, inter alia ensure further harmonization of Ukrainian legislation with EU law.

The restored production and logistics 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.

#2B. COMFORTABLE LIVING INFRASTRUCTURE consists of comfortable and sustainable accommodation together with efficient and climate-neutral life support systems both in rural and urban communities as well as between them.

The current building stock doesn't meet the needs of the population and energy efficiency standards. 80% of apartment buildings were constructed before 1994 and during the last 30 years, they lacked investment and maintenance. Water supply and sewerage, heat supply, and waste management infrastructure are technologically obsolete, energy-intensive, and physically worn out. As a result of the Russian invasion, more than 120 000 residential buildings were damaged or destroyed. Therefore, immediate solutions to provide accommodation and strategic initiatives to improve living conditions should be implemented:

- Provide IDPs and people whose homes have been damaged with temporary or long-term accommodation;
- Rebuild destroyed buildings based on the complex and general plans of territories;
- Launch a housing upgrade program with a priority focus on the Energy Efficiency program;
- Conduct large-scale energy renovation of buildings with the modernization of district heating to reduce natural gas use;
- Introduce the modernization of centralized potable water supply and water sewage systems as well as waste management systems.

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. COMPLEX INFRASTRUCTURE FOR DEVELOPMENT consists of educational, sports, cultural, and tourism infrastructure, as well as administrative, healthcare, security, and civil protection infrastructure for a high quality of life.

A lot of social infrastructure structures did not meet modern world standards and were not technically and architecturally capable of providing quality services, matching the needs of different groups of the population. Moreover, the network of different institutions was not optimized, which resulted in increasing budget expenditures on the maintenance of buildings and decreasing the availability of services all around Ukraine. As a result of the full-scale invasion, social infrastructure networks were significantly damaged.

Moreover, a huge influx of tourists is expected due to the unprecedented level of popularity of Ukraine. This will require the preservation and repair of existing attractions and the creation of new memorials and cultural sites. Thus, the following initiatives should be implemented:

- Provide the opportunity for the population to receive basic services through mobile and remote solutions, despite conditions of destroyed or insufficient infrastructure;

- 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;
- Launch a process of rebuilding social infrastructure networks;
- Maintain and develop tourism infrastructure, including cultural sites to promote Ukrainian history and boost national memory, and ensure safety for tourism tours in 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.

POSSIBILITIES TO SUPPORT | 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: (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. Territory-sensitive and needs-based planning will provide international partners with the opportunity to allocate investments in the most impactful way.

At the request of the URC2022 Organizational Committee, this 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.