

X), issues to the environment (output information Y), and also stores in itself (internal, intra-system information Z).

In the USSR, the development of computer science encountered obstacles due to the ideology of the period. The totalitarian ideology of the time fought against dissenting opinions. The ideology did not even recognize some sciences, such as genetics and cybernetics, they were considered “pseudoscience”. A.I. Berg said that the country was misguided in its assessment of the importance and possibilities of computer science. This caused great losses in the development of this science, and likewise delayed the process of developing computers. It also caused difficulties since the progress of this science in this period faced great obstacles in the implementation of large state projects. One of these projects was the creation of automated control systems (ACS).

Despite its short history as an official scientific discipline, computer science has made fundamental contributions to science and society. In fact, computer science, along with electronics, is one of the fundamental sciences of the current era of human history, called the information age.

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## **POST WAR URBAN RECONSTRUCTION IN UKRAINE**

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Despite the ongoing war in Ukraine, the reconstruction and recovery planning process has already started. The general trend is to provide housing and rebuilding solutions quickly to meet the immediate and urgent needs of the population. Concurrently, there also is a need to fully engage all stakeholders in the recovery process to make it more sustainable, and to make sure all tangible and intangible dimensions of recovery are included, such as those dealing with trauma, people’s hope for the their future homes, as well as environmental considerations (e.g., green recovery , net-zero cities). Failing to be fully inclusive could result in “temporary” unsustainable solutions and miss the opportunity to build forward better.

To ensure that Ukraine’s recovery is sustainable, inclusive and leaves no one behind, there is a need for more multilevel and multistakeholder research. This research should address, among other things, the following questions:

- What are the peoples’ hopes for their new homes, city, country?

- How many people will return to Ukraine?
- How many of them return to their own community?
- What would be needed the most to start living again in their town?
- Do we need to rebuild specific neighbourhoods or create something new?
- What are important intangible damages that need to be repaired?
- How do we ensure energy independence of the regions?
- How do we rebuild in accordance with European Union regulations?

We are all facing national disaster with Russian Federation treacherously bombing civilian infrastructure in the unjustified war. But we need to get out of this situation stronger than ever and build a better future for the generations to come.

New land and property taxation policies — increasing taxation by the analysis of the true value of the real estate and decreasing the tax pressure on the revenue and income of people. New local land policies allowing non-discriminatory competitive access to land plots with rent for 99-years free of charge for non-profit organizations;

Avoid creating more monofunctional, ecologically disastrous and car-oriented Pozniaki and Southern Borschagivka-style development. Only multi-functional and socially relevant projects with dense and meaningful urban spaces, short distances, access to jobs and social services by the introduction of new guidelines for spatial development, zoning and height, and density limits in cities;

Develop a new national mobility policy. Strong anti-automobile pressure, as people will see them as vehicles of safety with disastrous consequences. Car has to become redundant as an unnecessary and costly asset. Getting rid of it means getting rid of the dependence on Russian oil and gas, as well as achieving new quality of air and urban space. Taxation of cars and fuel and streaming the revenue into public transport and alternative mobility projects;

New requirements for housing construction. Imperative for the re-use of materials, especially rubble. No more coal or gas heating. Only electricity from alternative sources, nuclear stations or autonomous heating from natural biogas. Guidelines and regulations for climate-resilient materials and surfaces. Parking for non-motorized transport and urban gardening as indispensable parts of the projects.

It is extremely necessary to support these policies by reviving Regional spatial planning. Complex sustainable land-use schemes, integrated mobility connections and strong anti-sprawl policies can revive devastated regions. Legal power over local planning and continuous update with experts for comprehensive visions of the regions from the competitiveness perspective;

There is a necessity for funding and opening new universities and departments for urban planning, architecture and construction. Contemporary education in this field in Ukraine is simply poor, outdated and unable to provide high-class multi-profile specialists needed. Increase of funding for short-term programs and academic exchange as well as incentives for studies abroad and return programs;

Promote international cooperation and competition in planning and construction. Allow international architecture and construction companies to operate in Ukraine without additional legal entities and compete in tenders or competitions.

Incentivize tourist potential and revenue by comprehensive rehabilitation and restoration projects in cities and towns. Development of new legislation for heritage protection with transparent rules, zones and requirements. Strengthening the heritage protection administering system and punishment for the violation for businesses and individuals.

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## **IMPACT OF RUSSIA-UKRAINE WAR ON THE CHEMICAL INDUSTRY**

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As the Russia-Ukraine conflict is going on, the gap between the two countries have snowballed into causing a major economic misrule across the globe. Several countries are directly or indirectly dependent on Russia and Ukraine for various commodities, which has severely impacted the price of food, energy, fertilizers, pharmaceuticals, etc. Russia and Ukraine are the biggest exporters of raw materials to markets around the world. Before war, Ukraine has a thriving synthetic chemical sector where thousands of novel compounds were being produced. Around 80% of all screening compounds used in the research and development of drugs were either manufactured in Ukraine or Russia.

Prices of natural gas and crude oil are skyrocketing in Europe, which is forcing chemical producers to increase selling prices. This is putting them at an increasing disadvantage compared to competitors in the US, Asia, and Middle East. The war in Ukraine has pushed up feedstock and energy costs for chemical producers. Increasing fuel costs are causing inflation, leading to high freight rates. In addition, safety concerns have disrupted land and air transport routes via Ukraine and Russia, which has made rerouting even more expensive. Sanctions that western economies have put up against Russia are also impacting businesses in neighbouring countries such as Romania, Moldova, and Poland. Manufacturing plants in Lithuania, Latvia, and Estonia are considerably hit due to Russia-Ukraine war. Even countries that do not have trade restrictions are struggling to import