SUSTAINABLE DEVELOPMENT GOAL NO. 9 «INDUSTRY, INNOVATION AND INFRASTRUCTURE»

Infrastructure determines the speed of development, resilience to crises, and the ability of society to recover and adapt to change.

In the 21st century, industry and innovation have become a space of interaction between science, technology, education, and societal needs. It is here that the future of economies and states is being shaped.

For Ukraine in 2025, issues of infrastructure and innovation have gained particular importance due to the consequences of the war: destruction of facilities, restructuring of logistics systems, the need to restore industrial capacity, and digital transformation.

In these conditions, universities play the role of centers of innovative development that generate knowledge, technologies, and human capital for national recovery.

In 2025, V. N. Karazin Kharkiv National University continued implementing Sustainable Development Goal No. 9 “Industry, Innovation and Infrastructure” through:

- development of scientific research;
- support of innovative projects;
- digital transformation;
- interdisciplinary cooperation;
- international partnerships;
- formation of an innovation culture.

SCIENTIFIC RESEARCH AND TECHNOLOGICAL DEVELOPMENT

In 2025, the university continued to develop scientific research focused on innovative technologies and applied solutions.

Main areas included:

- materials science and new materials;
- information technologies;
- artificial intelligence and modeling;
- energy innovations;
- biotechnology;
- geoinformation systems.

Special attention was given to combining fundamental science with applied tasks related to the recovery and modernization of Ukraine’s infrastructure.

UNIVERSITY INNOVATION ECOSYSTEM

In 2025, Karazin University continued to develop its internal innovation ecosystem.

Its components included:

- support for startup initiatives;
- research laboratories;
- cooperation with business;
- incubation programs;
- project-based activities of students and faculty.

Innovation is seen as a natural continuation of university science transitioning into practical implementation.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

DIGITAL TRANSFORMATION AND KNOWLEDGE INFRASTRUCTURE

In 2025, the university continued developing its digital infrastructure as a key element of modern education and science.

Main directions included:

- digital educational platforms;
- electronic libraries;
- learning management systems;
- digitalization of administrative processes;
- development of online research.

Digital transformation is considered the foundation of a new knowledge infrastructure that ensures accessibility, speed, and efficiency of educational and research processes.



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



UNIVERSITY INFRASTRUCTURE IN WARTIME CONDITIONS

In 2025, an important priority remained the restoration and maintenance of university infrastructure under wartime risks.

Measures included:

- restoration of damaged facilities;
- modernization of academic buildings;
- ensuring energy independence;
- creation of safe learning environments;
- development of blended learning formats.

University infrastructure is increasingly oriented toward resilience and adaptability to crisis conditions.

COOPERATION WITH INDUSTRY AND BUSINESS

In 2025, Karazin University continued expanding cooperation with industrial enterprises and the business sector.

Main directions included:

- joint applied research projects;
- student internships;
- technology transfer;
- consulting initiatives;
- participation in regional economic recovery.

Cooperation between science and industry is viewed as a key driver of national innovation development.

INTERNATIONAL INNOVATION PARTNERSHIPS

In 2025, the university continued participation in international research and innovation programs.

Main areas included:

- joint research projects;
- technology exchange;
- participation in international consortia;
- integration into the European Research Area.

International cooperation enables the university to be part of a global innovation network.



FORMATION OF AN INNOVATION CULTURE

In 2025, the university continued developing a culture of innovative thinking.

This included:

- fostering creative approaches to learning;
- supporting student projects;
- encouraging research initiatives;
- promoting interdisciplinary research.

Innovation culture is understood as the ability to think creatively, work with uncertainty, and generate new solutions.

CONCLUSIONS

In 2025, V. N. Karazin Kharkiv National University continued implementing Sustainable Development Goal No. 9 “Industry, Innovation and Infrastructure” through:

- development of scientific research;
- formation of an innovation ecosystem;
- digital transformation;
- infrastructure restoration;
- cooperation with industry;
- international partnerships;
- development of an innovation culture.

The university views innovation as the foundation of modern societal development, where knowledge is transformed into technology, and technology into tools for recovery and progress. In this context, infrastructure is both a physical and intellectual system that determines society’s ability to move forward.