

PROACTIVE UNIVERSITY-COMMUNITY PARTNERSHIP AS A DRIVER OF RESILIENCE AND SUSTAINABLE DEVELOPMENT

Oleksandr Aziukovskyi¹ <https://orcid.org/0000-0003-1901-4333>

Artem Pavlychenko¹ <https://orcid.org/0000-0003-4652-9180>

Tetiana Mamatova¹ <https://orcid.org/0000-0003-1844-5377>

¹*Dnipro University of Technology, Dnipro, Ukraine*

Corresponding author: mamatova.t.v@nmu.one

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Context and problem framing

The shocking events under which universities in Ukraine have been forced to exist over the past six years have highlighted the need for them to establish themselves as key players in the national resilience system, contributing to the “maintenance of security and the continuity of operations in the key spheres of society and the state before, during and after a crisis” (President of Ukraine, 2021). This extremely complex task necessitates particular attention to ensuring the university’s own institutional resilience.

Confronting numerous challenges and hybrid threats (Karpenko, 2024; Ukrainian Helsinki Human Rights Union, 2023; Giannopoulos, Smith & Theocharidou, 2021; Erasmus+ project WARN, 2024; Jungwirth et al, 2023), within which higher education institutions in Ukraine function and develop, along with an understanding of the importance of proactive subjectivity in the national resilience system (President of Ukraine, 2021, 27 Sept.) and the implementation of international and cross-sectoral partnership projects contribute to the creation of a new dimension of organisational culture in modern universities – a culture of resilience – complementing the dimensions of quality and integrity (Aziukovskyi, Pavlychenko & Mamatova, 2025).

The war has exacerbated the vulnerability of local communities: infrastructure damage, energy shortages, demographic challenges, the influx of internally displaced persons, and the integration and support of veterans, as well as the need for further sustainable development and the implementation of circular

economy principles. At the same time, communities need not only humanitarian aid, but also the systematic transfer of knowledge, innovative solutions and jointly developed initiatives for recovery. Universities play a leading role in these processes.

The Development Strategy 2026–2030 emphasises that Dnipro University of Technology is growing as a university of applied sciences and, at the same time, is strengthening its development trajectory, which is focused on strengthening partnerships with businesses and communities (Dnipro University of Technology, 2026). This includes: recognising the university's third mission; implementing local and regional development projects in collaboration with business partners and local communities in the region; and developing a system of service-learning. The University is actively pursuing a strategic portfolio of programmes and projects in priority policy areas aimed at ensuring resilience, particularly in the domains of systematic quality management, the creation of an inclusive and accessible environment to engage a broad range of stakeholders, risk management, and the development of partnerships (education/research – business – governance – community) with the aim of ensuring security, energy and financial autonomy (Aziukovskyi, Pavlychenko & Mamatova, 2025; Dnipro University of Technology, 2026).

In this context, a preliminary analysis and reflection are proposed regarding the case of the Dnipro University of Technology on the development of a proactive university–community partnership as a driver of resilience and sustainable development.

Approach/methodology

The study employs a qualitative single-case study design (Baškarada, 2014) with elements of reflective practitioner inquiry (Douglass & Moustakas, 1985). The primary unit of analysis is the institutional transformation and partnership practices of Dnipro University of Technology during 2022–2026.

The analytical framework integrates:

- concepts of the third mission and service-learning as mechanisms for co-creating knowledge and solutions with communities (Compagnucci, & Spigarelli Spânu, Ulmeanu, & Doicin, 2024; Coelho, & Menezes Resch, 2018; Petersen, Kruss, & van Rheede, 2022);

- organizational resilience principles and attributes set out in international standard ISO 22316:2017 (The International Organization for Standardization, 2017) and guidelines for resilience policy provided in the international standard ISO 22336:2024 (The International Organization for Standardization, 2024);
- the International Consortium for Organizational Resilience (ICOR) corresponding set of framework models (Resilience Frameworks) (The International Consortium for Organizational Resilience, n.d.a), in particular the “Organizational Resilience Model” (The International Consortium for Organizational Resilience, n.d.b).

Data sources include: strategic university documents, internal project reporting documentation, and materials relating to the implementation of initiatives aimed at proactively building partnerships with local communities, local businesses and civil society organisations; reflective evidence from the author’s and colleagues’ participation in international projects) and local initiatives developed jointly with territorial communities, businesses, and veteran organizations; secondary sources, including academic publications on hybrid threats, national resilience frameworks, and, organizational resilience.

Methodology of reflection combines systematic analysis of the case with critical self-reflection on the process of initiating and implementing partnership projects. Particular attention is paid to how international project experience (methodological rigor, stakeholder engagement, monitoring) was adapted to local community needs in the conditions of war and uncertainty. This approach allows not only to describe practices but also to reveal mechanisms of proactive partnership formation and their contribution to resilience.

Analysis or reflective evidence

The ability of social and socio-technical systems (countries, communities, organisations, teams, individuals) to absorb disruptive influences whilst maintaining their core functions and structure is defined as resilience. Ensuring resilience involves consciously managing the system’s adaptation process with the aim of preserving certain qualities and allowing others to fade away, whilst maintaining the essence (or “identity”) of the system (Mamatova & Borysenko, 2023).

The basic requirements, principles and guidelines for ensuring organisational/institutional resilience are specified in the international standard ISO 22316:2017 (The International Organization for Standardization, 2017). Based on these guidelines, the International Consortium for Organizational Resilience (ICOR) has developed a corresponding set of framework models (Resilience Frameworks) (The International Consortium for Organizational Resilience, n.d.-a), in particular the “Organizational Resilience Model” (The International Consortium for Organizational Resilience, n.d.-b). The combined use of ISO 22316:2017 and ICOR guidelines, along with the ISO 22336:2024 approach (The International Organization for Standardization, 2024) for the elaboration of resilience policies and strategies enabled the authors to propose a draft conceptual model for ensuring the resilience of Dnipro University of Technology as a systematic representation of a complex of interrelated components. The model represents a combination of preparedness, agility, and robustness, emphasising the ability to adapt and maintain core functions in the face of extraordinary challenges. It also highlights the importance of ensuring the resilience of individuals (students, academic and administrative staff, and other categories of personnel), leaders and teams operating within the university, as well as the flexibility of processes and strong social networks.

The institutional resilience of the university is underpinned by a system of shared corporate values and principles, as well as a clearly defined strategic vision and development priorities. The next steps relate to the university’s growing maturity as measured by the ‘enabling behaviours’ of a resilient organisation according to ISO 22336:2024 (The International Organization for Standardization, 2024), namely: adaptability; inclusivity; integration; accountability; preparedness; reliability; and innovation.

In this context, we emphasise that the International Organization for Standardization (ISO) defines resilience as “the ability to adapt to a changing environment” (The International Organization for Standardization, 2017), with a focus on the ability not only to survive but also to prosper. The realisation of such a development trajectory does not seem possible without considering the mutual influences of the university’s institutional resilience and the resilience of the local communities (Borysenko & Borysenko, 2025).

As noted in the context of the study, the Dnipro University of Technology transformation demonstrates that proactive partnership is not a supplementary activity but a strategic lever for building resilience at multiple levels.

Firstly, the university has placed greater emphasis on its third mission by shifting from reactive measures (such as voluntary initiatives and humanitarian aid) towards the systematic joint development of projects with local communities and businesses. For the past three years, the Scientific and Practical Conference 'International Forum: A Safe, Comfortable and Capable Local Community' has been held in October – an open platform for bringing together the efforts of public authorities, academia and business to rebuild communities. Over 30 agreements have been signed with local communities in the region, local government associations, and think tanks with expertise in local and regional development. In particular, in 2025, memoranda of cooperation were signed with the Dnipro City Council and the “Dnipro Development Agency”, as well as with the Dnipropetrovsk regional branch of the All-Ukrainian Association of Amalgamated Territorial Communities.

Collaboration with communities, representatives of local self-government bodies, and state administration also takes place within the framework of several projects, including:

- the nationwide project “Strengthening Communities’ Capacity for Reconstruction by Piloting Their Collaboration with Universities,” supported by the International Renaissance Foundation. This project was an initiative to bring together academic circles and community leaders to bolster local recovery plans with the robust expertise of Ukrainian universities. Thanks to specialized training programs developed by university experts, communities were able to prepare and submit their own projects for international funding, aimed at addressing local sustainability challenges;
- collaboration with ALTEK in 2024 to establish an innovative authorized renewable energy laboratory at the university opened up a new avenue for engagement with communities;
- founding of one of 12 European Digital Innovation Hubs (EDIH) in Ukraine. Created under the “Digital Europe” project, the Central Ukrainian EDIH focuses on innovation, energy efficiency, and digital transformation to develop sustainable and industrial regions in central Ukraine.

Second, the development of service-learning involves incorporating real-world challenges faced by the local community into educational programs. Short-term micro-certificate programs and training courses for internally displaced persons, veterans, and young local professionals focus on entrepreneurship, digital skills, and competencies relevant to recovery in line with the principles of “Industry 5.0”. Students and educators participate in learning formats that combine theory with practice, where academic knowledge is applied to solve specific local problems – from energy audits to inclusive infrastructure design.

The university’s capacity has been significantly strengthened through its participation in the ServU Project “Service-learning in Higher Education for Ukraine’s Recovery” (2023–2026). By growing its service-learning capacity, the university is already implementing a range of projects in areas that are most in demand in the region during wartime and which serve to prepare local and regional development stakeholders for post-war recovery. Some examples include: as part of the Ukrainian Energy Initiative of the UN Global Compact in Ukraine, in collaboration with DTEK Energo, the creation of specialised professional development programmes in the field of thermal power generation; modernisation of the Mechatronic Lab in partnership with Interpipe and Fischertechnik: classes using modern robotic systems and equipment in the fields of robotics, mechatronics and electromobility for students and schoolchildren; an interactive offline project “WOW! Physics” for pupils in Years 9, 10 and 11 in Dnipro, in collaboration with Interpipe. Another key focus is supporting the integration of veterans and IDPs into the local community: an opportunity for veterans, military personnel and their family members to start their own business through the “Lab2Market Veterano” project; training for veterans under the “Solar Energy Specialist” programme; the “Motanka” Centre has opened in a student hall of residence – a space where war victims, displaced persons and local residents can receive free support.

Thirdly, Dnipro University of Technologies’ strategic portfolio comprehensively covers key areas of sustainability:

- quality management and risk management: the creation of adaptive planning systems that take into account hybrid threats and uncertainty;

- an inclusive environment: creating barrier-free spaces and mental health support programmes for students, employees, veterans, representatives of local communities and internally displaced persons;
- talent management: unique career paths for teaching and administrative staff, supporting everyone’s talents, and engaging staff and applicants in international, national, regional and local projects;
- energy sustainability and financial independence – projects on renewable energy sources, efficient use of resources and diversification of funding through partnerships and technology transfer.

An analysis of project implementation experience shows that success depends on several factors: mutual trust built through continuous dialogue; aligning the university’s development priorities with those of the local community and the region; and iterative learning from both successes and challenges (for example, adapting to power cuts or security risks). Experience in implementing international projects has provided valuable methodological tools (mapping stakeholder needs, impact assessment, joint strategy and design workshops), which have been effectively adapted to local conditions.

Partnerships with business and local authorities have proved particularly effective in creating “quadruple helix” models (education–science–business–government/community), which strengthen the university’s contribution to the region’s recovery.

Implications for education, policy, or recovery

A reflective analysis of the case study on Dnipro University of Technologies allows us to draw the following conclusions across three key areas of guidance:

- for higher education institutions: HEIs must systematically integrate approaches based on service-learning and community engagement into their educational programs, moving beyond traditional placements toward jointly created projects with a measurable impact on the community. This requires rethinking the third mission as a key strategic pillar and developing relevant competencies among faculty and students. Priority areas include

micro-certification programs and lifelong learning focused on the needs of resilience and post-war recovery;

- for policy: national and regional policies – both in the sphere of ensuring national resilience and in post-war recovery – must be structured to stimulate proactive partnerships between universities, communities, and innovative businesses through targeted funding, simplification of regulatory requirements for joint projects, and recognition of the outcomes of the third mission in university performance evaluations (Hynes, Lees & Müller, 2020). To achieve this, it is necessary to synchronize the interaction of actors within the national resilience system and stakeholders in regional and local development in compliance with the Sustainable Development Goals;
- for ensuring community resilience: the proactive involvement of higher education institutions accelerates resilience by providing evidence-based solutions, building local capacity, and fostering social cohesion. Local communities gain access to scientific expertise, innovative technologies (particularly in energy, the circular economy, and inclusive development), and motivated human capital. Such partnerships contribute to “building back better” – not merely restoring pre-war conditions, but creating more sustainable and resilient local systems.

In conclusion, the model of proactive partnership between a university and a community, exemplified by Dnipro University of Technologies, demonstrates that higher education institutions can and should serve as pillars of resilience and catalysts for sustainable development even (and especially) in the context of war and post-war recovery. The institutional implementation of such an approach requires leadership commitment, cultural change, and the development of supportive ecosystems at the national, regional, and local levels.

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