

MUTUALLY BENEFICIAL COOPERATION BETWEEN UNIVERSITIES AND MUNICIPALITIES BASED ON OPEN DATA: THE EXPERIENCE OF STUDENT PROJECTS AT UKRAINIAN CATHOLIC UNIVERSITY AND LVIV CITY COUNCIL

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The full-scale war in Ukraine has highlighted the need for new models of interaction between universities and communities that combine the educational process with solving real management challenges. One such tool is the use of open data as a basis for applied student research, which simultaneously strengthens the capacity of communities and develops students' practical competencies.

In 2022–2025, the Ukrainian Catholic University and the Lviv City Council implemented a cooperation model within group course projects for second-year students of the Faculty of Applied Sciences, specializing in “IT and Solution Analytics”. The foundation of this collaboration was the use of open data from the Lviv community to analyze urban processes, primarily in the fields of transport infrastructure and urban planning.

The initiative was led by entrepreneur and founder of an IT company, Lviv City Council member Oleksa Voznyak, who acted as the “customer” for student projects on behalf of the city council. He defined research topics according to the community's needs, formulated practical tasks, ensured access to data, organized communication with city council employees, and provided feedback during weekly sprints. On the university side, coordination was carried out by Oleksiy Datsiv, lecturer of the “IT and Solution Analytics” course at the Faculty of Applied Sciences, who formed student teams and supervised the execution of course projects.

The working model followed an iterative format: weekly sprints with presentations of interim results and discussions with both academic staff and representatives of the city council. This allowed for continuous refinement of problem statements and alignment of research with the real needs of the city.

Within this collaboration, several projects important for the Lviv community were implemented:

- In 2022, students studied the network of public transport stops and routes in Lviv to assess the accessibility of different urban areas. The results included visualizations of the route network and identification of areas with insufficient public transport coverage.
- In 2023, an analysis of public transport schedules was conducted. Students compared official timetables with actual movement patterns, revealing gaps between planning and real route load and proposing approaches for optimization.
- In 2024, a “stress test” of the “Arena Lviv” intercept parking project was carried out, simulating transport flow scenarios, load levels, and the effectiveness of integrating the facility into urban mobility.
- In 2025, a student team worked on optimizing public transport schedules, taking into account real traffic conditions, drivers’ breaks, and other operational constraints.

The practical implementation of the projects was accompanied by challenges related to data quality and availability. Students worked with open data from the city council, public sources, interviews with Lviv City Council employees, and their own field observations. In several cases, the lack of structured data required additional on-site data collection.

The results of student work were presented both in the academic environment of the university, where detailed technical discussions of methodology took place, and at meetings with representatives of the Lviv City Council. This created a space for direct professional interaction between students, the university, and local self-government, and allowed for discussion of the practical application of the results.

In 2025, within a similar format, the Edu4Civic digital platform project was launched, aimed at scaling this cooperation model to other universities and communities. The platform is intended to

coordinate student projects, facilitate interaction with communities, and accumulate research results for further use.

The experience gained demonstrates that open data can serve not only as a transparency tool but also as the foundation for a sustainable model of cooperation between universities and communities, combining educational goals with practical tasks of urban recovery and development.

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