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Overview

On 4–5 October 2025, at the Kyiv School of Economics (KSE), the hackathon “**Urban Data Hackathon: Code the City**” took place as part of the BRIDGE project — a two-day intensive hybrid event that brought together students, researchers, IT professionals, urbanists, and analysts around the idea of creating innovative digital services for the development of Ukrainian cities. The event was held in a hybrid format, enabling remote participation from jury members, speakers, and experts.

The event was a joint initiative of the Kyiv School of Economics and the Department of Information and Communication Technologies of the Kyiv City State Administration (KCSA). Participants worked with open data from the city of Kyiv, published on the official government portal. Thanks to KCSA’s updated approach, all datasets are now available through a “single window” in a standardized format.

Teams used open data from the Accessibility Map in the Kyiv Digital app, citizen requests from the 1551 hotline, public petitions to city authorities, and dashboards from Kyiv’s official portal. Their goal was to develop solutions to improve the methodology for populating the Accessibility Map and for analyzing petitions and public requests, to better identify priorities for the city’s development.

Participating teams

The hackathon gathered 10 teams of 3-4 people each. The teams were mixed to ensure an interdisciplinary approach based on participants’ professional interests and skills. Among participants were students of the KSE Urban Studies and Post-War Reconstruction program, other Architecture and Urbanism development programs, students of Computer Sciences, Software Engineering and Business Analysis, Public Policy and Administration, Ecoengineering and Environmental Protection Technologies from different Ukrainian universities (such as Kyiv School of Economics, Taras Shevchenko National University of Kyiv, Igor Sikorsky Kyiv Polytechnic Institute, Kyiv National University of Construction and Architecture, Lviv Polytechnic National University) and others. The teams were recruited through both the open call within the KSE and the open call in student communities and among urban activists and experts across Ukraine.

Teams worked on developing their own projects, combining analytical thinking, creativity, and technical execution. Each team built its own strategy — from data collection and system architecture to data visualization and final presentations. Participants explored urban processes, analyzed data, created algorithms, wrote code, and presented their visions of how digital tools can improve the quality of life in cities.

“Urban Data Hackathon: Code the City” showcased how collaboration among students, researchers, technical specialists, and city administration can spark ideas and solutions that may not be obvious at first glance. Participants created prototypes and strategized — exploring how to integrate their proposed systems into the existing city infrastructure, discussing models for support, updates, and scaling.

First outcomes

Improved interdepartmental cooperation at the KSE and teaching innovation. Hackathon was selected as an innovative learning format to enhance the quality and variety of KSE's teaching methods and strengthen interdepartmental cooperation. On the KSE side, it was conceptualized jointly by the Urban Studies and Post-War Reconstruction Master's program of the Social Sciences Department and the Computer Sciences Department. This learning format to provide participants with hands-on experience in interdisciplinary collaboration, while fostering critical thinking and teamwork — all essential skills in today's tech-driven environment. As a result, the Computer Sciences Department tested the method, while the Urban Studies and Post-War Reconstruction program decided that the hackathon would become an integral part of the curriculum going forward. This will allow students' creative potential to be directly applied to the city's real needs.

Improved capacity of KSE to facilitate decision support tools for local governance. As a policy-to-practice bridge, the top two teams will present their prototypes at DICT to a purpose-convened working group for technical and operational review, and the best-scoring solutions will be elevated for discussion at the Council on Barrier-Free Accessibility, positioning successful ideas for real uptake in Kyiv's digital service stack. At the time this deliverable is created, such a meeting is being scheduled.



Increased access of KSE students to digital democratic innovation and related careers. Partners from the leading IT company **LUN** shared their experience in applying open urban data in practice. In the aftermath of the hackathon, LUN invited participants to attend their office, have a Q&A with the CEO, and better understand AI usage, digital tools for urban data aggregation and analysis. During the hackathon, **UN-Habitat** provided expert support to participants in areas such as

designing data-driven urban processes, framing user stories and data uptake narratives, problem framing and solution mapping, and integrating spatial data into urban planning.

The **tasks** fostered students' deeper engagement with urban management issues, while engagement with the experts and the jury from the BRIDGE consortium and partner institutions provided access to top-notch, relevant knowledge.

Description of tasks

Tasks' background

The hackathon was designed to bring together interdisciplinary teams to address a city management challenge: building software prototypes that serve as decision-support tools with a participatory component, increasing efficiency and transparency. All solutions were required to rely exclusively on depersonalized open data from national or municipal dashboards. In shaping both problem statements and data access, we partnered with the Department of Information and Communication Technologies (DICT) of the Kyiv City State Administration (KCSA). DICT helped us surface pain points from across KCSA departments, formulate the problem statement, and assemble source datasets. Together, we assembled these inputs into two complementary tasks that connect citizen needs with implementable digital tools.

Task 1: Accessibility map workflow improvement within the Kyiv Digital app

The first task focused on strengthening the “Accessibility Map” workflow in the Kyiv Digital app by expanding coverage from individual buildings to the full streetscape—including intersections, crossings, sidewalks, and other critical elements—and by formalizing a repeatable methodology for collection, verification, and maintenance.

The teams were asked to:

- benchmark missing object categories against international practice;
- define a pragmatic schema (object types, attributes, evidence requirements);
- and propose a verification stack that ties photographic proof and building codes/DBNs (optionally via computer vision) to clear roles and maintenance routines.

Crucially, the target system had to support routing for barrier-free paths that account for real-world obstacles, and to consider a lightweight participatory data-intake flow that minimizes spam or falsified inputs. Prototypes were expected to aggregate and validate data, expose exports to external systems, and demonstrate end-to-end value on a concrete test route within the city.

Evaluation emphasized concept strength—fitness to the brief, ease of rollout without new staffing, and a thoughtful participatory loop, namely a working demo on a real route and a robust verification mechanism, with bonus credit for integrated AI and real-time public testing. Available inputs included current accessibility-map records, field specifications for adding new objects, a sample LUN Misto dataset for a pilot district, and national barrier-free checklists for annual monitoring—plus the Kyiv Digital interface for reference.

Task 2: Aggregation of citizen feedback

The second task tackled fragmentation between two high-volume feedback channels—**city petitions service** and **1551 service requests** - by asking teams to build an analysis and clustering layer that unifies topics, geographies, and signals of urgency across both systems.

The expected outcome was a pipeline that automatically groups texts, detects thematic and spatial overlaps, and surfaces patterns: where residents are talking most, where problems cluster physically, and which themes attract sustained attention. The deliverable included an analyst-friendly dashboard (maps + charts) that supports departmental triage, priority-setting, and project planning, and that can reveal “hot spots” in near real time.

Evaluation weighted concept value—prioritization logic for responses, identification of problem territories, and detection of high-attention themes —and product readiness—does the prototype run end-to-end, and is insight delivery clear and accessible —with additional credit for live public testing and sensible AI use. Inputs comprised DICT-provided, depersonalized extracts and public dashboards: petition statistics, 1551 request fields and aggregates, and related city open-data feeds.

A list of ideas/prototypes that came out of the hackathon:

- create a system where citizens themselves help keep the city accessible – with AI verification, transparency, and real-time updates;
- improve the methodology for filling this service with data by adding a participatory data collection option;
- creating a program that will allow users to plot the fastest barrier-free routes to desired points in the city;
- develop a comprehensive barrier-free navigation system that integrates data mapping, reporting tools, and route planning to make cities more inclusive for people with disabilities
- a bonus system to support and motivate people who help us add new accessibility points to the map (rewards and gamification);
- enable citizens to easily report barriers and accessible places through Kyiv Digital
- use AI/LLM models for automatic photo verification;
- unify petition categories in accordance with the existing categories in the 1551 system;
- automatically determine the approximate location of petitions using artificial intelligence;
- cluster similar appeals and petitions by content, location, and topic;
- display “hot spots” of urban problems in real time;
- help city departments make decisions based on analytics rather than manual review;
- create an analytical platform for state and municipal services, designed for convenient work with petitions and electronic citizen appeals.

According to the two categories of tasks, the following teams took prize-winning places:

1 — Accessibility:

- I — CityCraft
- II — Vibe City
- III — Totally spies!
- III — Zhyvchyky (Живчики)

2 — E-democracy:

- I — No name
- II — POCHUY (Почуй)

Expertise and contribution

An important feature of this hackathon was its collaborative, interdisciplinary, and educational dimension.

Experts and the jury

During the hackathon, 13 experts took part, providing mentorship, consultations, and expert support to the teams in areas such as data analysis and machine learning, spatial and urban data integration, data visualization and decision-support tools, AI and NLP applications, and urban sustainability, civic participation, and digital democracy, as well as pitching of the projects.

Five jury members also evaluated the teams' projects and provided strategic feedback. Their expertise spanned urban planning and spatial analysis, circular economy and sustainable reconstruction, data science and artificial intelligence, digital governance and civic technologies, as well as academic research and education in AI and computer science.



Throughout the preparation phase, members of the BRIDGE consortium contributed their expertise to ensure the relevance and methodological rigor of the tasks. In particular, Dmytro Khutkyy and Ali Haririan from the University of Tartu (UTARTU) provided technical consulting, and Jonas Fahlbusch from the Technical University of Berlin (TU Berlin) offered advisory input on the hackathon's organizational design and planning. Mykhailo Leychenko and Kateryna Ivanchenko from the Center for Innovations Development (CID) played a key role in shaping the task logic and developing the evaluation criteria.

During the hackathon, Mykhailo Leychenko (CID) participated as an expert, providing mentorship and advising teams on practical approaches to data analysis and solution design. Dmytro Khutkyy from UTARTU and Prof. Dr. Hamid Mostofi from TU Berlin served on the jury panel, providing an external research perspective and ensuring fair evaluation. This cross-institutional collaboration exemplified how academic, civic, and municipal actors can co-create innovation processes grounded in transparency and evidence. Importantly, all teams worked exclusively with open data from official Ukrainian and municipal dashboards, reinforcing the hackathon's mission to promote open governance and reproducible digital tools.

Full list of involved Jury:

Dmytro Khutkyy	The Head of the University of Tartu Ukraine Center and Research Fellow in Digital Governance at the University of Tartu in Estonia. He conducts research, training, and communication in the areas of digital democracy and digital governance in Ukraine and globally.
Kateryna Lopatiuk	Architect, urban planner, worked with public organizations Ro3kvit and Restart, engaged in spatial analysis, design, and application of geographic information systems.
Hamid Mostofi	Professor of Data Science and Artificial Intelligence at SRH Berlin University of Applied Sciences and Senior Researcher/Project Manager at TU Berlin.
Nataliia Prokopova	Freelance advisor (counsel) to the Director of the Department of Information and Communication Technologies of Kyiv.
Oleksandra Konopatska	Academic Director of the Bachelor's Program "Artificial Intelligence" and Deputy Dean of the Faculty of Computer Science at KSE, researcher.

Full list of involved Experts:

Santiago Molano	Holds master's degrees in Urbanism & Strategic Planning and in Human Settlements. His experience spans SaaS product development, offshore wind, and international development, with a strong focus on GIS, spatial data infrastructures, and the EU INSPIRE directive. Currently with UN-Habitat in Kyiv, Santiago applies his multidisciplinary background to build data-driven solutions for sustainable urban recovery and planning.
Ihor Miroshnychenko	Candidate of Economic Sciences, Associate Professor, Lecturer at the Faculty of Economics of the KSE. A supporter of programming languages and data science: creates and conducts courses, publishes scientific and educational materials, and participates in projects on business process automation.
Oleh Omelchenko	Lecturer in data processing and visualization at Kyiv School of Economics; Senior Product Analyst at MacPaw.
Rezo Heorhadze	Master of Computer Science (XHEY) and Urban post-war reconstruction (KSE), Cybersecurity specialist in SE "Diia".

Roman Humeniuk	Lecturer at the KSE in the disciplines: product and delivery management; leadership and communication.
Michael Vidyakin	Strategist, Entrepreneur and Project Manager, Lecturer at KSE, Banker and Top Manager at RWS Bank, Ukraine.
Matvii Strechen	Lecturer of the subjects "Basic Data Science" and "Algorithms and Data Structures" at KSE. Developer with 6+ years of commercial experience, particularly in the context of data processing.
Anhelina Shynkarenko	Has 7 years of professional experience in Software Engineering. Currently works as a Data Engineer at the Ukrainian product company Uklon.
Roman Mishchenko	Software Engineer at MacPaw, IT Lecturer at KSE, PHD student in Computer Science.
Mykhailo Leychenko	Digital transformation and data expert, Director of IT and Analytics at the Center for Innovation Development (CID).
Oleksiy Zhenchuk	AI Engineer & Data Scientist with 6 years of experience. My areas of expertise are anomaly and fraud detection, NLP, and predictive analysis. Performed AI and analytics projects for the non-profit and government sectors.
Oleksiy Shkurdoda	First Deputy Director of the municipal budgetary institution, the contact center of Kyiv.
Ihor Markevych	Senior Data Scientist y Cognistx, Master's degree from Carnegie Mellon University with a focus on NLP and multimodal models.



▲ Video from the hackathon can be found at the following link:
<https://youtu.be/9flg1-1vTmo>

▲ Agenda of the hackathon can be found at the following link:
 [Agenda Urban Data Hackathon BRIDGE 4-5_10-1.pdf](#)