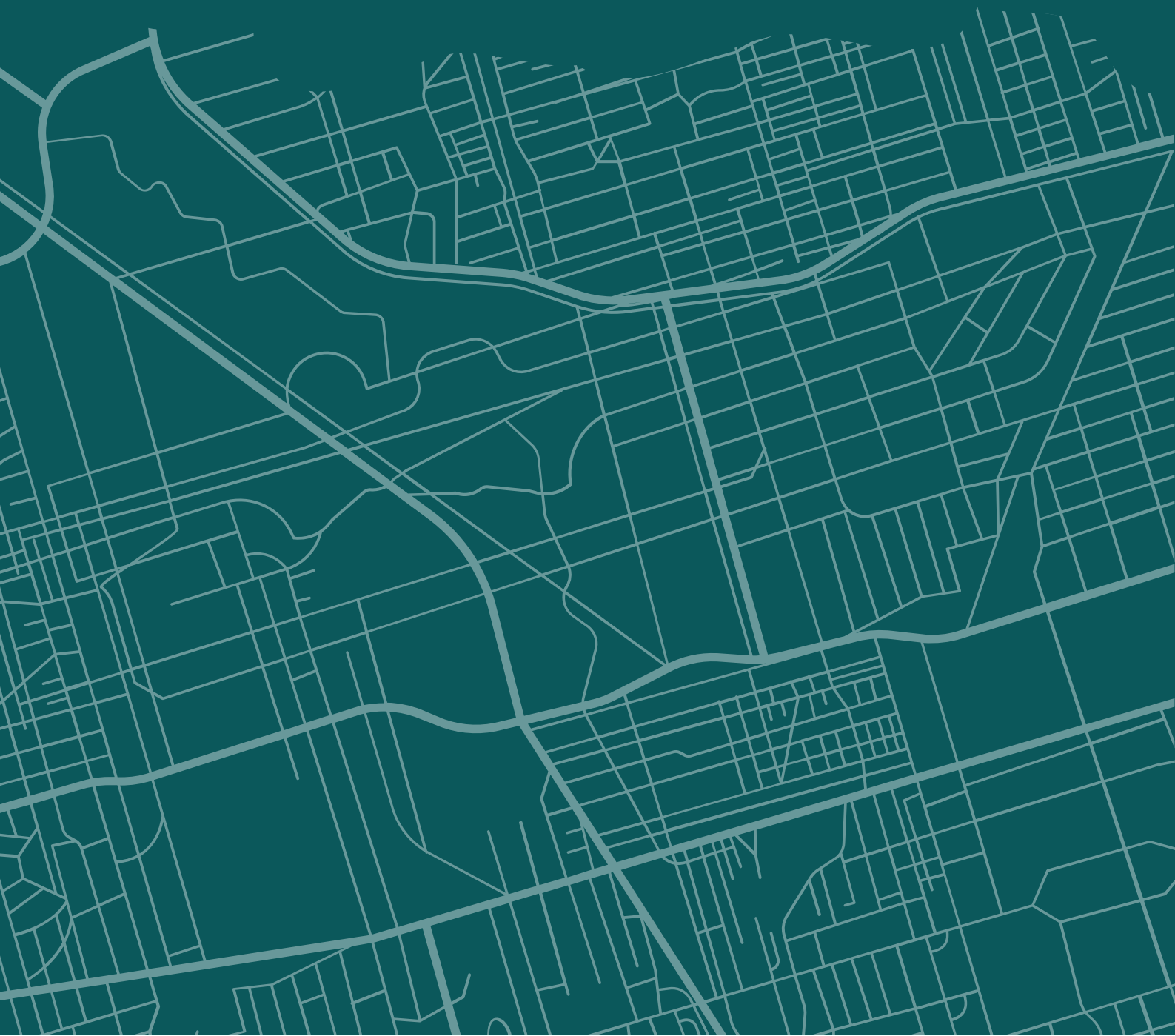
National Institute of Urban Affairs

UDSL
Urban Data Science Lab

Urban Data Conclave

MAPATHON

11th Aug - 25th Sep 2023



MAPATHON

Connecting Dots . Creating Change

What is Mapathon?

Mapathon is an exciting initiative that calls upon individuals to actively contribute to the collective growth of geospatial data. It is a collaborative effort where participants come together to map and annotate various aspects of urban areas within India. By harnessing the power of crowdsourcing, Mapathon intends to create a dynamic environment of shared knowledge, improving the accuracy and accessibility of geospatial data in the context of urban India. Through this interactive and engaging activity, participants contribute to the mapping community and gain a deeper understanding of the intricacies and interconnectedness. As a participant, your task is to contribute as a team to the OpenStreetMap by mapping utilities and features within the selected area of your city based on the problem statements provided.

How do we do it?

Participants are invited to actively volunteer and collaborate with us in the creation of a comprehensive and reliable geospatial database for urban areas in India. The Mapathon will be conducted as a series of offline events, where individuals come together to form a community within the selected cities and carry out the mapping of key aspects of urban infrastructure, transportation network, and other services.
To accomplish their objectives, participants are expected to utilise freely available open-source mapping applications for the mapping process, ensuring that the maps produced are clear and easily interpretable. The participants can choose a problem statement from the given options, select an area of **at least 2 sq km,** gather data and share it.
All maps created during this process are intended to be shared and contributed to the OpenStreetMap (OSM) platform, enriching the collective geospatial data available for urban areas. The participants may also submit the maps in a presentable format, with innovative visualisation techniques if interested.
By engaging in this collaborative mapping endeavor, participants have the opportunity to contribute to the development of urban India's geospatial database while showcasing their problem-solving skills and insights through the maps they create.

Who can participate?

- Participation in teams (minimum 3 members) are only allowed.
- Anyone above 18 years of age can participate. The participant may be a student, employed or unemployed person. Please register here Registration Form
- The participant requires to have a smart phone with stable internet connectivity to install and use the mapping application, and a system to upload the edits on OSM.

What will you map?

The participant can choose any one from the following problem statements:

- Public toilets play a crucial role in enhancing the quality of life and promoting the health and well-being of citizens. Being a fundamental human necessity, it is imperative that they have to be universally accessible with an inclusive design. This prompts the inquiry of whether public toilet designs are sufficiently comprehensive to ensure equal access across all genders, age brackets, socio-economic strata, and individuals with disabilities. Create a designated layer for public toilets, marked with attributes of inclusivity in design, like tactile pathways, wheelchair entry points, directional signage, user-friendly payment options, and Braille information boards etc.
- The city's drainage system serves as essential infrastructure, facilitating water flow, mitigating flood hazards, and preserving water quality. Drain conditions impact not only smooth wastewater and stormwater movement but also pedestrian safety and walkability. Therefore, mapping drain conditions and the extent of coverage is crucial for efficient drainage and urban livability. Generate a layer of drainage network and tag the attributes including covered/non-covered/partially covered lines and open/partially covered manholes along the footpath.
- Bicycle tracks and pedestrian pathways serve as essential arteries for active transportation, promoting sustainable mobility, and fostering healthier urban lifestyles. However, a lack of comprehensive documentation hinders the optimisation of these routes for various user needs. To address this, create a detailed layer that not only captures the locations of bicycle tracks and footpaths but also assesses their usability attributes, including safety, surface quality, lighting, availability of shade, and accessibility.

General instructions to participants

- Account creation: If you don't already have an account on OpenStreetMap, please sign up before the event. Visit the OpenStreetMap website and follow the registration process.

- Survey: Based on the selected problem statement, the participants can do a detailed survey of the site selected and use mapping tools to locate points of interest, create walk/cycle tracks and save the data generated. A list of mapping tools are given for your convenience:
  - Mapillary
  - Everydoor
  - Go Map!!
  - Vespucci
  - OsmAnd
  - StreetComplete
  - MAPS.ME

- Creating edits on OSM: Based on the site survey and data recorded on the mapping applications, participants can directly edit OSM and create tags for attributes of the elements mapped, say the presence of shade over a cycle track/footpath. Participants are encouraged to add more innovative attributes and choose a suitable approach for the whole process at their convenience. For editing in OSM, tools such as iD Editor (directly available on OSM) and JOSM (Java OpenStreetMap Editor) could be used.

- Sharing the data: While saving/uploading the edits on OSM, participants are required to use the hashtag #udc23 and add it to the commit history. This is a mandatory step for participation as it enables the organiser to review and validate the data submitted and ensures digital certificates for the participants.

What and How to submit?

For mandatory submissions :

- Upon the completion of the exercise, the participants are required to mail to dataspace@niua.org stating the completion along with a screenshot of OSM edits generated to confirm the participation. Participants are encouraged to send photographs of the teamwork during the site survey along with the mail to be posted on the social media handles of NIUA.

For submissions for the exhibition:

- Participants are encouraged to generate presentable maps using the data generated and free open-source software such as QGIS. The entries in the specified format should be submitted to the organising team for review by mailing to dataspace@niua.org. The submission should have a map of the study area in .pdf format of high resolution with identified features or patterns, represented distinctively. Make sure to include the following details on the map:
    - Title of the Map
    - Scale, North Arrow, and Legend
    - Any other details in text boxes

The last date of submission is 25th September 2023, 11:59 pm.

How are the exhibition entries evaluated?

The evaluation of the presented maps will be based on the following criteria:

- Map Design and Aesthetics: The overall visual representation of the map including the clarity of labeling, use of appropriate colors, and overall cartographic design will be evaluated.
- Geographic Accuracy: The accuracy of the mapped features compared to real-world geographic locations will be compared.
- Completeness: It will be examined whether the key features and infrastructure as given in the problem statement are adequately mapped.
- Data Consistency and tagging quality: The use of appropriate and consistent tagging conventions maintaining uniformity will be ensured.
- Attribute Information: The quality and accuracy of attribute data associated with mapped features, based on the problem statement will be reviewed.

What do we offer?

All participants will be awarded with digital certificates upon confirmation of their contribution. **The best 5 entries selected out of the submissions for exhibition will be displayed during the Urban Data Conclave at IHC, New Delhi.**

For any queries, contact Riya Robi, at 8075847028, rrobi@niua.org.