Inclusive walkability data through virtual audits: populations and features (InWalkData)

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Topic(s) and focus

This half-day workshop focuses on **inclusive walkability data** and on how **virtual auditing tools** can be used to capture the built-environment features that matter for diverse pedestrian populations (e.g., children, older adults facing age-related mobility restrictions, people sensitive to heat or noise).

Before the workshop, the organisers will prepare short lightning talks. These talks will introduce population groups with specific mobility needs, highlight the built-environment features that affect their walkability, and outline the data attributes needed to describe them. After this shared introduction, the main part of the workshop will be hands-on group work with virtual auditing tools.

Objective(s)

The main objectives of the workshop are to:

1. Present key pedestrian groups and their mobility needs in short lightning talks and handouts, and turn these into clear audit items (features and attributes) that can be recorded with virtual auditing tools.
2. Use and evaluate virtual auditing tools for data collection through group-based, hands-on work, test how well different tool categories support the capture of these population-specific attributes, and jointly derive requirements for tool functionality, workflows, and data structures.

Planned outcome(s)

Expected outcomes for participants include:

- A link between diverse pedestrian populations, their mobility needs, and feature lists that describe how the built environment moderates their walkability.
- A set of observations on the capabilities and limitations of different categories of virtual auditing tools (e.g., street-view-based, satellite-based, and GIS/OSM-based) for capturing inclusive walkability data.
- A set of requirements for virtual auditing tools, covering functionality, workflow requirements, underlying data sources, and data structure issues.

Participants will leave with practical knowledge on how to:

- Translate data requirements into concrete audit items and rating schemes that can be implemented in browser-based tools.
- Use virtual auditing tools to audit the built environment, and clearly describe the limitations and gaps of the tools they work with.

Workshop format

Intended length: Half-day workshop.

Format: A mix of short introductory lightning talks, structured hands-on virtual auditing exercises in small groups, and a closing plenary discussion:

- **Introductory block**

  The workshop starts with a welcome and short framing of the topic, including use cases such as planning support and personal mobility tools. The organisers then give lightning talks that introduce selected pedestrian populations, their mobility needs, and the built-environment features and data attributes that matter for them. Participants receive short literature-based summaries and handouts and choose a population or scenario to work on in small groups. A brief plenary concludes this block to align on the populations and feature sets that will be used in the hands-on work.

- **Core hands-on block**

  The main part of the workshop is group-based work with virtual auditing tools. Each group uses templates to adapt the feature and attribute lists for its chosen population and then applies these in browser-based auditing tools (e.g., street-view-based, satellite-based, or tools building on existing GIS/OSM data). Groups audit selected urban areas, record which population-relevant attributes can be captured, where tools fall short, and how well the tools support workflows such as navigation, annotation, rating, exporting, and collaborative use. Notes are recorded in simple, structured worksheets.

- **Closing discussion block**

  The workshop closes with a plenary discussion. Groups present their key findings. Together, participants compare how different tools support different populations and data needs, outline requirements for future inclusive virtual auditing tools and workflows, and sketch ideas and interest for a follow-up collaborative publication.

The workshop is interactive and collaborative, with an emphasis on shared learning and co-creation rather than formal lectures. Participants do not need to install software; activities will be based on web browsers and simple templates.

Target audience

The workshop is aimed at:

- Researchers and practitioners in GIScience, geoinformatics, urban planning, transportation, public health, gerontology, social work, and environmental psychology who work on

walkability, accessibility, active mobility, age-friendly or child-friendly cities, and related topics.

- Developers and users of walkability indices**,** routing and navigation tools**,** and planning support systems who are interested in improving the data foundations of their tools.
- Representatives of municipalities, NGOs, and advocacy groups concerned with inclusive mobility (e.g., organisations working with children, older adults, or people with disabilities).