A critical assessment of accessibility objectives and indicators in metropolitan transportation plans

Accessibility, the ease of reaching destinations, captures the complex interactions between land use and transportation systems. A simple example of accessibility metrics is the number of jobs that can be reached within 45 minutes of travel time using public transport. While transport planning is largely based on mobility indicators (e.g., travel speeds and vehicle-miles travelled), increasing attention is given to accessibility indicators. Yet, little is known on how they are used in practice.

RESEARCH AIM AND QUESTIONS
The aim of this study is to critically assess how accessibility is considered within metropolitan transportation plans and translated into performance indicators around the world to ultimately derive policy recommendations.

Research questions:
- What extent and how is accessibility included in metropolitan transportation plans around the world?
- What extent are accessibility goals translated into performance indicators reflecting the ease of reaching destinations?
- What are the best practices and how could accessibility objectives be better integrated in metropolitan transportation plans?

RESULTS
Accessibility is often used as a buzzword and as a result rarely translated into accessibility objectives and goals. While most plans emphasize the need to improve accessibility, few plans have accessibility-based indicators that guide their decision-making processes.

“Maximize mobility and accessibility for all people and goals in the region.” - RTP 2040 (SCAG)

“Improve regional accessibility with the most appropriate modes, to support economic and social dynamism.” (translated by the authors) - Bruxelles Mobilite 2011

To ensure that accessibility metrics reflect the ease of reaching destinations:
- Accessibility indicators should be based on accessibility destinations (e.g., jobs), rather than transport amenities (e.g., public transport stops).
- Accessibility should be measured for various modes of transport.

To support the inclusion of accessibility indicators in decision-making processes:
- Accessibility indicators should be systematically included in performance analyses.
- Accessibility metrics are used to assess the general performance of the land use and transportation system, in addition to the social equity assessment.

RECOMMENDATIONS AND BEST PRACTICES

Regional transportation goals
- “Improve accessibility: Help people of all ages and abilities to access specific destinations.” - Maxima 2040 (Baltimore)
- “Improve mobility: Help people and freight to move reliably and efficiently.”

Accessibility indicators included in a multi-criteria prioritization framework:
- “How well does the project improve access to areas of opportunity?”
- “How well does the project support job retention or expansion by improving access?” - RTP 2040 Update 2014 (Puget Sound)

Examples of best practices

1. Identification of the vision, goals, and objectives
2. Identification of the performance indicators related to accessibility
3. Key words in context analysis: access, accessibility, link, connection, reach, and “get to”
4. Detailed analysis of a subset of plans

SUMMARY
- Among the 32 plans assessed, less than half (15) included both accessibility goals and indicators. Among those 15 plans, only 7 of them included accessibility indicators reflecting access to destinations as main performance indicators. The other plans either:
  - i) defined accessibility metrics as potential indicators, but did not include them in the plan,
  - ii) used access-to-destinations metrics in their environmental justice assessment, but this one was not included in the main plan,
  - iii) did not specify the metrics or how these were included in the plan (other), or
  - iv) only included access-to-transit indicators.

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- Accessibility indicators should be based on accessibility destinations (e.g., jobs), rather than transport amenities (e.g., public transport stops).
- Accessibility should be measured for various modes of transport.

“Improve in employment accessibility: The change in the number of jobs accessible by public transport within 45 minutes travel time.

Improved access to employment from deprived areas: Percentage of population in the 10% most deprived areas of London within 45 minutes travel time of international and metropolitan centers.”

- Transport 2025 (Transport for London)

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