How to plan a door-to-door public transport journey

For public transport to compete with the convenience of private cars, a "whole journey" approach to planning is crucial. This means considering every part of the trip from the traveller's perspective — from pre-trip planning to walking/cycling to the station, to riding, waiting, and transferring. This approach helps overcome fragmented governance to create a seamless door-to-door experience. Effective inter-organisational collaboration managing different parts of the travel chain is key to coordinate transport modes, integrate fares and travel information, and ensure data access throughout the entire travel chain.

Urban travellers spend about half of the total travel time outside of public transport.

Pre-trip planning

The journey begins before the traveller even leaves home.

1 **Comprehensive travel information**
Provide real-time, detailed information for the entire journey. This helps travellers choose the best mode, route, and departure time, reducing perceived waiting times and improving the overall experience.

Access and Egress

Active modes such as walking and cycling are key to provide access to and egress from public transport and need to be well integrated into the transport system.

2 **Attractive walking environments**
Invest in well-lit, secure, and inviting walking areas. Walking policies should extend beyond infrastructure to incorporate ideas from architecture, landscape design, engineering, and other relevant fields, such as implementing greenery, aesthetic facades or places to socially interact alongside public transport access.

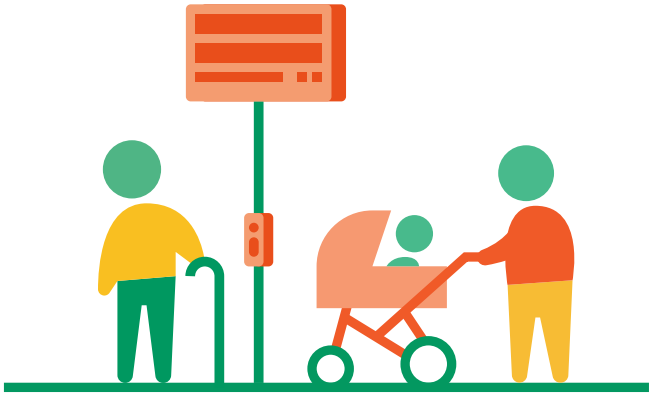
3 **Cycling infrastructure**
Build cycle lanes, clear wayfinding, bike rental schemes, and secure parking at stations. Allowing bikes onboard trains can further encourage cycling as an access/egress mode.

4 **Collaboration across levels**
Active transport needs support beyond the local level. Ensure political will and coordination at regional and national levels to fully integrate walking and cycling into the transport system, integrating walking and cycling into public transport provider's agendas.

5 **Distance matters**
For shorter urban public transport trips by bus, tram, or underground, travellers prefer walking to and from the stops, with other modes remaining negligible. When accessing local trains or longer train journeys, cycling and other modes of transport surpass the share of walking for distances over 1.5 km.

Waiting and Transferring

Waiting and transferring are often seen as the least enjoyable parts of the journey and greatly affect overall travel satisfaction.



6 **Improve station areas**
Facilitate easy and safe connections to other transport modes and nearby areas. Make station areas safe, clean, and comfortable. Focus on good lighting, amenities, regular maintenance, and clear wayfinding to enhance the traveller's experience. Travellers perceive a 30% longer waiting time at stations without amenities.

Key planning tools

- **Transit-Oriented Development (TOD)**
  Use this planning approach to create attractive, walkable communities around public transport hubs to encourage the use of public transport, cycling, and walking.

- **Transport modelling**
  Use detailed transport models that describe the entire door-to-door trip to evaluate impacts of policies.

- **Network Design**
  Understanding passengers' behaviour is crucial to rapid transit network design. Optimization tools can help in making decisions involving trade-offs between investment and passenger preferences.

- **Tariff Design**
  Design fares so that splitting tickets or taking longer routes does not offer cost advantages to passengers, ensuring fairness and consistency. Employ optimization and simulation tools to test and refine fare structures before implementation.

- **Digital Tactical Urbanism**
  Use this low-cost, participatory tool to engage users and test urban spaces around transport stations before implementation.

Learn more
Read more at easier.dtu.dk/en or k2centrum.se/easier-seamless-sustainable-everyday-urban-mobility
You can find more K2 publications at k2centrum.se/en/publications

K2 is Sweden's national centre for research and education on public transport. This is where academia, the public sector and industry meet to discuss and develop the role of public transport in Sweden. We investigate how public transport can contribute to attractive and sustainable metropolitan areas of the future. We educate members of the public transport sector and inform decision-makers to facilitate an educated debate on public transport.

K2 is operated and funded by Lund University, Malmö University and VTI in cooperation with Region Stockholm, Region Västra Götaland and Region Skåne. We are supported by Vinnova, Formas and the Swedish Transport Administration.