Interreg Baltic Sea Region

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HUPMOBILE

Aalto University

Smart Mobility Impact Assessment

Characteristics of the area for solution description

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The aim of the HUPMOBILE impact assessment and sharing knowledge through this assessment is not to compare cities, but to explain why they are different and have different options (can even take a leap in the development).

For this reasons, the assessment process includes the description of the operational environment of the mobility solution.

This material is to support you in describing this operational environments in easy-to-understand format. In the description, remove the icons that are not needed.

Characteristics of the area for solution description

The focus should be on one area (for example neighborhoods, city district, urban area of the city, metropolitan area) where sustainable mobility improvements have been implemented or where the new solution has an impact. Choose then the best option (from the next slides) that characterize the chosen area in your expert opinion.

Land area (The size of the land area that the mobility solution is aimed for affecting)
Users (The size of the potential user group that the mobility solution is aimed for in the target area)
Access to mobility services (Access to existing mobility solutions in the target area - complementary, competing or potentially substituting)
Location (Geographical aspects that potentially affect the possibilities that the city has regarding implementing mobility solutions)
Affordability (Your expert opinion about the share of the transport costs for fulfilling basic needs in the household budget of the poorest quartile of the population)
Costs (Your expert opinion about the need for specific investments and operating costs after the pilot or heavily subsidized operation period)

1. Land area

Definitions
The size of the land area that the mobility solution is aimed for affecting.

1. Under 5 km^2.
2. Between 5 km^2 and 25 km^2.
3. Between 25 km^2 and 100 km^2.
4. Between 100 km^2 and 400 km^2.
5. Over 400 km^2.

2. Users

Definitions
The size of the potential user base that the mobility solution is aimed for in the target area.

1. Under 20 000.
2. Between 20 000 and 100 000.
3. Between 100 000 and 300 000.
4. Between 300 000 and 1 000 000.
5. Over 1 000 000.

3. Existing solutions in the area

Source

The proposed limit of 400 meters (bus and tram stops, and shared bike system) and 800 meters (metro and train stops, and shared car system) is based on: TNO Business Unit Mobility and Logistics (2007), Transport for London (2010), Center for Transportation Research – University of Texas (2005).

Definitions

The coverage is estimated with the average distance to existing mobility services for majority of the users (75%). Mobility hub refers to a station, which has multimodal options / opportunity to change modality.

1. There is an area wide bike sharing system in operation.
2. There is an area wide car sharing system in operation.
3. There is an area wide rail-based transport system in operation.
4. The public transport network coverage is good (no longer than 800m to the nearest mobility hub).
5. The public transport network coverage is excellent (no longer than 400m to the nearest mobility hub).

4. Operating conditions in the area

Definitions

Geographical aspects that potentially affect the possibilities that the city has regarding implementing mobility solutions.

1. There are considerable vertical changes in the topography of the area in question (for example, favoring motorized/electric versions of small vehicles).
2. The area in question is characterized by landform surrounded by water (peninsula) or is divided by a large river (for example, limiting the land area usable for mobility solutions or favoring water-based transport).
3. The area in question is characterized by a large transport node that creates traffic flows (for example, TEN-T port).
4. In addition to two of the scale items above, the area in question is affected by severe snow conditions in the winter (for example, some mobility solutions, such as shared scooters, cannot be used during winter months).
5. In addition to all the three scale items above (1-3), the area in question is affected by severe snow conditions in the winter.

5. Transport affordability in the area

Definitions

The share of transport cost of the household budget for the poorest quartile of the population when they are fulfilling basic needs.

1. The financial cost of monthly journeys put a low-income individual or household in the position of having to make sacrifices to travel or the extent to which they can afford to travel when they want to.
2. Compared to previous scale item, low-income individual or household can make necessary journeys to work, school, health and other social services or urgent other journeys without having to curtail other essential activities.
3. In my expert opinion, PT is subsidized to the extent that the cost of monthly essential journeys does not exceed 10% of the average monthly income of low-income individual or household.
4. In my expert opinion, PT is subsidized to the extent that the cost of monthly essential journeys does not exceed 10% of the average monthly income of low-income individual or household and there are affordable tickets to vulnerable groups.
5. PT is free for vulnerable to exclusion groups (or to all).

5. Costs

Definitions

Estimated or documented costs of starting and operating the solution for a year per potential user of the solution. Does not include public investment costs (not solution-specific investments) or subsidies required to make the solution viable – think about implementing the solution without any state/city subsidies:

1. The costs per potential user are between 0 to 10 euros per user
2. The costs per potential user are between 10 to 20 euros per user
3. The costs per potential user are between 20 to 100 euros per user
4. The costs per potential user are between 100 to 500 euros per user
5. The costs per potential user are over 500 euros per user.