POLIS25
ANNUAL CONFERENCE

26-27 November 2025
Royal Jaarbeurs | Utrecht, Netherlands

Use our hashtag:
#POLIS25

Hosted by: City of Utrecht

City of Utrecht

POLIS25
ANNUAL CONFERENCE
26-27 November 2025
Royal Jaarbeurs | Utrecht, Netherlands

Sustainable travel chains in the Eastern and Western Uusimaa Region

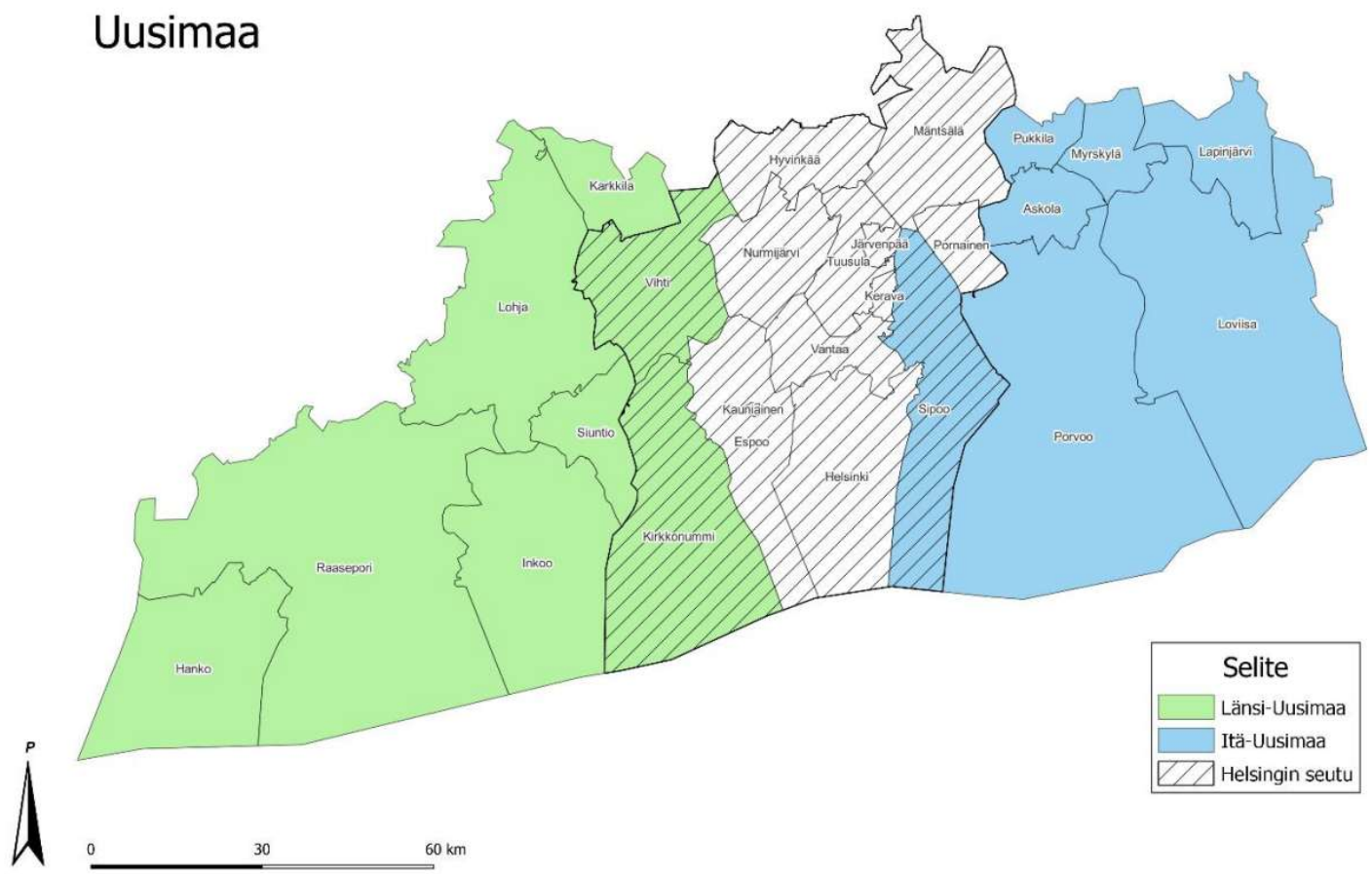
📌**Wednesday, 26 November 2025**
⏱️**XX:XX - XX:XX**

SESSION 1F
Regional Routes To Sustainability

SPEAKERS
Pasi Kouhia, Helsinki-Uusimaa Regional Council

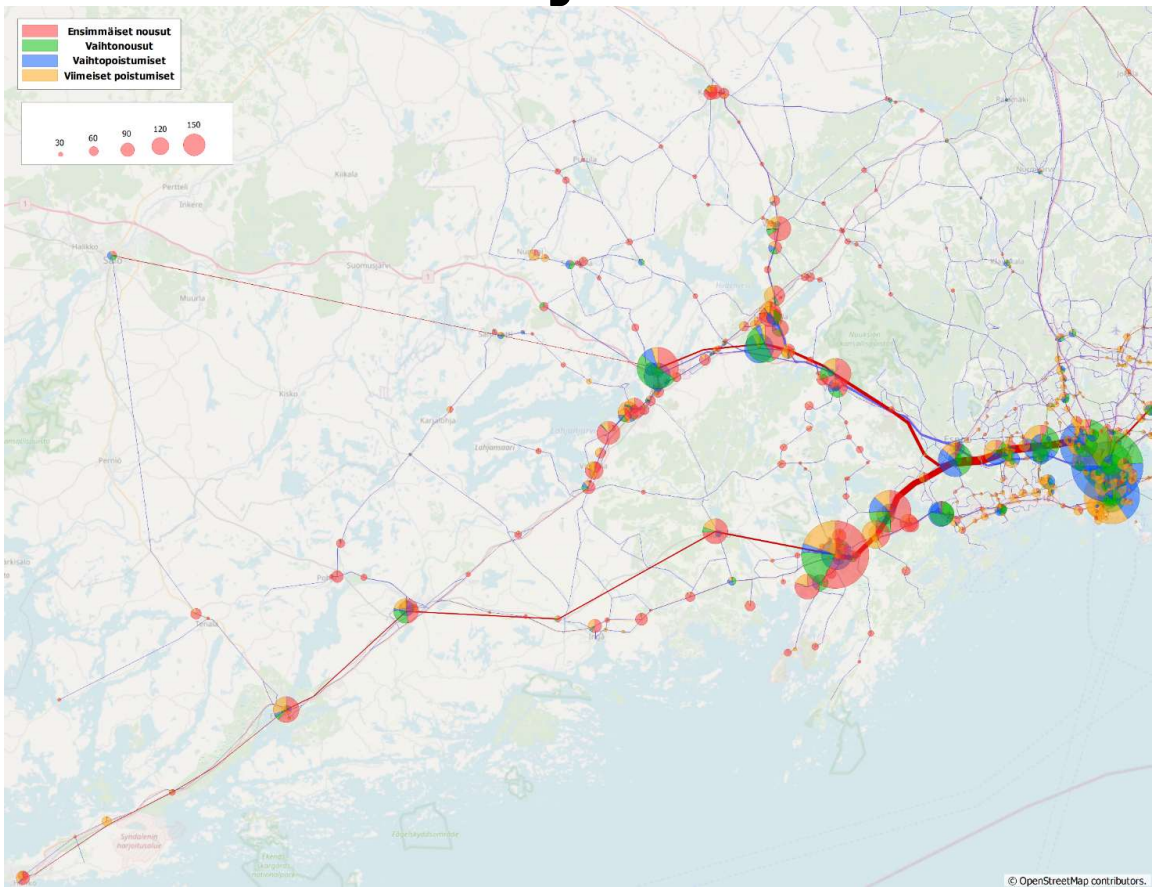
Background

- The project area covered the municipalities of Eastern and Western Uusimaa.
- The assessment was commissioned jointly by the Uusimaa ELY Centre and Helsinki-Uusimaa Regional Council.
- The idea for the project emerged during the preparation of the transport system plans (2020).
- The work was carried out in collaboration with the municipalities of Eastern and Western Uusimaa, the Finnish Transport and Communications Agency, the Finnish Transport Infrastructure Agency, and HSL.



Comprehensive Overview of the Sustainable Travel Chain Project

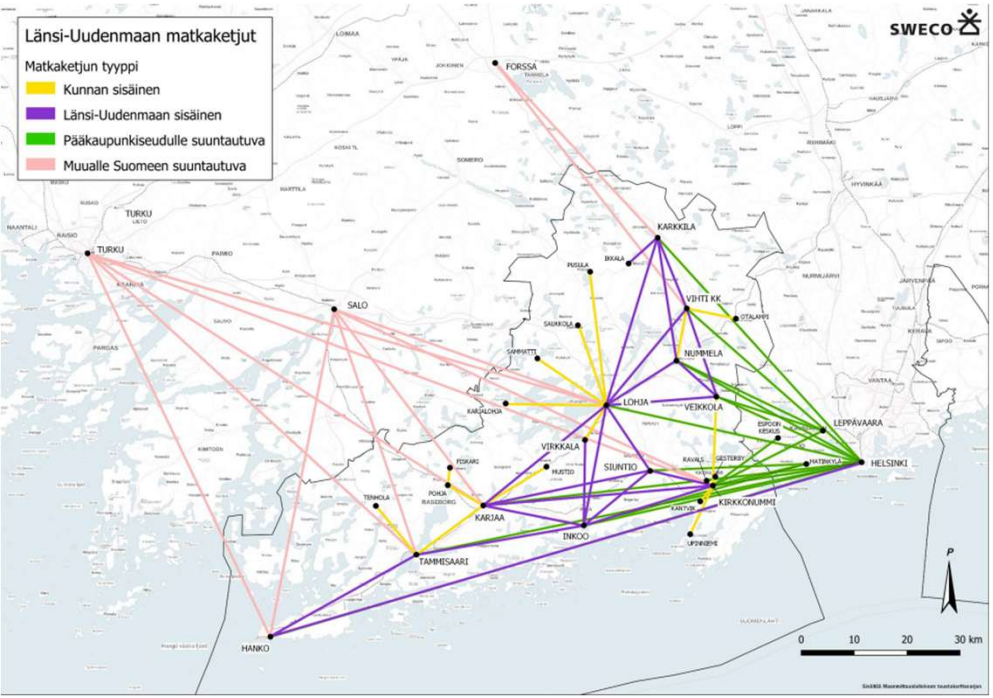
- This was the first comprehensive assessment of sustainable travel chains in Eastern and Western Uusimaa.
- The travel chains were prioritised, and the most important quality corridors were identified—three in total: one in Eastern and two in Western Uusimaa.
- The project also identified the key public transport stops in Eastern and Western Uusimaa and classified them for the first time into terminals, key hubs, high-demand stops, and basic stops.
- Service-level targets were defined for stops, access routes, and park-and-ride facilities for cars and bicycles, supporting appropriately scaled improvement planning.
- The project also defined, for the first time, the main cycling routes in Eastern and Western Uusimaa.
- The main objective was to ensure that conditions for sustainable mobility and traffic safety are improved in Western and Eastern Uusimaa, particularly along the most critical sustainable travel chains. This helps to direct resources where they have the greatest impact.
- The project focused on identifying feasible infrastructure improvements.

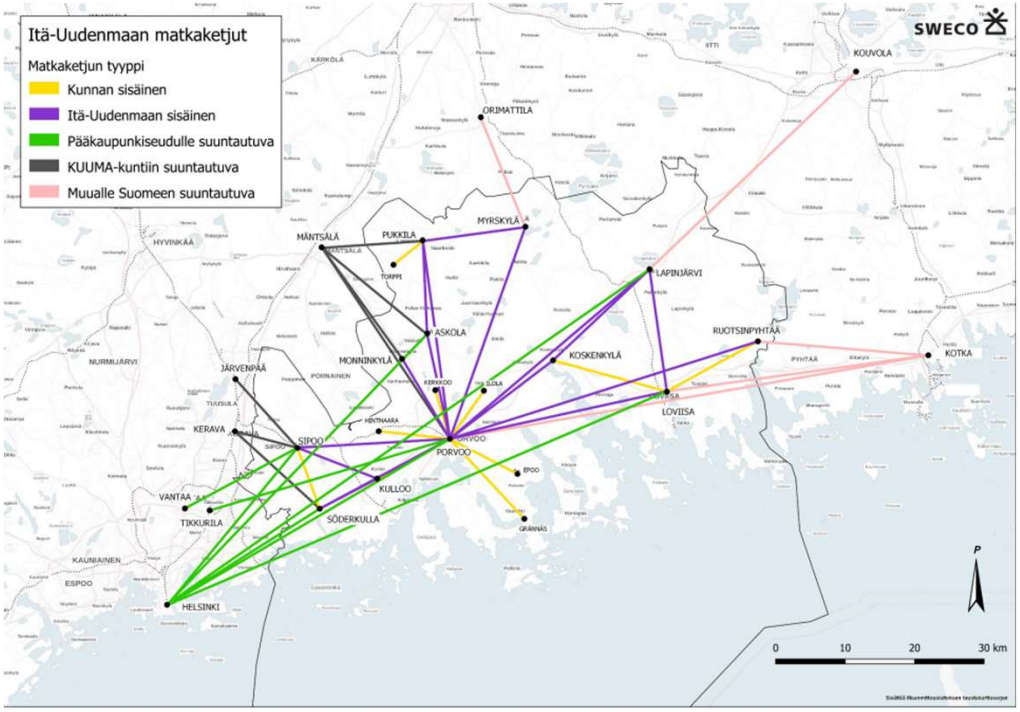


Sustainable Travel Chain

- In this project, each travel chain includes a sustainable main leg (public transport or cycling) and an access leg at the origin end.
- The main leg refers to a typically fast connection by train or bus between two nodes. These nodes are rarely the actual start or end points of a trip, as access journeys are usually needed at both ends.
- The access leg refers to the trip made from the origin to the node—or from the node to the final destination—by walking, cycling, car, public transport, or micromobility.

Identification of Sustainable Travel Chains





- Sustainable travel chains were identified using previous studies and plans (including transport system plans), YKR residence–workplace data and inter-municipal commuting data, as well as **municipal interviews, workshops and expert assessments.**
- A total of 113 sustainable travel chains were identified. From the outset, it was clear that they must be assessed using multiple factors in order to establish a prioritisation and identify the most important chains.
- Prioritisation is essential to ensure that limited resources can be allocated as effectively as possible.

Prioritisation - factors

Travel time (public transport vs. car)

- Travel times between key nodes were compared for public transport (train or bus) and private car.
- Public transport travel times were based on data from local operators, using average journey times.
- Car travel times were taken from Google Maps using average driving times between nodes.

User potential (walking)

- Residents within an 800 m catchment area of the travel chain inside the origin municipality, based on YKR population data.

User potential (cycling)

- Residents within a 3,500 m catchment area inside the origin municipality, based on YKR population data.

User potential (feeder traffic)

- Potential users within cycling distance (3,500 m) of identified feeder connections to public transport, based on YKR population data.

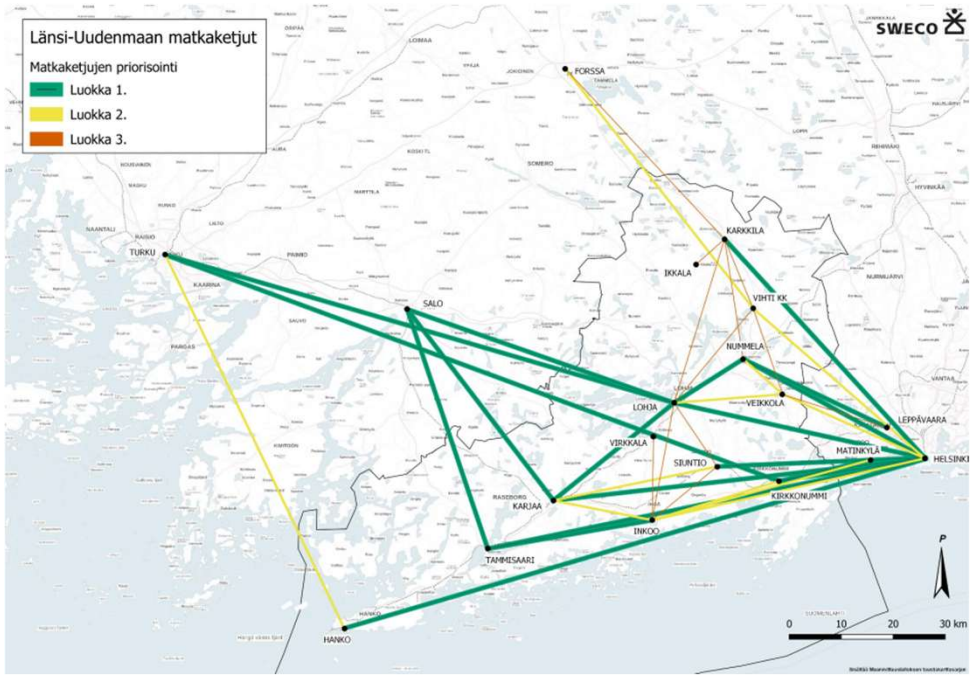
Commuting potential

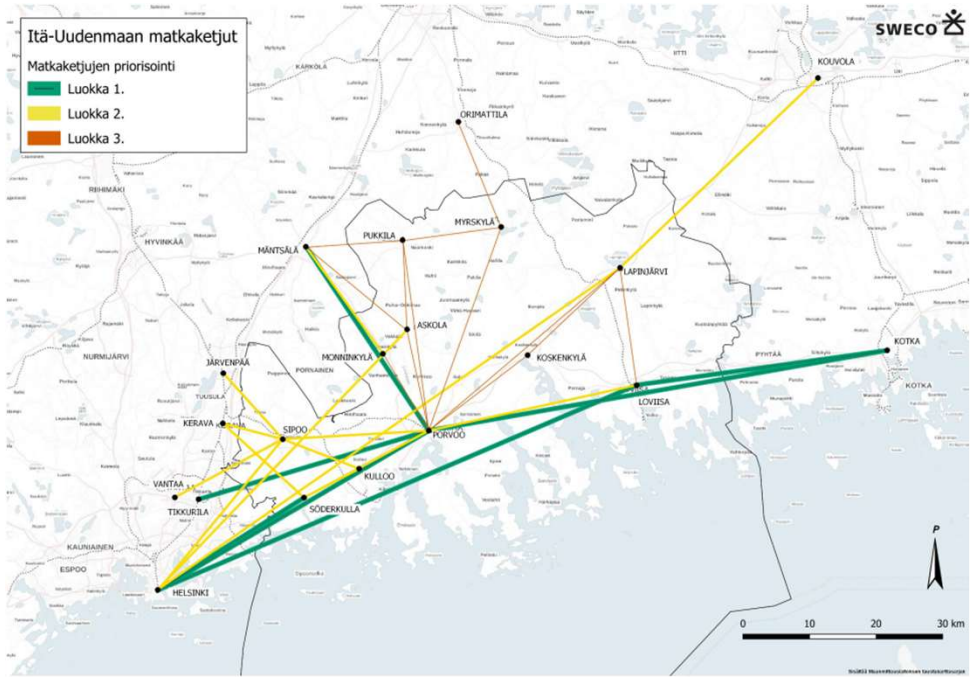
- Number of potential commuters along the main connection corridor, based on YKR residence–workplace data.

Emission reduction potential

- Emission reduction potential refers to the CO_2 savings when a trip is made by public transport (train or bus) instead of a private car.
- Average CO_2-equivalent emission of a private car in 2021: **147.1 g/km**.
- Estimated emission reduction when shifting from car to bus: **88.0 g/km**.
- Estimated emission reduction when shifting from car to train: **147.1 g/km** (electric train traffic is assumed to be carbon neutral within the timeframe of this study, through compensation of electricity production emissions).

Prioritisation - results

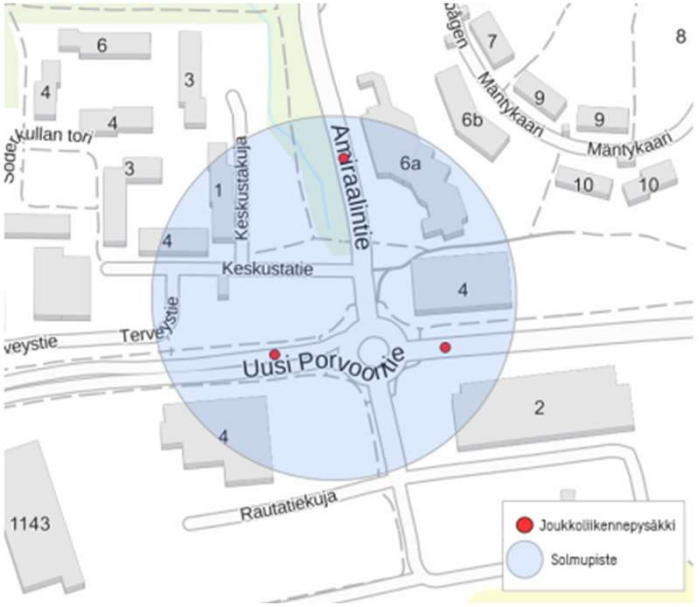




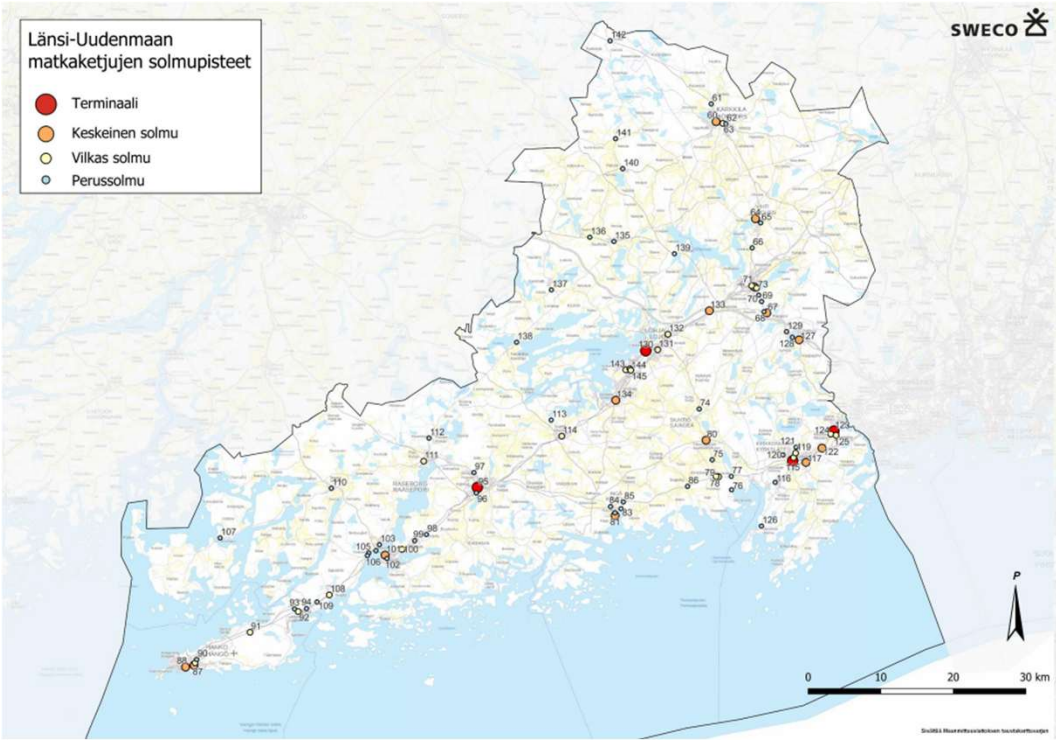
- Each factor used in the prioritisation was evaluated independently of the others.
- Travel chains were prioritised using a three-level traffic-light scale, where the best third of values is marked green, the middle third yellow, and the lowest third red.
- Exception: public transport travel time vs. car was scored using absolute thresholds:
  - **Green:** public transport faster than car (ratio < 1)
  - **Yellow:** travel time ≤ 1.5 × car (ratio 1–1.5)
  - **Red:** travel time > 1.5 × car (ratio > 1.5)

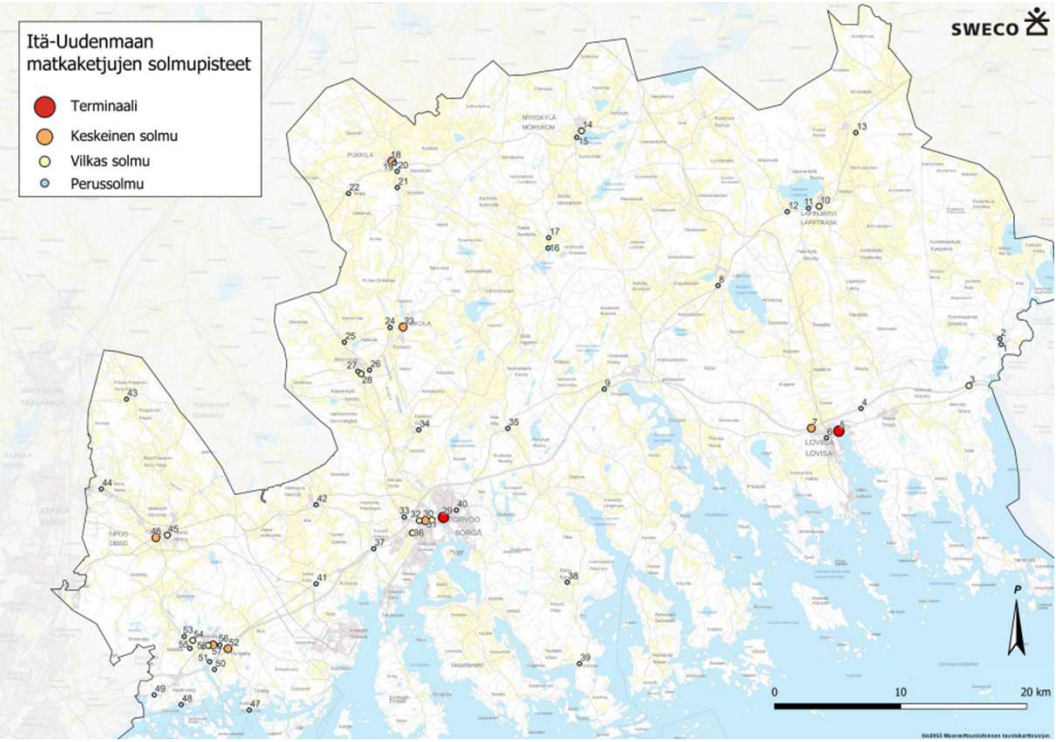
Nodes

- A node consists of a stop pair, a larger group of stops, or a station.
- A single node may include stops belonging to different stop classes.
- Stops were selected based on municipal collaboration and expert assessment. The selected stops are either already significant or have a clear development mandate.
- For the first time, the key stops in Eastern and Western Uusimaa were classified into node categories.
- The classification applied the four highest levels of the national stop hierarchy:
  - Terminal
  - Key hub node
  - High-demand node
  - Basic node



Nodes


Länsi-Uudenmaan
matkaketjujen solmupisteet
Terminaali
Keskeinen solmu
Vilkas solmu
Perussolmu
SWECO
0
10
20
30 km


Itä-Uudenmaan
matkaketjujen solmupisteet
Terminaali
Keskeinen solmu
Vilkas solmu
Perussolmu
SWECO
0
10
20 km

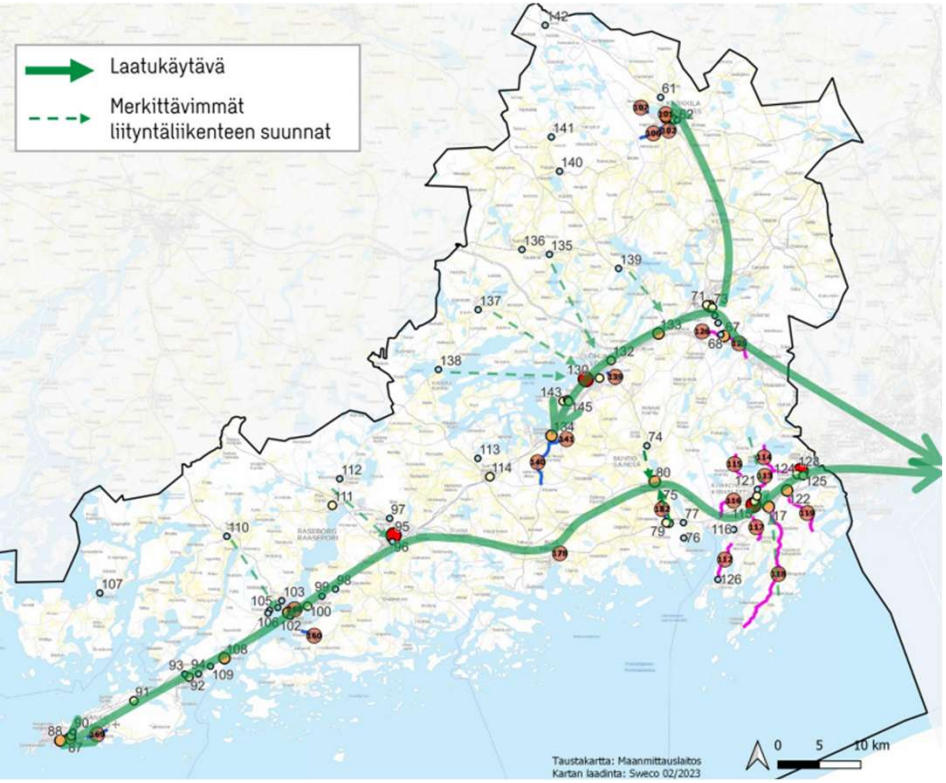
Nodes – service-levels

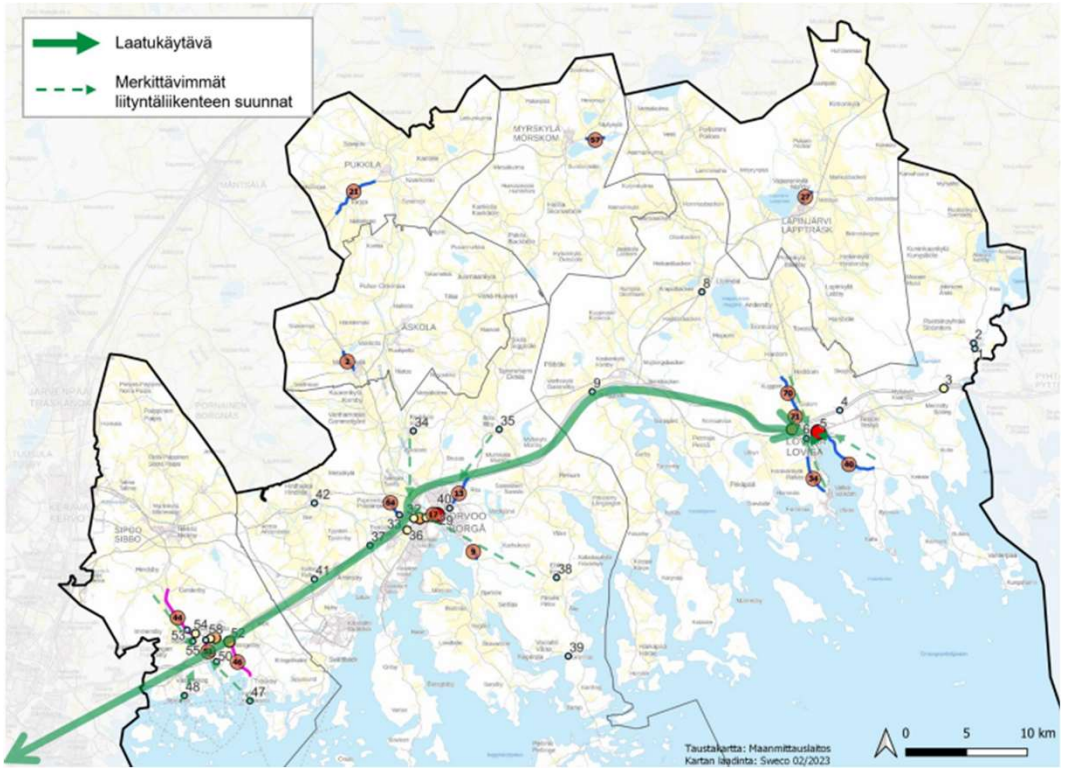
- Service-level targets for public transport stops were defined, determined by the stop or node classification.
- Service level objectives (quality targets) have been set for:
  - Public transport stops
  - Routes leading to the stops
  - Park-and-ride facilities for cars and bicycles

Vaatimukset	Pysäkkiluokat
Oltava aina	1. Terminaali
Suositeltava ratkaisu	2. Keskeinen solmupysäkki
Ei tarvita	3. Vilkas pysäkki
	4. Peruspysäkki

Pysäkeille tai solmupisteisiin johtavien reittien palvelutasotavoitteet					
Tavoite	**Kuvaus**	**1. Terminaali**	**2. Keskeinen solmupysäkki**	**3. Vilkas solmupysäkki**	**4. Peruspysäkki**
Sujuvuus ja vaivattomuus	Pysäkille johtaa erillinen jalankulku- ja (pyöräväylä).	*Oltava pääreittitasoinen	*Oltava pääreittitasoinen		*Oltava vähintään riittävän leveä piennar
	Ei ylimääräisiä puolen vaihtoja ja suojatie on reitin jatkeena			*Oltava ohjeistuksen mukainen turvallinen tienylitys ympäri vuorokauden	*Oltava ohjeistuksen mukainen turvallinen tienylitys ympäri vuorokauden
	Kunnossapito korkeimmassa luokassa			*Kunnossapitoa on, mutta ei korkeimmassa luokassa	*Kunnossapitoa on, mutta ei korkeimmassa luokassa
	Orientoitavuus pysäkille ja pysäkiltä varmistetaan tarvittaessa jalankulun ja pyöräliikenteen opastuksella			*Opastus lähimaastosta	*Opastus lähimaastosta tarpeen mukaan
	Liikennevalo-ohjaus suosii jalankulkijaa ja pyöräilijää päiväaikaan				
	Pysäkin ympäristössä on viihtyisyyttä lisääviä elementtejä (esimerkiksi. Prosenttitaide-ajatuksella tuotettua taidetta tai istutuksia)		* Mikäli kunnan keskeisin pysäkki		
Liikenneturvallisuus	Ylitysmahdollisuudet kuten saarekkeellinen tai nopeusvarmistettu suojatie tai valo-ohjaus tai ali- tai ylikulku. Lisäksi tarvittaessa liikenteen rauhoittaminen. Keskustamaisessa ympäristössä ylitysratkaisuna voi olla myös pelkkä suojatie, mikäli liikennettä rauhoitetaan.				
	Pysäkki ja pysäkkiyhteydet valaistuja. Voidaan hyödyntää erikoisvalaistusta			*Taajama-alueella	
	Pysäkkialueen turvallisuuden tunteen parantaminen esim. valaisemalla alikulut ja pysäkkialue				
Esteettömyys	Reitit ovat esteettömiä				
	Pysäkkialue on esteetön Jalankulun suunnitteluohjeen mukaisesti				

End Result - Prioritization of measures





- The highest-priority measures are located along the most important travel chains, ensuring the greatest impact.
- The key travel chain entities—quality corridors—were identified to determine where development efforts should be focused.
- Required improvements were defined at a general level; the established quality targets will guide further planning.
- After the project, we prepared four-year action programmes for the regions in line with the transport system plans. These programmes also include measures originating from this project

What we learned?

Examining travel chains enables a coordinated approach to developing rail, bus and cycling connections.

Identifying travel chains supports impactful allocation of resources.

The methods can be applied in different types of areas.

Thank you for your attention!

For more information:

Pasi Kouhia, Helsinki-Uusimaa Regional Council
pasi.kouhia@uudenmaanliitto.fi

POLIS
CITIES AND REGIONS FOR TRANSPORT INNOVATION

City of Utrecht