Focus session

E1: A strategic look on modal share growth of sustainable transport after the pandemic

9.30–11.00

TRAFICOM Finnish Transport and Communications Agency

eParking.fi

SITOWISE The Smart City Company

Regional Council of Southwest Finland

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Improving the level of service of sustainable travel chains

Case Päijät-Häme province

Project subscribed by Centre for Economic Development, Transport and the Environment of Uusimaa and The Regional Council of Päijät-Häme and carried out by Sitowise

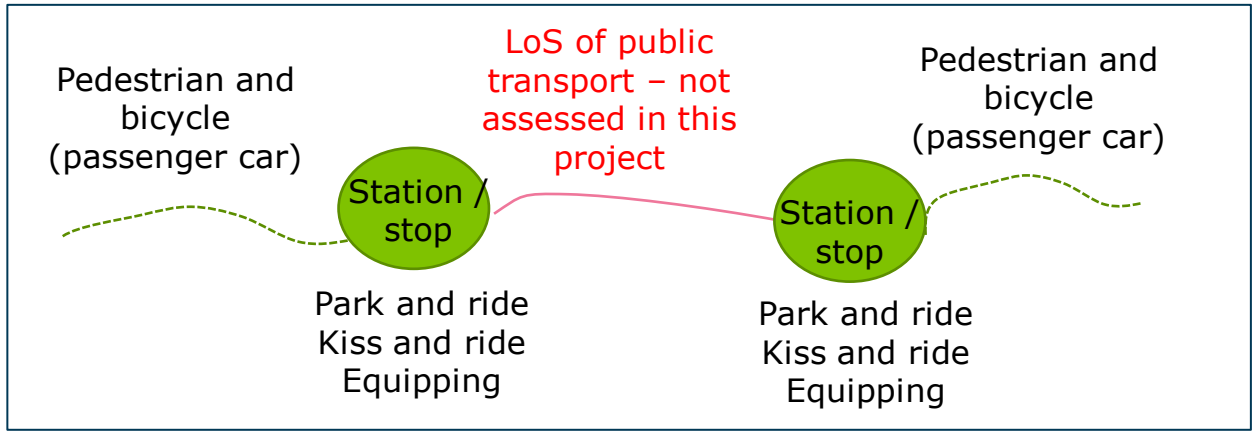
MAIJU LINTUSAARI

Background and aim

The development of sustainable travel chains is part of Finland's national transport system plan, Päijät-Häme's transport system plan, the MAL agreement on land use, housing and transport in the Lahti urban area, and the objectives of Lahti's year as European Green Capital 2021.

Developing sustainable travel chains through infrastructure is a slow process and individual measures have low impact. Specifying and implementing sets of measures can achieve greater benefits than individual measures.

Content and delimitations

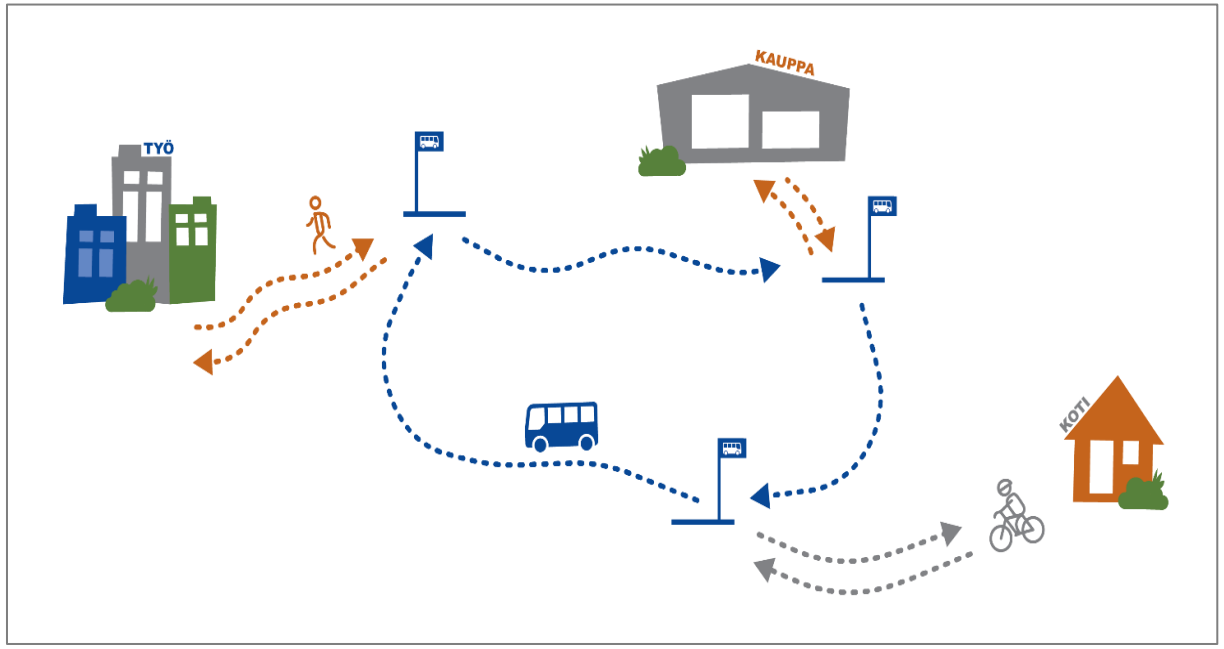


Phase	Interaction with municipalities
1. Identifying the most important nodes	First set of meetings
2. Creating the framework for the level of service on nodes	
3. Classifying the level of service and determining deficiencies of services and required measures in nodes	Second set of meetings
4. Determining and classifying the most importat travel chains	

Terms

The following definitions of terms were used in this project. Some of the terms are not well-established and their definition varies considerably between public transport operators.

- **Level of service** is related to the qualitative characteristics of the factor in the travel chain. Some of the criterion are critical and must be achieved; some are recommendations that can be implemented where possible.
- **A node** consists of a stop or a pair of stops and the infrastructure of the travel chain that is directly connected to them, such as a car or bicycle park and ride and connections from the stops to the park and ride and to the surrounding transport network.



- **A travel chain** means two or more trips with their connecting and trunk sections. Here, two or more trips are treated as a travel chain, because the possibilities and needs of connecting traffic for domestic travel differ significantly from connecting traffic for other trips, for example in terms of park and ride or kiss and ride. The infrastructure needs of a node are thus different at the starting points of domestic journeys compared to other parts of the travel chain.

Framework for the level of service on nodes

- **Class 1: Terminal**
  The only terminals in the province are Lahti Travel Center and the Market Square.

- **Class 2: Central hub**
  Central hub are e.g. the main stops in the municipalities and the main stops on the main lines in the urban area, especially interchanges. Railway stations that are not terminals are central hub.

- **Class 3: Busy node**
  Non-Category 2 stops with a particularly many users or a lot of land use nearby that creates passenger traffic (potential). The number of users is not absolute but depends on the number of trips in public transport in the area (municipality): for example, a stop with a hundred monthly rises would not be a busy stop in an urban area but could be elsewhere in the province. All park and ride nodes are at least on category 3.

- **Class 4: Basic node**
  Other stops that have a reasonable number of users or are important for other reasons.

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Classification of the level of service of nodes

Level of service of a stop or a station

<table>
<tr><th></th><th>Class 1
Terminal</th><th>Class 2
Central hub</th><th>Class 3
Busy node</th><th>Class 4
Basic node</th></tr>
<tr><td>Waiting area</td><td>Requirement: shetered and warm waiting area, sitting bench, waste bin</td><td>Requirement: alight shelter, sitting bench and waste bin</td><td colspan="2">Aim: shelter, sitting bench and waste bin at the departing stop</td></tr>
<tr><td rowspan="4">Information</td><td colspan="2">Requirement: timetable and stop information (in urban areas, a map of lines)</td><td>Requirement: timetable and stop information</td><td>No requirements</td></tr>
<tr><td>In railways stations
Requirement: information regarding both train and bus transport</td><td>In railways stations
Requirement: information regarding train transport
Aim: information regarding bus transport</td><td>Aim: Real-time infromation especially at park and ride nodes</td><td>No requirements</td></tr>
<tr><td rowspan="2">Other equipment</td><td colspan="3">Requirement: Stop sign, nameplate, coordinate sign or passenger ID, line ID’s</td><td>Requirement: Stop sign, coordinate sign or passenger ID
Aim: Line ID’s</td></tr>
<tr><td colspan="2">Requirement: Elevated stop area</td><td>Aim: Elevated stop area</td><td>Aim: Elevated stop area in urban areas</td></tr>
<tr><td>Other services</td><td>Requirement: at least space reservations for transport or other services (taxis, e-scooters, city bikes, kiosk, parcel machine…)</td><td colspan="2">Aim: space reservations for at least light transport services (e-scooters, shared bikes)</td><td>No requirements</td></tr>
</table>

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Classification of the level of service of nodes

Level of service of access traffic

	Class 1 Terminal	Class 2 Central hub	Class 3 Busy node	Class 4 Basic node
Park and ride (cars)	Required	Required	Not obligatory	Not obligatory
Park and ride (bikes)	Required	Required	Required	Not obligatory
A stop for connecting bus	According to demand	According to demand	Not obligatory	Not obligatory
Kiss and ride	Required	Required	Required	Required

Classification of the level of service of nodes

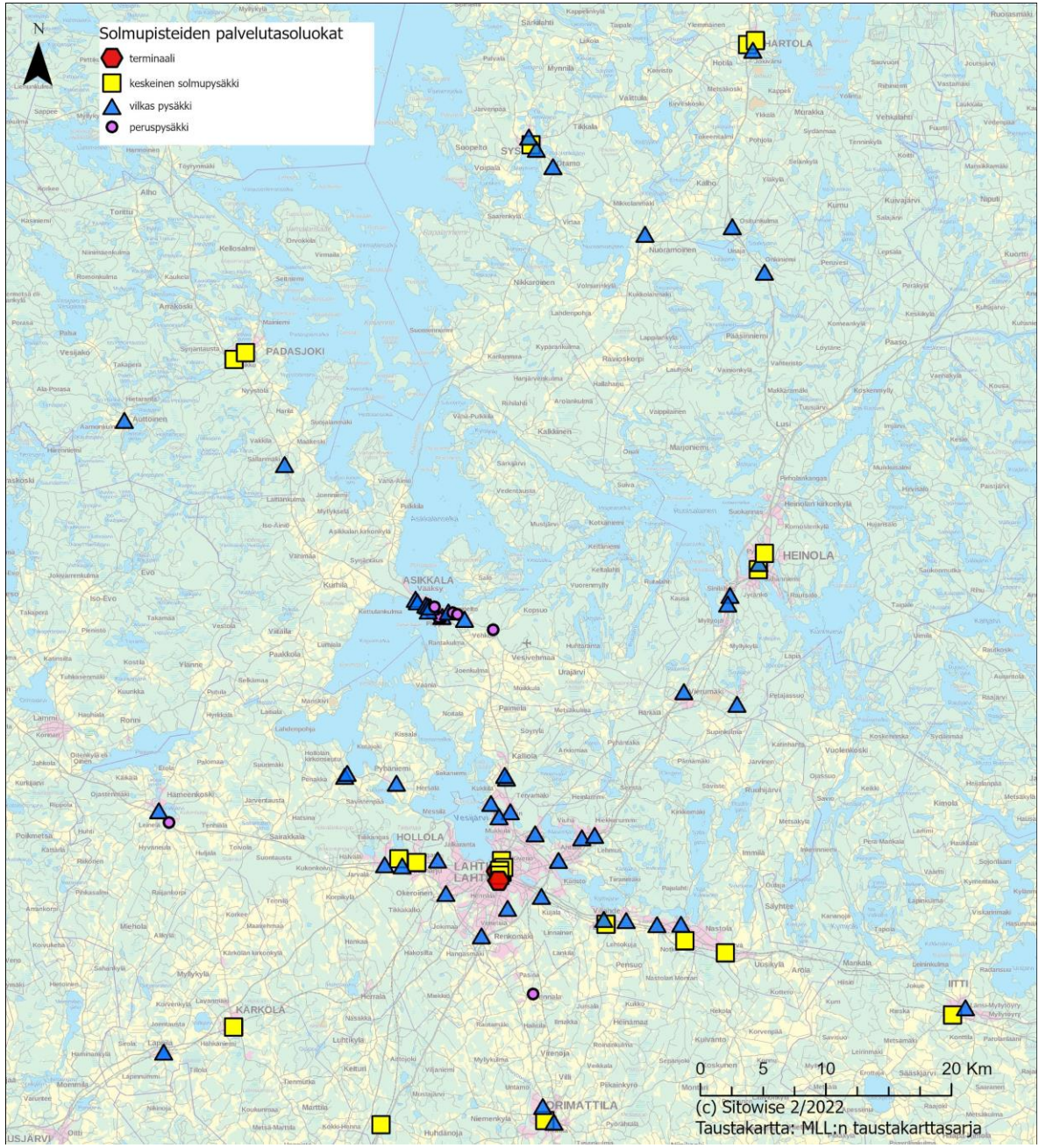
Level of service of the most important pedestrian and cycle routes

	Class 1 Terminal	Class 2 Central hub	Class 3 Busy node	Class 4 Basic node
Flow and ease	A separate pedestrian and bicycle lane leads to the node Bike traffic infrastructure has the quality of main bike paths	A separate pedestrian and bicycle lane leads to the node		Wide enough shoulder leads to the node
	No unnecessary side exchanges Zebra crossing is located at the extension of the route		No requirements	
	Orientability to and from the stop is ensured, if necessary, by pedestrian and bicycle signage		No requirements	
	Traffic light control favors pedestrians and cyclists during the day		No requirements	
	Maintenance in the highest class		Maintained	
	There are elements arounf the node that improve cozyness		No requirements	
Traffic safety	Crossing options such as an island or elevated zebra crossing, traffic lights, under- or overpass and / or traffic calming measures		Safe crossing of the road at all times	
	Designated lighting for pedestrians and cyclists at the stops and on the route. Special lighting can be used.		Stops are alight	No requirements
Accessibility	Routes are accessible			Usually no requirements for accessibility
	Possibilities to rest			No requirements

Important nodes

Lahti:

Solmupiste	Sijainti	Pysäkkiluokka
Matkakeskus	Mannerheiminkatu / Vesijärvenkatu	terminaali
Kauppatori	Aleksanterinkatu / Vapaudenkatu	terminaali
Kansanopisto	Vesijärvenkatu	keskeinen solmupysäkki
Kulmakatu	Kauppakatu	keskeinen solmupysäkki
Reuna	Aleksanterinkatu	keskeinen solmupysäkki
Seponkatu	Kauppakatu	keskeinen solmupysäkki
Siltapuisto	Aleksanterinkatu	keskeinen solmupysäkki
Vapaudenkatu	Vapaudenkatu	keskeinen solmupysäkki
Nastola rautatieasema	Pysäkinkuja	keskeinen solmupysäkki
Villähde rautatieasema	Lastaustie	keskeinen solmupysäkki
Uusikylä rautatieasema	mt 312 (Kouvolantie)	keskeinen solmupysäkki
Kauppakaari	mt 312 (Villähteentie)	vilkas pysäkki
Pajapellonkatu	Hennalankatu	vilkas pysäkki
Latokarkeankatu	Mukkulankatu	vilkas pysäkki
Kunnaksen koulu	Ahtialantie	vilkas pysäkki
Keinokivi	mt 312 (Levonkatu)	vilkas pysäkki
Suppalantie	mt 312 (Villähteentie)	vilkas pysäkki
Orrilanmäki	mt 312 (Villähteentie)	vilkas pysäkki
Nastola kk	mt 3138 (Kukkastie, Pekkalantie)	vilkas pysäkki
Renkomäki	mt 176 (Uudenmaankatu)	vilkas pysäkki
Muuntajakatu	Ajokatu	vilkas pysäkki
Vitikankatu	Vitikankatu	vilkas pysäkki
Myllypohja	Ahtialantie	vilkas pysäkki
Sipurantie	Ahtialantie	vilkas pysäkki
Huippukatu	Pohjoinen Liipolankatu	vilkas pysäkki
Keskussairaala	Keskussairaalankatu	vilkas pysäkki



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suunnittelutilanne	toimenpide (konkreettisuus riippuu mm. olemassa olevista suunnitelmista)	vastuutaho (ELY/kunta jne.)
	Rautatieaseman alikulku (Mannerheiminkadun alittava) -> Lisätään kaide bussipysäkin ja pyörätien väliin estämään jalankulkijoiden ja pyöräilijöiden välisiä konflikteja, Askonkatu, BW Towerin kulmalla olevat alikulut -> Lisätään alikulkuihin Muu vaara -liikennemerkki, Lisätään alikulkuihin Hidasta-lisäkilpi (Muu vaara -liikennemerkin yhteyteen), Lisätään alikulkujen risteämiskohtaan ajolinjoja ohjaavat	

Matkustusalue	Matkatyyppi	Nousijamäärä (2019)	Pysäkkiluokka // Palvelutasotavoite	Palvelutasopuutteet (teema)	Kehittämistarpeet

Solmu	Pysäkki-id (lähtöpysäkki)	Muut solmun pysäkki-id:t	Tienumero tai kadun nimi	Kunta	Joukkoliikenteen tarjonta	Matkustuksen suunta maakunnan sisällä	Matkustuksen suunta maakunnan ulkopuolella	
								Pysäkkikokonaisuus: Lämmin odotustila
Matkakeskus	85811	307405, 181342, 181343, 316101	vt 12, Mannerheiminkatu 15, Vesijärvenkatu, Askonkatu	Lahti	juna, LSL, me	Nastola, Hollola, Kärkölä, Heinola, Or	Koko Suomi, erit. pk-seutu ja Riihimäki	Pysäkkikokonaisuus: Odotustila? Runko keskisaarekkeet?
Kauppatori	103639	103640, 315603, 103641, 103642, 103643, 103644	Aleksanterinkatu, Vapaudenkatu	Lahti	LSL	asutukseen		Pysäkkipari: Katos molempiin suuntiin? Pysäkkipari: PP liipy? Yksittäinen pysäkki: PP liipy? (ei kiireine Pysäkkipari: PP liipy? (ei kiireinen, koska Yksittäinen pysäkki: PP liipy? (ei kiireine
Kansanopisto	103613	103614	Vesijärvenkatu	Lahti	LSL	keskusta, asutukseen		Yksittäinen pysäkki: katos, PP liipy? (ei k
Kulmakatu	103728	103729	Kauppakatu	Lahti	LSL	keskusta, asutukseen		
Reuna	104030	Ei paria	Aleksanterinkatu	Lahti	LSL	keskusta, asutukseen		
Seponkatu	104098	104097	Kauppakatu	Lahti	LSL	keskusta, asutukseen		Koko asema: PP liipy, jkpp- valaistus?
Siltapuisto	104105	Ei paria	Aleksanterinkatu	Lahti	LSL	keskusta, asutukseen		
Vapaudenkatu	104224	Ei paria	Vapaudenkatu	Lahti	LSL	keskusta, asutukseen		Koko asema: PP liipy, jkpp?
Nastola RAS			Pysäkinkuja	Lahti	juna	Lahti	Koko Suomi	Koko asema: PP liipy, HA liipy -> onko ta
Villähde RAS			Lastaustie	Lahti	juna	Lahti	Koko Suomi	

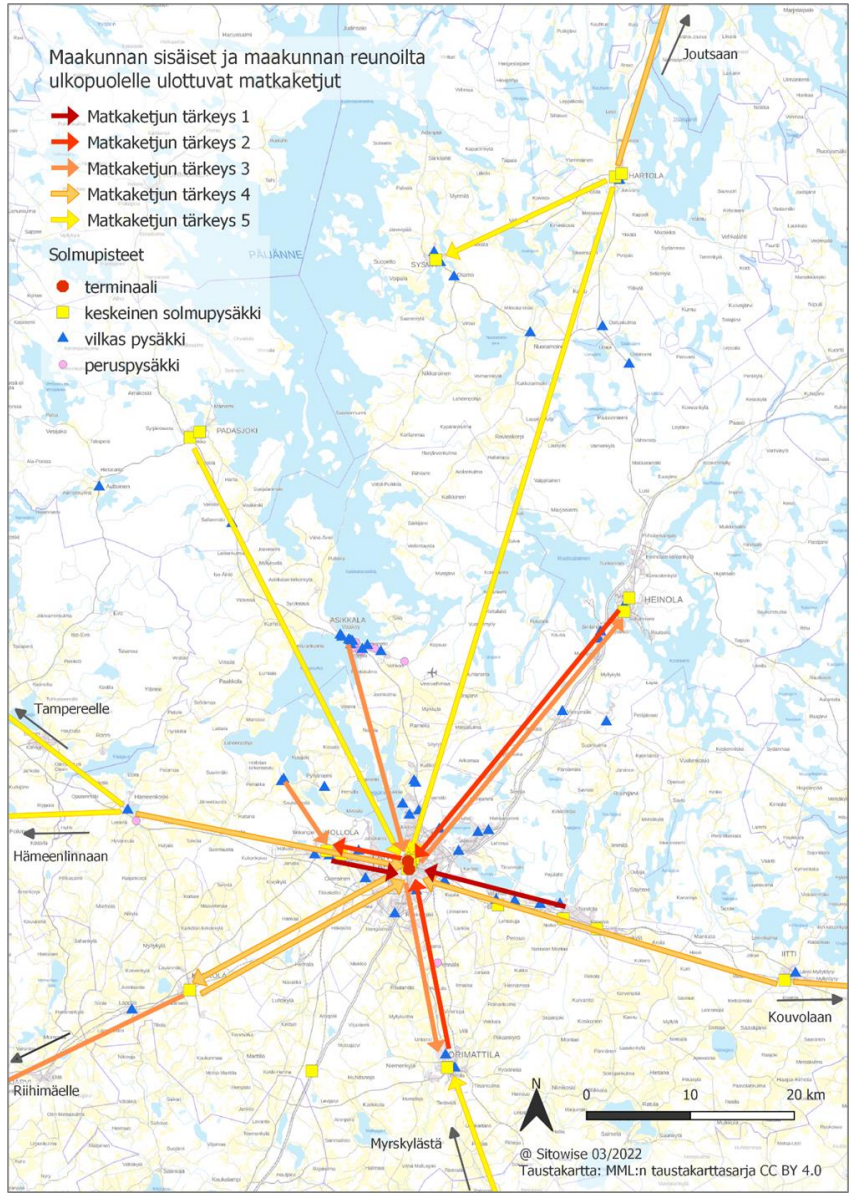
Important travel chains

Important travel chains **withing the province**

1	2	3	4	5
Nastola – Lahti Salpakangas – Lahti	Heinola – Lahti Orimattila – Lahti Lahti – Salpakangas	Hollola kk – Salpakangas Vääksy – Lahti Lahti – Heinola Lahti – Orimattila	Lahti – Järvelä Järvelä – Lahti Hämeenkoski – Lahti Kausala – Lahti	Padasjoki – Lahti Hartola – Lahti Hartola – Sysmä

Important travel chains **from the periphery of the province to outside the province**

3	4	5
Järvelä – Riihimäki	Kausala – Kouvola Hartola – Joutsa	Myrskylä – Orimattila Hämeenkoski – Hämeenlinna Hämeenkoski – Tampere



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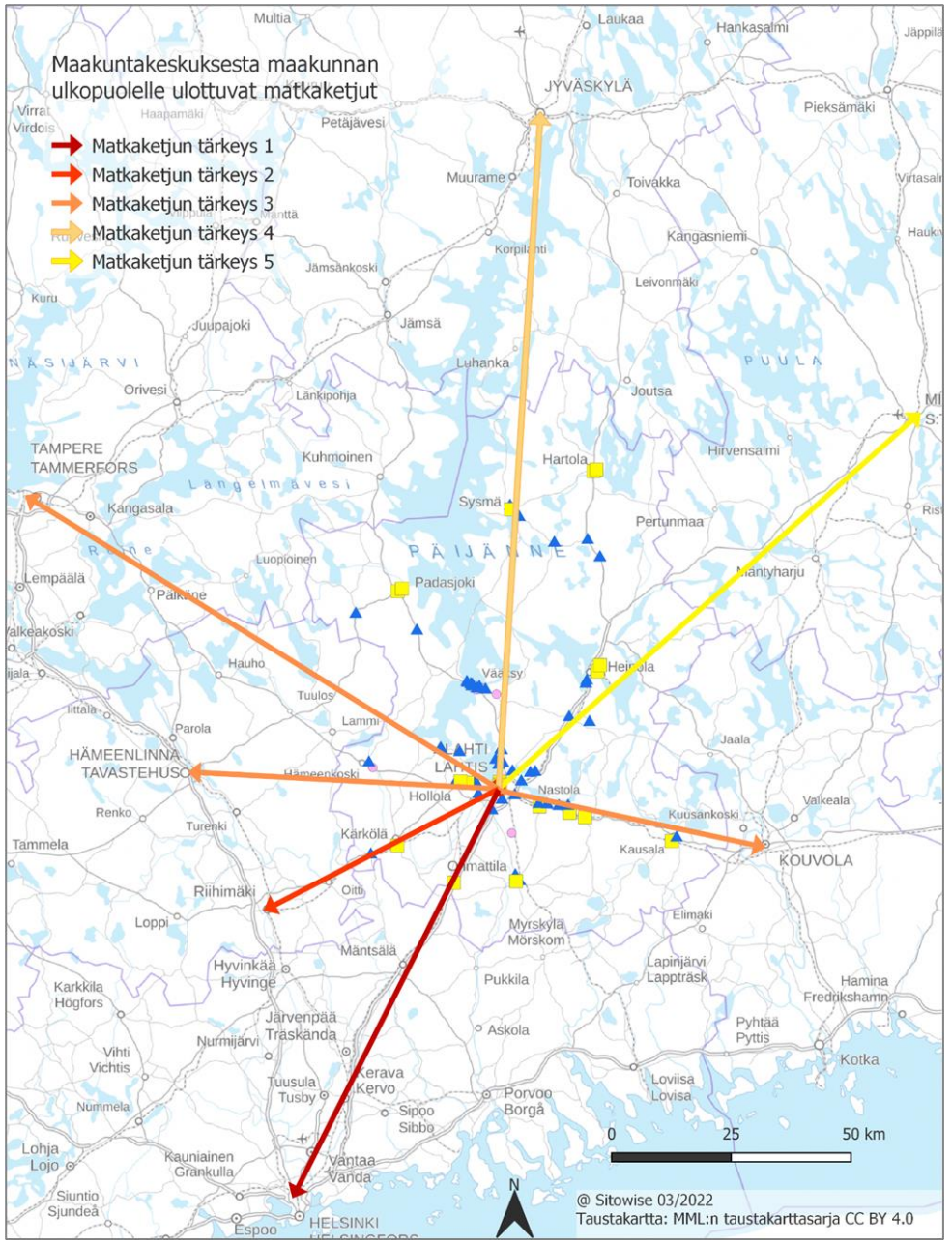
Important travel chains

Important travel chains **from the central hub (central city) of the profince to outside the province**

1	2	3	4	5
Lahti – capital region	Lahti – Riihimäki	Lahti – Kouvola area Lahti – Tampere Lahti – Hämeenlinna	Lahti – Jyväskylä	Lahti – Mikkeli



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Matkaketju (lähtöpaikka/koti - kohdepaikka/työ, koulu, asiointi tms.)	Matkustusalue	Tärkeys	Lähtöpaikan solmupisteiden palvelutasotavoite	Pendelöinti (maakunnan sisällä)	Matkan pituus	Matka-aika autolla	Matka-aika joukko-liikenteellä	Matka-aika polkupyörällä (jos matka alle 15 km)	Joukkoliikenteen tarjonta (vuoroa/huipputunti, molemmat suunnat yhteensä)
Nastola-Lahti*	maakunnan sisäinen	1	useita vilkkaita pysäkkejä		17 km	16min	35min		8 vuoroa tunnissa
Hollola/Salpakangas-Lahti*	maakunnan sisäinen	1	keskeisiä solmupysäkkejä, vilkkaita pysäkkejä	4875	9 km	14min	27min	32min	10 vuoroa tunnissa
Orimattila-Lahti*	maakunnan sisäinen	2	keskeinen solmupysäkki, vilkkaita pysäkkejä	1833	28 km	26min	44min		6 vuoroa tunnissa
Heinola-Lahti*	maakunnan sisäinen	2	keskeinen solmupysäkki, vilkkaita pysäkkejä	1236	38 km	32min	30min		6 vuoroa tunnissa
Lahti-Salpakangas	maakunnan sisäinen	2	terminaali	2076	9 km	14min	27min	32min	10 vuoroa tunnissa
Hollola kk – Hollola/Salpakangas	maakunnan sisäinen	3	vilkas pysäkki		12,4 km	15min	30min	40min	5 vuoroa tunnissa
Vääksy-Lahti	maakunnan sisäinen	3	useita vilkkaita pysäkkejä	947	24 km	29min	47min		3 vuoroa tunnissa
Lahti-Heinola	maakunnan sisäinen	3	terminaali	812	38 km	32min	56min		6 vuoroa tunnissa
Lahti-Orimattila	maakunnan sisäinen	3	terminaali	957	28 km	26min	44min		6 vuoroa tunnissa
Järvelä-Lahti	maakunnan sisäinen	4	keskeinen solmupysäkki	330	28 km	30min	24min		2 vuoroa tunnissa
Lahti-Järvelä	maakunnan sisäinen	4	terminaali	315	28 km	30min	24min		2 vuoroa tunnissa
Hämeenkoski-Lahti	maakunnan sisäinen	4	vilkas pysäkki		30 km	28min	35min		2 vuoroa tunnissa
Kausala-Lahti	maakunnan sisäinen	4	terminaali	378	40 km	36min	32min		2 vuoroa tunnissa
Padasjoki-Lahti	maakunnan sisäinen	5	keskeisiä solmupysäkkejä, vilkkaita pysäkkejä, peruspysäkkejä	153	53 km	52min	1h20min		2 vuoroa tunnissa
Hartola-Sysmä	maakunnan sisäinen	5	keskeinen solmupysäkki	33	21 km	18min			
Hartola-Lahti	maakunnan sisäinen	5	keskeinen solmupysäkki	48	81 km	54min	1h1min		1 vuoro tunnissa
Järvelä-Riihimäki	maakunnan reunalla	3	keskeinen solmupysäkki		35 km	33min	27min		2 vuoroa tunnissa
Hartola-Joutsa	maakunnan reunalla	4	keskeinen solmupysäkki		21 km	21min	15min		1 vuoro tunnissa
Kausala-Kouvola	maakunnan reunalla	4	keskeinen solmupysäkki		21 km	25min	16min		2 vuoroa tunnissa
Hämeenkoski-Hämeenlinna	maakunnan reunalla	5	vilkas pysäkki		46 km	40min	57min		2 vuoroa tunnissa
Hämeenkoski- Tampere	maakunnan reunalla	5	vilkas pysäkki		100 km	1h23min	1h42min		1 vuoro tunnissa
Myrskylä-Orimattila	maakunnan reunalla	5	-		18 km	22min	36min		1 vuoro tunnissa
Lahti-pk-seutu*	maakunnan ulkopuolinen	1	terminaali		104 km (Helsinki)	1h20min	1h		5 vuoroa tunnissa
Lahti-Riihimäki*	maakunnan ulkopuolinen	2	terminaali		63 km	54min	51min		4 vuoroa tunnissa
Lahti-Hämeenlinna	maakunnan ulkopuolinen	3	terminaali		81 km	1h5min	1h6min		2 vuoroa tunnissa
Lahti-Kouvolan suunta	maakunnan ulkopuolinen	3	terminaali		62 km (Kouvola)	55min	36min		4 vuoroa tunnissa
Lahti-Tampere	maakunnan ulkopuolinen	3	terminaali		132 km	1h49min	1h48min		3 vuoroa tunnissa
Lahti-Jyväskylä	maakunnan ulkopuolinen	4	terminaali		170 km	2h2min	2h6min		2 vuoroa tunnissa
Lahti-Mikkeli	maakunnan ulkopuolinen	5	terminaali		131 km	1h30min	1h52min		2 vuoroa tunnissa

Follow up

Planning readiness

Level of service of public transport

Bus stop service level

Funding

PUBLIC TRANSPORT:
BETWEEN INFRASTRUCTURE AND PUBLIC SPACE

PUTSPACE
Public Transport as Public Space in European Cities: Narrating, Experiencing, Contesting

Prof. Tauri Tuvikene
Tallinn University, Estonia

TALLINN UNIVERSITY
Åbo Akademi University
ULB UNIVERSITÉ LIBRE DE BRUXELLES
Leibniz-Institut für Länderkunde ifl
HERA Humanities in the European Research Area

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 769478

Public Transport as Public Space in European Cities: Narrating, experiencing, contesting [PUTSPACE]

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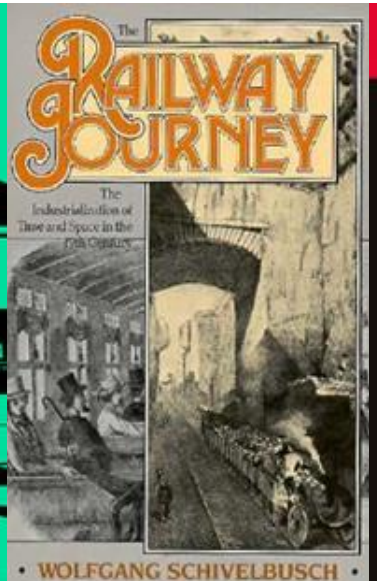
Duration of the Project:
01.05.2019 – 30.04.2022 (+ 6M)

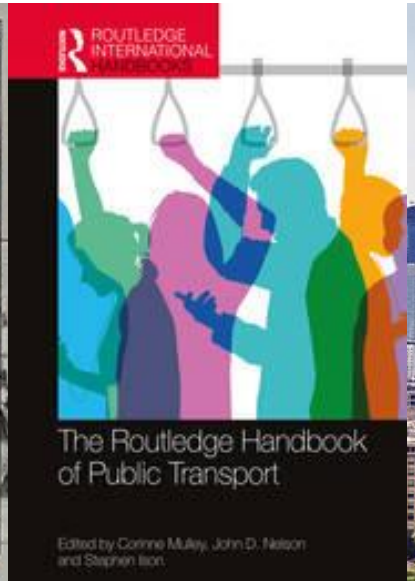
10 Partner Organisations, incl:

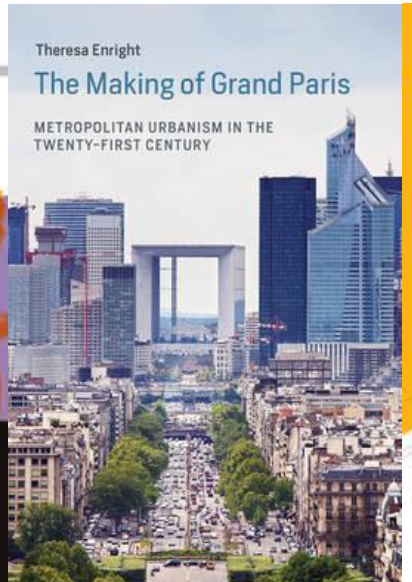
- Estonian Road Museum
- London Transport Museum
- Planka.nu
- Turku Crisis Centre
- Cosmopolis
- Aboagora

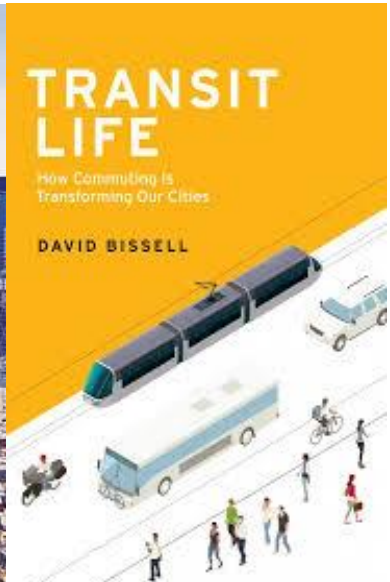
PUBLIC TRANSPORT IN LITERATURE

- Transport engineering
- Transport history
- Sustainable mobilities
- Politics of transport projects (repoliticising transport literature)
- Experience of public transport









AIM is to humanise, socialise and politicise public transport

RESEARCH QUESTIONS:

1. **What kind of public space is public transport?**
2. **What does public transport as public space tell about changing European societies?**
3. **How, why, by whom etc has it been regulated and with what effects?**
4. **What is the cultural significance of public transport for contemporary cities and societies in Europe?**

PUBLIC TRANSPORT IS PUBLIC SPACE!

… public transport is not just an essential infrastructure of cities but also a central public space, both of which have importantly been highlighted in the time of COVID-19 pandemic.

Public transport as (any) public space is:

1. **… a contested space!**
2. **… a mundane space!**
3. **… a spectacular space!**

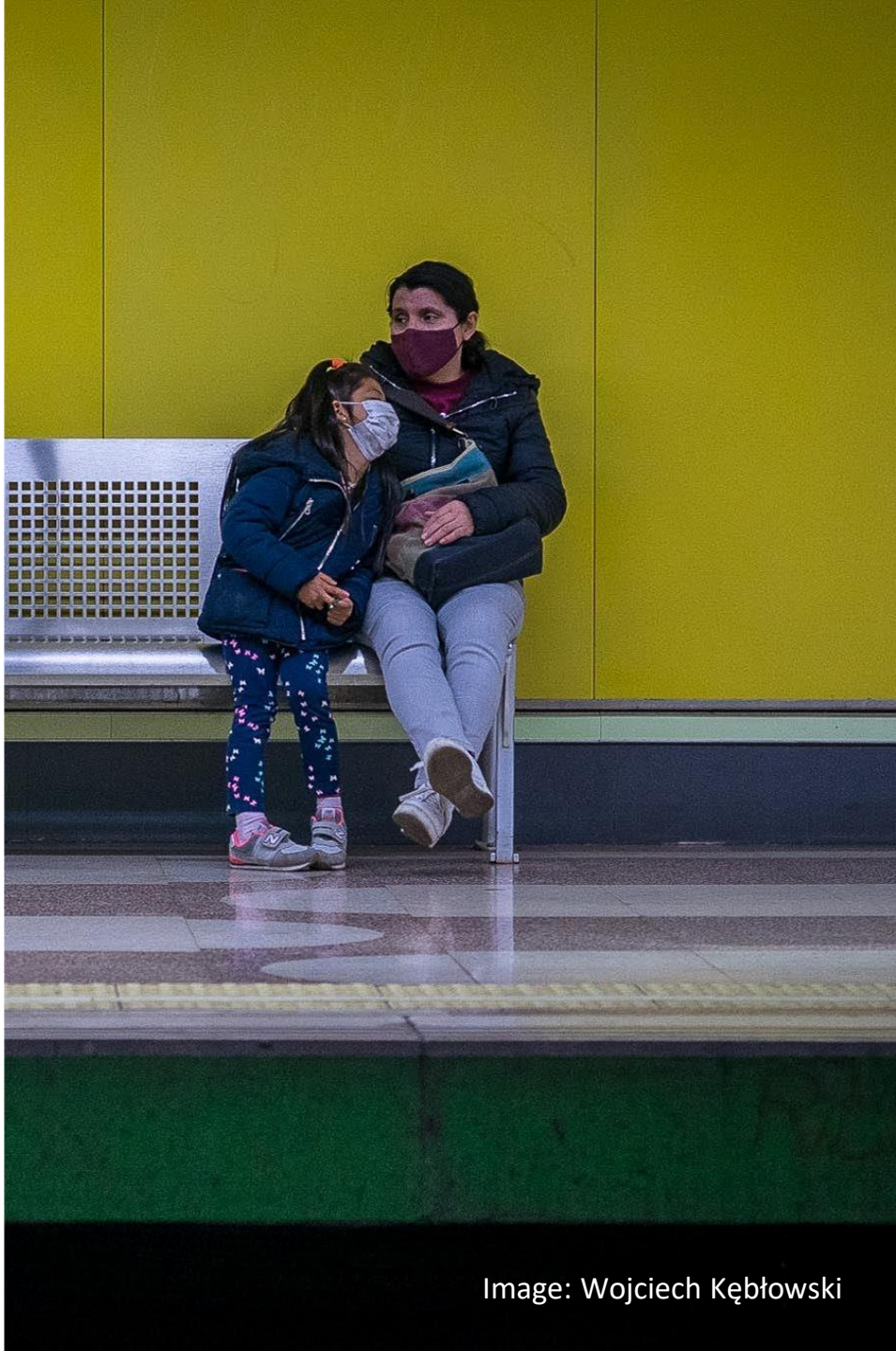
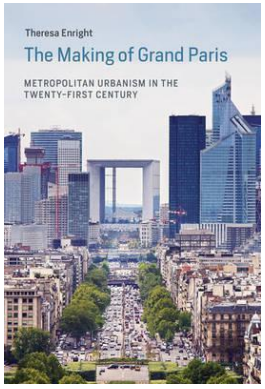


Image: Wojciech Kębłowski

PUBLIC TRANSPORT AS INFRASTRUCTURE

- **Network**
- **Economies and planning**
- **Symbolism and ideologies**
- **Access (including fares and pricing)**
  - **Public transport is an essential infrastructure of cities**
  - **Access to public transport allows access to the city**



"[transit and networked infrastructures] can certainly be employed in strategies for social justice, democracy, and freedom, but they can also be apparatuses of segregation, elitism, and authoritarianism. Often they are both simultaneously." (Enright, 2016, p. 126)

PUBLIC TRANSPORT AS PUBLIC SPACE

- Public space literature:
  - Ideal vs actual (Iveson, 2007)
  - Loss of public space?
- Elements:
  - Interactions
    - Micro-encounters & face-to-face interactions (Jensen, 2006)
    - Familiar strangers
  - Atmospheres
  - Cultural encounters and multi-culturalism
    - Conviviality and intercultural dialogue (Koefoed et al., 2017)
    - Differentiation, exclusion (Wilson, 2011), charged “micro-encounters” (Purifoye, 2015)
  - Connections between streets and infrastructural systems
- A special public space: intensity, unavoidability and trust

PIAZZA DEL CAMPO SIENA, ITALY

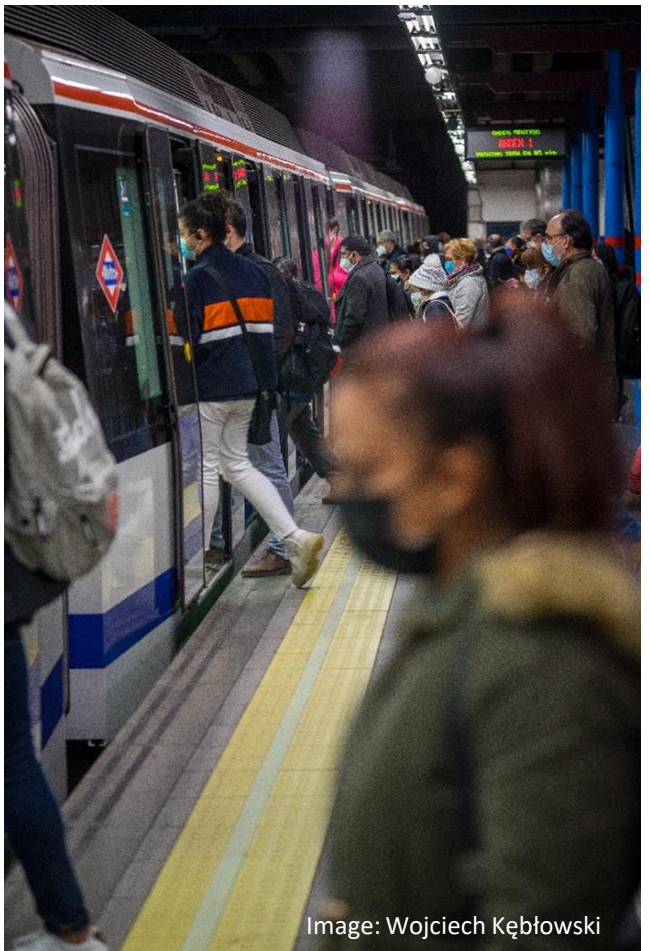


Image: Wojciech Kębłowski

PUBLIC TRANSPORT AS PUBLIC SPACE

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- A special public space: intensity, unavoidability and trust

PIAZZA DEL CAMPO SIENA, ITALY

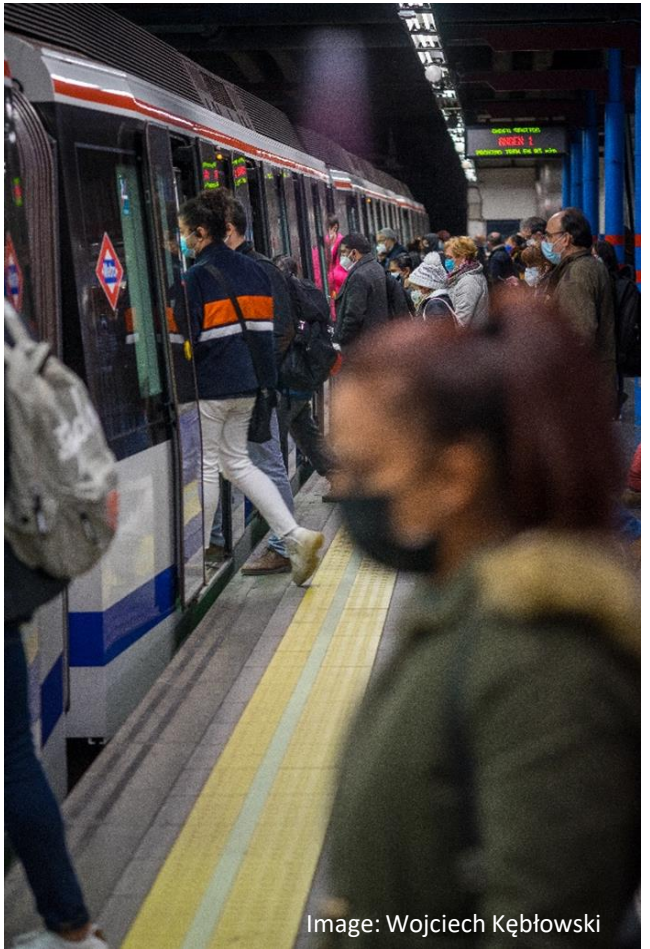

Image: Wojciech Kębłowski

PUBLIC TRANSPORT AS PUBLIC SPACE

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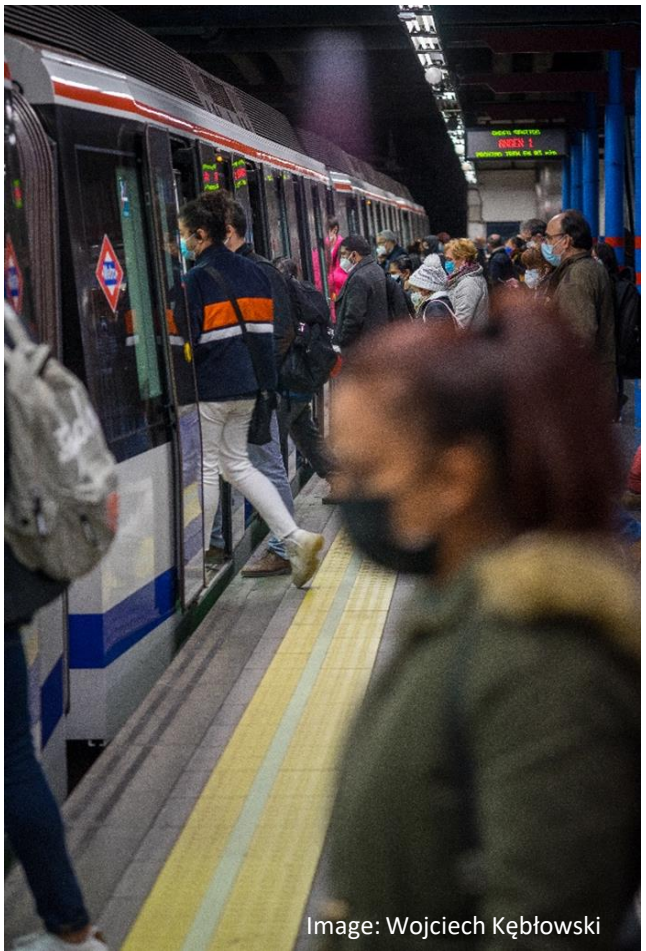
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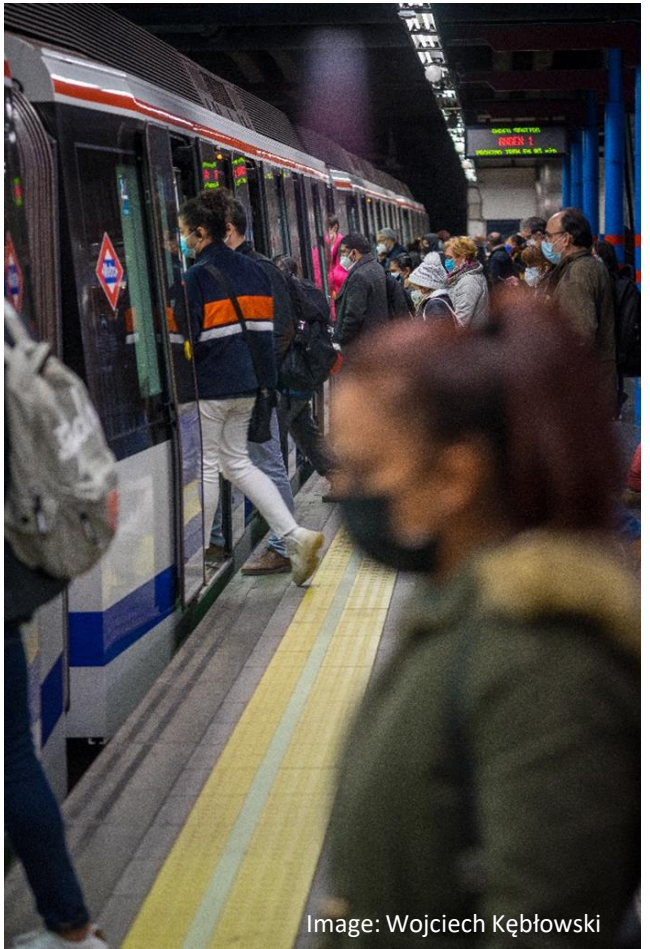

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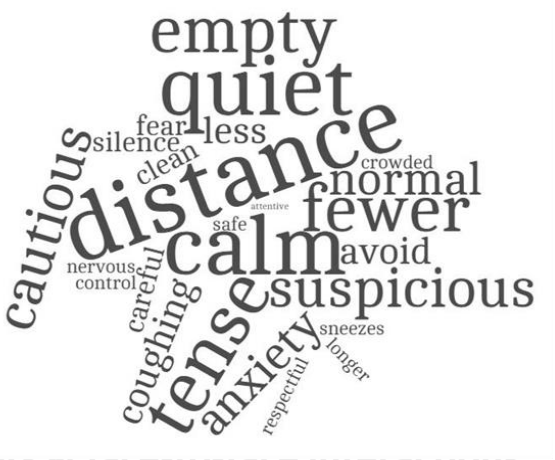
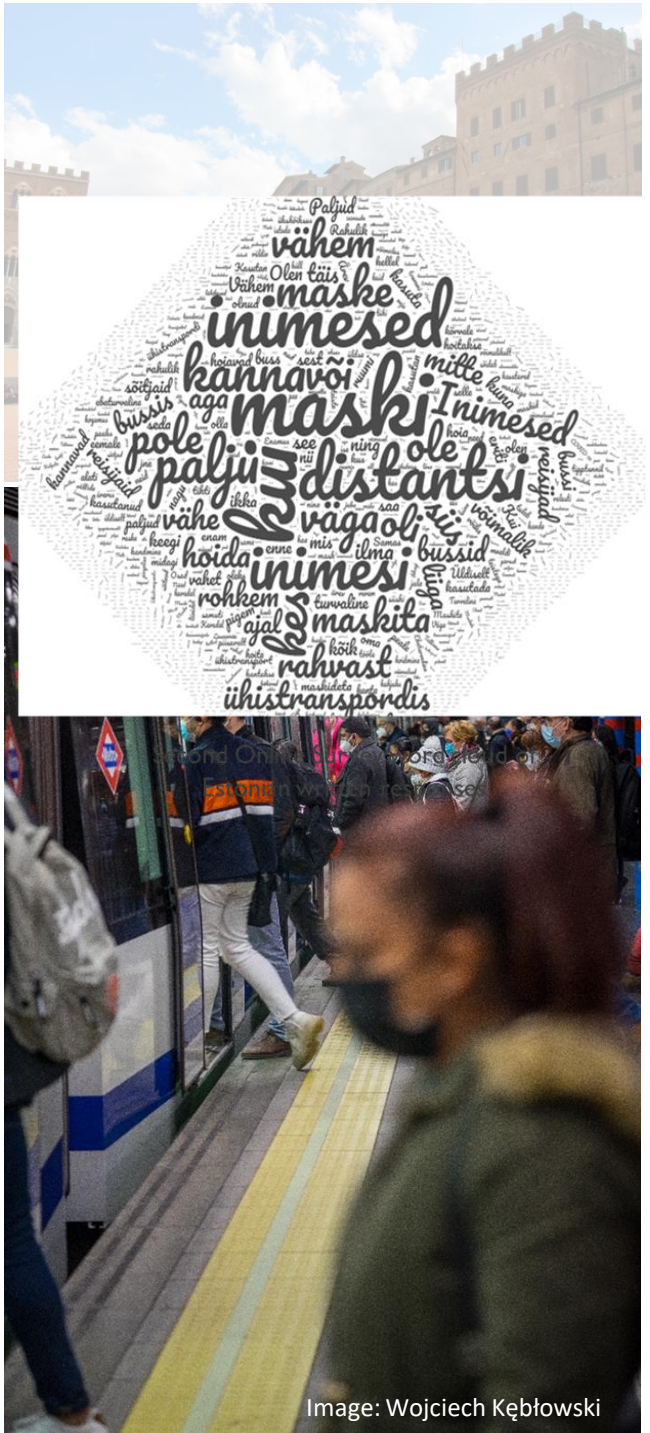


First Online Survey word cloud of the question
How would you describe the atmosphere in PT?



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Sociological Forum

Sociological Forum, 2022
DOI: 10.1111/socf.12804

Embodied Othering Encounters with Muslim(-Looking) Passengers: Riding across Amsterdam, Tallinn, Leipzig, and Turku[1]

Reza Shaker,[2] Annika Jungmann,[3] Philipp Zimmermann,[4] Lotta Häkkinen,[5] and Tauri Tuvikene[6]

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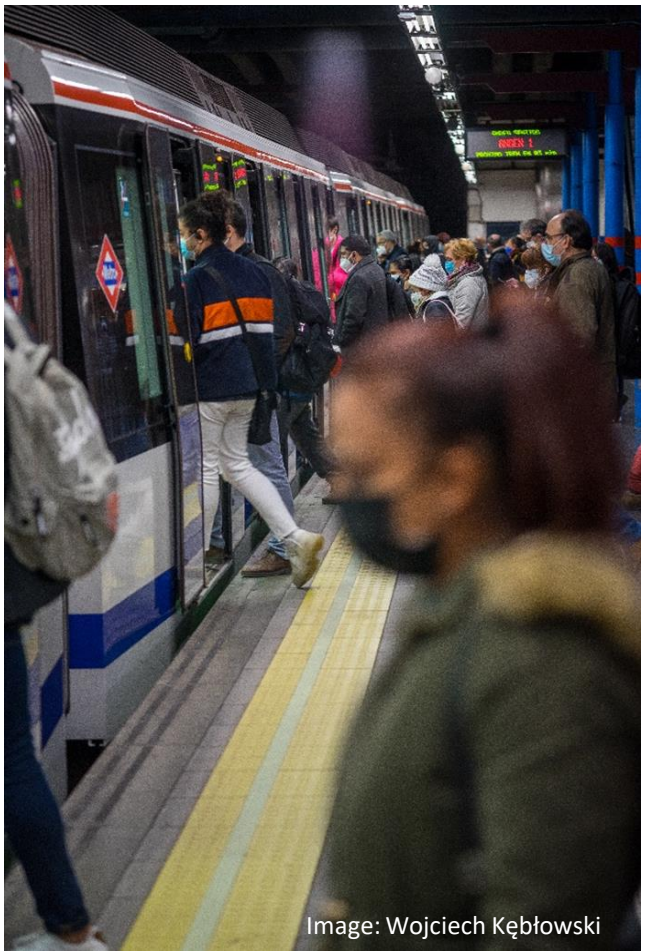

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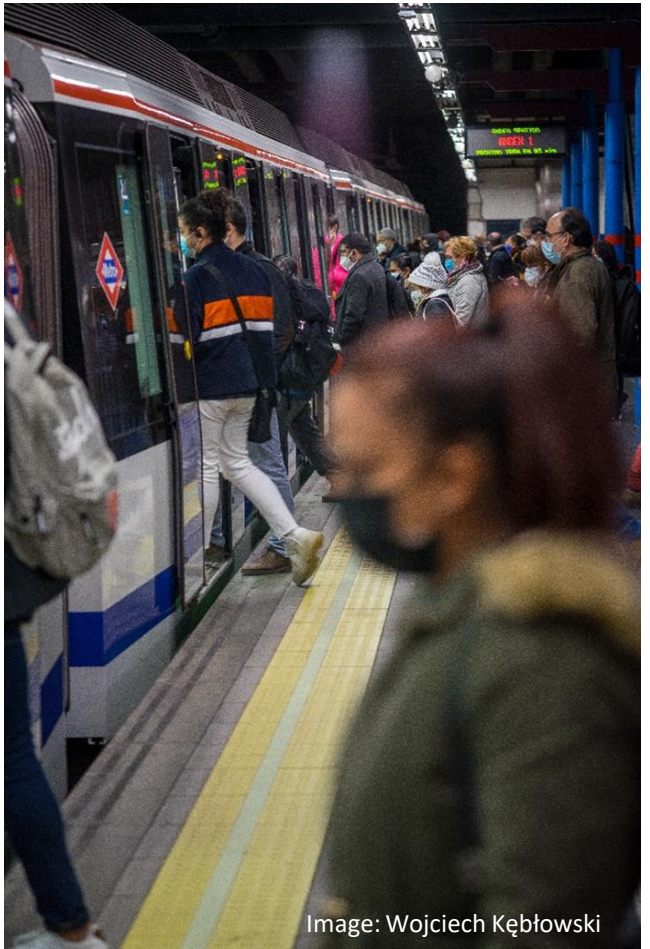


Image: Wojciech Kębłowski

COVID-19 AND CHANGED PUBLIC TRANSPORT EXPERIENCES

by Louise Sträuli, Marcus Finbom, Peter Timko, Tonio Weicker, Wojciech Keblowski, Tauri Tuvikene, Celine Drieskens

Dependence and exposure

Exacerbated inequalities

Hypersensitivity

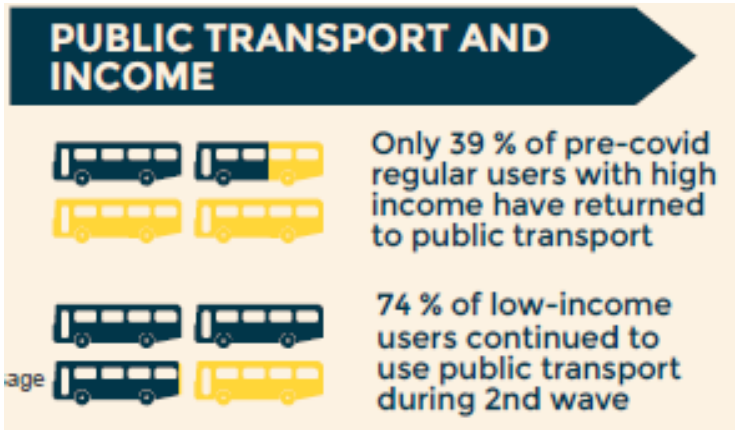
New norms

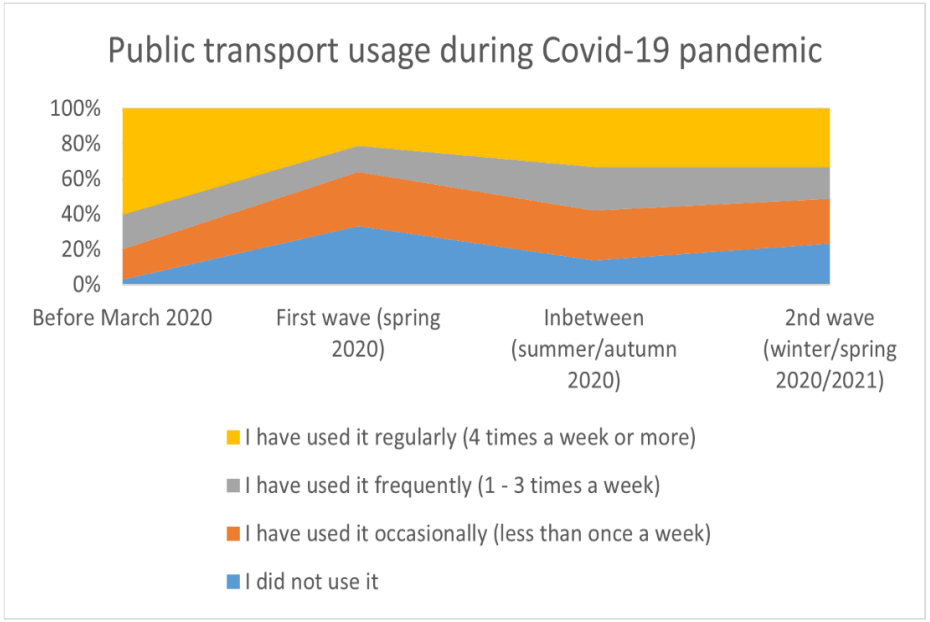
Online Survey & Qualitative Interviews

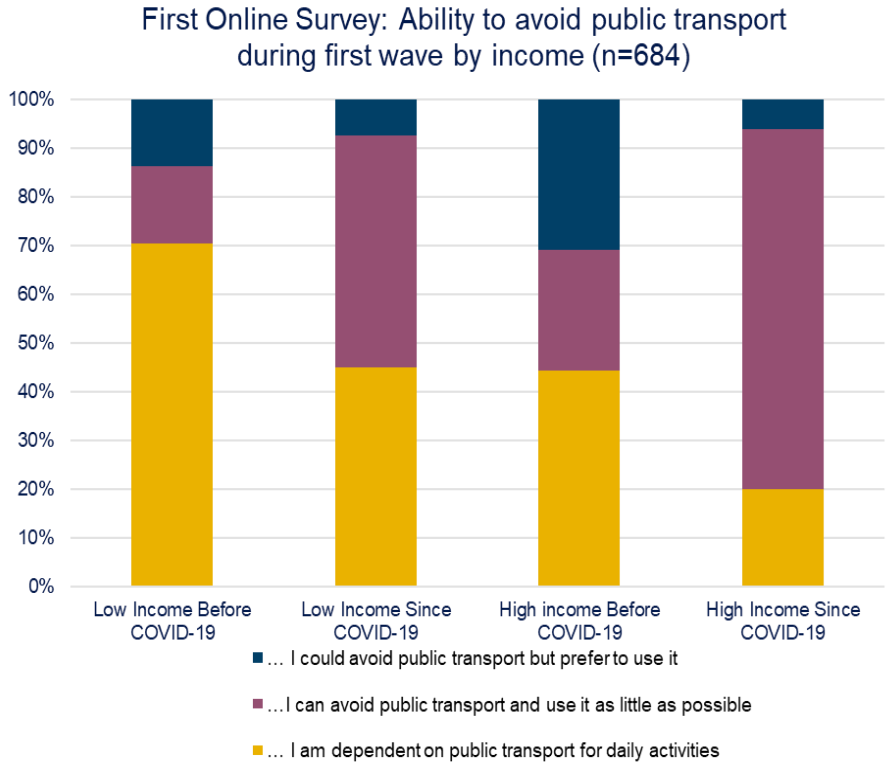
First Round	Second Round
April – August 2020	February – April 2021
Languages: English, German, French, Dutch, Estonian, Swedish, Russian	
2173 total, 1119 full responses	1837 total, 1275 full responses
49 Interviews in Tallinn, Stockholm, Brussels and German cities	31 Interviews in Tallinn, Brussels and German cities
Focus on qualitative accounts of personal experiences and perceived atmospheres	

COVID-19 AND CHANGED USAGE

- **Socio-economic disparities in public transport dependence and uses**







COVID-19 AND CHANGED EXPERIENCES

Emptiness was perceived as both calm and eerie

***Back to normality* atmosphere associated with crowdedness**

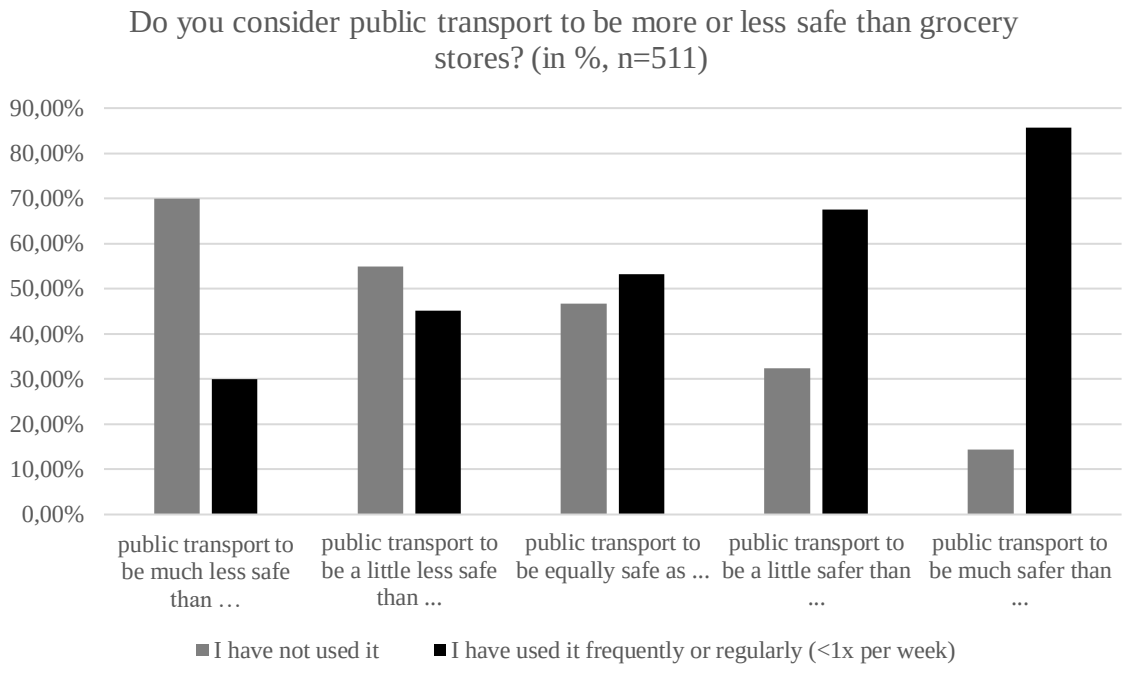
Changed norms and behaviour

Who is afraid of public transport?

Fear as privilege

Public transport as essential service

"In other words, when I commute to work the buses are clearly noticeably less frequented. As I have indicated my reluctance towards overcrowded public transport vehicles before [in pre-pandemic times], **I naturally find it pleasant right now**." (User interview, Berlin, 03.05.2020)



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"I: Do you feel that there is even less of such helping than before [the COVID-19 outbreak in March, 2020]?

R: Yes, I'm afraid so, nobody knows [what could happen] when it's a stranger." (User interview, Tallinn, 27 May 2020)

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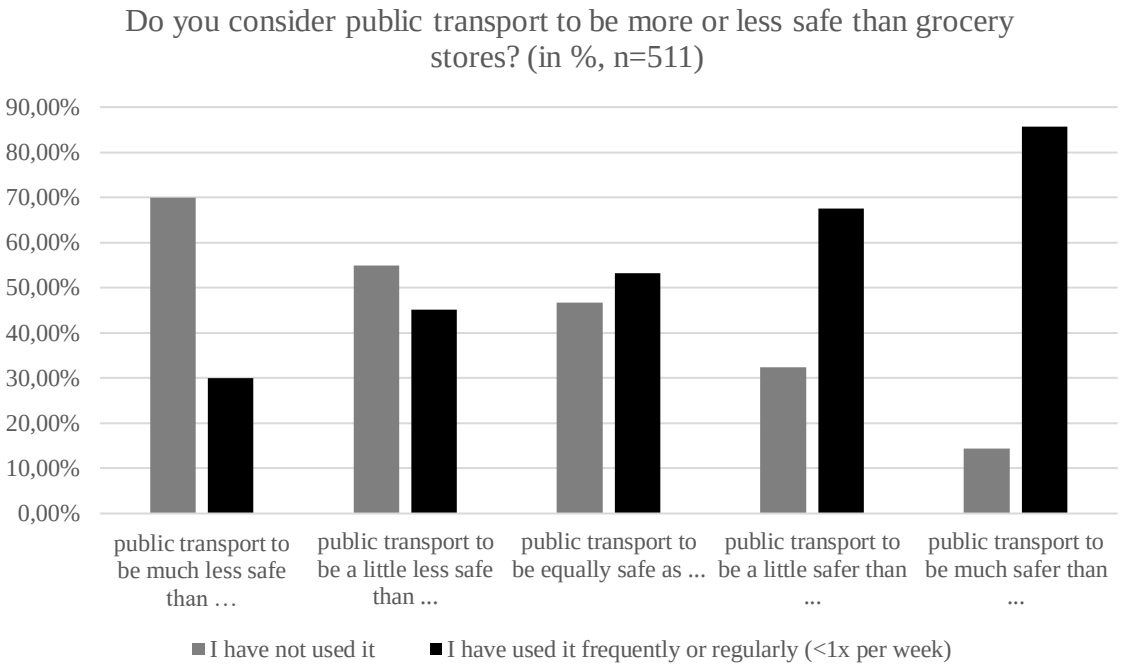


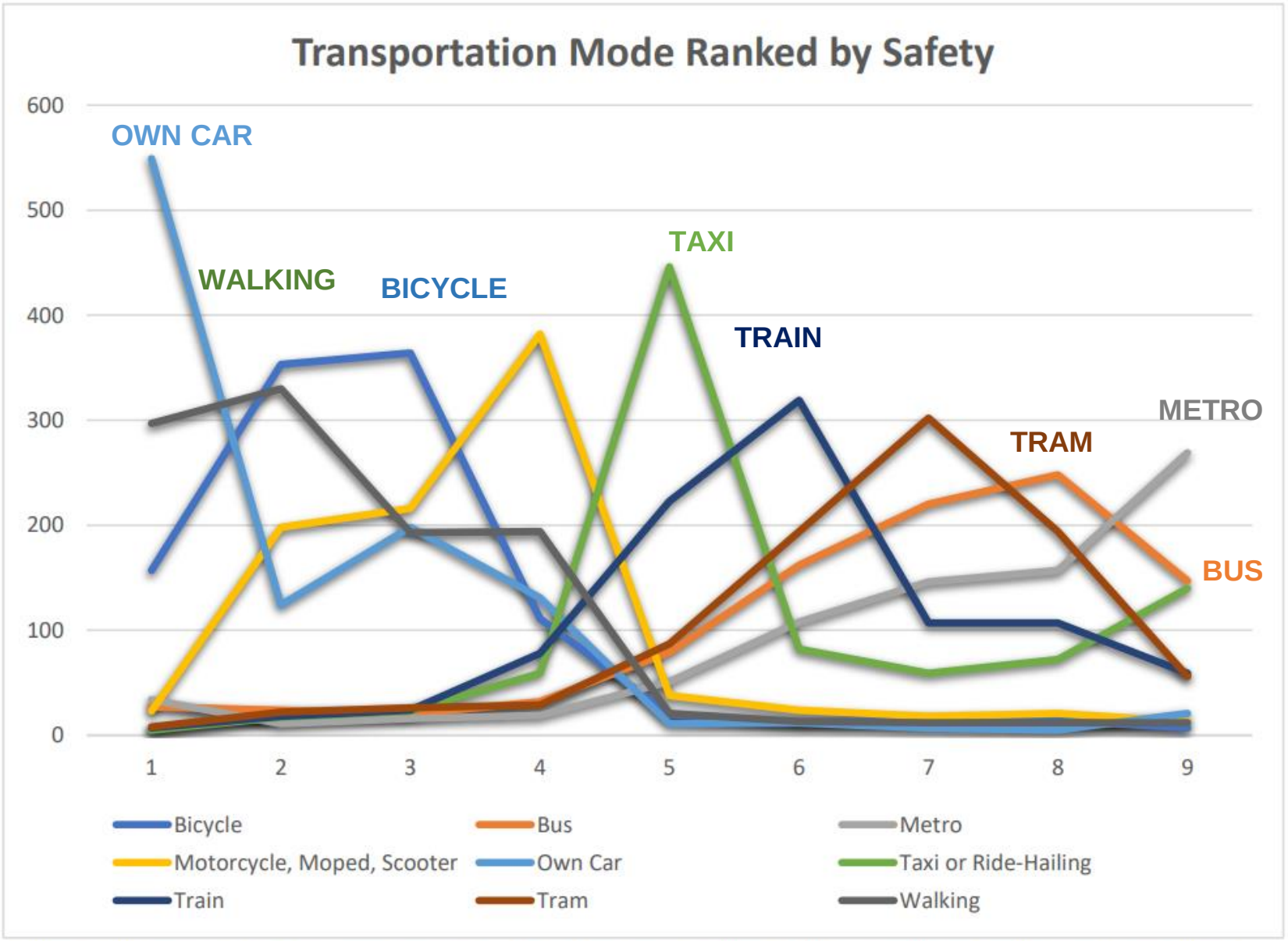
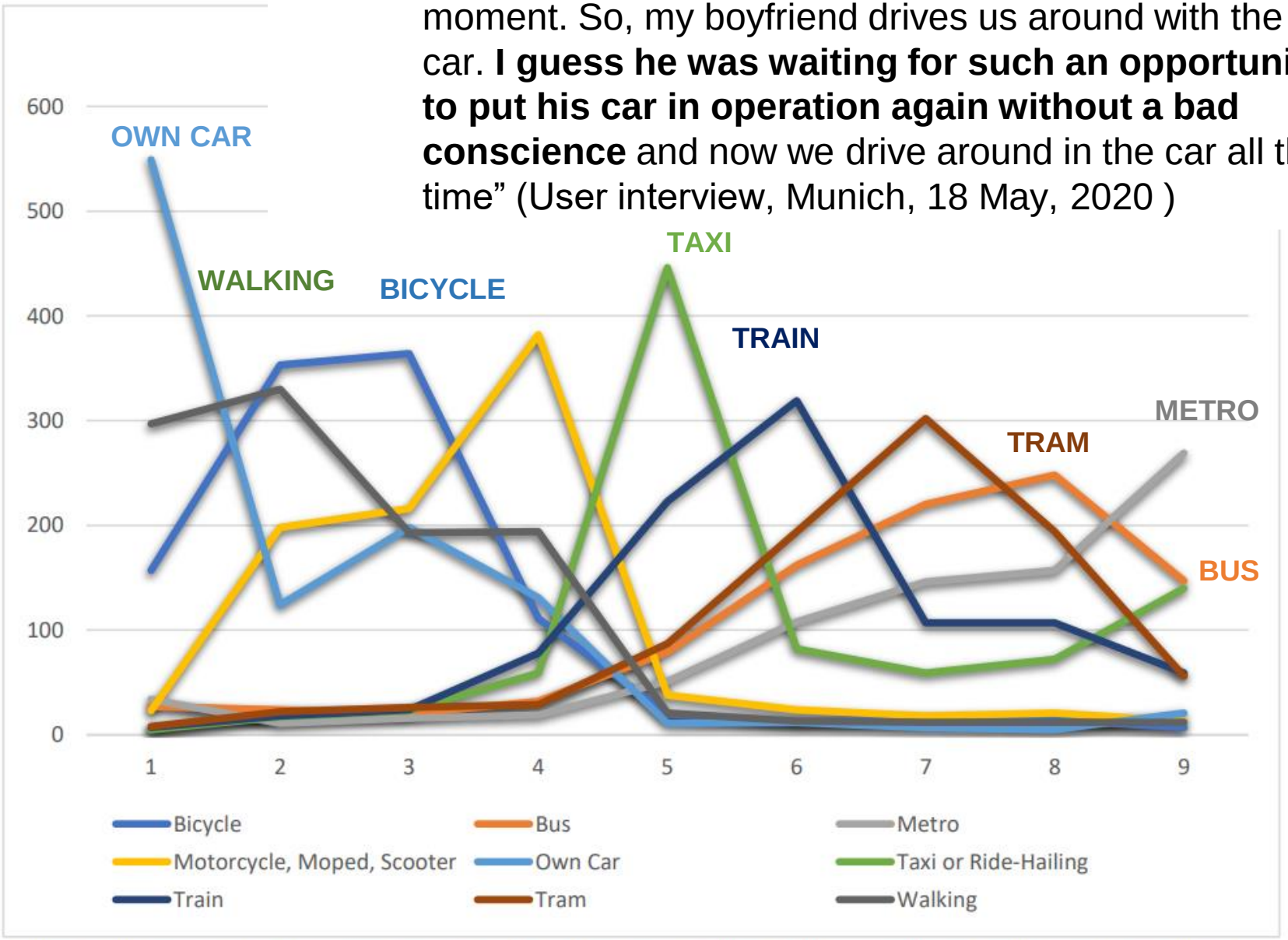


Figure 1-6: Please rank these transport modes from safest to least safe during COVID-19 outbreak (with regard to the risk of contracting COVID-19), 1=most safe – 9=least safe

“Actually, we use our car much more than usual at the moment. So, my boyfriend drives us around with the car. **I guess he was waiting for such an opportunity to put his car in operation again without a bad conscience** and now we drive around in the car all the time” (User interview, Munich, 18 May, 2020)



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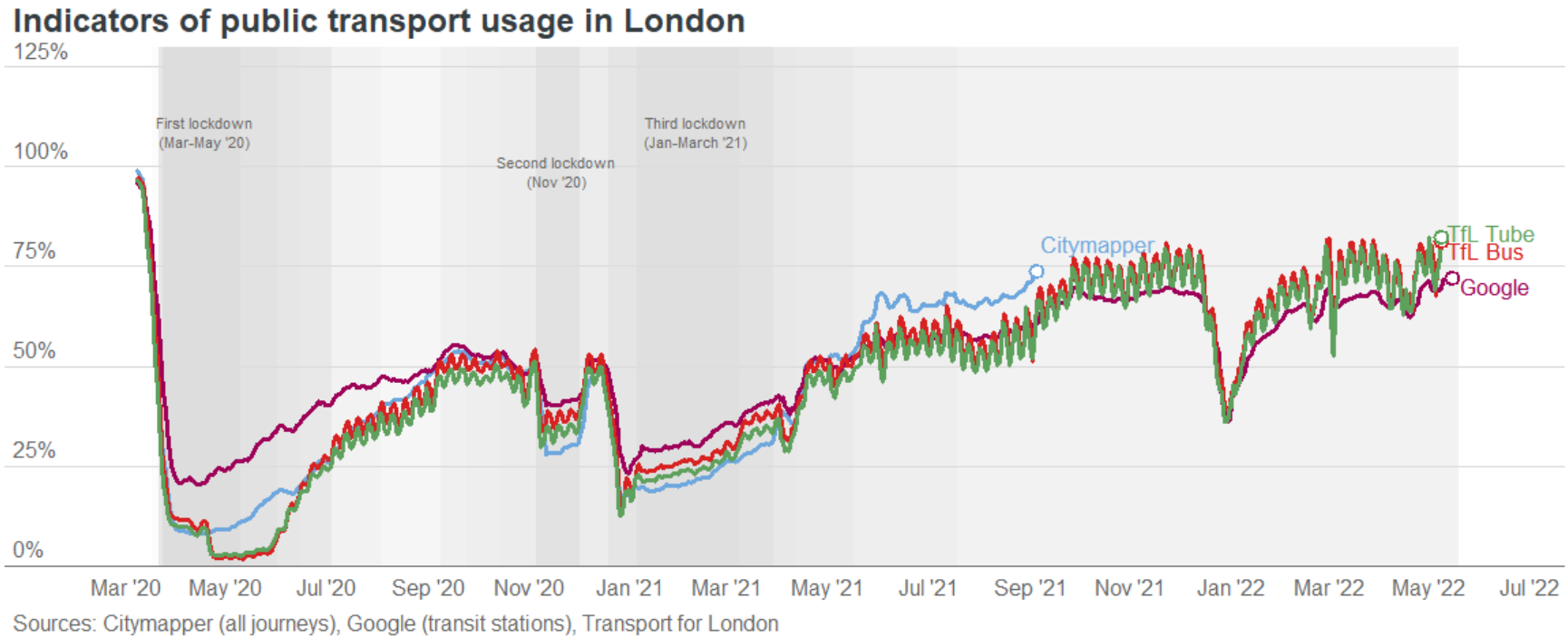
COVID-19 AND FARE-FREE PUBLIC TRANSPORT

- **Temporary suspension of fare regimes: at least 60 municipalities in Europe, 270 in the United States**
- **Free public transport as resilient public transport?**
- **Future of public transport?**



CARIN-PT: Inclusive and resilient public transport!

Ambition: … to build capacities for resilient, inclusive and integrated public transport infrastructures, prepared for natural and technological disruptions.

… through close collaboration between researchers, planners, government, business and civil society, through a rigorous research-centred approach.

- **Mobility justice**
  - Distribution
  - Recognition
  - Participation
- **Co-creation**

Micromobility

Fare-Free

Flexible on-demand

Transit-oriented development


Tauri Tuvikene


Õnne Kask


Louise Sträuli


Kaire Holts


Kobe Boussauw


Wojciech Keblowski


Koos Fransen


Mia Wahlström


Marcus Finbom


Mimmi Grybb


Jean Ryan


Chiara Vitrano


Tanu Priya Uteng


Lars Bocker


Fitwi Wolday

TALLINN UNIVERSITY

VUB VRIJE UNIVERSITEIT BRUSSEL

TYRÉNS

LUND UNIVERSITY

vti toi Institute of Transport Economics Norwegian Centre for Transport Research

European Commission | URBANEUROPE

TAMPERE.
FINLAND

Tampere SUMP

Sustainable mobility's links to urban space, well-being, and equality

ECOMM 2022

Traffic engineer Heljä Aarnikko

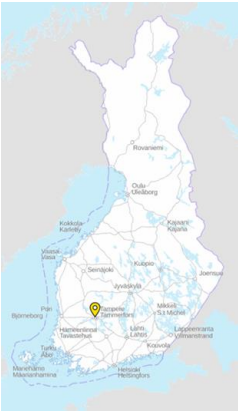
City of Tampere

TAMPERE

Kuva: Visit Tampere / Laura Vanzo

TAMPERE. FINLAND

City strategy



VISION 2030: Tampere – The Best for You

URBAN AND SUSTAINABLY GROWING

The city's growth

Vitality, distinctiveness and urban environment

A smart and sustainable city

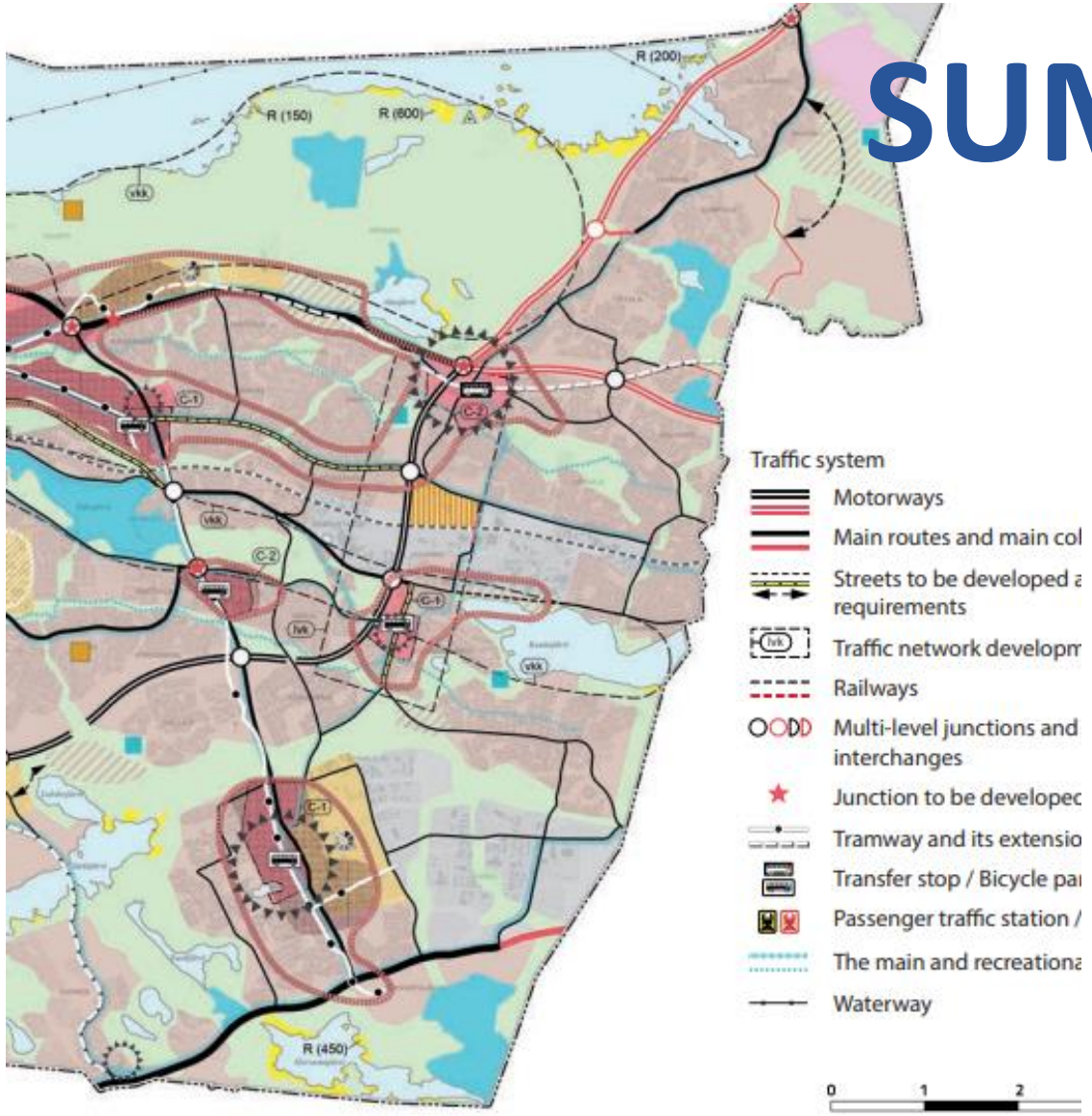
Desired results 2030:

A comfortable and lively city of 300,000 people

Carbon-neutral

A pioneer in smart and sustainable transport and urban development

SUMP’s role



Local Master Plan 2040

Carbon Neutral Tampere 2030 Roadmap

TAMPERE. FINLAND

- Approved by the City Board

  May 2021

Tampere is growing

Number of new jobs

2030: 135,500

2020: 118,200

New residents

2030: 277,700

2020: 241,600

New homes

2030:158,000

2019: 128,000

Each new resident makes more than three new journeys **EVERY WEEKDAY**

2.
THE FOCUS AREAS OF THE PLAN

The goal of the sustainable urban mobility plan is to influence mobility choices, the feeling of safety, equality and sustainability. The plan features six focus areas arising from the city's objectives for which actions have been presented

TAMPERE. FINLAND

Focus areas

Low-carbon mobility 2030

A safe city for all

More with less – smart and creative

Encouraging the use of active modes of transport

Mobility opportunities for all

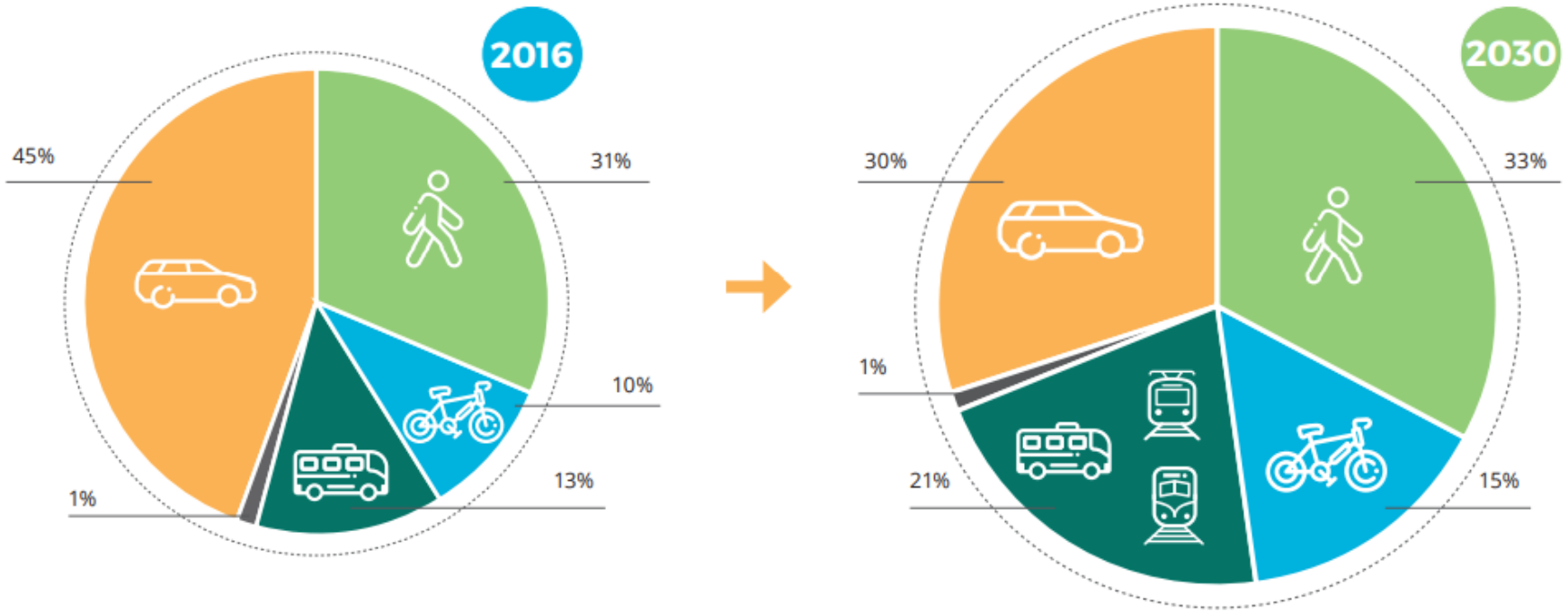
Environmental responsibility and health go hand in hand

TAMPERE

Carbon neutral

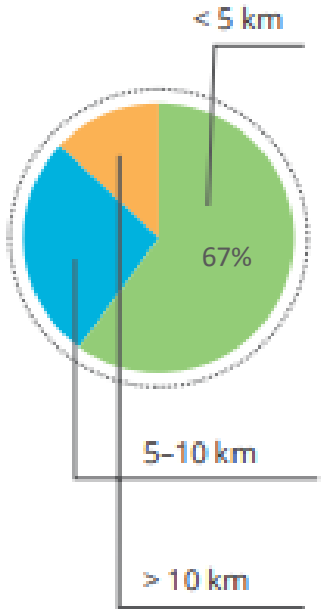
How do we move ourselves now and in 2030?

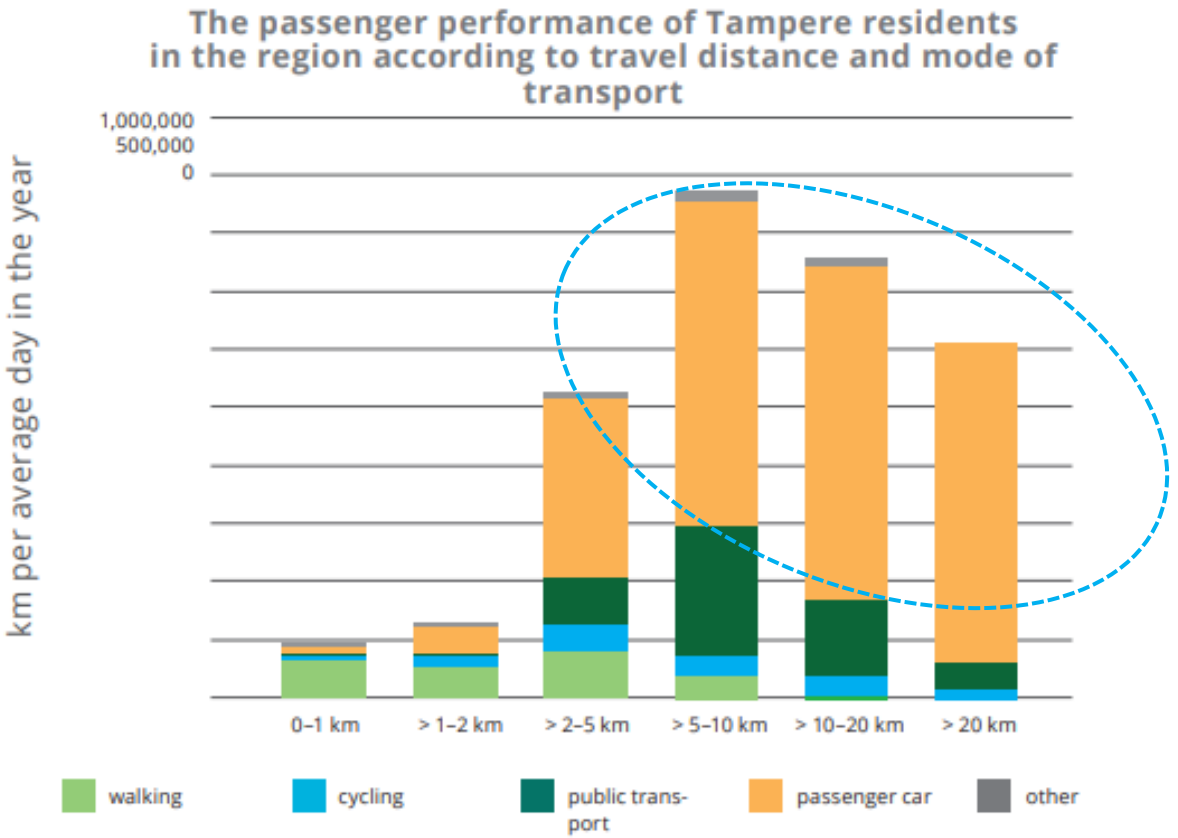
The shares of transport modes used by Tampere residents on an autumn day



Carbon neutral

Number of journeys

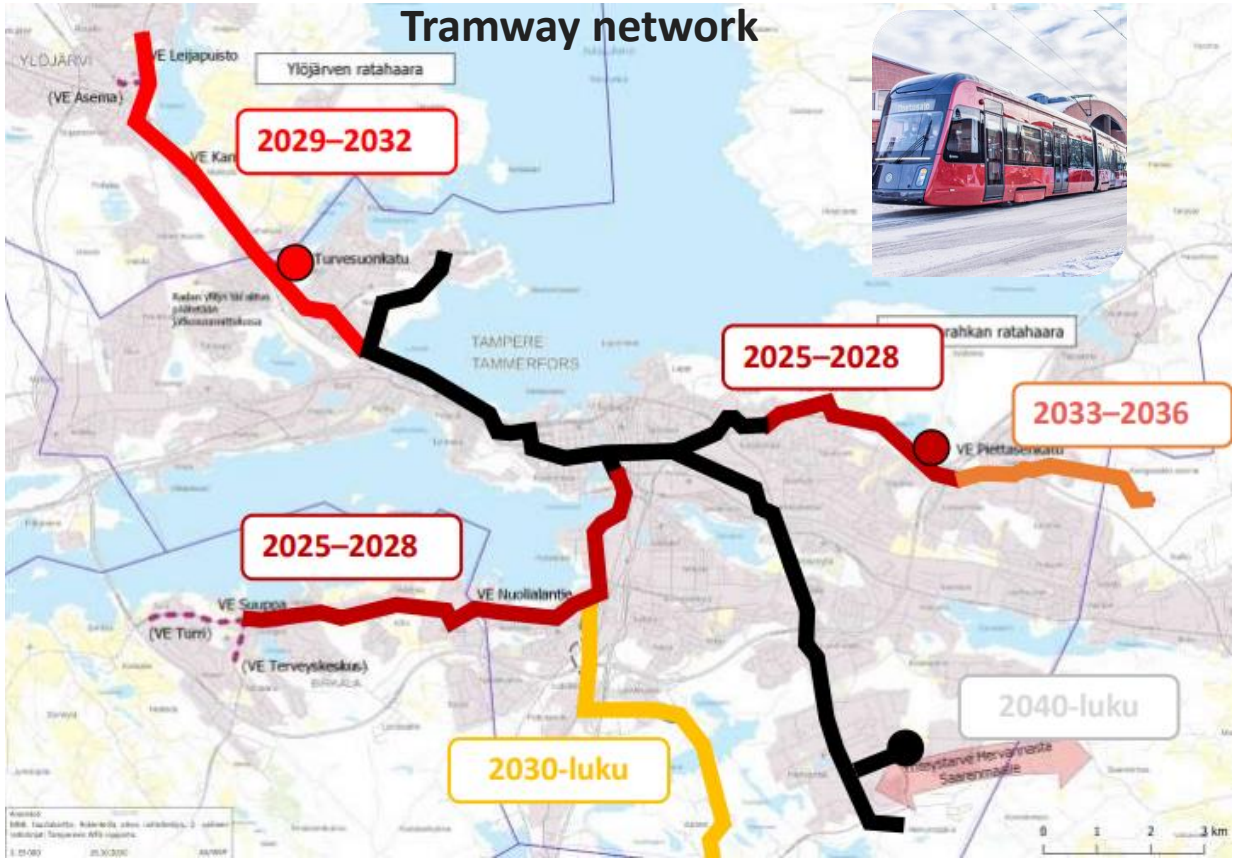




Carbon neutral

Examples of actions

- building the second stage of the tramway to Lentävänniemi
- expanding commuter train traffic and improving the service level of regional bus traffic
- developing park-and-ride facilities and travel chains
- investigating the options of financial direction of road traffic
- local master plan solutions that promote a sustainable urban structure.



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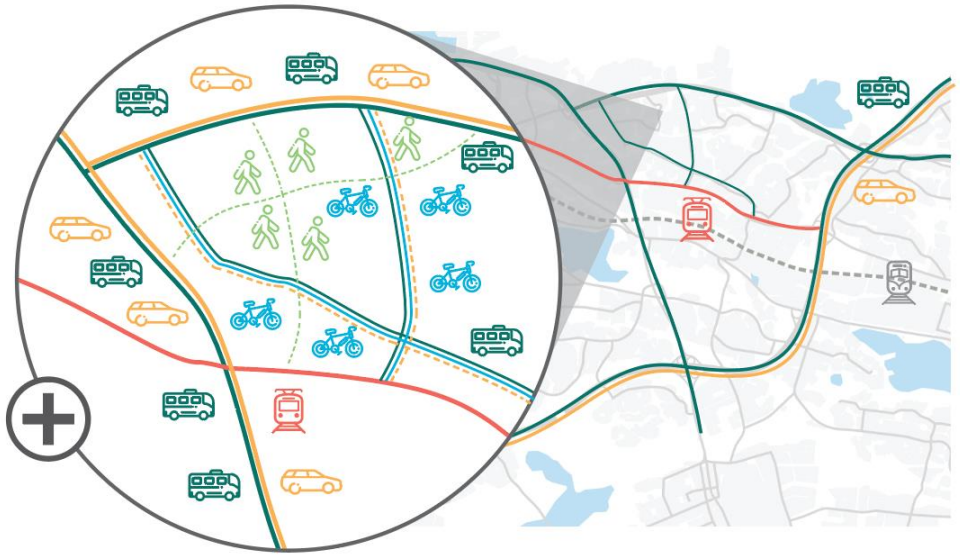
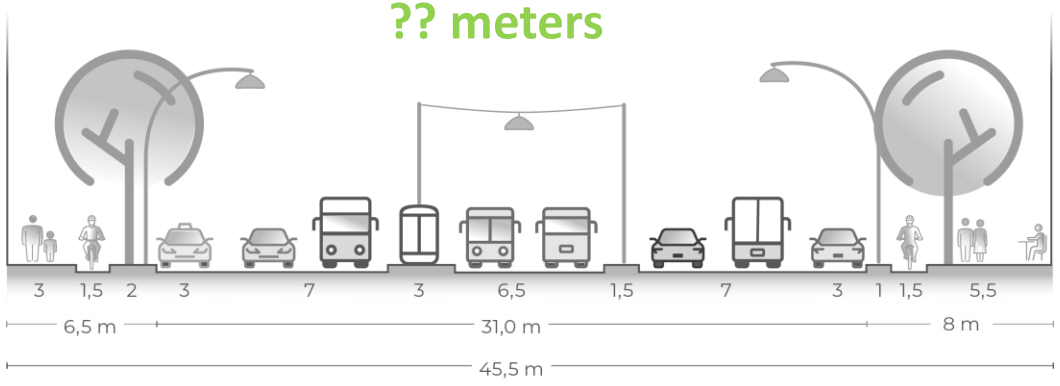
Efficient and sustainable



An efficient and sustainable transport system is reliable, safe and accessible.

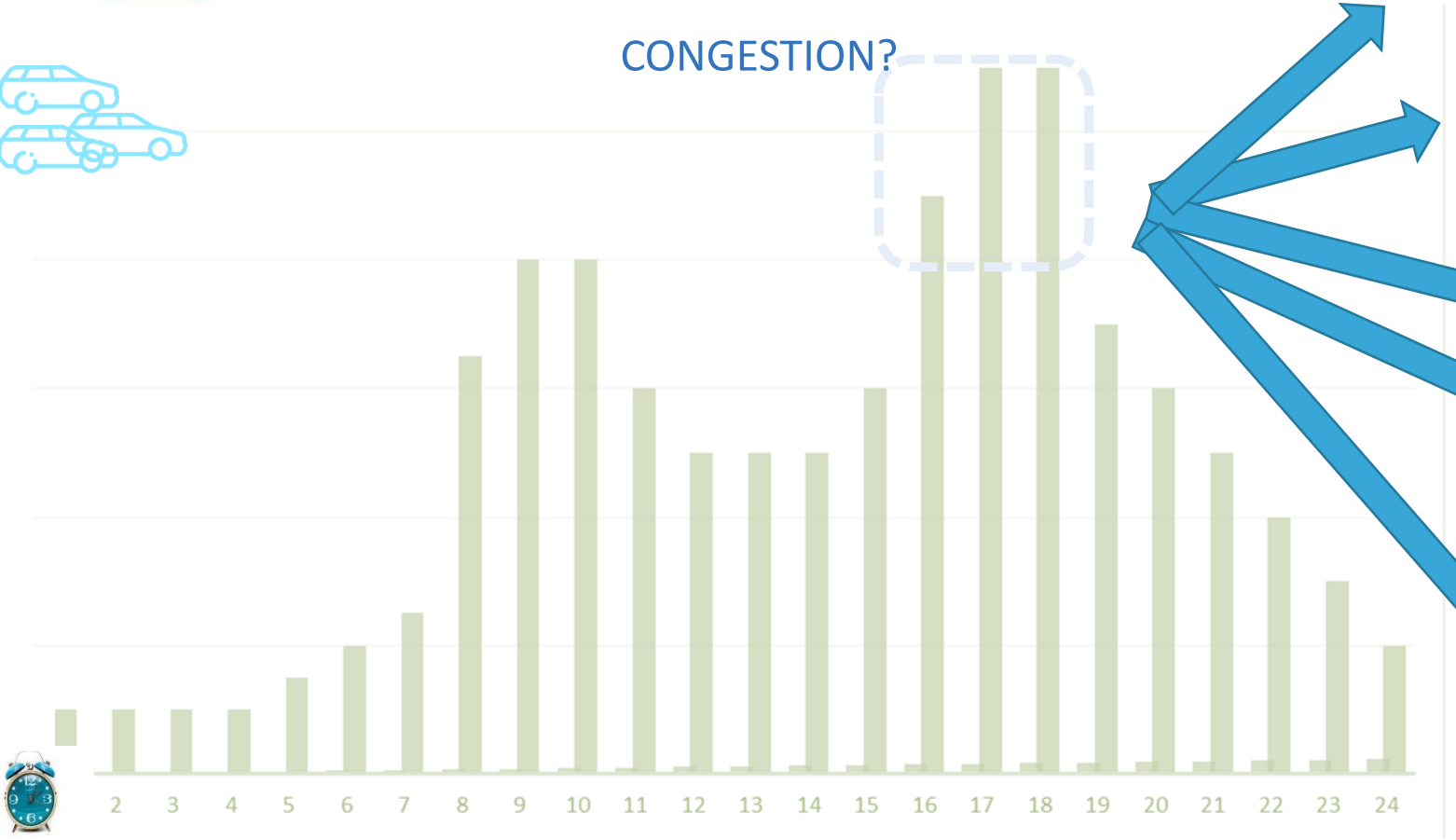
Each mode of transport has its own role in urban mobility.



TAMPERE. FINLAND

More with less

CONGESTION?



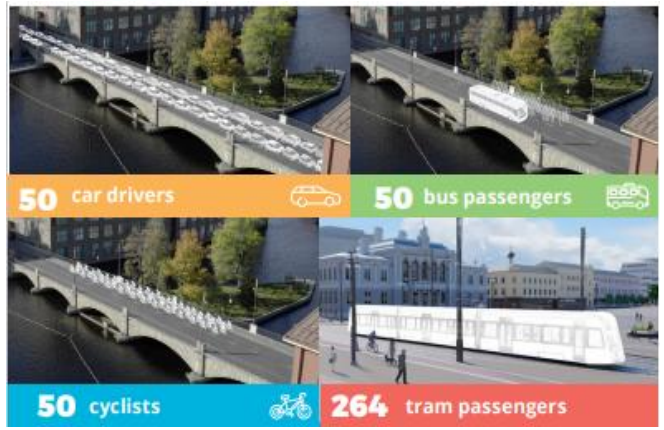
MOBILITY MANAGEMENT

Information & marketing

Focusgroups

TAMPERE

Sharing space effectively



The current sharing of space must be re-evaluated.

Efficient

Sharing space - pilots

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Equal mobility

In Tampere, 43% of households are car-free. Most car-free households live in the city centre and Hervanta. In the future, relying on sustainable modes of transport is possible on an expanding area thanks to dense urban structure.

Equality of mobility

SUPPLY:
A suitable mode of transport option is available.

ACCESSIBILITY:
Important services and destinations can be reached with different modes of transport.

AFFORDABILITY:
Mobility is reasonably priced.

TIME:
The journey can be covered in a reasonable amount of time.

SUITABILITY:
The mobility environment is safe, accessible and pleasant.

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Equal mobility

Examples of actions

- allocating resources to sustainable mobility
- developing competence related to resident interaction and assessing impacts on equality
- developing the inner city and district centres as areas with an emphasis on walking
- developing an accessibly mobility environment, separating walking and bicycle traffic from one another
- developing maintenance to facilitate moving all year round.

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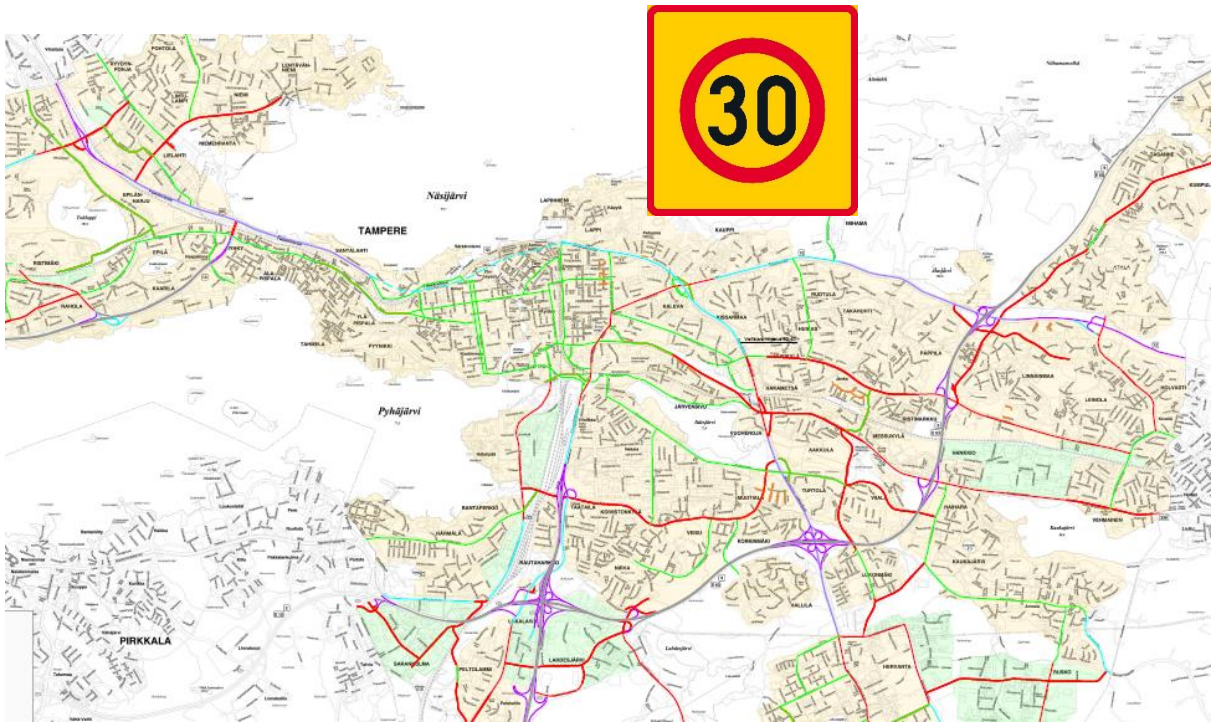
Safe city



Every child should have the right to a safe and independent journey to school on foot, by bike or using public transport.

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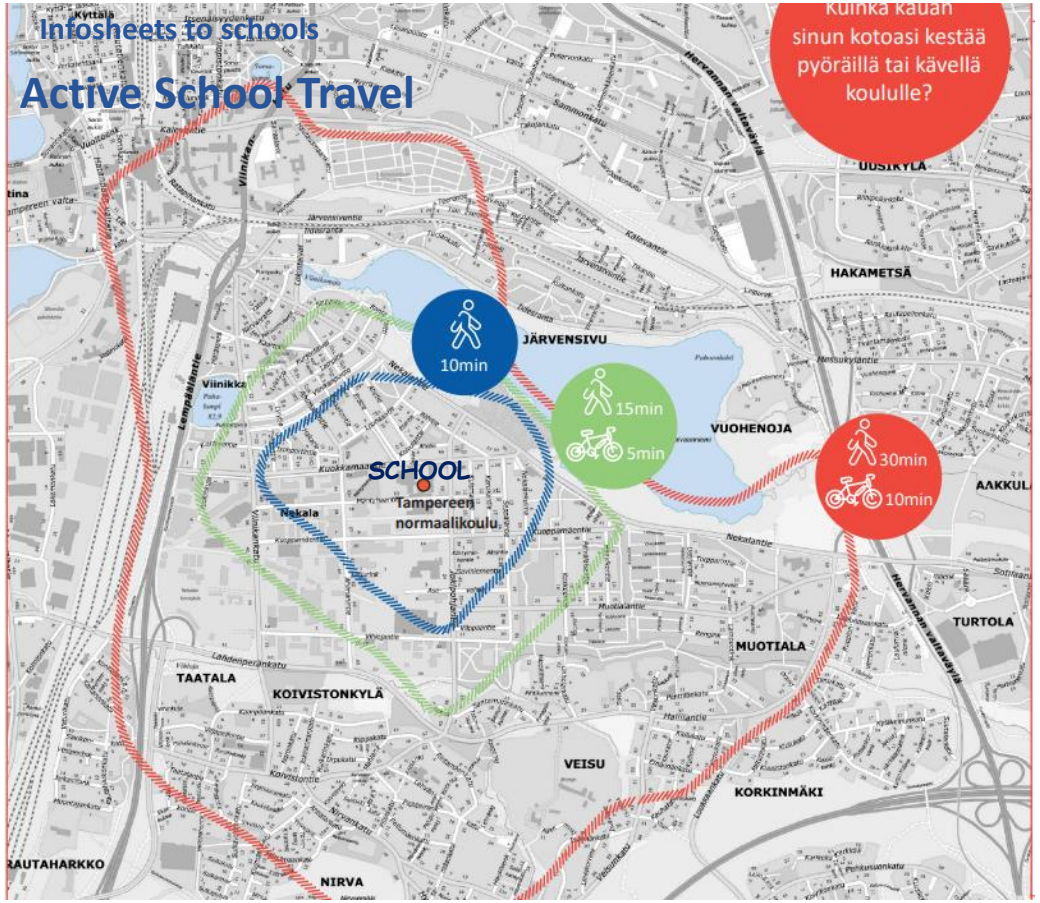
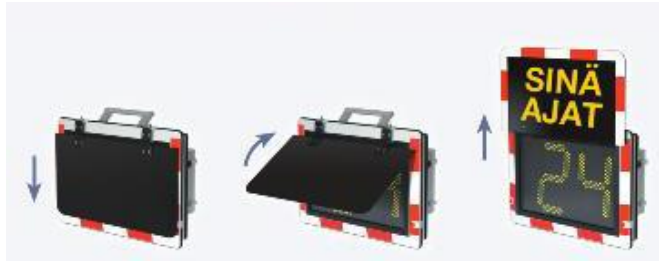
Safe city





TAMPERE

Active modes increase wellbeing

Recommendation: exercise for 30 minutes a day!

Only 20 % of finns do that.

For example 74.000 Tampere residents live within 15-minute bike ride from City Centre

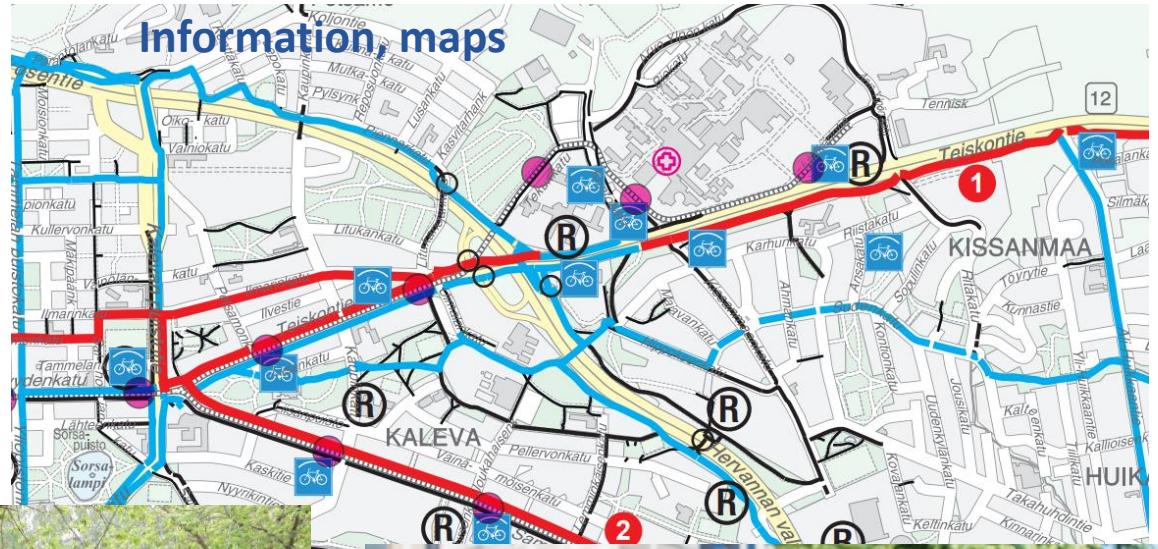
Immobility is expensive

The costs of immobility in Tampere per year

direct costs	€24,300,000
indirect costs	€166,900,000
Total	**€191,200,000**

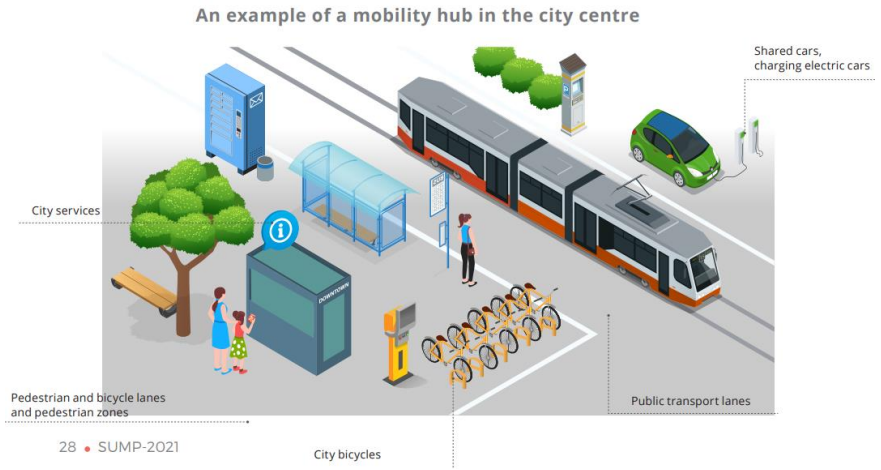
source: Seutuliike, Tampere City Region, 2019.

Active modes increase wellbeing



Digital solutions - Cross cycle

Working on…



- Mobility hub network plan
- Impact assessment of plans
- Design guides
- Mobility management campaigns and marketing

Kuva: Visit Tampere / Laura Vanzo

TAMPERE. FINLAND

Thank you!

Heljä Aarnikko

City of Tampere

helja.aarnikko@tampere.fi

TURKU AMK
TURKU UNIVERSITY OF APPLIED SCIENCES

FINLAND FUTURES RESEARCH CENTRE

UNIVERSITY OF TURKU

Walking and cycling scenarios 2034

[a,b]Katariina Kiviluoto, [a]Petri Tapio, [a]Ira Ahokas, [c]Anu Tuominen, [d]Jari Lyytimäki, [e]Jonne Silonsaari, [f]Tim Schwanen

[a]University of Turku, [b]Turku University of Applied Sciences, [c]VTT Technical Research Centre Finland,
[d]Finnish Environmental Institute, [e]University of Jyväskylä, [f]University of Oxford

ECOMM 2022 Turku

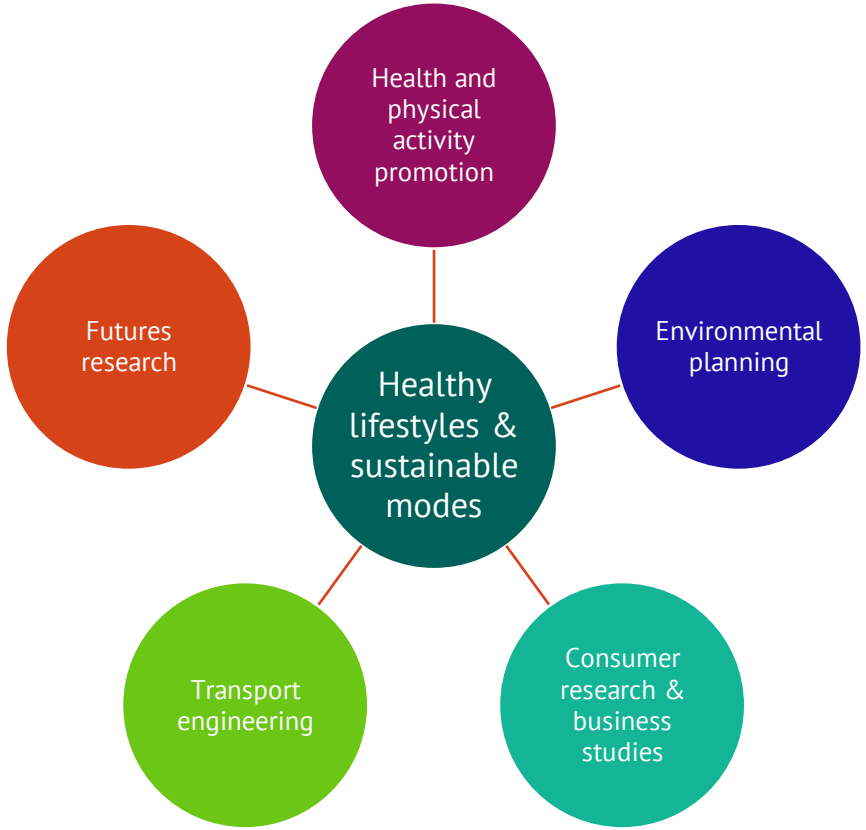
The premise and context

- This study was done as a part of STYLE-project – a multidisciplinary project which brings together researchers from transport engineering, health and physical activity promotion, environmental planning, consumer research, business model development and futures studies.

- STYLE examines how we can support and increase healthy and sustainable lifestyles while also promoting sustainable growth.

- The STYLE vision is to increase everyday physical activity so that the share of walking and cycling also increases.

- If you are interested in the research themes please check out STYLE webpages at: https://www.styletutkimus.fi/en/frontpage/



Study approach

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- Most scenarios are built either using mathematical models or through a qualitative process (e.g. futures workshops or -cliniques).
- This research used a combination of both quantitative and qualitative data and both types of data were given an equal emphasis in the analysis.
- The objective was to explore experts' views of the future of walking and cycling in 2034.
- Expert views were gathered using a real-time, online Delphi panel in May 2020.
- This research did not seek consensus within the expert views, but rather the aim was to seek different notions and in this way give room for alternative theories on how the future of walking and cycling may evolve in Finland.

Research questions

- **Research questions:**

  1) How Finnish experts see the future of walking and cycling and other transport modes in Finland 2034.

  2) What kinds of barriers and drivers do the Finnish experts see in current efforts.

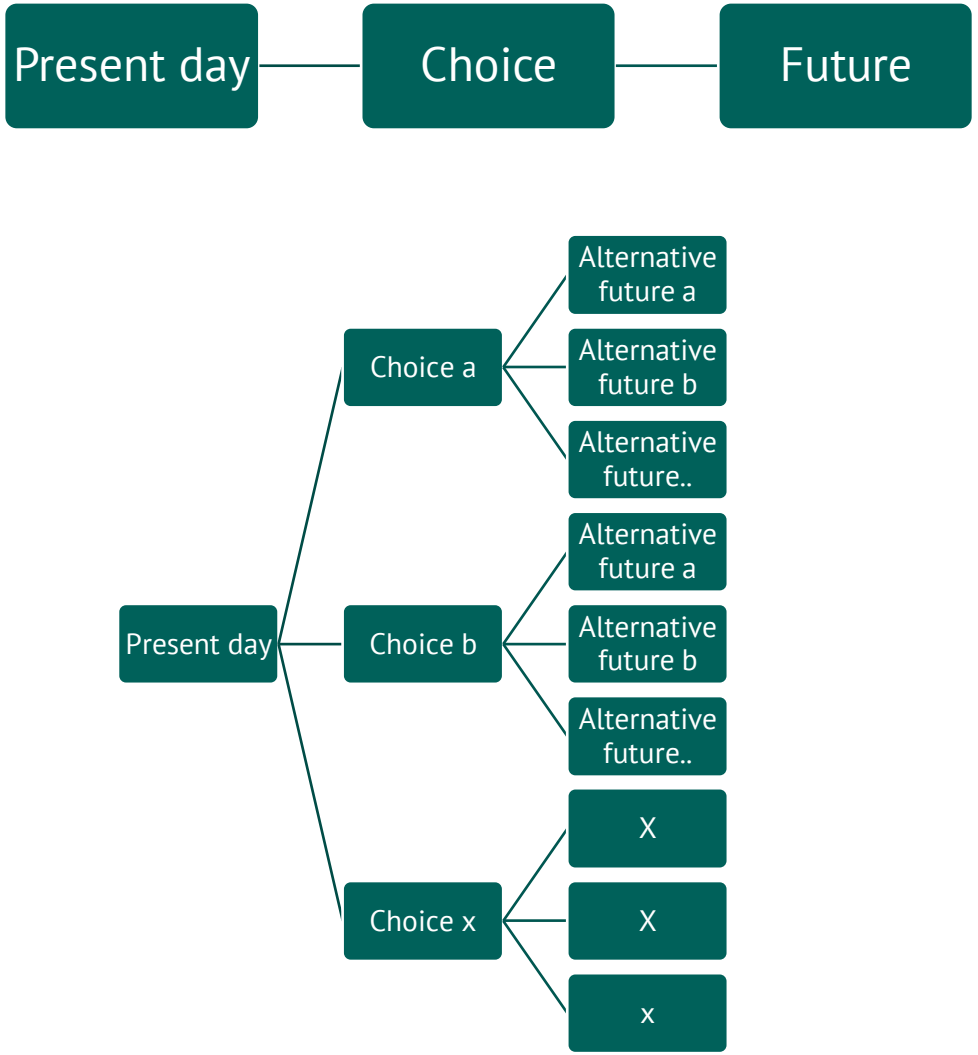
- **The year 2034 derives from two practical things:**

  1) We derive our data from the Finnish National Travel Survey which has a 6-year cycle. The last data is from 2016 and we are currently waiting for the next survey.

  2) The current national strategy for walking and cycling is for 2030. The aim is to increase the amount of walking and cycling with 30% from the current levels.

A future vs. alternative futures

- Futurists usually talk about **futures** in plural rather than using the singular future.
- This underlines the **openness** of future, i.e. there are numerous **alternative futures** out there. The future is not predetermined - we can affect the way it evolves.
- Futurists do not aim to predict the future – the aim is to **show that alternatives exist** and the **choices we make today have an effect on tomorrow**.
- From a policy point of view, the aim is to encourage discussion on alternative options and to **emphasise that we can affect the future**.



Methods for data gathering: Delphi

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- Delphi is a structured group discussion method which aims to map expert opinions on complex issues.
- Focus is on the *arguments* – on what grounds would a specific view on the future be considered feasible, probable or preferable/desirable?
- We had 27 questions ranging from transport volume trendlines (probable & desirable) to weak signals and business opportunities. The questionnaire included numerical parts and open questions. Each question also included a comment box to encourage open discussion.
- We used snowballing to find the experts and an expertise matrix to ensure that we had covered enough expertise.
- The Delphi panel was carried out in an online platform "eDelphi" which allows for anonymous participation and commenting.
- The panel was open for 2,5 weeks during the first lockdown 2020. The experts had open access to the platform to encourage interaction. All in all 30 experts participated to the panel.

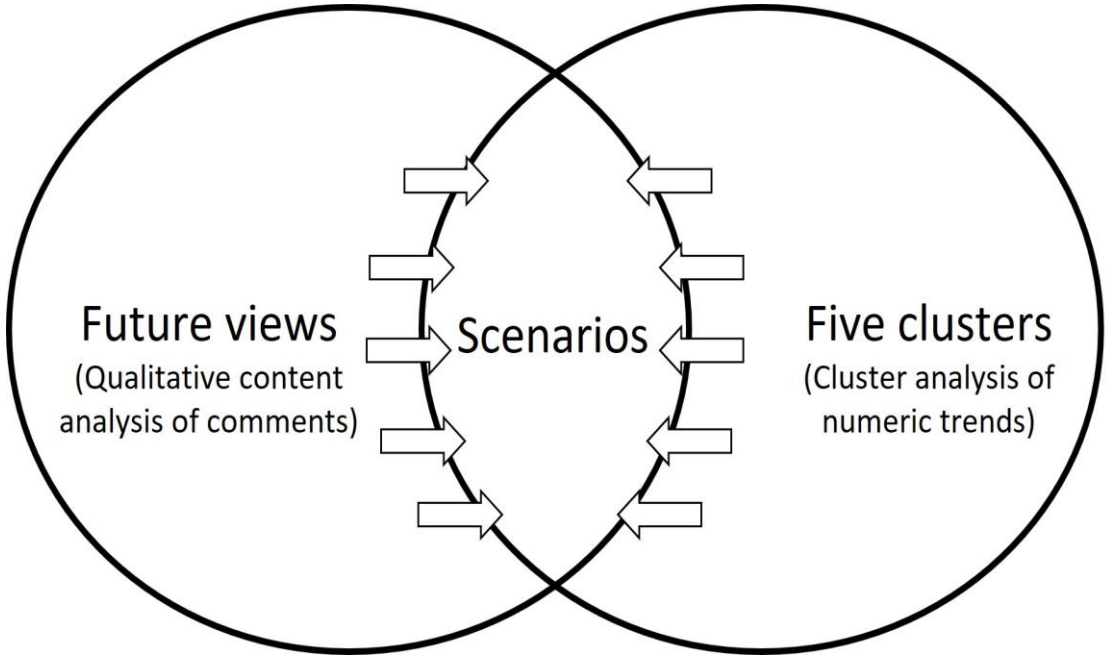
Data analysis and scenario building

- Data analysis combined both quantitative and qualitative methods

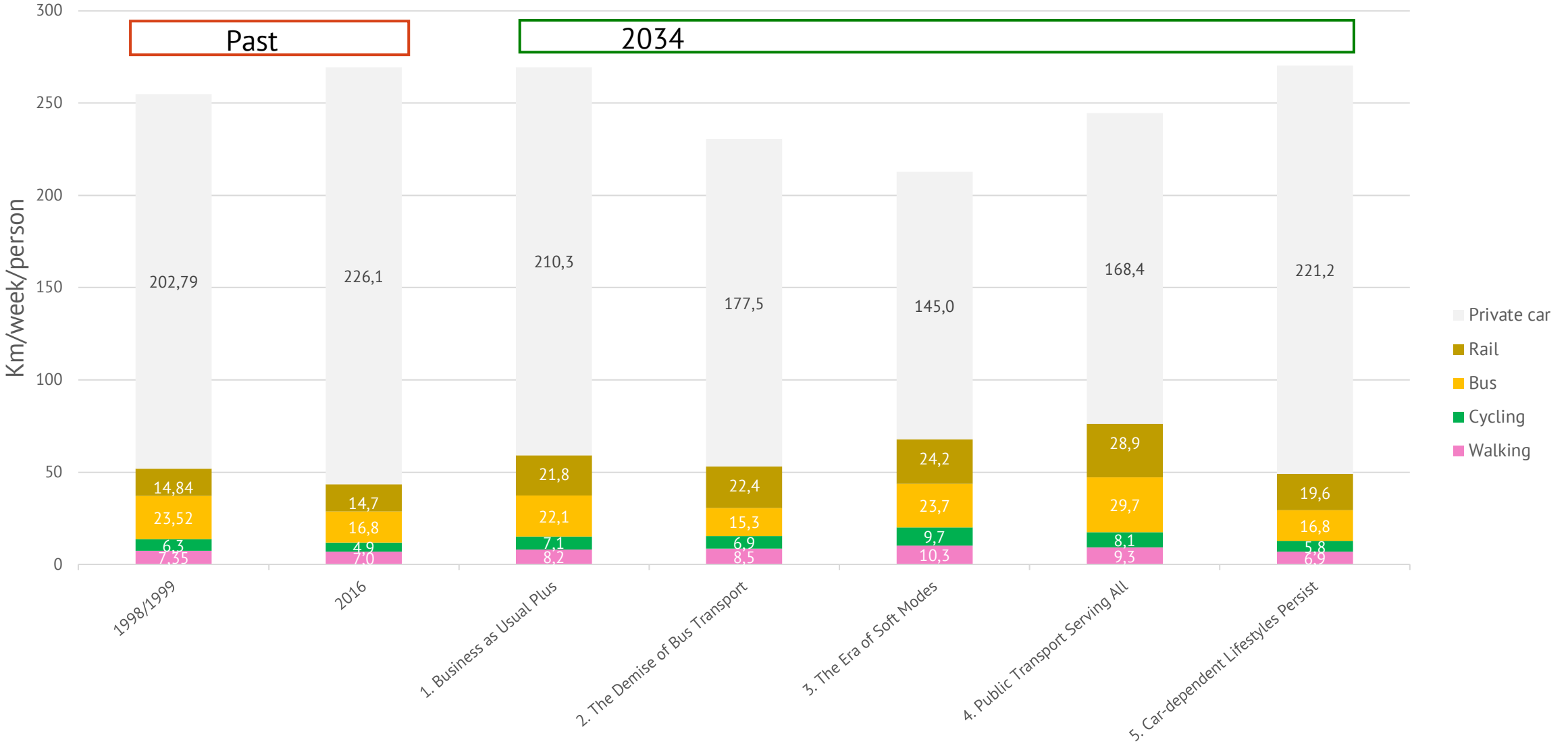
  1) Cluster analysis for the numeric data
  → 5 clusters

  2) Qualitative content analysis for the comments and answers to open questions

- We built 5 scenarios based on the mixed methods analysis.



Transport volumes: Historical values vs. 2034 scenarios



Scenarios for 2034

Business as Usual Plus

The Demise of Bus Transport

Public Transport Serving All

The Era of Soft Modes

Car-dependent Lifestyles persist

The Era of Soft Modes

THE STORYLINE

- *The increase in walking and cycling is the result of the adoption of a clear, overarching strategy to support the adoption of soft modes across sectors.*
- *The promotion of sustainable mobility is carried out as a coordinated effort.*
- *A more general change in the political climate towards an increased willingness to regulate private car use, which has lead to the introduction of new disincentives for car use.*
- *The benefits of walking and cycling are recognised and people are drawn to pro-climate and healthy lifestyles.*
- *Investing in high-quality infrastructure is seen as a long-term investment in the health and general well-being of both people and the planet.*

POLICY & PLANNING

More support and fora for **cross-sectoral cooperation**

More coordinated, **common efforts** across sectors

Support for **long-term** planning

Invest in high-quality walking and cycling **infrastructure**

Talk widely about the **many benefits of walking and cycling** (walking and cycling is beneficial for both health and the planet)

Comparison table

	Business as Usual Plus	*The Demise of Bus Transport*	*The Era of Soft Modes*	*Public Transport Serving All*	*Car-centred Lifestyles Persist*
Urban structure	Dense centres, sprawl	Rail-centred, dense cities	Green, car-free zones	Public transport centred, well-connected	Sprawled, polarised, car-centred
Infrastructure	Car-centred	Emphasis on rail and cycling infrastructure	Emphasis on walking and cycling infrastructure	Public transport-related infrastructure	Car-centred
Governance and decision-making	Independent municipalities, economic boundaries govern	Lack of cooperation, hesitant decision-making	Strategic coordination, political will supports walking and cycling	Economic boundaries govern, political support for climate targets	Fragmented governance
Service provision	To ensure accessibility with all modes	Safety guaranteed in services	Walking and cycling related services widely available	Equal access to all, versatile services	Tailored solutions to support car-dependent lifestyles
External factors	Digitalisation, technical development, economic recession	Climate politics, frequent pandemics, technological development	Urbanisation, climate politics, digitalisation	Ageing population, climate politics, justice and equality	Technological development, urbanisation
Individual factors	Flexibility, freedom of choice, belief in technology, car-centred culture	Freedom of choice, social distancing, individualism	Health, pro-climate, positive attitudes towards walking and cycling	Comfort, convenience and safety	Freedom of choice, comfort, conservatism

Main takeaways from the scenarios

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- ***Burst the transport bubble*** - bring different sectors together (health, culture, education, transport planners etc)
- ***Set a common goal*** - a clear, overarching strategy encompassing walking & cycling + other modes is needed
- ***Put people in the centre*** - A deep understanding of everyday life is needed to promote modal change.
- ***Mix carrot and stick*** - A right mix push and pull strategies are needed to promote sustainable mobility and reduce private car use.
- ***Mindsets may change*** – Although car-centred lifestyles are very persistent there are some weak signals which may or may not indicate a change in lifestyles.
- ***Infrastructure matters*** – Combine good quality infrastructure together with holistic urban planning

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Thank you!

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Link to presentation