Tallinn-Harju case study

A People First approach to increase equity in public transit stops in the Harju Region

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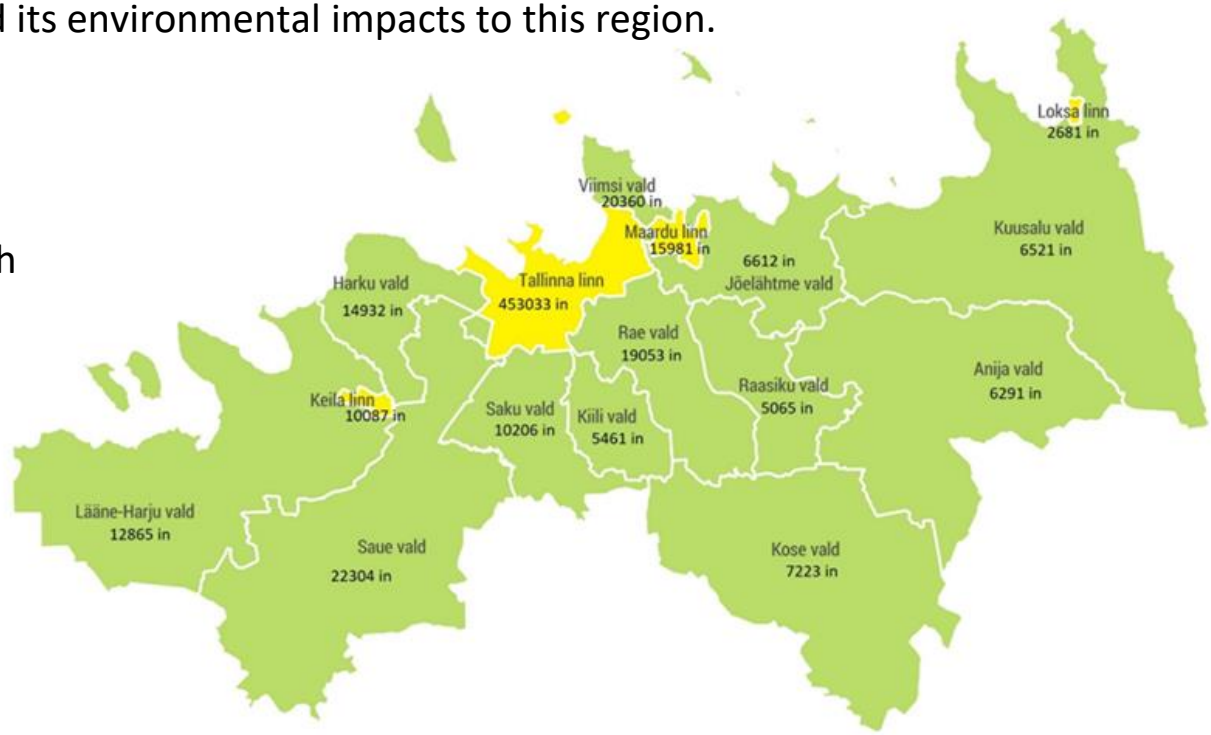
In the 16 years (bw 2003 and 2019) the Tallinn city region (Harju County) saw a significant decrease in the share of those commuting:

- **by public transport** (from 43% to 31%)
- **by foot** (from 18% to 12%).
- Meanwhile, the share of those travelling by car grew from 35% to 52 %. The rapid increase in car use and economic development in the region have now brought 50% of the country's total transport and its environmental impacts to this region.

Mobility has not been managed as a whole (having different public transport systems in the city and region and for different modes) Poorly managed land-use planning has also led to widespread urban sprawl with residential buildings built in areas lacking good quality infrastructure for active transport (ex. cycling and walking) and poor access to public transit.

An important positive development during the SUMBA project **was gaining political support to address these issues and to develop mobility in Tallinn region**, in close cooperation between the city and national authorities - a cooperation memorandum was signed by the mayor of Tallinn and minister of Economic Affairs.

Several of **SUMBA** inputs are included into Harju County development strategy 2035+, Transport and mobility master plan for Estonia 2021-2035 and Tallinn will soon adopt it's SUMP and SECAP.



Main activities in SUMBA project

Studies carried out during SUMBA project provided a better understanding of the transport situation today in Tallinn and Harju County as well as how to prioritise measures and investments.

- A light **light-rail feasibility study** demonstrated that it is socio-economically viable to develop new tram routes as a "backbone" of efficient and fast multimodal public transport network to create better commuting opportunities across municipal borders and better utilise existing rail infrastructure. https://hol.ee/tallinna-ja-harjumaa-kergroobastranspordi-teostatavus--ja-tasuvusanaluus-624
- Aa **study on transit stops** looked at the public transport stop as service provider and first gateway to public transport network. The aim is to improve public transport stops appeal and service standards. It also gave insight into how well regional bus infrastructure is managing with identified quality standards and into some accessibility issues. https://hol.ee/625

These and other studies (accessibility study by DLR, several mobility activities simultaneously (Tallinn-Harju SUMP, SECAP, Tallinn-Harju Mobility Council, Transport and mobility master plan for Estonia 2021-2035, Tallinn 2035 development strategy etc.), provided valuable input of creating **a roadmap document** (CMP) by highlighting the importance of a well-connected and attractive public transport network in the region. It recommends mobility development and investments to be focused on meeting the increasing demand for travel with public transport, and travel by foot and by bicycle. Increased integration of land-use planning, and transport planning should be prioritised. The road map document document could be considered a supplemental document of Tallinn-Harju SUMP with greater focus on commuting.

NEW MODAL: A PEOPLE FIRST APPROACH TO INCREASE EQUITY IN PUBLIC TRANSIT STOPS IN THE HARJU REGION

OUR TASK

There are many studies on transit and mobility but only a few ones that focus on the stops. **This project is about gaining high-level knowledge about transit stops and stations in Harju county.**

OUR CHALLENGES

Generalising knowledge about nearly **3000** stops across the region. Most **studies and strategy documents usually focus on one transport mode only.** The challenge of this project is to take **all transit modes into account** (train, tram and bus).

OUR APPROACH

We utilised a **capability approach** to study the mobility equity provided by public transit stops in Harju county. It **is about addressing problems related to the uneven or unjust distribution** of mobility services and the accessibility, safety and comfort of transit stops and stations.

DATA ANALYSIS

2917 stops and stations

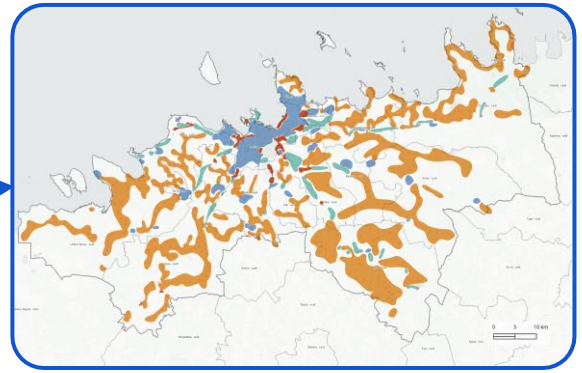
19 metrics to map Service performance & Potential demand

Mobility equity

SITE ANALYSIS

64 stops

Mapping accessibility, safety and comfort on site.



The knowledge produced in this project can be utilised to:

- ➔Establish benchmarks for stops and stations
- ➔Set service-development priorities
- ➔Initiate debate and activities for shared public-transport stops roadmap between municipalities

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DEMOS HELSINKI

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Stops are the business card of the public transport system - the place where every trip begins, ends or continues.

Combined insights from the site analysis

➔53% of stops do not have shelter.

➔69% of stops do not have comfortable seating for all passengers.

➔53% of the stops do not have the possibility for park and ride.

➔Bicycle parking is not available at 58% of the stops.

➔92% of the transit stops have incomplete signage and maps, or they lack indications to other stops nearby. When present, the readability of the information (such as timetables) was often compromised by the weather or vandalism.

➔The path between one transit stop and connecting stops nearby was safe and accessible only in 14% of the sites we visited.

PAST (Kuusalu)
A waiting and resting place that also offers aesthetic pleasure

PRESENT (Kuusalu)
Decomposing shelter (poor weather resistance)

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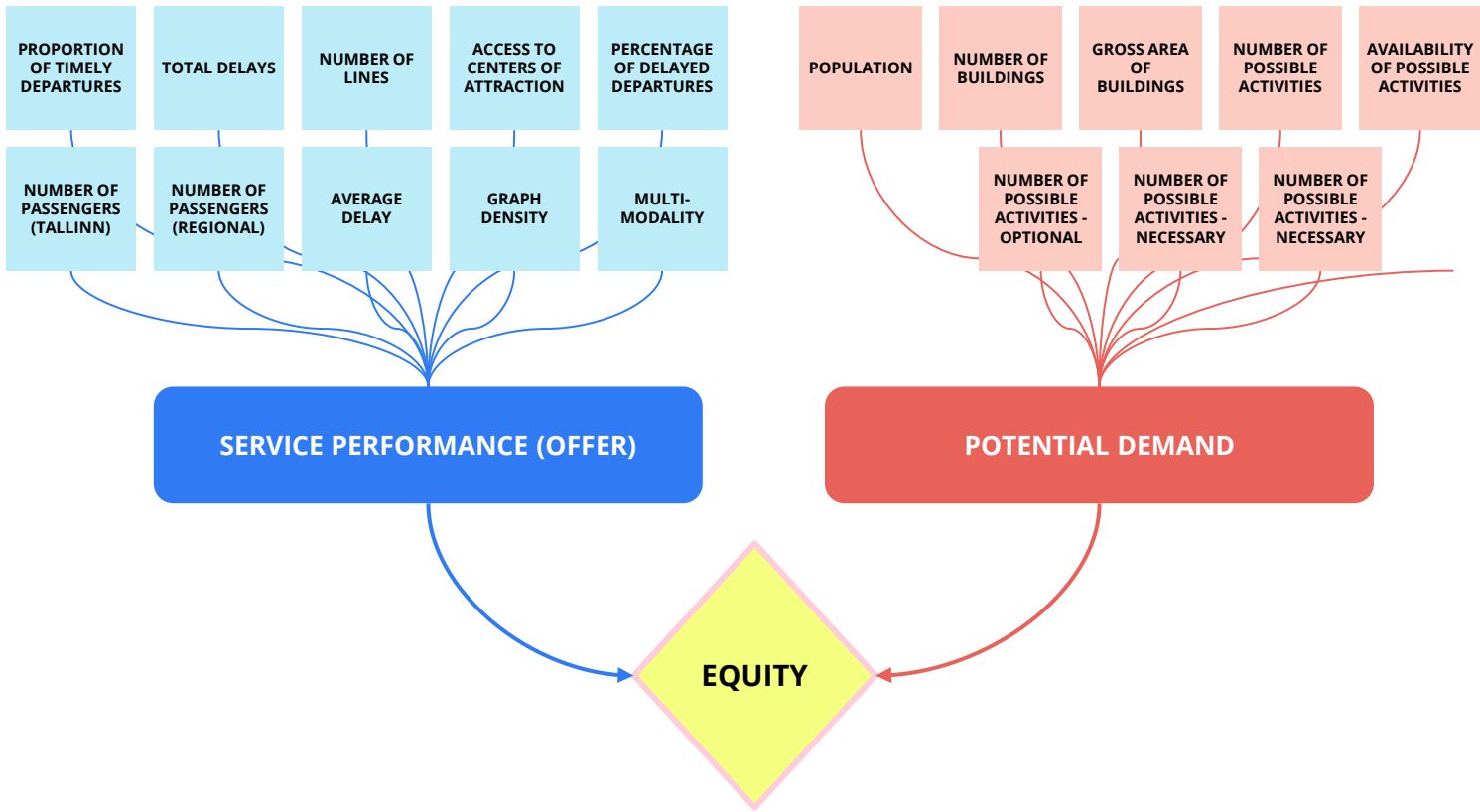
"Mobility injustice is a process through which spatial design and service provision can generate social and economic inequality." Mimi Sheller

Mobility equity is about mapping public transit performance and potential demand across Harju county. The more distributed is the service performance and potential demand, the higher is the mobility equity across the region.

This project is about stops only, so we are only analysing these indicators for each stops in the county.

Building the equity map from 19 indicators



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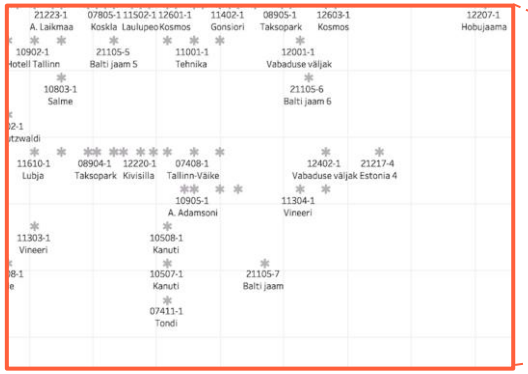
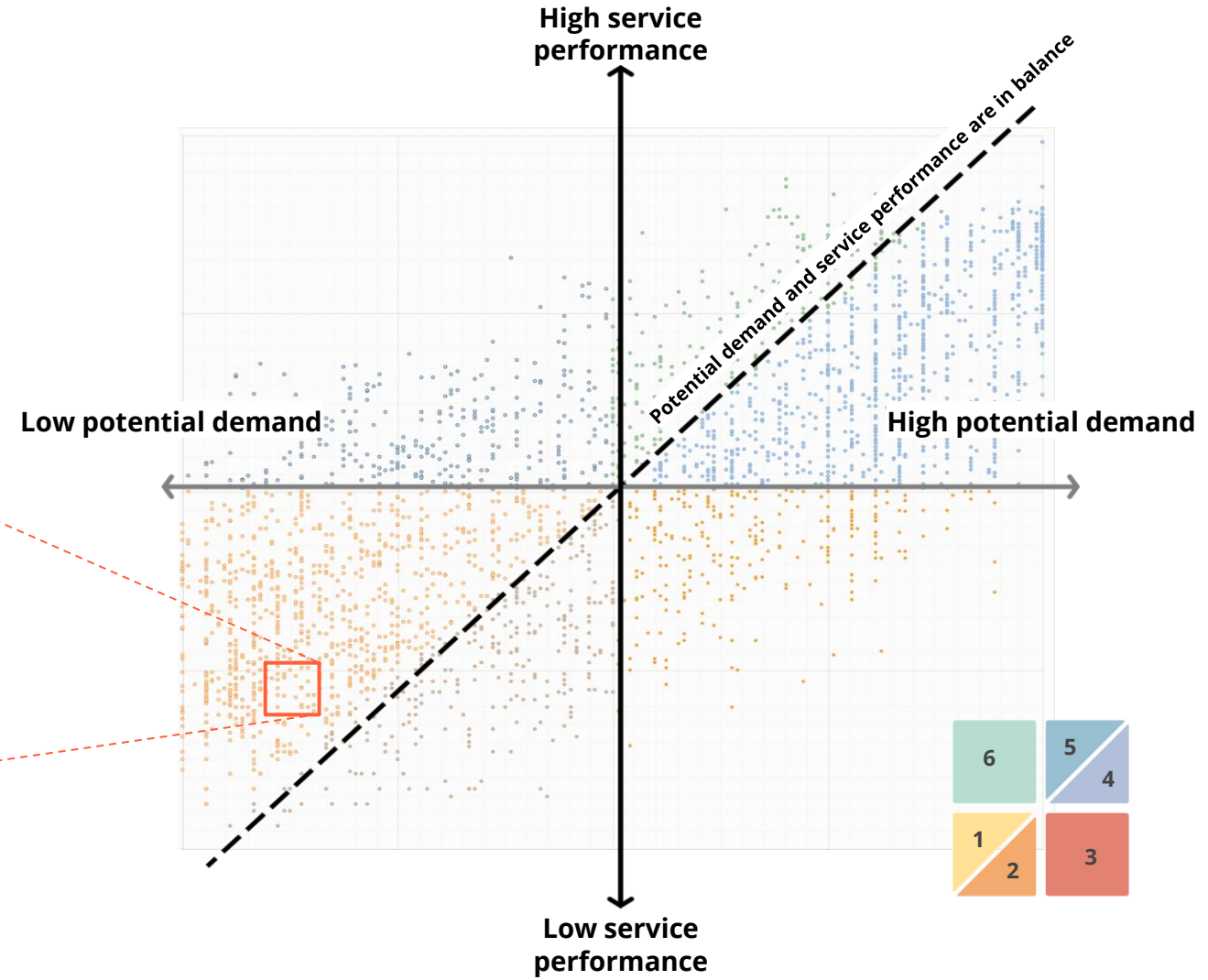
Creating the equity map

To categorise each stop based on their mobility equity level, we have normalised the values from the Service Performance and Potential demand and plot them in the equity graph. The diagonal line shows the balance between Service performance and Potential demand.



Each dot indicates one stop in Harju County (incl. Name and stop code).



Mapping mobility equity

The equity map of Harju county shows a clear divide between zones of high service performance (categories 4 and 5) and zones of low service performance (categories 1 and 2).

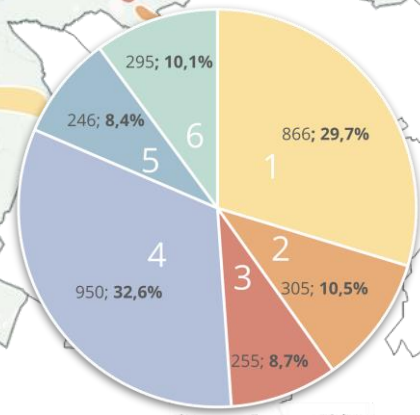
92% of the country stops are in categories 1, 2 and 6.

93% of urban stops are in categories K3, K4, K5.

Small town stops are relatively evenly distributed between different categories.

1. **LOW DEMAND - LOW PERFORMANCE**
   Performance higher than demand
1. **LOW DEMAND - LOW PERFORMANCE**
   a. *Performance lower than demand*
2. **HIGH DEMAND - LOW PERFORMANCE**
3. **HIGH DEMAND - HIGH PERFORMANCE**
   a. *Performance lower than demand*
4. **HIGH DEMAND - HIGH PERFORMANCE**
   a. *Better quality stops needed*
5. **LOW DEMAND HIGH PERFORMANCE**

Mobility equity imbalance between Tallinn with high efficiency public transit service and all the other municipalities



0 5 10 km

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MULTIMODALITY
New rising centers of gravity

Stops with high multimodality rank are usually in category 4 (high service performance and high demand). Many multimodal stops form mobility hubs comprising of multiple stops in 100-200m radius. Those stops should be designed with a uniform design to regionally important mobility points.

KRISTIINE KESKUS (TAKSOPARK-LILLEKÜLA)

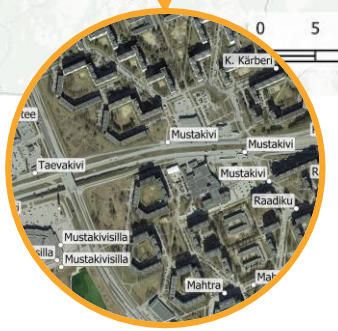
The Kristiine transport hub connects various bus stops and the train stop. This node should be developed into a mobility point of regional importance.

VANA-PÄÄSKÜLA

The Vana-Pääsküla transport hub connects various bus stops and the train stop. This node should be developed into a mobility point of regional importance.

VÄIKE- JÄRVE (JÄRVE-VIRVE PEATUSED)

The Väike-Järve transport hub connects various bus stops and a train stop. This node should be developed into a mobility point of regional importance.



MUSTAKIVI

The Mustakivi transport hub connects various bus stops. This node should be developed into a mobility point of regional importance.

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The attention economy reached the mobility sector.

Digital services will become integrated with the design of stops and stations, expanding the service level beyond mobility.

Stops will become micro-centres for local communities, commuters and visitors.

THE NEW MODAL: PRINCIPLES FOR TRANSIT STOP DEVELOPMENT

NEW MODALITY

1. Expand public transport to personal mobility modes (scooters, city bikes, cargo bikes, EVs, boats and more) and related charging devices.
2. Increase the multimodality of stop and stations, starting from rural areas with multi-modal micro hubs for commuters.
3. Plan multimodality as a user-centric solution that offers convenient journeys to all users and social groups - especially to those with irregular mobility patterns.
4. Establish routines to analyse users satisfaction with digital surveys at the stops.

NEW LOCAL

1. Relink urban planning normative with sustainable mobility goals.
2. Apply the principles of universal access to all stops. This will increase access for all social groups and people with limited accessibility.
3. Upgrade local development normative for people who do not conform to mobility patterns commonly interpreted as “typical” in the planning and zoning processes.
4. Increase the space dedicated to infrastructures that support sustainable mobility habits, without altering the car network. The goal is to invite new users to sustainable lifestyles.

SOFT MARKETS

1. Redesign stops to support the everyday life activities and services needed in urban and rural communities.
2. Invite local innovators, designers, start-up and entrepreneurs to co-design new stops and micro-mobility hubs in rural areas.
3. Increase the service level of transit stops beyond mobility and explore new partnership models to sustain design upgrades with sponsorships or contracts with advertisers.
4. In selected areas, establish community-ownership models, to expand the agency to local communities and increase the participation in the design and maintenance of transit stops.

SOFT HUBS

1. Establish new design principles for all stops in the regions based on people-first principles of perceived safety, universal accessibility, travel convenience and comfort. This is about rethinking stops as a human-friendly space that is part of the urban and rural landscape.
2. Utilise sustainable materials for the restyling or construction of new stops and stations.
3. Include safe bike and scooter parking to the minimum design requirements for all stops and minimum lighting conditions when dark.
4. Increase the accuracy and visibility of both physical and digital Information systems.

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Handbook: choosing additional services

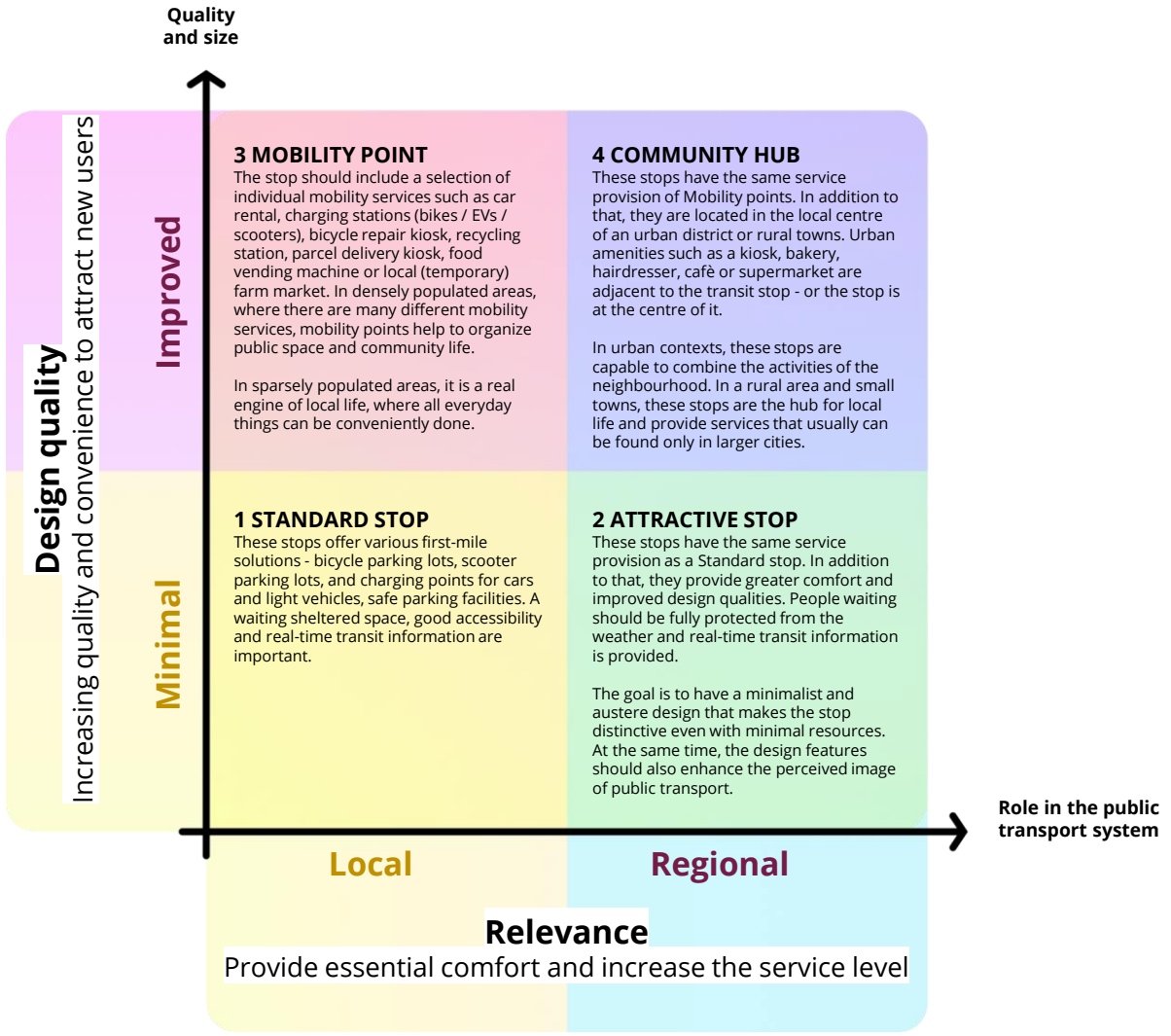
The framework presented here can help decision-makers and designers to focus their design intervention based on their strategic goals:

1 If their goal is to (re)design a local stop with minimal efforts, the transit stop should provide at least facilities to improve first-mile solutions (safe bike and scooter parking in cities + park & ride in rural areas.)

2 If their goal is to (re)design a stop of regional interest with minimal efforts, the transit stops should provide the same solutions as a Standard stop with enhanced comfort and increased design quality.

3 If their goal is to (re)design a local stop to attract new users, the transit stops should provide services beyond mobilityì and exhibit high-quality design solutions and building materials.

4 If their goal is to (re)design a stop of regional interest to attract new users, the transit stop should provide the same solution as a Mobility point but should be placed in a pocket of activities and services that are meaningful for the local community.



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Handbook: choosing stop design elements

The framework presented here can help decision-makers and designers to focus their design intervention based on their strategic goals:

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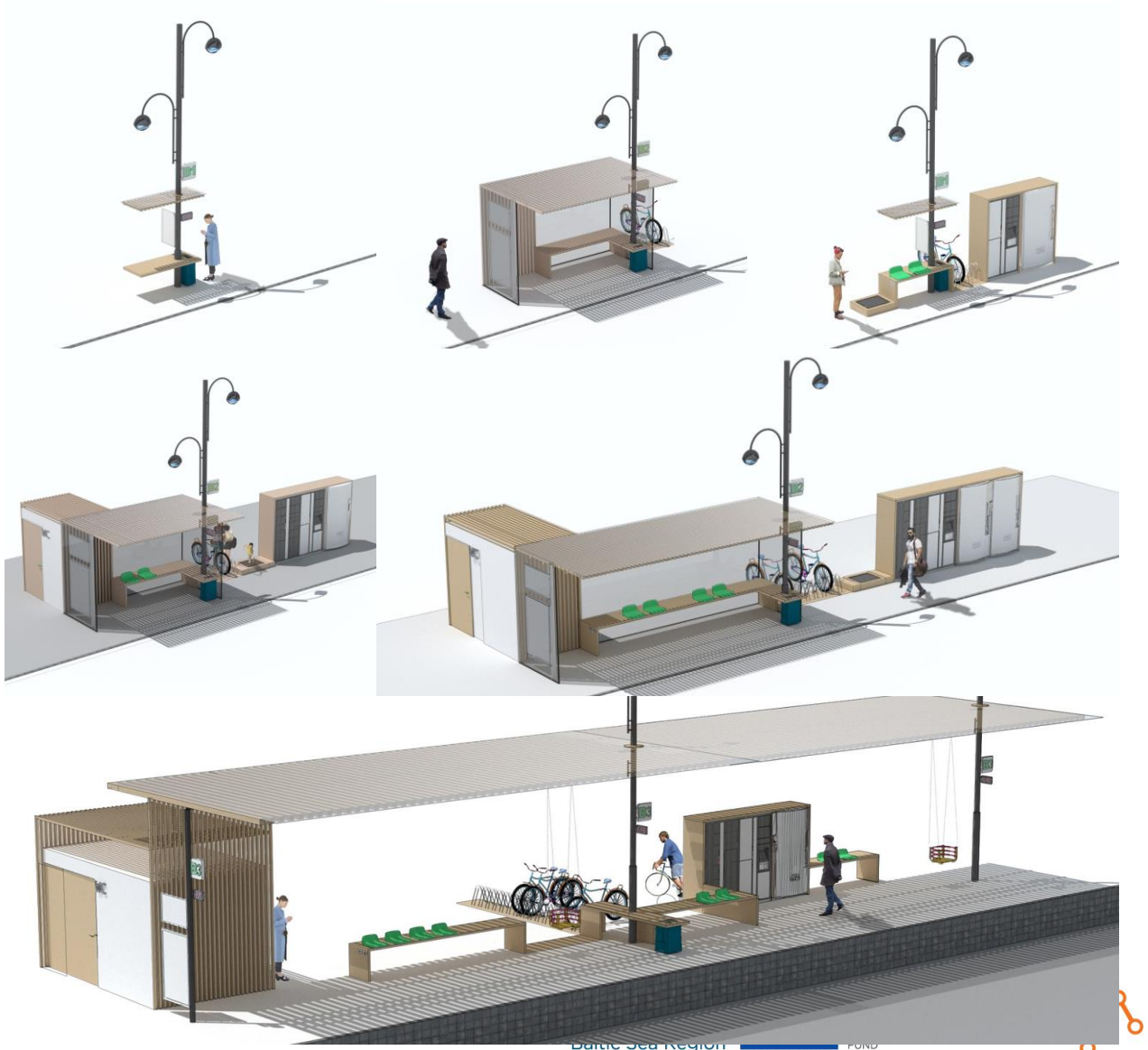


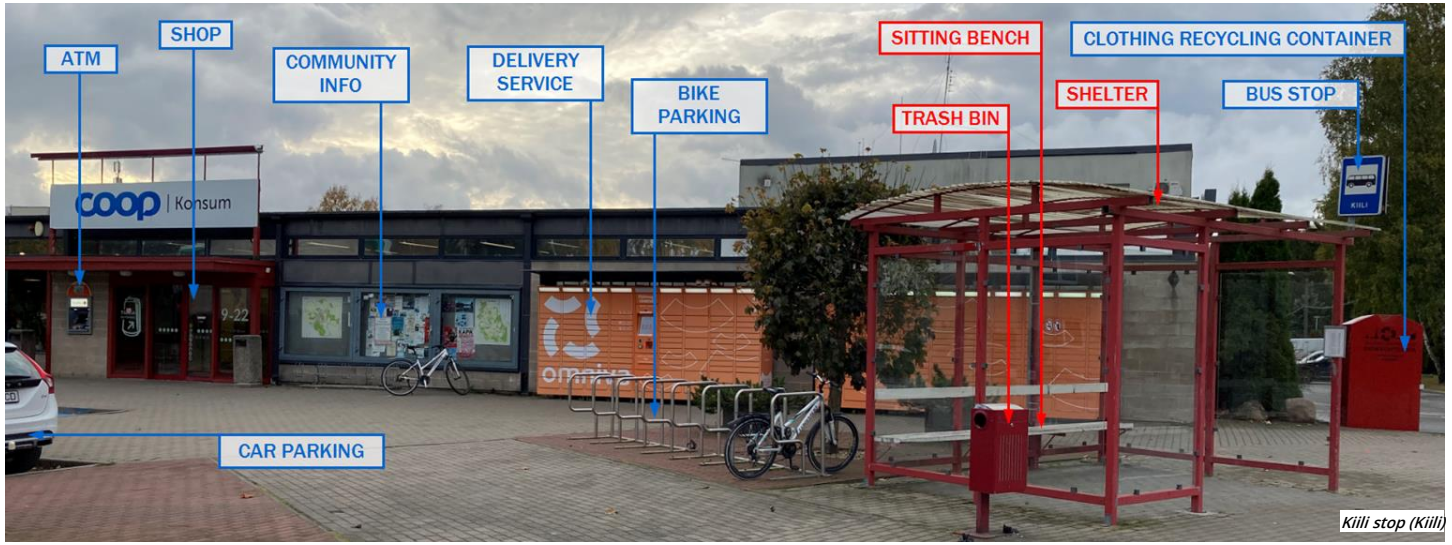
HIGH DESIGN vs LOW DESIGN

In this summary, we presented high-level learnings from nearly 3000 stops and a survey of more than 60 transit stops. Yet, sometimes everything that is needed to make the perfect mobility point is already there, it might just need a little boost.

Hamburg has now set up more than 70 SWITCH POINTs. Initially, it started with the creation of points at major public transport stops, then added points that were located in different district centres and were no longer necessarily linked to public transport stops.

At the Kiili stop in Harju County, several components of the mobility point already exist in terms of services and infrastructure. The area could be integrated with a unified design and new services could be added based on the needs of the community.

Hamburg, Germany



Kiili stop (Kiili)

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Thank You

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