MoLo Hubs | Interreg North Sea | Co-funded by the European Union

Sustainable Urban Mobility Plan Report

Researching and identifying key objectives and mobility transition goals of MoLo Hubs‘ host partner regions

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Executive Summary

The MoLo Hubs project explores how people-centric mobility and logistics hubs can support the transition towards more sustainable, efficient, and liveable urban mobility systems. Implemented across five pilot regions (Aalborg, Amsterdam, Borås, Hamburg, and Mechelen), the project combines mobility services with logistics functions to reduce emissions, optimise the use of public space, and improve accessibility and quality of life in cities. These pilots provide practical insights into how hub-based solutions can address growing challenges related to urban freight, congestion, and the use of limited urban space.

This report assesses whether the mobility transition goals pursued through the MoLo Hubs pilots are aligned with the wider policy objectives set out in the host partners' strategic mobility plans, including Sustainable Urban Mobility Plans (SUMPs) or SUMP-like documents. Drawing on the project's five cross-cutting topics (people centricity, socio-economic and environmental impact, logistical processes, spatial planning, and viable business models), the analysis links pilot-level goals to relevant Sustainable Urban Mobility Indicators (SUMI) and identifies key performance indicators that can support future evaluation and replication. While the report does not measure these indicators quantitatively, it establishes a structured and transferable framework that positions MoLo Hubs within the broader European sustainability and mobility policy context.

Building on this mapping exercise, the report provides an analysis of the maturity of each host partner's mobility planning framework. Using a light assessment lens focused on innovation readiness and liveability, the analysis highlights how prepared each city is to support, integrate, and scale mobility and logistics hub solutions. The findings show different levels of maturity across the pilots, reflecting differences in planning traditions, governance structures, and policy development stages. Overall, the report demonstrates that MoLo Hubs interventions are well aligned with existing mobility strategies and, in several cases, actively contribute to advancing their objectives. As such, the report offers a practical reference for cities and regions seeking to embed mobility and logistics hubs within their own sustainable urban mobility planning processes.

1. Introduction

People-Centric Mobility & Logistics Hubs MoLo Hubs combines mobility hubs and logistics services to improve the quality of urban life and boost mobility transition. MoLo Hubs intends to cut emissions, reduce traffic, and create urban meeting places to make our cities more livable.

Five pilots make an important contribution to reducing urban traffic, increasing the attractiveness and functionality of urban mobility hubs and also give an insight into how user-centred logistics services can be designed.

Carried out in 5 pilot regions:
Aalborg (Denmark), Amsterdam (The Netherlands), Borås (Sweden), Hamburg (Germany), and Mechelen (Belgium).

1.1.1. What interventions are supported by the project?

Molo Hubs focuses on the integration of mobility hubs and logistic services as an effective solution in urban planning and city development for addressing the growing challenges of transportation and carbon emissions in modern cities.

Mobility hubs are urban locations where people can access multiple types of transportation. When combined with logistic services, these hubs can enable more effective last-mile delivery solutions, reducing the need for individual vehicle trips and minimising the carbon footprint.

This report is based on an assessment of the practical experiences from five pilot projects that combine mobility hubs with logistics, evaluated in the context of their strategic mobility plans. It aims to answer whether these interventions and their identified mobility transition goals are in sync with the policy objectives of their strategic mobility plans, or whether these plans need to further evolve and mature for them to become truly effective.

1.1.2. Who can benefit from this report?

This report serves as a benchmarking tool for cities and regions seeking to implement mobility and logistics hubs to improve their urban mobility ecosystems. By researching key mobility transition goals in the MoLo Hubs' host partner regions and linking them to relevant key performance indicators (KPIs) researched in the context of the project by the MoLo Hubs' knowledge partners, and to the sustainable urban mobility indicators (SUMI[1]), other cities and regions can have a point of reference with regard to the key sustainability goals needed to tackle when implementing mobility and logistic hubs. The key performance indicators researched, and the related SUMI indicators can also be replicated as a way for cities to develop standardised evaluation methods when assessing the performance of their mobility and logistics hub interventions.

Finally, the report can offer insights into which sustainable mobility goals are most likely to be achieved, based on the performance of the MoLo Hubs' host partner regions. A complete overview of the MoLo Hubs pilots' performance can be found in another MoLo Hubs project report titled 'Comprehensive Pilot Assessment', which provides a comparative evaluation highlighting the effectiveness, acceptance, success factors, and economic viability of each pilot.

1.1.3. Purpose of the report

This document reports the research on the key mobility transition goals of all involved MoLo Hubs' host partner regions. The goal of this report is to analyse how aligned the host partner regions' researched mobility transition goals are with their strategic mobility plans, that is, to identify whether the pilots' goals

[1] Based on the SUMI project (aimed at supporting the development of the SUMPs of 431 urban nodes defined in the TEN-T regulation). SUMI Final Recommendations MOVE/B4/2017-358

are answering to wider policy objectives of the cities' Sustainable Urban Mobility Plans (SUMPs). This alignment analysis helps determine whether mobility and logistics hub interventions are embedded within existing policy frameworks, thereby indicating the extent to which such solutions can be institutionally supported, sustained, and scaled beyond the pilot phase. Based on this process, the report ends with an analysis of the host partners' strategic mobility plans' maturity levels at the end of the pilot implementation phase. To be able to do this, the following steps were taken:

- A review of all MoLo Hubs' host partner regions' strategic mobility plans. These plans range from structured SUMP-like mobility plans to less complex, sectoral policy-oriented documents.
- With the support of the host partner regions, mobility transition goals have been identified and linked to the relevant cross-cutting topics' indicators defined in the joint data collection process. Additionally, the SUMI indicators linked to the cross-cutting topics have been included to further facilitate replicability.
- A comparison between the host partners' identified mobility transition goals with their strategic mobility plans to match these goals with their cities' key policy objectives.
- Analysing the host partners' mobility plans' maturity levels based on MoLo Hubs' interventions and their link to the cities' wider policy objectives.

2. What is a Sustainable Urban Mobility Plan (SUMP)?

The concept of a Sustainable Urban Mobility Plan (SUMP) originated from a desire to transform urban transport systems and improve quality of life through sustainability. A decade ago, cities began asking what infrastructure, innovations, and organisational changes were needed for such a transformation: this question remains at the heart of SUMP processes today.

A SUMP is an integrated, strategic, and long-term approach to transport planning. Its primary aim is to improve accessibility and enhance the quality of life in cities and their wider functional urban areas. At its core, a SUMP is built on three defining principles:

- **Sustainability**: The plan should address the mobility needs of both current and future generations at the municipal and regional levels.
- **Strategic Vision**: It requires going beyond policy statements by establishing a well-defined process paired with a concrete action plan.
- **Integration**: It should ensure cohesive planning across spatial areas, sectors, and timelines.

To be effective, SUMPs must be well integrated into already existing local and regional planning frameworks: they should align with municipal strategies, regional development plans, and broader urban policy objectives.

While the final output of SUMP processes is not always referred to as a SUMP itself, it typically results in a strategic document tailored and branded according to local contexts. In some cases, cities may brand their SUMP under a local name (e.g., "Good Move" in Brussels, Belgium), but the underlying principles and structure remain consistent with the broader SUMP methodology. These documents draw on existing plans and frameworks and are meant to guide broader sectoral planning in areas such as housing, health, and energy.

2.1. The SUMP Process: A 12-steps methodology

The development of a SUMP follows a structured 12-step methodology. Each step ensures that planning is inclusive, evidence-based, and aligned with urban development goals. More information on each step is provided in the visual below.

Figure 1 - Wheel of the SUMP process. Source: Ruprecht (2019).

To support these steps, various topic guides have been created[2]. These guides are not meant to replace the SUMP but provide essential complementary material to support its effective integration and implementation.

The SUMP reference materials provide comprehensive planning recommendations on established topics and are organised under different thematic areas. They have been developed through EU co-funded projects and are available to all cities to support them in preparing and implementing their individual SUMPs. These reference materials are grouped into four main scopes: geographical, policy objectives, mobility modes, and mobility enablers.

Several SUMP reference materials can support MoLo Hubs' host partners' implementation processes. Some of these include:

- Sustainable Urban Logistics Planning (SULPs) – Mobility modes scope.
- Decarbonisation of Urban Mobility – Policy objectives scope.
- Integrating Mobility Management for Public and Private organisations into SUMPs – Mobility enablers scope.
- Integration of Shared Mobility Approaches into SUMPs – Mobility modes scope.
- Harmonisation of Energy and Sustainable Urban Mobility Planning – Policy objectives scope
- Planning for More Resilient and Robust Urban Mobility – Policy objectives

[2] For more information, refer to: Expert corner: SUMP reference materials - European Commission

3. MoLo Hubs‘ key definitions

To understand the purpose of this report, it is essential to define several key concepts transversal to the project, i.e., the concepts of mobility hub, mobility space, the MOLOHUB's cross-cutting topics, mobility transition goals, and host partners' mobility ecosystem maturity level. Below, each of these concepts is defined:

3.1. Definitions:

3.1.1. Mobility Hub:

- Consolidates or redirects flows of people, goods, or services away from private vehicles.
- Integrates at least two functions, one related to logistics (e.g. parcel lockers, micro-depots, service technician base, reuse/waste return) and one related to mobility (e.g. PT stop, bike parking/charging, micromobility docking, or modular space for active mobility).
- Acts as a point of interface between users and the wider mobility/logistics system, with the potential to reduce emissions, congestion, and space pressure while improving accessibility and service diversity.

3.1.2. Mobility space:

Space available to the public or a public realm that changes function due to the hub.

3.1.3. MoLo Hubs' cross-cutting topics:

These cross-cutting topics address themes that are relevant for implementing effective urban mobility hubs. Each topic addresses key aspects that contribute to the success and sustainability of mobility and logistics initiatives:

- ***People centricity (user experience & people centricity):*** This theme focuses on user experience, ensuring that solutions are designed around the needs and preferences of citizens. By prioritising people-centric approaches, the project enhances user satisfaction and adoption. For mobility and logistics hubs to be effective, they must be designed in the light of the needs, habits, and preferences of end-users. Focusing on people-centricity ensures that the initiatives address user barriers, increasing the functionality and likelihood of adoption. Involving stakeholders helps build stronger support and collaboration, not just with end-users but also with others impacted by the hubs
- ***Socio-economic and environmental impact (socio-economic and environmental impact):*** Assessing the broader impacts of mobility and logistic initiatives allows for important impact assessments. This theme evaluates how pilots affect communities and the environment, guiding necessary adjustments. Assessing the social, economic, and environmental impacts of MoLo Hubs is essential for ensuring that they provide systemic benefits to the local community and align with broader sustainability goals.

- ***Changed logistical processes (operator view: Logistical processes and supply chain)***: Understanding and assessing logistical processes from the operator's perspective is critical for efficiency. This theme helps identify best practices and streamline pilot operations.
- ***Recommended practices in spatial planning (spatial planning and city design):*** Effective spatial design is vital for integrating mobility solutions into local hubs. This topic ensures that pilots are designed and aligned with the broader spatial planning in the cities.
- ***A viable business case (multi-stakeholder business cases):*** Establishing a solid business model is essential for the long-term sustainability of initiatives. This topic emphasises the importance of engaging multiple stakeholders to secure funding and support.

This report draws on research by MoLo Hubs' knowledge partners on the relevant KPIs for each of these cross-cutting topics, selecting several key KPIs and linking them to the pilots' mobility transition goals. These KPIs, which were consolidated into a data collection framework by the project's knowledge partners, are necessary to create a benchmarking tool that facilitates replicability in other cities and regions seeking to identify key sustainability goals to tackle when implementing mobility and logistics hubs.

3.1.4. Mobility transition goals/SUMP goals:

Mobility transition goals can be identified as those key priority topics across the different fields of sustainable mobility (accessibility, safety, sustainability, resilience, adaptability) that are needed to make a mobility ecosystem more livable and ready for innovation (From the EGUM page on SUMPS).

3.1.5. Urban Mobility ecosystem maturity level:

Based on SPROUT's definition of an innovative urban mobility ecosystem.

3.1.6. Host partners' mobility plans' maturity level in the MoLo Hubs context

The **maturity level** of an urban mobility ecosystem, **inspired by the conceptual framing developed in the SPROUT project**, reflects how comprehensively a city or region has built the **institutional, infrastructural, social, economic, and environmental capacities** to design, implement, and scale innovative and sustainable urban mobility and logistics solutions[3]. In the MoLo Hubs project, this maturity is assessed by analysing both **Innovation Readiness** and **Liveability**, in alignment with each city's **mobility transition goals**, SUMI indicators, and MoLo's five **cross-cutting topics**:

Innovation Readiness

This dimension assesses how prepared a city is to enable, scale, and sustain innovation. It reflects capabilities in governance, data use, planning, funding, and stakeholder collaboration. In the MoLo context, this includes:

- **Viable business cases**: Multi-stakeholder funding and operating models for long-term impact.

[3] Ayfantopoulou, G., Touloumidis, D.T. & Xenou, E. (2022). D5.2: Urban policy system dynamics model. SPROUT project. D5.2: Urban policy system dynamics model - Polis Sprout

- **Changed logistical processes**: The integration of innovative supply chain solutions and operational models.
- **Spatial planning alignment**: Effective integration of mobility/logistic hubs into local urban design and city-wide strategic plans.

A mature ecosystem in innovation readiness is marked by strategic leadership, open data practices, a collaborative culture, and the institutional agility to adapt. The host partners' mobility plans must include key objectives linked to innovation readiness.

Liveability

Liveability captures how mobility systems support urban quality of life and innovation uptake. In the MoLo Hubs framework, this includes:

- **People centricity**: Designing hub services around the behaviours, preferences, and needs of users.
- **Socio-economic and environmental impact**: Assessing systemic effects on equity, emissions, community well-being, and public space.

A highly liveable system ensures equitable access, safety, multimodality, and environmental sustainability. The host partners' mobility plans must include key objectives linked to liveability.

3.1.7. Assessment process:

The maturity assessment presented in this report is qualitative in nature and is based on a structured review of strategic mobility documents and expert judgement, rather than on scoring, ranking, or benchmarking between cities. The purpose is to provide an indicative understanding of planning readiness and alignment, not to assign performance scores or compare cities against a fixed maturity scale.

The maturity level is derived from:

1. A review of host partners' mobility strategies (e.g. SUMP-like plans).
2. Mapping and matching mobility transition goals to relevant key policy objectives of the host partners' mobility plans.
3. Analysing if the identified mobility transition goals are in sync with the policy objectives of their strategic mobility plans, or whether these plans need to further evolve and mature for them to become truly effective.

Ultimately, a mature urban mobility ecosystem in the MoLo Hubs context is one that not only demonstrates high **innovation capacity** and strong **governance mechanisms** but also delivers **user-focused, sustainable**, and **spatially integrated solutions**, contributing to a resilient and adaptive urban mobility landscape.

4. Identifying mobility transitions goals in the host partners‘ regions

With the support of the host partner regions, mobility transition goals have been identified and linked to the SUMI indicators as well as to the relevant cross-cutting topics' indicators defined in the joint data collection process.

To facilitate the analysis and the cross-comparison of the host partners' maturity levels, there is a pool of mobility transition goals that apply to all pilots and that are related to general sustainable mobility goals such as accessibility, liveability, and clean air. However, it is explained how they individually achieve these goals with their specific interventions. Additionally, pilots that present similarities, i.e., those linked to waste collection, share several mobility transition goals as well.

In the tables below, all researched mobility transition goals identified for each host partner region are presented, along with their links to the cross-cutting topics through the relevant SUMI indicators, which are aligned with key performance indicators (KPIs) defined in the Molo Hubs' data collection framework.

4.1. Link to relevant cross-cutting topics, KPIs and SUMI indicators

The cross-cutting topics identified within the MoLo Hubs project provide a lens for understanding how mobility and logistics hubs influence wider urban mobility systems. These five themes (user-centred design, socio-economic and environmental impact, logistical processes, spatial planning, and viable business models) capture important dimensions that shape the effectiveness, acceptance, and long-term sustainability of local hubs.

Although the analysis in this report does not evaluate pilot performance through a strict KPI-based methodology, the project's broader data collection work offers complementary insights into how mobility transition goals relate to indicators of sustainable urban mobility. In this context, SUMI indicators are used as a common reference framework to position the pilots within a wider European sustainable mobility context, rather than as a direct measurement tool, reflecting the pilot-scale and heterogeneous nature of the interventions. During the creation of this report, KPIs were identified for each cross-cutting topic and connected to the Sustainable Urban Mobility Indicators (SUMI). These indicators provide a European reference point for assessing themes such as emissions, public space quality, multimodality, and congestion.

In this context, the KPIs and SUMI indicators serve an important function. They help situate the MoLo Hubs mobility transition goals within the wider EU policy landscape and demonstrate how the project contributes to broader European ambitions for climate neutrality, liveability, and efficient mobility systems.

This connection is particularly relevant given the overarching aims of the Interreg North Sea Programme, which emphasises:

- Sustainable and climate-resilient mobility,
- Reduction of environmental pressures,
- Innovation in urban logistics and mobility services, and
- Enhanced regional cooperation and knowledge transfer.

By aligning the project's mobility transition goals with these broader frameworks, MoLo Hubs illustrates how integrated mobility and logistics hubs can advance both local SUMP objectives and the strategic priorities of European territorial cooperation.

The tables presented in this chapter section draw on these connections by showing how each host partner's mobility transition goals relate to the project's cross-cutting topics, and how these goals reflect themes captured in European sustainability indicators. These references support the comparability and transferability of findings and highlight the role of MoLo Hubs within the broader evolution of sustainable urban mobility planning across Europe.

The applicability level in Table 1 refers to the degree to which an indicator is directly addressed by the MoLo Hubs pilot interventions, rather than to its geographical coverage. An indicator with low applicability may still be relevant across all pilot sites but typically reflects indirect or secondary effects of the interventions (e.g. noise hindrance). Therefore, indicators with medium or high applicability are more directly linked to the pilots' objectives and activities.

Below are the SUMI indicators and relevant key performance indicators identified:

SUMI Indicator Identified	Applicability level[4]	Pilot site
Air pollutant emissions	Medium	All
Noise hindrance	Low	All
Quality of public spaces	High	All
Urban functional diversity	Medium	All
Commuting travel time	Low	MEC, AMS
Mobility space usage	Medium	MEC, AMS
Emissions of greenhouse gases	High	All
Congestion and delays	Medium	MEC, AMS
Opportunity for active mobility	Low	MEC
Multimodal integration	Medium	MEC

Table 1 – Identified relevant Sustainable Urban Mobility Indicators (SUMI)

The KPIs identified in this report serve different analytical purposes and vary in nature. Some indicators reflect operational aspects of the pilots (e.g. number of trips handled or services offered at hubs), while others are perception-based (e.g. user satisfaction or perceived noise levels) or rely on estimated or proxy measures (e.g. avoided vehicle kilometres or emission reductions). This mix reflects the pilot-scale and heterogeneous nature of the interventions, where fully standardised measurement is not always feasible. As such, the KPIs are intended to be practical and indicative, supporting reflection and future evaluation rather than enabling direct performance comparison between cities.

1. **Emissions reduction** (*air pollutants + GHGs*)
    a. KPI 1.1: % of hub-served trips using zero-emission modes (cargo bikes, EVs, walking)
    b. KPI 1.2: Estimated number of van trips avoided per day/week
    c. CO_2e/unit (g/parcel), if operator data availability allows

2. **Noise hindrance**
    a. KPI 2.1: Share of deliveries performed by quiet modes (cargo bikes, EVs)
    b. KPI 2.2 (perception-based): % of residents/users rating noise as “low/acceptable” near hubs

3. **Quality of public spaces**
    a. KPI 3.1: Perception of public space quality

4. **Urban functional diversity**
    a. KPI 4.1: Number of different services available at hub (parcel lockers, reuse/waste, bike charging, tool rental)
    b. KPI 4.2: % of hubs with ≥1 distinct functions (logistics + mobility + community)

5. **Commuting travel time**
    a. KPI 5.1: % of delivery staff/technicians reporting time saved compared to baseline
    b. KPI 5.2: Average time saved per trip (self-reported, minutes)

6. **Mobility space usage**
    a. KPI 6.1: Number of trips (deliveries, pickups, returns) handled through hub per day
    b. KPI 6.2: Utilisation rate of hub facilities (% occupancy/usage of lockers, bays, parking)

7. **Congestion and delays**
    a. KPI 7.1: Estimated number of driven kilometres avoided in the pilot area per month or per duration of the pilot
    b. KPI 7.2: % of logistics trips performed outside peak traffic hours (if data available)

[4] The applicability level in this table relates to the importance of the different SUMI indicator categories within the scope of the MoLo Hubs project.

8. **Opportunity for active mobility**
    a. KPI 8.1: Increased share of active mobility options

9. **Multimodal integration**
    a. KPI 9.1: % of hubs offering both logistics and ≥1 transport service (e.g. PT stop, bike parking, micromobility dock).
    b. KPI 9.2: User satisfaction with connections across modes (e.g. survey, 1–5 scale)

4.2. Tables linking the mobility transition goals to relevant cross-cutting topics

The following tables summarise how each pilot's mobility transition goals relate to relevant SUMI indicators and to the practical KPIs identified during the project's data collection work. While these KPIs are not measured within this report, documenting their connection to the pilots' goals ensures that the methodology remains transparent and replicable. This structure also positions the MoLo Hubs interventions within a broader European sustainability framework, supporting comparability with other cities and alignment with wider mobility transition objectives. The tables below provide a clear overview of these relationships for each host partner region.

In the tables below, mobility transition goals, KPIs, and SUMI indicators are presented together to support readability and comparability across pilots, but they serve distinct analytical functions. Mobility transition goals express the normative ambitions of each pilot, describing what the intervention seeks to achieve. The KPIs represent practical and operational proxies that could be used to track progress at the local level, while the SUMI indicators provide a policy-level reference, situating these goals within a wider European sustainable mobility framework. Presenting these elements side by side helps illustrate how pilot-level ambitions can be operationalised and linked to broader policy objectives, without implying a direct or uniform measurement approach.

While the SUMI framework comprises a broader set of indicators, several of them (such as commuting travel time or opportunities for active mobility) were not applicable to the specific interventions implemented within MoLo Hubs. Their exclusion reflects the practical scope of the pilots rather than their general relevance. In other urban contexts or future projects, these indicators may play a more prominent role and can be integrated accordingly. The indicators retained here, therefore, represent the most meaningful and replicable alignment between the MoLo Hubs pilots, their mobility transition goals, and the wider European sustainable mobility framework.

Aalborg:

Mobility Transition Goal	Relevant SUMI Indicators	Relevant KPIs (replicable)	Cross-Cutting Topics
Better accessibility	Quality of public spaces; Urban functional diversity	KPI 3.1 (perception of public space quality); KPI 4.1 (number of services at hub)	People-centred design; Spatial planning
Enhanced liveability	Quality of public spaces; Emissions reduction; Noise hindrance	KPI 1.1 (% zero-emission trips); KPI 3.1 (perception of public space quality); KPI 2.2 (noise perception)	People-centred design; Socio-economic & environmental impact
Reduce diesel vans / traffic	Emissions reduction; Congestion & delays; Noise hindrance	KPI 1.2 (van trips avoided); KPI 2.1 (quiet mode deliveries); KPI 7.1 (km avoided)	Logistics processes; Socio-economic & environmental impact

Improve waste sorting/logistics	Urban functional diversity; Emissions reduction; Noise hindrance	KPI 4.1 (service diversity incl. reuse); KPI 1.1 (% zero-emission collection trips); KPI 2.1 (quiet mode deliveries)	Logistics processes; Socio-economic & environmental impact
Establish hub network	Multimodal integration; Mobility space usage	KPI 9.1 (% hubs offering both logistics + mobility services); KPI 6.2 (hub utilisation rate)	Spatial planning & city design
Multifunctional hub spaces	Urban functional diversity	KPI 4.1 (number of distinct services/functions)	Spatial planning & city design

Table 2 – Aalborg table for analysis

Amsterdam:

Mobility Transition Goal	Relevant SUMI Indicators	Relevant KPIs (replicable)	Cross-Cutting Topics
Better accessibility	Quality of public spaces; Urban functional diversity; Noise hindrance	KPI 3.1 (public space quality perception); KPI 4.1 (number of services at hub); KPI 2.2 (noise perception)	People-centred design; Spatial planning
Reduce pressure on public space	Mobility space usage; Noise hindrance	KPI 6.1 (daily hub transactions); KPI 6.2 (space utilisation rate); KPI 2.1 (quiet modes); KPI 2.2 (noise perception)	Spatial planning & city design
Zero-emission city logistics	Emissions reduction; Noise hindrance	KPI 1.1 (% zero-emission logistics trips); KPI 1.2 (van trips avoided); KPI 2.1 (quiet modes)	Logistics processes; Socio-economic & environmental impact
Reduce van kilometres	Congestion & delays; Emissions reduction; Noise hindrance	KPI 7.1 (km avoided); KPI 7.2 (% trips outside peak hours); KPI 2.1 (quiet modes)	Logistics processes
Establish multimodal hub network	Multimodal integration; Urban functional diversity	KPI 9.1 (% hubs with transport + logistics functions); KPI 4.2 (% hubs with ≥1 distinct service type)	Spatial planning; People-centred design
Improve service variety	Urban functional diversity	KPI 4.1 (number of different services at hub)	Spatial planning; People-centred design

Table 3 – Amsterdam table for analysis

Borås:

Mobility Transition Goal	Relevant SUMI Indicators	Relevant KPIs (replicable)	Cross-Cutting Topics
Increase sustainable travel modes	Opportunity for active mobility; Multimodal integration	KPI 9.2 (user satisfaction across modes)	People-centred design; Spatial planning

Improve waste collection processes (Returpunkten)	Urban functional diversity; Emissions reduction; Noise hindrance	KPI 4.1 (service diversity incl. reuse); KPI 1.1 (% zero-emission collection trips); KPI 2.1 (quiet modes)	Logistics processes; Socio-economic & environmental impact
Support multimodal node development (TEN-T requirement)	Multimodal integration; Mobility space usage	KPI 9.1 (% multimodal hubs); KPI 6.2 (hub utilisation)	Spatial planning & city design
Reduce congestion from freight	Congestion & delays; Noise hindrance	KPI 7.1 (km avoided); KPI 2.1 (quiet modes)	Logistics processes
Prepare for emission-free mobility	Emissions reduction; Noise hindrance	KPI 1.1 (% zero-emission trips); KPI 2.1 (quiet modes)	Socio-economic & environmental impact
Create multifunctional local hubs	Urban functional diversity	KPI 4.1 (service diversity)	Spatial planning; People-centred design

Table 4 – Boras table for analysis

Hamburg:

Mobility Transition Goal	Relevant SUMI Indicators	Relevant KPIs (replicable)	Cross-Cutting Topics
Reduce emissions & support alternative drivetrains	Emissions reduction; Noise hindrance	KPI 1.1 (% zero-emission trips); CO_2e/unit; KPI 2.1 (quiet modes)	Socio-economic & environmental impact
Improve commercial traffic efficiency	Congestion & delays; Noise hindrance	KPI 7.1 (km avoided); KPI 7.2 (% trips outside peak hours); KPI 2.1 (quiet modes)	Logistics processes
Support multimodal logistics hubs	Multimodal integration; Urban functional diversity	KPI 9.1 (% multimodal hubs); KPI 4.1 (service count)	Spatial planning; Logistics processes
Reduce curbside pressure	Mobility space usage; Quality of public spaces; Noise hindrance	KPI 6.2 (space utilisation); KPI 3.1 (public space quality perception); KPI 2.2 (noise perception)	Spatial planning & city design
Promote modal shift to sustainable modes	Opportunity for active mobility; Multimodal integration; Noise hindrance	KPI 9.2 (user satisfaction across modes); KPI 2.2 (noise perception)	People-centred design
Digitalise traffic/logistics management	Congestion & delays	KPI 7.1 (km avoided)	Logistics processes

Table 5 – Hamburg table for analysis

Mechelen:

Mobility Transition Goal	Relevant SUMI Indicators	Relevant KPIs (replicable)	Cross-Cutting Topics
Improve accessibility & multimodal travel	Multimodal integration; Quality of public spaces; Noise hindrance	KPI 9.1 (% hubs offering mobility + logistics); KPI 3.x (public space perception); KPI 2.2 (noise perception)	People-centred design; Spatial planning
Reduce vehicle kilometres	Emissions reduction; Congestion & delays; Noise hindrance	KPI 1.2 (van trips avoided); KPI 7.1 (km avoided); KPI 2.1 (quiet modes)	Socio-economic & environmental impact
Promote emission-free logistics	Emissions reduction; Noise hindrance	KPI 1.1 (% zero-emission trips); CO_2e/unit; KPI 2.1 (quiet modes)	Logistics processes; Environmental impact
Strengthen Hoppinpunten / hub roles	Urban functional diversity; Multimodal integration	KPI 4.1 (service diversity); KPI 9.1 (multimodal integration)	Spatial planning; People-centred design
Support behavioural change	Opportunity for active mobility; Noise hindrance	KPI 2.2 (noise perception); KPI 9.2 (user satisfaction with connections)	People-centred design
Improve parcel logistics efficiency	Mobility space usage; Congestion & delays; Noise hindrance	KPI 6.1 (locker transactions); KPI 6.2 (utilisation); KPI 2.1 (quiet modes)	Logistics processes

Table 6 – Mechelen table for analysis

4.3. Mapping and matching mobility transition goals to relevant key policy objectives of the host partners‘ mobility plans and analysing the maturity levels

To better understand how the MoLo Hubs pilots are contributing to the long-term sustainable mobility transformation of their respective cities, it is essential to understand how the identified mobility transition goals align with the strategic direction set out in each city’s SUMP or equivalent mobility plan framework.

Mobility transition goals reflect the core ambitions that the pilots aim to support. Such as improving accessibility, reducing emissions, enhancing public space, or enabling modal shift. However, these goals only gain higher relevance when considered in relation to the wider policy objectives that guide mobility planning at the municipal or regional level.

This section aims to bring these elements together. With the support of the host partners, each mobility transition goal identified for the MoLo Hubs pilots has been mapped against the key objectives found in their respective SUMPs or strategic mobility plans[5]. This process ensures that the project’s ambitions are not analysed in isolation, but within the broader policy contexts that shape mobility development in Aalborg, Amsterdam, Borås, Hamburg, and Mechelen.

[5] This process is documented in individual pilot tables matching the research pilots’ mobility transition goals with the key policy objectives of their broader mobility planning framework. The tables are available in the annex of the present report.

4.3.1. Aalborg[6]:

For the Aalborg pilot, the mobility transition goals identified within the MoLo Hubs project were matched against strategic objectives from *Mobility Plan 2040* and supporting municipal plans. The mapping provided by the city shows strong alignment between MoLo Hubs' cross-cutting topics and Aalborg's priorities on accessibility, climate-friendly mobility, circular resource management, and integrated multimodal hubs.

For instance, goals related to better accessibility and enhanced liveability were linked to *Mobility Plan 2040* statements emphasising that "everyone has access to mobility" and that new initiatives must be "climate-friendly and embrace technology."[7] Goals concerning waste sorting and reusable materials were matched with Aalborg's *Waste Plan 2026–2037*, which highlights the need to "support residents in apartment buildings with proper waste sorting" (p. 11) and to expand reuse opportunities (p. 5).[8] The goal of reducing traffic intensities was associated with the Climate Plan's commitment to reducing transport emissions by 65,000 tonnes by 2030.[9] Finally, the transition goal of establishing a hub network corresponded with Aalborg's ambition to develop hubs that "support the possibility of changing modes of transport during the journey."[10]

This mapping demonstrates that the Aalborg pilot directly reinforces the city's long-term ambitions for access, emissions reduction, circular resource flows, and an integrated, multimodal mobility system.

4.3.2. Amsterdam[11]:

For the Amsterdam pilot, the mobility transition goals identified within the MoLo Hubs project were matched with strategic objectives from two key municipal documents: the *Hubvisie* and the *Uitvoeringsagenda uitstootvrije mobiliteit*. The mapping shows a strong connection between MoLo Hubs' cross-cutting topics and Amsterdam's ambitions for space-efficient mobility, zero-emission logistics, and the development of a coherent network of multimodal and logistics hubs.

For example, the goal of better accessibility was linked to the *Hubvisie* principle that hubs "contribute to the accessibility and liveability of the entire region" (p. 8)[12], while goals related to multimodal integration were matched with descriptions of hubs as "transfer points in the travel or logistics chain" that support efficient connections between regional and urban mobility (p. 7).[13] Goals addressing reduced environmental impact and fewer diesel vans aligned with Amsterdam's Clean Air ambitions, including the city's commitment that "all motorised road traffic should be emission-free from 2030" (p. 6).[14] The objective to reduce pressure on urban space corresponds with passages emphasising the need for "space-efficient solutions" in a growing and densifying city (p. 8).[15]

The mapping also highlights the city's focus on logistics efficiency and consolidated flows, reflected in *Hubvisie* statements on bundling deliveries, data-driven optimisation, and providing charging capacity at hubs (p. 12; p. 27).[16] The goal of establishing a hub network directly corresponds with Amsterdam's long-term vision of a connected system of diverse hub types forming a "joint network in the city" (p. 12).[17] Taken together, the mapping demonstrates that the MoLo Hubs pilot strongly reinforces Amsterdam's policy direction toward multimodal accessibility, zero-emission logistics, and the efficient use of scarce public space.

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[6] The Aalborg pilot used their key mobility document "Mobility Plan 2040" as their reference for the analysis. The document is available at https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/mobilitet-2040.

[7] *Mobility Plan 2040*, Aalborg Municipality. Extracted from pilot mapping table.

[8] *Waste Plan 2026–2037*, Aalborg Municipality, pp. 5, 11.

[9] Aalborg Climate Plan, transport emissions objective.

[10] *Mobility Plan 2040*, section on multimodal hubs.

[11] The Amsterdam pilot used two key mobility documents, the "Uitvoeringsagenda" and the "Hubvisie".

[12] *Hubvisie*, City of Amsterdam, p. 8.

[13] *Hubvisie*, p. 7.

[14] *Uitvoeringsagenda uitstootvrije mobiliteit*, p. 6.

[15] *Hubvisie*, p. 8.

[16] *Hubvisie*, pp. 12, 27.

[17] *Hubvisie*, p. 12.

4.3.3. Borås[18]:

For Borås, the mobility transition goals identified within the MoLo Hubs project were matched with the strategic ambitions outlined in the city's ongoing Traffic Programme and in the mobility requirements set for urban nodes under the revised TEN-T Regulation. The mapping provided by the Borås team shows clear alignment between the Returpunkten pilot, a reuse and return hub supporting circular economy objectives, and the city's broader priorities for sustainable mobility, freight efficiency, and reduced environmental impact.

The pilot's goals relating to improving reuse and waste return logistics, reducing freight-related impacts, and supporting more resource-efficient flows correspond with the Traffic Programme's focus on integrating goods transport into long-term mobility planning and reducing its environmental footprint.[19] The ambition to develop multifunctional nodes through Returpunkten aligns with Borås' broader efforts to enhance local accessibility and support circular services within neighbourhoods.[20] Additionally, several transition goals, such as preparing for emission-free logistics and strengthening the role of hubs in the network, reflect obligations for designated TEN-T urban nodes to develop integrated, sustainable logistics systems and multimodal hubs by 2030.[21]

Taken together, the mapping suggests that Borås' mobility planning framework already incorporates many of the conditions needed to support hub-based logistics and circular services. At the same time, the pilot highlights areas where further development may be needed to meet future TEN-T requirements, particularly regarding the adoption of a formal SUMP and the expansion of multimodal hub functions.

4.3.4. Hamburg[22]:

For Hamburg, the mobility transition goals identified within the MoLo Hubs project were compared with the strategic objectives outlined in the city's *Verkehrsentwicklungsplanung Hamburg (Strategie Mobilitätswende)*. The internal mapping provided by the pilot team indicates strong alignment between the ambitions of MoLo Hubs and Hamburg's broader policy direction, particularly in areas such as emissions reduction, multimodal mobility, and the optimisation of urban space.

Goals related to climate-friendly logistics and reduced van traffic were matched with Hamburg's overarching commitment to CO_2 reduction and the promotion of alternative drivetrains (p. 14).[23] The city also connected MoLo Hubs objectives on efficient commercial traffic and consolidated logistics flows to policy goals aimed at improving the organisation and sustainability of "Wirtschaftsverkehr," including measures to reduce congestion and support more efficient goods distribution (p. 7).[24] Goals focusing on multimodal integration and behavioural change correspond to the plan's emphasis on strengthening cycling, walking, and public transport, and on encouraging a modal shift through high-quality, connected infrastructure (pp. 4–5; pp. 11–12).[25] Hamburg additionally linked transition goals involving public space use and curbside pressure to its strategic ambition to reallocate street space in favour of sustainable modes and more efficient mobility services (p. 13).[26] Finally, digital elements of the mobility transition were associated with the city's priorities for enhanced traffic management, data use, and digital mobility services (p. 16).[27]

[18] The Boras pilot used their strategic policy document, titled *"Traffic programme".*
[19] *Traffic Programme, City of Borås*, pp. 8–9.
[20] Ibid., p. 12.
[21] Regulation (EU) 2024/1679 on the trans-European transport network (TEN-T).
[22] The Hamburg pilot used their key document, *Verkehrsentwicklungsplanung Hamburg (Strategie Mobilitätswende).*
[23] *Verkehrsentwicklungsplanung Hamburg – Strategie Mobilitätswende*, p. 14.
[24] Ibid., p. 7.
[25] Ibid., pp. 4–5, 11–12.
[26] Ibid., p. 13.
[27] Ibid., p. 16.

Taken together, the mapping shows that the Hamburg pilot reinforces key elements of the city's Mobilitätswende, supporting its long-term vision of a low-emission, space-efficient, and highly multimodal urban mobility system.

4.3.5. Mechelen[28]:

For the Mechelen pilot, the mobility transition goals identified within the MoLo Hubs project were compared against the strategic objectives outlined in *Vervoerregio Mechelen 2030 – Ontwerp regionaal mobiliteitsplan*. The mapping provided by the city shows a strong alignment between MoLo Hubs' ambitions and the region's vision for accessible, multimodal, and space-efficient mobility.

Mechelen connected goals related to accessibility, user experience, and liveability with the plan's emphasis on creating high-quality multimodal nodes, secure bicycle parking, and seamless connections between transport modes (pp. 36–37).[29] The city also highlighted the relevance of mobility hubs as places that can enhance public space quality and stimulate local urban development (p. 37). Goals focused on reducing vehicle kilometres, shifting to sustainable modes, and lowering emissions were matched with regional objectives to promote behavioural change and strengthen climate-friendly mobility, including the aim to reduce car use and expand active and shared mobility options (pp. 15, 22, 37).[30]

The mapping further showed how Mechelen's logistics-related goals align with the plan's discussion of parcel logistics and micro-hub concepts, such as the role of parcel lockers and neighbourhood-level delivery solutions in reducing vehicle movements and improving efficiency (p. 49).[31] The city also linked hub-related goals to spatial planning ambitions, particularly the intention to concentrate development around accessible public transport corridors and to use mobility nodes as anchors for more efficient mobility patterns (p. 41).[32] Finally, Mechelen noted that the mobility plan supports identifying and preparing suitable locations for hubs and transit points, reinforcing the potential for MoLo Hubs to contribute to a more scalable and sustainable logistics network for the region (p. 42).[33]
Overall, the mapping demonstrates that the Mechelen pilot is well-positioned within the region's long-term mobility strategy, supporting objectives on accessibility, emissions reduction, multimodal integration, and sustainable logistics.

4.3.6. Summary of the host partners' mobility planning maturity levels:

To conclude the analysis of each host partner's mobility planning context, the table below provides a comparative overview of the maturity levels reflected in their strategic mobility documents. This summary brings together the key findings from the individual assessments and highlights how prepared each city is to support, integrate, and scale mobility and logistics hub solutions. While the degree of maturity varies across the pilots, each city demonstrates clear alignment between its mobility transition goals and the broader planning frameworks in place.

City	Key characteristics of the pilots' mobility planning frameworks	Maturity Assessment
Aalborg	Strong alignment with accessibility, climate goals, and circular economy objectives	**Relatively high maturity** for hosting and scaling mobility and logistics hubs
Amsterdam	Clear strategic documents (*Hubvisie*, *Uitvoeringsagenda*) and strong policy alignment	**High-maturity context** supporting hub development and integration

[28] The Mechelen pilot used their regional key document titled, *Vervoerregio Mechelen 2030.*
[29] *Vervoerregio Mechelen 2030 – Ontwerp regionaal mobiliteitsplan*, pp. 36–37.
[30] Ibid., pp. 15, 22, 37.
[31] Ibid., p. 49.
[32] Ibid., p. 41.
[33] Ibid., p. 42.

Borås	Traffic Programme under development, strong TEN-T obligations, Returpunkten aligned with circular services	**Emerging but developing maturity**, with increasing alignment to hub-based solutions
Hamburg	Strong institutional commitment to *Mobilitätswende*, established multimodality and logistics management frameworks	**Very mature ecosystem** with high readiness for scaling
Mechelen	Regional mobility plan supportive of hubs; strong multimodality, parcel logistics integration, and behavioural goals	**Moderate to high maturity**, with solid foundations for further development

Table 7 – Summary table for maturity analysis

5. Conclusion

The MoLo Hubs project demonstrates how integrated mobility and logistics hubs can support broader sustainable mobility transitions across diverse urban contexts. By analysing the mobility transition goals identified by each host partner region and comparing them with the policy objectives of their strategic mobility plans, the report provides insight into how mature each region's mobility ecosystem is in relation to innovation readiness and liveability.

The maturity assessment is based on the conceptual framework inspired by the SPROUT project, which defines a mature urban mobility ecosystem as one that has developed the institutional, infrastructural, social, economic, and environmental capacities needed to design, implement, and scale innovative mobility and logistics solutions. In the MoLo Hubs context, this maturity is evaluated through two dimensions: Innovation Readiness, which includes viable business cases, changed logistical processes; and Liveability, which encompasses people-centric design, socio-economic and environmental impact and alignment with spatial planning

Across all pilots, mobility transition goals were identified and linked to relevant SUMI indicators and relevant KPIs of the project's cross-cutting topics, ensuring that the analysis is both comparable and replicable. These goals reflect shared ambitions, such as emissions reduction, improved public space quality, multimodal integration, and reduced congestion, while also capturing pilot-specific priorities like waste collection improvements or the development of additional services in the planned multifunctional hubs.

The review of each host partner's broader mobility planning framework shows varying degrees of maturity. Some regions operate with structured SUMP-like plans that already integrate long-term visions for sustainable mobility, spatial planning, and logistics innovation. Others rely on less complex, sectoral policy documents that nonetheless provide good grounds for aligning MoLo Hubs interventions with broader mobility policy objectives. In all cases, the pilots contribute to strengthening the connection between practical interventions and strategic planning frameworks.

By mapping mobility transition goals to policy objectives and assessing how well these objectives are embedded in existing mobility plans, the report highlights where plans are already well aligned with MoLo Hubs' ambitions and where further evolution is needed. Ultimately, the maturity levels reflect not only the current state of planning but also each region's capacity to support user-centred, sustainable, and spatially integrated mobility solutions. The MoLo Hubs pilots therefore serve as both practical demonstrations and strategic initiatives, helping cities advance toward more resilient and adaptive urban mobility ecosystems

MoLo Hubs

Interreg North Sea

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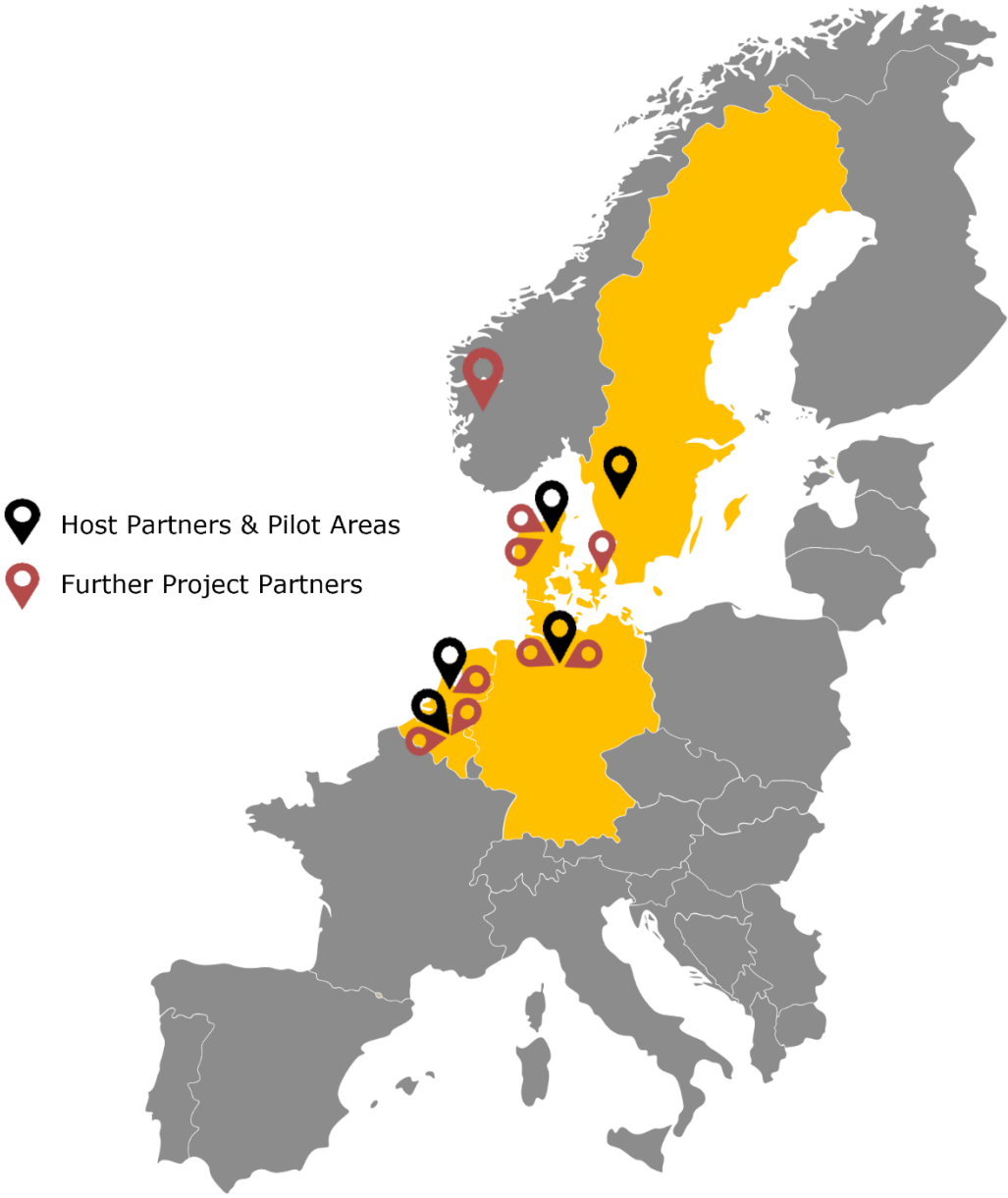

Project Partners

Aalborg Kommune

Amsterdam University of Applied Sciences

BORÅS STAD

CITY OF BERGEN

Gemeente Amsterdam

HITCE

HOMERUNNER

LOGISTICS INITIATIVE HAMBURG

MECHELEN

POLIS
CITIES AND REGIONS FOR TRANSPORT INNOVATION

Transition

STADTREINIGUNG.HAMBURG

University of Antwerp
TPR | Department of Transport and Regional Economics

venture NORDJYLLAND

6. Annex :

6.1. Aalborg:

Pilot: Aalborg	Link to cross-cutting topics/Mobility plan objectives									
SUMP Goals identified in the April workshop	User experience & people centricity	Closest objective identified in the mobility plan	Logistics processes	Closest objective identified in the mobility plan	Socioeconomic and environmental	Closest objective identified in the mobility plan	Spatial planning and city design	Closest objective identified in the mobility plan	Business model	Closest objective identified in the mobility plan
Better accessibility for public services and parcels	x	“Sustainable mobility is a shared responsibility. It places demands on all of us. We must ensure that everyone has access to mobility, and it is important that we are aware of our roles and responsibilitis both in municipalities as public authorities and in the private sector with new business models emerging.” (Mobility plan	x				x	"Accessibility is essential for both people and goods. At the same time, new mobility initiatives must be climate-friendly and embrace technology and other future trends." (Mobility plan 2040, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/mobilitet-2040#overskrift6)	x	"Sustainable mobility is a shared responsibility. It places demands on all of us. We must ensure that everyone has access to mobility, and it is important that we are aware of our roles and responsibilities—both within municipalities as public authorities and in the private sector with emerging business models." (Mobility 2040,

		2040, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/mobilitet-2040)								https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/mobilitet-2040#overskrift7)
Enhanced livability (lockers in close proximity)	x	"We prioritize integrated solutions that create a balance between individual needs and shared challenges." (Mobility plan 2040, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/mobilitet-2040#overskrift7)	x	"Accessibility is essential for both people and goods. At the same time, new mobility initiatives must be climate-friendly and embrace technology and other future trends." (Mobility plan 2040, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/mobilitet-2040#overskrift6)	x	"The Climate Plan outlines a path to reduce transport emissions by 65,000 tons by 2030. This reduction target is part of the upcoming revision of Aalborg Municipality's future mobility plan, 'Mobility 2040'. In addition, local production of green transport fuels contributes to a CO_2 reduction of 180,000 tons." (Climate plan, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/introduktion-til-klimaplan#overskrift8)	x	"Development of sustainable roads, including rethinking construction standards and gathering knowledge from pilot and development projects." (Climate plan, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/introduktion-til-klimaplan#overskrift8		
Better waste sorting (e.g.	x	"To support residents in			x	"In Aalborg Municipality, there	x	"In Aalborg Municipality,		

straightforward hazardous waste collection)		apartment buildings with proper waste sorting and to meet their needs, additional initiatives must be launched" (Waste plan 2026-2037, p. 11)				is a strong focus on working with the climate agenda. Waste sorting and proper resource management contribute significantly to reducing CO_2 emissions." (Waste plan 2026-2037, p. 5)		reuse and exchange opportunities must be expanded and further developed—both at recycling centers and as city- and citizen-oriented solutions." (Waste plan 2026-2037, p. 5)		
Increase the amount of recyclable- or reusable materials					x	"Aalborg Municipality aims to increase waste recycling and ensure more sustainable resource management. Waste should be moved as high up the waste hierarchy as possible, sorted correctly, and shifted from incineration and landfill to recycling." (Waste plan 2026-2037, p. 9)			x	"In a circular economy, delivering waste and products to the municipality should be the last resort. Direct reuse, sharing economy, and reducing waste production are far more sustainable. Therefore, the goal is to inspire and support reuse through other channels and to promote overall waste minimization."(Waste plan 2026-2037, p 4)
Change in traffic intensities / less traffic			x	"Accessibility is essential for both people and goods. At the same time,	x	"The Climate Plan outlines a path to reduce transport emissions by				

from vans (lockers in close proximity)				new mobility initiatives must be climate-friendly and embrace technology and other future trends." (Mobility plan 2040, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/mobilitet-2040#overskrift6)		65,000 tons by 2030. This reduction target is part of the upcoming revision of Aalborg Municipality's future mobility plan, 'Mobility 2040'." (Climate Plan, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/introduktion-til-klimaplan#overskrift8)				
Multifunctionality of lockers	x		x		x		x		x	
Reduce the number of operators at one hub, increased work efficiency	x	"Accessibility is essential for both people and goods. At the same time, new mobility initiatives must be climate-friendly and embrace technology and other future trends." (Mobility plan 2040, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-	x	"Accessibility is essential for both people and goods. At the same time, new mobility initiatives must be climate-friendly and embrace technology and other future trends." (Mobility plan 2040, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-	x	"The Climate Plan outlines a path to reduce transport emissions by 65,000 tons by 2030. This reduction target is part of the upcoming revision of Aalborg Municipality's future mobility plan, 'Mobility 2040'. In addition, local production of green transport			x	"Accessibility is essential for both people and goods. At the same time, new mobility initiatives must be climate-friendly and embrace technology and other future trends." (Mobility plan 2040, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-

		planer/mobilitet-2040#overskrift6)		**planer/mobilitet-2040#overskrift6)**		**fuels contributes to a CO_2 reduction of 180,000 tons." (Climate plan, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/introduktion-til-klimaplan#overskrift8)**				**planer/mobilitet-2040#overskrift6)**
Establishment of a hub network	**x**	**"Hubs that support the possibility of changing modes of transport during the journey." (Mobility 2040, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/mobilitet-2040)**	**x**	**"Hubs that support the possibility of changing modes of transport during the journey." (Mobility 2040, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/mobilitet-2040)**			**x**	**"Hubs that support the possibility of changing modes of transport during the journey." (Mobility 2040, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/mobilitet-2040)**	**x**	**"Development and demonstration of green technology. Under the framework of Green Hub Denmark, Aalborg Municipality supports companies that want to develop, test, demonstrate, and create business from the green solutions of the future." (Climate plan, https://www.aalborg.dk/om-kommunen/politikker-strategier-og-planer/introduktion-til-klimaplan#overskrift8**

6.2. Amsterdam:

Pilot: Amsterdam	Link to cross-cutting topics/Mobility plan objectives									
SUMP Goals identified in the April workshop	User experience & people centricity	Closest objective identified in the mobility plan	Logistics processes	Closest objective identified in the mobility plan	Socioeconomic and environmental	Closest objective identified in the mobility plan	Spatial planning and city design	Closest objective identified in the mobility plan	Business model	Closest objective identified in the mobility plan
Better accessibility (Goal 2030)	x	Hubs as alternatives in a liveable and accessible city: Hubs can play an important role in the urban and regional task. Hubs form connecting points between regional mobility and urban mobility and contribute to the accessibility and liveability of the entire region (Hubvisie Page 8.)	x	"By introducing mobility hubs, we offer more transport options, maintain our city's accessibility, and enable measures to protect the vulnerable quay walls and bridges." Page 8 hubsvisie A hub functions as a transfer or transshipment point in the travel or logistics chain. In some cases, the hub itself is the final destination. A hub ensures that there are more opportunities to connect the city with the rest of	x	Shops, offices, wholesalers, and other larger businesses in the city will increasingly be supplied by small, emission-free vehicles. . Hubsvisie. page 26 For the hubs where logistical flows converge, we aim to apply the following additional principles: • Hubs are open and accessible, with capacity available for all participating parties. • Transport flows can move both into and out of the city through hubs at different times and for various purposes. • Hubs provide sufficient charging capacity to meet the needs of all required modes of mobility.	x	Companies that currently use delivery vans will switch to emission-free vehicles or have their supplies delivered by a professional logistics provider. This requires the infrastructure to be in place to support this transition. Hubsvisie. page 26 For the hubs where logistical flows converge,	x	Commercial facilities within the hub can help improve the business case. Moreover, hubs can contribute to enhancing land development value, as expensive parking facilities beneath buildings may no longer be necessary. There may also be opportunities for balancing between

				the region effectively and provides opportunities to link various functions in a space-efficient manner. Hubsvisie page 7		• Hubs serve as sources of data and are data-driven in their operation to enable continuous optimization. • The logistical flows and costs are transparent for the different users of each hub. • Logistical hubs are inspiring meeting places for people and businesses. Page 12, Hubsvisie		we aim to apply the following additional principles: • Hubs are open and accessible, with capacity available for all participating parties. • Transport flows can move both into and out of the city through hubs at different times and for various purposes. • Hubs provide sufficient charging capacity to meet the needs of all required modes of mobility. • Hubs serve as sources of data and are		land development, real estate operations, and user operations. Hubsvisie page 32-33

								data-driven in their operation to enable continuous optimization. • The logistical flows and costs are transparent for the different users of each hub. • Logistical hubs are inspiring meeting places for people and businesses. Page 12, Hubsvisie		
Enhanced livability (Goal 2030)			x	For hubs where logistics flows converge, we strive to apply the following additional principles: • Hubs are open and accessible, with capacity available for all participating parties.	x	By 2030, Amsterdam aims to reduce CO2 emissions by 60 percent compared to 1990 levels. The measures outlined in the Clean Air Action Plan will make a significant contribution to this goal, as no less than 11 percent of total CO2 emissions are	x	The car-free city: the increasing pressure on public space calls for space-efficient solutions. (Hubvisie Page 8.)		

				• Transport flows can enter and leave the city via hubs at different times and for different uses. • Hubs have sufficient capacity to meet the loading requirements of all necessary mobility needs. • Hubs are a source of data and are used in a data-driven manner for continuous optimization. Hubsvisie page 12		caused by road traffic and mobile machinery on Amsterdam's roads (base year 2017). The ambition of the Clean Air Action Plan is to reduce these emissions to zero by 2030. In concrete terms, this means that all motorized road traffic on Amsterdam's roads should be emission-free from 2030 onwards. Uitvoeringsagenda uitstootvrij page 6				
Reduce the number of parking spaces and parking permits in public space (-1000 pp)					x	If coupling is possible at a location with limited nuisance, a P+R facility may be established there. However, priority will first be given to parking for city permit holders, to free up space in the city for other uses. The city will also keep monitoring the city center and, if needed, take steps to further reduce parking	x	In an increasingly dense city, hubs offer the possibility to use the available space efficiently. (Hubvisie Page 10.)		

						spaces. Hubsvisie page 20 The less traffic, the fewer emissions. Is it even necessary for cars or trucks to drive into the city? If we provide more parking spaces and logistics centers on the outskirts of the neighborhood or city, it will be possible to continue the journey from there in a different way. Uitvoeringsagenda uitstootvrije mobiliteit page 4				
Reduce diesel vans in the city / mitigate environmental impact from vans			x	Every day, many trucks drive through Amsterdam. They transport heavy materials needed for housing construction, supply shops and restaurants, and support the setup of events. This logistics system is the lifeblood of Amsterdam, but it is taking up an increasing amount of space	x	Every day, many trucks drive through Amsterdam. They transport heavy materials needed for housing construction, supply shops and restaurants, and support the setup of events. This logistics system is the lifeblood of Amsterdam, but it is taking up an increasing amount of space and has a major impact on traffic safety, air quality, livability, and accessibility.				

				and has a major impact on traffic safety, air quality, livability, and accessibility. The transition toward reducing, changing, and cleaning up this large fleet began some time ago at both the local and national levels. In early 2021, the City Council, together with the national government, several municipalities, and business representatives, signed the national Urban Logistics Implementation Agenda (UAS). The UAS is part of the national Climate Agreement and includes the introduction of zero-emission zones for delivery vans and trucks. It is		The transition toward reducing, changing, and cleaning up this large fleet began some time ago at both the local and national levels. In early 2021, the City Council, together with the national government, several municipalities, and business representatives, signed the national Urban Logistics Implementation Agenda (UAS). The UAS is part of the national Climate Agreement and includes the introduction of zero-emission zones for delivery vans and trucks. It is expected that 25 to 40 other major municipalities will also introduce zero-emission zones for urban logistics. Page 18				

				expected that 25 to 40 other major municipalities will also introduce zero-emission zones for urban logistics. Page 18						
Change in traffic intensities / less traffic from vans			x	A transition is underway in which gas stations are being transformed into charging hubs. This provides a network of fast-charging locations across the city. Frequent drivers (such as urban logistics) will make particular use of these locations. Hubs for logistics transshipment are indispensable in this transition. These are locations where goods can be transferred to smaller vehicles or vessels—from	x	With a growing population and increasing employment in the city and region, various measures are needed to keep the area livable, accessible, and easy to reach. These measures aim to guide the mobility transition in the desired direction. This transition includes: • moving towards more space-efficient, lighter, and cleaner urban mobility; • shifting from ownership to shared use; • shifting from single-mode travel to more multimodal travel chains (such as transferring from bicycle to public				

				the company's own fleet or from an intermediary. Hubsvisie page 26		transport). Page 7, Hubsvisie				
Switch to sustainable (zero-emission and light) mobility options (cargo bikes or light vehicles via P + S)	x	Facility goods are ideal for distribution via a hub, and there are already successful examples of this. Deliveries of goods for different recipients can then be bundled together. The facility hub has the potential to be a place where (digital) contact between the supplier and recipient takes place and where data can be exchanged for optimal inventory management.	x	For hubs where logistics flows converge, we strive to apply the following additional principles: • Hubs are open and accessible, with capacity available for all participating parties. • Transport flows can enter and leave the city via hubs at different times and for different uses. • Hubs have sufficient capacity to meet the loading requirements of all necessary mobility needs. • Hubs are a source of data and are used in a data-driven manner for continuous optimization.	x	Facility goods are ideal for distribution via a hub, and there are already successful examples of this. Deliveries of goods for different recipients can then be bundled together. The facility hub has the potential to be a place where (digital) contact between the supplier and recipient takes place and where data can be exchanged for optimal inventory management. A location on the outskirts of the city with good loading facilities is an important prerequisite. Hubsvisie page 27			x	Commercial facilities within the hub can help improve the business case. Moreover, hubs can contribute to enhancing land development value, as expensive parking facilities beneath buildings may no longer be necessary. There may also be opportunities for balancing between land development, real estate operations,

		A location on the outskirts of the city with good loading facilities is an important prerequisite. Hubsvisie page 27		Hubsvisie page 12						and user operations. Hubsvisie page 32-33
Reduce pressure for the service operators, increase work efficiency	x	Facility logistics concerns all goods and services delivered to offices and workplaces in the city. Customers expect a high level of service in this area. However, there is a high level of awareness among employers regarding ordering behavior and a strong willingness to purchase efficiently and collectively.	x	Facility goods are ideal for distribution via a hub, and there are already successful examples of this. Deliveries of goods for different recipients can then be bundled together. The facility hub has the potential to be a place where there is (digital) contact between the supplier and recipient, and where data can be exchanged for optimal inventory management. A location on the outskirts of the city with good loading facilities					x	Commercial facilities within the hub can help improve the business case. Moreover, hubs can contribute to enhancing land development value, as expensive parking facilities beneath buildings may no longer be necessary. There may also be opportunities for balancing

		Hubsvisie page 27		is an important prerequisite. Hubsvisie page 27						between land development, real estate operations, and user operations. Hubsvisie page 32-33
Establishment of a hub network (P + S locations)	x	If research is needed for hub developments, this will be addressed or coordinated in the Hubs implementation program. Example is an Exploration of an urban and regional network of hubs in 2030. Hubsvisie page 36	x	Amsterdam is facilitating the transition from fossil fuel-powered vehicles to zero-emission vehicles through its extensive network of public charging infrastructure. In the Strategic Plan for Charging Infrastructure 2020-2030, we outline the conditions for a zero-emission Amsterdam in 2030. Uitvoeringsagenda uitstootvrij page 33	x	Amsterdam is facilitating the transition from fossil fuel-powered vehicles to zero-emission vehicles through its extensive network of public charging infrastructure. In the Strategic Plan for Charging Infrastructure 2020-2030, we outline the conditions for a zero-emission Amsterdam in 2030. Uitvoeringsagenda uitstootvrij page 33	x	Ambition for the final vision of hubs There is a wide variety of different hubs in the city. The ambition is to work towards a connected system of which all hubs are part. The different types of hubs form a joint network in the city. Hubsvisie page 12	x	As hubs are used more intensively, the business case will also improve. The initiating role of the municipality will then be less necessary, which means that more can potentially be left to the market. Hubsvisie page 34

6.3. Boras:

Pilot: Boras	Link to cross-cutting topics/Mobility plan objectives									
SUMP Goals identified in the April workshop	User experience & people centricity	Closest objective identified in the mobility plan	Logistics processes	Closest objective identified in the mobility plan	Socioeconomic and environmental	Closest objective identified in the mobility plan	Spatial planning and city design	Closest objective identified in the mobility plan	Business model	Closest objective identified in the mobility plan
Better accessibility (combining goods services, reuse services and recycling)	x				x				x	
Enhanced livability (combining goods services, reuse services and recycling)	x				x					
Better waste sorting (recycling services in the city center)	x				x		x			
Change in traffic intensities / less traffic from vehicles (accessible hub by foot in the city center)	x		x		x					
Reduce pressure for the service operators, increase work efficiency (combining goods services, reuse services and recycling)			x		x				x	
Establishment of a hub network (first location established, more to realise)	x									

6.4. Hamburg:

Pilot: Hamburg	Link to cross-cutting topics/Mobility plan objectives									
SUMP Goals identified in the April workshop	User experience & people centricity	Closest objective identified in the mobility plan	Logistics processes	Closest objective identified in the mobility plan	Social economic and environmental	Closest objective identified in the mobility plan	Spatial planning and city design	Closest objective identified in the mobility plan	Business model	Closest objective identified in the mobility plan
Better accessibility (of circular economy solutions)	MoloHubs pilot placed close to bus station	More regional accessibility	The combination of the brand EcoHHub of SRH and MoloHub pilot is a synergy model supporting the process.	Network of mobility solutions as an addition to public transport	Brand EcoHHubs is already well known in Hamburg to be reached without a car	More usage of bicycles and food walks	EcoHHub2/MoloHub Hamburg is integrated into the moblity plan of the the City of Hamburg	Optimized economic traffic	EcoHHub as a brand of SRH. Molo Hub pilot is offer No 2.	Integrated planning of traffic and the city, cooperated processes of planning and realisation
Enhanced livability	Offer close to home	More livability in the inner city and in the quarters	Clients have less logistic challenges to dispose other kinds of waste	Network of mobility solutions as an addition to public transport	Saving time to go to a recycling yard is enhanced livability	More livability in the inner city and in the quarters				
Waste collection optimisation (Connecting mobility points with	Additional offer to four-	Cooperative planning s- and	Addition to 4 bin system and	Strengthening the mobility by offer to	More solutions to deliver more kinds	Network of mobility solutions as an				

circular economy solutions)	bin system and recycling yards	realisation-concepts	recycling yards	use destinations by walking	of waste especially Li-Ion-Akkus	addition to public transport				
Change in traffic intensities / less traffic (Connecting mobility points with circular economy solutions)	To use the moloHub pilot Hamburg no car is neccessary	More regional accessibility			To use the moloHub pilot Hamburg no car is neccessary	Network of mobility solutions as an addition to public transport				
Access to sustainable mobility options (multimodal integration)	Same place as the site of mobilty hub Move 21	More livability in the inner city and in the quarters			Areas in environmental fitting areas	Digital mobility				
Reduce pressure for the service operators, increase work efficiency (waste management optimisation)			MoloHubs pilot close To next recycling center to reduce logistic distances	Network of mobility solutions as an addition to public transport	Logistic tours to MoloHub Hamburg integrated in disposal tours of Recycling-Center	Integrated planning of Traffic and the city, cooperated processes of planning and realisation			MoloHub Hamburg / EcoHHub2 is situated near Recycling Center Rondenbarg	More regional accessibility
Improvement of the hub network	Beside MoloHubs pilot Hambur	More livability in the inner city	MoloHub pilot Hamburg is kick-	Cooperative concepts for	Neighbourhood support	Integrated planning of traffic and the city	EcoHHub2/MoloHub Hamburg situated on a	More regional accessibility	Communication campaign to new offer	Mobility solutions as addition to public transport

	g more following EcoHubs will follow	and in the quarters	off to following EcoHHubs	planning and realisation			former public parking place		EcoHHub/Molohubs	

6.5. Mechelen:

Pilot: Mechelen	Link to cross-cutting topics/Mobility plan objectives									
SUMP Goals identified in the April workshop	User experience & people centricity	Closest objective identified in the mobility plan	Logistics processes	Closest objective identified in the mobility plan	Socioeconomic and environmental	Closest objective identified in the mobility plan	Spatial planning and city design	Closest objective identified in the mobility plan	Business model	Closest objective identified in the mobility plan
Better accessibility (of multimodal mobility solutions Hoppinpunten)	x	PAGE 36: We strive to: Guarantee good accessibility for all modes of transport and all types of travellers. PAGE 37: The quality and interconnection of public transport, cycle paths and walking routes are paramount here. At the Hoppinpunt,			x	PAGE 36: We strive to: Seizing opportunities for more high-quality and relaxed public spaces Integrating sustainable and climate-resilient measures (e.g. green roofs at waiting areas, integration of solar panels into charging infrastructure at P+R facilities).	x	PAGE 37: (this text follows the text from user experience...) There are area-specific opportunities to use Hoppinpunten as a lever for urban regeneration, softening and a mental shift among specific target groups.	x	

		the integral accessibility of public space is essential. Each Hoppinpunt will be equipped with secure bicycle parking facilities for an increasing variety of bicycles, including solutions for the secure parking of often more expensive electric bicycles.								
Enhanced livability (combining the existing bpost locker system with the Hoppinpunten)	x				x	PAGE 49: By linking up with the expansion of regional, local and neighbourhood Hoppin points, the delivery of smaller parcels within the transport region can be optimised. Instead of delivering parcels door-to-door, they are stored in	x	PAGE 41: Targeted development and densification in centres cannot be separated from the expansion of (high-quality) public transport: for example, clustering commercial activities reduces the number of		

						parcel machines.		vehicles entering and leaving the area, thereby improving traffic flow. On the other hand, public transport connections provide more multimodal accessibility, allowing the stop or Hoppin point to form a new centre of activity.		
Reduce diesel-vans in the city / mitigate environmental impact from vehicles (via the service logistics cargo bikes and increased used of Hoppinpunten)	x	PAGE 37: The combination of car and public transport is selectively facilitated, albeit not everywhere. Neighbourhood and local Hoppin points are usually designated based on proximity, assuming that they can be easily reached on foot and/or	x		x	PAGE 15 (general ambition): Modal shift in passenger transport: 50/50; and -15% vehicle kilometres by 2030 PAGE 37: For Hoppin points located in town centres, there is a strong focus on bicycles as a			x	

		by (e-)bike.				means of transport to and from the location, and a steering (discouraging) policy is pursued (with the exception of a few parking spaces for disabled people).				
Change in traffic intensities / less traffic from vehicles (via the service logistics pilot part)	x				x		x		x	
Increased switch to sustainable mobility options (via Hoppinpunten and cargo bikes of Pidpa pilot)	x	PAGE 22: Mobility is an expression of human behaviour, which is often reflected in ingrained habits and patterns. Behavioural change and a mental shift are necessary to accelerate and strengthen the social transition towards a mobility culture in which people			x	PAGE 16: By 2030, the major hubs and centres located in the transport region will be supplied emission-free.	x	PAGE 49 (this is written for retailers but i think it can also apply for service logistics): In densely built-up areas, hubs are provided at strategic locations where goods for the entire area are delivered (sustainably). From there, they are transported to		

		and businesses are less dependent on car and lorry ownership and use. Strengthening the mobility offer in the Mechelen transport region will only have an effect on the modal split and the reduction of vehicle kilometres if travellers are also actively encouraged or enticed to make more sustainable choices. The Mechelen transport region has opted for measures that encourage sustainable modes of transport and measures that discourage non-sustainable modes.						**their destination using low-emission vehicles or (cargo) bicycles. Such hubs can often be limited in size and therefore easily integrated into the dense urban fabric. Urban areas often work with delivery windows. To be able to work efficiently within this framework, the logistics service provider delivers the goods to the local retailer at a micro-hub. Urban areas often work with delivery windows. In order to be able to work efficiently**		

								within this framework, the logistics service provider delivers the goods for the local retailer to a micro-hub. When it suits them best, the retailer collects their goods from this theft-proof environment.		
Reduce pressure for the service operators, increase work efficiency (e.g. Pidpa pilot cargo bikes take less travel time than service vehicle)	x		x		x				x	
Establishment of a hub network (overall pilot)	x				x	See spatial planning cell	x	PAGE 42: With regard to smart distribution, the transport region wants to actively seek out suitable locations for transit points. When determining the spatial	x	

								layout, consideration must be given to ensuring that deliveries to and from the hub are as sustainable as possible. Transit points, for example, are best located within cycling distance of the centre, but must be positioned in such a way that deliveries do not compromise traffic safety in the surrounding area. For example, transit points are best located within cycling distance of the centre, but must be positioned in such a way that their delivery does		

								not compromise traffic liveability in the surrounding area.		