INTEGRATED CITY ASSESSMENT: GOTHENBURG

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MOVE21 – Multimodal and interconnected hubs for freight and passenger transport contributing to a zero emission 21st century

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Project Executive Summary

The main objective of MOVE 21 is to transform European cities and functional urban areas into climate neutral, connected multimodal urban nodes for smart and clean mobility and logistics. MOVE21 will do this through an integrated approach in which all urban systems are connected, and which addresses both goods and passenger transport together. As a result, MOVE21 will improve efficiency, capacity utilisation, accessibility and innovation capacity in urban nodes and functional urban areas.

The integrated approach in MOVE21 ensures that potential negative effects from applying zero emission solutions in one domain are not transferred to other domains but are instead mitigated. It also ensures that European transport systems will become more resilient. Central to the integrated approach of MOVE21 are three Living Labs in Oslo, Gothenburg, and Hamburg and three replicator cities Munich, Bologna and Rome. In these, different types of mobility hubs and associated innovations are tested and means to overcome barriers for clean and smart mobility are deployed. The Living Labs are based on an open innovation model with quadruple helix partners. The co creation processes are supported by coherent policy measures and by increasing innovation capacity in city governments and local ecosystems. The proposed solutions deliver new, close to market ready solutions that have been proven to work in different regulatory and governance settings. The Living Labs are designed to outlast MOVE21 by applying a self-sustaining partnership model.

MOVE21 partners

The MOVE21 consortium consists of 24 partners from seven different European countries, representing local city authorities, regional authorities, technology and service providers, public transport companies, SMEs, research institutions, universities and network organisations.

- **Norway**: City of Oslo, Viken County, Ruter, Urban Sharing, Mixmove, Institute of Transport Economics, IKT-Norge
- **Sweden**: City of Gothenburg, Rise Research Institutes of Sweden, Business Region Gothenburg, Volvo Technology, Renova, Parkering Göteborg
- **Germany**: City of Hamburg, City of Munich, Hafencity University Hamburg, Deutsche Bahn Station & Service
- **Italy**: Metropolitan City of Bologna, Roma Servizi per la Mobilità, Roma Tre University
- **Belgium**: Eurocities, Polis
- **The Netherlands**: TNO
- **Greece**: Hellas Centre for Technology and Research

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Deliverable executive summary

The Integrated City Assessment Gothenburg (D6.3) is based on deliverables D3.1, D4.1 and D5.1 and provides first insights in the contextual factors that need to be considered or altered for the development and deployment of the MOVE21 solutions. Special attention is devoted to the urban social layer (WP3), governance (WP4) and technological solutions and integration (WP5). The MOVE21 Living Labs are supported with a continuous knowledge brokerage process on these three topics. They are relevant for the current and future socio-technical contexts in the three Living Labs and for improving the innovation capacity in the cities. In D6.3, action plans how to handle the knowledge brokerage needs are developed with regards to the contextual topics and complemented with the Living Lab priority topics.

As part of the Living Lab planning phase, workshops and meetings have been organised with the quadruple helix partners in the Gothenburg Living Lab to discuss the needs and possible solutions for the three potential hub sites: Nordstan, Klippan and Lindholmen. D6.3 touches upon each test site and shortly describes the preliminary outcome of the co-creation process.

Deliverable 6.3 integrates first observations relevant for the Gothenburg Living Lab from D3.1, D4.1 and D5.1 to facilitate a knowledge brokerage process. Based on the input from WP3, WP4 and WP5 and the co-creation process so far, Gothenburg has identified priority topics and crossovers to other work packages. These topics and crossovers will be taken up in the knowledge brokerage process in years 2, 3 and 4 of the project. With regards to the urban social layer, priority topics such as the social use connected to the hubs, the social qualities of the sites and the impact of new urban development on the social layer have been identified. Priority topics related to governance circle around questions on the role of municipalities or how to overcome challenges related to e.g. legitimacy. How to combine technological and non-technological solutions as well as the alignment of technological solutions will be part of the knowledge brokerage process involving WP5.

The knowledge brokerage process will be continuous, i.e. responsive to the Living Labs' needs and progress. This requires the knowledge brokerage process to be flexible and tailor-made to each Living Lab with possibility to alter or change focus and plans. Due to this, the proposed action plans in D6.3 have a more detailed time and topic planning for the knowledge brokerage process in the short term. Further sessions, adapted to needs arising later can be arranged with yearly intervals, eventually more intensive towards the end of the project. Knowledge brokerage sessions are organized within the Innovation Co-Creation Partnerships together with experts from WP3, WP4, WP5 and WP6, but also other work packages based on actual needs and topics.

Key words

Integrated City Assessment, Living Lab Gothenburg, knowledge brokerage process

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1 List of abbreviations and acronyms

Acronym	Meaning
ICCPs	Innovation Co-creation Partnerships
KBS	Knowledge Brokerage Session
KPI	Key Performance Indicator
LL	Living Lab
MaaS	Mobility-as-a-Service
PT	Priority Topic
TEN-T	Trans-European Transport Network
TF	Task Force
UMMS	Urban Mobility Monitoring System
WP	Work Package

2 Purpose of the deliverable

The Integrated City Assessment is based on deliverables D3.1, D4.1 and D5.1 and provides first insights in the contextual factors that need to be considered or altered for the development and deployment of the MOVE21 solutions. Special attention is devoted to the urban social layer (WP3), governance (WP4) and technological solutions and integration (WP5). They are relevant for the current and future socio-technical contexts in the Living Lab (LL) test sites and for improving the innovation capacity in the cities. Thus, the LL processes of co-creation, implementation, and upscaling activities should be supported with a continuous knowledge brokerage process related to these three topics. Based on the input from WP3, WP4 and WP5 and the co-creation process so far, the Gothenburg LL has identified priority topics and crossover topics. An innovation agenda is developed on how these topics and crossovers will be taken up in the knowledge brokerage process.

2.1 Attainment of the objectives and explanation of deviations

The objectives related to this deliverable have been achieved in full and as scheduled.

2.2 Intended audience

The intended audience of this deliverable are:

- Task Force of the Gothenburg LL, informed by the report summaries and incorporating the outcomes of this deliverable into their internal decision-making process.
- Knowledge transfer with stakeholders within the Innovation Co-Creation Partnerships (ICCPs), which contain a wide spectrum of stakeholders who might be interested in the information of this deliverable.
- WP-leaders as an up-to-date version of the activities and plans of the LLs.
- The general public and the academic community in particular, as this deliverable constitutes a body of knowledge that will be shared and replicated.

2.3 Structure of the deliverable and links with other work packages/deliverables

The deliverable D6.3 is structured in the following way: First, the purpose of the deliverable, intended audience and its structure as well as related WPs are explained in chapter 2. An introduction to the test sites, Nordstan, Klippan and Lindholmen, in the Gothenburg LL follows in chapter 3. Chapter 0 summarizes the first findings from D3.1, D4.1 and D5.1 on, respectively, the urban social layer, governance, and draft technology solutions. Based on the discussions in the Gothenburg LL and the context analysis from WP3, WP4 and WP5, the identified priority topics are explained, also considering the social layer, governance and technological solutions and integration (chapter 0). Potential crossovers between between WP3, WP4, WP5 as well as other WPs are elaborated. In chapter 0, the innovation agenda with the knowledge brokerage needs for the Gothenburg LL is described to make expert input and discussions as specific as possible at this stage of the project. The timing of the knowledge brokerage process is linked to the timeline of the Gothenburg LL. Chapter 7 presents final conclusions of the Integrated City Assessment for Gothenburg and next steps.

This deliverable is connected to other work packages and deliverables as follows: WP6 coordinates and facilitates learning, testing, deployment and upscaling activities in the LL. An initial context analysis was performed in WP3, WP4 and WP5 which delivered input to D6.3 of WP6. Therefore, deliverable D6.3 is connected with deliverables D3.1, D4.1, and D5.1 as they provide the main input for chapter 4 about the context description and situational analysis. Deliverable D6.3 is also aligned with 6.2 and 6.4, as

they have a shared structure and methodological framework, each of them applied in the LLs. WP6 again will provide solutions, data and insights for WP7 replication and take-up as well as for WP8 impact assessment. Deliverable 6.3 will be used as an input for 8.2 by incorporating specific strategic indicators to the KPIs in the UMMS. Lastly, D6.3 will be used as reference in D10.3, which will outline some measures for local end user and stakeholder involvement and bye-in.

3 Introduction of the test sites

As part of task 6.1, workshops and meetings have been organised with the quadruple helix partners in the Gothenburg LL to discuss the needs, possible solutions and feasibility for the three sites: Nordstan, Klippan and Lindholmen. An introduction to each test site and the status of the co-creation process is shortly described in the following sections. The goal of these co-creating sessions in MOVE21 is to frame local problems, innovations, and solutions, and to assess and review local solutions as well as tailor innovations to the local context (cf. D6.1). The test sites in Gothenburg are of very different character, as described in the following sections, which means that based on the different needs and problems for each site, suitable solutions are elaborated in an iterative process, such as to promote liveability at Klippan and goods consolidation in Lindholmen.

3.1 Living Lab test site: Nordstan

Nordstan is a central district in the city of Gothenburg with Scandinavia's third largest shopping mall (Figure 1). The mall is located between the main train station and a large public transport hub, Brunnsparken. The mall covers a total area of 306 000 m2 with approximately 200 businesses (including stores and offices) covering 70 000 m2. It is owned by five real estate owners. Over 6,000 people have their workplace here and there is a parking garage with room for 2,700 cars. Goods are delivered through a 1.5 km long underground tunnel.

Figure 1: Area for test site Nordstan (1:2000; Göteborgs Stad)

Over the next years, the area will change due to major infrastructure projects such as a new boulevard north of the mall, Västlänken[1], an approximately 6 km long train tunnel under central Gothenburg (Göteborgs Stad (2022): Stadsutveckling Göteborg – Västlänken. Retrieved on 2022-03-28 from https://stadsutveckling.goteborg.se/projekt/vastlanken/.), or the new quarter above Gullbergstunneln (Göteborgs Stad, 2022 – Centralområdet). Västlänken will increase capacity for regional and commuter trains, making it easier to travel by public transport, and will affect traffic flows in the whole area of Nordstan and Brunnsparken. With regards to goods transport in the area, different actors have started to test a city logistics hub in parts of Nordstan's underground tunnel. This Swedish research project (Smoovit project (2020). System of systems for sustainable urban goods transport. Retrieved on 2022-03-24 from https://smoovit.se/.) is relevant to MOVE21 due to its vicinity and the related aim to reduce transports from/to Nordstan by consolidating goods in an external logistics hub. Goods will be loaded onto smaller-zero emission vehicles for further distribution.

As part of task 6.1, workshops and meetings have been organised with the quadruple helix partners in the Gothenburg LL to discuss needs and possible solutions for Nordstan.

In a first step, the following criteria have been identified as most important to work with:

- flatten peak curves
- test combined solutions for goods delivery with innovative partners
- improve accessibility for and parking of bicycles
- improve signage in the area
- create a feeling of Gothenburg's "living room"
- improve security for visitors of the shopping center

The proposed solutions for the test site in Nordstan are about improving accessibility for small vehicles and bikes (including cargo bikes), creating a new zero emission micro mobility hub with focus on handymen service technicians, combined with measures to improve the attractiveness of the site for cyclists (bicycle cluster) and favour slow modes. How to best combine goods and personal transport is currently the major focus of the discussion on which solutions to implement.

3.2 Living Lab test site: Klippan

The area is located about 4 km west from Gothenburg's city centre. It is currently dominated by vehicle traffic from a heavily frequented urban highway and public transport route, Oscarsleden, separating Jaegerdorffsplatsen and the ferry stop Klippan (Figure 2). Due to the proximity to the water, large open windy spaces are dominating at Klippan too. Tram and bus station next to the local ferry which crosses the river to Eriksberg on Hisingen and long-haul ferry station (TEN-T to/from Germany) are accessible for commuters to local businesses, housing and other visitors.

[1] Västlänken is part of the so-called Västsvenska paketet (Western Sweden infrastructure package), a package of transport infrastructure investments over 20 years (Trafikverket (2022): Västsvenska paketet. Retrieved on 2022-03-30 from https://www.trafikverket.se/vastsvenskapaketet.).

Figure 2: Area for test site Klippan (1:1000; Göteborgs Stad)

The Klippan area will undergo significant changes in the coming years, with a residential area and school being built next to the local ferry (Carnegiekajen), the long-haul ferry station leaving Klippan, and office and service/sports buildings being developed south of the highway (Göteborgs Stad (2021): Investeringsplan 2022-2031. Retrieved on 2022-03-28 from https://www4.goteborg.se/prod/Intraservice/Namndhandlingar/SamrumPortal.nsf/7B1968ABF212B0C7C125869C002F0360/$File/37.%20Bilaga%201%20Textbilaga%20Investeringsplan%202022_2031.002.pdf?OpenElement). This will significantly affect the nature of visits and users in the area since there will be more necessary and optional activities (cf. D3.1). Further, it will affect transport flows as parking space will be reduced and heavy traffic will decrease as the long-haul ferry station will be moved.

As part of task 6.1, workshops and meetings have been organised with the quadruple helix partners in the Gothenburg LL to discuss the needs and possible solutions for Klippan.

In a first step, the following criteria have been identified as most important to work with:

- increase road safety for pedestrians and cyclists
- reduce pedestrians' and cyclists' exposition to noise and wind
- improve accessibility for the disabled
- contribute to reducing traffic flows
- increase the use of urban water ways
- allow for more effective land use
- provide better information about different means of transport
- be able to adapt to future changes
- contribute to the area becoming more lively
- increase security for pedestrians

There are many opportunities for increasing the efficiency of Klippan, making it a major public transport hub, yet the challenge is to make it attractive for passengers and stimulate modal shift especially when changing transport modes. Another challenge comes from the segregated nature of the area; it does not feel like one site at all, especially for those using slow modes of transport. The proposed solutions for the test site Klippan are mostly about improving accessibility and safety for non-motorised passengers, consolidation of small deliveries, and measures to improve information and signage in the area, to create a feeling of a “hub site”. The proposed developments for this site consider a seamless switch and technological solutions for Park and Ride to incentivize parking your car and using other modes of transport, combined with car charging infrastructure. The most important need regarding goods transport that came up under the discussions was focused on the installation of a recycling barge to make use of the urban waterways and improve goods transport efficiency and reduce the use of urban space and transport to and from the station. How to best combine goods and personal transport is currently the major focus of the discussion on which solutions to implement.

3.3 Living Lab test site: Lindholmen

The Lindholmen area situated on the northern side of the river Götaälv, has become the most knowledge-intensive and expansive area in Gothenburg, and an important hub for the expanding city (Figure 3). 25,000 people spend time here every day and this number is expected to double over the next five years. Lindholmen is an attractive and stimulating environment, home to two universities, 375 businesses, six secondary schools, the Gothenburg Film Studios as well as Lindholmen Science Park.

Figure 3: Area for test site Lindholmen (1:2500; Göteborgs Stad)

1. Lindholmen is an area undergoing constant change in the coming years, as the area is being densified with more offices, and residential units are added. Another important addition on the North end of Lindholmen area is the Karlastaden area, with Scandinavia’s highest skyscraper and a whole block being built including offices, hotel and 2000 residential units (Göteborgs Stad (2022):

Stadsutveckling Göteborg – Centralområdet. Retrieved on 2022-04-12 from https://stadsutveckling.goteborg.se/projekt/centralenomradet/.

Göteborgs Stad (2022): Stadsutveckling Göteborg – Karlastaden. Retrieved on 2022-03-28 from https://stadsutveckling.goteborg.se/karlastaden.). This will significantly affect transport flows in the area as more residents will live in the area, together with offices and hotels, leading to another mix of services and functions. In order to improve public transport in/to the area, a new tram line (Göteborgs Stad - Lundby) will be build.

As part of task 6.1, workshops and meetings have been organised with the quadruple helix partners in the Gothenburg LL to discuss the needs and possible solutions for Lindholmen.

In a first step, the following criteria have been identified as most important to work with:

- contribute to the area becoming more lively
- be able to adapt to future changes
- contribute to reducing traffic flows
- improve land use
- increase the use of urban water ways

The proposed solutions for the test site Lindholmen are mostly about scaling up and expanding the delivery consolidation solutions already present with new services in the area, Lindholmsleveransen (Renova (2021): En mikroterminal för transport av avfall, gods och paket. Retrieved on 2022-03-30 from https://www.renova.se/produkter-och-tjanster/fler-tjanster/lindholmsleveransen/.); combined with measures to improve accessibility for micro mobility and bikes. How to best combine goods and personal transport is currently the major focus of the discussion on which solutions to implement.

4 Summary of Context Analysis Living Lab

The Oslo, Gothenburg and Hamburg Living Labs in MOVE21 are places where co-creation, implementation, and upscaling activities for the non-technological and technological mobility solutions will take place for further two-way replication in collaboration with the replicator cities of Munich, Bologna and Rome. This implies efforts to increase innovation capacity in the cities and the local ecosystems. The Living Labs are designed to outlast MOVE21 with the aim to create long lasting change and impact. To begin with, D3.1, D4.1 and D5.1 have observed contextual factors for this process in the cities which are summarized here in the following sections. This chapter gives a summary for the city of Gothenburg.

4.1 Urban Social Layer

The main objective of Deliverable 3.1 was to perform a spatial contextualization of the LLs based on urban analysis and location-based needs (preferences). It is aligned with Task 3.2: Spatial context analysis assessment and framework, which feeds into the Integrated City Assessments for Oslo, Gothenburg and Hamburg (D6.2, D6.3 and D6.4) as well as the evaluation tasks in WP8. This task provides a framework and performs location assessments of LL test areas based on urban analysis and considering several typologies of spatial contexts. The aim of D3.1 is also to offer a comprehensive approach that triggers conversations and observations. Specifically, the results depict some socio-spatial characteristics of the hub candidate locations relevant for consideration in further studies, analysis, and eventually spatial proposals.

The test site areas are approached from different levels of analysis: urban and local. The urban-scale level considers the areas within the greater urban context with measurements such as its impact on the social fabric or its level of physical integration within the overall city street network. The local-scale level focuses on activities, optional and necessary, performed in the spatial environment surrounding the case-study locations. Regarding activities of social uses, some general guidelines to recommend types of activities, functions and services from D3.1 are shortly described below.

For Gothenburg in general it can be stated that there is an observable division north and south of the river, with hard infrastructure (railways and highways with high urban integration) along the river strengthening this division. Nordstan is directly located in the city centre and benefits from this centrality and its cluster of activities. In comparison, Lindholmen and Klippan are located in more mono-functional and isolated areas.

The assessment in D3.1 for the test areas can be summarized as follows:

Nordstan:

- Connection to the rest of the city: The location Nordstan has a high connection due to the highway that runs parallel to the river. It also should be considered within the TEN-T corridor nodes, for their proximity to the central railway station.
- Connection at local scale for walkability: Especially the city centre is walkable in Gothenburg, consequently, the Nordstan hub has a high potential to be accessed by active modes.
- Connection to main corridors: The hub location Nordstan is not located in the main corridors highlighted by the index in D3.1.
- Functional distribution: The location Nordstan is directly located in the city centre and benefits from this centrality and its cluster of activities.

- Mix of functions/activities: The hub in Nordstan has a high density and diversity of activities, both optional and necessary. Mobility activities cluster around the central station and work-places.
- Popularity: The hub in Nordstan is in the most popular area of the three test sites in Gothenburg.

Recommendations for activities of social uses at the hub location Nordstan – Type 1 [Dense | high integration high vitality], cited from D3.1:

"Those hubs located in places with a critical mass of urban vitality are within city centres and areas that cluster high levels of all types of activities, and high levels of walkability. Consequently, the potential social use connected to the hubs should consider the use of the existing customer base and pedestrian volumes, as well as the existence of places of origin and destination of trips. Hubs in these locations could consider their use within a multi-purpose mobility scheme."

Klippan:

- Connection to the rest of the city: Klippan has a high connection due to the highway that runs parallel to the river, thus it should be considered within the TEN-T corridor nodes, for their proximity to the central railway station.
- Connection at local scale for walkability: Klippan has a high local integration towards the south. In addition, it includes major waterway connections both at local and TEN-T level, along with Lindholmen (local waterway travel). In comparison to Nordstan, it is located in more mono-functional and isolated areas.
- Connection to main corridors: The hub location Klippan is not located in the main corridors highlighted by the index in D3.1.
- Functional distribution: Klippan is located in areas with lower density and diversity of activities than Nordstan, with less capacity for creating pedestrian flows.
- Mix of functions/activities: The hub at Klippan has a low concentration of both optional and necessary activities, with a slight turn toward the category of leisure-related activities in the north and south following the river border.
- Popularity: The location has a low number of visits to places compared to the other locations.

Recommendations for activities of social uses at the hub location Klippan – Type 4 [Segregated | High integration low vitality], cited from D3.1:

"Those hubs located in areas that constitute "walkable units" and are well connected to the rest of the city or to a main street. […], these areas also present a low level of vitality. Its performance as "walkable units" could favor multipurpose trips in synergy with the activities found in them, aiming for a catalytic effect attracting additional functions and services."

Lindholmen:

- Connection to the rest of the city: The location of Lindholmen has a lower connection but it is still close to one major road that connects the rest of the city.
- Connection at local scale for walkability: Lindholmen has a low local integration. It should also be considered that the connection for non-motorized passengers and public transport is possible via the ferry ("Älvsnabbaren") that connects Lindholmen with the city centre (Stenpiren) every 6 minutes and free of charge. In comparison to Nordstan, it is located in more mono-functional and isolated areas.
- Connection to main corridors: The hub location Lindholmen is not located in the main corridors highlighted by the index in D3.1.

- Functional distribution: Lindholmen is located in areas with lower density and diversity of activities, with less capacity for creating pedestrian flows. The hub has a higher concentration of necessary activities than optional.
- Mix of functions/activities: The hub in Lindholmen is connected to education and workplaces, an innovation environment.
- Popularity: The location of Lindholmen is moderately popular. Lindholmen's most visited type of place is the workplace, followed by hotels.

Recommendations for activities of social uses at the hub location Lindholmen – Type 2 [Disperse | Low integration high vitality], cited from D3.1:

"Those hubs located in areas with a low density of services and activity are also less walkable and less connected to the rest of the city. Potential uses of a hub could provide these areas with services that are missing, in the direction of social justice and equal access to basic services. This process would intend to create a new flow of pedestrians towards the use of this one service in the area driven by necessity and potentially activate inactive public spaces with single-purpose trips. The result of implementing hubs with social activities in these areas is expected to be more noticeable than in dense, well-functioning popular areas."

4.2 Governance Assessment

Deliverable D4.1 provides the initial governance assessment for the Oslo, Gothenburg and Hamburg Living Labs, as well as a state-of-the-art in the field of governance innovation, including a literature overview and a case study of the city of Antwerp. The review describes different roles that the municipalities can assume when dealing with urban experiments and mobility governance. These are context dependent, but may include roles such as promoter, enabler, architect or provider. In addition, the review outlines the factors that define a successful governance process (inclusivity, accountability, impartiality, administrative competence, learning capacity, timeliness) and successful process outcome (diversity, connectivity, polycentricity, redundancy and directionality). Furthermore, it touches upon the importance of learning in the process of experimental governance, particularly through questioning the underlying assumptions and societal structures, and reformulating the problem itself. In addition, the case study of Antwerp gives an example of mobility governance, featuring good practices and strategies that could be adopted within MOVE21 and broadly, by the participating cities.

The results from the governance assessment of Gothenburg are provided in the following, not including the general overview of the mobility landscapes in the city (cf. D4.1). The assessment is based on four parameters, for which a set of questions was drafted, forming the basis for the interviews with key persons within the Gothenburg LL:

Policy and regulation:

- Strategic documents set the general direction for MOVE21 solutions, such as the Environment and Climate Strategic Programme 2030 (Göteborgs Stad 2020) with the main goals that the solutions must contribute to. The Traffic Strategy (Göteborgs Stad 2014 Traffikstrategi) and Strategy for Green and Accessible Metropolis (Göteborgs Stad 2014 Grönstrategi) are some of the other potentially relevant strategic documents (cf. D4.1).
- In terms of urban development, relevant instruments include guidelines for mobility and parking when constructing new buildings, building permits, planning programs and detailed development plans (such as Göteborgs Stad 2014 Traffikstrategi, Göteborgs Stad 2022: Detaljplan Nordstan), and a masterplan for Gothenburg (Göteborgs Stad: Översiktsplan).

- These policies and policy instruments are not expected to provide any friction for demonstration projects, yet it depends on the design of the demonstrations and if it requires stakeholder consultations and/or approval from the Planning and Building Committee.

Stakeholders:
Stakeholders were identified in D4.1 for the individual test sites (cf. D4.1) with the conclusion that some stakeholders are potentially underrepresented in the Gothenburg LL, such as property owners, transport and logistics companies, and end users. Based on needs and possible contributing organisations, the stakeholder groups will change during the course of the project. This is a relevant point that the Gothenburg LL has been working and will further work within its stakeholder involvement process, moreover it will be taken up in the knowledge brokerage process with WP4 (cf. Table 2).

Risk factors related to stakeholders for the LL:
- User involvement is seen as a weakness. It can be strengthened by several platforms and process blueprints that can provide input to support a proper end-user and citizen dialogue, such as for instance, Safety Walks, summer pedestrian streets, the Freight Network. For user involvement in MOVE21, Gothenburg LL can build upon existing citizen involvement processes of the the City Planning Department for capturing needs, concerns, problems, and cooperation interests of citizens and other stakeholders.
- Cross-departmental working groups meet in both investment projects and planning processes. However, no structures exist for continuous collaboration outside of the boundaries of such initiatives.
- In the longer term, the interviewees raised the issue related to the responsibility for the sustainability of the LL beyond MOVE21 lifetime and upscaling of tested solutions. This relevant point has been part of the discussions on MOVE21 solutions for each test site, and will also be discussed as part of the knowledge brokerage process with WP4 and other relevant WPs such as WP6 and WP9 (cf. Table 2).

Legitimacy:
- Legitimacy concerns may arise when trying to test new functions in the urban environment. Conflicts could become visible when the development of innovative solutions moves to a more detailed level.
- Importance of managing the societal acceptance and ensuring compliance with existing institutions: mobility and transport matters are something that local stakeholders, including the citizens, find important and are vocal about. In Gothenburg for instance, a new political party was formed to protest the construction of the West Link and related congestion taxes.
- Traffic safety and accessibility are two important legitimacy considerations, and test site-specific risk analyses should be performed to minimise risks associated with these aspects as activities advance.
- Extending and sustaining the solutions beyond the project timeline is crucial to public buy-in: Permanent developments and long-term value creation must be communicated and demonstrated, linked together with existing projects and city planning overall. Considering e.g., piloting fatigue as in innovation dense areas such as Lindholmen or linking and aligning with urban development such as in Klippan over the next five to ten years.

  As Gothenburg LL considers these legitimacy issues as most relevant, we will include these challenges in our knowledge brokerage sessions with WP4 and other relevant WPs (cf Table 2).

Resources:

- Lengthy planning processes and time constraints represent one potential issue.
- Concerns over spatial resources were also raised: if physical assets are to remain in the area permanently, landowners and real-estate owners are key stakeholders to involve.
- Competition over space is tightly linked to competition between different private actors present in the area, particularly a concern in high density areas such as Nordstan. This issue will be explored in the project, through negotiating with such actors and linking several initiatives.

The report D4.1 rounds up with a set of general observations, which reflect on the similarities between the three cities in connection to the results of the literature review and the case study. First, it is concluded that fragmented governance justifies broad engagement of stakeholders, particularly underrepresented groups and groups that may form opposition to the project. In D4.1, the need to view test sites as negotiated solutions is also highlighted, i.e. that the solutions are dependent on the voluntary participation of different actors. Aligning the vision and objectives is then mentioned as an important tool to ensure successful stakeholder engagement. Gothenburg LL has during the co-creation and planning phase in MOVE21 closely worked with different stakeholder groups and will continue do this while local groups for each test site are forming for the implementation of solutions.

4.3 Draft Technology Solutions

The LLs in MOVE21 require access to and application of technologies for implementing new capabilities in urban distribution of people and freight to support non-technological innovations. D5.1 outlined ambitions for the project in general terms and the types of technologies that can be applied and integrated for achieving new capabilities for mobility and logistics. The technologies that are within the scope of the deliverable are limited to information and communication systems. WP5 in MOVE21 will assist the different LLs in identifying the relevant technologies that may be applied to achieve the ambitions in the LL and help integrate these technologies when required.

D5.1 presents the overall goals of the project and how they are being applied in WP5. Different types of hubs are presented with a set of amenities that may be associated with each mobility hub type. Sample technology types needed to support the objectives are shortly described, and the need for them to be integrated.

Integrating technologies and interoperability:
D5.1 names Mobility-as-a-Service (MaaS) as one example on how the information of all stakeholders need to interact for MaaS capabilities to be properly implemented. For freight transportation, information must be shared between the stakeholders for effective and efficient movement of goods as well. Data (reference) models are used for integration and interoperability both for transporting people and goods. In D5.1 several types of initiatives from the passenger and freight domain are listed, that have often little or no overlap. Furthermore, the governance basis for standards for the provision of EU-wide multimodal travel information services is described. These standards could be used in MOVE21 when integrating scheduled and non-scheduled passenger transport.

Even with the standards/architectures, the most common way of integration of information systems is the EDI (Electronic Data Interchange) and API (Application Programming Interfaces) integration. Integrations in MOVE21 could be done using both methods, depending on the situation. To overcome lack of interoperability, D5.1 further names the European projects FEDeRATED and FENIX, aiming at harmonising interoperability issues in the sector of transport and logistics. The digital twin concept is an integral part of the FEDeRATED/FENIX approach, an alternative to traditional integration techniques. That is, the use of a special form of digital twins, to establish electronic copies of all the items being

transported where all relevant information is being kept. When the need for integration emerges in MOVE21, we will use the digital twin approach, at least for freight-related integrations.

5 Priority Topics and Crossovers

This report provides insights into the contextual factors that need to be considered or altered for the development and deployment of the proposed MOVE21 solutions, with special attention devoted to the urban social layer (WP3), governance (WP4) and technological solutions and integration (WP5). Based on the input from WP3, WP4 and WP5 so far, the Gothenburg LL lead by the task force has identified priority topics and crossovers involving various WPs. These topics and crossovers will be taken up in the coming knowledge brokerage process in the LL for further discussion, learning and collaboration within the project.

5.1 Priority topics

5.1.1 Social layer

With regards to WP3, actors from the task force and the Gothenburg LL identify and limit us to the following priority topics (PT) to be considered when developing and implementing MOVE21 solutions in Gothenburg:

D3.1 considers hubs as a potential host for activities from the perspective of mobility, transport, logistics and social uses. Regarding the social uses, some general guidelines to recommend types of activities, functions and services are described in the D3.1 for each test site in Gothenburg (see 4.1).

> Nordstan - with a high urban vitality: The potential social use connected to this hub should consider the existing customer base, pedestrian volumes, as well as the existence of places of origin and destination of trips. A further development of a hub in such location could consider their use within a multi-purpose mobility scheme.
>
> Klippan - with a low level of vitality - when compared to Nordstan: It could favour multipurpose trips in synergy with the activities found in the hub, aiming for a catalytic effect attracting additional functions and services.
>
> Lindholmen - with a lower level of vitality - when compared to Nordstan: Potential uses of a hub could provide services that are missing, in the direction of social justice and equal access to basic services. This process would intend to create a new flow of pedestrians and potentially activate inactive public spaces.

The social use connected to the hubs is taken up in our PT1, while we combine it with the envisioned improvements in terms of social qualities, to enhance the mobility for people and freight.

PT 1: Mobility hub solutions to improve the social qualities and use of the test sites
Social quality, e.g. pleasantness or attractiveness, of the test sites should be improved by the choice of solutions and should be in line with the social use for the hubs from D3.1. Services and measures that could enhance the social qualities of the different test sites and increase their attractiveness need to be identified, while overall contributing to the mobility of people and freight. In the co-creation process, improving the feeling of security and safety for pedestrians/cyclists at the test sites Nordstan and Klippan has been emphasized. For Lindholmen, the LL also stressed the importance of solutions that increase social (evening) activities in the area. Further goods consolidation can lead to decreased number of freight transport in the area, potentially contributing to a more pleasant area. For Klippan with its location at the river Götaälv and its vicinity to a highway, questions that arise are about how to reduce traffic noise at exposed places in order to enhance its social qualities.

The LL will discuss with WP3 how the social uses of the test sites, potential solutions and kind of services may enable these kinds of changes. For example, the correlation between promoting micro-logistics/cycling logistics and improved walkability as non-motorized transport solutions have been discussed particularly for all three sites.

The method chosen for data collection and analysis in D3.1 has not considered long-term changes due to urban development. Yet, due to the ongoing changes at all sites in Gothenburg, we identify this as another priority topic.

PT 2: Impact of new developments on social layer
Infrastructure projects such as Västlänken and Gullbergstunneln in Nordstan and urban developments such as Karlastaden in Lindholmen have impacts on the social character of the test sites in the next five to ten years. To prepare effective and self-sustaining solutions with long-term value, these developments need to be taken into account already now and catered for. In this priority topic, the LL will look with WP3 at the anticipated changes with regards to the social use, new user groups, pedestrian flows and the potential impact of added services on the social layer.

5.1.2 Governance

As priority topics to consider when developing and implementing MOVE21 solutions, actors from the task force and the Gothenburg LL identify the following with regards to WP4.

PT 3: Potential challenges in co-creation process with regards to governance
We will discuss factors that define a successful governance process, such as inclusiveness, accountability, impartiality, administrative competence, learning capacity, timeliness and a successful process outcome, such as diversity, connectivity, polycentricity, redundancy and directionality. The discussion between the LL and WP4 should contribute both to our current phase of solution consolidation and later implementation process. It can help steer the process by providing answers to questions such as “What issues are most likely to arise in the establishment phase?” or “How to "legitimize" solutions in the future?”

As part of the challenges in a co-creation process, actors from the task force and the Gothenburg LL we identify potential topics that could be taken up in the discussions with WP4.

Interview-based observations in WP4 revealed that there are several underrepresented groups identified for the LL, such as property owners, transport/logistic companies, end users, citizens. A process how to work with and involve these should be part of the PT 4 discussion. For user involvement in MOVE21, Gothenburg LL can build upon existing citizen involvement processes of the he City Planning Department for capturing needs, concerns, problems, and cooperation interests of citizens and other stakeholders. Stakeholder involvement will be included in the knowledge brokerage process with WP4, further involving WP3 and WP10.

D4.1 points out that legitimacy concerns may arise when trying to test certain measures. In particular, traffic safety and accessibility are mentioned by WP4 as two important legitimacy considerations. A risk analysis should be performed in MOVE21 to minimise risks associated with these aspects, further societal acceptance and ensuring compliance with existing institutions.

PT 4: Site-specific constraints in the short and longer term
The governance assessment performed in WP4 points at a couple of constraints that are in parts closely linked to the specific sites, such as the physical resource constraints for Nordstan or the importance of establishing links to future development plans at Klippan. D4.1 further names the challenge of getting tangled up in lengthy planning processes, which is a common challenge in innovation projects that are ongoing amidst conventional urban planning and development processes.

D4.1 identifies a couple of long-term constraints that should be discussed together with several WPs and the other participating cities in the project as this is related to the sustainability of solutions beyond MOVE21s lifetime and the upscaling of tested solutions. Two major issues are, for example, to extend and sustain solutions at the test sites beyond the project timeline and project financing. This also includes the communication of permanent developments and long-term value creation or to establish links to existing projects – either physically, or by a common vision and business models for the test sites.

PT 5: Roles of municipalities in terms of governance
D4.1 describes different roles that municipalities can assume when dealing with urban experiments and mobility governance. These are context dependent, but may include roles such as promoter, enabler, architect or provider. This topic is most interesting for the City of Gothenburg as part of the LL, as well as with other cities during knowledge exchanges organised by WP7. It might also be helpful to discuss case studies, such as Antwerp that was showcased in D4.1, or other suitable best practice cases, to discuss how governance practices and strategies could be adopted.

5.1.3 Technological solutions and integration

WP5 will assist the Gothenburg LL in identifying the relevant technologies that may be applied to achieve the ambitions in the LL and help integrate these technologies when required. As priority topics to consider when developing and implementing MOVE21 solutions, actors from the task force and the Gothenburg LL identify the following with regards to WP5.

PT 6: Technological solutions based on needs
For WP5 to support the Gothenburg LL more knowledge is needed on the potential attributes for the test sites. Same is needed regarding ambitions and implementations in Gothenburg as the co-creation process proceeds. Another way of increasing knowledge is through simulations to get a more holistic view on how cargo and people flow for example. Expert knowledge could help to clarify questions from the LL such as how to optimize goods transport and service delivery transport and how to combine information of these different transports and services.

PT 7: Combine and align technological and non-technological solutions
To achieve the ambitions in MOVE21 a combination of technological solutions and non-technological solutions need to be implemented. Actors from the task force and the Gothenburg LL see this topic as a challenge for the Gothenburg LL. In this priority topic actors from the task force and the Gothenburg LL wish to find answers to questions such as: “Which technological solutions could be combined with our first sketch of non-technological solutions, i.e., technological solutions that could fit and support the test sites?” Further, we would need expertise on “What kind of solutions could support in particular non-motorized transport (pedestrian, bicycles)?”

Actors from the task force and the Gothenburg LL further see that the selection of a type of solution(s) might need alignment and that applying standards will take time during the deployment of the LL solutions. Another aspect for discussion that might come up at a test site in Gothenburg is about governing integrated people-freight transportation and connected to the mentioned service delivery hub under PT7

regarding ways of collaboration in a service delivery hub aiming at construction workers, facility managers, etc.

5.2 Crossovers

In the LL Gothenburg, we identified relevant crossovers between the WPs based on the context analysis (D3.1, D4.1, D5.1), the priority topics (5.1) and a discussion with the TF in February 2022:

- WP3 – WP4: Social acceptance of innovations

- WP3 – WP5: Harmonize the developed mobility hub/service typology
- WP3 – WP5: Add the social dimension to the digital twins when simulating new solutions

- WP4 – WP5: Combine and align technological and non-technological innovations
- WP4 – WP5: Governance of integrated passenger/goods transport

Actors from the task force and the Gothenburg LL try to integrate these crossovers in the knowledge brokerage sessions/action plan (cf. chapter 6.1). The aim is to include experts from different WPs to discuss solutions from a more holistic point of view. This can be crossovers with technical WPs and WP7 on knowledge exchange with other cities. Such a webinar is planned between the LLs and WP4 to reflect on the roles of municipalities in terms of governance. As the process of solution finding has proceeded for the different test sites, crossovers might also be identified between WP3 and WP10 as well as between WP6 and WP9.

6 Innovation Agenda

In this part of D6.3 action plans are developed on how to address the priority topics and crossovers identified by the Gothenburg LL. The knowledge brokerage process in MOVE21 is shortly explained and how this links to the LL stakeholders. The overall aim of the knowledge brokerage sessions in the LLs is to continuously deliver state-of-the-art information and knowledge relevant for increasing innovation capacity. Timing of the knowledge brokerage process for years 2022 to 2024 is described.

6.1 Knowledge brokering needs

The process in the LLs to develop MOVE21 solutions are supported with a continuous knowledge brokerage process on three topics: the urban social layer, governance, and technological solutions and integration. These three topics are relevant for the current and future socio-technical contexts in the LL areas and for improving the innovation capacity in the cities.

The knowledge brokerage processes will

- deliver timely and relevant state-of-the-art knowledge,
- analyse the current situation,
- provide support for co-creation of innovations and
- help to design possible interventions.

In the LLs, knowledge brokerage sessions (KBS = workshops) will be organized on the MOVE21 solutions to facilitate knowledge exchange, to discuss and analyse outcomes, and for the uptake of knowledge. Further, knowledge brokerage sessions in the LLs are to deliver state-of-the-art information and knowledge relevant for increasing innovation capacity. WP3, WP4 and WP5 will provide the LL with on-demand knowledge and information in the KBS on the relevant priority topics such as place making, governance and co-creation, technological connectivity, system integration issues, etc. Other WPs and their expertise will also be connected as needed.

In the following, the action plan for the Gothenburg LL is presented, addressing the social layer (WP3), governance (WP4) and technological solutions and integration (WP5) to make expert input and discussions as specific as possible at this stage of the project when solutions are consolidated. The action plans are based on the identified priority topics in the Gothenburg LL (5.1). Cross-over topics are added to the KBS when suitable. The crossovers can be integrated in the KBS by including experts from other WPs to discuss solutions from a more holistic point of view.

Knowledge brokerage sessions are organized within the ICCPs which are the chosen governance structure for co-creation and implementation in MOVE21. Each LL has its own ICCP. An important part of the co-creation and implementation process in the ICCP is steered via the Task Force. These actors may be included in the KBS as well as the local working groups that are forming for each of the three sites in Gothenburg currently. In addition to this, for each topic an advocate in the ICCP has been assigned as a contact point. This advocate is knowledgeable on the topic, knows the relevant local people, and has a good overview on what is at stake in the cities.

Further, experts from all WPs but in particular WP3, WP4, WP5 and WP6 provide the LL and ICCPs with knowledge that is relevant for the co-creation, tailoring, deployment and upscaling of the proposed solutions. This input varies as it is based on the priority topics and on the key action steps. The aim is that these actors together review the local conditions and propose actions or measures to make the

innovations fit local contexts, discuss policy measures that should accompany the innovations, and/or develop local upscaling and follow-up plans.

Table 1: Action plan addressing the social layer in the LL Gothenburg

Key Action Step	Timeline	Outcome	Process/Method	Involved
Priority Topic 1: Mobility hub solutions to improve the social qualities and use of the test sites				
(1) Develop mobility hub solutions that enhance the social qualities of the test sites, connected to social use(s)	Starting with KBS Q2 2022	Example for Lindholmen: Missing services identified to improve social activities in the evening hours, creating a new flow of pedestrians and potentially activate inactive public spaces Example for Nordstan: Improve feeling of security and safety for the test site to increase non-motorized transport modes.	Discussion with working groups for each site Expert input, data analysis, pedestrian simulation	Gothenburg LL WP6 WP3
Priority Topic 2: Impact of new urban development on social layer				
(2) Consider new developments in further analysis of the impact on social layer	Starting with KBS Q3 2022	Example for Lindholmen: Anticipated social changes and new user groups due to the development of Karlastaden with regards to logistics, recycling, waste management.	Discussion with working groups for each site Expert input Scenario methods (tbd)	LL Gothenburg WP6 WP3

Table 2: Action plan addressing governance issues in the LL Gothenburg

Key Action Step	Timeline	Outcome	Process/Method	Involved
Priority Topic 3: Potential challenges in co-creation process with regards to governance				
(3) Work with potential challenges in the co-creation process	Starting with KBS Q2 2022	Define successful governance process and process outcome for the sites. Continued work at each test site (ongoing): how to work with and involve underrepresented user groups and stakeholders. Identify legitimacy considerations for the test sites: ensuring compliance with existing projects, clear communication, etc.	Expert input WP4 Detailed stakeholder and user mapping for each site Test-site specific risk analysis to prevent oppositions at test sites. If necessary, risk mitigation measures, etc.	Gothenburg LL WP6 WP4 WP10 WP3 Gothenburg LL WP6 WP10
		Crossover: Social acceptance of innovations		WP3 – WP4
Priority Topic 4: Site-specific constraints in the short to longer term				
(4) Consider site-specific constraints in the short and longer term	Starting with KBS Q3 2022	Example for Klippan: Work with flexible solutions that can be adapted to the future development of the site. Develop strategies for upscaling of tested solutions.	Expert knowledge to be included in site-specific decision process from Gothenburg LL Long-term value creation, business/financing model for the solutions, etc.	Gothenburg LL/ Traffic Planning Office WP6 WP4 WP9 WP7

Priority Topic 5: Roles of municipalities in terms of governance				
(5) Explore the roles of municipalities in terms of governance	Starting with WP4 webinar Q2 2022[2]	Context dependent roles and case studies are explained and discussed for the LL Gothenburg.	Expert input on case studies and roles	City of Gothenburg as part of LL WP6 WP4 WP7

[2] A webinar is planned by WP4 in Q2 2022 as this topic has been identified also by the other LL cities. Whether a dedicated KBS is needed on this with specific focus on the Gothenburg LL will be discussed after the webinar.

Table 3: Action plan addressing technology solutions in the LL Gothenburg

Key Action Step	Timeline	Outcome	Process/Method	Involved
Priority Topic 6: Technological solutions based on the needs				
(6) Base technological solutions on the needs at the sites	Starting with KBS Q2 2022	Example for Nordstan: Find technological solutions that support the establishment of a service delivery hub that could reduce delivery transports in the area.	Discussion with working groups for each site Expert input Digital twins/simulations	Gothenburg LL WP6 WP5
		Crossover: Add social dimension to the digital twins when simulating new solutions		WP3 – WP5
Priority Topic 7: Combine and align technological solutions and non-technological solutions				
(7) Combine technological solutions with non-technological solutions and align different solutions	Starting with KBS Q3 2022	Example for Klippan: Support non-technological solutions with suitable, meaningful technologicl solutions for the test site to increase non-motorized transport modes. Example for Lindholmen: Ways of governance for goods transport management, including waste, recycling, delivery, etc to reduce the amount of goods transport.	Discussion with working groups for each site Expert input Digital twins/simulations	LL Gothenburg WP6 WP5 WP6
		Crossover: Combine technological and non-technological innovations		WP4 – WP5
		Crossover: Governance of integrated passenger/goods transport		WP4 – WP5

6.2 Timing of the Knowledge brokering process in the Living Lab

The ICCPs are provided with expert knowledge from WP3, WP4 and WP5 as well as other WPs for the discussions in a continuous knowledge brokerage process on the social, governance and technical conditions (cf. D6.1) based on the needs of the LLs. Together the members of the ICCP and members of WP3, WP4 and WP5 will review the local conditions and propose actions or measures to make the innovations fit local contexts, discuss policy measures that should accompany the innovations, and develop local upscaling and follow-up plans.

The knowledge brokerage process will be continuous, i.e. responsive to the LL needs and progress. This requires the knowledge brokerage process to be flexible and tailor-made to each LL. Due to this, the action plans in chapter 6.1 have a more detailed time and topic planning only for 2022 and preliminary for 2023. As we are now in month 12 (April 2022) of the project, there is a shift from planning to implementation in the LLs (cf. Figure 4). We propose during this period of the project and due to the status in the LL to have a more intensive cooperation with WP3, WP4 and WP5 in the beginning of the implementation phase, scheduling topic-focused knowledge brokerage events in 2022 (Table 4). The aim of the knowledge brokerage sessions in 2022 is to present and discuss the LL solutions for the three hubs in Gothenburg and how to address the knowledge brokerage needs as identified in the action plans (cf. chapter 6.1).

As the ICCPs in the LLs further professionalize over three stages (year 1: set-up, year 2: mature and year 3-4: stabilize), we foresee that further knowledge brokerage sessions can be useful with yearly intervals, eventually more intensive towards the end of the project depending on needs for upscaling and follow-up plans in 2024 (cf. Figure 4). Again, these sessions could be split up to address priority topics from WP3, WP4 and/or WP5 (as suggested for 2022) or be more all-encompassing and site-specific.

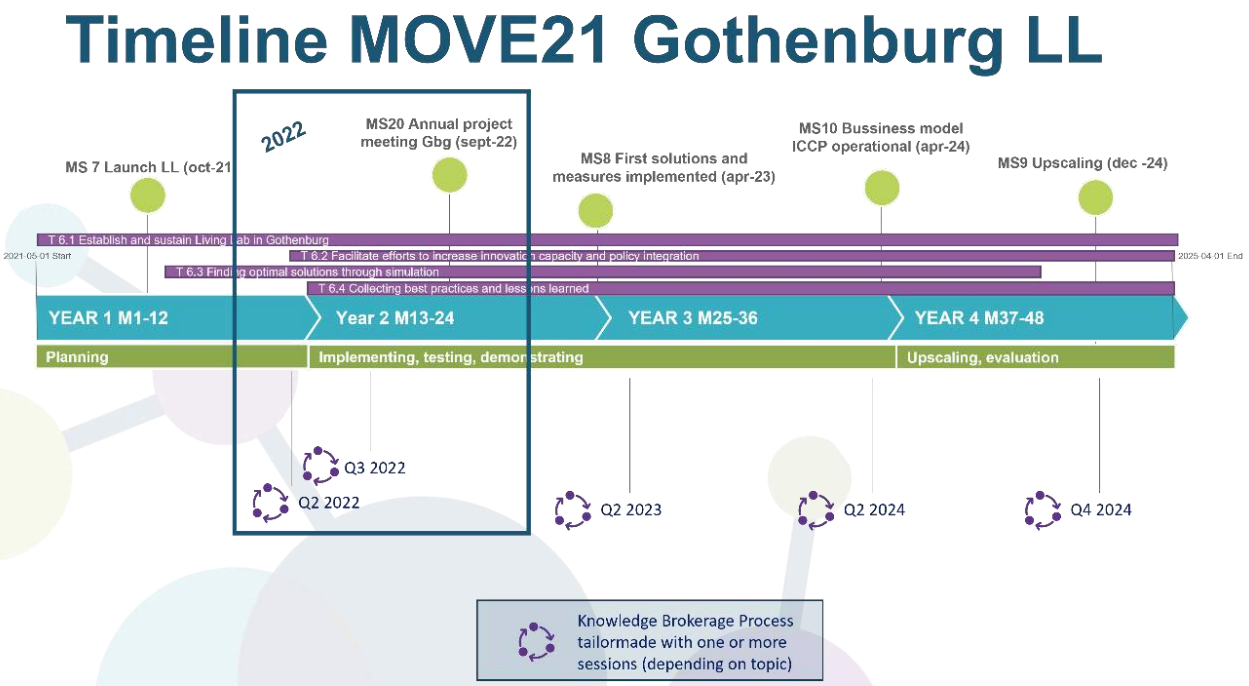

Figure 4: Timing of the knowledge brokerage process 2022-24 for the Living Lab Gothenburg

The knowledge brokerage sessions in 2022 could be organized per LL, i.e. encompassing all three test sites, yet addressing one of the context topics (social layer, governance or technology). The details will be clarified in the following weeks while the local working groups for each hub site are forming in Gothenburg.

The following suggestion for KBS is made to include all priority topics, encompassing all hub sites in the LL. Eventually, a few KBS could be further combined if suitable:

Table 4: Time plan for the Knowledge Brokerage Sessions in 2022 and 2023 for Gothenburg LL

Timing	Knowledge Brokerage Session	Involved
Q2 2022	KBS 1: Social qualities and use of hubs (PT1)	WP3, LL Gothenburg, WP6, tbd
Q2 2022	KBS 2: Challenges in co-creation/governance (PT3)	WP4, LL Gothenburg, WP6, WP10, incl. crossovers with WP3
Q2 2022	KBS 3: Technology based on needs (PT6)	WP5, LL Gothenburg, WP6, tbd incl. crossovers with WP4
Q3 2022	KBS 4: Impact of new development on social layer (PT2)	WP3, LL Gothenburg, WP6 , tbd
Q3 2022	KBS 5: Constraints in short and longer term (PT4)	WP4, Traffic Planning Office Gtb, WP6, WP7, WP9
Q3 2022	KBS 6: Alignment of solutions/technology (PT7)	WP5, LL Gothenburg, WP6 , tbd incl. crossovers with WP4
Q2 2023	KBS 7: Roles of municipalities/governance (PT5)[3]	WP4, WP6, City of Gtb, WP7

KBS: Knowledge brokerage session
PT: Priority topic

[3] A webinar is planned by WP4 in Q2 2022 as this topic has been identified also by the other LL cities. Whether a dedicated KBS is needed on this with specific focus on the LL Gothenburg will be discussed after the webinar in Q2 2022 and the progress made in the LL.

7 Conclusions

To overcome barriers for clean and smart mobility and facilitate innovative solutions, deliverable D6.3 provides an overview of priority topics for the Gothenburg LL that need to be addressed in the knowledge brokerage process. Based on the co-creation process of the Gothenburg LL, actors from the task force and the Gothenburg LL see a need for further discussion, learning and collaboration within the project.

One conclusion of the project process so far is that the work of WP3-5 needs to be more closely connected to and responsive to the individual needs of each LL, in particular to have a successful knowledge brokerage process in the coming years. To have a positive effect on the LL solutions, WP3-5 should focus on questions and issues that are of concern to the LL and contribute to their success. Thus, in D6.3 a more detailed time and topic planning for the knowledge brokerage process is limited to 2022. Further sessions in years 2023 and 2024 need to be adapted to the upcoming needs in the LL.

As the Integrated City Assessment Gothenburg is based on deliverables D3.1, D4.1 and D5.1, special attention is put on the urban social layer (WP3), governance (WP4) and technological solutions and integration (WP5). These topics are indeed relevant for the current and future socio-technical contexts in the LL areas and for improving the innovation capacity in the cities. Therefore, in D6.3 action plans are developed with regards to these contextual topics and complemented with the LL´s priority topics. Still, there might be other issues that will need expert input, and which should be taken up in the knowledge brokerage process, as the LL solutions are deployed and replicated.

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