Benchmark for Integrated Learning

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Abstract

The REALLOCATE project supports the implementation of the EU mission '100 Climate-Neutral and Smart Cities by 2030'. Through integrated, innovative, and inclusive sustainable urban mobility solutions, the project targets diverse groups and communities with the main objective to reallocate street and public space. Each of the 10 partner cities within REALLOCATE will organise Safe and Sustainable Mobility Labs (SSMLs), with support from technical and horizontal partners, exploring strategies to contribute to the achievement of the Mission.

The **Benchmark for Integrated Learning** (Part I of this document) seeks to identify and aggregate the common challenges and learning needs faced by the partner cities during the planning, implementation, and scaling of their SSMLs. The focus of this report is on the learning processes that would support REALLOCATE cities in their transition towards climate neutrality, and more specifically in the conduction of their SSMLs. We approached learning needs by engaging in an exploratory dialogue with participating cities to shed light on the kinds of support required. The resulting benchmark is based on qualitative data collected through semi-structured interviews with REALLOCATE cities and later iterations through focus groups with both city teams and horizontal partners. Learning needs are summarised into a preliminary typology comprising four primary categories: technical learning needs; community-related learning needs; transformation management learning needs and governance-related learning needs. These categories, and their component subcategories, are then detailed through practical examples drawing on our dialogue with the cities.

This benchmark constructs a typology of the central learning needs (see Chapter 4) that REALLOCATE cities have as they develop their SSMLs. It further demonstrates that cities' needs for learning can be clustered, and most importantly, that the identified learning needs are interconnected with each other. This highlights the need to establish adaptive knowledge-sharing practices that not only acknowledge but also address the systemic implications of these interconnections. This evolving typology represents a first step, taken in the beginning of the project, to chart the baseline learning needs against the support structures and practices offered by the REALLOCATE consortium.

The Benchmark for Integrated Learning is conducted as part of REALLOCATE's efforts to coordinate peer learning and capacity building (WP4 Peer learning, capacity building, and twinning; T4.1 Baseline for peer learning and capacity building). It aims to serve as a framework for which to expand the further development of knowledge exchange activities. Furthermore, this Benchmark feeds into the development of a Transformative Governance Framework taking place later in the project by documenting participating cities' current perceptions of their city-wide governance systems and capabilities. This Benchmark forms the basis for the **Cities' Self Assessment template** (Part II of this document), which will be used to further enhance the identification and precise delineation of each city's specific situation and learning needs.

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Abbreviations and acronyms

Acronym	Description
AI	Artificial Intelligence
NBS	Nature-Based Solutions
NZC	NetZeroCities
SCNM	Safe Climate-Neutral Mobility
SSML	Safe and Sustainable Mobility Lab
SUMP	Sustainable Urban Mobility Plan
VRU	Vulnerable Road User
WP	Work Package

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About REALLOCATE

REALLOCATE transforms streets into inclusive, green, safe and future-proof urban spaces, where communities live and thrive. The project enables researchers, mobility experts, urban planners and local citizens to collectively re-imagine our cities and redesign how we move from one place to another.

REALLOCATE supports the implementation of the EU mission '100 Climate-Neutral and Smart Cities by 2030'. The main objective of this project is to pave the way towards climate-neutral, safe and smart EU cities through integrated, innovative and inclusive sustainable urban mobility solutions that will address the needs of diverse groups and communities, while rebalancing the street / public space allocation. The project will pioneer a Safe Climate-Neutral Mobility (SCNM) System in 10 twinned cities - Gothenburg-Tampere, Heidelberg-Utrecht, Lyon-Warsaw, Budapest-Zagreb, Barcelona-Bologna - to contribute to the achievement of the mission. This will happen by organising 10 Safe and Sustainable Mobility Labs (SSMLs) in partnering cities. The SSML concept expands Living Labs to a focused road safety and sustainable mobility vision. The SSMLs are meant to provide cities with a framework to co-design and co-develop technologies and interventions. This aims to promote a modal shift to sustainable urban mobility modes by leveraging the SCNM System, implemented to solve ongoing issues in 15 unsafe urban or peri-urban areas. The project consortium consists of 10 cities and their technical partners, and horizontal technical partners which help cities in organising their SSMLs (see Figure 1 next page for details). In addition, the project aims at empowering 10 Cascade Cities (selected among all 377 cities that expressed an interest in becoming climate-neutral by 2030) by providing tools and knowledge to replicate the experience of REALLOCATE SSMLs.

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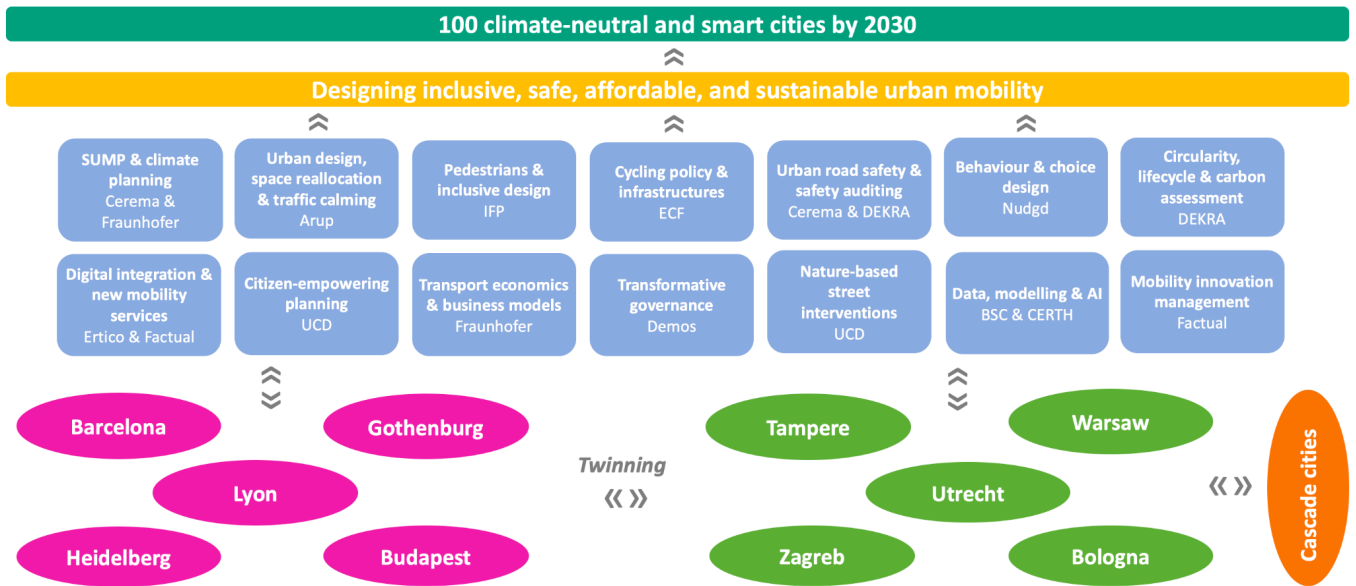
Figure 1. *Horizontal technical partners and their areas of expertise*

Part I: Benchmark for Integrated Learning

1   Introduction

The Benchmark presented in this report identifies and aggregates common challenges and learning needs across the REALLOCATE partner cities. It is the first step to chart the baseline learning needs of partner cities as the project begins, and set these against the support structures and practices offered by the REALLOCATE consortium.

The **Benchmark for Integrated Learning (Part I)** serves as the basis for crafting the **Cities' Self-Assessment (Part II)** that will be undertaken by the partner cities in the following stages of the REALLOCATE knowledge sharing programme in WP4. The insights gathered from the Self-Assessment will provide the groundwork for subsequent peer-learning and capacity-building activities, and enable cities to assess their development over the course of the project. The content of this report is therefore most relevant for project partners and individuals involved in similar initiatives.

Additionally, this Benchmark feeds into the development of a Transformative Governance Framework later in the project by documenting the current perceptions of the participating cities in the context of the city-wide governance systems (Figure 2).
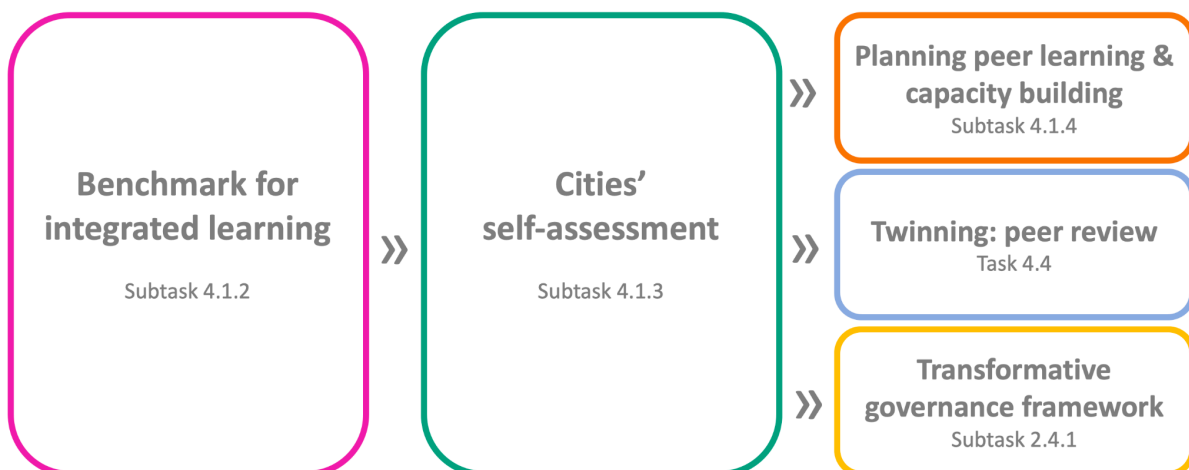
Figure 2. *Process of REALLOCATE's tasks related to knowledge sharing*

Our work on this Benchmark is based on the argument that integrated learning is a key element of any transformative process, aligning with the overarching objectives of the Cities Missions to achieve climate neutrality and the specific goals of our project.The efforts put

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into this Benchmark contribute to achieving the project goals in two fundamental ways. First, integrated learning is at the core of the Safe and Sustainable Mobility Labs (SSMLs), as the cities work to create inclusive, green, safe, and future-proof urban spaces. Second, work performed during REALLOCATE aims for the city-wide adoption of solutions developed and deployed during this work (scaling up), and ultimately, helping these spread across Europe (replication and take up).

To pave the way for integrated learning, we have approached the learning needs by engaging in an exploratory dialogue with the 10 participating cities, and then summarising the results of this process into a typology of learning needs, presented in Chapter 4. The work begun in this Benchmark will be continued in Cities' Self Assessments, and in other tasks over the course of the project. This Benchmark and the Self Assessment serve to guide the work of horizontal partners and the entire REALLOCATE consortium in supporting cities in their development processes.

2   Concepts and approach

The concept of integrated learning in REALLOCATE emphasises the exploratory nature of our project. In this Benchmark, we focus specifically on learning that takes place in the context of city organisations and local communities; that is, learning that enables the cities and communities to together adapt to the requirements of our times, fulfil our objectives on climate impact, safety, and inclusivity, and take forward solutions that are integrated with the overall needs of our communities.

In this chapter, we discuss the central concepts and principles informing our approach at the beginning of this project. These will aid in the interpretation of the learning needs discussed in Chapter 4, and provide a basis for discussing learning needs both for the cities' Self Assessment, and for guiding the work of all REALLOCATE partners in supporting the cities.

2.1   Learning and capacity building in organisations and networks

In discussing integrated learning, our focus is specifically on learning that supports REALLOCATE cities in their project tasks and their transition towards climate neutrality. The learning that we are looking for is truly integrated in the city organisations and local communities; it builds the capabilities of cities and communities, and improves their abilities to work towards the project goals.

This type of learning takes many forms. The pilots developed in REALLOCATE call for changes in the practices and structures of the participating cities. Such changes require many kinds of learning: the adoption of new models and perspectives, the adaptation of tested models to new surroundings, and changing working practices and ways of working together. In this context, learning needs are recognised as the evolving capacities of cities, emphasising 'knowing how to do things' over merely collecting new data or information, which involves an understanding of 'what actions to take' to achieve goals

The changes needed range from the acquisition of *technical expertise* – e.g. bringing in a new expert or system to resolve a problem – to the building of *collective understanding* that can lead to new connections, breaking down working silos and fostering collaborations between city departments, decision makers, and broader stakeholders. Changes of the latter kind may require much in-depth discussion and the development of new working practices; in short, an often continuous process of learning from all parties involved.

Thus, the integrated learning we wish to support forms a path for the cities to move from first identifying learning needs to then assessing how to support them, and then iteratively testing and transforming this (often shared) knowledge to collective capabilities – being able to work together, understand and work on shared goals. Supporting movement on this path is expected to support the cities in improving their capability for learning; as the city departments and communities build networks for collaboration and learn to better understand each other, they may be better equipped to continue dialogue and collaboration on new issues later.

2.2   Building the practices for learning and capacity building

The support structures built into REALLOCATE form a significant part of the project, and cities are presented with a broad network of expertise to feed into these structures. Leveraging this support in the best way possible depends on the abilities of the REALLOCATE consortium to work together. In this section, we draw on constructivist and transformative learning theories[1,2] to present five traits of successful learning support. These traits summarise research and best practice in organisational and individual learning into a

[1] Wenger, E. 1998 Communities of practice: Learning, meaning and identity. Cambridge: Cambridge University Press.
[2] Formenti, L., & Hoggan-Kloubert, T. (2023). Transformative learning as societal learning. *New Directions for Adult and Continuing Education*, 2023: 105–118. https://doi.org/10.1002/ace.20482

concise outline that we hope can guide the design and delivery of the support activities the REALLOCATE consortium can offer to participating cities during the project.

FIrst, the **identification of learning needs** presents both a challenge and an opportunity to cities, as this identification is the foundation for effective actions. The process of identifying learning needs can be understood in two dimensions: on one hand, each city makes individual efforts to identify its unique learning requirements. Cities should draw from their own expertise and best practices while remaining open to adapting their identified solutions to their unique context, and in these dynamics needs for 'learning how to do things' will arise. On the other hand the consortium undertakes the task of discerning the collective learning needs of all participating cities in order to coordinate efforts and resources to support those needs.

Second, **the timing of support activities** is central to effective learning support. As learning needs arise from gaps in experience or knowledge, it is relevant to note that the perception of needs will evolve as the project advances and cities face unexpected challenges. New learning needs will be identified, while others will be dismissed in the process of conducting experimental pilots. Addressing evolving identified learning needs should be made in a timely and well-supported manner.

Third, the above shows that **the flexibility to respond to both anticipated and emerging learning** needs is also an important part of effective learning support. Each city works in a distinctive context in which evolving learning needs can look different or require a different type of support. The response to these dynamic learning challenges should be flexible enough to address systemic issues while remaining adaptable to emerging and context-specific requirements. In REALLOCATE this should be considered when designing peer-learning and capacity building activities.

Fourth, different needs require different strategies which can be understood through the lenses of **individual expertise and organisational capacity**. While certain needs, particularly those linked to operational, technical, or analytical aspects, may require the involvement of a single expert into the team, others might need the development of novel organisational models at the level of the working team or beyond. Recognizing the distinct nature of each learning need is relevant in mapping the journey for the cities' development within REALLOCATE.

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Finally, learning builds on both **innovating with new solutions and adapting existing knowledge**. The implementation of innovative solutions for urban mobility does not necessarily mean that cities need to experiment with new technologies or innovative approaches they haven't tried before. Often the teams have the capabilities to develop new solutions by adapting the knowledge that already exists within the organisation to a new context. Existing knowledge can and most often will be refined and enriched through the piloting process, and in the context of REALLOCATE it can also be shared with other partners.

2.3   Methodology

This Benchmark is based on qualitative data collected with the 10 partner cities in REALLOCATE between August and October, 2023. Semi-structured interviews and focus groups were conducted with the partner cities.

The interviews focused on an initial understanding of the cities' perceptions of learning needs in the context of their goals for participation in REALLOCATE and the process of conducting their SSML (Appendix 1). The interviews were recorded and transcribed; a thematic content analysis was performed on these transcripts, to identify common themes and to form the basis for a preliminary typology developed in this document (chapter 4).

This typology was developed through an iterative process: A preliminary categorisation of the learning needs was developed based on the interviews (Appendix 1) and presented to representatives of all 10 cities in two focus groups, organised remotely on Teams using Miro boards. More details on this process is available from the authors upon request.

Focus groups aimed at verifying and complementing these findings, and sparked further discussion on the pilot plans and learning needs. In the focus groups, we asked the participants to evaluate each learning need along two dimensions: firstly, the current expertise level of the city teams, ranging from novice to expert, and secondly the level of importance attributed by each city based on the development stage of their SSML, from unimportant to important. After the focus group sessions with the cities, a separate focus group was conducted with representatives of the horizontal partners.

The methodology presented here aims to pave the way for the development of the Template for the City's Self-Assessment (Part II), which will be completed by the partner cities by the end of January 2025. The Self-Assessment report will iterate in the process of identifying

learning-related opportunities and challenges for cities in their participation on REALLOCATE, focusing on the journey towards climate neutrality, in particular in relation to urban mobility and public space design. The following section will introduce the current state of the cities in relation to this journey.

Barcelona
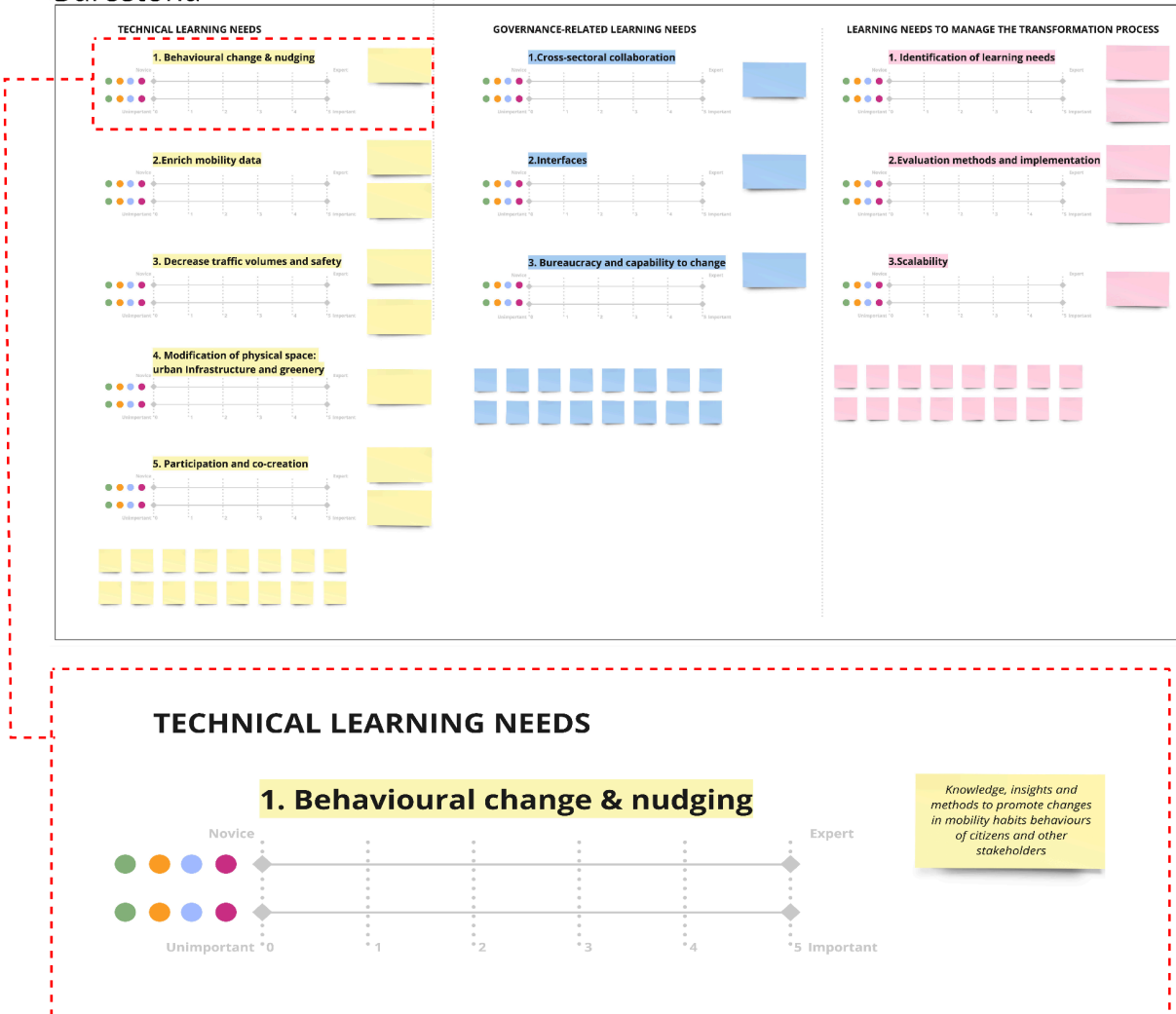
Figure 3. *Focus group activity in Miro (comments in upper section removed for clarity)*

3   Mapping the current situation of cities

All participating cities are amongst the 100 cities selected for the EU Mission on climate-neutral and smart cities[3], committed to carbon neutrality in accordance with the

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[3] European Commission, EU Mission: Climate-Neutral and Smart Cities.

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Mission's objectives. Many cities mentioned that being a mission city is an important motivation in participating in REALLOCAT and they reflect their SSML plans in relation to the goal of carbon neutrality and constantly seek to embed the work around pilots with it. All cities either have or are preparing a Sustainable Urban Mobility Plan (SUMP) or a similar transportation master plan, which is a city-wide plan to improve the accessibility of urban areas and provide high-quality and sustainable mobility and transport to, through, and within the urban area. A SUMP framework[4] is also provided by the EU through EU SUMP Guidelines. Cities also have other overarching mobility goals in addition to carbon neutrality, which are aligned with the mission of reducing car dependency and supporting a modal shift towards sustainable transport modes, reducing traffic congestion and increasing safety by creating more livable urban environments.

In this chapter, we illustrate the current state of cities' SSML processes and their expectations based on the interviews and focus groups. The aim is to prepare the ground for the cities' Self Assessments by exploring the tentative common themes in the circumstances, objectives and pilot plans of the 10 REALLOCATE cities. Cities have made initial plans for the pilots already in the proposal phase, and are now in the phase of preparing detailed plans of action. Many cities have a clear picture of their goals and pilots, but there is still need and opportunities for fine-tuning. The SSMLs deployment plans will be finalised with the help of the consortium by the month 12 of the project, meaning April 2024. In most cases, pilots are built on previous projects and experiences, with some variations, like location or technology, or new research questions.

3.1 The main themes of pilots

REALLOCATE initiates 10 Safe and Sustainable Mobility Labs (SSMLs), which will each host one or two pilots. The pilots stem from the local needs of each participating city and are related with the Sustainable Urban Mobility Plan and the Climate Plan developed as part of their participation in the EU Cities' Mission. The idea of the SSML concept is to provide cities with a framework to co-design and co-develop technologies and interventions to promote a modal shift to sustainable urban mobility modes.

REALLOCATE cities are divided into two groups: Lead Cities (Barcelona, Budapest, Gothenburg, Heidelberg and Lyon) and Twin Cities (Bologna, Tampere, Utrecht, Warsaw and

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[4] Guidelines for developing and implementing a Sustainable Urban Mobility Plan (2nd edition), https://www.eltis.org/mobility-plans/sump-guidelines.

Zagreb). The first group will conduct two pilots (as part of their SSML) and the latter group one pilot during the second and third year of the project (2024-2025). These pilots are listed in Table 1 below.

Table 1. *List of REALLOCATE SSMLs and pilots.*

Barcelona SSML (Lead city)
Pilot 1: Implementation of Barcelona superblocks 2.0 Pilot 2: Increased and Integrated Public Transport Accessibility System for People with Disabilities
Budapest SSML (Lead city)
Pilot 1: Introducing 'Healthy Superblocks' in Budapest Pilot 2: Periurban Traffic Safety in Budapest
Gothenburg SSML (Lead city)
Pilot 1: Safe System Approach for children's active travel in peri-urban areas Pilot 2: Seamless travel, citizen engagement and nudging tools in a complex mobility hub
Heidelberg SSML (Lead city)
Pilot 1: Regional Commuter plan with Electronic Bus Lanes for climate neutrality Pilot 2: Contextual & Tactical Public space Reallocation
Lyon SSML (Lead city)
Pilot 1: Safety Measures for VisionZero in the schools' surroundings Pilot 2: Lyon's Road Safety Tech & non-pollution parking policy
Bologna SSML (Twin city)
Pilot 1: Climate positive green corridors for safe and sustainable mobility
Tampere SSML (Twin city)
Pilot 1: AI for increased road safety, space reallocation and parametric design
Utrecht SSML (Twin city)
Pilot 1: Safety-proofing schools in vulnerable neighbourhoods
Warsaw SSML (Twin city)
Pilot 1: Warsaw's green & safe road to school
Zagreb SSML (Twin city)
Pilot 1: Central traffic corridor holistic solutions

Cities have already identified similarities between their pilots during the proposal phase and possibilities to facilitate knowledge exchange and co-learning. Central recurring themes of these pilot projects include the following:

- Supporting children's active mobility and traffic safety around school areas
- Street design for reallocating space and calming traffic in residential areas
- Improving peri-urban commuting conditions
- Improving traffic safety of central transport corridors and intersections
- Behavioural change and choice design to support the modal shift
- Public space management (parking, dynamic traffic lanes) to promote sustainable mobility.

These themes illustrate the commonalities between REALLOCATE SSMLs, and link together the themes of traffic safety, community needs, citizen's participation, and space reallocation, with the overall aim of reducing the negative climate impacts of urban mobility. More work to identify opportunities for collaboration and peer learning is needed, and will take place as the planning of the pilots proceeds.

3.2　Situating the pilots in the context of the city

Approaches to piloting vary among the participating cities. Some participating cities mentioned clearly that EU-funded pilot projects are very central to the development of their mobility system, since otherwise they would lack resources for implementation. For some cities, pilots provide room for deepening their knowledge into certain topics and to build linkages and continuity between different projects. Cities could be placed on a spectrum related to how they see pilots in relation to the wider goals of the city; Some cities seek new projects and pilots which could contribute to the strategic objectives of the city and build longer continuums with these carefully chosen projects, some cities seek for projects to get funding and later build links with strategic objectives. In many occasions, projects are funded from different sources, which increases the need for strategic collaboration and steering. Different funding mechanisms also bring different funding terms, which increase management and require managerial skills which may be lacking. In the worst case scenario, this can hinder the project execution.

Attitudes toward scaling up and continuation also vary greatly across cities, although this dimension is more difficult to assess. Some cities are newer to the practices of piloting and have not yet had the chance to scale up results. Other cities have faced challenges related

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to reaching the end of innovation projects and not having enough resources to incorporate specific learnings. This is a common issue in similar projects as REALLOCATE and something that REALLOCATE is trying to avoid with emphasising transformative governance.

During the last decades, street experiments have proven their transitional capacity for systemic change[2, 3]. Cities enact pilots in order to gain experience in new ways to organise transportation and public space. Pilots can create long-lasting change within the city if there is a strong link between the pilot and the city's strategies. While the nature and strength of these links varies, REALLOCATE cities approached piloting as more than just experimenting with technical solutions, but also as an exploration of how to strengthen the links between these solutions and the whole ecosystem of urban planning.[5]

3.3 Current expertise contributing to the pilots

Based on the interviews and focus groups, cities have a good understanding and a matching level of expertise regarding their pilots. Many participants have already previously worked on similar projects and topics. It is worth noting that a mobility system is rarely just about mobility, and this is clearly the case for REALLOCATE. Many of the SSMLs include pilots involving multiple city departments, and some cities see pilots as an opportunity to develop interdepartmental cooperation. The collaboration between climate, transportation and urban planning departments is central to almost all of the pilots, but education departments are also planned to be involved in some of them. Different departments - together with decision makers - are already involved in the project teams in many cities, but some will involve them later in the process. Besides identifying the expertise required in the pilot, it is extremely important to build alignment regarding the wider city-level goals related to climate transition and transportation system.

In addition, city project teams include technical partners, both working within the city government and external to it. Technical partners bring additional expertise or domain-specific capabilities to the pilots. They vary from local city-related partners, such as public transportation operators, innovation units, and NGO's to research institutes and universities. Many cities have already collaborated with their technical partners in the past,

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[5] Smeds, E & Papa, E. (2023). The value of street experiments for mobility and public life: Citizens' perspectives from three European cities. *Journal of Urban Mobility*, vol. 4.

[3] Van Hoose, K. & Bertolini, L. (2023). The role of municipalities and their impact on the transitional capacity of city street experiments: Lessons from Ghent. *Cities*, vol. 140.

while some partnerships are more recent. Pilots provide a good basis for finding new collaborators, developing ways of collaboration and finding common ground in relation to transformations.

3.4   Networks and governance

As described above, pilots are planned in accordance with cities' strategies and goals, and one of the key tasks along with executing the pilot is to plan how the learning can be embedded, replicated and scaled within the city operations. This requires work on many fronts, and emphasises the importance of engagement with key stakeholders, including politicians and residents, and the private sector. These different groups require different approaches, but in general, it is important to engage with different parties already at an early stage and build the engagement in relation to what is relevant to each party. For example, visions and strategies have usually gone through democratic decision-making processes, so it is important to tie pilots with them. Reallocating space for different traffic modes usually raises passionate viewpoints and polarising opinions, and in those situations it is important to have strategic and public backing. This showcases the importance of engagement with the decision-makers and the citizens.

Cities participating in the project differ from each other in administrative terms, and thus have different ways to push transformations. Possibly the most significant difference is that some cities govern the whole area within its borders, while others consist of self-governing districts. This has direct implications for the organisation of the pilots, since managing pilots and the wider transformation requires collaboration and multi-level governance. Multi-level governance is required also towards regional and state-level authorities, which might have interest towards changing traffic systems, especially in the case of traffic corridors. In some cases these corridors expand to the area of neighbouring municipalities, which sets requirements for administrative cross-border collaboration.

Advancing transformations is collaborative and contentious in its nature and requires involvement of partners outside of city organisations. Pilots are a good way to push transformations forward, but also to engage and build alignment with stakeholders. Many cities pointed out that engagement activities are a central part of the project and one aim of participating in the project is to learn more about engagement. Cities have identified various stakeholders they need to engage in order to make a successful pilot. There have already been some previous interactions with stakeholders, and this work is currently ongoing.

4   Learning needs

City teams face common challenges as they strive to achieve the REALLOCATE objectives of co-designing and co-developing interventions to facilitate the successful implementation of their SSMLs. These challenges manifest in a variety of learning needs related to acquiring diverse new knowledge and capabilities. In the following sections we acknowledge learning needs as the evolving capacities of the cities, focusing on 'knowing how to do things', rather than merely collecting new data and information, which involves understanding 'what actions to take' in order to achieve goals.

This Benchmark identifies the insights that are drawn from our discussions and co-creation activities during the interviews and focus groups. The presentation takes the form of a tentative typology of learning needs (Table 2). The objective of this evolving typology is not to close our findings into fixed or rigid categories, but instead to provide a framework for which to expand the further development of the peer-learning and capacity-building activities. More specifically, this typology will serve as the foundation for the Cities' Self Assessment template (Part II), aimed at enhancing the identification and precise delineation of each city's specific learning needs.

In this tentative typology, learning needs are classified into four primary categories, which shed light into the kinds and depth of support required by the cities: **technical learning needs; community-related learning needs**; **transformation management learning needs** and **governance-related learning needs.**

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Table 2. *Preliminary typology of learning needs*

1. Technical learning needs	2. Community-related learning needs	3. Transformation management learning needs	4. Governance-related learning needs
1.1 Analysis and utilisation of data	2.1 Behavioural change and nudging citizens	3.1 Organisational capability to change and adapt	4.1 Cross-sectoral and internal collaboration
1.2 Solutions to decrease traffic volumes and speeds	2.2 Inclusive participation, co-creation and community engagement	3.2 Evaluation methods and implementation	4.2 Management of roles and responsibilities
1.3 Space reallocation and urban infrastructure	2.3 People-centric data integration	3.3 Ensuring continuity and scaling up of project results	4.3 Systemic barriers and organisational inertia
1.4 Implementation of NBS		3.4 Budgeting and financial implementation	

Our engagement with the city teams and horizontal partners emphasised that the cities' learning needs are interconnected, demonstrating the systemic nature of mobility challenges and of sustainability transitions. This implies that addressing one type of learning gap may require complementary knowledge or skills on a variety of topics. For instance, resolving a technical issue often involves the adoption of new collaborative practices among city departments or between the city and external stakeholders. Moreover, the unique context from which each city team operates influences the approach required to support similar needs. Recognizing this, we describe in detail the typology of learning needs in the subsequent sections of this chapter.

4.1   Technical learning needs

Technical learning needs are focused on the practical and technical aspects of managing and implementing sustainable mobility solutions. This category includes skills related to data analysis, technology implementation, and place-making. It addresses the 'how' of effectively implementing and maintaining space allocation and mobility solutions which are part of the SSML.

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4.1.1 Analysis and utilisation of data

This first category refers to the importance of effectively collecting, managing, analysing, and deriving practical and valuable findings from quantitative data associated with urban space and mobility. Requirements for various forms of mobility data vary among cities, and cities have articulated their needs for guidance across a diverse array of interrelated subjects concerning both data collection and analysis. Examples include data collection on near-misses and pedestrian safety; data collection on walking as mode of transportation and on cycling patterns; data collection on the correlations between vehicle weight and severity of injuries in accidents; data collection on citizen's perceptions of safety in urban spaces (e.g. perception of how welcoming or unwelcoming places are perceived); data collection through the use of traffic cameras; AI processing and data analysis; geofencing and visualisations.

Cities also firmly believe that they can draw valuable insights from each other's experiences, particularly in integrating new technologies. Furthermore, horizontal partners have stressed the importance of reflecting on broader topics such as the purpose of the collection, sharing and its beneficiaries when utilising each data type.

4.1.2 Solutions to decrease traffic volumes and speeds

Several SSMLs revolve around the idea of reducing traffic volumes and speeds to increase urban safety in specific locations, especially on problematic areas like high-traffic intersections, residential areas, or near schools. Many cities are enthusiastic about exploring innovative solutions in this regard. They have expressed interest in investigating the impacts of various strategies, including infrastructure solutions such as speed bumps and temporary street closures, as well as the implementation of new policies like revised parking regulations and speed limits. This aligns closely with the broader objective shared by many cities, focusing on the low-traffic street concept, aiming to reallocate space for a more vibrant and enjoyable urban environment.

Regarding street safety, some cities are keen to explore methods for identifying near-miss incidents as a means to gain deeper insights into mobility behaviours. Others are interested in studying the potential relationships between parking policies and the severity of injuries in

accidents, as well as the correlation between vehicle weight and accident outcomes. These explorations go in line with the alignment to Vision Zero strategy for EU road safety[6].

Cities have also noted that solutions addressing safety concerns are generally met with higher acceptance and are more readily implemented when compared to sustainability-focused measures.

4.1.3   Space reallocation and urban infrastructure

City teams have engaged in discussions exploring the relationship between the transformation of urban spaces and the resulting impact on the perception of safety, livability, environmental impact and aesthetics. In their quest for more livable environments, they have delved into a variety of measures to reshape the physical layout of their streets. Cities have voiced a desire to draw inspiration from innovative urban modifications, particularly in the context of 'low-traffic neighbourhoods'.

In general, cities are seeking aesthetic inspiration from creative and functional examples that can nudge residents to choose walking and cycling as their primary modes of transportation. Many have pointed to the vibrant and inviting urban transformations shown during the project's kick-off, featuring colourful streets, asphalt art, and welcoming street furniture.

With a special focus on school areas, many cities are exploring ways to enhance the urban landscape, making it more child-friendly and secure, thereby encouraging children and parents to embrace greater independence in their commutes to schools. Additionally, other modification needs revolve around the development of dedicated pedestrian infrastructure and mobility networks.

4.1.4   Implementation of nature-based solutions (NBS)

Physical transformations of urban streets extend beyond conventional modifications, with the potential to introduce more green space that not only enhances people's well-being but also contributes to the health of urban ecosystems. However, only a few cities have explicitly emphasised their focus on nature, natural ecosystems, and their positive impacts on the community. NBS, including urban trees, green walls, roofs, and nature corridors, among many other solutions, offer a multitude of benefits that extend to both human and non-human city residents. They contribute to the improvement of urban biodiversity, help mitigate heat

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[6] EU Road Safety: Towards "Vision Zero"
https://cinea.ec.europa.eu/publications/eu-road-safety-towards-vision-zero_en

islands, enhance water absorption, reduce noise pollution, and deliver numerous other environmental enhancements.

It is worth noting that while these solutions bring regenerative advantages to communities, the social and ecological benefits of urban interventions are often considered in isolation rather than holistically. Furthermore, NBS have traditionally been developed at the regional or city level, and there has not been enough research on their implementation at the street level, as it would be the case in REALLOCATE's SSMLs. Some cities also raised concerns about the long-term nature of these solutions, which might not align with the time and resources available for the piloting phase.

4.2 Community-related learning needs

Society-related learning needs focus on understanding and responding to the needs and preferences of communities and stakeholders, especially of city's residents. This category involves learning how to engage with the community, collect and integrate citizens' input, and shape mobility solutions that align with the real-world experiences and preferences of the people. It addresses the 'why' and 'for whom' aspects of sustainable mobility.

4.2.1 Behavioural change and nudging citizens

Implementing changes in mobility choices at the city scale requires the challenging exercise of influencing both individual, community and institutional structures and behaviours. While some cities have gained some experience in this field, their expertise is not fully developed. The task of reshaping people's habits is frequently described as difficult, hazy and emotionally charged, as also revealed in our interviews. Most cities have expressed a clear need to acquire the methods and structures required to facilitate this process, emphasising the high significance they attribute to this learning need. Both the horizontal partners and the city teams acknowledged the vital role of these skills in ensuring the success of the SSML and their broader impact.

Developing nudging skills relates to a city's ability to 'tell the story' effectively and make it appealing enough for citizens to actively engage in the transformative journey. This persuasion or storytelling capability becomes important when considering the urgency of addressing pressing urban challenges, such as when planning strategies to reduce traffic volumes and speed, discourage the use of cars, when promoting active mobility choices

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among adults and children, and when influencing other specific behaviours on pedestrians and cyclists, including avoiding conflicts among road users.

As many SSMLs include community participation, behavioral change skills also become essential when fostering citizen involvement and participation in co-creation and in decision-making processes.

4.2.2 Inclusive participation, co-creation and community engagement

Cities are deeply interested in understanding the direct experience of the users of mobility systems, and they are willing to explore new methodologies for integrating these experiences into the redesign of spaces and policies. While some partner cities have deep expertise in managing multi-stakeholder dynamics involving a wide range of actors, others expressed a desire to learn methods and tools for enhancing participation and decision-making - particularly involving citizens - in ways that all stakeholder's voices can be genuinely taken into account. At the same time, the concept of participation remains as a subject of contestation, as it can be interpreted differently depending on the conventions of who holds the right to participate and in which capacity.

Participation is a key element of most cities' approaches. For instance, one of the cities is interested in identifying differences in safety perception among different actors and plans to gather direct insights from participatory interactions with city planners, parents and children, recognizing that each group maintains distinct viewpoints. Several cities are seeking to directly include citizens in decision-making and in co-creation of spatial solutions. Moreover, cities and horizontal partners are aware that a higher degree of citizen involvement directly correlates with a greater sense of ownership and acceptance of solutions.

Many cities are focusing on school areas and have expressed their intention to engage with school stakeholders, including teachers, parents, and especially children. In particular, some cities are highly enthusiastic about collecting children's experiences and exploring ways in which these can directly inform infrastructural changes and policies. It is important to highlight that there are special ethical, practical and methodological considerations when working with children. For instance, one city mentioned the benefits of closely working with a sports organisation with substantial experience in direct engagement with the city's school children. Interestingly, children were the only Vulnerable Road User (VRU) group directly mentioned by the cities.

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4.2.3   People-centric data integration

The availability of mobility-related quantitative data does not appear to be a major concern for the cities, and many expressed confidence in their ability to address specific knowledge gaps with the help of the consortium. However, a recurring theme among cities is the desire to further enrich the available data by incorporating the direct experiences of citizens. As expressed by one of the city teams, the aim is to 'make the numbers speak to the people – and make the people speak to the numbers'. In practical terms, this entails the exploration of learning methods that bridge the gap between quantitative data and the real-world experiences, preferences, and feedback of citizens, ensuring that urban mobility solutions align with the genuine needs and desires of mobility users.

This implies not only a desire for deep understanding of the citizens' perspectives in what is measured and analysed, but also for increased ability to present the data in ways that can be comprehended and effectively utilised by diverse stakeholders, including decision-makers and citizens. Cities have highlighted their desires to employ mobility data for informed decision-making and for this they need to present this data to citizens and other stakeholders in interactive and participatory sessions. Interactive 2D and 3D visualisations and mapping technologies were mentioned.

These endeavours highlight the recognition of citizens as integral components of mobility systems and the commitment to involving their voices in the decision-making processes that shape the redesign of urban mobility systems.

4.3   Transformation management learning needs

These learning needs focus on the skills and approaches required to successfully navigate transitions towards sustainable mobility on an organisational level. It involves understanding how cities can lead and facilitate change, manage resistance, and create a culture of innovation and adaptation. This category addresses the 'how to lead change' aspect of mobility initiatives, expanding beyond the limits of the project into replication, upscaling and implementation.

4.3.1   Organisational capability to change and adapt

Recognising knowledge gaps within the city organisation is directly linked to its capacity to lead and manage change. Simultaneously, all partners have acknowledged that learning

needs will shift and evolve throughout the process of designing and implementing the SSMLs. At this juncture, cities with more concrete plans or prior experience were better equipped to define the capabilities or technical assistance they will require in the future, while those less developed plans were less able to identify detailed needs.

Furthermore, the capacity to effectively process and assimilate new knowledge and apply it in future projects was seen to vary across cities. This expertise in knowledge management significantly impacts how each city responds to the existing challenges, prioritises interventions, and seeks support in addressing the recognised knowledge gaps.

In most cases, the design of the pilots and the elements included in them was expected to evolve through participatory and co-creation practices, involving diverse groups of stakeholders. During interviews, some cities highlighted that they consider a level of openness and uncertainty to be inherent in experimental projects, and they view this uncertainty as a positive aspect that encourages ongoing learning and development.

Therefore, as conditions evolve, effective knowledge management requires adaptable 'blueprints' that are flexible and systematically involve all relevant and interconnected actors within the city system.

4.3.2   Evaluation methods and implementation

During the interviews, cities mentioned the great challenges associated with assessing and effectively implementing the lessons gained from previous innovation projects which included experimental piloting. The demanding pace of work coupled with bureaucratic hurdles often limit the time and resources available to working teams, affecting their ability to process these new insights and translate them into actionable measures for subsequent projects or the wider scaling and replicability of impactful results. These cities have underlined the great importance of acquiring the right tools and methods in order to evaluate their results and collect feedback at internal and external levels.

Remarkably, one city has made the exploration of new evaluation methods a top priority within their SSMLs. They would like to design and establish feedback systems that facilitate the evaluation of each strategy at different stages, with the goal of enriching their collective knowledge base. This proactive approach to evaluation not only enhances their learning process but also prepares them to effectively apply these insights to future projects and

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initiatives, fostering a culture of continuous improvement and adaptability in their organisation.

4.3.3 Ensuring continuity and scaling up of project results

City teams voiced concerns regarding the challenges associated with the effective scaling of specific project outcomes to various levels. For instance, one city emphasised the need to transition from academic research-related initiatives to practical implementation by municipal authorities within the context of REALLOCATE, while several cities emphasised the urgency of swiftly expanding the impact of their SSMLs, e.g. to encompass additional school areas, as a means to address pressing traffic-related issues at the citywide level. These challenges encompass a range of considerations, including resource availability, regulatory and legal obstacles, and the complexities of cross-sector collaborations.

Furthermore, in addition to these systemic factors, the choice of evaluation methods (as described earlier) plays an essential role in pinpointing specific insights and lessons. It also serves as a mechanism for preserving 'institutional memory' with a long-term perspective, thereby facilitating a more seamless transition into practical applications and broader-scale implementations.

4.3.4 Budgeting and financial implementation

Several city teams highlighted the persistent challenges they face in effectively managing limited financial resources when working around innovation and sustainability changes. Often, these financial limitations do not align with the city teams' ability to drive sustainability transitions on a broader scale. City teams and horizontal partners explained that the teams would benefit from tailored guidance on how to navigate these financial constraints, explore diverse sources of funding, multi-funded strategies, and optimise procurement processes. Additionally, many cities are relatively new to EU funding, and have expressed a keen interest in exploring alternative funding opportunities within the broader spectrum of Horizon EU initiatives.

4.4 Governance-related learning needs

These learning needs pertain to the governance-specific strategic aspects of transformation processes towards sustainable urban mobility, which in the context of REALLOCATE emerge in direct relation with the design and implementation of innovation and piloting

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experimentation, including technical aspects. They encompass the skills required and challenges faced by city teams when navigating their specific governance frameworks. These learning needs include breaking internal and external working silos and setting the scene for meaningful collaborations between the city teams and strategic actors within the very specific context of each city, region and country. In the context of implementing and overseeing sustainable mobility projects, this category deals with the question of 'how to foster transformative governance'.

4.4.1 Cross-sectoral and internal collaboration

Cities have acknowledged that the successful implementation of their SSMLs requires close collaboration with various municipal departments and their city's own governance structures. This recognition is rooted in a systemic perspective, whereby sustainable mobility objectives are intrinsically interconnected with a multitude of urban challenges, encompassing areas such as energy efficiency, social inclusion, and more. Each city participating in REALLOCATE faces challenges when it comes to opening up organisational silos. They express a strong desire to discover strategies and specific methods to foster dialogue with other municipal departments, identify synergies, align overarching visions, secure political commitment, and gain the support of key decision-makers.

Furthermore, cities have also underscored the necessity for the development of new organisational models, a task that arguably extends beyond the immediate scope of the REALLOCATE. In the context of their SSMLs, cities are navigating these complexities in a manner that aligns with their specific and diverse contexts. Some SSMLs are designed around multi-fund strategies, intertwining funds from two or more projects to achieve more ambitious mobility goals. While this approach offers resource advantages, it requires the coordination of multiple simultaneous initiatives, emphasising the importance of collaboration. In addition, other cities envision their roles as orchestrating an extensive network of stakeholders, encompassing not only various city departments but also their own internal team members.

4.4.2 Management of roles and responsibilities

The complexities of urban mobility require the collaboration of various structures, stakeholders, and actors in the pursuit of interconnected initiatives. City teams have emphasised that the unclarity or unsuitability of roles and responsibilities hampers their capacity to innovate and hinders the swift implementation of solutions. For instance, some

cities grapple with issues related to the ownership of urban spaces, where the municipality lacks control over street areas, impeding their ability to implement or modify the urban infrastructure. Other cities need to depend on the engagement of certain institutions which are key for the development of their SSML designs. The execution of solutions often calls for cooperation with region-scale governance structures, neighbouring municipalities, private landowners, institutions, and local communities, which requires proactive efforts to encourage their engagement and participation.

An important objective for REALLOCATE SSMLs is to facilitate the creation of the right conditions for interaction, fostering spaces where diverse stakeholders and governance structures can intersect, collaborate, and exchange experiences and information. Mastering how to effectively manage these interfaces is essential for cities, as it expands their capacity to design more sustainable mobility systems.

4.4.3   Systemic barriers and organisational inertia

REALLOCATE cities are highly motivated and have ambitious plans for experimenting and implementing sustainable mobility solutions. However, city teams face intricate systemic institutional barriers which they cannot overcome on their own. These complexities directly impact their ability to design and implement their SSMLs, and addressing these barriers is seen as a valuable learning experience that can be applied beyond REALLOCATE.

Many of these obstacles originate from uncertainties at higher levels of governance and political disparities, unique to their specific contexts, e.g. conflicting political agendas, institutional path dependencies, working under uncertain futures and the complexity of decision-making processes. Resolving these issues requires adaptability, the ability to forecast future conditions, and flexibility to deal with uncertainty.

5   Supporting learning in REALLOCATE

The above typology of cities' learning needs represents the first step towards supporting the progress of the city pilots. This support process has the potential of expanding its impact beyond the REALLOCATE project, as it can support city teams in the overarching challenge of creating inclusive, green and future-proof urban spaces on the city level.

REALLOCATE approaches respond to learning gaps through collaboration between partners on common challenges and barriers, and by spreading good practices and successful

approaches between partners. In addition, the project leverages the wide expertise of horizontal partners to provide technical support to the development of the SSMLs. This Benchmark examines the mechanisms of addressing the learning requirements of cities from three perspectives: peer learning between cities, learning from the horizontal partners, and integrated learning efforts across the consortium.

5.1   Peer learning between cities

When discussing learning opportunities during interviews and focus groups, cities expressed particular enthusiasm for opportunities to interact directly and learn from one another. They conveyed a strong belief that the experiences shared by other cities, including both successful solutions and lessons learned, have the potential to enhance their own understanding and improve the development of their pilots.

Sharing experiences directly with other city partners can help city teams feel validated in their uncertainties and struggles. This validation seems to be important to empower the teams to recognize their needs and turn these into action. For instance, many interviewees pointed out that simply coming together around the same table during the project kick-off made them feel understood and supported.

Each city holds a unique approach along with a wealth of knowledge and expertise concerning the practicalities of ground-level operations. Many cities expressed their wish to engage directly with other practitioners rather than relying only on interactions with project leaders, and they are keen to uncover the stories and lived experience behind reported challenges. It was emphasised that presentations showcasing merely success stories would fall short of covering the full picture. Ideally, they advocate for selecting well-planned immersive experiences (study visits, twinning visits, work shadowing) which they find valuable to gaining a comprehensive understanding of chosen topics.

In REALLOCATE, learning interactions between cities have been structured around two categories:

- **Twinning for peer support:** Twinned cities are encouraged to engage in collaborative activities, including peer-review visits, performance assessments, and shadowing, during the design and implementation of pilot projects. As twinned cities may have diverse learning needs, contextual differences and diverse approaches to

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their SSML, it is important that these interactions are thoughtfully designed to meet the aims of the learning experience.

- **Thematic exchange for breadth and focus:** As cities face similar mobility challenges, their teams have learning needs that can be thematically clustered, as demonstrated by the preliminary typology presented in this Benchmark. Cities also have different levels of expertise in dealing with these challenges, so what one city sees as a learning need for one city can already present a lesson learned for another. Each city, then, can be viewed as a valuable source of hands-on expertise and knowledge which can be circulated around the consortium.

It is important then to set the scene to facilitate the sharing of knowledge and experience at a practice level, bringing together the most relevant actors in each case in a common dialogue. At the same time, the limited time available and the changing needs of city teams call for a measured selection of focal themes and topics. The next steps for building the learning and capacity building efforts will produce a richer mapping of the needs of each city through the completion of the Self-Assessment reports due at the end of January 2024. This process is built to increase opportunities for collaboration between cities, and help guide collaborative efforts towards topics that best support the development work performed in the SSMLs.

5.2   Learning from the horizontal partners

Within the REALLOCATE consortium, 14 horizontal areas of expertise were identified, each with designated responsibilities. The horizontal technical partners bring a wealth of knowledge and transdisciplinary expertise in problem-solving that thematically aligns with the learning needs of cities. This support network is illustrated in Figure 1 in page 7.

A comparison of the areas of expertise shown above and the typology of learning needs demonstrates that horizontal partners are in a good position to provide support for most identified learning needs. However some learning needs, especially the technical ones, seem to be better covered than needs related to change management and governance. Aligning the partners' expertise with any emerging learning gaps will form part of planning the detailed support practices.

Direct engagement with the city teams to map out and cluster their learning needs emerged as a fruitful approach that remains important for guiding the learning support provided by

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horizontal technical partners. This Benchmark and the discussions it may spark can help the horizontal partners understand not only the learning needs themselves, but also the context in which they are presented: this understanding can guide them to tailor learning exchange opportunities, whether in the form of workshops for various cities, or individual mentoring sessions.

While cities recognize the expertise of the horizontal partners, they also express that they are looking forward to more discussion on how the collaborative process will unfold. Successful coordination of the efforts to establish the cooperation, taking into consideration the resources available, will have a significant impact on the effectiveness of support efforts.

5.3   Integrating learning efforts across the consortium

In REALLOCATE, the coordination and integration of the learning efforts is regarded as essential to fostering knowledge transfer and collaborative learning among and between horizontal partners, participant cities, and cascade cities. In addition to organising opportunities for peer learning and capacity building (e.g. workshops, mentoring meetings, study visit, etc.), the planning and coordination of these efforts includes work performed (often collectively) to plan and guide the learning process, guide the assessment of progress, ensure adequate feedback mechanism exists, and periodically revisiting the frameworks used to guide learning efforts.

It is important for the consortium to keep in mind that most of the contextualised understanding and practical insights are found across the different members of the consortium, both city teams and horizontal partners, who have hands-on experience in problem-solving and implementation. Incorporating this contextualised understanding in the design of the specific learning instances ensures that learning experiences are grounded in the tangible needs of cities. At the same time, cities and horizontal partners can collaborate in making sure the information about what works and does not work for the needs of the SSMLs reaches those responsible for coordinating work. Future consideration should also include the knowledge transfer to the cascade cities.

6   Concluding remarks

This Benchmark is based on the argument that the process of learning sharing within REALLOCATE stands at the core of the successful implementation of the SSMLs, as well as

in the centre of the transformation process towards inclusive, green, safe and future-proof urban spaces. The direct interaction with the partner cities through the interviews and focus groups allowed us to gain a first approach to understanding the diversity of the existing learning needs and, importantly, to validate the significance of these requirements.

We recognize that cities' needs for learning can be clustered based on certain similarities. But most importantly, it became evident that learning needs are inherently interconnected between each other, which highlights the need to establish knowledge-sharing adaptive instances that not only acknowledge but also address the systemic implications of these interconnections. In order to recognise leverage points within these interconnected learning needs, we developed the tentative typology of learning needs presented in Chapter 4, which will be further iterated through the cities' Self Assessment, with the aim to facilitate a more coordinated and effective approach to addressing them. As the project begins, this typology will serve as the basis for a comprehensive understanding of the complexities that surround the general challenges of city teams, and further for the development of peer-learning and capacity building activities.

The development of this typology also clearly illustrated the dynamic nature of learning needs. As the development of the SSMLs progresses, the landscape of learning needs may shift, leading to changes in types of support needed. In the same way, addressing one learning need will have implications over another, most likely in a positive manner. Anticipating the emergence of new needs is relevant, while some previously identified needs may become less significant. At the same time it is important to acknowledge that not all learning needs can be fully addressed within the project constraints; however, fostering an awareness of their existence remains a valuable aspect of our approach.

The next steps for the REALLOCATE knowledge sharing programme include delving deeper into the specific needs of each city. Through the process of preparing Self Assessment reports (Part II), each city will critically assess its own practices and evaluate its performance in alignment with the learning needs typology presented in this document. The resulting refined categorization, presented on a case-by-case basis, will serve as the guiding framework for the entire consortium. It will facilitate a more profound understanding of each city's unique situation and will act as a source of inspiration for designing an ambitious peer-learning and capacity building programme that aligns with REALLOCATE's overarching objectives.

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Part II: Template for Cities' Self-Assessment

Part II encompasses the template for Cities' Self-Assessment to be filled by the city teams in accordance with the recommendations provided in this section. The template is divided into three sections:

1. Driving the transition and the EU Mission on Climate-Neutral and Smart Cities
2. Learning needs for impactful SSMLs
3. Learning methods and environments

As part of the preparatory activities in the first stage of the project, Lead and Twin Cities in REALLOCATE will perform a self-assessment in order to identify the opportunities and challenges they experience in their efforts to become climate neutral, in particular in relation to urban mobility and public space design. The Cities' Self-Assessment template is part of the efforts to identify the common challenges and learning needs of REALLOCATE's city partners as a preparation for the development of capacity-building and peer-learning activities in WP4 (i.e., peer-learning and technical webinars, mentoring, twinning). The aim of this template is to support cities to assess their learning needs or anticipate having, in order to facilitate the development, implementation, and sustaining of the SSML's pilots.

Based on this template, the 10 cities will each prepare an individual report for a critical look at their own practices and assess their performance against REALLOCATE's Benchmark for Integrated Learning. These reports, due at the end of January 2024 (M9), also briefly describe each city's mobility and climate policy context, and are reviewed and integrated into deliverable D4.1 (February 2024 / M10). The deliverable is not a public one and is supposed to serve project-internal purposes only: therefore cities have the chance for an honest and pragmatic assessment.

To enhance the utilisation of responses by REALLOCATE partners for adapting peer-learning and capacity-building activities, we strongly encourage respondents to involve the appropriate expert colleagues from the city departments on the addressed topics. This will ensure the generation of the most informative and useful answers. In particular, answering the questions in **Section 1: Driving the transition and the EU Mission on Climate-Neutral and Smart Cities** would require the participation of **city representatives involved at the strategic level** (in particular, the development and implementation of the Sustainable Urban Mobility Plan or other mobility strategies, the design of the Climate Plan

or managing the Mission-related activities, and so on), while the requirements in **Section 2: Learning needs for impactful SSMLs** and **Section 3: Learning methods and environments** can be filled in by **those directly involved in the REALLOCATE SSMLs**. It is even more relevant if representatives beyond the city administration are involved, e.g., stakeholder groups the city engaged in its mobility or climate strategies, but that will always be dependent on the local context and the scope of the SSMLs.

1   Driving the transition and the EU Mission on Climate-Neutral and Smart Cities

*Suggestions for addressing this section: This section focuses on questions related to the wide-ranging strategies and objectives adopted by the cities to address climate-related challenges and transition to climate neutrality. Therefore, it is key to involve representatives involved **at the strategic level in the city administration and beyond.** Whenever possible, it is best to answer the questions in a collaborative and co-creative way. One suggestion would be to call for an internal meeting and collect input (e.g., using a whiteboard and sticky notes for individual contributions) from a variety of participants and then aggregate the answers into relevant ones for your city and local situation. Although more efforts are needed to organise it this way, it pays off by offering an opportunity to engage with relevant colleagues (and other stakeholders, if the case) in a collaborative and insight-generating exercise which would ensure collaboration and a shared understanding in the long run. Local managers are responsible for choosing the most suitable way in their local context to collect the input needed for the self-assessment.*

1   What are the main strategies and actions that your city has put in place for becoming climate-neutral in connection to urban mobility and public space reallocation?

Strategy / action	Brief description if the document is not in English, including indicative timeline, and/or relevant link (if applicable)

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2   What type of governance mechanisms (e.g. climate officer, climate department, and climate responsibilities) are in place in relation to the goals of achieving climate neutrality?

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3   How is the Cities' Mission within your city connected to the objectives and implementation of your work in REALLOCATE?

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4   Does your city have a Sustainable Urban Mobility Plan (SUMP) or similar planning document? How are the activities developed in REALLOCATE related to the SUMP implementation and what are the strategies in place to make the connections between the SUMP and REALLOCATE within the city?

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2　Learning needs for impactful SSMLs

Table 1: Learning needs self-assessment below refers to the learning needs identified in Part I (Chapter 4) and clustered in four types: **technical**, **community-related**, and **transformation management** and **governance-related learning needs**. Each type of category is divided into specific learning needs which **may or may not apply to your SSML's pilot(s).**

It is important to **first identify the needs,** among the ones listed below, that are **relevant to your SSML pilot(s).** The template then provides **guiding questions** as starting points to support you in defining these needs more precisely in the context of your city.

Column A will guide your city team in identifying the **challenges you anticipate** your city will face when planning and conducting your SSMLs, in relation to the guiding questions in each category.

Column B will lead your city in identifying **potential knowledge gaps or needs for internal or external technical expertise** when planning and conducting your SSMLs, in relation to the guiding questions in each category.

Column C will guide your city in assessing two separate but interrelated dimensions of learning needs, which can be assessed on a scale from 0 to 5:

- **Level of expertise** refers to the degree of proficiency your city currently has in relation to the specific learning need in each section, where **0** stands for **none** and **5** for **expert**.
- **Level of importance**, refers to the degree of relevance this specific learning need has for planning and conducting your city's SSMLs, where **0** stands for **unimportant** and **5** for **very important**. Please refer to the **typology of learning needs** in **Part I, chapter 4** for a description of each category.

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Table 1: Learning needs self-assessment

1. Technical learning needs				
Types of learning needs	**Guiding questions**	**A) Drawing on the answers to the questions, where do you foresee challenges?**	**B) Drawing on the answers to the questions, where are the gaps in knowledge/technical expertise?**	**C) Assess the following in relation to this learning need:**
1.1 Analysis and utilisation of data	● What types of data are required for the development, implementation, and monitoring of the SSML's intervention(s) (e.g., population data, geospatial data, etc)? ● Who is collecting/holding the data required? (e.g., existing dataset elsewhere in the city, privately held, etc) ● Is this data accessible to and usable (e.g., quality, standards) by stakeholders? ● How can this data be used (e.g., aggregation, analytics, etc) and what resources are needed to process it? ● What are the best practices for data analysis and utilisation in the context of your SSMLs? ● What expertise/ knowledge needed to obtain relevant insights from data is missing, if any? ● Does the city have already relevant guidance on best practices (data protection impact assessment, ethics charter, etc)?	Foreseen challenges:	Knowledge/technical gaps:	1) Level of expertise (0-5): None Expert 0 1 2 3 4 5 2) Level of Importance (0-5): Unimportant Very important 0 1 2 3 4 5
1.2 Solutions to decrease traffic volumes and speeds	● What solutions in terms of decreasing traffic volumes and speed have already been piloted/ implemented at city level? ● What were the lessons learnt related to existing solutions piloted/ implemented (what worked, challenges)? ● Have the solutions been evaluated? If	Foreseen challenges:	Knowledge/technical gaps:	1) Level of expertise (0-5): None Expert 0 1 2 3 4 5

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	yes, what were the results? ● Who were the stakeholders involved in deployment of relevant solutions (technical organisations, departments in the city, local stakeholders)? Who was missing? ● What lessons can be drawn from previous experience in relation to the SSML's intervention(s)? ● What are the existing good practices and examples outside your city for reducing traffic volumes and speed, in order to create more liveable city spaces? ● What types of resources do you anticipate would be needed (technical, organisational, etc)?			2) Level of Importance (0-5): Unimportant　　　　Very important 0　　1　　2　　3　　4　　5
1.3 Space reallocation and urban infrastructure	● What solutions in terms of space reallocation at the street levels have already been piloted/ implemented? Has your city implemented LEZ / low-traffic neighbourhoods? ● Has the city conducted temporary street interventions (e.g., during COVID)?What were the lessons learnt (what worked, challenges)?Have these initiatives been evaluated? ● What are the existing good practices and examples for reallocating streets spaces and modifying urban infrastructure in other cities? ● Who are the relevant stakeholders to involve (technical organisations, departments in the city, local stakeholders) for the SSML's intervention(s)? Who is missing? ● Has the city worked with school stakeholders including parents, children,	Foreseen challenges:	Knowledge/technical gaps:	1) Level of expertise (0-5): None　　　　　　　Expert 0　　1　　2　　3　　4　　5 2) Level of Importance (0-5): Unimportant　　　　Very important 0　　1　　2　　3　　4　　5

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	and teachers to design interventions around schools? ● What types of resources do you anticipate would be needed (technical, organisational, etc)?			
1.4 Implementation of nature-based solutions	● What nature-based solutions have been piloted/ implemented at the city level? ● Have they been evaluated? What were the outcomes? ● What were the lessons learnt (what worked, challenges)? ● How are nature-based solutions integrated in the city's SSMLs? ● Who are the relevant stakeholders to involve (technical organisations, departments in the city, local stakeholders) for the SSML's intervention(s)? Who is missing? ● What types of resources do you anticipate would be needed (technical, organisational, etc)?	Foreseen challenges:	Knowledge/technical gaps:	1) Level of expertise (0-5): None Expert 0 1 2 3 4 5 2) Level of Importance (0-5): Unimportant Very important 0 1 2 3 4 5
Other technical learning need	● What other type(s) of technical learning needs (not mentioned above) do you anticipate in relation to the pilot(s)?	Foreseen challenges:	Knowledge/ technical gaps:	1) Level of expertise (0-5): None Expert 0 1 2 3 4 5 2) Level of Importance (0-5): Unimportant Very important 0 1 2 3 4 5

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2. Community-related learning needs				
Types of learning needs	Guiding questions	A) Drawing on the answers to the questions, where do you foresee challenges?	B) Drawing on the answers to the questions, where are the gaps in knowledge/technical expertise?	C) Assess the following in relation to this learning need:
2.1 Behavioural change and nudging citizens	- What existing understanding does the city have in terms of citizens behaviours related to the SSML's intervention(s)? - Where are the gaps in knowledge about known citizens' behaviours in relation to the SSML's intervention(s)? - What are the expected obstacles/ possible resistance to behaviour change based on previous experience? - How is the need for behavioural change communicated to citizens? What strategies are in place?	Foreseen challenges:	Knowledge/ technical gaps:	1) Level of expertise (0-5): None Expert 0 1 2 3 4 5 2) Level of Importance (0-5): Unimportant Very important 0 1 2 3 4 5

		Foreseen challenges:	Knowledge/technical gaps:	1) Level of expertise (0-5): None　　　　　　　　　　Expert 0　　1　　2　　3　　4　　5 2) Level of Importance (0-5): Unimportant　　　　Very important 0　　1　　2　　3　　4　　5
2.2 Inclusive participation, co-creation, and community engagement	● Which local stakeholders, paying particular attention to Vulnerable Road Users (VRUs), need to be involved for the SSML's intervention(s)? ● What are the foreseen obstacles for these stakeholders to be involved? ● What are the mitigating measures deployed to ensure inclusion (e.g., caring facilities, accessibility of venue, etc.)? ● What method of engagement and participation are adequate to use with school children? ● Are local stakeholders engaged at several stages of the processes? What are the strategies in place to incorporate their inputs?			
2.3 People-centric data integration	● What types of insights are needed to complement existing quantitative data? Where are the identified gaps? ● How can safety mobility data be enriched with the direct experiences of citizens, and especially children? ● What resources (human/ technical) are needed to gather these insights? ● What tools/ visualisations are used to share insights with citizens? How is it communicated with citizens?	Foreseen challenges:	Knowledge/ technical gaps:	1) Level of expertise (0-5): None　　　　　　　　　　Expert 0　　1　　2　　3　　4　　5 2) Level of Importance (0-5): Unimportant　　　　Very important 0　　1　　2　　3　　4　　5

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Other community-related learning need	● What other type(s) of community-related learning needs (not mentioned above) do you anticipate in relation to the pilot(s)?	Foreseen challenges:	Knowledge/ technical gaps:	1) Level of expertise (0-5): None Expert 0 1 2 3 4 5 2) Level of Importance (0-5): Unimportant Very important 0 1 2 3 4 5
3. Transformation management learning needs				
Types of learning needs	**Guiding questions**	**A) Drawing on the answers to the questions, where do you foresee challenges?**	**B) Drawing on the answers to the questions, where are the gaps in knowledge/technical expertise?**	**C) Assess the following in relation to this learning need:**
3.1 Organisational capability to change and adapt	● What are recent examples of successful organisational change within the city? ● What were the drivers/enablers? ● Is there a policy on change management and/or agile working? If yes, who is responsible for their implementation? ● What are the foreseen obstacles to adapt to rising demands related to the SSML's intervention(s)? ● What tools and methods can you use to identify and keep track of your evolving learning needs throughout your participation in REALLOCATE?	Foreseen challenges: ☐ ☐ ☐ ☐	Knowledge/ technical gaps: ☐ ☐ ☐ ☐	1) Level of expertise (0-5): None Expert 0 1 2 3 4 5 2) Level of Importance (0-5): Unimportant Very important 0 1 2 3 4 5

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		Foreseen challenges:	Knowledge/ technical gaps:	1) Level of expertise (0-5):
3.2 Evaluation methods and implementation	• What internal evaluation and monitoring methods are used at the city level? What is the city's experience with these methods? • What mechanisms are, need to be, in place to monitor and evaluate SSMLs' results, actions, and interventions? • What kind of resources are needed to be successful in monitoring progress at each stage? How often should progress be monitored? • Who should be responsible for it?			None Expert 0 1 2 3 4 5 2) Level of Importance (0-5): Unimportant Very important 0 1 2 3 4 5
3.3 Ensuring continuity and scaling up of project results	• What are recent examples of scaling up from initial pilot/project(s) to a broader context? • What were the drivers/enablers? What were the obstacles? • How can they (drivers/enablers) be replicated for the pilot? • What are the foreseen obstacles related to the scaling up of the SSML's intervention(s)? How can they be mitigated? • How are the impacts of REALLOCATE ensured over the limits of the project?	Foreseen challenges: ☐ ☐ ☐ ☐	Knowledge/ technical gaps: ☐ ☐ ☐ ☐	None Expert 0 1 2 3 4 5 2) Level of Importance (0-5): Unimportant Very important 0 1 2 3 4 5

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| 3.4 Budgeting and financial implementation | • How is/are the pilot(s) embedded within the broader financial strategy of the city? Where are the risks?
• What lessons learnt from recent procurement procedures in your city can be applied to the SSML's interventions?
• What kind of support do you need to better manage the financial implementations of your SSML, and better manage the transition process into sustainable mobility? | Foreseen challenges:
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☐ | Knowledge/ technical gaps:
☐
☐
☐
☐ | 1) Level of expertise (0-5):

None   Expert

0   1   2   3   4   5

2) Level of Importance (0-5):

Unimportant   Very important

0   1   2   3   4   5 |
| **Other transformation management learning needs** | • What other type(s) of transformation management learning needs (not mentioned above) do you anticipate in relation to the pilot(s)? | Foreseen challenges: | Knowledge/ technical gaps: | 1) Level of expertise (0-5):

None   Expert

0   1   2   3   4   5

2) Level of Importance (0-5):

Unimportant   Very important

0   1   2   3   4   5 |

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4. Transformation management learning needs				
Types of learning needs	**Guiding questions**	**A) Drawing on the answers to the questions, where do you foresee challenges?**	**B) Drawing on the answers to the questions, where are the gaps in knowledge/technical expertise?**	**C) Assess the following in relation to this learning need:**
4.1 Cross-sectoral and internal collaboration	● What are recent examples of successful cross-departmental collaboration in the city? What were the enablers and obstacles? ● How can knowledge and skills be effectively shared among city departments according to the needs of the pilot(s)? ● How can links to other internal projects in the city (NZC, CIVITAS) be made and utilised?	Foreseen challenges:	Knowledge/ technical gaps:	1) Level of expertise (0-5): None　　　　　　　　Expert 0　　1　　2　　3　　4　　5 2) Level of Importance (0-5): Unimportant　　　Very important 0　　1　　2　　3　　4　　5
4.2 Management of roles and responsibilities	● Who in the city is coordinating synergies among the broad network of stakeholders involved in SSML(s)? ● Does the city have best practices to manage partnerships? ● Are the roles and responsibilities of the partners involved in the pilot(s) clearly defined? ● How are decisions made? ● How are risks mitigated (accountability/ risks management)?	Foreseen challenges:	Knowledge/ technical gaps:	1) Level of expertise (0-5): None　　　　　　　　Expert 0　　1　　2　　3　　4　　5 2) Level of Importance (0-5): Unimportant　　　Very important 0　　1　　2　　3　　4　　5

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| 4.3 Systemic barriers and organisational inertia | ● What are the main systemic barriers your city faces and how do they affect your team?
● How do political disparities directly affect the development of your pilot(s)?
● What strategies does your team currently have when dealing with slow-paced work or decision-making of higher levels of governance?
● How does uncertainty affect the work of your city team members? Can your team be supported? | Foreseen challenges: | Knowledge/ technical gaps: | 1) Level of expertise (0-5):

None   Expert

0   1   2   3   4   5

2) Level of Importance (0-5):

Unimportant   Very important

0   1   2   3   4   5 |
| Other governance-related learning need | ● What other type(s) of governance-related learning needs (not mentioned above) do you anticipate in relation to the pilot(s)? | Foreseen challenges: | Knowledge/ technical gaps: | 1) Level of expertise (0-5):

None   Expert

0   1   2   3   4   5

2) Level of Importance (0-5):

Unimportant   Very important

0   1   2   3   4   5 |

REALLOCATE D4.1 Benchmark for Integrated Learning

3   Learning methods and environments

1. Briefly explain what would be a successful learning experience for your city. Drawing from this, do you have suggestions of specific learning methods/tools we could use in REALLOCATE?

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2. An important aspect of REALLOCATE is peer learning, that is, city-to-city knowledge sharing. What are your expectations in this regard, and what are, in your experience, the most efficient methods for knowledge sharing among local and metropolitan authorities?

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3. One of the REALLOCATE objectives is to build capacity among city administrations and increase potential for the long-term impact of the interventions. Please describe your city's need(s) in terms of capacity building, in particular in relation with your pilot(s), as a way of supporting the transition to climate neutrality. If you feel you already answered this as part of your input in Section 2, please just briefly prioritise here the most important aspects.

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4. REALLOCATE identified 14 areas of horizontal expertise (see Figure 1, page 7) and relevant technical partners that can provide advice in these areas. These were detailed in the six technical webinars organised between September 2023 and February 2024. Please prioritise **the first 5** horizontal areas of expertise most relevant for your pilot(s) by adding a number from 1 (the most relevant) to 5 in front of the respective area. If you are not able to find 5 relevant areas, try to list at least 3.

Pilot 1

Priority no.	Horizontal area of expertise
	SUMP & climate planning
	Urban design, space reallocation & traffic calming
	Pedestrians & inclusive design
	Cycling policy & infrastructures
	Urban road safety & safety auditing
	Behaviour & choice design
	Circularity, lifecycle & carbon assessment
	Digital integration & new mobility services
	Citizen-empowering planning
	Transport economics & business models
	Transformative governance
	Nature-based street interventions
	Data, modelling & AI
	Mobility innovation management

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Pilot 2 (if applicable)

Priority no.	Horizontal area of expertise
	Nature-based street interventions
	Transformative governance
	Pedestrians & inclusive design
	Behaviour & choice design
	Urban road safety & safety auditing
	Urban design, space reallocation & traffic calming
	Mobility innovation management
	Circularity, lifecycle & carbon assessment
	Digital integration & new mobility services
	SUMP & climate planning
	Citizen-empowering planning
	Transport economics & business models
	Data, modelling &§ AI
	Cycling policy & infrastructures

5. The 10 REALLOCATE cities have been paired as twins as a way of engaging into one-to-one mutual learning (see Figure 4 below). As part of the twinning activities, each city will review the Self-Assessment of its peer and provide feedback. In addition, reciprocal peer visits will be organised among the twin cities, together with several relevant horizontal technical partners. Please describe your learning expectations from the twinning activities. If this is the case, feel free to include specific suggestions concerning the organisation of these activities.

Figure 4. City twinning within REALLOCATE

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6. REALLOCATE is one of the projects contributing to the Public Space Design cluster
    under the CIVITAS Initiative (currently the projects contributing to the cluster are
    AMIGOS, ELABORATOR, and REALLOCATE). CIVITAS is an EU initiative
    addressing cities and urban mobility. How can CIVITAS contribute to or supplement
    the peer-learning programme in REALLOCATE? Are there specific inputs your city
    can contribute to the CIVITAS exchange? *This question is optional.*

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7. REALLOCATE is embedded into the overall effort of cities becoming climate-neutral
    promoted by the EU Mission on Climate-Neutral and Smart Cities and implemented
    through NetZeroCities. Can you make specific suggestions on how to bring together
    REALLOCATE and NZC, and consolidate learning accross the two initiatives?

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Appendices

Appendix 1: Interview outline

Interview Outline - REALLOCATE WP4 City Interviews, 09/2023

This is a semi-structured, thematic interview aimed at exploring the goals, plans and current state of the cities. Instead of directly asking the questions, follow the general spirit and topic.

1. Current plans for the Safe & Sustainable Mobility Lab and pilot(s)
   a. Please describe the main idea of your pilot(s), and the current status of your planning
   b. Uncertainties and development needs for these plans?
   c. What do you need to learn to fulfil your goals? (include process knowledge / content knowledge / tested technical solutions)
2. Goals
   a. What are your goals for the pilots? What is the current situation of your city on these topics, as you start your work?
      i. Both REALLOCATE goals + local goals for participation (climate impact → mobility system → pilots)
      ii. What are your learning goals and motivation for these pilots?
      iii. How have you organised the SSML to respond to these goals?
      iv. How does your work respond to recognized stakeholder needs?
   b. What are the current central obstacles in the (city-wide) mobility system to the attainment of the climate neutrality goals of your city?
      i. (Note the dimensions of the REALLOCATE goal of 'zero-emission, shared, active and human-centred, inclusive mobility')
3. Local members of the REALLOCATE consortium
   a. Who (organisations and possibly people) have you recognized as the central members of the local team participating in the SSML efforts? ('Who works on the pilot?')
   b. (What is the motivation of these team members for participating in the SSML?)
      i. Re. action in the SSMLs, learning, and capabilities for change?
   c. Describe their necessary **expertise** and role in the SSMLs (maybe staffing & resources, too)
   d. What do these stakeholders **need to learn** to work together towards the SSML goals?
   e. Any other relevant stakeholders and their perspectives (briefly, unless described earlier)?

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4. What are the strengths and weaknesses of the local team regarding the current SSML plans?
    a. *Stay on the level of the local team (the city organisation + local technical partners + any others included locally?)*

5. What does the local team need in order to work productively and achieve its goals?
    a. E.g. resources, mandate, collaboration, information / data, publicity…
    b. **Specifically, what does the local team need to know?** What kinds of knowledge, and which skills, are important for the success of the SSML?
    c. **Process knowledge / content knowledge / tested technical solutions**

Cross-city learning:

6. What would you like to learn from other cities, and help them learn, during this project?
    a. On the level of climate impact → mobility system → SSML
    b. Link with the level of interaction - and action - during the project
    c. What kinds of learning efforts do you think would be most useful for you?

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