European Platform on Sustainable Urban Mobility Plans

GUIDELINES FOR
DEVELOPING AND IMPLEMENTING A SUSTAINABLE URBAN MOBILITY PLAN

SECOND EDITION

Imprint

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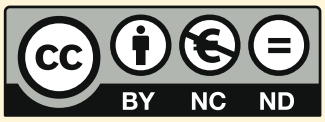

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Planning for sustainable urban mobility in Europe

In a rapidly changing world, I am happy to see *increasing engagement of local authorities and stakeholders* to make urban mobility cleaner and more sustainable. Reducing traffic-related air and noise pollution, congestion and accidents while increasing the quality of life in our cities is now the priority of many Mayors. Today, more than ever, we all need better walking and cycling conditions, effective public and shared transport, multimodal nodes, and more – all supported by smart digital solutions. And the best way to make it happen is to *combine great ideas and innovative measures with political support and the involvement of people* through comprehensive mobility planning.

I am therefore very proud that the *European Commission has been actively supporting sustainable urban mobility planning (SUMP)* over the last decade. Since the introduction of its SUMP concept in 2009 and the publication of the SUMP guidelines in 2013, the Commission has helped hundreds of cities across Europe to ensure the balanced and integrated development of sustainable transport modes. This is illustrated by an impressive and prolific take-up of Sustainable Urban Mobility Plans in Europe. Importantly, this follows a *participatory approach* with people's needs at the centre of the process. Comprehensive sustainable urban mobility planning has proven to be an *effective way to tackle the climate, energy and environmental challenges* that cities face in relation to transport.

I know that many people and stakeholders value greatly the European SUMP concept and guidance, and I want it to be *used and useful to the fullest possible extent*. Therefore, the Commission initiated in 2018 the process of *updating the SUMP guidelines* to better reflect the most recent trends in mobility, technology, and society, all affecting the changing mobility landscape. Many dedicated people in the SUMP community worked hard in a co-creation mode over the last 1.5 year to make it happen. The revised edition of the guidelines is a *truly impressive result of this process* that I fully endorse!

I strongly *encourage all local authorities to fully exploit* this worthwhile planning tool and use the rich guidance as much as possible. Every town and city, irrespective of its size, can – and should – develop a high-quality Sustainable Urban Mobility Plan to help combat the principal urban mobility challenges, and to improve quality of life of its citizens.

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Henrik Hololei
Director-General of DG MOVE (European Commission)

Guide to the reader

The publication of this second edition of the European Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan (SUMP)[1] marks an important milestone in the take-up of a new planning culture in Europe. This comprehensive revision of the widely-used first edition of 2013 aims to integrate the dynamic developments in many areas of urban mobility and some of the rich experience of implementing the concept of Sustainable Urban Mobility Planning since then.

Section 1 introduces the SUMP concept to readers who are not necessarily professional planners, but want to understand the principles and basic elements (see Chapter 1.1 - What is a Sustainable Urban Mobility Plan?). Decision makers in particular may be interested to read evidence about why Sustainable Urban Mobility Planning is beneficial for cities and their residents and what its long-term impacts have been in various European cities (see Chapter 1.2 - What are the benefits of Sustainable Urban Mobility Planning?).

In developing these Guidelines, every effort was made to produce guidance that is tailored to the practical needs of planners and policymakers all over Europe (see Chapter 1.3 - What are the main elements of Sustainable Urban Mobility Planning?). Nonetheless, it is an idealised concept for a policy field in which many demands and interests meet. Flexibility in adapting these guidelines to concrete urban realities is therefore essential to achieve progress towards more sustainable cities and urban areas. This is further discussed in Chapter 1.4 - How does Sustainable Urban Mobility Planning work in practice?

Cities are the level of government that is closest to the people, therefore the task to plan and provide mobility for its residents lies with them in most European countries. However, national and regional governments play an important role in creating frameworks that give cities legal competences, facilitate cooperation and provide financial support. Chapter 1.5 summarises how national and regional government levels can support the development of SUMPs.

Section 2 is a comprehensive step-by-step description of the SUMP process. Although its readers may primarily be planning practitioners and active participants of the planning process, it is written in a style that is also understandable for others. This section follows the structure of the new cycle of Sustainable Urban Mobility Planning: four phases, each with three steps and a total of 32 activities. Every phase and step is introduced with a brief overview. For all activities, readers are presented with a rationale, aims, detailed task descriptions, information about timing and coordination with other tasks, a checklist, as well as good practice examples and useful tools to get the work done. While it can also be read from cover to cover, most readers will use Section 2 as guidance throughout the planning process, whose respective chapters they can consult for inspiration whenever they enter a new planning step.

Several **Annexes** complete the Guidelines. Annex A offers a glossary of important terms to facilitate a common understanding across different languages and planning cultures. Annex B describes a planning checklist for the SUMP process. Annex C includes more detailed descriptions of all good practice examples. Annex D links to the compendium of complementary guides and briefings that are also based on the SUMP concept , but elaborate certain planning aspects in more detail, provide guidance for specific contexts, or focus on important policy fields. Last but not least, Annex E presents the list of experts consulted for the development of this second edition of the SUMP Guidelines.

[1] Throughout this document the term "Sustainable Urban Mobility Planning" refers to the process of planning, while "Sustainable Urban Mobility Plan" (or SUMP) is the essential (but not the only) outcome of the planning process. The abbreviation "SUMP" is used for the plan itself, terms like "SUMP concept" or "SUMP process" are used for differentiation. Both pronunciations are in use: "sump" (/sʌmp/) as well as "S.U.M.P."

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Introduction

When the first version of these Guidelines for Sustainable Urban Mobility Planning was published in late 2013,[2] 1168 planning practitioners and other experts from all over Europe had contributed to a comprehensive consultation for the definition of this new planning concept.[3] In parallel, the European Commission had systematically developed its urban mobility policy and published its Urban Mobility Package[4] that included a definition of the concept of "Sustainable Urban Mobility Plans" (see Chapter 1.1 below).

What has been achieved since the first edition of the SUMP Guidelines?

Many cities in Europe and around the world have developed SUMPs, while numerous European Union-funded projects and programmes have contributed valuable knowledge that helped cities to develop this new generation of mobility plans.

An entire community of practice has formed around Sustainable Urban Mobility Planning. A wealth of good practices is being shared by practitioners; numerous (mostly) free tools and know-how are available on the Eltis platform (*www.eltis.eu*); a coordination platform of major stakeholders and projects has been set-up; and highly successful SUMP Conferences have been held annually since 2014. Finally, having a state-of-the-art Sustainable Urban Mobility Plan is increasingly seen as a must-have for forward-looking cities and as a requirement to attract funding for urban transport investments (e.g. in the EU's Structural and Investment Funds).

The concept of Sustainable Urban Mobility Plans is clearly a European success story to which many stakeholders have contributed and from which many cities (and citizens) have benefited. Its success is based on strong European policy coordination and support, practical guidelines that are based on systematic consultation with practitioners, and an active community of practice.

[2] Rupprecht Consult, Guidelines. Developing and Implementing a Sustainable Urban Mobility Plan (2013); *www.eltis.org/mobility-plans.*

[3] The origins of SUMP go back to Thematic Strategy on the Urban Environment (see COM(2005) 718) which proposed the preparation of guidelines for Sustainable Urban Transport Plans; see also the first guidance document by the PILOT project (2007), *www.rupprecht-consult.eu/uploads/tx_rupprecht/Pilot_EN_WEB.pdf.*

[4] COM(2013) 91.

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Why was an update of the SUMP Guidelines necessary?

Over the last few years, we have seen major new developments in many areas of urban mobility. Due to new technologies, driverless electric vehicles may soon be on our roads, new business models provide "Mobility as a Service", and at the same time changing attitudes among travellers result in an increase in shared mobility and cycling. These few examples indicate that important changes are occurring on different levels of the mobility system that made it necessary to rethink and update the original SUMP Guidelines. In addition, a wealth of SUMP implementation experience has been collected that needed to be made available as inspiration for practitioners across Europe. Finally, several projects and initiatives were about to develop additional guidance on specific planning topics; this had to be integrated to begin forming a structured knowledge base.

Therefore, the process to update SUMP guidance was started in 2018. It included the preparation of this second edition of the SUMP Guidelines, as well as the development of a range of complementary guides and briefings on specific aspects of the SUMP concept. These documents elaborate certain planning aspects in more detail (e.g. institutional cooperation), apply Sustainable Urban Mobility Planning to specific contexts (e.g. metropolitan regions), or provide guidance for concrete policy fields (like road automation or safety).

How was this update organised?

This second edition of the SUMP Guidelines is the result of an intense one-year stakeholder engagement process. It has been developed and validated in close cooperation with the SUMP community. Starting with a large survey and dedicated session at the SUMP Conference 2018, a number of workshops with practitioners and other experts from all over Europe have been organised. By involving several major city networks closely in the update, special care was taken to include feedback from all types of cities and regions.[5] In total, more than 300 transport and urban planners, other practitioners, policy makers, and researchers have contributed to the update. Annex E includes a list of consulted experts.

In addition, the update has been inspired by a thorough review of existing literature, including national planning guidance from several countries with a strong tradition of strategic mobility planning.[6] Together with the first edition of the Guidelines as a solid basis, the literature review, detailed peer reviews of an advanced draft[7], and two dedicated review sessions and a feedback survey at the SUMP Conference 2019 have ensured that the document presents proven high-quality planning guidance.

[5] Workshops have been organised by Rupprecht Consult, as well as the other city network partners of SUMPs-Up (ICLEI, EUROCITIES, Polis, Union of Baltic Cities), the International Association of Public Transport (UITP), and partners in SUMP-related projects (PROSPERITY, SUITS, LOW-CARB).

[6] Guidance for UK Local Transport Plans, French Plans de Déplacements Urbains, German Verkehrsentwicklungspläne, Swedish TRAST, and Italian Piano Urbano della Mobilità.

[7] Formal peer reviews were provided by Prof Peter Jones, Professor of Transport and Sustainable Development, University College London (UK); Prof Anthony D May OBE FREng, Emeritus Professor of Transport Engineering, Institute for Transport Studies, University of Leeds (UK); Frank Wefering, Director of Sustainability (Greenman-Pedersen, Inc.), New York (USA). In addition, representatives of the European organisations have provided valuable comments throughout the preparation process: European Commission (Directorates-General Mobility and Transport; Regional and Urban Policy), European Investment Bank/ Jaspers Programme. and from organisations and individuals involved in the SUMP Coordination Platform. Special thanks are also due to Thomas Durlin, Cerema; Caroline Mattsson, Trivector; Ivo Cré, Polis; Tom Rye, Edinburgh Napier University, who have provided extensive comments to draft versions of this document.

SECTION 1: The Concept of Sustainable Urban Mobility Plans

This section is an introduction to Sustainable Urban Mobility Plans. It is intended for all readers with an interest in urban mobility, including decision makers and other mobility stakeholders who are not planning experts.

1.1 What is a Sustainable Urban Mobility Plan?

Policy context

Sustainable Urban Mobility Planning is Europe's de facto urban transport planning concept. The policy that facilitated its establishment has been systematically developed by European policy makers since 2005.[8] Its most important milestone was the publication of the Urban Mobility Package at the end of 2013,[9] where the European Commission defined in an Annex the concept of Sustainable Urban Mobility Plans. At the same time, the first version of the Guidelines was released.[10] The Urban Mobility Package advocates "a step-change in the approach to urban mobility…to ensure that Europe's urban areas develop along a more sustainable path and that EU goals for a competitive and resource-efficient European transport system are met."[11] It sketches out the guiding principles of the planning process and the topics to be addressed in a Sustainable Urban Mobility Plan. The concrete steps to be followed, practical guidance and good practices are contained in the Guidelines. Since the publication of the Urban Mobility Package, the concept of Sustainable Urban Mobility Plans has been widely taken up across Europe and internationally. However, while the concept has proven to be sound and continues to be valid, the Guidelines were increasingly in need of updating. Therefore, this new version of the SUMP Guidelines is still based on the original concept (described in the next chapter), but the recommendations for preparing a SUMP have been updated considerably.

Definition

The following definition of a Sustainable Urban Mobility Plan has been widely accepted in Europe and internationally:

"A Sustainable Urban Mobility Plan is a strategic plan designed to satisfy the mobility needs of people and businesses in cities and their surroundings for a better quality of life. It builds on existing planning practices and takes due consideration of integration, participation, and evaluation principles."

A Sustainable Urban Mobility Plan is based on the following principles, which are described in more detail below:

1. **Plan for sustainable mobility in the "functional urban area"**
2. **Cooperate across institutional boundaries**
3. **Involve citizens and stakeholders**
4. **Assess current and future performance**
5. **Define a long-term vision and a clear implementation plan**
6. **Develop all transport modes in an integrated manner**
7. **Arrange for monitoring and evaluation**
8. **Assure quality**

[8] Building on the Thematic Strategy on the Urban Environment (2005), and the Green Paper on Urban Mobility (2007), the Action Plan on Urban Mobility (2009) proposed 'twenty measures to encourage and help local, regional and national authorities in achieving their goals for sustainable urban mobility'; the first action was 'Accelerating the take-up of sustainable urban mobility plans'. The Transport White Paper formulated concrete targets for urban transport to contribute to strategic global and European policy goals.

[9] COM(2013) 913.

[10] Rupprecht Consult, Guidelines. Developing and Implementing a Sustainable Urban Mobility Plan (2013); *www.eltis.org/mobility-plans.*

[11] COM(2013) 913, p. 2.

Sustainable Urban Mobility Planning is a strategic and integrated approach for dealing effectively with the complexities of urban transport. Its core goal is to improve accessibility and quality of life by achieving a shift towards sustainable mobility. SUMP advocates fact-based decision making guided by a long-term vision for sustainable mobility. As key components, this requires a thorough assessment of the current situation and future trends, a widely supported common vision with strategic objectives, and an integrated set of regulatory, promotional, financial, technical and infrastructure measures to deliver the objectives – whose implementation should be accompanied by systematic monitoring and evaluation.

In contrast to traditional planning approaches, SUMP places particular emphasis on the involvement of citizens and stakeholders, the coordination of policies between sectors (especially transport, land use, environment, economic development, social policy, health, safety, and energy), and broad cooperation across different layers of government and with private actors. The concept also emphasises the need to cover all aspects of mobility (both people and goods), modes and services in an integrated manner, and to plan for the entire "functional urban area", as opposed to a single municipality within its administrative boundaries.

What is the difference between traditional transport planning and Sustainable Urban Mobility Planning?

In recent years, the approach to transport planning has changed considerably in academia and in planning practice. The main differences between traditional approaches and Sustainable Urban Mobility Planning are summarised in this overview:

Figure 1: Differences between traditional transport planning and Sustainable Urban Mobility Planning

Traditional Transport Planning		Sustainable Urban Mobility Planning
Focus on traffic	→	Focus on **people**
Primary objectives: Traffic flow capacity and speed	→	Primary objectives: **Accessibility** and **quality of life**, including social equity, health and environmental quality, and economic viability
Mode-focussed	→	**Integrated development of all transport modes** and shift towards sustainable mobility
Infrastructure as the main topic	→	**Combination** of infrastructure, market, regulation, information and promotion
Sectoral planning document	→	Planning document **consistent with related policy areas**
Short and medium-term delivery plan	→	Short and medium-term delivery plan embedded in a **long-term vision and strategy**
Covering an administrative area	→	Covering a **functional urban area** based on travel-to-work flows
Domain of traffic engineers	→	**Interdisciplinary** planning teams
Planning by experts	→	Planning with the **involvement of stakeholders and citizens** using a transparent and participatory approach
Limited impact assessment	→	Systematic **evaluation** of impacts to facilitate **learning** and improvement

Eight principles

The concept of Sustainable Urban Mobility Planning, as defined in the Urban Mobility Package, is based on eight commonly accepted guiding principles.[12]

1 Plan for sustainable mobility in the "functional urban area"

Cities are connected with their surroundings by daily flows of people and goods, meaning the geographical scope of a SUMP needs to be based on this "functional urban area". Depending on the local context, this might be a city and its surrounding peri-urban area, an entire polycentric region, or another constellation of municipalities. Planning on the basis of actual flows of people and goods is an important criterion to make a plan relevant and comprehensive, even if municipal boundaries may follow a different logic and make this difficult to achieve.

The definition of a functional urban area has been agreed upon by the OECD, the European Commission's statistics office (Eurostat) and its Directorate General for Regional and Urban Policy. It is based on "population density to identify urban cores, and on travel-to-work flows to identify the hinterlands whose labour market is highly integrated with the cores."[13]

A SUMP needs to pursue the general aim of improving accessibility and providing high-quality, sustainable mobility for the entire functional urban area. A sustainable transport system:

- Is accessible and meets the basic mobility needs of all users;
- Balances and responds to the diverse demands for mobility and transport services of residents, businesses and industry;
- Guides a balanced development and better integration of different transport modes;
- Meets the requirements of sustainability, balancing the need for economic viability, social equity, health and environmental quality;
- Optimises efficiency and cost effectiveness;
- Makes effective use of urban space and of existing transport infrastructure and services;
- Enhances the attractiveness of the urban environment, quality of life, and public health;
- Improves road safety and security;
- Reduces air and noise pollution, greenhouse gas emissions and energy consumption; and,
- Contributes to better overall performance of the trans-European transport network and Europe's transport system as a whole.

These basic criteria of SUMPs are further broken down and prioritised during the planning process.

2 Cooperate across institutional boundaries

The development and implementation of a Sustainable Urban Mobility Plan needs to be based on a high level of cooperation, coordination and consultation across different levels of government and between institutions (and their departments) in the planning area.

Sustainable Urban Mobility Planning should be based on:

- Cooperation to ensure the consistency and complementarity of the SUMP with policies and plans in sectors related to transport (e.g. land use and spatial planning, social services, health, energy, education, enforcement and policing).
- Close exchange with relevant authorities at other levels of government (e.g. district, municipality, agglomeration, region and state).
- Coordination with public and private sector providers of transport services.

[12] This section draws strongly on Annex 1 of the Urban Mobility Package (COM(2013) 913).

[13] OECD, Definition of Functional Urban Areas (FUA) for the OECD metropolitan database, 2013, p. 2. *www.oecd.org/cfe/regional-policy/Definition-of-Functional-Urban-Areas-for-the-OECD-metropolitan-database.pdf.*

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3 Involve citizens and stakeholders

A Sustainable Urban Mobility Plan focuses on meeting the mobility needs of people in the functional urban area, both residents and visitors, as well as institutions and companies based there. It follows a transparent and participatory approach, actively involving citizens and other stakeholders throughout the plan's development and implementation. Participatory planning is a prerequisite for people to take ownership of the Sustainable Urban Mobility Plan and the policies it promotes. Early and active involvement makes public acceptance and support more likely, thereby minimising political risks and facilitating implementation.

4 Assess current and future performance

A Sustainable Urban Mobility Plan builds on a thorough assessment of the current and future performance of the transport system in the functional urban area. It provides a comprehensive review of the existing situation and establishes a baseline against which progress can be measured. To do this, the Sustainable Urban Mobility Planning process identifies objectives and ambitious but realistic targets which are consistent with the established vision, and then defines performance indicators for each of these. They are then used to assess current and future conditions. This status analysis also includes a review of current capacities and resources and of the institutional set-up for planning and implementation.

5 Define a long-term vision and a clear implementation plan

A Sustainable Urban Mobility Plan is based on a long-term vision for transport and mobility development for the entire functional urban area and covers all modes and forms of transport: public and private; passenger and freight; motorised and non-motorised; and moving and stationary. It also includes infrastructure and services. A SUMP contains a plan for the short-term implementation of objectives and targets through measure packages. It includes an implementation timetable and budget as well as a clear allocation of responsibilities and outline of the resources required.

6 Develop all transport modes in an integrated manner

A Sustainable Urban Mobility Plan fosters balanced and integrated development of all relevant transport modes while prioritising sustainable mobility solutions. The SUMP puts forward an integrated set of measures to improve quality, security, safety, accessibility, and cost effectiveness of the overall mobility system. A SUMP includes infrastructure, technical, regulatory, promotional and financial measures. A Sustainable Urban Mobility Plan addresses all forms of collective mobility (traditional public transport as well as new services based on sharing, including new business models); active mobility (walking and cycling); intermodality and door-to-door mobility; road safety; moving and stationary vehicles; freight and service delivery; logistics; mobility management; and Intelligent Transport Systems (ITS).

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7 Arrange for monitoring and evaluation

The implementation of a Sustainable Urban Mobility Plan must be monitored closely. Progress towards the objectives of the plan and meeting the targets are assessed regularly based on the chosen performance indicators. Appropriate action is required to ensure timely access to the relevant data and statistics. Ongoing monitoring and evaluation of the implementation of measures can suggest revisions of targets and, where necessary, corrective action in implementation. A monitoring report that is shared and communicated with citizens and stakeholders informs about the progress in development and implementation of the Sustainable Urban Mobility Plan.

8 Assure quality

A Sustainable Urban Mobility Plan is a key document for the development of an urban area. Having mechanisms in place to ensure a SUMP's general professional quality and to validate its compliance with the requirements of the Sustainable Urban Mobility Plan concept (i.e. this document) is an effort worth taking. Assurance of data quality and risk management during implementation require specific attention. These tasks can be delegated to external quality reviewers or another government institution (e.g. on the regional or national level), while it can be facilitated by the use of tools like the SUMP Self-Assessment Tool.

1.2 What are the benefits of Sustainable Urban Mobility Planning?

What makes Sustainable Urban Mobility Planning useful for a city? What success stories have emerged from cities that have turned their Sustainable Urban Mobility Plans into actual policies? Read on for a short selection of some of the possible benefits of developing and implementing a Sustainable Urban Mobility Plan.

Working together for better health

Air pollution contributes to more than 400,000 premature deaths per year in the EU,[14] making the social and economic advantages of improving air quality obvious. In addition, the need to reduce emissions to tackle the climate crisis is universally acknowledged, and road transport is the second biggest source of CO_2 emissions in the EU.[15] Despite all of this, many European cities exceed European air quality standards.

The Spanish capital Madrid saw a 15% reduction in nitrogen dioxide pollution in just three months after establishing low emission zones in its SUMP in November 2018.[16] With Toulouse's latest SUMP (PDU in French), the city aims to reduce the number of people exposed to an increased concentration of NOx emissions from 8,000-18,000 (2013) to less than 300 in 2030.[17] TThese reductions are achieved most effectively with the buy-in of many different government departments and different levels of government – something that planning together makes possible.

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[14] European Environment Agency, 2018. Air quality in Europe - 2018 report, *www.eea.europa.eu/publications/air-quality-in-europe-2018.*

[15] European Environment Agency, 2019. Emissions of the main air pollutants in Europe. Fig. 2: Emissions of the main air pollutants by sector group in the EEA-33, *www.eea.europa.eu/data-and-maps/indicators/main-anthropogenic-air-pollutant-emissions/assessment-4.*

[16] Sergio Fernández Balaguer, Municipal Transport Company of Madrid, interview by the authors, March 04, 2019.

[17] Le projet Mobilités 2020/2025/2023 - Valant révision du Plan de Déplacements Urbains de la grande agglomération toulousaine, 2018.

Reaping the benefits in health and safety

Public health and road safety also benefit from encouraging active modes of transport. A British study found that the risk of cancer was 45% lower among people who regularly cycled to work. Through investments in public infrastructure, Tartu, Estonia's second largest city, managed to double the modal share of cycling from 4% to 8% in just five years.[18] Sustainable Urban Mobility Planning aims for consistency of policies, while also aiming to link transport and health. Even if there are many reasons for cities to have good public health policies, the most successful municipalities, it is probably not coincidental that eight out the EU's ten healthiest cities have a Sustainable Urban Mobility Plan.[19]

9,600 people were killed in 2017 on urban roads in the EU, accounting for 38% of the 25,047 total road deaths. 70% of those killed on urban roads were vulnerable road users - 39% pedestrians, 12% cyclists and 19% powered-two-wheeler riders.[20] Sustainable mobility measures can effectively contribute to tackling a city's road safety problems and help to reach the EU target of 50% fewer road deaths and serious injuries by 2030.[21] In attempting to secure change in urban mobility patterns, road safety should be regarded as a critical challenge. Real and perceived safety has a profound effect on mode choice, especially for the most sustainable modes of travel: walking, cycling and access to public transport. It is important to recognise that sustainable roads are also safer roads. Integrated policies, for example improved cycling infrastructure, wider pavements and enforced speed limits, improve a city's road safety. Since Warsaw began developing its SUMP in the mid-2000s, road accidents have decreased by 21% and road deaths by 60%.[22]

Getting there more easily, with fewer cars

When infrastructure for travel and transport is well thought through– and especially when mobility and urban planning departments coordinate well – there is less competition between different forms of transport for public space. SUMPs help to create a complementarity that suits people's individual mobility needs. Measures in Milan's SUMP of 2016 have contributed to bringing the number of residents using cars already down to 50%, well below the Italian average. The city is on track to achieve its goals.[23] SUMPs help to reverse negative mobility trends. Thanks to the promotion of SUMPs in France in the 1990s, nearly every major French city has seen a reversal in the trend of increasing car use. Increases of as much as 22% in the two preceding decades were halted and replaced by decreases of up to 8%.[24] In Szeged, Hungary's third largest city, the SUMP helped to freeze a rapid decline in public transport use.[25]

Winning public support

These results have been and can only be achieved through the active involvement of local residents, which is essential to Sustainable Urban Mobility Planning. Through its SUMP - which took into account input from 755 citizen - Milan has introduced a low emission zone restricting car use in approximately 70% of the city. Intensive public debate involving stakeholders and citizens has helped to minimise opposition.[26]

Budapest gathered more than 1,000 public comments in a similar process, the majority of which said that people wanted more environmentally friendly measures; this public buy-in also helped to create political buy-in.[27] Besides helping to convince people, Budapest found that this cooperation in planning a SUMP, both internally and with the public, can provide significant insights and fresh ideas.[28]

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[18] Tartu Linnavalitsus, 2018. Tartu heade mõtete linn, Tartu linna ja lähiümbruse liikuvusuuring, *www.tartu.ee/sites/default/files/research_import/2018-12/Tartu_LU_aruanne.pdf.*

[19] Spotathome, 2019. The world's healthiest cities. Which cities are the best for healthy living?, *www.spotahome.com/healthiest-cities-world.*

[20] ETSC PIN Report (2019) Safer roads, safer cities: how to improve urban road safety in the EU.

[21] European Commission (2019) EU Road Safety Policy Framework 2021-2030 Next Steps Towards "Vision Zero".

[22] Kalenkiewicz, E., Bisak, A., 2017. Zarzad Dróg Miejskich w Warszawie, Raport o stanie bezpieczenstwa 2017, *https://zdm.waw.pl/wp-content/uploads/2018/05/raport-zdm-web-1_1528982930.pdf.*

[23] Dr. Paolo Campus, Area Pianificazione Mobilità Milano, interview by the authors, 08 March, 2019.

[24] CERTU, 2013. 30 years of sustainable urban mobility plans (PDU) in France, *www.cerema.fr/system/files/documents/2017/11/1304_Fiche30ansPDU_EN_cle6c8317.pdf.*

[25] Sándor Nagy, vice mayor of Szeged, interview by the authors, 11 March, 2019.

[26] Dr. Paolo Campus, Area Pianificazione Mobilità Milano, interview by the authors, 08 March, 2019.

[27] Budapest Mobility Plan 2014-2030, Vol. 1 Objectives and Measures, pp 12-15.

[28] Máté Lénárt, BKK Centre for Budapest Transport, interview by the authors, 05 April, 2019.

Citizens are ready for their local leaders to make changes. In Nantes, France, 50% of people surveyed while travelling on the bus had chosen public transport even though they had a car at home.[29] By consulting and working with the public on its sustainable urban mobility measures, Stockholm increased public support for congestion charges from 33% to 67% over five years.[30] If nothing else, citizen and stakeholder involvement is a tool for policy makers to convince citizens and other stakeholders of ambitious measures, to understand what might be acceptable, and to reduce the political risks associated with non-acceptance.

Liveability, a double win for people and business

Sustainable modes of transport can often also be more convenient than private car travel. The shared mobility network set up as part of Milan's Sustainable Urban Mobility Plan includes electric cars, scooters and bicycles, and has demonstrated its appeal by attracting almost half a million subscribers.[31]

Making the streets safe for everyone, irrespective of their mode of travel, increases urban accessibility and contributes to a higher quality of life. Even if many factors come into play, it is not a coincidence that seven out of the top ten liveable cities in the EU are cities with Sustainable Urban Mobility Plans.[32] Decreasing levels of car use make streets more attractive, changing them from thoroughfares to places of urban life and social cohesion.

Bolstering a sense of place through diverse modes of mobility improves the image of a city, helps local shops, and encourages tourism, local regeneration and international investment. In Copenhagen, pedestrianisation of one street led to a 30% increase in sales in a single year.[33] Similarly, after the temporary closure of the main thoroughfare in Madrid to cars during the 2018 Christmas period, there was a 9.5% boost in retail spending compared to 2017.[34] While such measures can temporarily decrease turnover and excite opposition in the short term, a year or so is usually all it takes for the gains to become evident.

When employees have more mobility options, businesses also benefit through an increased pool of candidates and less time wasted in traffic. Highly qualified people are more likely to seek employment in attractive cities, and vulnerable groups - including the mobility-impaired or economically disadvantaged - are more likely to find work when travel barriers are removed. This means that improved mobility leads to greater social equity by pushing up standards for everyone, rather than benefiting one group at the cost of another. The cost-benefit analysis that Arad, Romania, carried out when deciding on the measures for its SUMP showed that €2.2 million will be gained for every €1 million invested.[35] Stockholm calculated its annual socio-economic surplus as a result of mobility measures at €60 million.[36]

image © olaser on istock.com

[29] CERTU, 2013. 30 years of sustainable urban mobility plans (PDU) in France, *www.cerema.fr/system/files/documents/2017/11/1304_Fiche30ansPDU_EN_cle6c8317.pdf.*

[30] Centre for Transport Studies, 2017. The Swedish Congestion Charges: Ten Years On, p 21,*www.transportportal.se/swopec/CTS2017-2.pdf.*

[31] Dr. Paolo Campus, Area Pianificazione Mobilità Milano, interview by the authors, 08 March, 2019.

[32] The Economist Intelligence Unit, 2018. The Global Liveability Index 2018 *www.eiu.com/public/thankyou_download.aspx?activity=download&campaignid=liveability2018.*

[33] Mattias Kärrholm, 2012. Retailising Space: Architecture, Retail and the Territorialisation of Public Space, Ashgate: Farnham and Burlington, VT, p 44.

[34] Ayuntamiento de Madrid, 2019. 20 millones de transacciones comerciales confirman el aumento del gasto en Navidad tras la implantación de Madrid Central,*https://diario.madrid.es/blog/notas-de-prensa/20-millones-de-transacciones-comerciales-confirman-el-aumento-del-gasto-en-navidad-tras-la-implantacion-de-madrid-central/.*

[35] Municipal Arad, 2017.Planul de Mobilitate Urbană Durabilă al Municipiului Arad, pp 288-289.

[36] Eliasson, J., 2014. The Stockholm congestion charges: an overview. Centre for Transport Studies Stockholm, p. 34, *www.transportportal.se/swopec/cts2014-7.pdf.*

image © BKK Centre for Budapest Transport

Strength in unity

The more diverse and integrated sustainable mobility options are, the greater the efficiency and resilience of the transport system as a whole. Since implementing its most recent Sustainable Urban Mobility Plan in 2017, the city of Ghent, Belgium, has seen a 25% increase in cycling within the city centre and a 35% increase outside the centre.[37] Since implementing its SUMP, which was updated in 2015, Antwerp saw a 25% decrease in car trips (approximately 14,000 less) coming into the city on an average weekday.[38]

The long-term and integrated nature of a Sustainable Urban Mobility Plan is the most effective way of realising many potential benefits. Because it involves a long-term commitment and widely agreed-upon goals, a Sustainable Urban Mobility Plan helps to manage uncertainty and to define clear metrics of working step by step towards targets. As a SUMP requires cooperation between departments and governance levels, it helps to create a shared vision and serves as a way to bring together institutions that are not (yet) used to cooperating. This creates an enormous boost in the effectiveness of policy making.

Budapest cited the development of its Sustainable Urban Mobility Plan as a key to more harmonised thinking among different stakeholders, from municipal departments and state actors to transport companies.[39] Such coordination ensures the mutual support and follow-through that these measures require. Traffic regulations are useless if the police do not enforce them. Pedestrianisation is only successful when it is embedded in a wider urban mobility strategy. Antwerp is going so far as to develop a joint Sustainable Regional Mobility Plan with 33 surrounding municipalities and the Flemish administration.[40]

Ready, steady, SUMP!

By making explicit the necessary connections between political priorities, for example mobility and employment, a Sustainable Urban Mobility Plan ensures that the contribution of mobility to high-level political goals is more widely perceived. The consultation and involvement of stakeholders within and outside government, including civil society and private industry, increases support for mobility actions. This improves the likelihood of success and political buy-in. Sustainable Urban Mobility Planning is a tool to effectively manage change and to inspire new ways of thinking.

[37] Transport & Mobility Leuven, 2018. Evaluatie Circulatieplan Gent, *https://stad.gent/sites/default/files/page/documents/Evaluatierapport%20Circulatieplan%20Gent_0.pdf.*

[38] Marjolein Salens, City of Antwerp, interview with the authors, 13 March 2019

[39] Máté Lénárt, BKK Centre for Budapest Transport, interview by the authors, 05 April, 2019

[40] Marjolein Salens, City of Antwerp, interview with the authors, 13 March 2019

1.3 What are the main elements of Sustainable Urban Mobility Planning?

This chapter provides an overview of the elements and process of Sustainable Urban Mobility Planning. It introduces the twelve steps of the "SUMP cycle" with a focus on the role of decision makers, whereas details for planners can be found in Section 2.

Overview

Since the publication of the SUMP concept in 2013, the process of developing and implementing a Sustainable Urban Mobility Plan has been applied in many urban areas across Europe (and worldwide). The "SUMP cycle" represents it by using the visual metaphor of a clock face (see Figure 2). This is, of course, an idealised and simplified representation of a complex planning process. In some cases, steps may be executed almost in parallel (or even revisited), the order of tasks may be adapted occasionally to specific needs, or an activity may be partially omitted because its results are available from another planning exercise.

This need for flexibility is fully understood and planners are encouraged to make reasonable adaptations if required by their specific situation - as long as the overall principles of Sustainable Urban Mobility Planning are followed. Chapter 1.4 discusses these points more broadly. Figure 2 presents the four phases of Sustainable Urban Mobility Planning, each of which begins and ends with a milestone and each of which is subdivided into three steps (for a total of twelve steps in the planning cycle). This Figure presents an overview for decision makers, whereas Figure 9 provides a more detailed description for planners.

Figure 2: The 12 Steps of Sustainable Urban Mobility Planning (2nd Edition) – A decision maker's overview

This symbol indicates points of political involvement during the SUMP process

Phase 1: Preparation and analysis

The first milestone, and the starting point for the SUMP process, is an explicit decision by policy makers to prepare a Sustainable Urban Mobility Plan. In the first phase, the groundwork for the planning process is done by answering the following questions:

What are our resources?

Analyse all available (human, institutional, financial) resources for planning and set up appropriate working and participation structures to get started. At this stage, decision makers need to ensure that the key institutions and policy makers support the SUMP's development and contribute to setting up a core planning team.

What is our planning context?

Identify factors that will have an impact on the planning process, such as existing plans or legal requirements. Analyse traffic flows to determine the geographic scope of the plan – and ensure that neighbouring authorities and stakeholders are 'on board'. Agree on the planning timeline and recruit external support as needed. Activities in this and the previous step are closely linked and often run in parallel. A key task for decision makers at this point is to ensure that the 'functional urban area' serves as the planning area for the SUMP. This is often an institutionally and politically complex decision.

What are our main problems and opportunities?

Analyse the mobility situation from the perspective of all transport modes and relevant sustainability aspects by using an appropriate set of current data sources. The concluding milestone of the first phase is a completed analysis of the major problems and opportunities related to mobility in the entire functional urban area.

Phase 2: Strategy development

The goal of the second phase is to define the strategic direction of the Sustainable Urban Mobility Plan in cooperation with citizens and stakeholders. The key questions in this phase are:

What are our options for the future?

Analyse the likely changes in external factors important for urban mobility (e.g. demography, information technology, climate) and develop scenarios that explore alternative strategic directions. Scenarios try to capture the scope of uncertainty that comes with "looking into the future" in order to have a better factual basis for strategic decisions.

What kind of city do we want?

Use visioning exercises with stakeholders and citizens to develop a shared understanding of desirable futures, based on the results of the mobility analysis and scenario impacts. A common vision and objectives are cornerstones of every SUMP. A vision is a qualitative description of the desired mobility future for the city, which is then specified by concrete objectives that indicate the type of change aimed for. Make sure that your objectives address the important problems and that they cover all modes of transport in the functional urban area. Decision makers need to get actively involved at this stage, as this is the point at which the strategic direction for the next years is decided.

How will we determine success?

Define a set of strategic indicators and targets that allows you to monitor progress in all objectives without requiring unrealistic amounts of new data collection. Decision makers should ensure that the targets are ambitious, feasible, mutually consistent, widely supported by stakeholders, and aligned with other policy areas.

At the end of the second phase, you have reached the milestone of a widely supported vision, objectives and targets. If possible, decision makers should adopt these strategic priorities to ensure a stable guiding framework for the measure phase.

Phase 3:
Measure planning

With the third phase, the planning process moves from the strategic to the operational level. This phase focuses on measures to achieve the agreed objectives and targets. Here the Sustainable Urban Mobility Plan is finalised and its implementation prepared by answering the following key questions:

What will we do concretely?

Create a longlist of measures and assess their effectiveness and feasibility to select those that best contribute to meeting your objectives and targets. Bundle measures into integrated packages, discuss them with citizens and stakeholders, and assess them in detail to validate your selection. Plan monitoring and evaluation for each measure.

What will it take and who will do what?

Break measure packages down into actionable tasks (or 'actions') and describe them in detail, including their estimated costs, interdependencies and risks. Identify internal and external financing instruments and funding sources for all actions. On that basis, agree clear responsibilities, implementation priorities and timelines for each action. At this stage it is essential to communicate the actions to political stakeholders and the public. For example, concrete building projects can be controversial even if their related objectives and measures are supported by a majority. Decision makers are required at this point to recruit political and public support for the measures and actions of the SUMP, ideally achieving a formal agreement on responsibilities and timeline among decision makers and key stakeholders.

Are we ready to go?

Many authors may have contributed to the various parts of the Sustainable Urban Mobility Plan. Now it is time to finalise the document and check its quality. Based on your organisation's conventions, a detailed financial scheme can be included in the plan itself or is part of a separate process. In either case, you should agree on a budget for each prioritised action and long-term arrangements for the distribution of costs and revenues among all involved organisations before SUMP adoption.

The most important milestone of the planning process concludes the measure planning phase: The Sustainable Urban Mobility Plan is adopted by the decision makers of the competent political body.

Phase 4:
Implementation and monitoring

The fourth phase focuses on implementing the measures and related actions defined in the SUMP, accompanied by systematic monitoring, evaluation and communication. Here the actions are put into practice by answering the following key questions:

How can we manage well?

The responsible departments and organisations should plan the technical details of their actions, undertake implementation and procure goods and services if needed. As this often involves a large amount of parties, the overall coordination of the implementation process requires particular attention.

How are we doing?

Systematic monitoring will make clear whether things are going according to plan, allowing corrective action to be taken if needed. Innovative mobility schemes can be a great disruption (as well as a great benefit) for daily travellers. Understanding public opinion, based on an active two-way dialogue, is crucial for a successful implementation process.

What have we learned?

The last step of the SUMP cycle is about reviewing successes and failures, and communicating these results with stakeholders and the public. This review process also looks towards the future and considers new challenges and solutions. Ideally, decision makers will take an active interest in understanding what has worked (and what has not), so that these lessons are considered in the next SUMP update.

The milestone 'Measure implementation evaluated' concludes the SUMP cycle.

Summary

- A political decision initiates the SUMP process and provides overall guidance and leadership;
- A sound analysis informs scenario building and supports decision making;
- A shared vision, objectives and targets set the strategic direction;
- Integrated measure packages are defined that can deliver the objectives and targets;
- Measure packages are divided into actions (actionable tasks) that are further operationalised, including in terms of responsibilities and financing;
- Based on all previous decisions, a SUMP is adopted that combines a long-term vision and clear implementation plan;
- Overall measure coordination and regular monitoring ensure efficient and adaptive implementation;
- Systematic evaluation of the implementation provides the basis for the next planning cycle.

A more technical description of the planning cycle and the 32 specific activities to be carried out within the 12 Steps is provided in Figure 9 and described in detail in Section 2.

1.4 How does Sustainable Urban Mobility Planning work in practice?

Sustainable Urban Mobility Planning is not a theoretical concept. It was developed using a bottom-up approach based on the experience of many planning practitioners and other experts. The principles, as well as the steps and activities recommended in this second edition of the SUMP Guidelines are based on the experience of a wide range of cities in Europe and beyond. It is, therefore, intended to go beyond being just inspirational material. But it is equally clear that specific national planning and funding frameworks, varying urban contexts, constellations of political power, and stakeholder influence will require a range of creative compromises that are bound to lead to adaptation of the concept to local requirements. Political decision making also requires pragmatism and the ability to work with what one has. Nevertheless, wise political decision makers think beyond one electoral cycle and the political majority of the day.

image © Rupprecht Consult

Sustainable Urban Mobility Planning also helps to create a better basis for managing future demands. From a strategic political perspective, a SUMP is a tool for sustainable and innovative change management. This means that the SUMP planning cycle (as presented in Chapter 1.3) should rather be seen as a spiral: when one planning cycle is completed, another cycle should soon start, creating an ongoing improvement process.

This chapter looks at how Sustainable Urban Mobility Planning fits into the operational realities of planning; how it relates to the wider context of urban policy making; how to integrate it with other planning activities in a city; how to adapt the SUMP concept to the specific context of an urban area; and how to meet the challenge of planning in times of uncertainty and change.

The operational side of planning

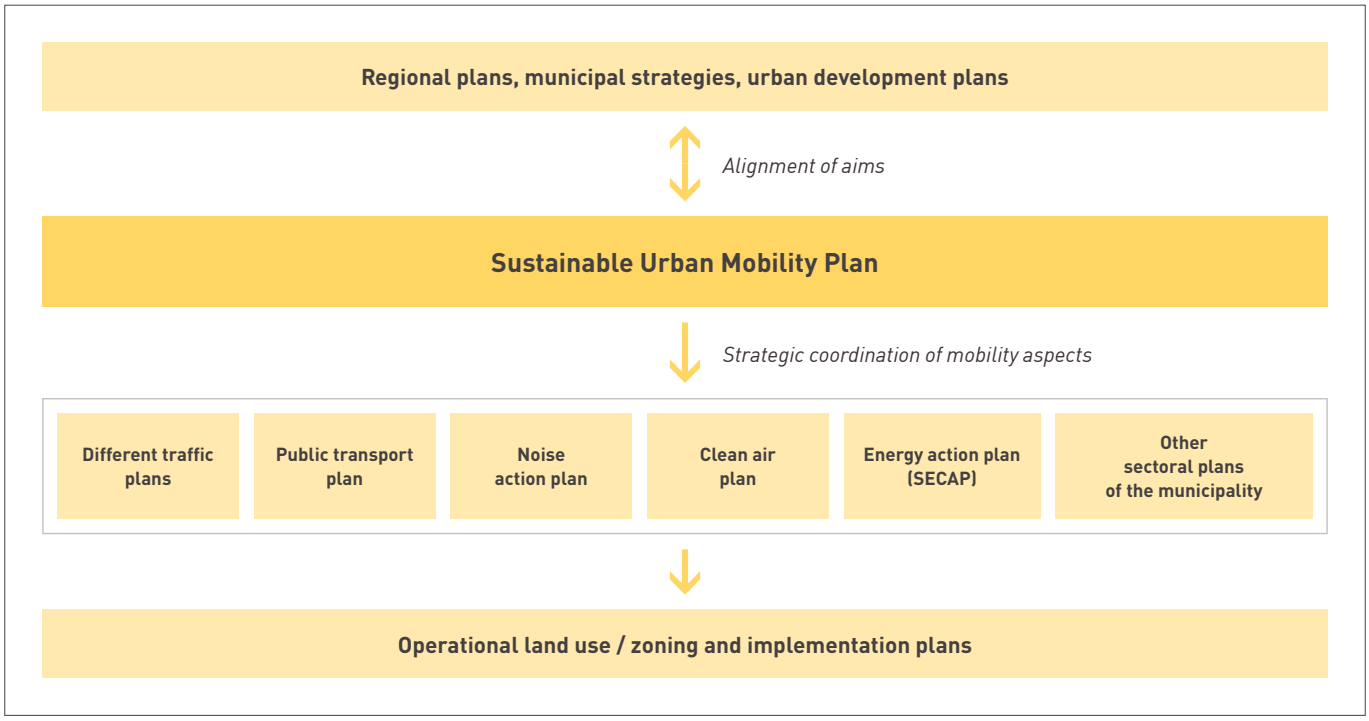
The cycle of twelve Steps may seem to suggest that the steps should be executed one after another, and the clear structure of tasks and checklists may appear to recommend following the Guidelines word by word, but this is not the case. Sustainable Urban Mobility Planning is not a recipe book but a method. Everyone knows how different cities are and how complex decision making can be in an urban area. The challenge of implementing a SUMP is to adapt the SUMP to a given local context while remaining ambitious and avoiding inappropriate compromises.

The SUMP cycle (introduced in Chapter 1.1 and described in more detail in Section 2) is intended as a communication tool to describe in an easily understandable form what urban mobility planning entails. In the reality of planning practice, it can be difficult to determine which steps and activities come first, because some activities must run in parallel. For example, setting up working structures (see Step 1) and determining the planning framework (see Step 2) overlap considerably in terms of timing and the people involved. Sometimes a task which seemed complete needs to be revisited because some results are not entirely satisfactory. A visual representation of the SUMP cycle showing the relative time spent on steps and potential feedback loops and return arrows can be found in Figure 17.

Planning requirements

Planning is an important aspect in many policy fields and at all levels of government. Local planners must be aware of requirements that influence the SUMP (e.g., land use planning, education, employment) and to understand where responsibilities are located so that these institutions can be included in the SUMP. At the European level, most planning recommendations are voluntary. These include the Sustainable Energy and Climate Action Plan (SECAP), which is aligned with the Covenant of Mayors climate and energy targets.[41] At the national level, infrastructure investment planning is common, while comprehensive environmental and land-use planning are often a regional responsibility.

Figure 3: Structure of relationships between SUMP and other plans (adapted from Ahrens et al., FGSV 2015, Recommendations for Mobility Master Planning, p.8)



[41] See guidebook on 'How to develop a Sustainable Energy and Climate Action Plan' by Joint Research Centre; *www.empowering-project.eu/en/new-guidebook-on-how-to-develop-a-sustainable-energy-and-climate-action-plan-secap/*

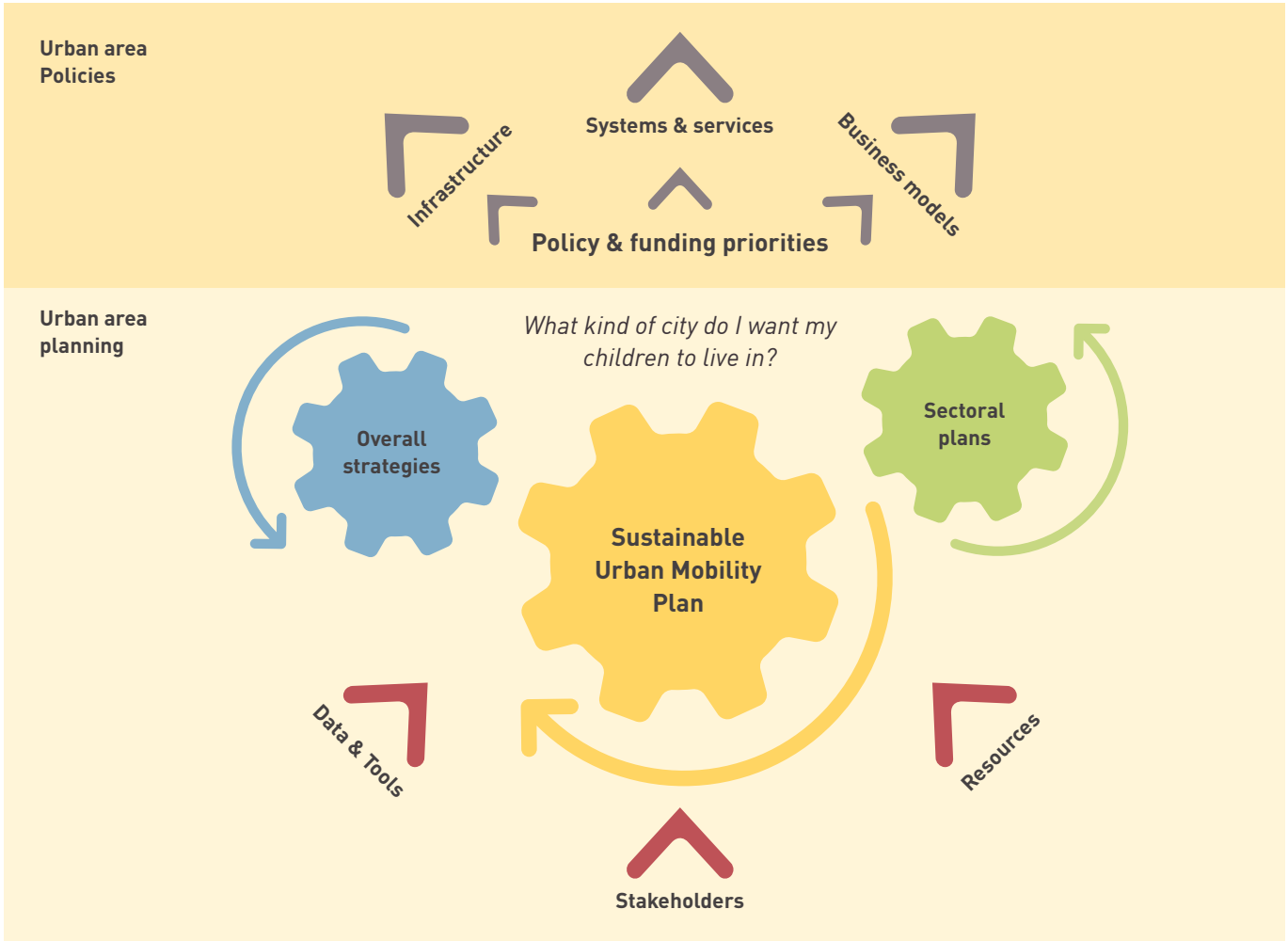
SUMP as an integration process

Whatever the specific planning portfolio of a local authority may include, planning processes often use the same data and tools, require participation from the same stakeholders, and are sometimes even carried out by the same people drawing from the same financial resources. However, these processes tend to have different timing, planning and reporting requirements and a different geographical scope, or responsible authority. Nonetheless, planning is always a process of making choices between different options about the future. Fundamental questions like "What type of city do I want my children to live in?" are often at the heart of urban planning, irrespective of the specific domain.

SUMP can be seen as one wheel in a larger planning machine (see Figure 4).

It is often difficult to determine which wheel drives and which is driven by the others, as this depends mostly on the time horizon taken. An overall urban development strategy may set the general goals for mobility, which is an important input into a SUMP, that in turn drive the development of a detailed sectoral strategy. In practice, the timing may be completely different, but policy coordination is needed to ensure consistency and coordinate the timing, spatial scope and implementation of related planning processes and policies. Beyond saving resources through synergies and avoiding inefficiencies - or even conflicts - between policies, such coordination also reduces the disturbance created by infrastructure construction and the uncoordinated introduction of new systems. Importantly, it also reduces stakeholder fatigue.

Figure 4: SUMP as an integration process



Adapting the SUMP guidance to the local context

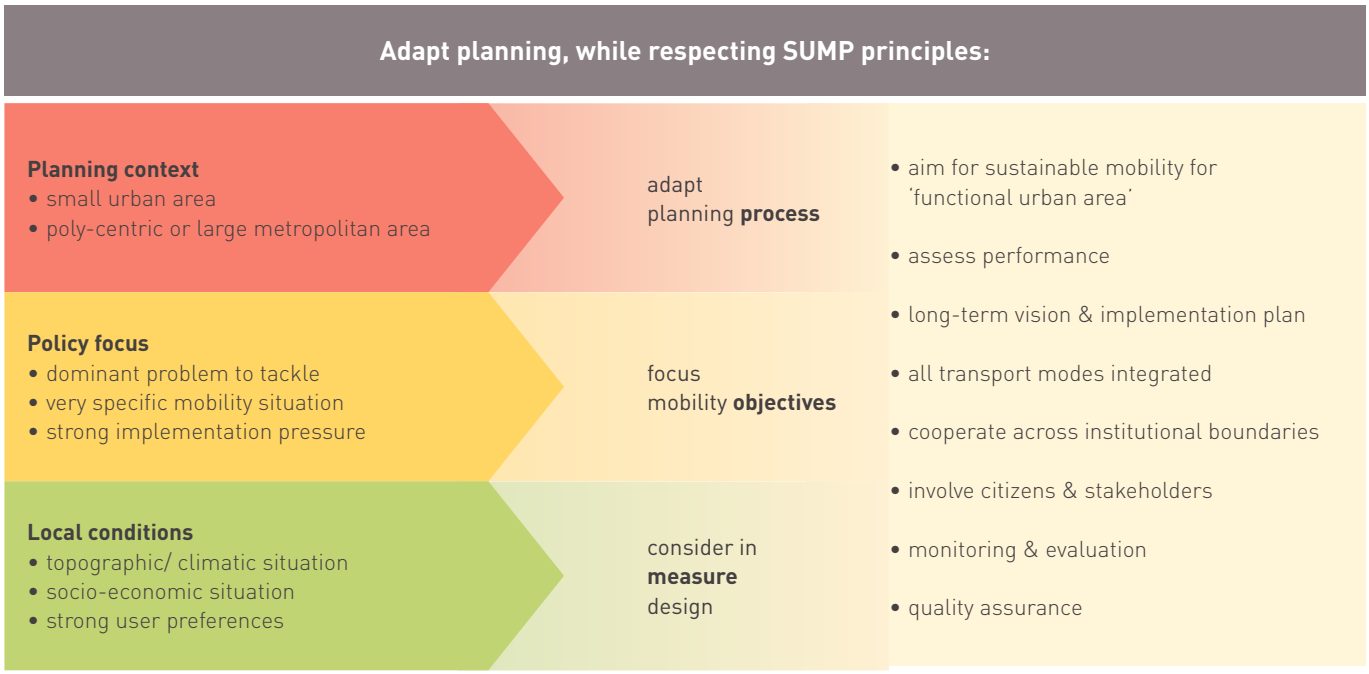
The SUMP method must be adapted to the context and specific requirements of each urban area in which it is applied, while still keeping ambitions high. The eight SUMP principles distinguish a Sustainable Urban Mobility Plan from a more conventional transport plan. However, "adapting" does not mean skipping any of the principles; rather the intensity may be adapted, for example, to the capacities of a small city developing its first SUMP, while keeping long-term ambitions high.

Adaptation to local needs can take different forms. The need for adaptation could, for example, arise if an urban area has a very specific function, e.g., as a national port terminal that creates enormous through-traffic. Or a city may be on an island with seasonal transport patterns. In such specific situations, it is obviously important to focus the SUMP on producing a set of objectives and targets that aim to address the specific mobility issues, while still following the SUMP methodology to avoid producing a conventional traffic plan (see also Figure 5).

While the SUMP Guidelines provide room for flexibility and adaptation to the local context, minimum requirements must be met:

- Key milestones must be produced in a factual and participatory manner. These milestones are: a concise analysis of the problems and opportunities of the functional urban area; a vision, objectives, and targets agreed upon with stakeholders; and a description of actions including their evaluation and financing.
- The implementation process must be closely monitored and implementation adapted as needed, with citizens and stakeholders actively informed of progress.

Figure 5: Identification of adaptation needs of the planning process (examples)



Planning in times of rapid change

We are living in times of rapid change in which we are confronted by immense global challenges like climate, economy, and security, to name only a few and their effects. Furthermore, people's habits, values, and expectations are evolving constantly and new options are continually appearing as technology advances. But there is great uncertainty about whether citizens will use these new technologies as expected, about how mobility cultures will develop, and about how municipal finances will develop in light of macroeconomic and demographic challenges.

A CIVITAS expert group identified a list of such factors which, over time, will exert the greatest impact on urban mobility and should, therefore, be considered "game changers" of urban mobility.[42] While their impact may vary across areas, they may fundamentally "change the game of urban mobility". It is clear that a strategic document like a Sustainable Urban Mobility Plan must consider such (and other) long-term changes:

- Electrification: electrification of all modes, innovative use of electrical infrastructure, and its link to energy-related issues (e.g. local regenerative production).
- Automation and connected, intelligent transport systems (C-ITS): application of technology in new mobility services and its impacts on urban form and function.
- The data economy: data as the driver of new businesses and policies, integration platforms providing new products from existing and new mobility offers, and more fundamental aspects such as algorithms increasingly determining rules and regulations.
- New business concepts for freight and passenger transport: integration platforms providing new mobility products based on existing and new mobility services (e.g. Mobility as a Service and platforms for freight exchange).
- Shared mobility: all (non-technical) aspects of shared mobility, e.g. ride hailing, car sharing (especially free-floating schemes), and bike sharing.
- Active mobility: both the growth of walking and cycling as well as new micro-mobility concepts.
- Changing mindsets and behaviour patterns: new mobility patterns among young people, increasing expectations for same day delivery service, demand for easy-to-use mobility services (simplification), and decentralised production (e.g. 3D printing).
- Integrated space management: new and integrated approaches to using and managing urban space, e.g. placemaking, urban vehicle access regulation, kerbside management, and urban air mobility (e.g. drones).

The SUMP concept proposes scenario analysis and vision building, based on a detailed analysis of the mobility situation, as essential steps in SUMP development (see Steps 3, 4, and 5).

[42] See forthcoming CIVITAS SATELLITE document on "game changers".

1.5 How can the national and regional level support Sustainable Urban Mobility Planning?

Urban mobility is closely connected with other policies such as those on the environment, road safety, health, spatial planning and energy. Such policies are often elaborated at the local, regional and national levels. Many European cities therefore need enabling support from higher levels of government, particularly in the areas of governance, legislation, funding, monitoring and evaluation, guidance and methodology, education and knowledge exchange. In most EU Member States, the national government provides such support, while in some countries regions have more competencies and the national level plays a more limited role.

Benefits for the national and regional level

While urban mobility planning is mostly a local competence, cities cannot achieve the ambitious goals of sustainable urban mobility alone. At the same time, national and regional levels of government also have much to gain from effective Sustainable Urban Mobility Planning, as the local level improvements also contribute to the achievement of regional and national goals. Below are several incentives for national and regional actors to support SUMP development.

Improved coherence between different sectoral policies and governance levels:

Urban mobility is closely bound by sectoral policies at other governance levels, but such policies are often developed by a wide range of political and institutional actors both at the local as well as the regional, national or even the European level. Unless coordinated, such policies are compiled in diverse planning documents, reflecting differences in governance and legal frameworks, elaboration processes and specific objectives. The inherent risk of inconsistency and redundancy among planning approaches and outcomes needs to be addressed. The most prominent examples relate to land-use regulation and land taxation, the ability of disadvantaged people to access basic services, and infrastructure development.

Removal of barriers to SUMP elaboration and implementation:

Some obstacles are purely local in nature and must be overcome by local authorities, whereas others often result from ineffective national frameworks that lead to the following barriers:[43]

- Lack of cooperation between city, regional and national levels;
- Limited coordination at the national level across ministries, leading to inconsistency between the policies of national government departments;
- Low level of awareness, political will and commitment from decision makers;
- Lack of sustained and coordinated funding at the national, regional and local levels;
- Poor culture of monitoring and evaluation with limited or no quality control; and
- Insufficient professional support (including guidelines), training, and professionals who are able to convey the required competencies.

Optimisation and coordination of European, national and local funding flows:

Financial leverage is an essential component in translating political visions into concrete operations. Various European and national institutions provide funding for urban mobility. The creation of a coordinated national or regional funding framework, based on a shared understanding of legal and technical aspects, could support sustainable urban mobility. Most importantly, any framework for funding infrastructure schemes would need to promote transport avoidance and support sustainable modes.

[43] See 'SUMPs-Up status report (2018)' for a more detailed description of barriers and needs.

Promotion of innovation and new markets:

The creation of a national or regional strategy for mobility can encompass the establishment of clearly-defined priorities for mobility solutions, including innovative technologies. For instance, the Clean Vehicles Directive[44] requires public bodies to procure a certain minimum share of clean vehicles, thereby facilitating the roll-out of low- and zero-emission vehicles. These clearly-stated priorities provide the private sector and local authorities with a clear and stable signal that may facilitate long-term investments.

Developing a national or regional framework: a win-win situation!

Cities have the potential to be major catalysts of change in the implementation of recent international agreements such as the Paris Agreement and the New Urban Agenda. Indeed, the UNFCCC Conference of the Parties in Paris in 2015 (COP 21) recognised the critical role cities have to play in effective climate action. For example, a crucial strategy to push people away from private car use is taxation: national government departments can put in place purchase and circulation taxes, while local action can facilitate car-independent lifestyles.

However, cities' resources and competences are too limited for them to achieve the shift towards sustainable mobility alone. National or regional support for SUMP can trigger a decrease in transport-related greenhouse gas emissions by creating a political, financial and technical framework that increases awareness among stakeholders - from the local to the national level and within the public and private sectors. In this way, a national or regional policy that supports SUMPs represents a direct contribution to nationally determined contributions (NDCs).

This also holds true for European air quality requirements. European legislation sets emission limits and air quality standards for the protection of human health. In 2016, six Member States exceeded the limits of at least one of their emission ceilings. Overall, only four EU countries complied with all air quality standards, while ten states exceeded the limits of all air quality standards. Urban mobility is one essential field of action in order to reduce emissions and improve air quality. A national or regional SUMP-supportive framework would allow local plans to be more focused and operational, contributing to cities' ability to comply with air quality requirements.

In a nutshell, national and regional governments will not achieve their climate-related goals, meet European air quality requirements or keep their international commitments without the contribution of cities. And cities need regional and national governments to support them in achieving more sustainable mobility. A win-win situation!

image: UNclimatechange on flickr.com

[44] *https://ec.europa.eu/transport/themes/urban/vehicles/directive_en.*

Measures and instruments to foster the uptake of SUMPs

National actors can support the development of SUMPs with a wide range of actions at that level. Figure 6 shows the core national measures relating to governance, legislation and regulations, funding, monitoring and evaluation, guidelines and methodology, education and knowledge exchange.

There is a high level of interaction among the actions. For example, developing a national grant to support quality SUMP elaboration [Funding] implies defining what a SUMP is and possibly how to elaborate one [Legislation and regulations, Guidelines and methodology].

The funding process must be coordinated with other national stakeholders [Governance] and monitored throughout its duration [Monitoring and evaluation]. Its benefits must be communicated at key moments (e.g. launch of the grant) and feedback should be gathered from stakeholders throughout the process [Governance, Information, knowledge exchange]. Thus, national decision makers are strongly encouraged to develop a comprehensive national programme. This improves coherence, creates synergies and increases visibility for all stakeholders, especially local authorities that are elaborating SUMPs.

Figure 6: National level measures to foster the uptake of SUMP and their main relations

Governments can foster the take-up of the SUMP concept through four levels of intervention, all of which build upon one another:

1. Information: The national government provides detailed information about the SUMP concept (and its benefits) in the national context. A national platform can facilitate exchange among cities on the SUMP concept, provide good practice examples, and inform about (national) funding opportunities.

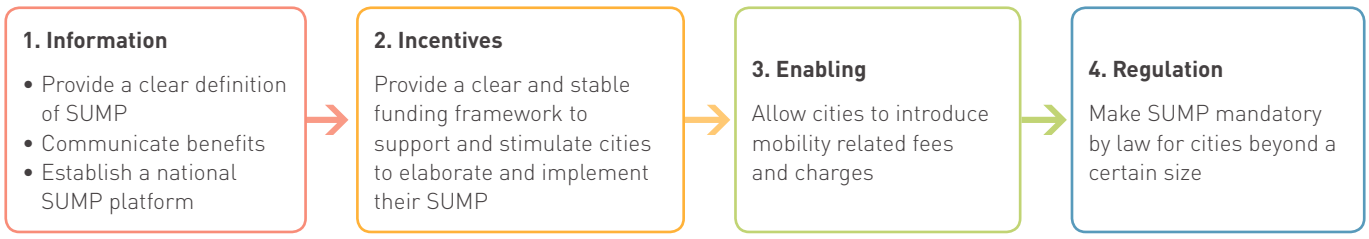
2. Incentives: Having a SUMP is a prerequisite for cities to receive national funding for urban mobility projects. This approach is followed in some Operational Programmes of the European Structural and Investment Funds.

3. Enabling cities and regions: The national government grants cities the legal power to introduce levies and charging systems or it introduces experimentation clauses in relevant legislation to allow cities to test new approaches to sustainable mobility.

4. Regulation: A SUMP is mandatory by law for all cities or for some cities based on given criteria, e.g. population or the category of local authority.

image © inakiantonana on istock.com

Figure 7: Four levels of intervention



National SUMP Supporting Programmes are programmes run at the national or regional government level to encourage, support, require and/or provide incentives for the implementation of SUMPs. Detailed guidance can be found in the Topic Guide on **National support frameworks for Sustainable Urban Mobility Planning.**

As highlighted by a recent analysis of national frameworks for Sustainable Urban Mobility Planning in Europe, there is a real need for effective and coherent national and/or regional SUMP programmes to support local SUMP development and implementation. More detailed needs have been identified for different country profiles.[45]

Figure 8: Needs of effective and coherent national or regional SUMP programmes for local SUMP development and implementation

Countries and regions without a national SUMP programme or starting to develop one		**Countries and regions with an existing national SUMP programme**	
Needs	**Main areas**	**Needs**	**Main areas**
Achievement of commitment and willingness on a national (ministry) level concerning the central management of SUMPs and to establish a common vision for mobility planning	**Governance**	Constant improvement of National SUMP programmes and their elements	**Governance** **Legislation & regulation**
Institutional, legislative and financial support for SUMP and SUMP measures	**Governance** **Legislation & regulation** **Funding**	Securing or restructuring continuous national funding for SUMP development and implementation	**Funding**
Adoption of National SUMP guidelines	**Guidelines & methodology**	Expansion of the scope of SUMP to functional areas with inter-municipal or regional SUMP	**Guidelines & methodology** **Governance** **Legislation & regulation**
Introduction of monitoring & evaluation activities and stimulation of regular mobility data collection	**Monitoring & evaluation**	Improvement of monitoring & evaluation activities and stronger decision makers' and political support for its implementation	**Monitoring & evaluation**
Capacity building (trainings, workshops for municipal staff and professionals) to support elaboration of SUMP, consultancy expertise, quality control and training of national supervisors	**Information, education, knowledge exchange**	Cooperation with universities to integrate SUMP into relevant curricula	**Information, education, knowledge exchange**
Awareness raising on positive effects of SUMP and urban mobility in general at national level, for local politicians, stakeholders and public	**Information, education, knowledge exchange**	Continuous communication and promotional campaigns presenting the positive impacts of SUMP implementation with special focus on decision makers and general public	**Information, education, knowledge exchange**

[45] Durlin, A., Plevnik, A., Balant, M., Mladenovič, L., 2018. The Status of SUMPs in EU member states, *http://sumps-up.eu/publications-and-reports/.*

SECTION 2: Developing and Implementing a Sustainable Urban Mobility Plan

These guidelines are aimed at practitioners in urban transport and mobility, as well as other stakeholders who are involved in the development and implementation of a Sustainable Urban Mobility Plan. The guidelines describe the process of preparing and implementing a SUMP. This process consists of 4 Phases with 12 main Steps that are further broken down into 32 Activities. All four phases of the cycle start and end with a milestone. The milestones are linked to a decision or an outcome needed for the next phase, and each marks the completion of the previous phase. Each step, along with the associated activities, is presented in detail in this guidance document, including information about:

- The rationale behind the activity, issues to be addressed, and questions to which responses are needed;
- Specific aims of the activity to be performed;
- Main tasks to be completed within the activity;
- Activities beyond the essential requirements, for cities and regions that have the ambition (and resources) to go beyond the basic tasks;
- Requirements for timing and coordination with other activities; as well as
- A checklist of the steps to be taken.

It needs to be stressed that the order of the activities is logical rather than sequential.[46] In practice, activities may run partially in parallel or include feedback loops. The section on timing and coordination for each activity highlights crucial aspects in this regard. The following page provides a graphic overview of the planning cycle, which is then followed by a detailed description of all steps and activities for developing and implementing a SUMP. The guidelines include good practice examples, glossary definitions, tools and references to support users in the development and implementation of a Sustainable Urban Mobility Plan.

Good practice examples are taken from SUMPs across Europe. Some may not necessarily fulfil all requirements, but they are useful to illustrate activities that are part of the process of developing and implementing a Sustainable Urban Mobility Plan. The aim is to provide a portfolio of examples from different European regions to show that good planning approaches are possible in different contexts. Many of the examples also illustrate forward-thinking planning activities.

Additional examples can be found at *www.eltis.org*

The SUMP cycle

The SUMP cycle consists of four phases with twelve main steps that are further broken down into 32 activities. All four phases of the cycle start and end with a milestone. The milestones are linked to a decision or an outcome needed for the next phase and mark the completion of the previous phase. All steps and activities should be taken as part of a regular planning cycle in the sense of a continuous improvement process.

[46] This aspect is described in detail in Chapter 1.4 Sustainable Urban Mobility Planning in practice.

Figure 9: The 12 Steps of Sustainable Urban Mobility Planning (2nd Edition) – A planner's overview

PHASE 1: Preparation and analysis

Milestone:
Decision to prepare a SUMP

Starting point: Decision to prepare a SUMP

The starting point for developing a Sustainable Urban Mobility Plan should be a decision to improve the current mobility situation and a strong conviction that change towards greater sustainability is needed. It should be clear from the outset that urban transport or mobility is not an end in itself but should contribute to higher goals, such as enhanced quality of life and well-being. A decision to prepare a SUMP always means a commitment to its general aims of:

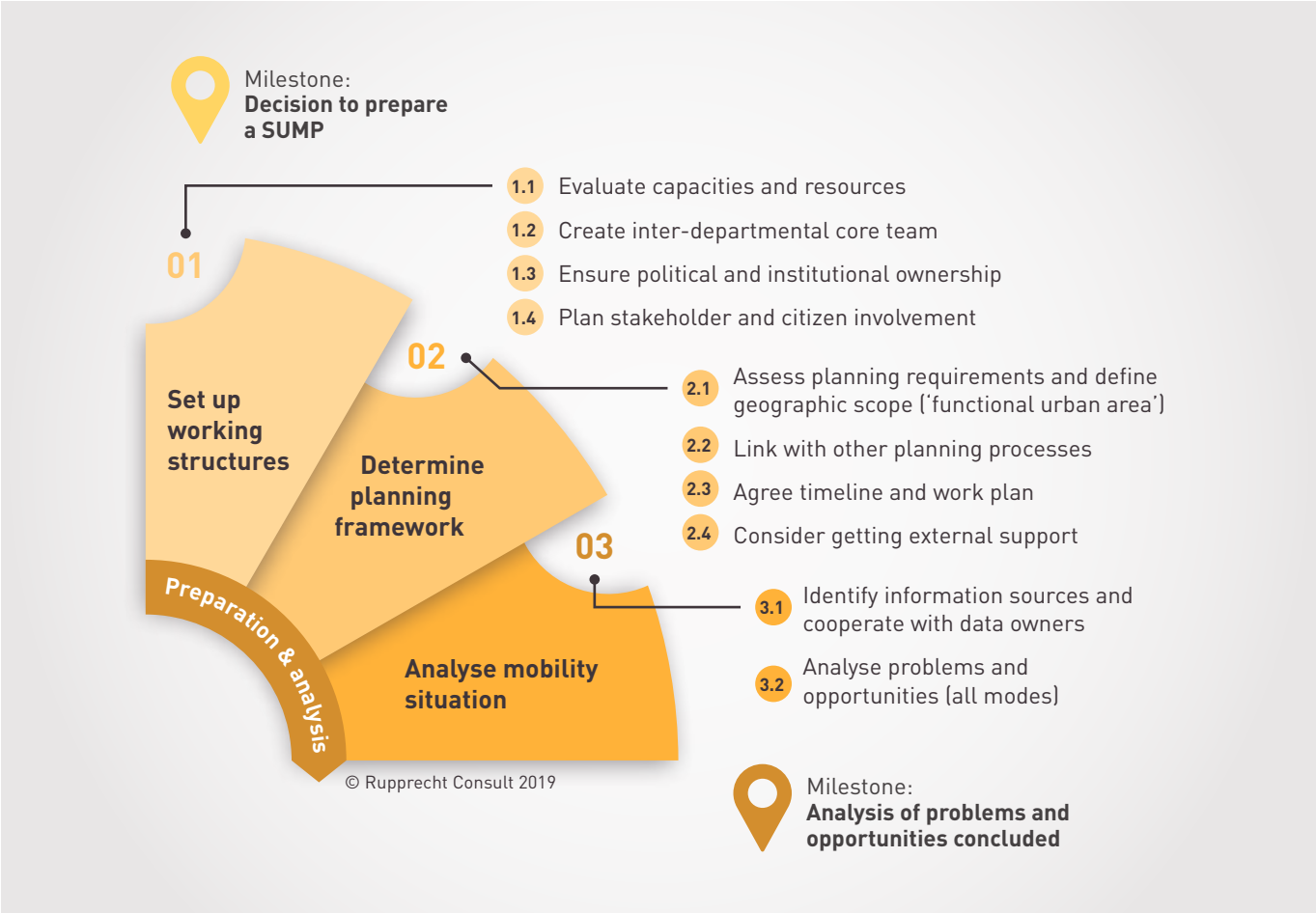
- improving accessibility for all, regardless of income and social status;
- enhancing quality of life and the attractiveness of the urban environment;
- improving road safety and public health;
- reducing air and noise pollution, greenhouse gas emissions and energy consumption;
- economic viability, social equity and environmental quality.

Depending on the national and local context, a legal obligation from the national level, an official decision by a local political body (such as the local council), or a commitment by the local administration can be the driving force for developing a SUMP. In any case, real commitment is needed to make it a truly sustainable and effective plan. If there is no political champion at the local level, it may be hard work to convince other politicians to become supporters. This requires persuasive arguments presented by someone who is respected by the decision makers. A project or measure can itself also be the trigger to start the SUMP process. With the decision for a big infrastructure project (e.g. a new tram line) or a big urban innovation (e.g. a low emission zone), this measure needs to be embedded in a wider planning framework.

A SUMP can offer an integrated approach for a large project, with complementing measures, long-term targets and a participative approach. Especially for big and innovative projects with high impact, a SUMP offers comprehensive participation strategies that are needed to gain public support for the measures. A large infrastructure project may provide the initiative to launch a comprehensive mobility planning for a functional urban area, supported by a broader planning strategy.

A useful approach is to show the challenges and problems the city will face if nothing is changed, stress the benefits generated by a Sustainable Urban Mobility Plan, and highlight the fact that voters will reward good results. In order to communicate urgency, it can be effective to simulate the negative consequences of business-as-usual development (e.g. in terms of future congestion and resulting economic losses, or in terms of indicators such as road fatalities or years of life lost due to air pollution) and to present these to politicians with the help of maps and figures. Current rapid changes driven by digital technologies highlight the urgency of developing a coherent strategic approach for future sustainable mobility. When communicating the benefits, it is often helpful to connect to current high-priority issues in your city - such as air quality, traffic, road safety, affordability of housing or economic growth - by explaining how a SUMP helps to solve them. It can also be convincing to point to other cities that have successfully carried out Sustainable Urban Mobility Planning (see Chapter 1.2).

Political commitment can be particularly challenging to achieve as the full benefits of a SUMP only become visible after a time span longer than the electoral cycle. It may be helpful to highlight the option of including smaller-scale measures with high visibility in the SUMP, which can generate public support in the short-term and trigger a first decision for developing a SUMP. For example, the temporary transformation of public spaces with "light and cheap" solutions can help people visualise the desired positive changes (e.g. a street closure during the summer, a temporary bike path separated with flower planters, parklets instead of parking spaces; see also placemaking box in Activity 7.2).



The first milestone and starting point for the initial phase is an explicit decision by policy makers to prepare a Sustainable Urban Mobility Plan. The groundwork for the planning process is laid by answering the following questions:

What are our resources?

Analyse all available (human, institutional, financial) resources for planning and set up appropriate working and participation structures to get started. Ensure that the key institutions and stakeholders support SUMP development.

What is our planning context?

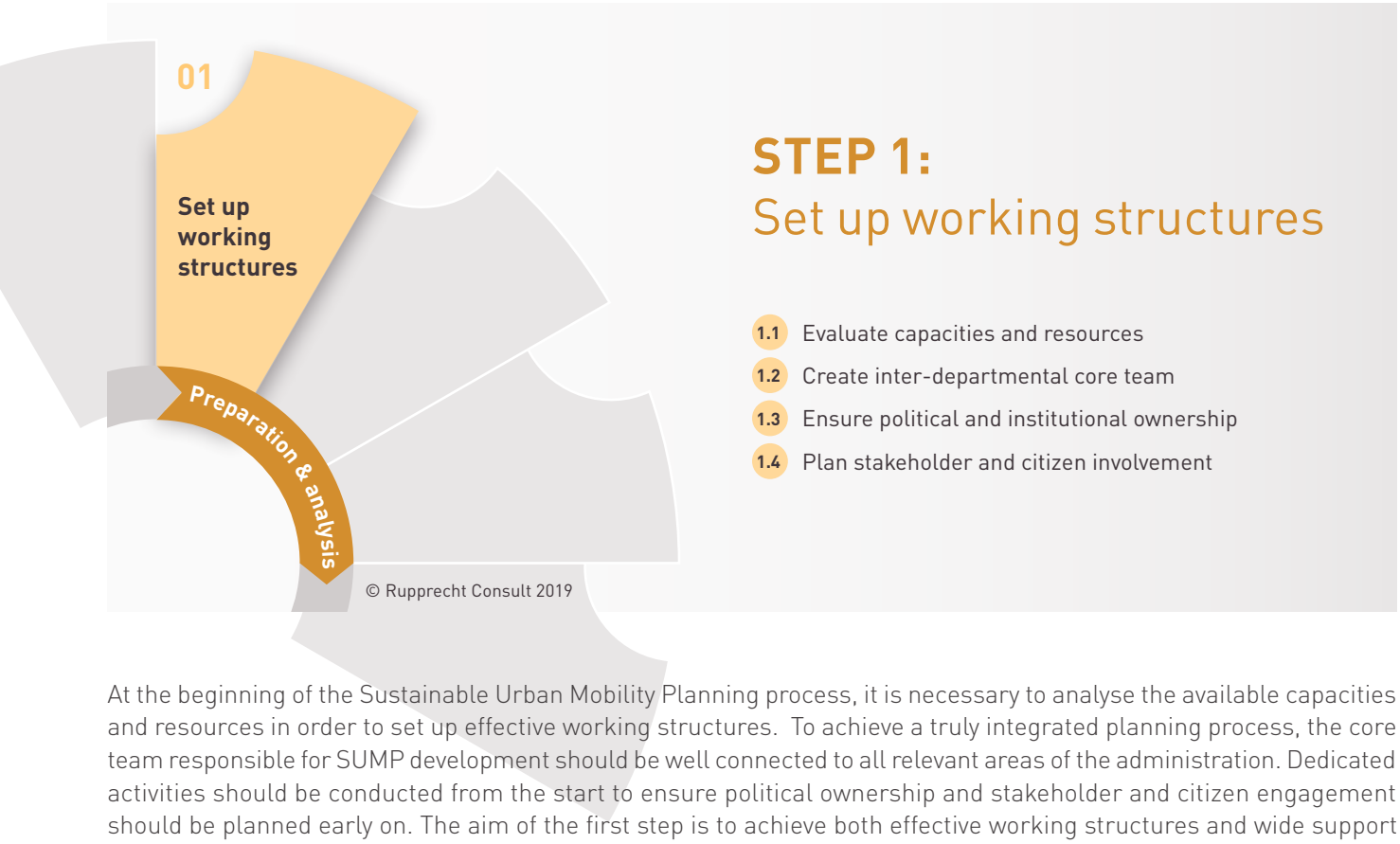
Identify factors that will have an impact on the planning process, such as existing plans or legal requirements. Analyse traffic flows to determine the geographic scope of the plan – and ensure that neighbouring authorities and stakeholders are 'on board'. Agree on the planning timeline and recruit external support as needed.

Activities in this and the previous step are closely linked and often run in parallel. For example, the geographic scope needs to be defined early on so that it is taken into account when setting up the working structures.

What are our main problems and opportunities?

Analyse the mobility situation from the perspective of all transport modes and relevant sustainability aspects by using an appropriate set of current data sources.

The concluding milestone of the first phase is a completed analysis of the major problems and opportunities related to mobility in the entire functional urban area.



STEP 1: Set up working structures

1.1 Evaluate capacities and resources
1.2 Create inter-departmental core team
1.3 Ensure political and institutional ownership
1.4 Plan stakeholder and citizen involvement

At the beginning of the Sustainable Urban Mobility Planning process, it is necessary to analyse the available capacities and resources in order to set up effective working structures. To achieve a truly integrated planning process, the core team responsible for SUMP development should be well connected to all relevant areas of the administration. Dedicated activities should be conducted from the start to ensure political ownership and stakeholder and citizen engagement should be planned early on. The aim of the first step is to achieve both effective working structures and wide support for the process.

The activities of this and the next step are closely linked and sometimes run in parallel. For example, the geographic scope needs to be defined early on so that it is taken into account when setting up the working and participation structures.

ACTIVITY 1.1: Evaluate capacities and resources

Rationale

A self-assessment of planning practices, capacities and resources at the beginning is needed to tailor the process to your local context. This helps you to identify strengths and weaknesses as well as barriers and drivers that might influence the development of a successful Sustainable Urban Mobility Plan. An assessment of your current planning practices will determine how closely they align with the principles set out in this guidance document. Closely linked to this is the question of available capacity and resources for developing and implementing the plan. This includes human resources (i.e. available staff and skills) as well as financial resources. Without sufficient resources it will be difficult to carry out a successful plan.

Aims

- Get an honest and clear picture of the strengths, weaknesses and opportunities of current planning practices with regard to developing a SUMP in your local context (e.g. political, institutional and legal framework).
- Ensure that the necessary (wide) range of skills for managing and driving the Sustainable Urban Mobility Planning process is available in your local authority and among stakeholders.
- Assess the confirmed and potential financial resources for running the planning process and for implementing measures.

Tasks

Planning practices

- Analyse your current transport planning activities. It is recommended to use the online SUMP Self-Assessment (see tools section) to check to what degree your processes already incorporates the principles of Sustainable Urban Mobility Plans (are the processes considered fully, to a limited degree, or not at all?). This way you can identify gaps that should be addressed in the new SUMP development process.

- Identify and analyse drivers and barriers to the plan development process in your urban agglomeration, such as:

    - Drivers that can support the development and implementation of a SUMP (for example political champions, voiced need for better coordination of municipal activities, synergy with another planning process that is just starting).

    - Institutional, acceptability, legal, regulatory and financial barriers that affect the whole planning process. (For example, is the bus company private or controlled by another level of government? Can mobility incomes be used to finance mobility measures? Are you able to influence third party providers (such as ride-hailing companies)? Is there political will and public support at least in principle?)

    - Process barriers that may arise in the course of planning (for example management or communication between different departments, or elections).

- Carry out an honest self-assessment as a starting point for improving planning processes and policies. The outcome does not necessarily have to be made public.

Capacities

- Assess skills available within the leading organisation(s) and among stakeholders. Ensure that all core skills for Sustainable Urban Mobility Planning are considered (see list in tools section).

- Develop a strategy to cover skill gaps (e.g. through training, cooperation, recruitment or subcontracting). This should be done by someone who is familiar with the Sustainable Urban Mobility Planning process (if applicable, in cooperation with your human resources manager).

Resources

- Define the required budget for the SUMP development process and ensure political approval.

- Assess the likely budgetary framework for measure implementation. Consider local, regional, national, EU and external funding opportunities. This will probably still be a rough estimate at this stage, but it will help you to stay realistic.

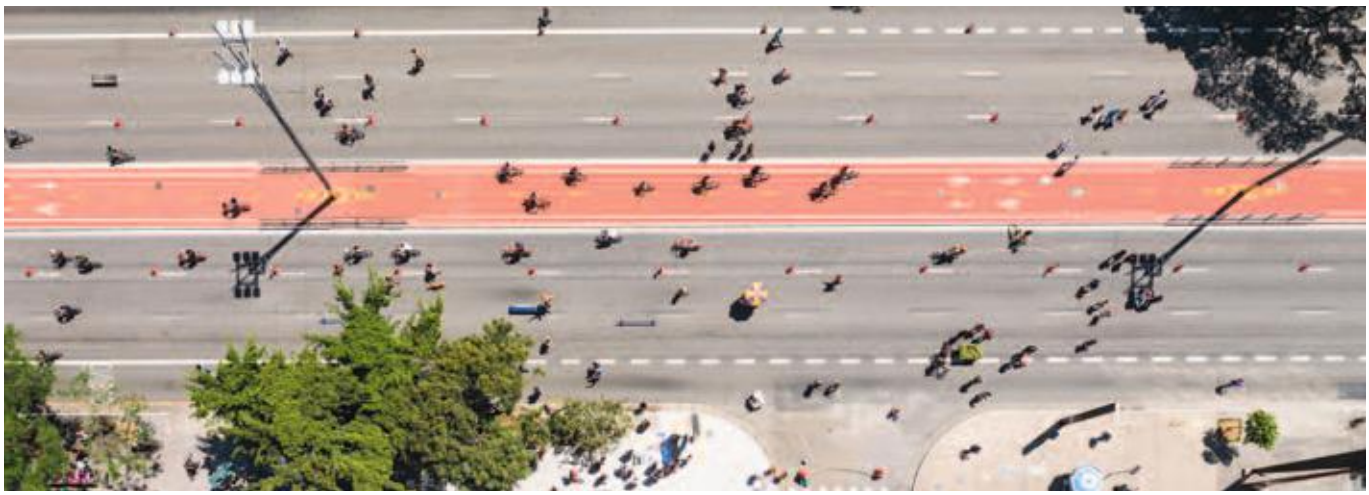


image © Willbrasil21 on istock.com

Activities beyond essential requirements

- Apply a peer-review method with external experts to assess planning practices.
- Cooperate with other departments or involve external partners (e.g. consultants, universities) to fill skill gaps (for more details see Activity 2.4).

Timing and coordination

- This activity is needed at the beginning, with results to be taken into account for setting up effective working structures, in particular the core team (see Activities 1.2, 1.3 and 1.4).
- Essential input to design a locally-tailored Sustainable Urban Mobility Planning process and to decide whether or not external support is needed (see Activities 2.1, 2.2, 2.3 and 2.4).
- Barriers to be taken into account in the third phase on measure planning.

Checklist

- ✔ Strengths, weaknesses and barriers with regard to developing a SUMP identified.
- ✔ Self-assessment results summarised as starting point to optimise local planning processes.
- ✔ Required skills and financial resources for planning process analysed.
- ✔ Strategy to cover skill gaps developed.
- ✔ Budget for SUMP process politically approved.
- ✔ Likely financial framework for measure implementation assessed.

Methods for assessment of planning practices

Internal meeting and review with SUMP Self-Assessment

A self-assessment can be as simple as a group of people who are involved in the planning process sitting down together to discuss the strengths and weaknesses of current processes and how to improve them. To guide the discussion, it is recommended to use the online SUMP Self-Assessment available on Eltis. Following the completion of the SUMP Self-Assessment, a results page will show how well your planning activities already fulfill the principles of a SUMP and will provide tailored advice for further improvement. By having all meeting participants complete the questions on their own, and then discuss the similarities and differences in responses as a group, highly relevant insights can be gained.

SUMP Self-Assessment Tool

Link to SUMP Self-Assessment: *www.eltis.org/mobility-plans*

Peer review

Another way of assessing the planning environment for a SUMP is by means of a peer review. This means that one or more experienced planners, or other experts in the field, are invited to review the situation in your city. The peer reviewer can consider the quality of the current planning process and organisational se-tup, also benchmarking them against the 'best in class'. They can contribute a useful external perspective and feedback on how to best organise the development of a Sustainable Urban Mobility Plan.

Source: Lasse Brand, Rupprecht Consult; Tom Rye, Edinburgh Napier University

Figure 10: Skill requirements for Sustainable Urban Mobility Planning

Management skills for project coordination
• Project management (team building, process development, moderation and documentation) • Financial management (budget planning) • Staff management (incl. managing multidisciplinary teams made up of internal and external staff)
Technical skills of the team members
• Urban planning and transport planning, including regulatory framework • Expertise in important sectoral policies (economic, social, environmental) • Moderation, mediation • Data collection methods and empirical analysis (surveys, interviews and modelling) • Knowledge of mobility measures and impact assessment • Writing and design skills for public relations • Economic analysis, funding and investment expertise • Legal procurement expertise

Budget requirements for SUMP development

The costs of developing a Sustainable Urban Mobility Plan differ widely depending on the scope, availability of existing plans and studies, and external assistance required. The costliest elements are data gathering and transport modelling, so it is important to be clear about how much data and what level of complexity of modelling is required in your case before seeking approval for a budget. Smaller cities often decide not to use a transport model due to the high costs and limited complexity of decisions in their context, and to focus on measures that have proven successful in similar contexts instead (see Activity 4.1 for guidance on when to use a model). Other aspects that tend to be expensive, but very useful, are a comprehensive participation process as well as professional design and communication.

GOOD PRACTICE EXAMPLE

Koprivnica, Croatia: Early external support for the SUMP team

In 2014, the city of Koprivnica decided to develop a SUMP. As part of the first stage of the SUMP development process, the city researched which steps it would need to take and resources required to produce such a document. Based on this research, the Koprivnica SUMP team ascertained that there weren't enough resources and that therefore there was a need to involve external mobility experts. The SUMP team searched within Croatia for mobility experts with enough experience to guide the team through the development process. With the help of these experts, the city conducted a status analysis and a baseline traffic survey.

Author: Nebojsa Kalanj, collected by ICLEI

Image City of Koprivnica

ACTIVITY 1.2: Create inter-departmental core team

Rationale

Developing and implementing a Sustainable Urban Mobility Plan is a complex process that requires working across boundaries and sectors and coordinating between related policies and organisations (e.g. coordination with land-use planning, environmental protection, social inclusion, gender equity, economic development, safety, health, education, information technologies). To coordinate and manage this process, a clear project owner with sufficient capacities and resources as well as authority within the organisations is needed to drive the process forward.

Aims

- Establish efficient working structures for a planning process that makes best use of available resources.
- Achieve an integrated SUMP that considers linkages between different transport modes, rather than addressing them in isolation, and acknowledges the interactions between urban structures (land use, density, functions, socio-economic patterns, ecosystems) and mobility.
- Establish the planning of mobility and transport as a shared policy domain and not as an end in itself.
- Ensure that basic sustainability principles are taken into account throughout the entire planning process.

Tasks

- Appoint a project coordinator with responsibility, mandate and resources to facilitate and drive the planning process forward. In some cities it has proven successful to appoint two coordinators that can exchange ideas and alternate their absences (such as holidays) to keep the process running at any time.
- Also appoint a more senior project director, e.g. the head of your department, that provides the necessary high-level support to ensure cooperation - and that speaks up for the SUMP process on a steering level if needed.
- Set up a core team as project owner that is regularly involved throughout the entire development of the SUMP.
- Ensure that the team members together have all management skills required to lead the planning process. This includes skills for project, political, technical, financial and staff management (see also tool section of Activity 1.1).
    - Usually the project coordinator covers most of these management skills, but depending on your local situation other team members may take over certain management tasks.
    - Liaison with the political sphere throughout the entire planning process is important. It can therefore be beneficial to have team members with good links to mayors, other leading politicians and key actors in your planning authority. (For more details on how to ensure political and institutional ownership see Activity 1.3.)
- Ensure that the team unites all technical skills and policy backgrounds required to take sound planning decisions throughout the process. Transport and urban planning are the most important skills, but knowledge of related planning areas, such as economic, social and environmental policies, are also crucial to achieve a truly integrated planning process whose outcomes are mainstreamed into other sectors. For example, if the SUMP is developed mainly by one department, the team should include members from several other departments or units.
- Consider operational skills required for particular planning steps when selecting team members, but keep the team at a workable size. Not all such skills have to be available within the core team, as other colleagues from your organisation can be brought in for the respective planning steps. For most public authorities, these specific skills may exceed the capacities of their staff, in which case external expertise should be brought in for particular technical tasks (see also Activity 2.4).

- Discuss the results of your self-assessment of planning practices, or optimally conduct it together as a team, to develop a common understanding of what sustainable urban mobility means (see Activity 1.1). Emphasise linkages between different transport modes as well as between urban structures (density, functions, socio-economic patterns, ecosystems) and mobility. Broaden the view beyond transport and mobility to the different needs of society – economic, social, environmental – that it needs to serve.

Activities beyond essential requirements

- Encourage departments to send senior staff as members of your core team to show their commitment and emphasise the importance of the SUMP. Often there might be two (or more) core team members from each department, with the senior staff only attending meetings of strategic importance to keep the workload manageable for them. Alternatively, consider setting up a separate control group consisting of high-level decision makers from your and other departments, such as the heads of department. The control group will support the core team in taking important decisions along the SUMP development.

- Cooperate with other departments or involve external partners (e.g. consultants, universities) to fill skill gaps (for more details see Activity 2.4).

- Consider hiring people with a non-transport-related background for specific tasks (e.g. marketing). This helps bring in the fresh perspective that is a key part of Sustainable Urban Mobility Planning. Also consider combining the resources of different stakeholders to finance staff.

Timing and coordination

- Start from the outset and continually adjust working structures to changing needs and circumstances during the entire process.

- Take into account the planning requirements and geographic scope of your SUMP (Activity 2.1).

Checklist

✔ Coordinator of the planning process determined.

✔ Core team with all required skills set up that includes key authorities from the entire planning area.

✔ Common understanding of Sustainable Urban Mobility (Planning) developed in the team.

GOOD PRACTICE EXAMPLE

Edinburgh, United Kingdom: Multi-disciplinary Spatial Policy Team

Edinburgh's SUMP is being produced by the Council's Spatial Policy Team. The core team comprises transport and mobility planners, air quality professionals and urban, landscape and spatial planners. The wider team that can contribute on a case-by-case basis draws on the skills and knowledge of specialists from a range of transport teams (active travel, public transport, road safety engineering), land-use planners, sustainable development officers, economists and communication experts. The team is working on and coordinating three major inter-related projects: The City Mobility Plan (SUMP), a city centre transformation strategy, and the introduction of a low emission zone in Edinburgh.

Author: City of Edinburgh Council, collected by Wuppertal Institute
Image City of Edinburgh Council

GOOD PRACTICE EXAMPLE

Bielefeld, Germany: Inter-departmental core team supported by wider steering group of experts and stakeholders

In Bielefeld, the five-person SUMP core team included representatives from the offices of mobility, urban planning, and environment, as well as the office of the Head of Department for urban and mobility planning and the local public transport provider. Choosing senior team members that were also involved in relevant parallel planning processes ensured good coordination and a strong link to political decision makers. The team was supported by an experienced external expert that conducted the mobility analysis, moderated and documented the participation process, and developed a vision and objectives based on several workshops with a stakeholder steering group. All results were developed in close coordination with the core team, which met regularly to manage the process and take decisions.

Author: Olaf Lewald, City of Bielefeld, collected by Polis
Image Grafikbüro Wilk

ACTIVITY 1.3: Ensure political and institutional ownership

Rationale

Identifying key stakeholders and ensuring that they feel ownership is crucial for the long-term success of Sustainable Urban Mobility Planning. A good stakeholder analysis can help to identify possible conflicts and coalitions, and how these, in turn, may affect your planning process in terms of geographical coverage, policy integration, resource availability and overall legitimacy. Early involvement of political and institutional stakeholders helps them to feel ownership and makes it more likely that they will support the outcomes of the process.

Aims

- Create a sound basis for a durable cooperation between all stakeholder groups.
- Identify possible synergies or conflicts between stakeholders.
- Enhance steering capacity and acceptance for the development and implementation of your SUMP.

Tasks

- Identify all relevant stakeholders as well as their objectives, power, capacity and planning resources (e.g. using a stakeholder mapping tool, see skill table and influence-interest matrix in tools section below).
- Strive for a broad coalition that supports your SUMP and feels ownership. Achieving the support not only of the governing party but also of the opposition helps to ensure continuity. Avoid substantial conflicts with one or more powerful actors, but stay true to the core principles of sustainable mobility. Draw up a simple stakeholder coordination strategy to guide this task.
- Meet key politicians and practitioners personally at an early stage to discuss their views and involvement.

- Promote the idea of Sustainable Urban Mobility Planning to politicians and colleagues in all relevant departments, for example by organising awareness-raising seminars or an excursion to a model city for sustainable mobility.
- Take an open and transparent approach to actor cooperation from the outset (including organisations beyond the municipal borders), securing the involvement of actors from different policy fields (e.g. different administrative departments).

Timing and coordination

- From the outset – identification and analysis of stakeholders.
- Reassess regularly if changes in stakeholder coalitions occur.
- Start awareness-raising activities early in the process.
- Political support and involvement is needed constantly, see Figure 2 for an overview of the timing and coordination of political decisions.

Checklist

- ✔ Stakeholder groups identified.
- ✔ Analysis of actor constellations carried out.
- ✔ Basic stakeholder coordination approach developed.
- ✔ Political support established.
- ✔ Overall commitment to sustainability principles from key stakeholders achieved.

Depending on the field of action, different types of stakeholders should be involved in Sustainable Urban Mobility Planning. When it comes to urban logistics, a diverse set of stakeholders is affected. Therefore, the Topic Guide **Sustainable Urban Logistics Planning** recommends to set up a multi-stakeholder platform for urban logistics planning. Three main groups should be directly involved in the process through the platform:

- Supply Chain Stakeholders (e.g. Freight Forwarders, Transport Operators, Shippers, Major Retail Chains, Shop Owners)
- Public Authorities (e.g. local, regional or national government)
- Other Stakeholders (e.g. industry and commerce associations, consumer associations, research and academia)
- Experts

More information about the platform and how to integrate urban logistics into Sustainable Urban Mobility Planning can be found in the Topic Guide.

Identification of relevant stakeholders

The table below helps you to involve stakeholders that have all the necessary skills and knowledge for Sustainable Urban Mobility Planning. It allows you to check your ideas of whom to involve, and to identify (new) organisations or people that bring in missing skills or knowledge. The concept states that SUMPs are only successful in cases where the partners involved have four functional abilities:

1. Capacity to gain political support
2. Competence over transport networks and services
3. Technical excellence in SUMP development
4. Capacity to gain public support or to understand the urgencies and needs of the public

Figure 11: The Kingdon Model applied to SUMP: functionalities and corresponding relevance, stakeholders and assets (based on Cré, I., Mourey, T., Ryder, A., Heckley, S., Balant, M,, 2016. CH4LLENGE Institutional Cooperation Manual: Working jointly with institutional partners in the context of Sustainable Urban Mobility Plans, p. 24, *www.eltis.org/resources/tools/sump-institutional-cooperation-kit).*

Functionality	Relevance	Which stakeholders?	Key assets
Political support	Who can assure political support and resources, within the transport sector and beyond?	• Mayors of cities that are planning a SUMP and city councillors (both majority and opposition) • Mayors and representatives of neighbouring cities • Heads of metropolitan areas, provinces, counties, regions • Representatives of district town halls • Political parties • Politicians from different local authorities within the SUMP partnership	Vision, Leadership, Power, Resources
Transport network competence	Who manages the respective transport networks?	• Public transport companies (municipal buses, trams, and metros as well as regional buses and trains) • Owners of transport infrastructure (roads, parking, interchange stations, etc.) • National railway companies • Port authorities (when applicable) • Airport authorities (when applicable) • Providers of new mobility services (e.g. bike sharing, car sharing)	Technical feasibility
Technical expertise	Who has the data and relevant skills to deliver a technically sound plan?	Technical experts from different organisations: • City departments or public administration (transport and spatial planning, economic development, environment, health, tourism, etc.) • Universities and other research • Qualified companies • Specialised agencies • Qualified non-governmental organisations and associations	Technically sound planning
Public support	Who understands public and stakeholder opinions?	Government bodies providing access to citizens, other stakeholders and the media. Within city services this can be: • Communication department • Police force • Department for economic development, job coaches • City's ombudsman/mediator • Educational department • Moderators of advisory councils in different policy areas (transport and spatial planning, economic development, municipal youth council, etc.)	Values, Sense of urgency

Analysis of actor constellations

After stakeholders have been identified, the constellations between these actors should be analysed. This analysis should be based on a list of different criteria or attributes which are relevant for the respective case, e.g. interest, power, influence on each other, coalitions, etc. This way you can find out what the objectives of each stakeholder are, what their hidden agendas are and whether they regard themselves as 'winners' or 'losers' if a given project is implemented.

The objective of a systematic analysis of actor constellations is to get a clear picture of conflicts of interests or potential coalitions and to be able to better determine clusters of stakeholders who may exhibit different levels of interest, capacities and knowledge in the respective issue. This can, for example, be done by developing an 'Influence-Interest Matrix', which groups stakeholders by their level of influence/importance:

Figure 12: Influence-Interest Matrix (based on UN-Habitat, 2001. Tools to Support Urban Decision Making, Nairobi, p. 24)

	Low Influence	**High Influence**
Low Stake	least priority stakeholder group	useful for decision and opinion formulation, brokering
High Stake	important stakeholder group perhaps in needs of empowerment	most critical stakeholder group

During the stakeholder identification process, consider identifying the role of existing 'local champions'. These are key personalities in the local network that are well recognized because of their personal skills, contacts, and their significant role for mobilising resources, creating alliances etc. In the context of the SUMP, consider an early strategic assessment of their role - such persons can have an extraordinary influence on the process, and you might want them to stand by your side.

GOOD PRACTICE EXAMPLE

Budapest, Hungary: Regular roundtable meetings for decision makers

To support a new form of institutional decision-making for SUMP measure planning, BKK Centre for Budapest Transport established a 'SUMP Committee'. With regular roundtable meetings, it serves as a forum to speak about and coordinate measure and project plans. The committee can also make proposals to the city council about new SUMP measures. It has 21 members from the main stakeholder institutions such as the municipality, ministries and governmental institutions of transport planning, national railway company, regional council, main operators and experts from universities. Personal contacts and the professional organisation of the events is necessary for forming an effective committee.

Author: BKK Centre for Budapest Transport, collected by UBC
Image BKK Centre for Budapest Transport

GOOD PRACTICE EXAMPLE

London, Brussels, Dresden, Groningen, Ljubljana: Strong mayors for SUMP

In the recent past, several high-level politicians in European cities have offered strong support to sustainable mobility and to their local SUMP. The mayors often focus on a specific measure, objective or vision. London's (UK) Mayor Sadiq Kahn focused his strategy on accessibility and air quality. In the Brussels region (BE), former minister for mobility, Pascal Smet, supported the shift from a car-oriented city to a city made for people. In Dresden (DE), Councillor Raoul Schmidt-Lamontain proudly promotes the 'MOBI' branding, which applies to sustainable mobility modes and services. Groningen's (NL), Vice-Mayor for Mobility, Paul de Rook, pursues the long bicycle-friendly tradition of the city. Ljubljana's (SI) Vice-Mayor Dejan Crnek has a European promotional role as he chairs the CIVITAS Political Advisory Committee. He has strongly developed multimodality in his city.

collected by Polis
Image Polis

ACTIVITY 1.4: Plan stakeholder and citizen involvement

Rationale

A transition towards sustainable mobility requires active support from stakeholders and the wider public. Working with stakeholders is generally considered common practice – but often only certain groups actually have a say in planning. It is crucial to involve all relevant stakeholders throughout the planning process, addressing their specific requirements. This helps to legitimise the SUMP and enhance its quality. Only a Sustainable Urban Mobility Plan that was developed in cooperation with important stakeholders and the public will be accepted and effective in practical and financial terms. The involvement of citizens and stakeholders is therefore a fundamental element of a SUMP.

A dedicated strategy is needed for the involvement of stakeholders, drawing on different formats and techniques when dealing with authorities, private businesses, civil society organisations, or all of them together. Public involvement is fundamental to ensure the legitimacy and quality of decision making and is also required by EU and international conventions.

Aims

- Ensure a well-structured involvement of all relevant stakeholders throughout key stages of the planning process.
- Create a transparent dialogue-based planning culture that is based on regular communication and consultation.
- Encourage and enable citizens to get engaged and to join the debate, in particular in the early planning phases when processes are still open and flexible.
- Design sustainable and supported approaches for the involvement process that aim to improve the quality of life for residents, and create broad public ownership of the planning process.
- Strengthen the vitality of civil society and local political culture.
- Improve the overall quality, effectiveness, (cost) efficiency, transparency, acceptance and legitimacy of Sustainable Urban Mobility Planning.

What are 'Citizens' and 'Stakeholders'?

Citizens refers to all people living and/or working in the functional urban area for which your SUMP is being prepared. In this document, it is used largely interchangeably with the terms people, residents and the public.

Stakeholders are all individuals, groups or organisations affected by and/or being able to affect the SUMP. While citizens are a part of this, in this document the term stakeholders mainly refers to institutional stakeholders, such as public authorities, political parties, citizen and community groups, business organisations, transport operators and research institutions.

Key stakeholders are usually more closely involved in the SUMP process than the general public. Therefore it needs to be ensured that the interests of all affected parts of society, including typically underrepresented 'hard to reach' groups, are properly represented amongst the involved stakeholder groups.

Tasks

- Establish involvement activities as part of standard planning practices. Identify the planning steps in which stakeholders and citizens will be involved (see recommendations in Figure 13 about citizen involvement during the SUMP process), and the participation methods suitable to each of them (see Figure 14 on methods and tools for engagement). Review both in-person and online engagement tools and select the most useful ones.

- Set up a permanent 'steering group' consisting of important politicians and other key stakeholders. This group provides guidance and input on strategic decisions throughout the entire planning process. Use the stakeholder mapping conducted in Activity 1.3 to define which stakeholders to include. Regularly involve the 'steering group' in meetings or briefings and ask for feedback to set the framework for key decisions.

- Develop a communication and engagement strategy and timeline, including an overall strategy for PR activities (such as media involvement).

- Strive for as much interactive involvement as possible (see section below 'Activities beyond essential requirements') but include in your strategy at least proactive information to the public (i.e. you approaching the people and not the other way round).

- Make sure to engage all affected parts of society, which includes people with disabilities, young people and the elderly, ethnic minorities, less affluent people, single parents, and other typically underrepresented 'hard to reach' groups. Don't just regard them as beneficiaries but involve them in the planning process. Be careful of lobby groups that can block the process.

- Plan for news releases to communicate that a new SUMP will be developed and that all groups of citizens and stakeholders have the opportunity to get involved. Consider using a combination of tools, including conventional formats such as print advertising in newspapers, website announcements, newsletters, or household letters, but also newer formats such as social media, short videos, a drop-in centre or a dedicated website. See Figure 14 for more information.

Activities beyond essential requirements

- Plan to involve stakeholders and citizens more actively with a wider range of participation tools throughout the whole process (e.g. study tours, stakeholder events, an internet forum, citizen panels).

- Widen the scope of stakeholder involvement to more groups, including interest and lobby groups (but make sure that critical discussions are well moderated).

- Ensure maximum transparency and enable more democratic, participatory decision making throughout the planning process (Aarhus convention).

- For advanced cities: Involve stakeholders actively in decision making and managing SUMP development.

Details on the tasks

Questions to be addressed by an engagement strategy
There are four main questions about the process that need to be considered when preparing an engagement strategy.

- **Why?** Why is the engagement process being undertaken? How will it influence the strategy/scheme?
- **Who?** Who should be involved in the decision-making process? How can such people be identified?
- **How?** How will engagement be undertaken? What tools and techniques should be used?
- **When?** When should different activities take place? When is it not appropriate to engage?

Timing and coordination

- Finish planning the main involvement activities before initiating the planning process.
- Set up the 'steering group' of politicians and other key stakeholders together with the (newly established) core group (see Activity 1.2), taking into account the planning requirements and geographic scope of your SUMP (see Activity 2.1).
- Involve stakeholders throughout the entire planning process.
- Make sure to involve citizens in important decisions of selected steps. Citizen engagement might be more successful when done well in selected activities instead of trying to involve them in too many activities and thereby risking participation fatigue. The figure below recommends useful steps for citizen engagement.

Figure 13: Citizen involvement in the SUMP process

image © Orbon Alija on istock.com

Citizen involvement in the SUMP process - do it right!

Citizen involvement should take place throughout the SUMP cycle, but not in each of the 12 steps. Figure 13 recommends where to put the emphasis. It suggests steps and activities during which important decisions need to be taken and the planning process would benefit from the ideas, visions and commitment of local residents.

It pays off to involve citizens from the start. Already when the decision to prepare a SUMP is taken, they can be informed and a group of interested citizens mobilised. But the four most important planning steps for citizen involvement are the discussion of scenarios (Activity 4.2), development of visions (Activity 5.1), selection and validation of measure packages (Activity 7.2) and implementation (Activity 11.2). In addition, your SUMP benefits from involving citizens when carrying out the problem analysis of the mobility situation (Activity 3.2), ensuring wide public support for the planned actions (Activity 8.4), and when evaluating successes and failures (see Activity 12.1).

Next to these activities, the milestones are a good point of time to communicate the results of the completed phase to the public. Especially the third milestone offers an opportunity to validate the strategic direction with citizens, and the fourth milestone benefits from celebrating the adoption of the SUMP with citizens. Whenever you plan events or other methods for citizen engagement, be aware of these few rules:

- Be creative but also self-critical about suggested tools and formats of engagement. For example, apps and online surveys might not reach all target groups (e.g. elderly people, people without access to a computer). Therefore always provide an offline format in addition to an online one.
- It is crucial to communicate how the results of citizen engagement are used for the process, emphasising that they will not just disappear in a drawer. Promise the participants that every contribution will be considered and give feedback if something is taken into account for the SUMP.
- Think about the language. You might exclude people from a migrant background if you only use the local language. Also be careful not to use technical jargon.
- For any public meeting chose the location carefully and make sure it is easily accessible, barrier-free, reachable by public transport and it provides appropriate equipment as well as a well-lit room with good acoustics. Plan the seating arrangements and be aware of different concepts of seating that do not imply power hierarchies.
- Be considerate of people's different time schedules and set up your event preferably for the evening. An afternoon event could exclude employees, while evening events can be difficult for parents.
- Ensure a professional and respectful moderation.

Checklist

✔ Timing, methods and involved citizen groups identified and decided.

✔ Involvement and communication approach finalised.

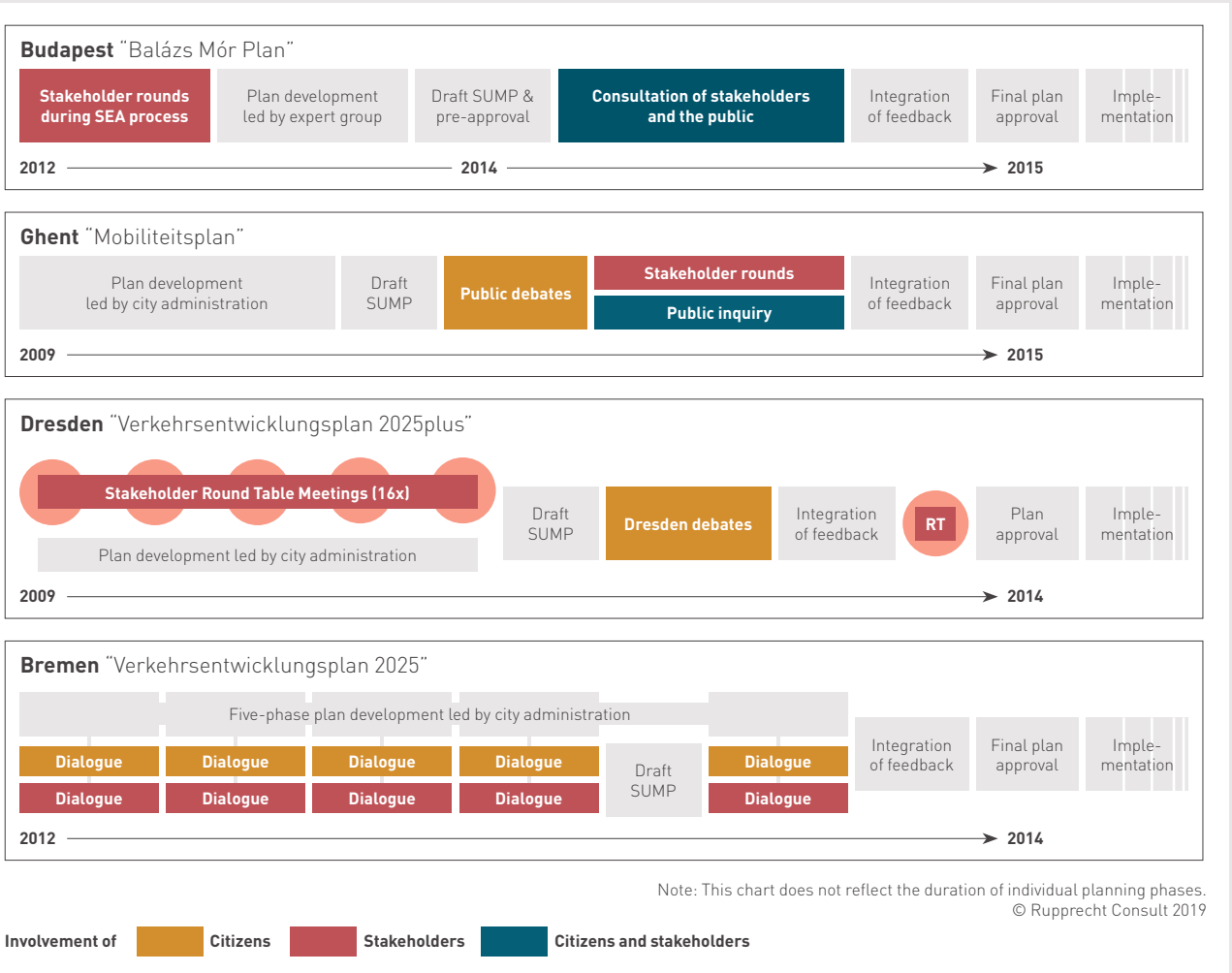
✔ Steering group with key stakeholders set up.

Figure 14: Recommended involvement tools and methods for SUMP development (important ones marked in bold), based on the four SUMP phases and classified after the level of engagement (from the lowest level of engagement "Inform", to "Consult", "Collaborate" and the highest level "Empower")

Practice examples of citizen and stakeholder involvement in the SUMP process

The cities of Budapest, Ghent, Dresden and Bremen have developed individual approaches to integrate citizen involvement into the SUMP process - depending on their local context, planning expertise, resources and capacities. Blended formats were applied (e.g. Budapest, Ghent) as well as separate but concurrent engagement of stakeholders and citizens (e.g. Bremen, Ghent) and phased engagement (Dresden). Please note that this figure presents selected case examples to show the wide variety of possible approaches. There are, of course, various other ways to involve stakeholders and citizens, depending on the individual planning context of the city.

Figure 15: Practice examples of involving citizens and stakeholders into the SUMP process, Rupprecht Consult, 2016 (based on Lindenau, M., Böhler-Baedeker, S., 2016. CH4LLENGE Participation Manual: Actively engaging citizens and stakeholders in the development of Sustainable Urban Mobility Plans, p. 17, *www.eltis.org/resources/tools/sump-participation-kit*).



GOOD PRACTICE EXAMPLE

Brno, Czech Republic: Citizen engagement strategy combining traditional and online formats

The City of Brno developed a SUMP engagement strategy in cooperation with a consultancy specialised in communication and participation that helped the city to conduct a professional and meaningful participation process. The strategy included traditional methods, such as public discussions, round tables, and communication through a dedicated website, but also new approaches such as the 'Brno Mobility – 2050 Vision – Experts Workshop'. In the engagement process from 2015 to 2018, more than 2500 comments from citizens were analysed, more than 500 people were involved in about 30 events, and several workshops with citizens, experts, city districts and municipalities, as well as politicians were organised.

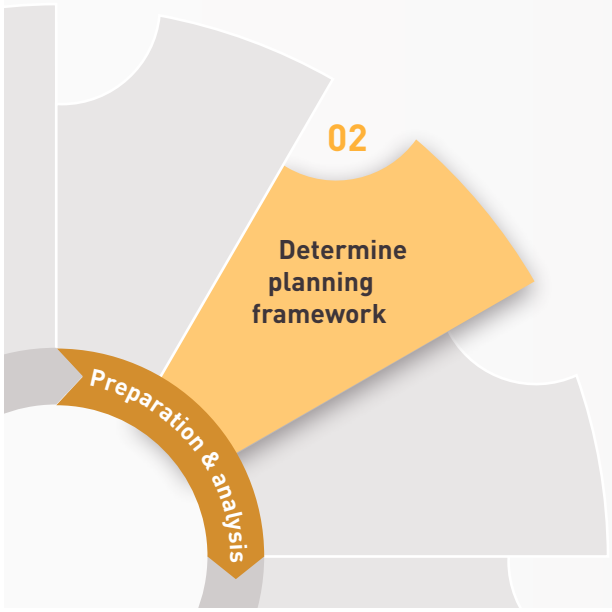
Author: Iva Rorečková (Machalová) and Lukáš Bača, City of Brno, collected by EUROCITIES | **Image** Marie Schmerková (Brno City Municipality)

GOOD PRACTICE EXAMPLE

Vilnius, Lithuania: Comprehensive engagement achieving broad ownership of the SUMP

The first step of Vilnius' SUMP process was to prepare a roadmap for project management that identified strategies on how to work with relevant stakeholders and citizens. Four clear aims were defined: clarify expectations; inform about the process constantly; reach specific target groups, and organize awareness raising events. Vilnius collaborated with behavioural scientists and sociologists to identify the most effective ways of communicating with different target groups (politicians, stakeholders, citizens). A dedicated person coordinating the activities, sufficient budget, clear objectives and KPIs helped to run a successful campaign and raise discussion on the SUMP among local community, media and politicians.

Author: Kristina Gauče, collected by UBC
Image Saulius Žiūra



STEP 2: Determine planning framework

2.1 Assess planning requirements and define geographic scope ('functional urban area')
2.2 Link with other planning processes
2.3 Agree timeline and work plan
2.4 Consider getting external support

Hand in hand with the setup of working structures, the planning framework needs to be determined to tailor Sustainable Urban Mobility Plan development to the local situation. This includes the definition of the geographic scope, which ideally should address the 'functional urban area'. Other important aspects are to follow legal planning requirements and to link with planning processes of related fields. The results of all previous activities are then summarised into an agreed timeline and work plan, which should be politically approved to create reliability for involved actors. If lack of capacities has been identified before, suitable arrangements need to be made to get external support for SUMP development.

ACTIVITY 2.1: Assess planning requirements and define geographic scope (based on 'functional urban area')

Rationale

A Sustainable Urban Mobility Plan is embedded in a wider regional and national planning framework. This includes for example regulations, funding streams or higher level strategies for spatial and transport development (e.g. a national transport plan, where one exists). It is crucial to assess the impact of the regional and national planning framework to exploit opportunities and avoid conflicts with higher level authorities at a later point.

A SUMP should cover the functional urban area (i.e. travel-to-work area), which in most cases goes beyond the administrative boundaries of a municipality. If no regional or national regulations for the geographic scope of a SUMP exist, the most suitable spatial coverage needs to be agreed by the stakeholders concerned and approved by the political body. On the one hand, this depends on the area for which the respective local or regional authorities are responsible. But on the other hand, it must follow the actual mobility patterns as much as possible. A plan that covers the entire urban agglomeration will be much more effective than one that only covers parts of it.

Tasks

- Ensure that relevant regional, national and European legal requirements for the SUMP are identified.
- Gain a clear perspective on how the regional, national and European framework will influence the planning process.
- Define the geographic scope of your plan, usually covering the functional urban area of actual mobility patterns (e.g. travel-to-work area).
- Identify the appropriate body/bodies to take leadership in the planning process.
- Obtain a political decision to approve the geographic scope and the lead organisation.
- Ensure that the connection to long-distance transport corridors is considered.

Aims

Planning requirements

- Identify, document and assess:
  - Legal regulations and guidance on how to develop a SUMP, including potential requirements for the geographic scope or the responsibilities of different types of planning authorities (if any).
  - Relevant regional and national funding criteria.
  - Higher level plans, strategies and objectives that might influence your SUMP. For example, the plans of a National Road Authority for new or enlarged roads could work against the objectives of a SUMP by encouraging more car driving into the city.
- Create a summary of the regional and national framework with suggestions of how to address it in your SUMP.

Geographic scope

- Analyse transport patterns and administrative boundaries. Define your functional urban area (see tool section below for more guidance). Include also links to long-distance transport corridors (such as the Trans-European Transport Network, TEN-T, national railway network).
- Involve key stakeholders and authorities within the envisaged planning area and strive for formal agreements on the geographic scope of planning activities.
- Take an open and transparent approach, securing the involvement of the authorities concerned. Ensure regular communication and exchange between relevant authorities.
- Negotiate overall responsibility for the plan.
- If it is not possible to define a planning area that is fully consistent with the functional urban mobility area, at least strive for good cooperation with actors on challenges that can only be dealt with at the agglomeration level. This can build on existing cooperation or involve new practices (e.g. formal procedures, such as joint land-use plans, or informal procedures, such as working groups).
- Ensure representation of stakeholders from the entire planning area in the steering group.
- Ensure involvement of citizens from the entire planning area in participation activities.

Activities beyond essential requirements

- Ensure coverage of areas linked to major socio-economic and environmental transport impacts.

Timing and coordination

- Identify regulations and relevant planning requirements at the very beginning and consider these throughout the whole process.
- Take these particularly into account when defining stakeholder and citizen involvement (see Activity 1.4), the geographic scope (this activity), links with other planning processes (see Activity 2.2) and the timing and work plan (see Activity 2.3).
- Define geographic scope early so that it is taken into account when setting up the working and participation structures (see Step 1) – a clear agreement is required before initiating the official Sustainable Urban Mobility Planning Process (see Activity 2.3).

Checklist

- ✔ Relevant national and regional documents reviewed and results summarised.
- ✔ Opportunities and impacts identified that might result from the regional and national framework.
- ✔ Geographic scopes defined (if possible, the functional urban area).
- ✔ Political agreement achieved on geographic scope, basic roles and responsibilities of authorities and politicians.
- ✔ Key authorities from the planning area included in the core team and/or steering group.
- ✔ Political agreement signed and adopted by municipal councils.

Functional urban areas in EU Member States

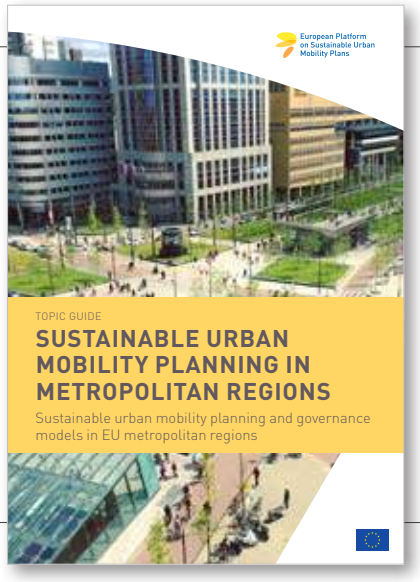
The OECD and the European Commission have jointly developed a methodology to define functional urban areas (FUAs) in a consistent way across countries. Using population density and travel-to-work flows as key information, a FUA consists of a densely inhabited city and of a surrounding area (commuting zone) whose labour market is highly integrated with the city.

- The urban core consists of a population cluster with a density of at least 1,500 inhabitants per km².
- A municipality is part of the urban core if at least 50% of its population lives in the cluster.
- The 'hinterland' is identified as the 'worker catchment area' of the urban labour market, outside the densely inhabited core. All municipalities having at least 15% of their employed residents working in a certain urban core are defined to be part of the urban hinterland.

The ultimate aim of the OECD-EU approach to functional urban areas is to create a harmonised definition of cities and their areas of influence for international comparisons as well as for policy analysis on topics related to urban development.

The OECD offers profiles of the functional urban areas of each EU country. They include a map of the country with all functional urban areas (also available as a free shapefile), a list of the functional urban areas by population size and the population living in those functional urban areas. To access the profiles, please go to *www.oecd.org* and search for 'functional urban area'.

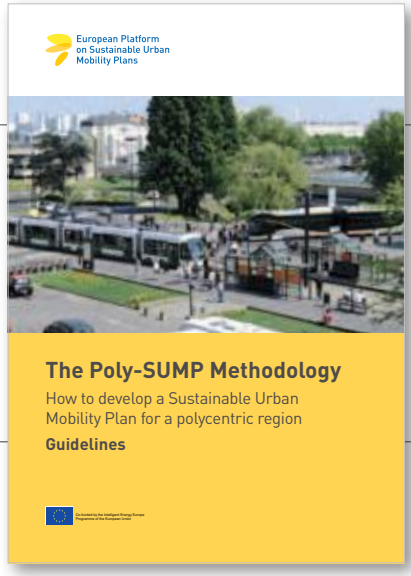
Source: OECD 2019

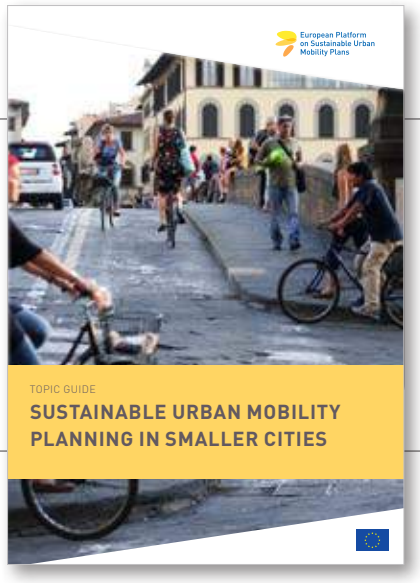


Based on the common OECD-EU methodology, metropolitan regions are defined as contiguous, dense and built-up functional urban areas with at least 250,000 inhabitants. They tend to have a high economic attractiveness, large commuter flows and complex multi-modal transport systems, while typically also being transport nodes of national and European importance. Metropolitan regions can be particularly challenging for Sustainable Urban Mobility Planning due to the many affected municipalities and other institutions.

The Topic Guide **Sustainable Urban Mobility Planning in metropolitan regions** provides guidance for SUMPs at the metropolitan scale. It identifies four types of metropolitan governance (informal/soft coordination; inter-municipal authorities; supra-municipal authorities; special status metropolitan cities) and recommends examples and planning principles for the different institutional set-ups.

There are various types of functional urban areas with different needs for SUMP development. The Poly-SUMP Methodology offers guidance for polycentric regions with several municipalities or cities that are closely dependent on each other. It gives recommendations on how to initiate or develop regional transport cooperation in such complex areas. Based on the terminology of the **Poly-SUMP guide**, polycentric regions feature a capital city with a relatively low population (fewer than 200,000 in a larger region or fewer than 100,000 inhabitants in a smaller region) and a number of intermediate poles, smaller than the capital city, but greater than 5,000 inhabitants.





Sustainable Urban Mobility Planning can be as effective for small cities as for metropolitan regions, but small cities show different needs than larger ones and usually have very limited capacities for strategic planning. The Topic Guide on **Sustainable Urban Mobility Planning in smaller cities** adapts the SUMP process to the planning realities of smaller cities. It offers guidance both for cities who want to develop their own SUMP and for those who want to be part of a regional SUMP that was initiated by a nearby bigger city. In addition to planning tools and participation methods that have proven to work well in their context, the guide particularly focuses on measures that fit smaller cities with strong car-dependency and weak public transport.

The status of SUMP regulations in EU Member States

For more information on regional and national regulations on how to develop a Sustainable Urban Mobility Plan in the EU Member States: CIVITAS SUMPs-Up & Prosperity: THE STATUS OF SUMPS IN EU MEMBER STATES

http://sumps-up.eu/fileadmin/user_upload/Tools_and_Resources/Reports/SUMPs-Up___PROSPERITY-SUMP-Status-in-EU-Report.pdf

GOOD PRACTICE EXAMPLE

Basel, Switzerland: Cross-border planning cooperation for a trinational agglomeration

The SUMP of the Canton of Basel-Stadt contains various cross-border measures (across Switzerland, France and Germany) to reduce car commuter traffic and limit congestion during peak hours. For example, the 'Pendlerfonds' is a fund that collects the revenue from parking management within the Canton. This fund is used to finance projects that have a proven positive effect on commuter traffic to and from Basel. Most of the financed projects are Bike&Ride and Park&Ride facilities at key stations of the regional railway network. Since the establishment of the fund in 2012, a total of 394 bicycle and 966 car parking spaces have been co-funded at various railway stations.

Author: Martin Dollesche, Canton of Basel-Stadt, collected by EUROCITIES | **Image:** EUROCITIES

GOOD PRACTICE EXAMPLE

Kassel, Germany: Synchronised development of municipal and regional SUMP

Due to the dense interweaving of the regional transport network of Kassel and the surrounding area, the "SUMP Kassel 2030" was complemented with a regional mobility development plan. While the SUMP places emphasis on inner-city transport and traffic flows, the regional mobility development plan focuses on regional transport and accessibility. Both plans were synchronised in terms of content and spatial dimensions and a regional traffic model has been established as the basis for both plans. The common target set guides the development of measures and actions in both plans and sets the standards for subsequent evaluation. Both integrated action concepts contain a coordinated programme of measures for implementation.

Author: Simone Fedderke, Centre of Competence for Sustainable Urban Mobility – State of Hessen and City of Kassel, collected by Rupprecht Consult
Image: City of Kassel

GOOD PRACTICE EXAMPLE

Grand Nancy, France: Metropolitan inter-municipal urban plan for housing and development

Grand Nancy is elaborating a metropolitan SUMP, which will integrate several sectoral plans into a single one. By pooling resources and skills at the agglomeration level, this unique document aims at harmonizing public policies on urban planning, housing, mobility, economic and commercial development, and the environment to achieve a shared, coherent and united territorial project. The elaboration of the plan is carried out by a transdisciplinary technical team, which gathers staff from the urban planning, housing, economic development, sustainable development and mobility departments of the Grand Nancy metropolitan authority, and supported by the regional agency for development and urban planning.

Author: Aurélie Dore-Speisser, Grand Nancy Metropole, collected by EUROCITIES
Image: Métropole du Grand Nancy

ACTIVITY 2.2: Link with other planning processes

Rationale

A principal shortcoming of urban transport planning today is the lack of coordination between other policies and organisations, aside from the integration of transport modes. Addressing this deficit represents a major challenge (e.g. coordination with land-use planning, environmental protection, social inclusion, gender equity, economic development, safety, health, education, information technologies, energy, housing) for Sustainable Urban Mobility Planning, but is also a main source for innovation and improvement.

Linking up with other planning processes and coordinating goals and objectives strengthens your Sustainable Urban Mobility Plan - as well as the plans you link up with.

Aims

- Mainstream awareness of the interactions between changes in urban structures (density, functions, socio-economic patterns, ecosystems) and mobility in relevant municipal departments and authorities.
- Define how Sustainable Urban Mobility Planning and other policies at the local and regional level can be integrated.
- Strive for harmonisation of the timing of the SUMP with different technical and political decision making processes (e.g. overall strategies, sectoral plans, elections).
- Establish planning of mobility and transport as a shared policy domain.

Tasks

- Identify local sectoral strategies for transport and mobility (e.g. strategies for different transport modes), as well as local plans from other policy domains that may have an impact on urban mobility (e.g. land use, energy, environment, economic development, social inclusion, health and safety). Also identify relevant plans of local transport operators, service providers and other municipalities in the planning area.

- Review whether the goals of the plans support or conflict with sustainable urban mobility objectives. For example, a land-use policy that makes use of brownfield land is supportive, while one that promotes urban sprawl is in conflict with the principles. Another conflict could be, for example, if a health improvement plan emphasises physical activity only through organised sport, as opposed to increased walking and cycling for everyday trips, or if an education policy encourages longer journeys to school.

- Identify coordination requirements across relevant policy domains. An example is the relation between land-use planning and transport. Transport impacts need to be considered in the land-use planning process to maximise the use of sustainable travel to new developments.

- Link to established regional corporations (e.g. a metropolitan organisation). This also includes long-distance transport corridors, such as the Trans-European Transport Networks – TEN-T.

- Consider specific requirements of strategic environmental impact assessment, SEA.

- Develop common actions in cooperation with actors from relevant policy fields. Strive for a modification of sectoral policies and practices and/or create new inter-departmental fields of activity.

- Ensure regular communication and exchange between relevant authorities (and within authorities, e.g. through regular meetings between transport and land-use planners). Consider including a land-use planner in your core team or steering group and give them a clear role in the planning process to create ownership.

- Strive to fully embed Sustainable Urban Mobility Planning into the development and implementation schedule of other existing policies and strategies

Activities beyond essential requirements

- Strive for integration with broader long-term strategies. Some cities and regions have a long-term local development strategy or vision with a perspective of 20-30 years. If such a strategy is available it can provide orientation for the SUMP for defining overarching aims.

Timing and coordination

- Start from the outset as a continuous activity. Initial review of coordination requirements and potential to be completed before defining the timeline (see Activity 2.3).

Checklist

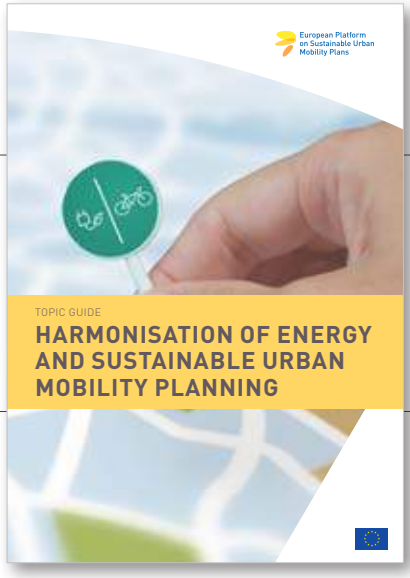
✔ Relevant policy linkages identified (synergies and conflicts).

✔ Initial options for policy integration assessed.

✔ Dialogue established with concerned actors about integration possibilities.

✔ Initial prioritisation of integration options decided.

One example of linking different planning processes is the harmonisation of Sustainable Urban Mobility Planning with Sustainable Energy and Climate Action Plans (SECAP). This addresses the need for bringing together strategic planning of sustainable mobility, climate adaptation and energy, and results in two harmonized plans with well-adapted implementation and monitoring phases. Detailed guidance can be found in the Guidelines for **Harmonization of energy and Sustainable Urban Mobility Planning**.



Strategic Environmental Assessment (SEA) and Sustainable Urban Mobility Planning

For some measures it is obligatory to conduct a Strategic Environmental Assessment (SEA). As SEA and SUMP share common elements, it is recommended to link the two processes. Undertaking a SEA at the SUMP level provides a consistent and holistic framework for decision making. The inclusion of the relevant environmental information and considerations at the planning stage contribute to more sustainable and effective solutions.The SEA should not be approached as a separate exercise but as an integral part of the development of the SUMP, performed in distinct steps that feed to and from the plan:

- Collection of baseline environmental information;
- Scoping and SEA objectives;
- Assessment of measures;
- Prediction and evaluation of effects and impacts;
- Proposal of mitigation measures and monitoring.

All of the above need to be closely linked to the different steps of the SUMP. Basic pillars for effective decision making within the context of SEA for SUMPS are clarity of responsibilities between authorities, effective public information and consultation and consideration of expressed opinions before the adoption of the plan.

Author: EIB/JASPERS

Figure 16: Corresponding activities in SUMP and SEA (EIB/JASPERS)

SUMP		Strategic Environmental Assessment
Activity 3.1: Identify information sources and cooperate with data owners Activity 3.2: Analyse problems and opportunities (all modes)		Methodology Identification of other relevant plans, programs, environmental protection objectives Data collection Analysis / Identification of environmental problems
Activity 5.2: Agree objectives addressing key problems and all modes	Cross reference / harmonize	SEA objectives
Step 7: Select measure packages with stakeholders (including measure assessment, measure selection, measure packaging)	coordinate	Assessment of measures/groups of measures (alternatives) vs SEA objectives Public consultation (highly recommended)
Activity 9.2: Finalise and assure quality of 'Sustainable Urban Mobility Plan' document		Prediction and evaluation of Plan effects / impacts Mitigation measures Monitoring measures
Involvement of the public (e.g. Activity 4.2, 5.1, 8.4, 11.2)	Develop possibly together	Environmental (SEA) Report Public consultation on SEA

Linking SUMP with social inclusion policies

In several Belgian cities the development of a SUMP is complemented with policies that increase social inclusion in the domain of mobility. With regard to access to public transport, more than 140 Flemish municipalities and cities have a third-party payment agreement with the public transport provider for bus travels. This means their citizens can benefit from public transport at a reduced fee, often with additional discounts for children, students, and/or the elderly. Moreover, for people who are unable to drive a car and have a low income, sixteen municipalities and cities have a social fee for taxi rides and many more municipalities have a transport-on-demand system with volunteers. In addition, cities and municipalities are increasingly providing trainings to vulnerable groups: The city of Antwerp and Leuven have their own cycling school for adults and the city of Oostende helps newcomers with obtaining their driving licence.

Author: Els Vandenbroeck and Evelien Bossuyt, Mobiel 21

image © RomanBabakin on istock.com

GOOD PRACTICE EXAMPLE

Bologna, Italy: Metropolitan SUMP linking territorial, mobility and logistics planning

Bologna took an innovative approach by developing a mobility plan that is integrated on both territorial and thematic levels: its SUMP has been developed for the entire metropolitan area and closely coordinated with sectoral plans for urban logistics and biking. To achieve a common planning process, the team of the Mobility Planning Office planned from the start to bring them together. The key output of Bologna's case is that stakeholder engagement is a crucial aspect of any decision-making process in a metropolitan area. The main challenge was to find feasible and effective ways for policy makers to steer urban logistics, which is a market dominated by private businesses with often little municipal planning experience.

Author: Catia Chiusaroli, Metropolitan City of Bologna, collected by Polis
Image: Metropolitan City of Bologna

GOOD PRACTICE EXAMPLE

Monzón, Spain: Harmonized development of SUMP and SECAP

Based on the SUMP-SECAP harmonisation guide, Monzón developed its SUMP and Sustainable Energy and Climate Action Plan (SECAP) in an integrated way. The main activities included (1) setting up a harmonization team in charge of developing both plans and of exploiting synergies; (2) sharing the transport emissions inventory between both plans; (3) using the same reference year for the inventory of emissions; (4) carrying out a study to identify which measures can be included in both plans; (5) prioritizing SUMP measures according to their 'impact on SECAP' criteria; and (6) involving all municipal departments that could be affected by SUMP and SECAP implementation in joint meetings.

Author: Andrea Conserva, Circe Foundation, collected by EUROCITIES
Image: Guidelines for the harmonization of energy and Sustainable Urban Mobility Planning, 2018

GOOD PRACTICE EXAMPLE

Lahti, Finland: Integration of land-use and mobility planning

Lahti has developed an integrated strategic process, 'Lahti direction', for the combined planning of land use and mobility. The aim of the new approach, which was first implemented in 2019, is to build a sustainable city together with citizens, stakeholders and decision makers. The process is ongoing and cyclical, the strategy will be updated every four years, or each council term. It includes the city plan, the SUMP, the environmental programme and the service network programme. The integrated approach has proven to work well so far. It enhances the cooperation between the land use and mobility planners and improves the engagement of citizens in the mobility planning process.

Author: Anna Huttunen, City of Lahti, collected by UBC
Image: Lassi Häkkinen, City of Lahti

ACTIVITY 2.3: Agree timeline and work plan

Rationale

Ensuring the right timing and a clear work plan are key to success. The activities to develop a Sustainable Urban Mobility Plan partly depend on each other – interdependencies need to be carefully translated into a logical sequence that is harmonised with local conditions. When determining the timing, it is crucial to consider ongoing planning and policy-making activities that can affect the process, such as elections, legislation processes and other planning activities.

Developing and implementing a SUMP is also a complex process institutionally. It usually requires revision of planning practices and working across boundaries. These management arrangements need a political mandate to make them widely accepted. A work plan that indicates all milestones and clearly defines which involved actors do what and when should be approved.

Aims

- Develop a tailored planning process that fits the local context and coordinates activities well.
- Strive for harmonisation of the timing with different technical and political decision making processes (e.g. overall strategies, sectoral plans, elections). Identify time windows for coordination.
- Clarify and formalise the roles of all actors and their resource contributions.
- Create reliability and transparency of the planning process.
- Facilitate an efficient planning process that considers temporal interdependencies among activities, minimizes risks related to timing and makes optimum use of resources.

Tasks

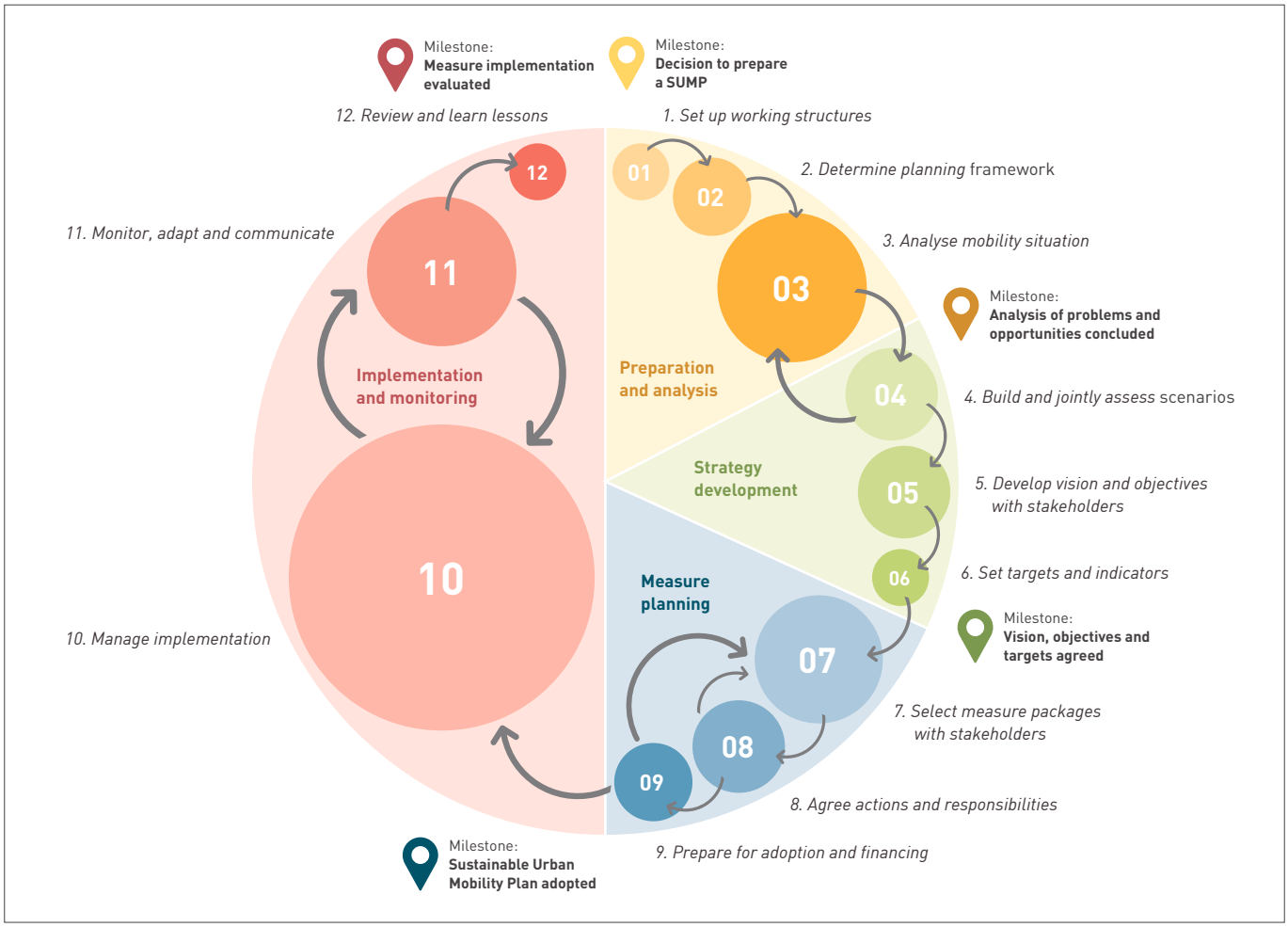
Timeline:

- Take sufficient time to prepare the planning process well. The time needed to achieve a decision to develop a SUMP, set up working structures and define the planning framework varies a lot between cities. It will to a large extent depend on a city's experience with strategic planning processes, institutional structures, the political context and the local 'planning culture'.
- Define a timeframe for SUMP development, including the phases of analysis, strategy development and measure planning. In total, cities tend to require at least one year from the official start of the planning process until adoption, usually more.
    - The analysis usually takes around two to six months, but can also be longer if a lot of additional data has to be collected;
    - Strategy development (including vision, objectives and targets) usually takes around two to five months;
    - Measure planning (from the initial identification of potential measures until the agreed-upon set of measure packages, with defined financing and responsibilities, that are included in a finalised SUMP document) usually takes around three to eight months. But this depends strongly on the level of detail at which measures are prepared in the SUMP process.
    - Usually, some extra time is needed for the SUMP to be adopted once it is ready. This varies a lot depending on the political circumstances, ranging from just a few weeks to half a year or more. Good integration of decision makers into the planning process helps to lower the risk of delays for adoption.
- Take into consideration potentially challenging periods (e.g. elections or budget planning periods). In the months before an election, it may be difficult to move ahead quickly. This may influence the timing of the planning process.

- Calculate some 'quiet' working periods in order to make the general planning more flexible and to avoid severe delays. In addition, remember to include the time needed for communication as well as stakeholder and citizen involvement.
- Communicate a provisional timeline so that involved actors can schedule in time for their contributions.
- Continue to implement measures with high visibility during plan preparation and SUMP development. This helps to avoid the impression of inactivity, which is particularly important for decision makers.
- Choose a preliminary timeframe for measure implementation, which will be defined in more detail in the measure planning phase
- Focus on the next two-three years in your detailed planning, but also do a rough planning for the next 10 years and be aware of long-term measures that will start during the 10-year period and continue after (e.g. major projects, such as the construction of a tram line).
- Some cities prefer to define their timeframe through important milestones, and do not use exact time frames. An example would be the opening of a new bus rapid transit line, and measures that will be implemented before and after the opening. This can help to stay realistic about the temporal framework and makes it easier to follow for the city and the public.

Figure 17: Relative time requirements of the SUMP Steps.

The visualisation of the 12 Steps presents the relative amount of time needed to complete a respective step in relation to all other steps in a typical SUMP process. For example, the management of the implementation process usually requires most of the time in the implementation and monitoring phase, and is linked to the monitoring step. The arrows present typical feedback loops, e.g. if in Step 8 it becomes obvious that certain measures require too much capacity, the selected measure packages might need to be readjusted in Step 7. (This Figure is not based on exact measurements and only aims to be an orientation for planners.)



  - Build in time for monitoring and updating measures after SUMP adoption (see also Activity 11.1). The frequency for reviewing and updating depends on your individual situation, also taking into account legal requirements and election cycles, but should be done at least every second year.

- Consider reviewing and updating the full SUMP every five to 10 years. After 10 years the document is usually outdated, while the measures should be updated much more frequently.

Work Plan

- Reinforce the political mandate for the development of a SUMP. Ensure that decision makers broadly agree that sustainability principles should be core to the SUMP when they take the formal decision to proceed with the planning process. This means a focus on the environmental and social benefits of mobility, not merely on better traffic flow.

- Draft an overall work plan for the SUMP process that indicates all necessary milestones. Maintain a certain flexibility to amend the work plan as the work progresses.

- Develop approaches to overcome barriers and fully exploit the drivers for Sustainable Urban Mobility Planning (informed by the results of self-assessment from Activity 1.1).

- Agree on management procedures and tasks with stakeholders responsible for planning tasks (also within your own organisation).

- Assess risks and plan for relevant contingencies.

- Monitor progress, enforce work plan implementation and adapt to changes.

Activities beyond essential requirements

- Consider branding (e.g. name, logo) your planning process to achieve professional and recognisable visibility in all public communication and events throughout the process.

Details on the tasks

The development process of a Sustainable Urban Mobility Plan is usually set up as a local project, which is also given a specific title. It is reasonable to use the English terminology. However, this can generate resistance among stakeholders and the public in non-English-speaking countries. To avoid this, it is advisable to select a (local) specific term, which is confirmed by stakeholders or defined together. Using an appropriate term is also important to create acceptance for participation and the process. It is also possible to name the process directly as the final product if a specific title has already been chosen (see Activity 9.1 "Brand your Plan").

Timing and coordination

- Timeline defined after working structures are set up and planning requirements analysed, but before starting the mobility analysis.

- Continuous fine-tuning of timing for specific activities (e.g. press releases, meeting calendar).

- Adoption of work plan as a milestone before starting the official SUMP development.

Checklist

- ✔ Realistic basic timeline for Sustainable Urban Mobility Planning process prepared.

- ✔ Political mandate for developing your SUMP confirmed.

- ✔ Strategy for risk management and quality management devised.

- ✔ Timeline and work plan developed and politically approved.

ACTIVITY 2.4: Consider getting external support

Rationale

For most public authorities, the specific skills required for running the Sustainable Urban Mobility Plan process will exceed the capacities of their staff. The aim is to cover immediate skill requirements by contracting external experts, if needed, but also to develop and maintain expertise of Sustainable Urban Mobility Planning within your own organisation.

Aims

- Balance short-term skill requirements and build capacity within your own organisation and in the wider professional community.
- Facilitate an efficient planning process that makes best use of resources.
- Add value to the SUMP by cooperating with experts that contribute new approaches or fresh perspectives on key issues.

Tasks

- Based on your strategy to cover skill gaps (see Activity 1.1), decide for which tasks external support is needed, if they cannot be efficiently covered through internal capacity building (or the recruitment of new staff).
- Consider getting external support for tasks for which a lack of skills in your organisation would reduce quality or prolong the process considerably if attempted internally.
- Decide if tasks could be tendered as a bundle (normally tasks that are closely related to each other, e.g. citizen engagement and communication) or require very specific skills and need to be tendered separately (e.g. data collection, or, even more specifically, a household survey or an analysis of cycling infrastructure quality).
- Tender and contract external services for the selected tasks. Use clear terms of reference that describe the tasks as precisely as possible, including a timeline and concrete outputs for each task. Use suitable criteria for the selection of offers, which need to be specified in the terms of reference. In addition to the price, you should give proper weight to content criteria (e.g. quality of the described concept and methods, and the expertise of offered personnel). Experience has shown that quality pays off, and unrealistically low offers often lead to low quality results or follow-up costs for cities.
- When delegating project management activities to a consultant, keep the overall coordination within your planning authority. For all delegated tasks, always foresee sufficient time and resources for quality management by your organisation. Integrate capacity building activities in the terms of reference whenever possible so that your internal staff can gain the respective competencies for the next planning process

Timing and coordination

- Take into account the timing of planned tenders when developing the timeline and work plan.
- Conduct tendering and contracting only after receiving political mandate and approval of the work plan.

Checklist

✔ Decision taken on which tasks to get external support for, if any.

✔ Services tendered and suitable contractor chosen who understands the SUMP approach.

Examples of tasks to get external support on

Tasks	Details
Preparation, organisation and facilitation of events as well as documentation and analysis of discussion results related to the engagement of stakeholders and citizens	The administrative efforts required to carry out good participation processes should not be underestimated. The review of comments is usually done manually, which requires considerable time. Especially online engagement requires planning authorities to manage a high volume of responses (more than 1000 comments is not an unusual number). Engaging a neutral facilitator can also help to avoid (old) conflicts and help a group to collaborate in a constructive atmosphere.
Communication with the public	Communication activities, such as writing attractive news items for print and online, designing public reports (e.g. the mobility strategy and the SUMP), facilitating social media channels (which can receive high volumes of comments) and taking professional photos during events.
Analysis of the mobility situation, including data collection.	This could be either the entire analysis or specific technical subtasks or areas, which are usually easy to separate (e.g. analysis of cycling infrastructure quality, collection of traffic count data, walkability analysis, execution of a household survey, setup of a transport model).
Training on specific activities	Training could help local authorities carry out larger parts of the SUMP process in-house. This could be the case, e.g. for modelling. If a transport model is applied, it would also be important for the city to have the expertise on how to use the model even if a consultant is running the model.
Legal advice	In countries where a binding legal framework exists to mitigate the risk of having a SUMP challenged in court.

image © BKK Centre for Budapest Transport

GOOD PRACTICE EXAMPLE

Cluj-Napoca, Romania: SUMP development driven by external consultants

Cluj-Napoca's Urban Mobility Plan was developed by an external consultancy under the coordination and guidance of Jaspers and EBRD. Consultants lead the organisation and implementation of the entire process, including data collection, analysis of the existing situation, and the development of the SUMP Action Plan. Internal staff was also closely involved in all steps, providing valuable knowledge about the local context, and thereby supported the consultants in developing tailor-made solutions and a robust SUMP. Overall, hiring external consultants brought technical expertise and fresh thinking, and helped to improve the efficiency of the planning process.

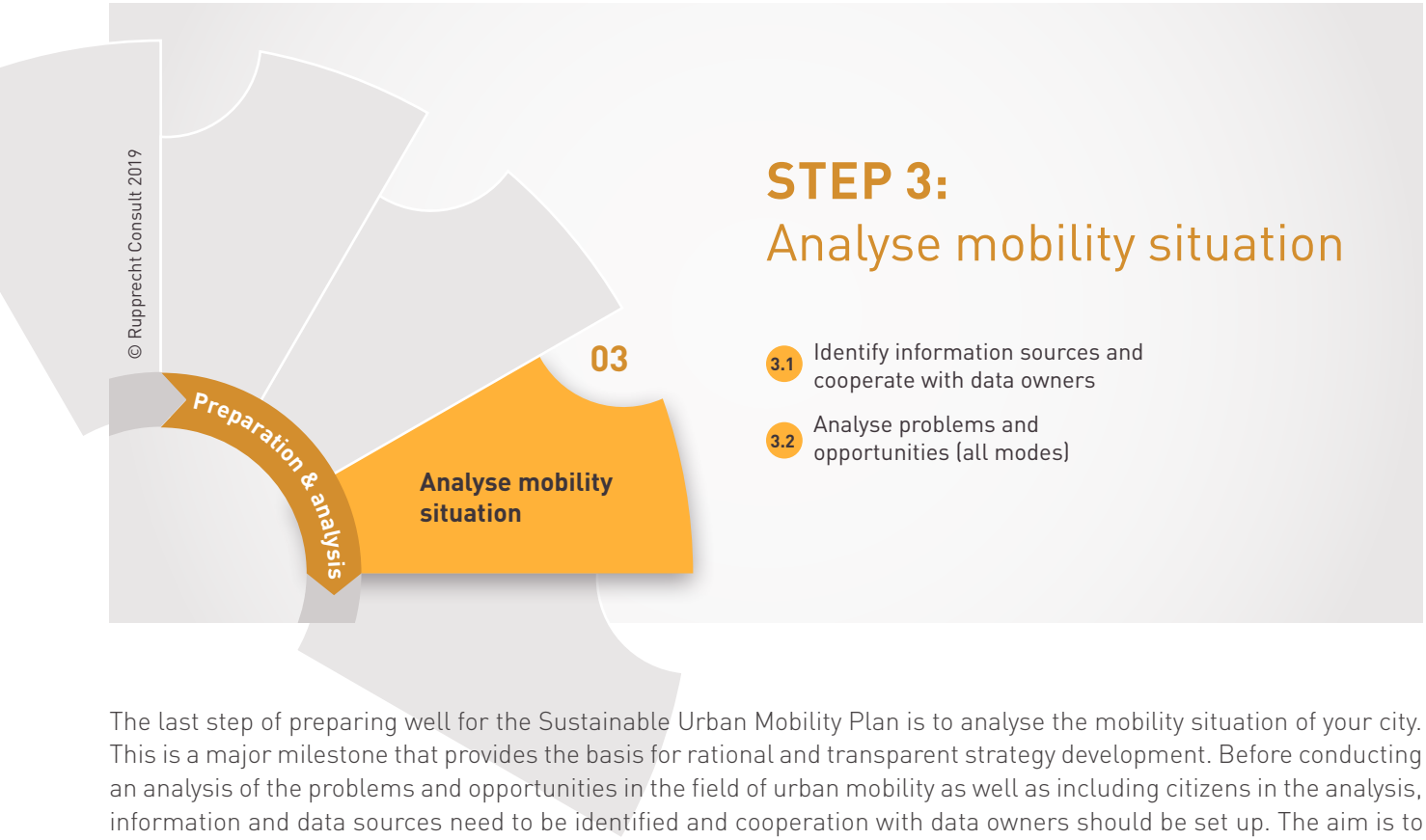
Author: City of Cluj-Napoca, collected by ICLEI
Image: City of Cluj-Napoca

GOOD PRACTICE EXAMPLE

Thessaloniki, Greece: Expert support to set up a mobility monitoring centre

For the development of the SUMP and the monitoring of measures, local authorities of Thessaloniki analysed a wide range of mobility data. The municipality signed a cooperation agreement (2016 - ongoing) with a research institute, benefitting from its scientific skills in sustainable mobility planning, as well as in ITS, big data management and transport modelling. The cooperation was key to ensure that the SUMP implementation includes a good mix of technical and scientific work, increasing the capacity and skills of the local authority's staff in stakeholder engagement and data collection.

Author: Maria Zourna, Municipality of Thessaloniki, and Georgia Aifantopoulou & Maria Morfoulaki, CERTH/Hellenic Institute of Transport, collected by Polis
Image: Logo of Thessaloniki's SUMP



STEP 3:
Analyse mobility situation

3.1 Identify information sources and cooperate with data owners

3.2 Analyse problems and opportunities (all modes)

The last step of preparing well for the Sustainable Urban Mobility Plan is to analyse the mobility situation of your city. This is a major milestone that provides the basis for rational and transparent strategy development. Before conducting an analysis of the problems and opportunities in the field of urban mobility as well as including citizens in the analysis, information and data sources need to be identified and cooperation with data owners should be set up. The aim is to have target-oriented and focused data collection and analysis, which includes all transport modes and important mobility-related aims and trends for the entire functional urban area.

ACTIVITY 3.1: Identify information sources and cooperate with data owners

Rationale

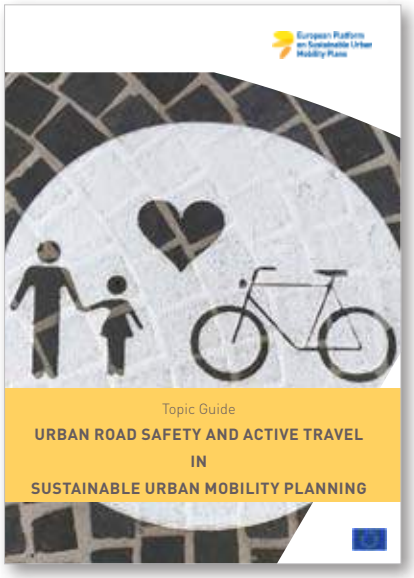
Before deciding on future policies, it is essential to know what problems you are currently facing. In urban transport and mobility, this knowledge is often very fragmented and incomplete. Like pieces of a puzzle, data and information need to be put together in order to describe the current situation. To conduct a good analysis, you first need to identify which data is needed (to analyse all SUMP aspects and, in particular, the political priorities of your process), what information is available, and what is still lacking. Beginner cities with no or only few data available should not be discouraged and rather see it as an opportunity to improve data collection as part of the SUMP process. A challenge most cities face is that their data is not harmonised in terms of timescales or spatial coverage, and that data is often distributed between different data owners, holders or storage systems. As a result, access can become a problem due to a lack of information on existing databases and because of reluctance to share the information - in particular when commercial operators, are involved who might also demand high payments for their data or cite commercial confidentiality. A thorough data audit, excellent communication with data owners and mutual data sharing with them can help to overcome this. Experience has shown that early involvement of internal and external data owners and clear agreements can contribute to a higher willingness to cooperate.

Aims

- Identify data needs in terms of political priorities and probable objectives.
- Get a good overview of the available data, including quality and accessibility.
- Identify data gaps and additional information needed for your mobility analysis.
- Cooperate with external and internal organisations to complete your dataset, ideally establishing long-term agreements to ensure good data supply also in the future.
- Ensure that gaps in data are filled where possible.
- By combining data available in different parts of your organisation, in other organisations, and (if needed) by collecting new data, achieve a set of information on urban mobility and related areas that enables a status analysis.

Tasks

- Perform a data audit. Get an overview of data needs and sources, identify all available data relevant for your Sustainable Urban Mobility Plan, and assess its quality and accessibility.
- Retrieve available data, synthesise its content and identify data gaps for your main mobility issues. Select suitable data that describes the status of transport and mobility in your city, focused on the general aims of sustainable urban mobility (see first Milestone) and the political priorities that led to the decision to develop a SUMP. For example, if a political priority is to improve road safety, then data on fatalities is required. Your data should provide information on the status and trends of:
  - all transport modes used in your city, including freight and the level of integration of modes (multimodality);
  - all main sustainable mobility aspects relevant to your city (e.g. air pollution, traffic noise, road safety, liveability of public spaces, equitable accessibility to services, employment and education).
- Go beyond a simple description of the status and aim to understand the underlying reasons. For example, why do most people still drive to the centre and park there despite good availability of Park & Ride? Strive for data explaining the motivations for mobility behaviour that you want to influence, for example by including qualitative behaviour-related questions in mobility surveys. This information will help to choose effective measures later on.
- Consult stakeholders and the general public on the problems and issues that they feel should be addressed by the SUMP. This makes them aware of the planning process, ensures that their voices are heard and makes the public feel ownership of the SUMP. Their collective impression can also be a valuable source of information that helps to fill data gaps.
- Strive to arrange data sharing with external owners of data that you need for your analysis. Respect confidentiality (following European and national legislation), anonymise personal information and handle data carefully to avoid cooperation problems (consider setting up a security strategy for your data management). Explain clearly why the data is required, showing the benefits to be generated by its use, and describe how the data will be used and held by your organisation. Agree together on the process to collect and share the data so that all partners can rely on a single, common set of information (e.g. secure data sharing platform).
- To fill important remaining gaps in your data, you should check the availability of default values, such as those provided e.g. by the national level, or collect additional data that is not accessible from internal or external data owners. Data can be collected by a variety of means. For example, trends in the number of pedestrians can be determined by carrying out manual counts annually at key points in the city, such as by installing counting machines or conducting a household survey. The choice of method depends on the resources available, the size of the city and the level of reliability required. The following general types of data could be distinguished:
  - Quantitative data from automatic measurements (e.g. counting machines, infrared and other sensors, cameras, satellites) or GPS data (e.g. vehicle tracking, mobile phone locations collected via apps or by mobile providers),



For data collection, it is important to generate precise, specific and complete data sets, but also to set priorities and clear targets for the purpose of the data. The Topic Guide **Urban Road Safety and Active Travel in Sustainable Urban Mobility Planning** offers a list of priorities for data collection related to road safety:

- Identification of the main types of accidents as a basis to define the right target groups to approach and measures to be developed;
- Identification of dangerous spots in the multi-modal network;
- Setting realistic but ambitious targets for safety policy;
- Awareness building: correct accident figures can help to build awareness;

It also defines a minimum set of data needed to analyse the road safety situation in a city. Most importantly, the analysis should consider:

- Total number of casualties and fatalities per year in the city over a period of at least 3 years;
- Total number of accidents without injuries, grouped according to the different transport modes, over at period of at least three years; and
- Location and type of accidents on the (multimodal) network of the city

- Quantitative and qualitative data from surveys (household, on-street, in-vehicle) or from on-street observations (e.g. manual traffic counts, site visits, inventory of curb space assignments),
- Qualitative data from interviews or focus groups,
- Qualitative data from journals, blogs, social media,
- Modelling data to fill data gaps.

Activities beyond essential requirements

- Use open data as much as possible. This will make the process more transparent, allowing citizens and stakeholders to access and use the data, which in turn can benefit your planning activities (e.g. university students who analyse a mobility issue in-depth or who programme a mobility app for your city). Make sure that the open data that is used is of high quality.
- Establish a central municipal data centre that manages the data of all departments. This facilitates internal data exchange and integrated planning, making it easier to consider the data and policy aspects of other departments.

Timing and coordination

- Can be started once the core team is set up and the geographic scope is defined (see Activity 1.2 and 2.1), at the latest after agreeing on the timeline and work plan.
- Directly feeds into the mobility analysis of Activity 3.2.
- The identification of data sources and needs is linked to the definition of objectives (Activity 5.2), strategic indicators (Activity 6.1), and the monitoring process (Activity 11.1).

Checklist

✔ Data needs specified, with view of political priorities and probable objectives.

✔ Available data identified and quality checked.

✔ Data gaps defined and additional data sources identified.

✔ Secure data management established.

✔ Data sharing with external owners of relevant data agreed.

✔ Additional data collected, if needed.

Tools for measuring the quality of public spaces

There is a range of tools available that help you to measure how people use public spaces and to understand how they can be improved for the public life that takes place in them. As one of the forerunners in this area, Gehl Institute offers a selection of such tools on their website, such as:

- Twelve Quality Criteria is a tool for researching how public spaces are experienced by their users. More specifically, it is used to evaluate whether different features of a public space are protective, comfortable, and enjoyable for people.
- People Moving Count measures how many people move through a space and by what means. This information gives you a sense of how busy a space is at different times of the day and how accessible it is by different modes of transport.
- The Stationary Activity Mapping tool helps you map what people are doing in a space at a given time, such as sitting on a bench, playing sports, or performing live music. The result is a "snapshot" of activity in your survey area. By evaluating what is already happening in a place, you can begin to identify potential enhancements to public life.
- Increasingly, apps are used for public space analysis, which make it easier for cities to collect data in the field and to later organise and share the data on a public database.

For more information, see: *https://gehlinstitute.org/tools/*

image © Mark Englert

Listen & learn! - Online map-based surveys for data collection[47]

Planning for people requires the (early) integration of citizens in the process - for example through data collection with Public Participation GIS (Geographic Information System). Online map-based surveys, which link an online survey with an interactive map, combine public involvement and data collection for smart planning that is based on people's needs, perceptions and ideas. PPGIS enables the collection of data from a large and diverse group of people, while it improves public involvement, helps to create ownership for the process, and also takes up the citizen perspective. For planners, the collected data can be a source of information, and PPGIS can also be used to give citizens decision-making power in the process. For example, through defining the areas of intervention with mapping those with need of improvement (e.g. perceptions of public transport service, mapping unsafe areas, insufficient cycling routes etc.). In this way, the city of Helsinki developed its Master Plan together with citizens and the city of Stockholm collected ideas for the design of a new neighborhood. Rather than replacing traditional methods, online map-based surveys can complement them to reach a wider public and increase the quality of the collected data. Especially for metropolitan areas, Public Participation GIS can be a door opener to reach a wide audience in the whole region.

Which kind of data can you collect with online map-based surveys?

Collecting data directly from and with citizens can give you a completely new insight into people's living environments that can be utilized along the planning process. By asking participants to locate various places on a map (e.g. their daily activity places or areas they prefer/avoid), assess the quality of infrastructure, or map their ideas for the future development of the city, Sustainable Urban Mobility Planning can gain a closer perspective from the citizens and understand where actions need to be taken. By collecting spatial data, geographical patterns can be linked with socio-demographic aspects, attitudes and environmental quality. Data from map-based online surveys can, for example, be used to understand more about:

- Mobility behaviour (e.g. through mapping of visited places, routes, trip purposes, visit frequencies, mode choices);
- Places of interest and activity spaces;
- (Dis-)Satisfaction and perceptions of e.g. neighborhood, urban space, accessibility, public safety, green space, mobility services, infrastructure, etc.;
- Identification of areas in need of improvement (e.g. insufficient public transport service);
- Mobility-related health outcomes and well-being; and
- Demographic data.

Which online tools are available?

- Maptionnaire, *https://maptionnaire.com/*
- Citizenlab, *https://www.citizenlab.co/*
- GeoForm (Esri), *https://github.com/Esri/geoform-template-js*
- Mapping for change, *https://mappingforchange.org.uk/*
- GeoCitizen *https://www.geocitizen.org/home/login*

image © City of Lahti

[47] Source and further reading: Czepkiewicz, M., Brudka, C., Jankowski, P., Kaczmarek, T., Zwolinski, Z.,Mikuła, Ł, Bąkowska-Waldmann, E., Mlodkowski, M., Wójcicki, M., (2016). Public Participation GIS for Sustainable Urban Mobility Planning: methods, applications and challenges. Rozwój Regionalny i Polityka Regionalna, 35. 9-35.

Measuring accessibility - the Flemish 'Mobiscore' approach

Urban mobility planning should focus not only on mobility in the narrower sense (i.e. the ease of moving around in the city), but also on the final aim of mobility, which is the accessibility of places and activities. Accessibility describes the actual potential to participate in out-of-home activities. One of the barriers you need to overcome in order to address accessibility more explicitly in a SUMP is the difficulty to measure it.

The Flemish tool and its use in Flanders

In May 2019, the Environment, Nature and Energy Department (LNE) of the Flemish administration launched a web-based tool, 'Mobiscore', that assigns an 'accessibility score' to a particular house or land lot. The score informs potential buyers or renters of a house about how well the various facilities – such as a railway station, bus stop, school, etc. – can be reached in a sustainable manner; such as by foot or by bike. With the development of this tool, the Ministry department wants to raise awareness among citizens about the mobility impact that arises from the choice of residence. The decision to buy or rent is an influential moment that can be seized to drive change in mobility behaviour, for example modal choices. People who want to move to a new house can easily compare the accessibility of different locations on the Mobiscore website (*www.mobiscore.be* – only in Dutch). The tool could also evolve into a useful analytical instrument for urban mobility planning. As it assigns an accessibility score for each hectare (100x100m), a map of the different scores in a functional urban area would reveal areas with high and low accessibility. This can, for example, help in deciding where to upgrade public transport or biking connections most urgently. Furthermore, it can certainly better link urban development policy with mobility planning by showing where to develop housing, schools, etc., in order to promote sustainable transport modes.

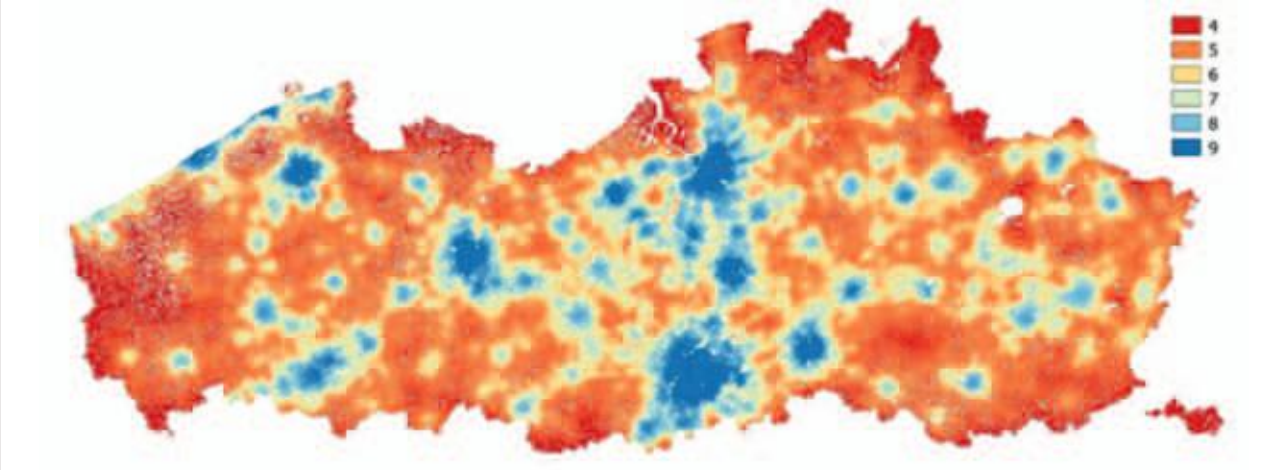
How the Flemish approach can inspire your SUMP

It is unlikely that a ready-made tool to measure accessibility to common daily destinations is available in your city. However, during Activity 3.1 (Identify information sources and cooperate with data owners), you should check with the Spatial or Urban planning department or research institutes in your area to see if GIS-based data on the location of shops, schools, etc., is available. Based on these densities, an accessibility score for different areas in the city can be developed. In addition, density of public transport stops or the identification of areas within walking distance of these stops (e.g. 400 meters for bus stops and 800 meters for train stops) can be analysed. In the second SUMP phase on strategy development, accessibility indicator mapping can inform discussions with public transport providers, citizens and other stakeholders. This is particularly useful when cooperating with urban development departments in order to develop a so-called TOD strategy (Transit Oriented Development), i.e. urban development oriented towards public transport nodes while also discouraging developments in car-dependent areas with low public transport accessibility. On the neighbourhood level, accessibility mapping can encourage the development of active mobility routes and helps planning for mixed-use developments, including schools, shops and services.

For more detailed information on the methodology used for the 'mobility score' indicator developed in Flanders, see: *https://www.tmleuven.be/en/project/Mobiscore* (only in Dutch).

Author: Dirk Lauwers, Center for Mobility and Spatial Planning, Ghent University

Figure 18: Geographical distribution of the Mobiscore across Flanders (scoring for 1 hectare cells; red (4) being the least accessible and blue (9) the most accessible; Transport & Mobility Leuven, 2019. Mobiscore, *www.tmleuven.be/en/project/Mobiscore*.)



More analysis tools

- The Health Economic Assessment Tool (HEAT) for Walking and Cycling (WHO/Europe) economically assesses the health impacts of walking and cycling in a city, *www.heatwalkingcycling.org/#homepage*
- AirQ+ (WHO) performs calculations that allow for the quantification of the health effects of exposure to air pollution, including estimates of the reduction in life expectancy, *www.euro.who.int/en/health-topics/environment-and-health/air-quality/activities/airq-software-tool-for-health-risk-assessment-of-air-pollution*
- The UK Department of Transport offers guidance on planning cycling and walking networks, including a Walking route audit tool, *www.gov.uk/government/publications/local-cycling-and-walking-infrastructure-plans-technical-guidance-and-tools*
- As a city, you can encourage citizens to report issues regarding road safety and infrastructure issues on a specific platform. Some cities or countries have their own reporting platform, examples are the Radkummerkasten for Vienna, Austria (*www.radkummerkasten.at*) or FixMyStreet for the UK (*www.fixmystreet.com*).
- BYPAD (Bicycle Policy Audit) helps you to evaluate a city's cycling policies, *www.bypad.org/cms_site.phtml?id=552&sprache=en*
- For more data gathering tools, see also the CIVITAS Urban Mobility Tool Inventory: *https://civitas.eu/tool-inventory?f%5B0%5D=field_application_area%3A923*

GOOD PRACTICE EXAMPLE

Gdynia, Poland: Partnership for data collection between municipality and public transport authority

In the past years, Gdynia has established a valuable partnership with different actors to collect data for mobility planning. Detailed interviews with citizens on mobility preferences and behaviours (carried out by the public transport authority), GPS data collected in different campaigns and projects, traffic observations, as well as interviews on the street with pedestrians, drivers, and shop owners provide data. It is used i.a. for heat maps, animations of cycling flows, and freight statistics useful to transport and city planners. Developing a trustworthy relationship with your partners and making them part of the whole process helps you to both receive data and maintain the partnership for the future.

Source: City of Gdynia, collected by UBC

GOOD PRACTICE EXAMPLE

Bremen, Germany: Online citizen participation to assess the mobility situation

Complementing traditional methods of data collection, the City of Bremen utilised crowdsourcing-based methods to analyse the problems and opportunities of mobility developments in the city. A proactive participation strategy and innovative online participation modules allowed citizens to be a key data source. Citizens addressed questions - 'where are things running badly?' and 'where are they running smoothly?' – through an online platform, which enabled users to further mark specific locations on a map and color-code entries according to transport mode. The portal received more than 100,000 page views, 4,000 contributions, 9,000 comments, and 100,000 'like' or 'dislike' comments.

Author: Michael Glotz-Richter, City of Bremen, collected by ICLEI
Image: City of Bremen

ACTIVITY 3.2: Analyse problems and opportunities (all modes)

Rationale

A good mobility analysis is crucial in helping to define appropriate policies and provides the necessary baseline against which progress can be measured. The analysis should be as comprehensive as possible, but also needs to be manageable considering the given resources. A proper analysis of all transport networks, modes and key aspects of sustainable urban mobility need to be ensured, but you should avoid spending too much time and energy on analysing comprehensive data that is of low relevance to the key issues in your city. Wherever useful, the planning process should build on the results of already existing plans and strategies.

Aims

- Provide a review of the current status of important mobility and transport developments in the entire functional urban area, based on data and relevant planning documents both for passenger mobility and freight transport.
- Prepare a list of problems and opportunities that relate to urban mobility (e.g. accessibility to services, pollution, social inequity, road safety, climate protection, land-use patterns and resilience of the network).
- Identify and prioritise key problems to be addressed by your SUMP.

Tasks

- Check key planning documents relevant to urban transport for a useful analysis of the current status, problems and strategies. Such documents may include sectoral mobility strategies and plans (e.g. on walking, cycling, public transport, road transport, parking, freight) as well as plans and documents from other relevant policy areas (e.g. land use, energy, environment, economic development, social inclusion, health and safety), from local transport operators and other municipalities. (Builds on Activity 2.2 in your analysis of planning documents).

- Also look at the municipal budget. How much has been invested in the different transport modes and in measures addressing the different sustainability aspects? Is this consistent with your city's priorities or do discrepancies exist?

- Analyse your data (retrieved in Activity 3.1). Make sure to also use spatial analysis methods, for example by mapping road accidents, air pollution and noise levels, areas far away from any parks, areas inaccessible by public transport, or gaps in the network of cycle paths and footpaths. Based on existing information and expert assessments, preliminarily identify the main problems and strategies.

- Together with key stakeholders and citizens, prepare a baseline analysis to identify and prioritise the main problems to be addressed by your SUMP. As far as possible, try to quantify the current status of mobility and transport and visualise it on maps. Your baseline should include the status, trends and problem areas of:

  - all transport modes used in your city, including freight transport and the level of integration of modes (multimodality);

  - all main sustainable mobility aspects relevant to your city (e.g. air pollution, traffic noise, road safety, liveability of public spaces, equitable accessibility to services, employment and education).

- Involve residents in the analysis of problems and opportunities (e.g. by offering online maps where they can locate negative and positive areas for specific transport modes).

- Assess social exclusion aspects in the framework of transport policies. This means considering the needs of the whole community, including vulnerable groups such as children, people with reduced mobility, the elderly, low income households, minority groups, etc. Gender aspects, i.e. giving women and men the same opportunities, should also be looked at. Important questions to consider are:

  - Does the transport system guarantee equal access, affordability and availability?

  - Do transport-related measures facilitate employment and support the development of an inclusive labour market?

Activities beyond essential requirements

- Draw on key actor knowledge to obtain an insight into sectoral policy documents (e.g. through interviews, meetings).

- Based on the preliminary identification of main problems and opportunities, consider doing focused analyses to complete the picture. For example, a hypothesis-led analysis to verify a specific issue that has been raised, a diagnostic-led analysis to try to identify issues that have not been raised, or a vision-led analysis to explore future priority topics in-depth.

Timing and coordination

- Directly builds on the data collection (see Activity 3.1) and, to a smaller extent, the self-assessment (see Activity 1.1) and the assessment of related plans (see Activity 2.2).

- The conclusions of this task are important input for scenario building (see Activity 4.1) and the whole planning process.

Checklist

✔ Problems and opportunities with key stakeholders and citizens discussed and analysed.

✔ Review and problem analysis concluded. Status of all transport modes and main aspects of sustainable urban mobility described.

✔ Baseline set against which progress can be measured.

✔ Key opportunities and problems to be addressed by the SUMP prioritised.

Figure 19: Example of how an analysis table can be used to define the status of the transport system (baseline analysis) (adapted from Sundberg, R., 2018. SUMPs-Up Manual on the integration of measures and measure packages - Start, p. 10.)

FUNCTIONS / TRANSPORT MODES	MODAL SHARE	QUALITY OF INFRASTRUCTURE	SAFETY AND LIVEABILITY	ENVIRONMENT AND HEALTH	EQUITABLE ACCESSIBILITY	STATUS OF MEASURE IMPLEMENTATION	MAIN RECOMMEN-DATIONS
Walking	12%	Poor	Many accidents on road crossings near schools	Less and less pupils walking to school	Some areas lack walkable access to parks and sports facilities	Low activity. New 'walk to school' campaign.	Traffic safety measures are needed
Cycling	7%	Medium	Cyclists often feel unsafe, attractive cycle paths in parks	Low use gives small benefits	Few cycling lanes along main roads	Efforts to mapping the bicycle network in progress. Low budget for new measures.	Increase city administration's budget for cycling measures
Public transport (bus, tram, metro, train, etc.)	16%	Good	Some bus stops need repair, feel unsafe in the evenings	New bus fleet has been installed, decreased impact on air quality	Reduced fare for unemployed, but infrequent buses to poor outskirts	High activity, public transport strategy planned.	Progress in right direction, keep on
Vehicle sharing (car, bicycle, e-scooter, etc.)	0.5%	Medium	E-scooters blocking footpaths	Low use gives small benefits	Sharing offers only available in the centre	No activity, purely privately driven field	Proper regulation and knowledge needed
Private motorised transport (car, motorcycle, etc.)	64.5%	Good	Many accidents with people that walk or cycle	High use of cars strongly impacts air quality and noise levels	Road networks covers all parts of the city well	High activity, new bypass is under construction.	Introduce measures to reduce car traffic in city centre when bypass is completed
Multimodality (train station, interchanges)	n/a	Good	New train station is attractive. Unreliable changes in off-hours incentivise car use	Main bus station is outside walking distance from main train station.	No Park&Ride offers in outskirts. Lack of secure bike parking for e-bikes at main interchanges.	Low activity	Involve location of interchanges and P+R and B+R in public transport strategy
Freight	n/a	Good	Heavy truck traffic in centre causes safety risk	Trucks in centre cause air and noise pollution	All industrial areas well connected	Low activity	Develop strategy to divert heavy goods traffic from centre
ANALYSIS	Car is the dominant transport mode	Walking and cycling infrastructure needs improvement	Traffic safety needs to be prioritised	Air pollution from cars and trucks is biggest problem	Improve bus connections to outskirts	Capacity needs to be strengthened in several fields	

"Don't tell me where your priorities are. Show me where you spend your money and I'll tell you what they are." (James W. Frick)

The level of sustained investments in cycling infrastructure is a litmus test of how much cycling development is valued. The United Nations Environmental Programme recommended that at least 20% of the whole transport budget should be dedicated to non-motorised transport. In the Netherlands, Europe's most cycling-friendly country, about 35€ per person is being invested annually in cycling development, with the largest share coming from the local authorities. For the mobility analysis, the investment made for the different modes is a good indicator to observe the prioritised fields of action of a city and to uncover potential gaps in investment, such as in Cycling.

More guidance on how to successfully promote cycle use in Sustainable Urban Mobility Planning can be found in the Practitioner Briefing **Supporting and encouraging cycling in Sustainable Urban Mobility Planning**.

Figure 20: Example of how to illustrate the consistency between the city's priorities (with regards to transport modes and targets in this example) and what the city actually invests in (adapted from Sundberg, R., 2018. SUMPs-Up Manual on the integration of measures and measure packages - Step up, p. 11.)

Transport modes	Priority	Investments the last year	Investments the last five years
Walking		100	800
Cycling		200	1300
Public transport		5000	19000
Taxi / transport (e.g. special transport services)		200	1000
Car-sharing		100	200
Car		2000	18700
Total		7600	41000

Targets	Priority	Investments the last year	Investments the last five years
Improve safety and security		1000	4000
Increase walking a cycling		200	1300
Increase quality and use of public transport		5000	19000
Effective freight system		1000	3000
Accessibility private cars		2000	18700
Total		9200	43000

GOOD PRACTICE EXAMPLE

Malmö, Sweden: Comprehensive approach including manual, mechanical, survey and app-based data collection

The City of Malmö uses a mix of methods to collect data on the mobility situation as well as noise and air pollution. This includes manual and mechanical traffic counts twice a year, as well as travel surveys to measure changes and influencing factors of travel habits every five years. Next to the traditional way, the last survey was set up to be used in an online application for mobile phones. The key success factor is to connect the collected data to the traffic model and the follow-up of infrastructural investments in the city. This supports the decision makers in their actions for the development of the city.

Author: Andreas Nordin, City of Malmö, collected UBC
Image: City of Malmö

GOOD PRACTICE EXAMPLE

Deinze, Belgium: Accessibility screenings for children and the elderly

The SUMP of the city of Deinze includes accessibility screenings for public space and road design connecting different activity places in the city. The accessibility screenings are an example of how the city applies the principles and objectives of 'prioritizing modes (STOP[1])', 'attention to vulnerable target groups' and 'proximity', as defined in the Flemish SUMP program, starting from analysis.

Author: City of Deinze, collected by Mobiel 21
Image: City of Deinze

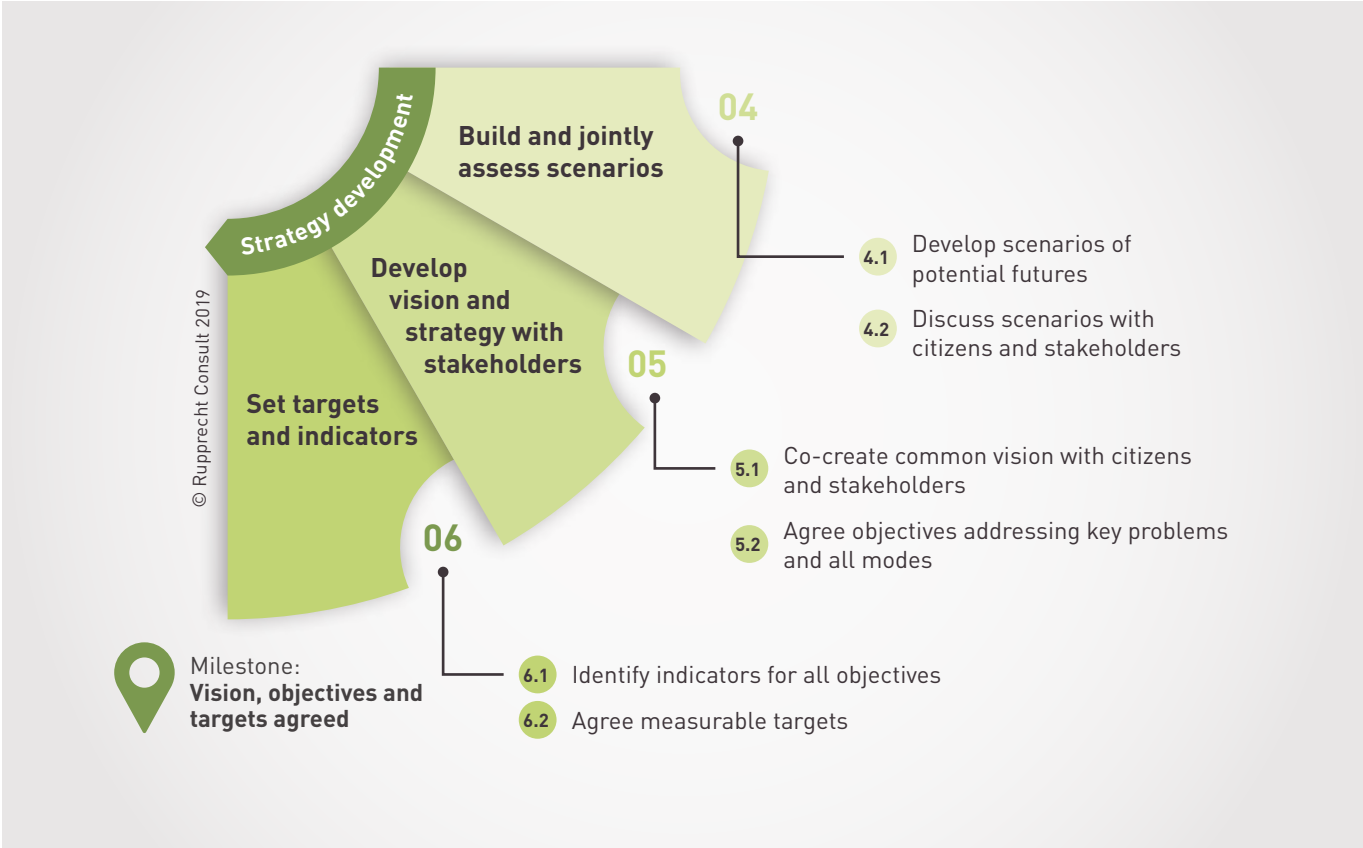
[1] Dutch abbreviation prioritizing modes – walking, cycling, PT, (sharing) and only last private cars as a thread in SUMP planning for all Flemish cities and municipalities.

Milestone: Analysis of problems and opportunities concluded

At this point of the cycle, you should have finished all preparational steps and the status analysis. You have a good overview of the mobility situation and planning framework, you have set up effective working structures and you know what is important to consider for developing the SUMP's vision, objectives, targets, and measures in your city. As a fundamental milestone of Sustainable Urban Mobility Planning, you should have achieved a common understanding, together with important stakeholders, of the main problems and opportunities. It is possible to involve key stakeholders and local politicians again in order to foster acceptance of the SUMP, make the process accountable and provide a sound basis for the upcoming strategy development. You should share the summarised results of your analysis, including all problems and opportunities, and ensure support for further involvement in Sustainable Urban Mobility Planning. For an easier process of sharing your results and breaking down the main problems and opportunities, you would ideally summarise the key findings of the analysis in a 'baseline report'.

image © Rupprecht Consult

PHASE 2: Strategy development



The goal of the second phase is to define the strategic direction of the Sustainable Urban Mobility Plan in cooperation with citizens and stakeholders. The key questions are:

What are our options for the future?

Analyse the likely changes in important external factors for urban mobility (e.g. demography, information technology, climate) and develop scenarios that explore alternative strategic directions. Scenarios try to capture the scope of uncertainty that comes with "looking into the future" in order to have a better factual basis for strategic decisions.

What kind of city do we want?

Use visioning exercises with stakeholders and citizens to develop a shared understanding of desirable futures, based on the results of the mobility analysis and scenario impacts. A common vision and objectives are cornerstones of every SUMP.

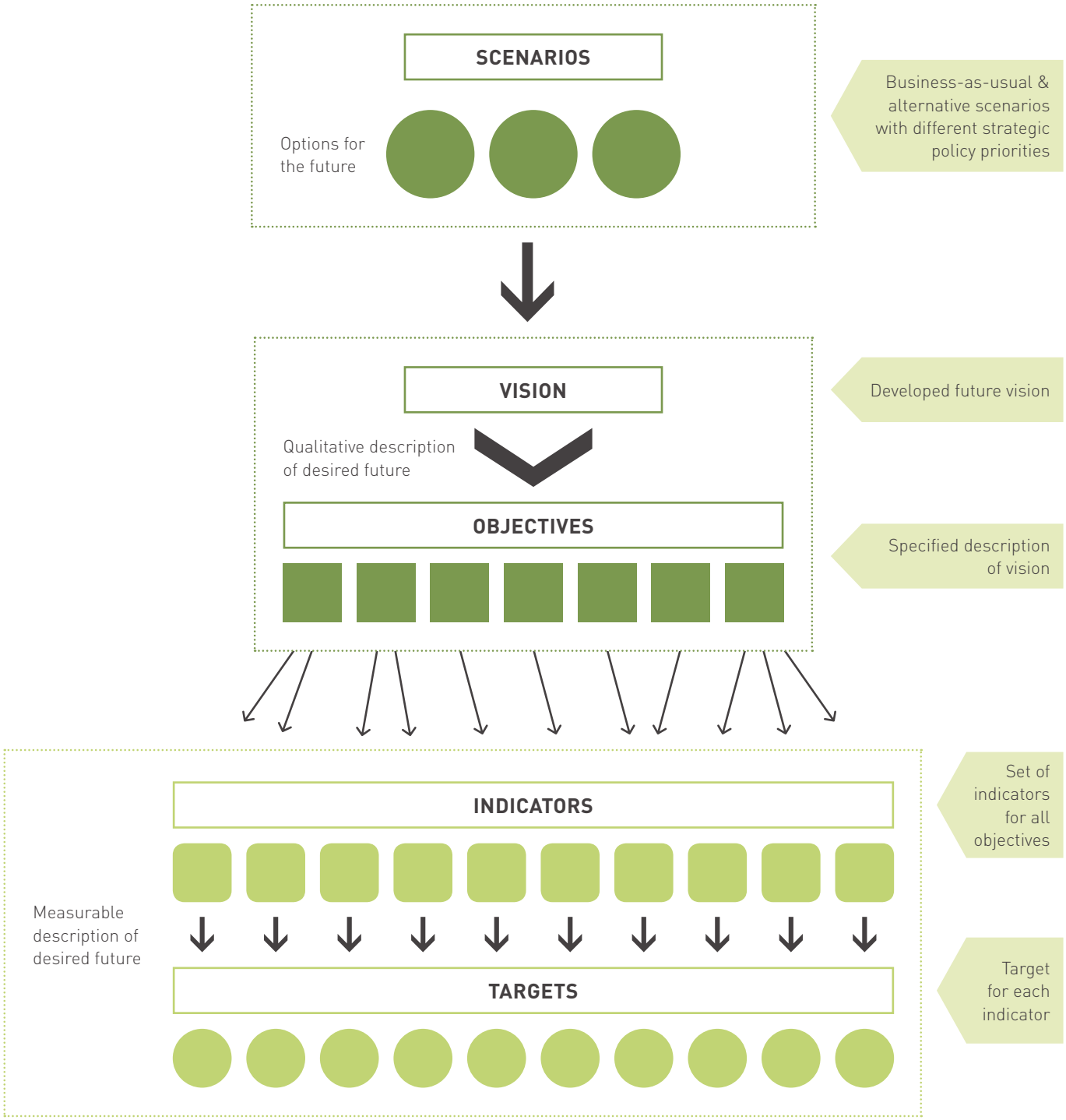
Make sure that your objectives address the important problems and that they cover all modes of transport in the functional urban area.

How will we determine success?

Define a set of strategic indicators and targets that allows you to monitor progress made towards realising all objectives without requiring unrealistic amounts of new data collection. Choose ambitious but feasible targets that are aligned with other policy areas.

At the end of the second phase, you have reached another milestone of a widely supported vision, objectives and targets.

Figure 21: Overview of the main steps (scenarios, vision, objectives, targets) of Phase 2



STEP 4: Build and jointly assess scenarios

4.1 Develop scenarios of potential futures

4.2 Discuss scenarios with citizens and stakeholders

Based on the analysis of problems and opportunities, different scenarios should be developed and discussed with citizens and stakeholders. These scenarios help improve your understanding of what urban mobility in your city could look like in the future. In this way they can inform and inspire the subsequent development of your vision.

ACTIVITY 4.1: Develop scenarios of potential futures

Rationale

Scenarios help to better understand the likely effects of external factors that affect urban mobility (such as changes in climate, information technology, finance and security) in combination with alternative approaches to react to them. By illustrating different possible future situations, they allow planners to assess consequences of current trends, potential societal and local changes, as well as alternative strategic policy priorities independently of each other. Examining the effects of these different scenarios strengthens the factual basis for strategic decisions. It can inform and inspire the development of vision and objectives (see Step 5), and helps you to set realistic targets for strategic indicators (see Step 6).

Aims

- Understand the risks and opportunities related to current trends and possible changes of circumstances.
- Develop alternative scenarios that inform about the likely impacts of different strategic policy directions.
- Create a factual basis for the subsequent development of a vision, objectives and targets.

Tasks

- Explore possible future developments of the most relevant external factors for urban mobility (i.e. the factors that are outside the city's control, such as demography, oil price, economic situation, climate crisis, technological change or level of political support for sustainable mobility). Consider current trends and likely changes as projected by recent expert reports. Analyse trends in typical forerunner cities, such as San Francisco, and consider what would happen if digital mobility innovations available there were also to become available in your city. In addition, consider less likely, but highly disruptive changes that would heavily influence mobility in your city.

- Analyse the impacts of future external circumstances on your local transport system. This includes the effects of global or national changes (e.g. new technologies enabling Mobility as a Service, automated driving or free-floating shared mobility), as well as local trends (e.g. strongly increasing or decreasing population affecting the city budget and urban development options). Assess what opportunities and restraints they would imply for your city. Do they open up new options? Or do they make certain sustainable policies harder?

- Develop several scenarios that describe alternative policy priorities and their impacts on a strategic level. At least three scenarios should be developed:

  - A business-as-usual scenario that describes the development forecasted if the current policy direction is continued and only measures that have already been planned are implemented.

  - Alternative scenarios that describe forecasted developments resulting from different strategic policy priorities (e.g. public transport focus vs. active mobility focus vs. electromobility focus). Such scenarios show the contributions of different policy directions, helping you to define what to put most emphasis on. It is recommended to include only sustainable policy directions, as the business-as-usual scenario already allows the comparison with a less sustainable scenario.

- Use appropriate scenario building techniques such as modelling, purely qualitative analysis (based on expert judgement or on past results of policy strategies in your city or in similar urban contexts), or a combination of both. In the case of modelling, strategic and sketch planning models are recommended at this stage, since they are inexpensive, quick to run, and can be used interactively. Detailed transport models are usually only used at this stage if they are readily available without high extra costs.

- Assess interdependencies between developments in different sectors: Transport, land use, environment, economy, etc. Identify synergies on a strategic level, potential for integration, and the negative effects of sectoral trends.

- Assess the sensitivity of the scenarios to important external factors, taking into account your previous analysis of these factors. (It can be useful to specifically search for circumstances where things might go wrong, worst-case scenarios -, in order to identify the risks and limitations.) Such an assessment helps you to be prepared for potential changes and their effects, and lets you understand which scenarios are more future-proof. It can also help to show the limits and risks of the current status (business-as-usual scenario), explaining why changes are needed to prepare for the future, even in cases where most people are satisfied at the moment.

- Involve stakeholders in the scenario building, for example in the discussion on how many and which scenarios to develop. This enhances their ownership and acceptance of the vision development process. (See also Activity 4.2)

What is a 'Scenario'?

A scenario is a description of a specific set of developments in the future which are relevant to urban mobility, including the likely effects of external factors (such as demographic and economic circumstances), as well as those of strategic policy priorities (such as a strong active mobility or electromobility focus).[48]

For more information on the topic, see also the US FHWA Scenario Planning Guide-book: *www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning*

Activities beyond essential requirements

- Involve stakeholders already during scenario building, for example in the discussion on how many and which scenarios to develop. This enhances their ownership and acceptance of the strategy development process.

[48] To avoid confusion, it should be noted that some planners use scenarios later in the planning process, in the sense of measure or policy scenarios. This aspect, where different combinations of measures are assessed to identify the best way to achieve objectives and targets, is called measure package appraisal in this document (see Activity 7.2).

Timing and coordination

- Follows the status analysis.
- The scenario development accompanies the development of a common vision (see Activity 5.1), objectives (see Activity 5.2) and targets (see Activity 5.2).

Checklist

- ✔ Impacts of potential changes in external factors explored.
- ✔ Different alternative scenarios described, including a business-as-usual scenario.
- ✔ Appropriate techniques applied to support the scenario development and appraisal.
- ✔ Sensitivity of scenarios to changing circumstances assessed.

When developing future scenarios, possible trends and policy directions need to be considered. As one of the current major trends, various concepts of shared mobility are being implemented in many forerunner cities and can be expected to spread further in the coming years. Mobility options like public bike sharing, e-scooter sharing, e-motorbike sharing, (e-)car sharing, ride sharing and hailing, and shared freight mobility could be part of the policy direction of a scenario. More information on the different forms of shared mobility and how to implement them in the framework of a Sustainable Urban Mobility Plan can be found in the Topic Guide **Integration of shared mobility approaches in Sustainable Urban Mobility Planning**.

GOOD PRACTICE EXAMPLE

Maia, Portugal: Scenarios of different ambition to achieve the agreed vision

The City of Maia developed its first SUMP in 2013. To come closer to realising urban mobility which promotes sustainable transport modes, Maia defined three different scenarios: business-as-usual, intermediate, and proactive. The intermediate scenario included both desirable and feasible measures, while those in the proactive scenario were more ambitious. While the latter scored a higher evaluation result due to possible constraints not being considered, a participatory event with key stakeholders led Maia to the intermediate scenario, which could be realistically achieved. The process highlighted the importance of stakeholder involvement when developing and agreeing on future scenarios.

Author: Energy and Mobility Division, City of Maia, collected by ICLEI
Image: City of Maia

GOOD PRACTICE EXAMPLE

Leipzig, Germany: Scenario building supported by transport modelling

The city of Leipzig developed six scenarios for different future options in a scientific and open process.

The six scenarios were:

1. Continuation of the current mobility strategy;
2. Continuation of the current mobility strategy with constant fares;
3. Sustainability scenario;
4. Bicycle City scenario;
5. Public transport priority scenario; and
6. Community scenario.

The scenarios were evaluated using various criteria (attractiveness for users, ecological attractiveness, economic attractiveness, systemic attractiveness) and a qualitative assessment. The evaluation resulted in the prioritisation of the 1. bicycle-scenario, 2. sustainability scenario and the 3. PT scenario.

Author: City of Leipzig, collected by Marlene Damerau, Rupprecht Consult
Image: City of Leipzig

ACTIVITY 4.2: Discuss scenarios with citizens and stakeholders

Rationale

Discussing the different scenarios and their impacts with citizens and stakeholders is the first step towards a widely accepted mobility vision. Presenting different potential futures and reflecting on them together will create a shared understanding of the options for the future. It also helps to create awareness of the interdependencies and trade-offs between different policies and sectors, the complexity of the strategic decisions to be taken, and the risks faced.

The aim is to discuss and work towards a common understanding of which scenarios or elements of scenarios are desirable. Involving citizens and stakeholders already at this stage will help you to create broad ownership and acceptance of the objectives and measures that will later be selected.

Aims

- Use alternative scenarios as the basis for discussing general policy priorities and strategies for future development.
- Create broad ownership and acceptance of the process to select a common vision and objectives.

Tasks

- Present scenarios and their results to key stakeholders. Stimulate a discussion on strategic policy alternatives and their impacts. Group work and other interactive formats can help you to create a constructive and engaging atmosphere at the meeting(s). Ensure that everyone gets an equal chance to voice their opinion on questions such as:

  - Which needs for change does the business-as-usual scenario reveal?
  - Which of the alternative policy priorities are desirable?
  - What level of ambition is needed to achieve sustainable mobility in the future?

- Discuss also interdependencies between changes in the transport sector and in other sectors. How can synergies be created and negative side effects avoided? Consider the resilience of your current transport system and of different scenarios against changing external circumstances.

- Discuss the scenarios with a wide range of people from all parts of society. Aim to use a variety of engagement methods that also reach typically underrepresented groups, such as young people and the elderly, ethnic minorities, people with low-income, single parents and people with disabilities. Such methods can include placing information and feedback boxes or booths in different parts of the city (e.g. on market squares and in shopping centres, also in low-income areas), gathering feedback online and via social media, cooperating with organisations representing these groups (e.g. kindergartens, schools, universities, cultural associations, job centres), communicating in several languages, and conducting representative surveys (see also Activity 1.4). By comparing the demographic composition of your meeting and online participants with the general population in your city, you can identify underrepresented groups that you should actively seek to reach out to.

- When inviting stakeholders and citizens, always communicate a clear process and agenda so that they know what is expected from them and how much effort and capacity is required. A good argument to convince them to participate is that,their needs cannot be considered in the planning process without their input.

image © City of Bremen

Activities beyond essential requirements

- Organise official personal invitations on behalf of your mayor (or president of your organisation) to invite high-ranking stakeholders (e.g. mayors of neighbouring local authorities, local councillors, or directors of large organisations). Their attendance can help achieve high-level political support for the SUMP process.

Timing and coordination

- Follows or accompanies scenario development.

- The discussion of the scenarios goes hand in hand with the development of a common vision and objectives (see Activity 5.1 and 5.2). Scenarios and visions are strongly related, and the sequence of developing them can vary between cities or even run in parallel.

Checklist

✔ The needs for change revealed in the business-as-usual scenario discussed with stakeholders and citizens.

✔ Discussed with stakeholders and citizens which scenarios or elements of scenarios are desirable.

GOOD PRACTICE EXAMPLE

Prague, Czech Republic: Scenario building with strong stakeholder and citizen participation

In 2015, Prague designed three possible scenarios and organised a workshop for experts, as well as a sociological survey to select the most suitable scenario. 57 selected experts gathered in groups and discussed the scenarios in a half-day workshop. A sociological survey collected additional opinions from 2,224 citizens. Based on the combined opinion of stakeholders and citizens, Prague developed its final transport strategy. Designing an expert workshop and a sociological survey with essential, easy questions is an easy, cheap and illustrative solution for scenario selection. It also provides a powerful basis vis-à-vis to political approval, as based on broad and balanced experts' opinions.

Author: Václav Novotný, Prague Institute of Planning and Development, collected by EUROCITIES | **Image:** City of Prague

GOOD PRACTICE EXAMPLE

Antwerp, Belgium: Broad integration of citizens, policymakers and experts in scenario discussions

The City of Antwerp has introduced innovative governance methods to gain wide public support for their vision for the city. After examining possible scenarios, a steering group selected one that best matched the ambition of Antwerp and that also included adequate and relevant projects for the region. This approach led to an agreed ambition to develop innovative ideas together with citizens and stakeholders. A total of 100 working sessions were organised, in which about 3500 experts and policymakers and approximately 3000 citizens and organisations participated. An alliance was formed and it developed a governance structure to manage the process. The multidisciplinary teams used participation and co-creation tools to shape input received from citizens.

Author: Annelies Heijns, collected by ICLEI
Image: City of Antwerp

STEP 5:
Develop vision and objectives with stakeholders

5.1 Co-create common vision with citizens and stakeholders

5.2 Agree objectives addressing key problems and all modes

Now you are ready to get started with the main steps of developing a Sustainable Urban Mobility Plan. Developing a common vision and objectives are cornerstones of every SUMP. A vision is an important qualitative description of the desired future for the city and its mobility, which is then specified by concrete objectives that indicate the type of change aimed for. The two provide the basis for all subsequent steps of defining strategic indicators and targets and selecting measures. Scenarios and visions are strongly related, and the sequence of developing them can vary in different contexts or even run in parallel. Vision and objectives can only be guiding elements if they are widely accepted among stakeholders and citizens; therefore it is crucial to co-create them and establish common ownership.

ACTIVITY 5.1: Co-create common vision with citizens and stakeholders

Rationale

What kind of city do we want to live in? How will it differ from other cities? These are the central questions that need to be answered by a visioning exercise involving all stakeholders and citizens. A vision provides a qualitative description of a desired urban mobility future and serves to guide the development of appropriate planning measures. It needs to place transport back in the wider context of urban and societal development. In other words, how can transport contribute to a positive future?

The vision should be prepared taking into consideration all policy perspectives it seeks to address, especially those of existing general city visions or strategic plans, urban and spatial planning, economic development, environment, social inclusion, gender equity, health, and safety.

To create awareness and broad acceptance, the public should be actively engaged in the vision building process and its outcomes. Citizens should get involved in developing the vision, e.g. via a dedicated workshop. Sustainable Urban Mobility Planning outcomes can only be successful if citizens understand the vision and if they support its broader goals.

Aims

- Agree on a widely supported common vision that builds on the results of the scenario discussions - a long-term goal for mobility development serves as a guide for the planning process.

- Broaden the perspective by looking beyond transport and mobility, e.g. at quality of life, health, and land use.

- Strengthen the local community identity and the public's collective ownership of the vision.

- Emphasise the political value of a SUMP and ensure the commitment of key actors and decision makers.

Tasks

- Establish a representative group of key stakeholders that will be responsible for the development of the vision. This could be the SUMP 'steering group' created in Activity 1.4.

- Prepare, hold and follow up on stakeholder meetings. Different formats can be useful to achieve an open, respectful and fruitful dialogue (see visioning methods below, and Activity 1.4 for an overview of formats). At the first meeting, provide basic information to stakeholders to ensure a common level of knowledge. This should include information on any existing visions, as well as the results of the mobility analysis (Step 3) and the scenarios (Step 4). Use maps, visualisations and concrete examples from other cities as much as possible to inspire the discussions.

- Avoid secrecy and corporatism: use public hearings and make notes from stakeholder meetings public to guarantee transparency.

- Consider engaging citizens directly in the development of the vision, e.g. via meetings or workshops similar to the stakeholder meetings. At the very minimum, you should actively inform citizens about the vision building process (e.g. in a public relations campaign) and provide them with the possibility to give feedback on the draft vision. Take all contributions seriously, but be clear and open beforehand that not all suggestions can be followed and that decisions will have to be taken based on opinions that often contradict one another.

- Elaborate a draft vision that covers the entire urban agglomeration and all relevant aspects of sustainability, such as road safety, accessibility, liveability, noise and air quality. It should also take into account all modes and forms of transport, namely public and private; passenger and freight; motorised and non-motorised; and moving and stationary. Consider the results and discussions of scenarios when drafting the vision, e.g. by including the scenario or elements of scenarios that showed the best results and were most widely supported.

- Keep decision makers in the loop. Consider discussing the draft vision with leading politicians from all parties, which can also happen in informal meetings, to achieve broad ownership of the vision. It can be useful to conduct simple opinion polls with the public; the trends that these reveal can serve as arguments for convincing political decision makers.

- Discuss the draft vision and feedback from citizens and decision makers with stakeholders and agree on a final version.

- Publish the vision in a format that is easy to understand and use visualisations to communicate it. Disseminate the vision document widely, including by using the media (local press, radio, TV, social media).

Timing and coordination

- Builds on the mobility analysis (Step 3) and scenarios (Step 4).

- Scenarios and visions are strongly related, and the sequence of developing them can vary between different contexts or even run in parallel.

What is a 'Vision'?

A vision is a qualitative description of a desired urban future that serves to guide the development of objectives, strategic indicators and targets and the selection of suitable measures throughout the SUMP process. It usually has a long-term horizon - that can even go beyond the timeframe of the SUMP, envisioning situations in 20-30 years.

Checklist

- ✔ Stakeholder group for vision development established.
- ✔ Citizens actively involved in vision building process.
- ✔ First draft of vision developed and discussed with citizens and decision makers.
- ✔ Stakeholder agreement on final draft of vision.
- ✔ Vision outcomes documented.

Future search workshop

There are many formats to involve stakeholders and citizens in the visioning process. One of them is a Future Search Workshop. The three-day workshop is designed to bring all important stakeholders together to create a common ground. In a condensed process of 17 hours, participants work mostly in small groups to co-create a vision. Ideally, you should gather a diverse group of around 50 to 60 stakeholders, including decision makers, planners, researchers, and representatives of all important groups.

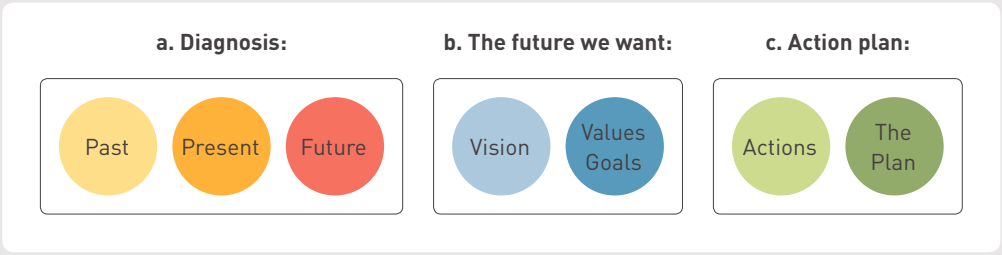
A Future Search Workshop is typically built around three themes:

a. Diagnosis: Take a look back in time to analyse how the current mobility situation has developed. Then look to the future by exploring structural trends that are likely to influence mobility patterns in the future.

b. The future we want: Define the ideal future situation and share these amongst the other participants. Common ground is sought and principles of actions to reach the desired future are outlined. Any differences and disagreements are also collected.

c. Action plan: In the final step of the process, the focus is put on the formulation of concrete projects and actions, based on the visions developed in the previous phase.

Figure 22: The three themes of a Future Search Workshop (*Source: Adell, E., Ljungberg, C., 2014, The Poly-SUMP Methodology, p. 21)*

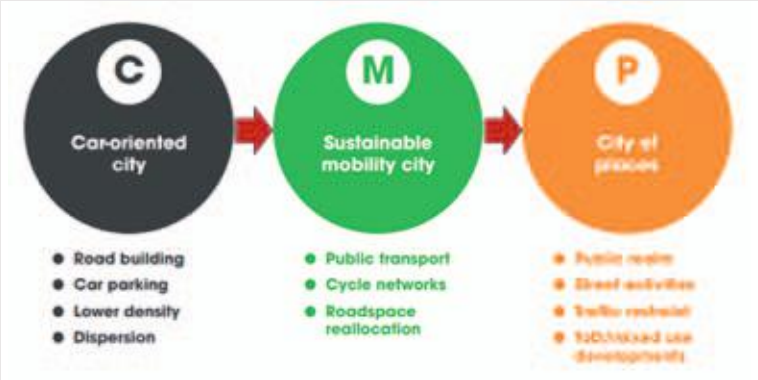


For more information, see the Poly-SUMP Guidelines and the Practical guide on running a Future Search Workshop: *www.poly-sump.eu/tools*

Towards cities of places

The CREATE project has studied city authorities' policy perspectives in the past 50 to 60 years. Historically, they identified three distinct visions. In most Western European cities, these perspectives have broadly followed a three-stage sequential process: what begins as a car-oriented city becomes a sustainable mobility city and then later a city of places. In practice, the shift is much less clear-cut, with overlaps and sometimes short term reversals of policy following an election. The three stages usually also co-exist in a city at the same point in time, but in different parts of the urban area. Place-oriented policies tend to start in the central areas and then spread outwards towards the suburbs, where car-oriented perspectives dominate longer. While the exact timeline can be complex and varies from city to city, it is clear that there is a general trend towards place-based visions.

Figure 23: Urban mobility visions with their typical types of policy measures



Typical objectives of place based visions, which may inspire vision building in your city, are to create:

- mobility services that enable everyone to move freely and safely around the area without undue delay, mainly using sustainable modes of transport.
- land-use patterns that support high-frequency and high-quality public transport services on main corridors, and offer sufficient local diversity that residents can walk or cycle to access services that fulfil their daily needs.
- cities that are liveable and provide safe and attractive places (streets, interchanges, etc.) where people can take part in economic, social and community activities.
- successful achievement of wider urban policy objectives, such as regeneration, good public health and wellbeing, and community cohesion.
- governance arrangements that facilitate or support change, such as knowledge and expertise, enforcement mechanisms, integrated transport planning, business models, etc.

Source: Peter Jones et al., 2018, CREATE project summary and recommendations for cities: http://nws.eurocities.eu/MediaShell/media/CREATE-ProjectSummaryReccommendations.pdf

GOOD PRACTICE EXAMPLE

Leuven, Belgium: Widely accepted Leuven Climate Vision

With the expression of the importance to work towards climate neutrality, the signature of the Covenant of Mayors by Leuven's mayor and the initiation of a consultation process, the city of Leuven created the association Leuven Climate Neutral 2030 (or Leuven 2030). This association provides the framework for defining a general long-term vision for the city. The association's membership represents all sectors of society, with the municipality heavily involved in the process as well. The goal of reducing greenhouse gas emissions is also reflected in the local SUMP. It sets targets for doubling the modal share of cycling and public transport and reducing the use of cars in Leuven by 20% by 2030.

Author: Tim Asperges, City of Leuven, collected by Polis
Image: KarlBruninx

GOOD PRACTICE EXAMPLE

Gothenburg, Sweden: A "Vision Zero" approach for road safety

Gothenburg, a city of 570,000 inhabitants, has, along with the rest of Sweden, adopted a long-term "Vision Zero" approach to road deaths and serious injuries. The city's intermediate targets are to reduce the annual number of road deaths from 9 to 3 and the number of serious and moderate injuries from 227 to 75 over the period of 2010-2020. In 1978, Gothenburg had one speed-hump. In 2019, there are around 2500 traffic calming measures, and citizens are asking for more. Traffic calming, together with the separation of active modes of transport from motorised traffic, contributed to the fact that 80% of the injuries sustained on the city's roads do not involve a car.

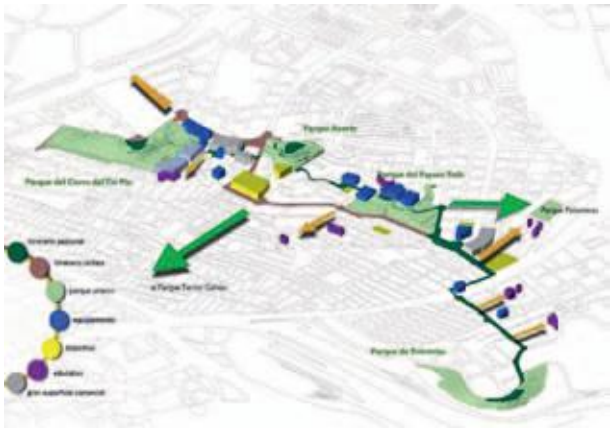
Author: Dirk Engels, Transport & Mobility Leuven, collected by Rupprecht Consult
Image: City of Göteborg, 2007

GOOD PRACTICE EXAMPLE

Madrid, Spain: Defining objectives for the peripheral areas

The new Madrid SUMP has a strong focus on the regeneration of the city's most vulnerable suburbs. The objectives of the plan were defined based on a set of participatory activities with neighbours to collect needs or problems in the different peripheral districts. Furthermore, a full day of structured dialogue was organised with technicians, experts, associations and groups of citizens to present the working strategic lines of the mobility plan, analyse specific problems, and propose possible approaches or solutions. The new SUMP will develop pilot actions to make the action lines of the plan visible in the city, evaluate them, and easily reproduce them in other parts of the city.

Author: Cristina Moliner Hormigos, Madrid City Council, collected by EUROCITIES
Image: Madrid City Council



ACTIVITY 5.2: Agree objectives addressing key problems and all modes

Rationale

To provide strategic guidance, a vision needs to be specified by concrete objectives that indicate the type of change that is desired. Defining objectives means specifying what social, environmental or economic improvements are being targeted, stating exactly what needs to be 'reduced', 'increased' or 'maintained'. Objectives are higher level aims of the Sustainable Urban Mobility Plan (e.g. cut congestion), while measures (e.g. build a tram) are the means to achieve them. This goal-oriented approach contrasts with a planning approach that focuses on the delivery of schemes and infrastructure without reference to higher level objectives. Continued stakeholder involvement is a must to ensure acceptance of the identified priorities for mobility.

Aims

- Specify what the SUMP should achieve, taking into account all aspects of the common vision.
- Formulate clear objectives and strategic priorities that specify the directions for improvement.

Tasks

- Build on the vision by analysing which improvements it outlines. Furthermore, take into account the results of scenario development, in particular when defining the strategic priorities and the areas to focus on to improve the situation.
- Take into account relevant goals at the regional, national and EU level.
- Assess and define the desired improvements together with stakeholders. Prepare and follow up by holding stakeholder workshops and meetings. Agree on a set of strategic objectives for overall themes that reflect the needs of stakeholders and citizens in the urban agglomeration. Not all objectives may be easy to achieve and there may therefore be a need to define the most important objectives.
- Define clear objectives that help to orientate measure selection and design. Specify what should be achieved and when. Objectives usually also include strategic priorities and the areas to focus on to improve the situation. For example, a city might not only set the objective to improve air quality and livability, but already decide to reduce car use or to become a 'city of short distances' to achieve this. These priorities only provide strategic direction (goal-oriented planning), and they should not be too detailed as the exact means are defined only during measure planning (Activity 7.1 and following). The objectives should include an integrated approach to all transport modes, while following a shift towards more sustainable modes.

Activities beyond essential requirements

- Discuss draft objectives with citizens and consider their feedback when defining the final objectives.
- Consider aligning your objectives to those of external funding bodies to make the measures included in the Sustainable Urban Mobility Plan attractive for funding. For example, national environmental agencies may be willing to fund measures if a strong focus is put on energy savings or the reduction of greenhouse gas emissions.
- During the development of the vision and objectives, and throughout the whole planning process, be conflict-sensitive when finding common agreements. If necessary, consider conflict prevention actions to reduce the risk of dispute and to lower tensions among different stakeholders.

What is an 'Objective'?

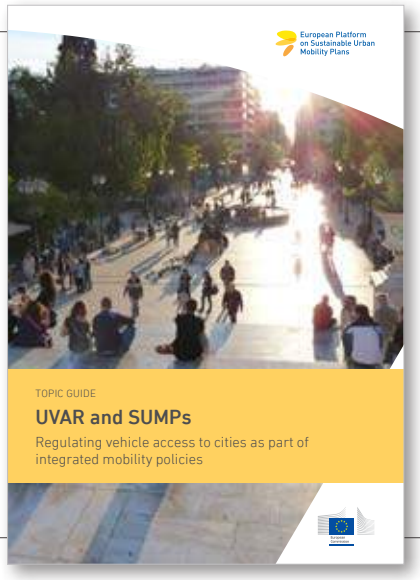
A broad statement describing an improvement that a city is seeking. Objectives specify the directions for improvement and priority areas, but not the means for achieving it.

Timing and coordination

- Builds on the vision (Activity 5.1) and leads to indicators and targets (Step 6).

Checklist

- ✔ Vision reviewed to guide the development of objectives.
- ✔ Draft objectives developed.
- ✔ Draft objectives discussed with key stakeholders.
- ✔ Final set of objectives selected.



Urban Vehicle Access Regulations (UVAR) can show the highest impact when being integrated into a mobility plan. UVARs often combine various measures (e.g. as Low-Emission-Zone, Congestion Charge, Superblocks) to serve a combination of important objectives. Some objectives that can be achieved by implementing UVARs are:

- Improvement in air quality
- Congestion reduction
- Redistribution of road space
- Increased liveability and attractiveness of public spaces
- Preservation of historic town centres
- Noise reduction

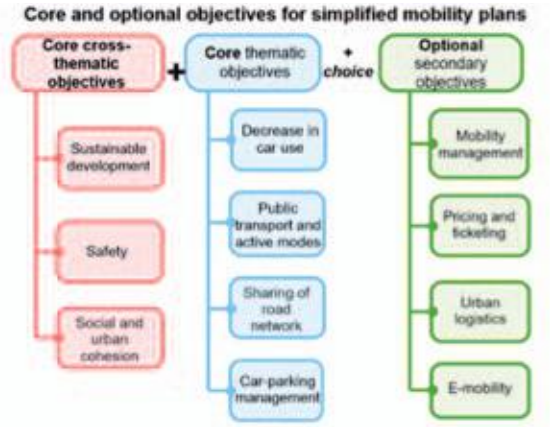
Additional objectives that can be achieved and related UVAR measures can be found in the Topic Guide **Urban Vehicle Access Regulations and Sustainable Urban Mobility Planning**.

GOOD PRACTICE EXAMPLE

France: Mandatory objectives adapted to cities of different size

In France, SUMPs (PDU – Plan de déplacements urbains) are compulsory for urban areas with a population of over 100,000 inhabitants. These SUMPs are assigned eleven mandatory objectives. Many smaller cities voluntarily develop either a full PDU or a simplified plan. Therefore, dedicated guidelines were developed to make a distinction between core objectives, which are to be integrated by all (mandatory or voluntary) SUMPs, and optional objectives, which a smaller city could choose to integrate, depending on its own ambition, when developing a simplified plan. Ongoing discussions in France are likely to lead to a legal but flexible definition of the simplified mobility plan after 2020.

Author: Thomas Durlin, Cerema, collected by Rupprecht Consult
Image: Cerema



GOOD PRACTICE EXAMPLE

London, United Kingdom: Objectives for healthy streets

The Healthy Streets Approach puts people, and their health, at the heart of decision making. The Healthy Streets Approach uses 10 evidence-based indicators of what makes streets attractive places. Working towards these will help to create a healthier city, in which all people are included and can live well and in which inequalities are reduced. To ensure that the approach is successful, it is important to embed it in overarching strategies and to make it evidence-based. It is also necessary to involve communities and stakeholders to gather political, community and organisational support.

Author: Chris Billington, Transport for London, collected by Walk 21
Image: Transport for London

GOOD PRACTICE EXAMPLE

Munich, Germany: Extensive stakeholder workshops for shaping the objectives

To evaluate and discuss Munich's Transport Development Plan and its objectives, stakeholders were given the opportunity to get involved during numerous public events. This included a mobility workshop that drew approx. 100 attendees to share ideas on future mobility. The ideas were incorporated into the plan and thus set the direction for transport planning. A draft document was also circulated and allowed stakeholders to provide suggestions and highlight issues. Involving stakeholders in the process not only enabled Munich to find mobility solutions for everyone, but to also realise these solutions later. The city aims to increase the number of routes travelled by foot, bicycle and public transport and to quiet traffic in inner-city residential neighbourhoods

Author: : City of Munich, collected by ICLEI
Image: Evisco / LHM

STEP 6:
Set indicators and targets

6.1 Identify indicators for all objectives
6.2 Agree measurable targets

The vision and the objectives provide an important qualitative description of the desired future and intended type of change. However, this alone is not sufficient. In order to make these changes measurable, a suitable set of strategic indicators and targets needs to be selected. The main aim is to define a set that is feasible, ambitious and mutually consistent, allowing those involved to monitor progress towards achievement of all objectives without requiring unrealistic amounts of new data collection.

ACTIVITY 6.1: Identify indicators for all objectives

Rationale

The selection and definition of strategic indicators for all objectives is an essential step for the further process of setting targets and monitoring progress. It is important to first identify the indicators to ensure that targets will be selected that you are able to monitor with reasonable effort. A systematic approach helps to identify a manageable set of core indicators that reflect the objectives well. Working with just a few indicators on the strategic level may prove more effective, especially for 'newcomer cities' that have limited resources, data or experience when developing a Sustainable Urban Mobility Plan. While indicators for monitoring measures will be developed later (see Activity 7.3), the strategic indicators for measuring overall SUMP performance will be selected here, together with the respective measurement methods and corresponding data sources that were identified during the preparation phase (see Activity 3.1).

Aims

- Define a set of strategic indicators that allow for the monitoring of progress made towards the achievement of each of the objectives.
- Select easily measurable and understandable indicators by taking into account existing data sources (see Activity 3.1) and standard indicators.

Tasks

- Specify your objectives and identify which main aspects need to be monitored.
- Develop a small number of quantitative and qualitative 'core' indicators that are easily measurable, understandable, and clearly linked to each of the objectives

- Use standard indicators that are already well-defined and have existing knowledge on how to measure and analyse them. This enables benchmarking against other cities or comparison to national/international statistics.

- Focus on impact indicators (also called outcome indicators) that directly measure the achievement of your sustainability objectives. Consider also indicators from related areas, such as economy, environment, health and social, not only transport indicators.

- Include a few indicators that are particularly useful for communication with decision makers and the public. These indicators should be easy to understand and interesting for a wider public (e.g. number of people seriously injured or killed in traffic; number of locations exceeding air pollution limits; or jobs created).

What is an 'Indicator'?

An indicator is a clearly-defined data set used to monitor progress in achieving a particular objective or target.

Strategic indicators enable measurement of the overall performance of a SUMP and therefore provide a basis for its evaluation. On a more detailed level, measure indicators allow for monitoring the performance of individual measures.

- Evaluate the already available data and identified data sources (see Activities 3.1 and 3.2), identify gaps in being able to measure the intended outcomes, and, if necessary, develop or identify new data sources (e.g. survey data, quantitative data from automatic measurements).

- Before you start developing your own strategic indicators, discuss with key stakeholders and other organisations in your area, as they might already have adopted some. Progress is much easier to monitor if indicators that have already been implemented and accepted are used.
- Develop a clear definition for each indicator, the reporting format, and an outline of how data is measured and the indicator calculated from the data.

Activities beyond essential requirements

- Coordinate with relevant local and regional stakeholders on regional indicators.

- Make data available online so that external people understand the severity of problems.

Timing and coordination

- Directly based on the objectives defined in Activity 5.2, leading on to the setting of targets in Activity 6.2.
- Goes hand-in-hand with Step 3, during which data and data sources are identified and analysed and the baseline for the availability of data for indicator identifications are set.

- Developed strategic indicator set and monitoring arrangements to be taken into account when planning the monitoring of the individual measures (see Activity 7.3).

Checklist

✔ Quantitative and qualitative outcome indicators identified for all objectives, including indicators used by other organisations in your area.

✔ Existing and new data sources evaluated.

✔ Set of strategic core indicators defined, including reporting format and measuring method.

Figure 24: Overview of important quantifiable strategic impact indicators, based on the European sustainable urban mobility indicator set (SUMI) and the international standard (MobiliseYourCity)

Objective	Indicator	Definition
Road Safety	Fatalities by all transport accidents in the urban area on a yearly basis.	Number of deaths within 30 days after the traffic accident as a corollary of the event per annum caused by urban transport per 100,000 inhabitants of the urban area.
Access to mobility services	Share of population with appropriate access to mobility services (public transport).	Percentage of population with appropriate access to public transport (bus, tram, metro, train).
Emissions of greenhouse gases (GHG)	Well-to-wheel GHG emissions by all urban area passenger and freight transport modes.	Greenhouse gas emission [tonnes CO2(eq.)/cap. per year].
Air quality	Air pollutant emissions of all passenger and freight transport modes (exhaust and non-exhaust for PM2.5) in the urban area.	Emission index (kg PM2.5 eq. per capita per year).

Additional urban mobility indicators:

- Affordability of public transport for the lowest income group
- Accessibility for mobility-impaired groups
- Noise hindrance
- Congestion and delays
- Energy efficiency
- Opportunity for active mobility
- Multimodal integration
- Satisfaction with public transport
- Traffic safety for active modes

Source: European sustainable urban mobility indicator set (SUMI)
https://ec.europa.eu/transport/themes/urban/urban_mobility/sumi_en

You can find more tools to support you in selecting indicators in the CIVITAS Tool Inventory:
https://civitas.eu/tool-inventory/indicator-sets

More general information on monitoring can be found in the CH4LLENGE Monitoring and evaluation manual:
https://www.eltis.org/resources/tools/sump-monitoring-evaluation-kit

GOOD PRACTICE EXAMPLE

Milton Keynes, United Kingdom: Easily measurable and available set of strategic indicators

To assess the overall performance of the Sustainable Urban Mobility Plan, the city council has selected a number of indicators, including e.g. road network condition, average journey time, air quality and road safety. The decision to select these indicators was made as to allow for a correct assessment of the impact of the SUMP, and are easily measurable as well as available or easily accessible. Milton Keynes Council advises to define a clear set of SMART (specific, measurable, achievable, relevant, time-bound) objectives for the SUMP, which helps to later select indicators aligned with the SUMP objectives. Based on experience, the SUMP team also advises to use new technologies and indicator methodologies that have been applied in other cities.

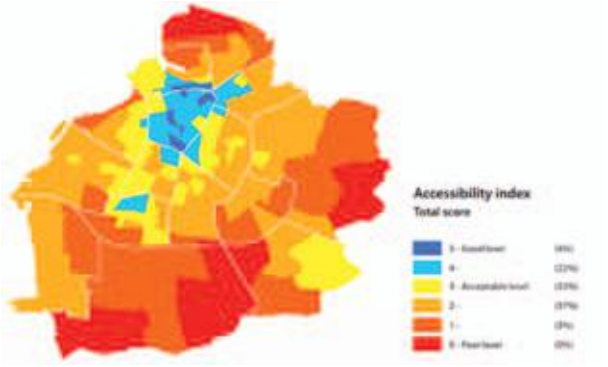
Author: James Povey, Milton Keynes Council, collected by Polis
Image: Milton Keynes Council

GOOD PRACTICE EXAMPLE

Malmö, Sweden: The Accessibility index as an indicator example

Malmö developed, based on relevant measurements, a normative Accessibility Index that can assess the impact of measures undertaken und uses maps to illustrate sustainable accessibility. The Accessibility Index can function as support for decisions in planning and in weighing different investments and actions. It also allows for making comparisons between different areas and population groups. The Accessibility Index can constitute support for following-up on how accessibility in the transport system develops over time and can thus serve as one of several indicators for how well SUMP goals are reached.

Author: Andreas Nordin, City of Malmö, collected by Rupprecht Consult
Image: Sustainable Urban Mobility Plan Malmö



ACTIVITY 6.2: Agree measurable targets

Rationale

Targets represent a concrete form of commitment in a Sustainable Urban Mobility Plan, stating what you want to achieve and by when. Setting clear targets has two main purposes. Firstly, it provides transparency and clear guidance as to how you want to change transport and mobility in the city. Secondly, it allows cities to understand the extent to which objectives are to be achieved. If strategic core indicators and targets are well-defined, decision makers and the public will be able to easily understand them and they can be an incentive to achieve better results.

Aims

- Decide on a set of measurable targets for each of the agreed-upon strategic indicators (see Activity 6.1), covering all of your objectives.
- Make sure that the agreed-upon targets can assess the achievement of desired outcomes.
- Express feasible, but ambitious targets.
- Ensure that the targets are mutually compatible.

SMART Targets

- **Specific** – precisely described using quantitative and/or qualitative terms that are understood by all stakeholders.
- **Measurable** – the current situation has been measured and is known. Resources are also in place to measure the changes (qualitative and quantitative) that occur.
- **Achievable** – based on the technical, operational and financial competencies available and the stakeholder agreements/ commitments that have been made.
- **Relevant** – stresses the importance of choosing targets that matter, drive urban mobility forward, and support or are in alignment with other targets.
- **Time-bound** – key dates for the achievement of the target are clearly defined.

Tasks

- Set targets for each of the strategic core indicators (selected in Activity 6.1) to allow for the monitoring of progress towards the achievement of objectives. Targets should be SMART: specific, measurable, achievable, realistic, and time-bound. Be ambitious, but realistic, assessing what can be achieved.
    - Start by defining targets for the strategic indicators, which directly measure the desired extent of achievement of each of the sustainability objectives (e.g. greenhouse gas emissions from transport reduced by 30% within 10 years). Furthermore, include intermediate targets that represent milestones towards the long-term targets (e.g. greenhouse gas emissions from transport reduced by 15% within 5 years).
    - Then set targets for the core transport activity indicators, which measure the extent to which the transport system has improved (e.g. share of sustainable transport modes above 70% within 10 years; or number of kilometres of high-quality bus lanes implemented within the next 10 years).
    - Aim to avoid inconsistencies between indicators.
- Involve key stakeholders in target setting, as this will ensure that targets are widely supported and realistic. However, be careful not to let lobby groups block ambitious change that serves the majority of people. Prepare, conduct, and follow-up working group meetings.
- Make the targets a part of the SUMP document to formally adopt them (see Activity 9.1).

Details on the tasks

Be ambitious but realistic!
In many cities, targets for urban transport and mobility reflect wishful thinking rather than what can realistically be achieved. This is counterproductive. While it is good to be ambitious, you also need to assess honestly what can be achieved considering the given resources and expertise.

Modal Split

Definition: The modal split can be defined as the share of people using a particular mode of transport within the overall transport usage in an urban area. The modal split of each of the different modes of transport is typically displayed as a percentage value. It can be calculated for passenger and freight transport, based on different units (e.g., number of trips, volume, weight, passenger-km or tonne-km), but it can also be calculated for different geographic areas (e.g. the functional urban area, city center, district).[49]

'Show me your modal split - and I know your city' might sound exaggerated, but in some ways it might be true. Cities want to know how the people within the city get around, not only to get a picture of the transport system. Therefore, the first approach is to collect data and then calculate and take a look at the modal split. This is what numerous cities do worldwide, which makes having a global target for modal split highly valuable for a shift towards sustainable modes. The modal split might not be clearly defined or consistently measured in every city, but it still acts as a globally-understandable value that is of high significance. On the one hand, it plays an important role for defining the baseline of the transport system of a city. On the other hand, the modal split supports setting ambitious targets for a shift in the current value, and to also compare it with other cities. For example, London has set the ambitious target of having 80% of all trips by residents to be made using sustainable modes of transport (walking, cycling and public transport) by 2041.

In the context of Sustainable Urban Mobility Planning, the modal split can be a part of the analysis of the current mobility situation, but it can also represent one of the major targets used to evaluate progress made towards sustainable mobility. For example, if you see an increase in cycling trips, you did not only come closer to achieving the overall vision of a bicycle-friendly city, but you can also measure the progress of reaching your target of 10% higher bicycle share. The modal split can be seen as an overarching target that is recommended to be integrated in the SUMP. The modal split not only makes it possible for you to compare changes in the transport system over time, but it also allows you to measure specific trip purposes or even focus on different citizen groups, thereby allowing you to observe mobility behaviour based on gender, age, etc.

Activities beyond essential requirements

- Use localised targets within the urban agglomeration (such as for the city centre, industrial or commercial areas, individual neighbourhoods, etc.) to take into account locally varying transport behaviour patterns and travel opportunities.

Timing and coordination

- Directly based on strategic indicators identified in Activity 6.1.
- Targets help you to define and achieve the desired performance of the SUMP (see Activities 11.1 and 12.1).

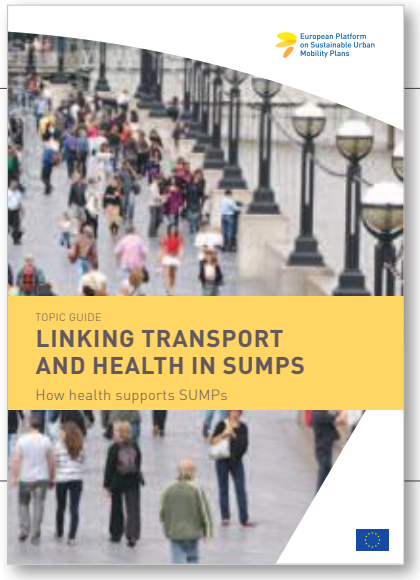
Checklist

- ✔ Key stakeholders involved in target setting.
- ✔ Suitable set of locally achievable targets developed.

What is a 'Target'?

Targets are the expression of an aimed-for value of a strategic indicator. More specifically, they define what should be achieved, in comparison to the current situation, by a specific year. Targets should be 'SMART' (Specific, Measurable, Achievable, Relevant, Time-bound).

[49] Eltis SUMP glossary, 2015, *www.eltis.org/glossary*



A good SUMP often includes targets related to public health, which can be closely linked to targets about road safety, air and noise pollution, or the increased use of active modes of transport. One example of a health-related targets comes from the SUMP of Vienna (STEP2025):

"The proportion of the Vienna population that undertakes 30 minutes' physical activity as part of their daily travel will increase from 23% in 2013 to 30% in 2025."

More information on how public health fits in with Sustainable Urban Mobility Planning can be found in the Topic Guide on **Linking transport and health in Sustainable Urban Mobility Planning**.

GOOD PRACTICE EXAMPLE

Dresden, Germany: Strategic targets developed by intensive round table process

The 2025 targets for mobility and transport development in Dresden were elaborated by stakeholders in an intensive roundtable process. The SUMP roundtable created a consensual paper of transport development targets, agreed by all stakeholders and adopted with little modification by the City Council in March 2011. The selected targets formed the basis for SUMP elaboration. For both SUMP elaboration and implementation, it was crucial to have politically adopted targets in order to plan with certainty and ensure a high level of acceptance. The initial SUMP evaluation in 2018 showed that for further improvement in the future, the SUMP should include more targets.

Author: Kerstin Burggraf, City of Dresden, collected by EUROCITIES
Image: Joe Breuer, pixabay.com

GOOD PRACTICE EXAMPLE

Örebro, Sweden: Three key targets for traffic development

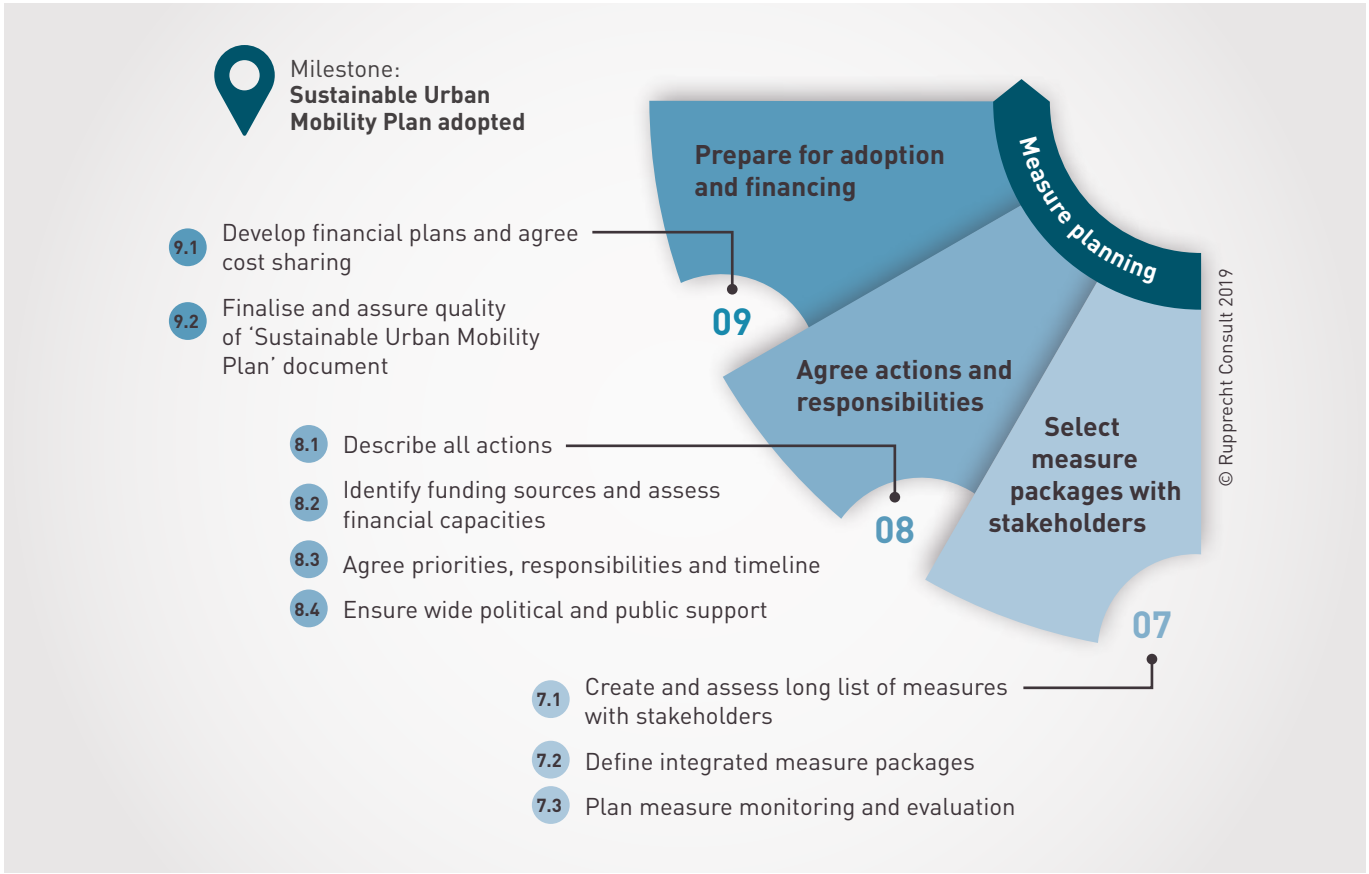
During the SUMP process, Örebro set three targets for traffic development by the year 2020: (1) to increase the share of cycling, walking and public transport to 60% of all trips (from 44% in 2011), (2) to decrease the absolute numbers of fossil fuel-driven cars and (3) to improve the travel time quota between car, bus and cycling. In the process of setting the targets, one step was to reflect on how to monitor them. Örebro considered which indicators the city already measures and reports annually, and which indicators could be provided by the national statistics office. As a lesson learned, the key success factor is to choose targets that can be relatively easily evaluated and/or evaluated with a certain interval according to the ordinary monitoring of traffic indicators.

Author: : Lovisa Blomér, City of Örebro, collected by UBC
Image: Örebro Municipality

Milestone: Vision, objectives and targets agreed

With reaching the third milestone - halfway through the planning cycle - you have completed the strategic phase of your Sustainable Urban Mobility Plan. Many important decisions regarding the future vision, the city's objectives, and the strategic indicators and targets have been taken, which together form the strategic priorities of the SUMP. These results can now be consolidated in a summary document, which will provide a stable guiding framework for the measure planning phase. Before entering the next phase, you should consider getting feedback from citizens on your strategic priorities once more, who will have already provided important input during the discussion of scenarios, creation of a vision, and, sometimes, also the definition of objectives. This validates your strategic priorities and ensures public support and acceptance. If possible, you should also get the strategic priorities adopted by decision makers (e.g. in the local councils) to establish an even more solid base for the measure phase.

PHASE 3: Measure planning



With the third phase, the planning process moves from the strategic to the operational level. This phase focuses on measures to achieve the agreed objectives and targets. Here the Sustainable Urban Mobility Plan is finalised and its implementation prepared by answering the following questions:

What will we do concretely?

Create a longlist of measures and assess their effectiveness and feasibility to select those that best contribute to meeting your objectives and its targets. Bundle measures into integrated packages, discuss them with citizens and stakeholders and assess them in detail to validate your selection. Plan monitoring and evaluation for each measure.

What will it take and who will do what?

Break measure packages down into actionable tasks (or 'actions') and describe them in detail, including their estimated costs, interdependencies and risks. Identify internal and external financing instruments and funding sources for all actions. On that basis, agree clear responsibilities, implementation priorities and timelines for each action.

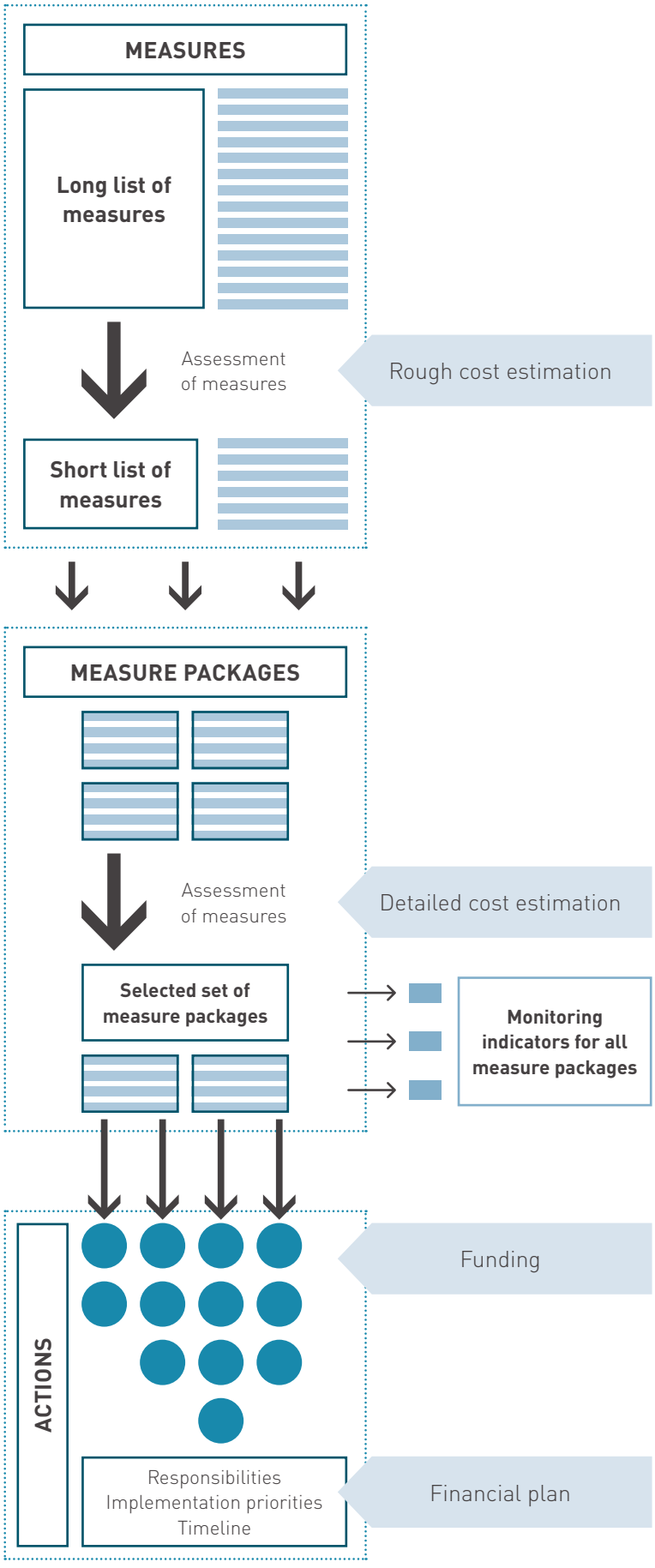
At this stage it is essential to recruit political and public support for the actions, as for example building projects can be controversial even if their related objectives and measures are supported by a majority.

Are we ready to go?

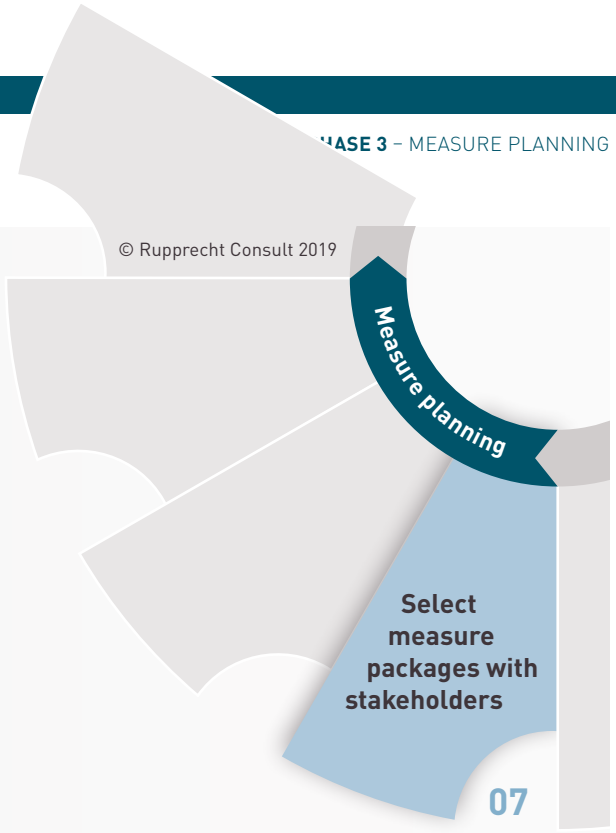
Many authors may have contributed to the various parts of the Sustainable Urban Mobility Plan. Now it is time to finalise the document and check its quality. Based on your organisation's conventions, a detailed financial scheme can be included in the plan itself or is part of a separate process. In either case, you should agree on a budget for each prioritised action and long-term arrangements for the distribution of costs and revenues among all involved organisations before SUMP adoption.

The most important milestone of the planning process concludes the measure planning phase: The Sustainable Urban Mobility Plan is adopted by the decision makers of the competent political body.

Figure 25:
Overview of the main steps (measure assessment, measure packaging, action planning) of Phase 3



STEP 7:
Select measure packages with stakeholders



7.1 Create and assess long list of measures with stakeholders

7.2 Define integrated measure packages

7.3 Plan measure monitoring and evaluation

The development of effective measure packages is at the core of Sustainable Urban Mobility Planning. Only well-selected measures will ensure that the defined objectives and targets are met. The selection should build on discussion with key stakeholders, transparently assess measures for feasibility and contribution to the objectives, and consider experience from other places with similar policies. In order to maximise synergies and help overcome barriers, integrated measure packages should be defined. Planning evaluation and monitoring of each measure (or measure package) early makes sure it is considered when responsibilities and budgets are discussed later on.

ACTIVITY 7.1: Create and assess long list of measures with stakeholders

Rationale

The assessment and selection of measures aims to identify the most suitable and cost effective measures to achieve your vision and objectives. In order not to forget relevant options, a comprehensive longlist should be created based on your own expert knowledge, the ideas of stakeholders and the public, the experience of practitioners in other cities, and databases of measures and measure types.

To achieve a set of effective measures that realistically fits with the available resources and local circumstances, a transparent assessment of all options on the long list needs to be conducted. The assessment will be guided not only by effectiveness in terms of contribution to objectives, but also by acceptability and value for money. Especially in times of tight budgets for urban transport and mobility, it is crucial to get the most impact possible for the resources spent.

Aims

- Identify a wide variety of measure options that would contribute to your vision, objectives and targets. Learn from experienced cities and practitioners to consider all relevant options.
- Select the most promising measures for your local context.
- Ensure efficient use of available resources and avoid selection of financially unrealistic measures.
- Conduct a transparent process that provides convincing evidence for the effectiveness and feasibility of selected measures.

What is a 'Measure'?

A measure is a broad type of action that is implemented to contribute to the achievement of one or more policy objectives in a SUMP, or to overcome one or more identified problems. Examples range from land use, infrastructure, regulation, management and service measures to behavioural, information provision and pricing measures.

Tasks

Identification of measures (option generation)

- Produce a systematic overview of measures that are already planned or implemented, based on sectoral mobility plans (e.g. on walking, cycling, public transport, road transport, parking, freight) as well as plans from other relevant policy areas (e.g. land use, energy, environment, economic development, social inclusion, health and safety).
- Create a long list of new potential measures that connect to your objectives and vision. Consider new and innovative ideas. Also include measures that would be implemented by the private sector. Use databases of measures and lists of measure types to identify measure gaps and to be inspired (see Tool section below).
- Involve stakeholders in drawing up the long list of measures.
- Be sure to include a mixture of investment, operational and organisational measures for all relevant transport modes in the long list. Also aim for a mix of measures with effects at the short, middle and long term.
- Learn from others' experience. Identify measures that have already been successfully implemented elsewhere and get in touch with their planners. This avoids 're-inventing the wheel' and making costly mistakes that others may already have learnt from.

Databases of urban mobility measures

There is a wide range of possible measures. This means that identifying the most suitable measures for your local context will require some desk work and talking to members of the project team as well as stakeholders.

You may want to consult online databases and documents that provide an overview of possible measures that may match your objectives:

- SUMPs-UP Manuals on the integration of measures and measure packages in a SUMP (three versions for beginner, intermediate and advanced cities), including a long list of over 100 measures for 25 categories: *http://sumps-up.eu/publications-and-reports/*
- CH4LLENGE Measure selection manual - Selecting the most effective packages of measures for Sustainable Urban Mobility Plans: *www.eltis.org/resources/tools/sump-measure-selection-kit*
- EPOMM website for details on mobility management, e.g. the MaxExplorer helping you to identify the most suitable 'soft measures': *www.epomm.eu/index.php?id=2745*
- Vital Nodes Toolbox with Appraisal framework, Mapping and spatial design, Good Practices and Fingerprint: *https://vitalnodes.eu/tools/*
- Complementary SUMP guidance, Annex D: The different guides include a range of recommended measures for specific topics or contexts.

On the European level, the two most encompassing resources for implementations of urban mobility measures (and packages of measures) in cities throughout Europe are the case study sections of Eltis (*www.eltis.org*), i.e. the European Commission's urban mobility portal, as well as the EC's website of the CiViTAS Initiative for cleaner and better transport in cities (*www.civitas.eu*).

image © Ralf Brand

Tools for measure identification

Figure 26: Examples of measure areas to address different overall challenges common in urban mobility planning. A challenge can be addressed with a wide range of different measures. The different measure areas displayed in the pie-charts can be used as a control to see if a city uses all relevant areas to address a certain challenge (Sundberg, R., 2018. SUMPs-Up Manual on the integration of measures and measure packages - Step up, p. 9).

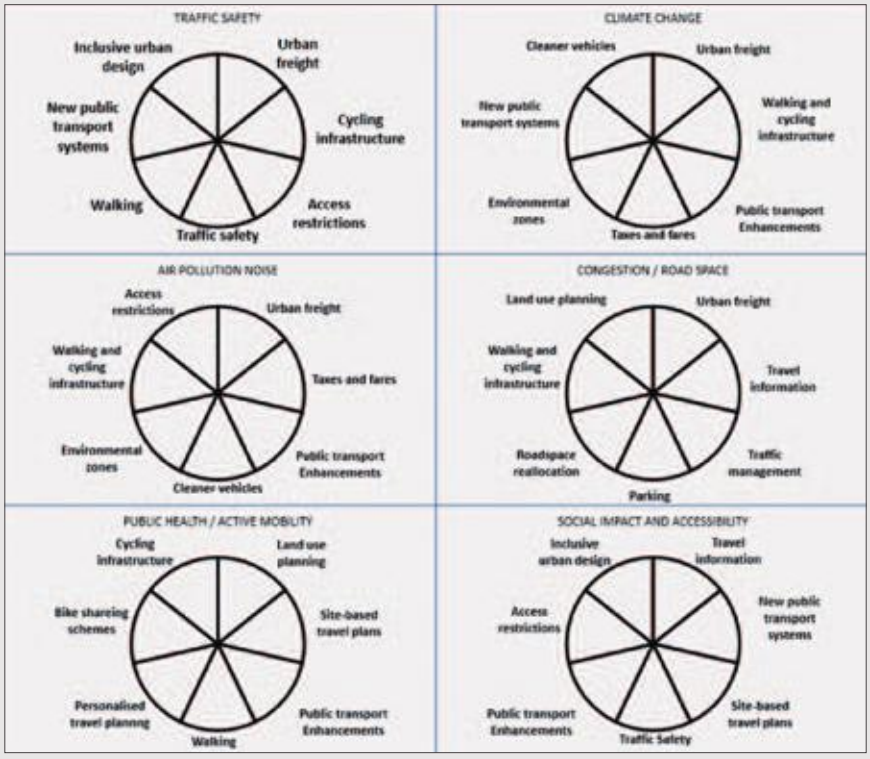
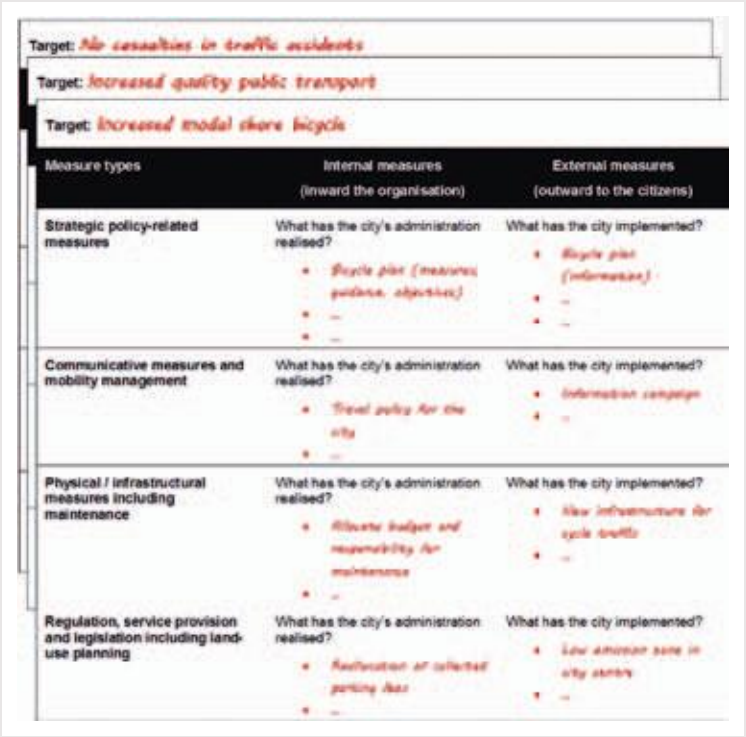


Figure 27: Example of a structure to get an overview of the coverage of different types of SUMP measures and the balance of internal and external measures (Sundberg, R., 2018. SUMPs-Up Manual on the integration of measures and measure packages - Step up, p. 13.)



Target: Air casualties in traffic accidents

Target: Increased quality public transport

Target: Increased modal share bicycle

Measure types	Internal measures (inward the organisation)	External measures (outward to the citizens)
Strategic policy-related measures	What has the city's administration realised? • Bicycle plan (measures, guidance, objectives) • ... • ...	What has the city implemented? • Bicycle plan (information) • ... • ...
Communicative measures and mobility management	What has the city's administration realised? • Travel policy for the city • ...	What has the city implemented? • Information campaign • ...
Physical / infrastructural measures including maintenance	What has the city's administration realised? • Allocate budget and responsibility for maintenance • ...	What has the city implemented? • New infrastructure for cycle traffic • ...
Regulation, service provision and legislation including land-use planning	What has the city's administration realised? • Reallocation of collected parking fees • ...	What has the city implemented? • Low emission zone in city centre • ...

Online tools supporting measure identification and appraisal

Urban Transport Roadmaps
The Urban Transport Roadmaps tool allows users to explore and identify appropriate sustainable transport policy measures, as well as to quantify the transport, environmental and economic impacts of these measures: *www.urban-transport-roadmaps.eu*

KonSULT Measure Option Generator
This online tool allows users to quickly identify those policy measures that fit their situation. Users specify their objectives or problems and the option generator provides a ranked list of 64 measures, with links to detailed measure descriptions: *www.konsult.leeds.ac.uk*

Assessment of measures (option appraisal)

- Conduct an appraisal of all measures on your long list to identify the most suitable and effective ones for your SUMP.
    - Consider the likely impact of measures on the performance of the transport system (by changing the demand of travel, by changing the supply of transport facilities, or by changing the cost of provision and operation of the transport system).
    - Assess for each measure the likely performance against each of the city's objectives (effectiveness), the likelihood of being approved (acceptability), and implications for the city's budget (value for money). Consider different assessment methods and decide which one to use. The choice depends on your experience and available resources and may include both qualitative and quantitative approaches.
        - A relatively quick approach used by many cities is expert ratings of multiple criteria (simplified multi-criteria analysis), for example in a series of workshops. To follow this approach, a group of qualified experts should be gathered (e.g. the SUMP 'steering group' or 'core team'). After presenting a measure, each expert rates individually, scores are discussed as a group, experts can amend their ratings but do not have to agree on a common score, and finally the averages are calculated to compare and prioritise measures (see Tool section below for an example of how to organise such a rating method). For a more qualified average, it can be useful to weight the ratings of experts depending on their field of expertise (e.g. environmental experts get a higher weighting in the air quality rating, financial experts in the cost rating, etc.).
        - Online tools that can support this include, for example, the KonSULT Measure Option Generator and the Urban Transport Roadmaps tool, which can both inform impact appraisal with impartial estimates of expected effectiveness (see Tool section below).
    - Assess the proposed measures with an eye to their realistic and timely implementation with the given resources (pre-feasibility check). Ensure that all costs and benefits – not just those that can be easily measured or valued – are taken into account.
- Based on the results of your assessment, reduce your long list of measures to a short list with the most promising measures.
    - Ensure that both passenger and freight transport flows are considered.
    - Ensure that all modes are equally considered and compared in assessing costs and benefits.
- Provide a more detailed specification for the measures on your short list. Consider where and when the measure should be implemented, and who will use it or be affected by it.
- Prepare detailed cost-estimates of the shortlisted measures that include estimates for all relevant categories: civil works/construction; survey, investigation, design, and mapping; institutional development/capacity development; stakeholder engagement and communications; equipment, vehicles, and materials; consulting services; operation and maintenance; land acquisition; incremental administrative costs; initial working capital, and; taxes and duties. Inadequate cost-estimates are often considered a significant risk in infrastructure investment appraisals.
- Involve other departments (including the financial department) early on and provide benefits for participating. That will help you to define responsibilities and cost sharing later on (see Activity 8.3, 9.2).
- Identify which measures require additional or external technical support for feasibility, technical or market studies.

Tools for measure appraisal

Example table showing how the rating of listed measures can be structured. The rating can for example be done by experts from the city in a workshop:

Figure 28: Example of an impact assessment of measures. Effectiveness assessment scale from -2 to 2; -2 = the measure imposes a clear risk on the achievement of the objective, 0 = the measure has a neutral effect, 2 = the measure clearly contributes positively. Assessment scale for acceptability and value for money from 0 to 3 (based on Mattson, C., 2018. SUMPs-Up Standards for developing a SUMP Action Plan, p. 9).

MEASURE / MEASURE PACKAGE	SUMP VISION & TARGETS			PRIORITY LEVEL (SUMMARY OF SUMP VISION)	EXPECTED OUTCOME	
	Increase of traffic safety	Increase of walking, cycling and public transport	Decrease of private car traffic		... if measure is implemented	... if measure is not implemented
Segregated Cycle Facilities	2	2	1	5 (2+2+1)	Better infrastructure for cyclists. More people using the bicycle for everyday trips.	No improvements for cyclist. In the best of scenarios that means no decrease of people using the bicycle.
Develop mobility management plan	0	2	2	4 (0+2+2)	A shift towards more use of sustainable transportation for everyday trips. Increased use of existing infrastructure for sustainable modes.	Business as usual in modal share. No increase of sustainable modes.
Improve pedestrian crossings on prioritised routes	2	2	0	4 (2+2+0)	Increased safety and security for pedestrians. More people walking for everyday trips.	Status quo in number of injuries of pedestrians. Low perceived safety can lead to less people moving by foot.
...						

Activities beyond essential requirements

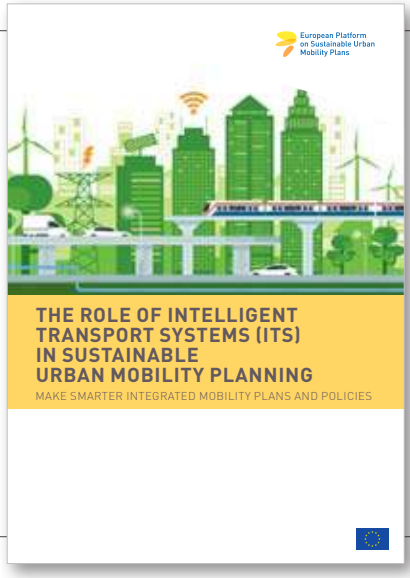
- Co-identify measures with key stakeholders, involving them closely into option generation and appraisal.
- Ask the public for measure ideas, for example in an online format, to inspire your long list.
- Search for good examples beyond your own city and country.
- Invite practitioners from other places to your city for advice.
- Take your local decision makers on a site visit to a city that has successfully implemented one of your key measures to increase its acceptability.

Timing and coordination

- After vision, objectives and targets have been defined.
- First identification, then assessment of measures.

Checklist

- ✔ Implemented and planned measures analysed.
- ✔ Long list of potential measures created.
- ✔ Exchange of experiences established with planners that have implemented interesting measures in other cities or regions.
- ✔ Suitable measures assessed with an eye to effectiveness (in terms of contribution to objectives), acceptability and value for money.
- ✔ Most promising measures selected for short list.
- ✔ Detailed specifications and cost estimates for shortlisted measures available.



Intelligent Transport Systems (ITS) offer a range of measures for your SUMP. However, implementing such technologies should not be seen as a goal in themselves, but rather as a means to clearly contribute to achieving one or several of your SUMP objectives. In many cases, ITS is the enabling technology for other measures, which makes them possible or more effective (e.g. electronic monitoring of access restrictions for certain vehicles as part of the implementation of Low Traffic Zones). Other examples of how to use ITS include: systems that provide multimodal real time information to facilitate multimodal travel; environmentally friendly traffic and intersection control or corridor management (e.g. public transport priority at intersections); multimodal integrated payment and booking and e-ticketing; automatic road user charging; intelligent parking management and information; reactive and predictive traffic management and control, including the use of floating vehicle data; fleet management systems.

More about the link of ITS and SUMP can be found in the Practitioner Briefing **The role of Intelligent Transport Systems (ITS) in Sustainable Urban Mobility Planning**.

GOOD PRACTICE EXAMPLE

Porto, Portugal: Classification of measures for the measure selection in different municipalities

The Sustainable Urban Mobility Action Plan (PAMUS) for the Metropolitan Area of Porto (AMP) covers 17 municipalities. To decide which measures to implement in individual municipalities and the metropolitan area as a whole, the measures were divided into nine typologies. To evaluate the measure long list according to the typologies, a cross-matrix analysis of the typologies and objectives was carried out. As the Action Plan was developed within a period of six months, there was no time to involve citizens in measure selection. However, the PAMUS integrated input from a working group comprised of politicians and technicians from the municipalities. This working group helped to narrow down the initial long list of measures.

Objetivo Estratégico	Modos suaves	Integração multimodal (bilhética)	Interfaces	Corredores BUS, BRT e LRT	Sistemas de informação aos utilizadores	Sistemas de gestão de tráfego	Soluções DRT	Multi tipologia
1	✓✓✓	✓	✓✓	✓✓	✓	✓	✓✓✓	✓✓✓
2	✓✓	✓✓	✓✓✓	✓✓✓	✓	✓	✓✓✓	✓✓✓
3		✓✓✓	✓✓✓	✓✓✓	✓✓	✓	✓✓✓	✓✓
4	✓✓	✓✓	✓	✓✓	✓	✓	✓✓	✓✓
5	✓	✓✓	✓✓	✓✓			✓✓	✓
6		✓✓	✓✓	✓✓			✓✓✓	✓
7	✓			✓			✓	✓
8				✓		✓		✓
9		✓	✓✓	✓	✓✓	✓✓✓		✓
10	✓		✓	✓	✓✓	✓	✓✓	✓
11		✓✓	✓✓✓	✓	✓✓	✓	✓	✓
12	✓	✓✓✓	✓✓	✓	✓✓✓	✓✓✓	✓✓✓	✓
13		✓✓✓	✓	✓	✓✓	✓	✓✓	✓
14						✓✓✓		
15	✓✓	✓	✓	✓	✓	✓	✓	✓

Author: City of Porto, collected by Ana Dragutescu, ICLEI
Image: PAMUS - Plano de Ação de Mobilidade Urbana Sustentavel

GOOD PRACTICE EXAMPLE

Granollers, Spain: Participatory measure assessment informed by evaluation of previous SUMP

When developing their second SUMP (PUMS), Granollers focused on involving stakeholders in the re-evaluation and prioritisation of mobility measures. This was achieved through specific activities and debates. Sessions were held with the city's mobility and health council, economic and social agents, and the city council's technical staff. Further sessions were also held with citizens and public transport users. During these sessions, participants provided feedback on the technical proposals and gave suggestions for how specific elements and measures within the SUMP might be improved.

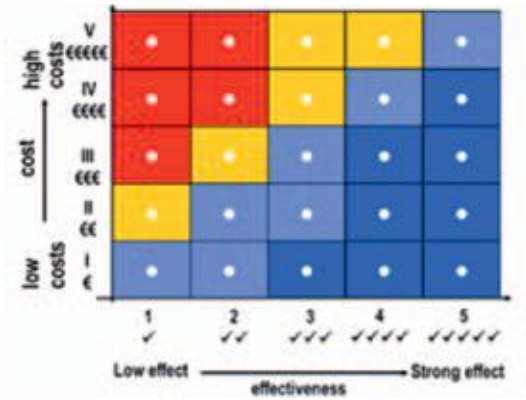
Author: Laura Llavina Jurado, City of Granollers, collected by ICLEI
Image: City of Granollers

GOOD PRACTICE EXAMPLE

Bremen, Germany: Multi-criteria assessment with structured expert workshops

The city of Bremen used several tools for the SUMP measure selection process. A cost-benefit matrix helped to determine the level of goal attainment of each single measure. The method included an expert evaluation of the effectiveness of the measures with respect to the targets using a qualitative scale for each indicator to reach the targets. Secondly, there was an evaluation of the spatial effect, and finally a ranking of the effects. The classification of the cost of the measures was based on five cost groups. After the classification and the ranking, the cost and effect matrix was finalised showing to what degree targets are achieved with every measure.

Author: City of Bremen, collected by EUROCITIES
Image: City of Bremen



ACTIVITY 7.2: Define integrated measure packages

Rationale

Experience shows that isolated measures can only have a limited impact, while packages of measures can positively reinforce each other and help to overcome implementation barriers. A measure package combines different measures to contribute more effectively to the objectives and to increase their acceptability. To identify the most useful measure packages, different ways of grouping them should be explored and tested.

A detailed impact appraisal of the main measures and measure packages is needed at this stage to avoid unrealistic projects, confirm innovative ideas and ensure cost-effectiveness, often using standardised methods such as multi-criteria analysis (MCA) or cost-benefit-analysis (CBA).

The final packages selected with the help of citizens and stakeholders should not only maximise the contribution to the objectives, but also strive for integration of transport modes (intermodality) with land-use planning and other sectoral planning activities (e.g. environmental, health or economic measures, see Activity 2.2).

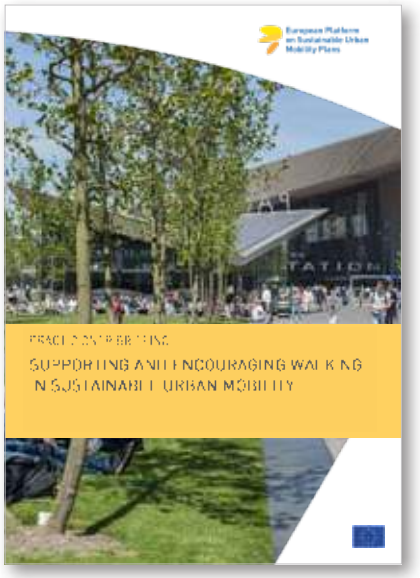
Aims

- Use packaging of selected measures to help overcome barriers to implementing specific measures and to exploit synergies.
- Ensure integration of transport modes (intermodality).
- Strive for integration with land-use planning and other sectoral planning activities.
- Ensure ownership and high acceptance of your measure packages among decision makers, citizens and other stakeholders.

What is a 'Measure Package'?

A measure package is a combination of complementary measures, often from different categories, which are well coordinated to address the specific dimensions of a problem more effectively than single measures and to overcome the barriers to their implementation. An example would be the combination of measures to discourage car use, such as parking controls, with measures to promote alternatives, such as improved bus services and cycling lanes.

Your measure packages should support and encourage different fields of action, including walking. A measure package for walking could for example be formed around a signature project or key intervention, such as a pedestrian zone or a 'superblock' (see also good practice example of Vitoria Gasteiz below). Such a package of redesigning an urban area into a pedestrian zone should include different types of measures that support each other. In addition to the core measure of restricting car access and redesigning the streets with a focus on attractiveness and accessibility (e.g. more green spaces and trees, seating and toilets, clean and well-lit streets), this could include:



- Temporary pedestrianisation on selected summer days or Sundays in the months before, optimally combined with public events
- Construction of bicycle parking at the edges and improvement of cycle paths in nearby streets
- Creation of off-street parking closeby (e.g. parking garage with low fees for residents)
- Improvement of bus connections in the vicinity
- Solutions for freight delivery to shops (e.g. time slots for delivery vehicle access in the morning/evening, or creation of nearby micro-hub with cargo bikes for last mile)
- Proactive communication towards shop owners and the public (e.g. using customer satisfaction surveys and turnover statistics before and after pedestrianisation)
- Reduction of speed limits and installation of safe crossing points for pedestrians in the surrounding streets

More guidance on how to create healthy, efficient and sustainable walking communities as part of Sustainable Urban Mobility Planning can be found in the Practitioner Briefing **Supporting and Encouraging Walking in Sustainable Urban Mobility Planning**.

Tasks

- Identify options for packaging measures. There are different methods to group measures, for example
  - by type of measure (striving for a mix of land use, infrastructure, regulation, management and service, behavioural, information provision and pricing measures in a package),
  - by acceptability (grouping popular and less popular but effective measures into packages, e.g. incentives and restrictions),
  - by objective or challenge (adding measures that contribute to the same objective or solve the same problem to a package),
  - by geography (combining measures in the same area into one package),
  - by costs (combining an effective but expensive key measure with measures that create revenues to achieve lower net costs),
  - by bundling for external financing (grouping measures in need of external financing that: i) support one clearly defined objective; ii) are implemented in the same impact area; iii) share the same project owner; and iv) have similar implementation periods), or
  - around bigger projects (such as a new bike network, seeking measures which complement and reinforce that project).
- Group measures into packages to benefit from synergies and increase their effectiveness. The key to decide which measures come together in a package is to identify which ones will work well together, or may be needed to make other measures viable. Measures in a package should interact while achieving more together than either would on its own (synergy), or facilitating other measures in the package by overcoming the barriers to their implementation.
- Ensure that intermodality is taken into account. This may include links to the long-distance transport networks such as the TEN-T network.

- Check proposed transport and mobility measures regarding integration with land-use planning.
- Integrate the measures where possible with further sectoral planning activities (e.g. environmental, health or economic measures).
- Ensure that you are addressing all objectives, including externalities, such as greenhouse gas emissions, noise, and local air pollution.
- Ensure a balance of short-term and long-term measures.
- Make sure to have a mixture of investment, operational and organisational measures.
- Check that all relevant transport modes are addressed, including freight.

- Test and appraise the alternative packages and their key measures in detail. Modify them based on the results to avoid unrealistic projects and ensure cost-effectiveness. For example, if it turns out in the detailed option appraisal that certain key measures risk being unfeasible, go back to Activity 7.1 and adjust your short list of measures to ensure it still achieves your objectives. Consider different assessment methods and decide which one to use based on your experience, available resources and the types of measures to assess.
  - Because the impacts of measures are complex and hard to predict, models are often used for this purpose. Well-calibrated models allow you to test measures, by themselves or in packages, to predict and compare their impacts with the current situation and with the set of already planned measures ("business-as-usual"). A high-quality model is a powerful planning tool, but requires considerable data and capacities to keep it up-to-date. Another limitation of particular relevance to Sustainable Urban Mobility Planning is the inability of many models to represent certain types of measures (in particular freight, walking and cycling, intermodality and some behavioural measures) and to predict disruptive changes (see also overview of modelling tools below).
  - Cost-benefit analyses (CBA) are widely used to appraise the value for money of larger individual measures, usually for infrastructure projects, and can also consider many of the societal, economic, and environmental impacts of projects. However, CBA usually require extensive data and most cities lack a standardised CBA approach for non-infrastructure measures.
  - In order to cover criteria that are not monetised, CBAs are often complemented with multi-criteria analyses (MCA), in particular if the monetisation of certain criteria is deemed too complicated. MCAs allow users to combine quantitative and qualitative assessments depending on data availability for different criteria. Standardised CBAs or MCAs are a requirement in many countries to receive funding for larger infrastructure measures.
  - In many places, a full cost-benefit-analysis or a transport model to simulate policies may be too costly, especially for smaller measures and cities. In such cases, a focus on the most important measures, estimates and/or 'real world modelling' in form of experimentation can be applied instead.

- Conduct a risk assessment of the selected measure packages. In its most simple form, this can be a thought exercise which assumptions the effectiveness of the measures depends on, what would happen if these change, and how to mitigate those risks. If possible, also use quantitative methods, for example by running sensitivity tests. This means that the appraisal (or model) is re-run with a range of assumptions. If the preferred package performs well under a number of assumptions, it has been validated. If its performance is variable, then it is less robust, and less obviously worth pursuing. This may suggest trying to redesign it to improve its performance.
- Discuss the selected measure packages with stakeholders and involve them in the selection process, for example in a meeting of the SUMP 'steering group'. Communicate the measure packages in a transparent and professional way.
- Actively involve and get feedback from citizens on measures and measure packages. They should be involved in the validation and final selection of packages.
- Make a final selection of measures and measure packages.

Activities beyond essential requirements

- Cooperate with other local organisations in a shared transport model. This reduces costs and makes it easier to keep the model up-to-date. Organisations interested in a shared model can for example be local universities, neighbouring municipalities or (regional) public transport operators or authorities.

Timing and coordination

- Once a list of measures has been developed.

Checklist

- ✔ Potential packages of measures identified that are expected to realise synergies and overcome implementation barriers.
- ✔ Packages of measures checked with an eye to integration with land-use planning and other sectoral planning activities.
- ✔ Shortlisted packages tested and appraised against all objectives to identify the most cost-effective combinations.
- ✔ Selected packages discussed and validated with stakeholders and the public.
- ✔ Final set of measure packages selected.

Placemaking

A type of measure that has received growing attention in recent years is placemaking. It can start by using "light and cheap" solutions and strong collaboration with residents to transform streets and public spaces for increased liveability and attachment to place. Allowing cities to make quick improvements, it can be a useful component in measure packages to illustrate the desired changes and to gain further support for other SUMP measures.

The Project for Public Spaces offers a wide range of resources on placemaking: *www.pps.org*

The online platform URB-I: URBAN IDEAS hosts an inspiring database of placemaking projects, including pictures that compare the "Before and After" situation: *www.urb-i.com/before-after*

Source: Project for Public Spaces

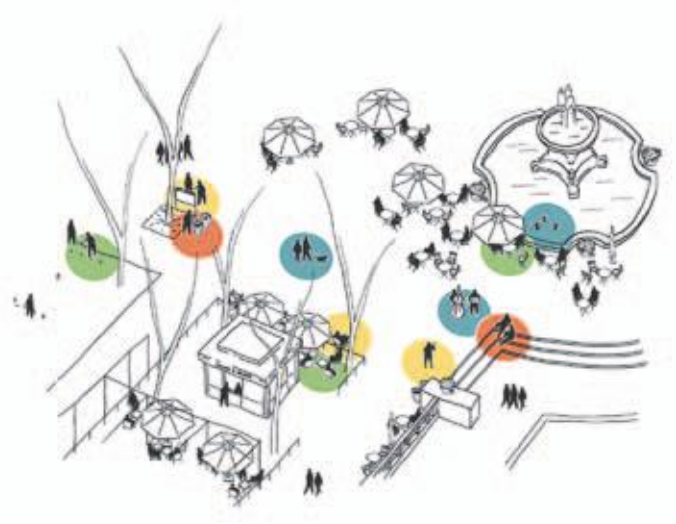


Figure 29: Placemaking

Tools for measure packaging

A proven approach for systematic and effective measure packaging is the four-step-principle. This approach is advocated by Swedish national authorities for both Sustainable Urban Mobility Planning in cities and for transport planning on national and regional levels. The steps of the four-step-principle could be described as follows:

- **Step 1: Rethink!** Solutions influencing travel demand and choice of transport mode (land-use planning, demand management/ mobility management).
- **Step 2: Optimise!** Solutions for a more efficient use of the existing transport system (infrastructure, vehicles etc.).
- **Step 3: Reconstruct!** Reconstruction of existing infrastructure.
- **Step 4: Build new!** Investments in infrastructure and larger reconstructions.

Even though the naming of the approach implies a sequential use, the approach should more correctly be seen as a 'way of thinking' in sustainable mobility planning. The research behind the four-step-principle emphasises the importance of continuously reducing dependence on motorised transport, prioritising more sustainable transport modes and effectively using the existing transport system in order to reduce the need of large reconstructions or building of new road infrastructure. The four-step-principle assures that suitable measures are combined in measure packages to increase cost effectiveness in Sustainable Urban Mobility Planning.

Source: Sundberg, R., 2018. SUMPs-Up Manual on the integration of measures and measure packages - Step up, p.15-16

Figure 30: Types of measures in the different steps in the four-step-principle (*Source: Swedish Transport Administration et al., 2014*)

KonSULT measure package generator

The KonSULT online tool can also assist the packaging process. Based on the ordered list of measures resulting from the option generation stage, the tool provides suggestions which measures could complement each other based on a methodology of typically effective combinations: www.konsult.leeds.ac.uk

Further information on CBA and MCA

- DG Regio, 2015. Guide to Cost-Benefit Analysis of Investment Projects; Economic appraisal tool for Cohesion Policy 2014-2020, *https://eufunds.gov.mt/en/Operational%20Programmes/Useful%20Links%20and%20Downloads/Documents/2014-2020/cba_guide.pdf*

- The Evidence project, 2014. Discusses the challenge in determining a project's viability; the role of project appraisal (most commonly CBAs) in decision-making at urban level; and the role SUMPs play in project prioritisation, *www.eltis.org/sites/default/files/evidence_common-practice-reader-final.pdf*

- TIDE project, 2012. Project guide on cost-benefit and impact analyses in urban transport innovation providing an easy-to-apply tool for urban transport project appraisal, which includes CBA and MCA elements, *www.eltis.org/sites/default/files/trainingmaterials/tide_d_5_1_final.pdf*

Modelling tools in the SUMP process

A transport model is a simplified representation of the real world that allows for testing and evaluating theoretical ("what-if?") scenarios. The role of transport models is to support public authorities in the design process of future transport infrastructure (including new pedestrian and cycling facilities), and new or changed operational concepts (e.g. intelligent signal control systems). They are continuously developed and adjusted to current mobility trends, sociodemographic changes and sustainable environmental objectives. Typical results include total travel time for the different transport modes and user groups, volumes in the private and public transport networks, emitted air pollutants, etc. The outputs of transport models thereby often feed into further economic calculations or are the basis for political discussion including public involvement.

A transport model can be used to generate reliable and consistent input to the SUMP process, specifically in certain planning stages such as scenario development, measure appraisal and selection, and monitoring. Modelling results help to predict the impact of different combinations of policies and measures, taking into account the complex interactions and potential reinforcing or rebound effects, thereby helping to define the most effective integrated packages. Beyond their use to define the baseline scenario, they also enable regular monitoring of changes in the transport system during the implementation phase to assess whether you are on track or if you need to react and adapt your actions.

The decision about whether or not to use transport models for the SUMP needs to be taken early in the SUMP process. This depends on the time horizon of the SUMP as well as on the nature of measures under discussion: the more it is expected that these measures will impact transport demand (such as the construction of a new public transport line, the introduction of a new sustainable mode or service, etc.), the more it is recommended to use transport modelling to predict these impacts. The available budget, time, data and the scale of questions determines which model is used.

The three categories of transport models are macroscopic, microscopic and mesoscopic, with the first two being the most commonly used. Macroscopic modelling is typically applied for strategic planning, whereas microscopic modelling is typically applied for operational planning. Macroscopic models focus on large-area choices such as destination, mode and route choice, while microscopic simulations mostly focus on the traffic flow model. Thus, the appropriate modelling level has to be selected to analyse the various impacts of the cities' measures, as they may differ according to their scope.

Up until recent years, the available modelling tools have not fully considered cycling and walking. The EU-funded CIVITAS FLOW project (*http://h2020-flow.eu*) worked to improve micro- and macroscopic transport modelling software so that they can more accurately model the existing cycling and walking infrastructure, as well as cycling and walking behaviour. The developments include the extension of the macroscopic travel demand model (including introducing vehicle sharing systems and enhanced stochastic assignment for cycle route choice) and the improvement of features of microscopic transport simulation software (including improved modelling of the interaction between vehicles and pedestrians).

Another type of model are integrated transport and land use models (Land Use Transport Interaction - LUTI), which have the capability to simulate a wide range of interventions ranging from infrastructural projects, pricing, regulation, co-modality to planning of urban space. They can also include the impacts of "rebound" effects due to relocations or newly generated demand. However, it is important to highlight that integrated transport and land-use models are complex and data-hungry: their setup requires a significant amount of time and effort as well as technical expertise.

Modelling tools in the SUMP process

It is important to be aware of the limitations of models at all points in the planning process. Planners and modellers have to use their own judgment as transport modelling isn't an exact science and all models have systematic biases. Each model run is based on many assumptions and calculations and each one of them increases uncertainty. Uncertainty is difficult to understand especially when exact figures are presented on a nicely-designed map. There is also a strong temptation to believe forecasts even when they go beyond the capabilities of the model. Uncertainty also grows the more you zoom in. To this end, it is essential to calibrate your model to your local context and not to simply use the default settings.

Therefore, planners' responsibilities throughout the process are:

- To commission sensitivity test
- To present the limitations together with results
- To use ranges of outputs and qualitative outputs, not point estimates
- To avoid zooming in beyond a credible level

Aggregated models called sketch planning models are no transport models in the sense described above but they could be an interesting option for initial policy screening within the SUMP process. They can be built with significantly less resources and allow users to explore and identify appropriate sustainable transport policy measures, quantifying their impacts within a consistent framework and setting up the implementation pathway of future scenarios. One typical example of this category is the Urban Roadmap 2030 model *www.urban-transport-roadmaps.eu* developed on behalf of DG MOVE). However, aggregated models cannot replace the use of more disaggregated models for detailed assessment.

Author: TRT Trasporti e Territorio, Rupprecht Consult

GOOD PRACTICE EXAMPLE

Krakow, Poland: Combination of parking management with traffic limitation and public transport measures

The City of Krakow considers parking management policy as a means to contribute to some wider goals - such as improving air quality and decreasing congestion, rather than only responding to car parking issues. The municipality of Krakow combines the implementation of parking measures (e.g. removal of parking spots), with traffic limitation measures (e.g. limited traffic zone) and public transport measures (e.g. integration of public transport services), thus reducing the number of vehicles and improving air quality and traffic flow all at once. Providing alternatives to the car and taking a step-by-step approach help to achieve public acceptance of the parking regulations.

Author: Tomasz Zwoliński, City of Krakow, collected by Polis
Image: Eltis, Harry Schiffer

GOOD PRACTICE EXAMPLE

Tampere, Finland: Mobility management leveraging the opportunity of a tramway project

In 2016, Tampere decided to build its first tramway line. Years of significant car traffic disturbances in the city centre are a good time to encourage people to change their mobility habits. People are open to break their routines since they need to find new modes and routes during the construction time. Tampere has introduced several mobility management actions targeted especially to car drivers including new Park & Ride facilities, promoted public transport and cycling and provided more space for cycling and walking. Large traffic infrastructure investments should not take place without smart mobility management and extended communication with citizens and stakeholders.

Author: Sanna Ovaska, City of Tampere, collected by UBC
Image: Veli-Matti Lahdenniemi

GOOD PRACTICE EXAMPLE

Vitoria Gasteiz, Spain: Integration of mobility measures in the superblock model

The Sustainable Mobility and Public Space Plan for Vitoria Gasteiz was designed to give the public space back to the people by the implementation of a new scheme called the superblock model. A superblock is a geographical space that covers several city blocks that can only be used by pedestrians, cyclists, services and neighbours' cars, while other private cars and public transport are restricted to the streets surrounding the blocks. Apart from the redesign of the urban space, the integration of mobility measures is required to improve the overall quality of the space, such as a new public transport network, traffic light regulation, pedestrian/ bicycle lane networks, urban freight logistics or the expansion of the regulated parking space.

Author: Juan Carlos Escudero, City of Vitoria-Gasteiz, collected by Rupprecht Consult
Image: Agencia de Ecología Urbana

ACTIVITY 7.3: Plan measure monitoring and evaluation

Rationale

Monitoring and evaluation both of the planning process and the measure implementation are crucial to the effectiveness of a Sustainable Urban Mobility Plan.

Robust monitoring and evaluation processes help you to systematically learn from your experiences, to adjust and to improve your planning activities. Regular monitoring helps you ensure that you are making the necessary progress. Evaluation after implementation helps provide evidence of the effectiveness of the SUMP and its measures, which is essential for long-term success, as it allows decision makers to justify where money was spent and to avoid mistakes in future. Transparent reporting should ensure that evaluation results feed back into the public debate.

While strategic indicators and targets have already been defined earlier (see Activity 6.1 and 6.2), here the indicators at measure level are developed and the monitoring and evaluation activities are agreed in more detail. The aim of defining monitoring arrangements early is that they become an integrated part of measure implementation.

Aims

- Define a set of indicators that allow monitoring and evaluation of all main measures with reasonable effort.
- Agree on suitable monitoring arrangements (including responsibilities and budget) to assess the status of measure implementation and target achievement, enabling timely and effective responses.
- Make monitoring and evaluation arrangements an integral part of the further process.

Tasks

- Identify which information is needed to monitor and evaluate your measures.
  - Outcome: What impacts are expected from a measure? Define a suitable outcome or transport activity indicator for each main measure or measure package to be able to evaluate its success. Strategic outcome indicators on general progress towards sustainable mobility have already been selected in Activity 6.1. Here, more specific indicators on the objectives of individual measure packages are defined, e.g. emissions from buses, trucks and cars, number of accidents, or number of cycle trips in a certain area of the city.
  - Output: What policy, infrastructure or service is directly implemented in a measure? Define a suitable output indicator for each measure to be able to monitor the extent to which it has been carried out, e.g. km of new bus lanes or number of new buses in operation.
  - Input: What resources do you spend? Monitor the investment and maintenance costs (including labour costs) of each measure to react in time if costs get out of hand, and to be able to evaluate value for money.
- Evaluate existing data sources, taking into account the results of previous data audits (see Activity 3.1 and 6.1). Identify gaps and, if necessary, develop or identify new sources of data (e.g. survey data, quantitative data from automatic measurements).
- Before you start developing your own measure indicators, discuss the topic with key stakeholders and other organisations in your area, as they might already have adopted some. Progress is much easier to monitor if already implemented and accepted indicators are used.
- Define a set of quantitative and qualitative measure indicators that provides sufficient information with reasonable effort. Take into account available data and limited resources for collection of new data when selecting indicators. Whenever possible, use standard indicators that are already well defined and where people know how to measure and analyse them.

- Develop monitoring and evaluation arrangements for all selected indicators, both strategic and measure indicators. For each of them:
  - Develop a clear definition, reporting format, how data is measured, how the indicator value is calculated from the data, and how often it will be measured.
  - Establish a baseline value, i.e. a starting value and expected development without SUMP measures, as well as a target value of desired change
- Agree on clear responsibilities and a budget for monitoring and evaluation. Well-skilled staff members, or an external partner, should be responsible – ideally an independent body. The budget for monitoring and evaluation typically should be at least 5% of the total SUMP development budget.

Activities beyond essential requirements

- Consider aligning your indicators to those of external funding bodies to make the measures attractive to funding. For example, measuring reductions in CO_2 emissions might be required to get funding from national environmental agencies.
- Integrate an assessment of costs and benefits of the SUMP development process.
- Plan for stakeholder involvement in monitoring and evaluation.
- Coordinate with relevant local and regional stakeholders on regional indicators.

Details on the tasks

Figure 31: Categories of indicators with examples (May, T., 2016. CH4LLENGE Measure selection Manual – Selecting the most effective packages of measures for Sustainable Urban Mobility Plans, p. 28.)

SUMP Element	Measured by	
	Example →	Indicator type
Objective	Reduce local air pollution from transport	Number of days exceeding critical air pollution levels	Outcome indicator
Transport objective	Increase use of non-motorised modes	Share of walking and cycling trips	Transport Activity Indicator
Measures	Build segregated cycle lanes	Km of segregated cycle lanes built	Output Indicators
	Pedestrianise city centre shopping street	% completion of pedestrianisation of city centre	
Resources	Investment and maintenance costs	Transport investment and maintenance costs for new/ improved infrastructure	Input indicators

Timing and coordination

- Once measures and measure packages have been defined.
- To be updated when the final set of actions has been agreed on (Activity 8.3), if needed.
- Make monitoring and evaluation arrangements, including responsibilities and budget, part of the SUMP document (Activity 9.1), see also Figure 32 below.

Checklist

- ✔ Suitable set of measure indicators selected.
- ✔ Monitoring and evaluation arrangements for all indicators developed.
- ✔ Responsibilities and budget for monitoring and evaluation agreed on.

Figure 32: Monitoring and evaluation in the SUMP process

Figure 33: Overview table to plan monitoring and evaluation activities filled with example indicators

SUMP indicators	Definition	Base-line	Target	Measuring area	Data collection method	Measuring frequency	Respon-sibility
Traffic fatalities (road safety)	Number of deaths within 30 days after the traffic accident as a corollary of the event per annum caused by urban transport per 100,000 inhabitants.	4	decrease	Area of mu-nicipality #1, #2 and #3 (covering most of the func-tional urban area)	Police accident report	Continually (indicator value calculated from police database annually)	Police
...							
Measure indicators	**Definition**	**Base-line**	**Target**	**Measuring area**	**Data collection method**	**Measuring frequency**	**Respon-sibility**
People injured in traffic close to schools (measure: create traffic-calmed zones in front of schools)	Number of people injured in traffic acci-dents with 300m radius of schools per annum per 100,000 inhabitants.	25	decrease	300m radius of all schools in municipality #1, #2 and #3	Police accident report	Continually (indicator value calculated from police database annually)	Police
...							

GOOD PRACTICE EXAMPLE

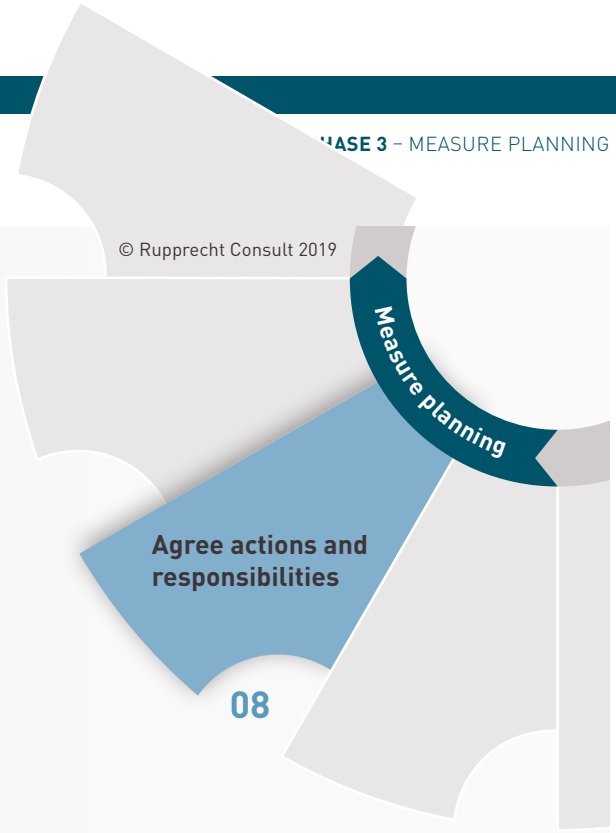
Toulouse, France: Ambitious monitoring process led by cross-institutional committees

The SUMP of Toulouse includes an ambitious plan for monitoring and evaluation. Several committees regularly monitor the SUMP and its measures and meet at least once a year. The committees are composed of different institutional, technical, civil society and research organisations. The committees are provided with different tools:

- A SUMP observatory (for each measure: initial objectives, resources allocated, expected results & indicators which are updated by regular surveys).
- A trip cost tool (per mode, for both users and for society)
- A mobility dashboard (tracking of individual measures)

The involvement of partners in the monitoring activities is identified as a success factor.

Author: Mary Malicet and Christophe Doucet, Tisséo Collectivités, Toulouse, collected by Polis | **Image:** Tisséo Collectivités



STEP 8: Agree actions and responsibilities

8.1 Describe all actions

8.2 Identify funding sources and assess financial capacities

8.3 Agree priorities, responsibilities and timeline

8.4 Ensure wide political and public support

Following the agreement on 'measure packages', operational planning must break the packages down into actionable tasks (or 'actions') for the departments and institutions that are in charge of their implementation. On the basis of detailed action descriptions and cost estimations, clear responsibilities, implementation priorities and timelines need to be agreed. At this stage, it is also essential to communicate the concrete ('actionable') content to the most affected stakeholders (which is often the general public) and to political decision makers. The main aim of this step is to agree on a widely supported set of clearly defined actions that helps to achieve the vision and objectives.

ACTIVITY 8.1: Describe all actions

Rationale

Information has already been gathered in the previous step of measure selection, where measures and measure packages were defined, selected and described in general terms and discussed and validated with citizens and stakeholders (see Activity 7.1 and 7.2). Now it is time to go into more detail and break down the measures into actions. You define what will be carried out how, where and when during the implementation phase.

By specifying the actions, you define how exactly you want to reach the set targets. The detailed action descriptions prepare the implementation phase and help you to identify relationships between actions and then to decide on the order of their implementation.

Aims

- Define the measures of your SUMP in detail through breaking them down into actions.
- Identify links between actions and find the best order of implementation.
- Consider and contain important implementation risks.

Tasks

- Break the measures down into several actions, e.g. prior to the construction of a bicycle highway, a study should identify where commuters regularly cycle and where bikeways are needed.

- Describe all actions in as much detail as possible. These four questions can guide the specification:
  - Where should the action operate?
  - When should the action operate?
  - Who will use it?
  - How intensively should it be used?
    e.g. km of new bus lanes or number of new buses in operation.

- Identify links between different actions in order to set up the most effective order of implementation. With the identification of relationships between actions, you might also find out how they relate to and can benefit from each other in the actual implementation.

- Present actions in an overview table (see template table in Activity 8.3), including detailed action descriptions, legal requirements, expected contribution to objectives, as well as suggested priorities, responsibilities and timeline. The table can be further updated with cost estimates and funding sources in Activity 8.2

Activities beyond essential requirements

- Prepare action factsheets that provide all key information about an action in a structured way (see factsheet in tool section below). Factsheets can facilitate the handover to and communication with implementing units in the implementation phase (see Activity 10.1).

Timing and coordination

- Actions build on defined measures and measure packages in Activity 7.2.

- The detailed description of actions provides an essential basis for the agreement of priorities, responsibilities and timelines in Activity 8.3.

- The description of actions prepares the implementation phase.

Checklist

✔ All actions identified, defined, and described.
✔ Relationships between actions identified.

What is an 'Action'?

Actions are the concrete tasks to be carried out in the implementation of measures. They include information on priorities, timing, responsibilities, budgets and funding sources, risks and contingencies, and dependencies among them.

For more information

SUMPs-UP - Standards for developing a SUMP Action Plan, *http://sumps-up.eu/fileadmin/user_upload/Tools_and_Resources/Reports/SUMPs-Up_-_Standards_for_Developing_a_SUMP_Action_Plan.pdf*

CH4LLENGE Measure selection manual - Selecting the most effective packages of measures for Sustainable Urban Mobility Plans, *www.eltis.org/resources/tools/sump-measure-selection-kit*

image © Katja Engel-Zepernick

Figure 34: Example factsheet for different actions of measure "Marking and extension of cycle paths"

Measure: R 2	**Marking and extension of cycle paths**		
Actions: • R 2.1 Opening pedestrian zones and one-way streets for cyclists • R 2.2 Implementation signposting Street #1 – Street #10 • R 2.3 Traffic calming Street #1 – Street #10 • R 2.4 Further routes according to cycling program (2018-2022)			
Traffic types involved: Cycle traffic **Benefitting traffic types:** Cycle traffic	**Planning status:** Planning/Implementation	**Priority:** very high	**Implementation period:** short to midterm
Actions: • Creation of a coherent network of cycle paths in City #1 • Implementation of the routes planned in the cycling programme to connect important destinations in the city (residential areas, city centre, shopping centres, universities, schools, businesses). • Promoting cycling by improving road safety for cyclists • Increasing the perception of cyclists as equal road users • Increasing the share of cycling in the city of City#1			
Measure efficiency			
Contribution to the achievement of objectives:	Very high		
Contribution to improving environmental compatibility:	Very high		
Contribution to improving environmental compatibility:	Low		
Costs and financing			
Investment costs:	Medium		
Annual follow-up costs:	Low		
Financer:	Budget of City#1		
Eligibility of funding:	tbd		
Measure implementation			
Dependency on other measures:	R 1: bicycle traffic programme and according responsible		
Requirements for other measures:			
Owner / responsible / control	Department of Housing and Municipal Economics, responsible for bicycle traffic		
Planning:	Construction company		
Realisation:			
Third parties to be involved:	• Commission for Road Safety and Sustainable Mobility • Cycling NGO		

GOOD PRACTICE EXAMPLE

Birmingham, UK: Programme of actions with clear priorities

The Birmingham Mobility Action Plan sets out a 20-year vision for the city's transport network. Alongside this, Birmingham Connected - the city's SUMP - acts as the umbrella for all transport planning activity. It outlines the desired direction; the key initiatives to achieve the vision; and a five-year strategy. In turning its vision into concrete schemes and initiatives, Birmingham is following four key principles: enable different transport modes; create an equitable transport system; utilise a corridor approach that balances competing needs; and coordinate project delivery to minimise disruption. Estimates show that up to £4bn is needed over the next 20 years for the foreseen changes.

Author: Helen Jenkins, City of Birmingham, collected by Ana Dragutescu, ICLEI
Image: Birmingham Connected White Paper

GOOD PRACTICE EXAMPLE

Turin, Italy: Comprehensive measure factsheets

The Turin SUMP consists of seven guiding principles, divided into targets and measures. Each measure is described with a high degree of details including related actions; connection to the guiding principles; connection to the target; type of sustainability aspect; general description and objective of the measure; responsible entity; implementation mode; aim of the measure and corresponding indicator; implementation period and economic resources needed. Each individual measure is assessed in terms of economic, social and environmental sustainability. The measures have been defined in close cooperation with the ten administrative districts, professional associations and different stakeholders.

Author: City of Turin, collected by EUROCITIES
Image: Comune di Torino

ACTIVITY 8.2: Identify funding sources and assess financial capacities

Rationale

A thorough financing plan is needed to ensure that the previously identified measures and actions are economically sound and financially viable. This starts with identifying all the available funding and financing streams as well as assessing the ability of the organisations involved in your SUMP to access or capture them. It is important to compliment the scan of financing and funding sources with an organisational assessment because the financial commitments and capacities of the different organisations vary, and they have different legal rights and responsibilities related to finance.

In identifying potential sources of financing and funding for mobility measures, a wide range of options should be assessed. Next to available sources - such as local budgets and taxes, national and EU subsidies, and existing revenue streams from ticket sales, parking fees, and other areas - also potentially new sources of funding should be assessed, such as bonds, land-value capture, development charges, and the private sector. It is important at this stage to also think about sources of funding for further detailed feasibility and market studies for larger investments.

Funding and Financing for SUMP implementation – what's the difference?

Financing usually refers to the money that is needed from external sources for the initial investment at the start of the project, which ultimately needs to be paid back or returned. Financing instruments generally refer to debt or equity or a mix of these products. Taxpayers can also contribute indirectly to initial costs through investment grants and subsidies.

Funding a project generally refers to who pays for the asset over the long term. This can be direct users of services (tickets, parking fees, city center pricing), customers of mobility related services (advertising), or taxpayers through general state budgets or special transport-related taxes.

It is useful to remember that implementing a financially sustainable SUMP needs both financing and funding. The use of loans to finance public transport infrastructure, for example, can be limited by the capacity of sources of funding to repay such loans.

Aims

- Identify potential financing instruments and funding sources for all actions.
- Assess the financial viability of individual actions within measures to rule out non-viable actions and achieve cost-effective measure designs, while still considering how funding streams could reasonably evolve in the future.
- Assess the ability of different organisations involved in your SUMP to access the funding streams.

Tasks

- Assess the actions specified in the previous Activity 8.1 against their financing needs and revenues in the short, medium, and long term, including operation, enforcement and maintenance, and identify any funding shortfalls (total cost of ownership).
- Estimate direct financial revenues from the actions, e.g. from public transport fares and subscriptions, concessions, lease of advertising space, fees for parking or other municipal services, and define the expected degree of cost recovery.
- Assess additional monetary value generated through the actions (e.g. increased value of land and real estate in the vicinity of new public transport stations) and potential mechanisms for value capturing.[50]
- Identify financing instruments and funding sources for the selected actions. Assess all of the following options to identify the most suitable ones. Explore in particular options beyond the local budget.
  - Local taxes: a special local transport tax for public transport paid by public or private enterprises, developers;
  - Revenue funding: tickets, parking fees, city centre pricing, congestion charging, advertisements;

[50] For more information see for example Transport for London, 2017. Land value capture, final report. *www.london.gov.uk/sites/default/files/land_value_capture_report_transport_for_london.pdf*

- Private sector involvement, e.g. through public-private partnership arrangements;
- Fundraising activities involving appropriate sponsors (but consider compatibility with marketing strategy);
- Local budgets: from different municipalities and different policy domains;
- National/regional subsidies and EU funding;
- External loans, municipal and green bonds.

- For measures that require external financing, identify the legally appropriate borrowing entity and assess the credit-worthiness.
- Identify sources of funding for further detailed feasibility and market studies for larger investments.

Activities beyond essential requirements

- Assess the financial viability and revenues of key actions under different context conditions (development of population, transport volume, and modal shares) as defined in Activity 4.1.

Timing and coordination

- Builds upon the actions of all measure packages as defined in Activity 8.1.
- Results will inform the final discussion of action in Activity 8.3 and feed into the development of financial plans in Activity 9.1.

Checklist

✔ Meaningful forecasts prepared for expenses, revenues, cash flows and other financial items.

✔ Financial analysis and assessment of possible funding sources carried out.

✔ Preliminary assessment available regarding which organisations need to acquire external financing.

✔ Results summarised for discussion on final selection of actions.

Pricing measures

Pricing measures such as fares, parking fees and road tolls form part of many measure packages. Changing cost structures for mobility options can both be a measure of demand management and generate local income. Some charging schemes, such as parking management, can be implemented relatively easily, others require more sophisticated technology and investments and may raise acceptability or privacy concerns (e.g. a congestion charging system based on vehicle registrations).

Before introducing demand management measures, it should be carefully considered whether the generated income should disappear into the general budget or better be ring-fenced for enhancing urban sustainable mobility options. The specific local and national regulations need to be closely analysed to assess the options.

Explaining that revenues will be used to increase the service level of public transport and to support alternatives to private car use generally enhances the acceptability of pricing measures. Ring-fencing additional income also makes public transport financing more resilient against competing budget demands from other public policy fields.

image © TkKurikawa on istock.com

The European Commission offers a vast number of initiatives and programmes that can be used for (co-)financing sustainable mobility measures. European funding programmes will mostly contribute to investments, but rarely to operating costs of infrastructure and services. Among these are:

- European Structural and Investment Funds (ESIF), including the European Regional Development Fund (ERDF) with 'Interreg'
- European Fund for Strategic Investments (EFSI)
- Connecting Europe Facility (CEF)
- LIFE Programme
- Horizon 2020/ Horizon Europe
- ELENA (part of Horizon 2020)
- Urban Innovative Actions
- URBACT
- Knowledge and Innovation Communities (KICs) on Climate and on Urban Mobility

An overview of current European funding sources for cities is available at *https://ec.europa.eu/info/eu-regional-and-urban-development/topics/cities-and-urban-development/funding-cities_en*
Further advice on European funding opportunities is provided by:

- European Investment Project Portal
- European Investment Advisory Hub
- JASPERS
- fi-compass

A selection of both European and other funding sources and financing instruments is described in the Topic Guide **Funding and financing of sustainable urban mobility measures**.

Major infrastructure projects in Sustainable Urban Mobility Planning

Ideally any investment to improve urban mobility should be based on the preferences established in the SUMP or in a preceding (robust) urban mobility strategy/plan. It is essential that the project is not defined as a result of single mode strategies (e.g. road or public transport in isolation), and that it is evaluated in the context of a wider set of interventions (both on the mobility/transport system and on the reference land use). In many cases large infrastructure projects have a very long preparation phase and are therefore pre-existent when a new comprehensive urban transport plan is launched – including having already set aside the budget for their construction. This is a frequent situation that many transport planners are confronted with in reality. Depending on the state of implementation of such predefined projects, the SUMP can then either take account of the new reality, verify the preceding options analysis – both at strategic and technological level - and conclude on the level of risk involved or investigate the project as one of the measures evaluated in the SUMP process. Such main pre-defined projects may have already undergone solid options analysis and/or they entail "no risk" for other reasons (e.g. their development was foreseen in the context of a well-conceived land-use plan). The SUMP can then be developed in parallel and may contribute to fine-tuning scope and design of the project (see Good Practice Example on Bratislava below). The identification of complementary measures, including "soft" measures to limit private car usage such as parking fare policy etc., may furthermore enhance its viability. When the risk is considered high – e.g. when the first analyses carried out within the SUMP seem to indicate a non-viability of the project – and if it has not yet been procured or physically started, it is necessary to cease the further preparation of the project until the SUMP confirms the project or indicates any necessary adjustments. A SUMP process biased in favour of the pre-selected risky project would be fundamentally flawed. It would be in contradiction with the core objectives of a SUMP and in contradiction with the stipulations of these guidelines.

Source: EIB/JASPERS

GOOD PRACTICE EXAMPLE

Bratislava, Slovakia: Parallel development of large tram project and SUMP

Bratislava's SUMP was prepared and approved between 2014 and 2016. It is based on a clear link between analysis, objectives and measures. This included the preparation of a validated 4-stage traffic model. A strong focus was put on sustainable transport modes, organisational and operational areas, in addition to infrastructural issues. In parallel to the development of the SUMP, the main new transport project for the city was also carried on - the new tramway to Petrzalka, which was confirmed by previous strategic documents and studies. The project is implemented in several phases, drawing mainly on ESIF (European structural and investment funds). The new SUMP confirmed the strategic importance of the new tramway and approved that the modernisation and upgrade of the tram system – including its fleet - is one of the main measures for the future of the city.

Author: Neri di Volo, EIB/JASPERS, collected by Rupprecht Consult
Image: Dopravný podnik Bratislava

GOOD PRACTICE EXAMPLE

Vienna, Austria: Employer tax to finance metro

Every business with at least one employee in Vienna is obliged to pay a "metro tax" (Dienstgeberabgabe). The tax serves as a financial supporting action for the operation and extension of the city's metro network. It amounts to 2 € per employee and week, with exemptions granted for certain groups such as elder, handicapped, or part time employees. In 2016, Vienna collected nearly 67 mio €. The tax had been introduced in 1970 in preparation of the planning, construction and implementation of the metro network. Today, revenues also run into the co-fund annual public transport tickets (=1€ per day).

Author: Wuppertal Institute
Image: Wiener Linien

GOOD PRACTICE EXAMPLE

Birmingham, UK: Capturing added values of land development through negotiations or levies

Granting planning permissions for new developments typically raises the value of affected land while increasing pressure on transport infrastructure. Provided they are legally empowered to do so, cities may introduce value capture instruments the revenues of which are ring-fenced for improving the transport network and the urban mobility system. Birmingham introduced a combination of planning obligations which aim at mitigating or compensating local impacts in the vicinity of new developments and a Community Infrastructure Levy which is mostly used for funding strategic infrastructure projects outlined in the city's Development Plan.

Author: Helen Jenkins, City of Birmingham, collected by Wuppertal Institute
Image: Birmingham City Council

ACTIVITY 8.3: Agree priorities, responsibilities and timeline

Rationale

When a final set of actions has been selected and described, it is time to assign responsibilities, priorities and a schedule for implementation. A clear picture of prioritised actions and schedules and who is in charge of them is a cornerstone of every Sustainable Urban Mobility Plan. This requires close coordination and discussion among all actors that will have a role in developing and implementing the actions.

Aims

- Identify suitable priorities and responsibilities for implementation of the selected actions.
- Assure that all actions are clearly prioritised and realistically deliverable.
- Secure efficient and effective allocation of resources (human, knowledge, time).
- Formalise the responsibility of all actors and the resource contributions with the respective partners.
- Provide a clear time horizon for action implementation.
- Achieve formal agreement on responsibilities and timeline among decision makers and key stakeholders.

Tasks

- Discuss the proposed actions and their priorities with the stakeholders who could play a role in financing, designing and implementing them. Make sure to involve other municipal departments in the discussions.
- Identify options for who can take the lead in implementing an action. Consider abilities, strength and competences of the stakeholders. Sometimes having one party taking responsibility for a task might be the obvious way forward. In other cases, collaborative and interdisciplinary work with different stakeholders might be a smarter solution.

- Agree on clear responsibilities for each action of the measure packages. An action without a responsible party is likely not to be carried out.

- Agree on a general timeline for the actions, where an approximate start and end of action implementation are defined. Focus on the next 2-3 years in your detailed planning, but also do outline planning for the next 10 years and be aware of actions requiring even longer-term implementation. (The detailed planning of actions for the next years should be revised and updated regularly, at least every 5 years.)

- Consider related actions that could influence each other (see Activity 8.1). For example, a new Bus Rapid Transit line should be implemented after the completion of the necessary infrastructure (e.g. bus stops, bus lane); and controversial actions (e.g. congestion charging) should be implemented in a package with or preceded by popular ones (e.g. cheaper public transport tickets) to increase acceptability.

- Consider large projects that are likely to impact the mobility system in the city, e.g. a construction work like the opening of a new tram, or the implementation of congestion charging. Such projects often have an implementation time longer than the SUMP, they tie up planning capacities by requiring a complex implementation process including strategic environmental impact assessment (SEA) and therefore strongly influence all other activities. Even 'simple' cycling projects can spend many years in legal challenges and processes.

- Update the action table and factsheets (prepared in Activity 8.1) with newly agreed information.

- Make timeline, responsibilities and allocation of resources public to ensure transparency and information for citizens.

Activities beyond essential requirements

- Assign a programme manager responsible for the coordination of action implementation, follow-up, and evaluation of the measures and the overall package (which could be the same person as the SUMP coordinator or an additional person to increase capacity). Defining a coordinator for actions helps to adapt or revise actions and develop new ones during the implementation phase. The coordinator has a comprehensive approach to the implemented actions and their cost-effectiveness and results, which provides valuable information for the further development of the mobility system in your city.

Timing and coordination

- Builds upon the actions as defined in Activity 8.1 and 8.2. Provides the basis for all following Activities and forms a key part of the final SUMP.

Checklist

✔ Responsible lead implementers for all actions identified.

✔ Timeline and priorities agreed with stakeholders.

✔ Agreed actions published to inform the wider public.

image © Susanne Böhler

Figure 35: Example of how to describe measures and measure packages in an action table (based on Mattson, C., 2018. SUMPs-Up Standards for developing a SUMP Action Plan, p. 23.)

Measure	Description of measure	Connection to SUMP targets	Responsi-bility	Actions within a measure	Implementa-tion period	Resources needed	Cost	Funding source	Stakeholders involved
Segregated Cycle Facilities	Marked lanes and tracks along major urban streets	Very high (improve accessibility, increase road safety, promote active travel, reduce air and noise pollution)	Road owner	Analysis of bicycle lanes needed	Year 1: Jan-May	2 traffic and city planners	30.000 € + 20% of fulltime from traffic planner	Municipal budget	Bicycle associations
				Develop a bicycle network plan	Year 1: May-Dec	4 traffic and city planners	40.000 €	Municipal budget	Bicycle associations, neighbouring municipalities
				Plan and construct bicycle lanes	Year 2-5	Planners, developers	500€/m	Municipal budget + national funding	Construction companies
Develop mobility management plan	Plan about what, when and how to work with mobility management	High (improve accessibility, promote active travel, promote public transport)	City admin-istration	Develop mobility management plan	Year 1: Apr-Oct	Expert on behaviour change, traffic planner	30.000 €	Municipal budget + research project	Schools, universities, large employers, public transport operator
Improve pedestrian crossings on prioritised routes	...								

GOOD PRACTICE EXAMPLE

Thessaloniki, Greece: A Mobility Forum to agree on responsibilities for actions

After the adoption of the SUMP in 2014, the stakeholders involved in the implementation met in the Mobility Forum, which acted as a SUMP assembly. The Mobility Forum met for the first time in 2016 with the aim of presenting the progress of the various measures and discussing and identifying the way forward with all participants. Responsibilities were allocated, firstly according to jurisdiction and law provision and secondly according to the skills and capacity of organisations. The success of this informal Mobility Forum relied on the good will of participants. Therefore, Thessaloniki authorities advise to use a more binding framework to sustain the decisions for action planning.

Author: Samuel Salem, TheTA Thessaloniki, collected by Polis
Image: Dimitris Vetsikas (JIC), pixabay.com

ACTIVITY 8.4: Ensure wide political and public support

Rationale

The actions are the most concrete part of a Sustainable Urban Mobility Plan. They directly affect local residents and are therefore usually the most controversial aspects of the process. For example, while it may be agreed easily that an active cycling policy is good for the city (i.e. on the strategic level), and a cycling infrastructure in a certain corridor is supported by a majority (i.e. on the measure level), the specific actions planned by the department in charge of construction (e.g. conversion of roadside parking in a certain street to create a cycling lane) may create controversy. To facilitate effective implementation of actions later on, it is therefore important to ensure wide political and public support throughout measure and action planning - and well before SUMP adoption. After involving citizens in the development of measures and measure packages (see Activity 7.1 and 7.2), the planned actions should be at a very minimum communicated publicly, giving citizens and stakeholders the opportunity to provide feedback before final decisions are taken. Ideally, they get actively involved in the agreement of actions and feel it is 'their' SUMP with 'their' measures and actions, and understand its role in improving mobility and quality of life for everyone.

Aims

- Ensure ownership and high acceptance of your planned actions among decision makers, citizens and other stakeholders.
- Provide transparency around planned actions.
- Facilitate adoption of the SUMP and effective implementation of actions later on.

Tasks

- Communicate in a transparent and professional way the main elements of the SUMP, in particular the planned actions.
- Actively inform and get feedback from decision makers. Consider organizing a dedicated information session in the local council well ahead of the official process to adopt the SUMP. Direct conversations with key decision makers, such as mayors and the heads of larger political parties, can also give you important information on how to widen the political support and facilitate adoption.
- Actively involve and get feedback from important stakeholders, for example in a meeting of the SUMP 'steering group'.
- Actively involve and get feedback from citizens on actions, for example in the form of a public debate evening (see Figure 14 on tools and methods for citizen engagement).
- Make the main elements of the SUMP, including its most important actions, a topic in the local media. When communicating the actions, emphasise the positive change they contribute to and their role in the SUMP. If possible, use quantifiable evidence of expected benefits and attractive visual elements, such as before-after pictures from other cities. A common risk is that only those negatively affected get active. Specific communication efforts are therefore recommended to also activate those that benefit among the general public.
- Be clear at all times about what a local authority can realistically do and what it cannot (expectation management).

Activities beyond essential requirements

- When facing strong political objections, for example in the case of government change during SUMP development, emphasise the benefits and the time and resources already invested in the SUMP. The analogy of a bridge can help to communicate this point: Just as a bridge started by one government is usually continued by the next one, also a SUMP should be, because it is a costly long-term project serving the city as a whole.

image © Susanne Böhler

Timing and coordination

- At least prior to finalising and adopting the SUMP, but better in parallel to all activities in Step 8.

Checklist

✔ Public relations and involvement activities planned and carried out.

✔ Information and opportunity for feedback provided to decision makers, citizens and other stakeholders and provided feedback considered for agreement of actions.

For some types of actions, gaining wide public acceptance can be especially challenging. Parking is such a topic that various road users tend to have strong opinions on (e.g. residents, visitors, logistics companies). The challenge for local authorities is increased as these user groups do not share the same expectations and needs towards the parking system in terms of costs, availability and capacity. Therefore, public acceptance is a major challenge and the only feasible way to get people to accept new parking management measures is to show them that "it will get better". Be very clear about how the measures work and how much – if anything – people will have to pay and explain what any new parking revenues will be used for. Helpful tools and further guidance can be found in the Practitioner Briefing **Parking and Sustainable Urban Mobility Planning**.

GOOD PRACTICE EXAMPLE

Ghent, Belgium: Public debate evenings, stakeholder meetings and public consultation

Ghent applied three different engagement formats to its SUMP: (1) public debate evenings where citizens discussed the draft SUMP, guided by a facilitator; (2) an extensive consultation round with stakeholders; (3) a one-month public inquiry process allowing every citizen and organisation to send comments concerning the SUMP. This was the most extensive participation process Ghent had carried out in mobility planning. Using multiple engagement formats allowed the SUMP team to reach people from various backgrounds and ages and strengthened public support for the plan and its measures. To inform citizens and connect them, the city also created a dedicated newspaper "de wijze gazet".

Author: Merijn Gouweloose, City of Ghent, collected by EUROCITIES
Image: City of Ghent


de WIJZE GAZET

Wat is het Mobiliteitsplan?

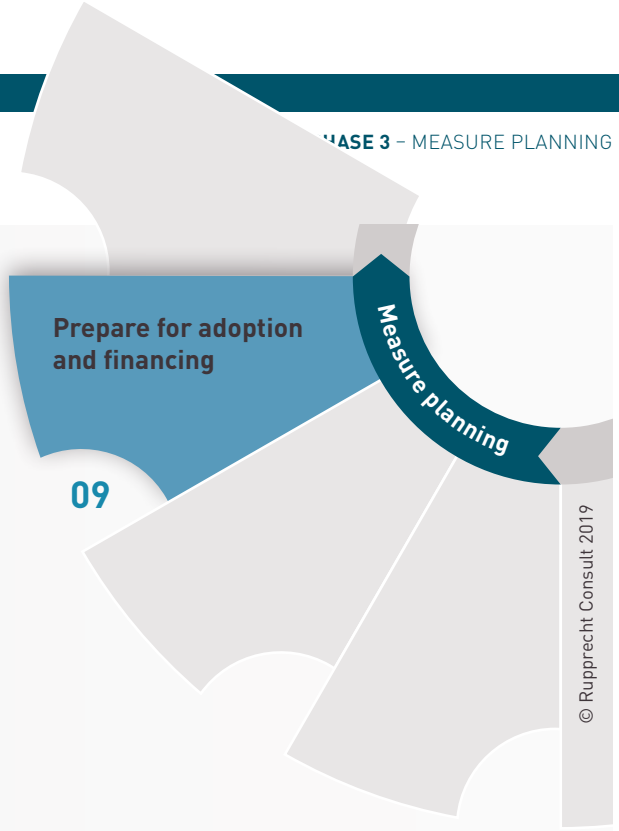
GOOD PRACTICE EXAMPLE

Lille, France: Bi-annual political committee to steer parking policies on a metropolitan level

The Métropole Européenne de Lille has set up a Parking Committee so that political and technical representatives of the metropolitan level (i.e. the MEL) and municipal level (i.e. 95 municipalities) can reach agreement on parking policies. This committee's main goal is "to adopt a shared vision on the parking policy, at the metropolitan scale [...] so to control car use and give public space back to people." The participation of all public authorities in an institutional framework allows for reaching political consensus. The transparency and neutrality of the framework is a major factor of success. The Committee plans to produce a white book on parking which will define the principles for parking policy to be integrated in the SUMP.

Author: Ellie Deloffre and Olivier Asselin, Métropole Européenne de Lille, collected by Polis | **Image:** Alexandre Traisnel, MEL

STEP 9:
Prepare for adoption and financing



9.1 Develop financial plans and agree cost sharing

9.2 Finalise and assure quality of 'Sustainable Urban Mobility Plan' document

Following a first cost estimate earlier on, it is now also time to develop definite concrete financial plans for all actions. Based on your organisation's conventions, a detailed financial scheme can be included in the SUMP itself or is part of a separate process. The Sustainable Urban Mobility Plan summarises the outcomes of all previous activities. After integrating adjustments based on stakeholder and citizen feedback and a final quality check, the document needs to be formally adopted by the political representatives.

ACTIVITY 9.1: Develop financial plans and agree cost sharing

Rationale

The implementation of sustainable urban mobility actions requires a sound financial plan that defines how to finance the actions of the SUMP, including the detailed cost estimates that were prepared in Activity 7.2 and the financing and funding sources that were identified in Activity 8.2. With respect to the functional urban area of a city, funding and financing must come from different municipal, regional, national, private and multilateral sources. Ensuring the long-term sustainability of the SUMP measures requires strategically matching the funding needs of the measures with public budgets and a diversity of financing instruments, municipal loans, public utility loans, and, sometimes, private sector capital. Due to the long-time horizon of a SUMP, it is often useful to plan financing in phases, with sufficient detailing for first phase measures in order to attract funding and financing from public and private sources.

The proper phasing of projects is necessary to transition effectively to implementation and to ensure long-term financing sustainability. When thinking about the potential for raising private capital for initial investments, it is important to keep in mind that the cost of money, or the interest rate, that is typically paid by the private sector is higher than that paid by the public sector. This means that the private sector will require higher review streams (e.g. from more expensive ticket prices) to offset these costs. Successfully engaging the private sector also requires that the public sector convincingly and contractually takes on appropriate risks, particularly risks related to policy. The private sector also generally has a shorter investment time horizon than the public sector, and generally requires a faster return on investment.

Aims

- Create a financing plan for all SUMP measures, with indicative sources of funding and financing.
- Create a detailed financing plan for priority actions, that contains all projected expenditures, including taxes and contingencies, as well as revenues on an annual basis for the duration of the financing plan.
- Ensure the financial viability of actions, also beyond the initial funding period.
- Plan for contingencies to help achieve resilience against potential changes in income streams.
- Identify opportunities for private sector involvement.
- Agree on the distribution of costs and revenues among all involved organisations.

Tasks

- Coordinate with other municipalities, regional institutions (cost-sharing arrangements for cross-border public transport services) and the national level. Explore possibilities to jointly fund measures.
- Assess the potential of private sector investor involvement in either capital, investment, operations, or a combination of both.
- Prepare financial projections for first phase actions that include capital expenditure (up-front investment) as well as operation and maintenance costs and related revenue streams per year.
- Discuss measures with potential financing partners and funding sources to ensure that the selected measures are well prepared.
- Allocate financing and funding sources for all actions, including potential changes in revenue streams per year; Consider political commitment for the resolution of arising funding gaps.
- Agree cost recovery arrangements (ratios, modalities) for shared systems and services, such as. contribution to the operating costs of public transport services.
- Agree on the distribution of costs and revenues among municipalities, regional authorities, the national level, and public and private operators.
- Prepare a detailed financing plan by financier for first phase investment.
- Initiate access to technical assistance facilities, such as JASPERS/ ELENA, for complex measures that require follow-up studies to ensure viability and access to finance.

Timing and coordination

- After Activity 8.3, building on the agreed-upon actions with their responsibilities and timeline.
- Builds upon and deepens the estimated direct financial costs of actions and the identified funding sources (Activity 8.2).

Checklist

✔ Detailed financial plans prepared and agreed for actions requiring financing in the first phase of SUMP implementation.

✔ Commitment obtained from relevant public entities to allocate sufficient public budget to fill financing gaps acquired.

✔ If required, initial application for sources funding for feasibility, market or other studies to prepare project completed.

✔ Financial sustainability of projects ensured.

✔ Division of costs and benefits among relevant actors agreed.

GOOD PRACTICE EXAMPLE

Barcelona, Spain: European funding and financing for renewing Barcelona's public transport

The Municipality and public transport operator (TMB) of Barcelona can rely on a sound funding and financing plan to renew its bus fleet. The local transport operator received the financial support of ELENA (European Local Energy Assistance) which provided a grant of almost 1.5M€ to cover preparation studies (2011 – 2015) for a large-scale retrofit of diesels and CNG buses into hybrids. In 2019, the European Investment Bank (EIB) granted a loan of 73,5M€ to TMB to purchase 254 clean buses (fully electric, hybrid and CNG). The renewal of the public transport fleet contributes to the improvement of the air quality in Barcelona.

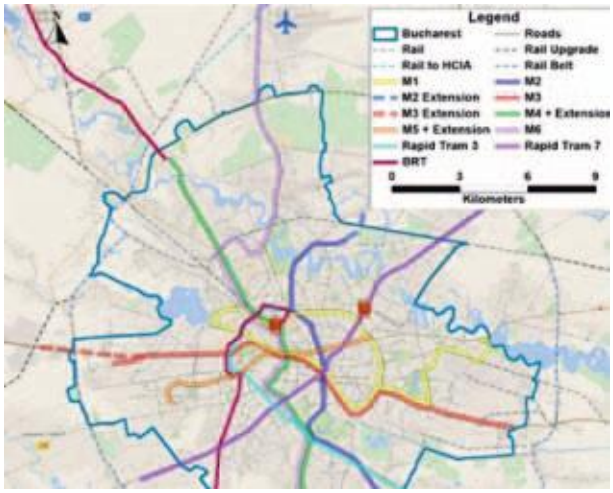
Author: Josep Maria Armengol Villa, TMB, collected by POLIS
Image: TMB

GOOD PRACTICE EXAMPLE

Bucharest/Ilfov, Romania: SUMP implementation based on comprehensive annual budget planning

Based on thorough data and problem analysis a list of priority areas for the SUMP was defined. This led to a range of organisational, operational and infrastructural measures included in the final SUMP. A cost estimate for each measure was made, thus identifying the scale of total investment needed to implement the Plan, to be put in relation with available financing sources. The SUMP served as a main tool to identify priorities for programming of EU funds until 2030. These needed to be considered in parallel with state funding, capital expenditure by Bucharest and Ilfov administration, lending from IFIs (EIB/EBRD) and additional income from the proposed parking strategy. Meanwhile it was possible to define the required budget for public transport operating subsidies and also network maintenance over the same period.

Author: Alan O`Brien, EIB/JASPERS, collected by Rupprecht Consult
Image: Planul de Mobilitate Urbană Durabilă BI



ACTIVITY 9.2: Finalise and assure quality of 'Sustainable Urban Mobility Plan' document

Rationale

The project team will have the task to compile the final version of the Sustainable Urban Mobility Plan document. To ensure that previous agreements are well reflected, drafts of the document need to be reviewed internally and by important stakeholders. Before the adoption and publication of the Sustainable Urban Mobility Plan, the focus lies on assuring high quality and finalising the document for its further implementation and dissemination. In this step, last refinements and improvements should precede the final publishable document.

Aims

- Ensure high quality of the SUMP document.
- Ensure that the views of key stakeholders and the wider public have been taken sufficiently into account in the document.
- Finalise the SUMP document so that it is ready for adoption by political bodies and release to the public.

Tasks

- Compile a full draft of the SUMP. The suggested aspects to include in the document are:
  - Background, local context and short overview of development process (including stakeholder and citizen involvement)
  - Results of mobility analysis and scenario exercise
  - Vision, objectives and key targets
  - Measure packages with their actions (including timeline, responsibilities and sometimes financing)
  - Monitoring and evaluation scheme
- Look at the whole document and check quality and potential for effective outcomes. Consider using the online SUMP Self-Assessment (see Tools below) or an internal peer review with colleagues to assure good quality.
- Check if views and results of the involvement process with stakeholders and citizens are integrated in the whole document.
- The SUMP also has to be assessed with an eye to procedural requirements (e.g. if existing on the national level), and to achieving compliance with the EC directive on Strategic Environmental Assessment (SEA). In certain countries, a public consultation is needed at this point of time as well.
- Make final amendments in cooperation with key stakeholders. Aim for a document that receives wide political and public support, for example by adjusting sensitive aspects that would stop key decision makers from supporting it. But be careful not to dilute it too much, it is essential that it is ambitious enough to achieve its sustainability objectives.
- Finalise the SUMP document.

Activities beyond essential requirements

- Include external reviewers with experience in Sustainable Urban Mobility Planning to quality check the document.
- Brand your SUMP to communicate its core idea, create consistent visibility and help citizens and stakeholders to recognise and remember it. Branding may include giving it a catchy title, developing a visual identity, theme and colour scheme and designing a dedicated logo (see examples below).
- Develop a short version of the document.
- Add your city to the Eltis database of cities with Sustainable Urban Mobility Plans: *www.eltis.org/mobility-plans/city-database*

Timing and coordination

- Quality check when advanced draft of SUMP document is available.

Checklist

✔ Final draft of Sustainable Urban Mobility Plan compiled.

✔ Internal and stakeholder review completed.

✔ Quality assessment completed.

✔ Final amendments completed.

SUMP Self-Assessment tool

To check the quality of the planning process to develop your final Sustainable Urban Mobility Plan, it is recommended to use the online SUMP Self-Assessment tool. The tool can be used at all stages of the planning cycle - both to evaluate and improve mobility planning at the beginning and during the process, and to assess the quality of the SUMP before it is finalised. The Self-Assessment consists of tailored sets of questions depending on your planning context and interests. After completing the questionnaire, the results page will show you how well your document fulfills the principles of a SUMP, enabling you to identify the strengths and weaknesses of your approach. It will provide you with tailored advice for further improvement, good practice examples and links to guidance for your specific situation. To ensure a diverse feedback on your final document, the SUMP Self-Assessment should be completed by several people of the SUMP core team.

Link to SUMP Self-Assessment:
www.eltis.org/mobility-plans

GOOD PRACTICE EXAMPLE

Greater Manchester, Malmö, Budapest, Vienna: Award-winning SUMPs with outstanding design

One of the award-winning SUMPs with an outstanding design is Greater Manchester. Transport for Greater Manchester (TfGM) used a combination of in-house expertise and external support for creating eye-catching imagery, while retaining flexibility to quickly do necessary updates. Stand-alone material, including the SUMP cover page, was made by a design consultant. For images related to evolving SUMP content, including maps, infographics and images, TfGM's in-house design team was used. This allowed TfGM to quickly refine content and to continue adopting the same formatting in all updates, maintaining consistency across TfGM's documents when referring to the SUMP.

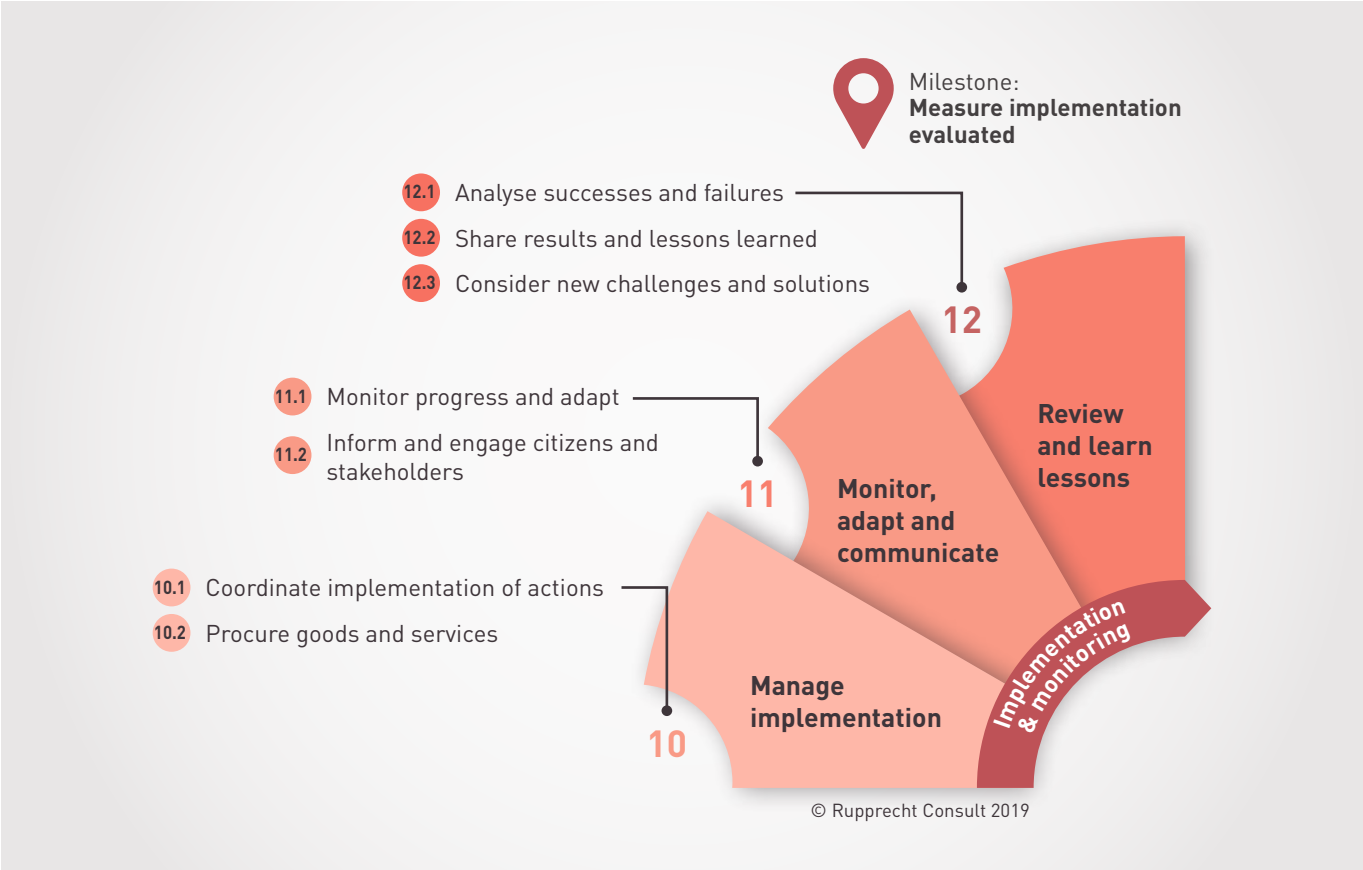
Information on the design approaches of Malmö, Budapest and Vienna can be found in the Annex.

Author: Ben Brisbourne, Transport for Greater Manchester, collected by Polis
Image: Transport for Greater Manchester

Milestone:
Sustainable Urban Mobility Plan adopted

The most important milestone of the planning process is the adoption of the Sustainable Urban Mobility Plan by as broad a political coalition as possible. The SUMP needs to be legitimised by the elected political representatives of the body/bodies responsible for the development (e.g. city council, neighbouring administrations, regional council). This is a key step in fostering acceptance, making it accountable and providing an agreed upon framework for measure implementation. The adoption process may take a few months and will depend on the national regulatory framework and administrative structure. Once it is adopted, your final SUMP deserves to be celebrated with the local community. You might organise an event, where stakeholders, the wider public and (local) media are invited and the final document is presented publicly.

PHASE 4: Implementation and monitoring



The fourth phase focuses on implementing the measures and related actions defined in the SUMP, accompanied by systematic monitoring, evaluation and communication. Here the actions are put into practice by answering the following questions:

How can we manage it well?

The responsible departments and organisations plan the technical details of their actions, conduct the implementation and procure goods and services if needed. As this often involves a large amount of parties, the overall coordination of the implementation process requires particular attention.

How are we doing?

Systematic monitoring will make clear whether things are going according to plan, allowing corrective action to be taken if needed. Innovative mobility schemes can be a great disruption (as well as a great benefit) for daily travellers. Understanding public opinion, based on an active two-way dialogue, is crucial for a successful implementation process.

What have we learned?

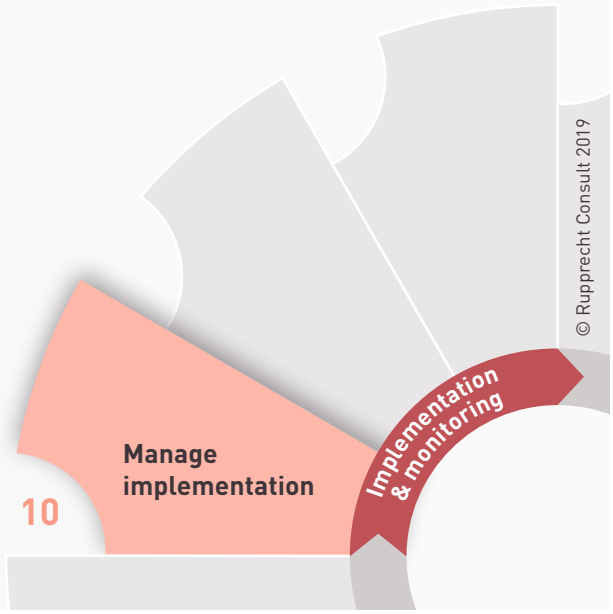
The last step of the SUMP cycle is about reviewing successes and failures, communicating these results with stakeholders and the public, and considering new challenges and solutions.

The milestone 'Measure implementation evaluated' concludes the SUMP cycle - at the same time providing lessons for the next SUMP process.

STEP 10:
Manage implementation

10.1 Coordinate implementation of actions

10.2 Procure goods and services



After SUMP adoption, the implementation phase starts. As the Sustainable Urban Mobility Plan is a strategic document, it provides a sound framework for these activities, but it does not specify in detail how each action will be implemented and what needs to be procured. These often complex implementation tasks are usually not performed by the core 'SUMP team', but by the responsible technical departments. Therefore, a good handover to technical implementers and effective coordination of all implementation activities by the core team is important to ensure a coherent approach. For example, while procurement of goods and services is a standard process in any public administration, tendering innovative products or 'green procurement' often requires the attention of the core team to ensure successful introduction of these novel products and procurement approaches.

ACTIVITY 10.1: Coordinate implementation of actions

Rationale

A good Sustainable Urban Mobility Plan does not automatically lead to good results, only the successful implementation of the identified measure packages and actions does. In order to deliver the objectives effectively, appropriate management needs to be applied to oversee the implementation and to manage risks. This requires agreements with all actors involved in action implementation as well as a handover from the SUMP core team to the technical staff and regular communication with them throughout the implementation of actions.

Aims

- Formalise the roles of actors involved in measure implementation.
- Ensure sound coordination among all parties involved.
- Facilitate an efficient and effective implementation process and sequence.
- Address potential risks.
- Ensure transparency of implementation.

Tasks

- Stay active as the SUMP core team to ensure continuity between process development and implementation. Continue to meet regularly (e.g. monthly) throughout the implementation phase to

keep a good overview of progress and plan contingency activities in case actions are not on track.

- Hand over factsheets describing the key aspects of each action to the departments and institutions in charge of their implementation. If not already developed before, prepare such factsheets. (For information on what to include in such factsheets see Activity 8.1 and 8.3, where they are usually developed.)

- Agree on management procedures and responsibilities. Each action should have one main person in charge of managing its implementation. Ensure that each action manager summarises the agreements in a work plan that serves as a common framework for all stakeholders involved in implementing the action.

- Assess risks and plan for contingencies (continuation of analysis in Activity 8.3). Which actions have strong effects on other actions, so that delays pose a risk to the success of the entire SUMP? How can you react if they get delayed?

- Keep regular personal contact with the action managers. Agree in what format and how often to get status updates by them (e.g. short informal phone calls only between SUMP coordinator and action manager to avoid bureaucratic overload). In case of difficulties, intensify communication, provide needed support and use decision maker backup to enforce the implementation of actions.
- Organise regular meetings to check the general status of action implementation. Meetings with the group of all action managers should be organised annually.

image © BKK Centre for Budapest Transport

Activities beyond essential requirements

- Link the management of action implementation with wider performance management systems within the administration.

Timing and coordination

- Throughout implementation phase.

Checklist

✔ Handover of action factsheets to implementers.

✔ Coordinator and implementation steps agreed for each action.

✔ Risks assessed and contingency activities planned.

✔ Procedures for regular status updates by action managers established.

GOOD PRACTICE EXAMPLE

West Yorkshire, United Kingdom: Project management to ensure a constant dialogue

In West Yorkshire (WYCA), the structure for SUMP preparation and implementation is defined in an organogram: The executive prepares the SUMP and implementation programmes. Decisions are made by politicians. A Transport Committee acts as a project board; it oversees preparation and implementation of the SUMP. A separate Investment Committee makes decisions on funding for implementation of SUMP projects. Project Management (WYCA) is responsible for the implementation with thematic work package leads in charge of developing elements of the SUMP. Coordination is done through monthly officer conversations, and through bi-monthly meetings with the political board and consultations with public and stakeholders.

Author: Steve Heckley, WYCA, collected by Polis
Image: West Yorkshire Transport Strategy 2040

GOOD PRACTICE EXAMPLE

Groningen, Netherlands: Regional Public-Private partnership for coordination and cooperation of actions

The SUMP in Groningen is rooted in a long tradition of sustainable planning for the city and the city-region. For coordinating the implementation of actions, Groningen has formally established an enabling body called Groningen Bereikbaar: A Public-private partnership for a sustainable and accessible Groningen. The body ensures that all parties cooperate effectively and coordinate their work on the various transport-related projects. The body has succeeded in gaining political support, increasing commitment and pooling the best available know-how from the public and private sector, academia, citizens and various different stakeholder groups.

Author: UBC, based on GroningenBereikbaar.nl.
Image: Jeroen van Kooten

GOOD PRACTICE EXAMPLE

Brno, Czech Republic: SUMP Monitoring tool for action implementation

The SUMP monitoring tool is a spatial database (GIS) application for both experts and citizens. It contains information about all investments from the Action plan (budget, year of realization, etc.) and allows detailed analysis of this data. Experts (mostly stakeholders) use the tool for managing the SUMP implementation. The tool allows cooperation for all the stakeholders over one platform simultaneously, so there is significant time saving and improved coordination of the implementation. Citizens can use the application as a source of information about the SUMP implementation. The utilisation as a public participation tool is currently under development.

Author: : Lukáš Báča , City of Brno, collected by Rupprecht Consult
Image: Kateřina Nedvědová, City of Brno

ACTIVITY 10.2: Procure goods and services

Rationale

A crucial part of implementation is to procure the goods and services required for the measures and actions of the SUMP. Procurement is a standard process in any public administration, usually supported by specialised staff, but tendering innovative products or 'green procurement' requires the SUMP core team's attention. Due to the large amounts that cities in Europe spend on this, it is a powerful lever in its own right to support the transition of urban mobility. The purchasing power of cities and regions can create a critical demand for innovative and green goods, services and business models such as low emission vehicles or shared mobility solutions. If executed properly, procurement can add value both by minimising negative social and environmental impacts and by enabling innovative products and services to penetrate the market.

Aims

- Ensure effective and timely procurement of all goods and services needed for the implementation of actions.
- Minimise negative social and environmental impacts of purchasing decisions.
- Facilitate the diffusion and promotion of new sustainable technologies and services.

Tasks

- Assess and define the real needs of the city, which should be the starting point of any procurement. Procurers will need to collaborate closely with the technical departments in order to define functions that can be correctly translated into an effective procurement process.
- Ensure thorough knowledge of the national and European legal framework for sustainable public procurement, to avoid any law infringement that could complicate and delay the implementation process.
- Determine the procurement method and timeframe for each good or service, define how it should be carried out, and what kind of contract is needed. Consider joint procurements with other authorities that may result in lower prices due to economies of scale.

- Set the technical specifications, using performance-based criteria that describe the function you need instead of specific products. Consider adding sustainability aspects, either as minimum requirements or as award criteria that help offers to score higher. Use life cycle costing, instead of only purchase price, as cost criterion. This better describes the true costs for you as a buyer and at the same time often favours sustainable choices, e.g. low-consuming (and therefore low-emission) vehicles.

- Publish the tender and go through the process of selection and exclusion of bidders.

- Ensure transparency of the procurement process in order to increase public and political support.

Activities beyond essential requirements

- Consider using innovative procurement methods for highly innovative products and services that are not readily available on the market. Suitable methods include:

  - Request for Information - a method to collect information on possible solutions before starting a formal procurement process.

  - Pre-Commercial Procurement - which challenges industry to develop new solutions that do not exist yet for public sector needs.

  - Public Procurement of Innovative Solutions - where the city acts as an early adopter of innovative solutions that are not yet available on a large-scale basis in order to facilitate their spread to the mass market.

Timing and coordination

- Procurement is usually one of the earlier parts of action implementation, but relevant during the entire implementation stage depending on the timing of the different actions.

Checklist

✔ Procurement needs of the city clearly defined and agreed on.

✔ List of personnel and their expertise to lead the procurement process defined.

✔ Tender specifications defined.

✔ Tenders launched, submissions evaluated and tenderers selected.

Criteria templates for Green Public Procurement

The EU GPP criteria are developed to facilitate the inclusion of green requirements in public tender documents. While the adopted EU GPP criteria aim to reach a good balance between environmental performance, cost considerations, market availability and ease of verification, procuring authorities may choose, according to their needs and ambition level, to include all or only certain requirements in their tender documents.

For urban mobility, criteria templates for the following areas exist. Each of them consists of several subcategories, e.g. procurement of buses, cars, other vehicles, etc. in the document on road transport. They are available in all EU languages.

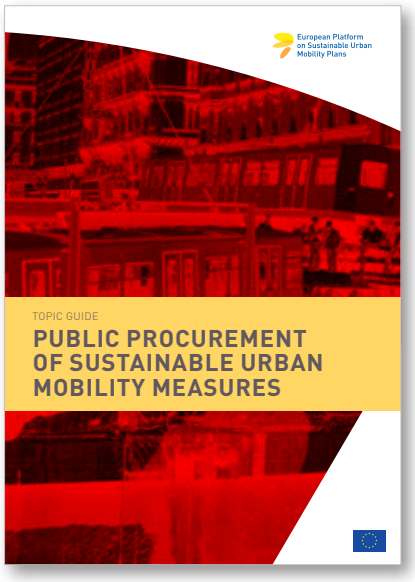
- Road Design, Construction and Maintenance
- Road lighting and traffic signals
- Road Transport

For more information: *https://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm*

Approaches to sustainable public procurement

Figure 36: Overview of approaches to sustainable public procurement (Rudolph, F., Werland, S., 2019. Public procurement of sustainable urban mobility measures.)

Approach	Aim	Examples	Comments
Re-direct investments towards sustainable mobility modes	Conversion of the transport system towards sustainable modes	Focus investments on public transport and active modes rather than on motorised individual mobility	This might be a political decision with limited or no influence from procurement agencies
Procure services instead of products (outcome based, functional procurement)	Reduce direct costs; save scarce urban space	Use car-sharing fleet instead of own cars for the public administration	Use functional and performance-related requirements to describe specifications
Procure more sustainable products and services	Increase efficiency of products and prefer environmentally friendly products	Use CO2-, noise-, PM- and NOx- emissions of vehicles as award criteria Retrofit existing trams or buses to increase energy efficiency Use recycled materials for road and bike path construction	European legislation allows the application of additional award criteria beyond the lowest price
Increase the quality of products and services	Increase public transport's attractiveness	Quality criteria for public transport (silent vehicles, on-board passenger information, WiFi, etc.)	
Procure innovative products and services	Bringing innovations into the market	Procurement of E-buses Contract bike-sharing providers as part of the public transport system	Municipalities have market power in many areas, such as public transport Procurement may require risk management



Further guidance and step-by-step-approaches for sustainable public procurement can be found in the Topic Guide **Public procurement of sustainable urban mobility measures**.

GOOD PRACTICE EXAMPLE

Piedmont region, Italy: Joint Procurement of 19 urban electric buses

The Piedmont Region applied a joint procurement approach to introduce electric buses into the fleets of regional transport operators. Five steps were taken:

- Project proposals requested from public transport operators;
- Market survey to identify suppliers;
- Pre-qualification phase with a call for offers from suppliers;
- Suppliers selected;
- Proposals requested from selected suppliers.

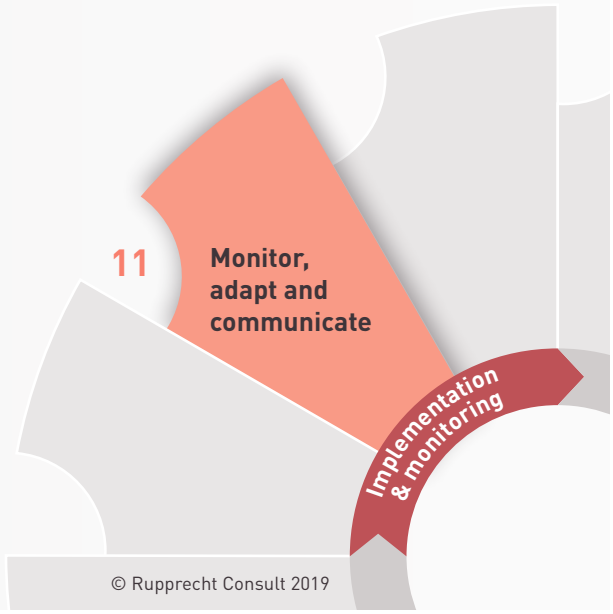
The tender was awarded to BYD EUROPE B.V. who signed independent contracts with each of the involved public transport companies.The Region financed 90% and operators 10% of the bus purchasing cost.The expected savings of the Region are approx. € 50.000 over a period of 10 years and 769 tonnes of CO2 /year.

Author: Chiara Ferroni, Fondazione Torino Wireless, collected by ICLEI
Image: The Piedmont Region

STEP 11:
Monitor, adapt and communicate

11.1 Monitor progress and adapt

11.2 Inform and engage citizens and stakeholders



Continuous monitoring is a principal characteristic of Sustainable Urban Mobility Planning, which increases the efficiency of the process and contributes to a higher quality of implementation. To ensure a successful implementation phase you need to set a baseline value before and start with monitoring early to be able to react to changes properly. The monitoring results need to feed back into the process to optimise further implementation and should be communicated with citizens and stakeholders. During this step, the wider public is usually directly affected by action implementation for the first time, and therefore expresses high interest in it. Accordingly, the local community needs regular engagement and information.

ACTIVITY 11.1: Monitor progress and adapt

Rationale

The broader monitoring and evaluation arrangements have been defined and the data collection has been conducted before the Sustainable Urban Mobility Plan is adopted (see Activities 3.1, 6.1 and 7.3). With the implementation of the actions it is time to apply the selected monitoring tools regularly and to check how much progress has been made towards achieving the targets. Through regular monitoring and reflection, problems can be identified early and adaptations can be made. Which kind of adaptation to apply depends on the specific situation and local context of every city and its SUMP. Flexibility is needed during the SUMP process to guarantee that new developments and insights are taken into account. New and better measures or actions might be available that could address a specific challenge of the city or new knowledge could make a measure obsolete. Reasons to adapt measure implementation could include internal factors relating to planning (e.g. time or budget), or various kinds of external factors (e.g. public disagreement with an action, political legislature, regulation processes or planning activities that may influence the process, new technologies etc).

Aims

- Identify problems, bottlenecks and other challenges for on-time implementation.
- Keep track of progress towards achieving the targets.
- Adapt to new technological, legal, funding or political developments.
- Adapt and optimise the implementation process.

Tasks

- Keep track of implementation activities through regular personal contact with the action managers (see Activity 12.1).

- Regularly measure your indicators with the data collection methods and frequency defined in Activity 7.3. Use the measure-level indicators to monitor progress of individual measures or measure packages towards their targets (every 1-5 years, depending on the type of measures). Use the strategic indicators to monitor progress towards your general SUMP targets (usually every 1-2 years). In both cases, compare measurements to the baseline values before the start of implementation - while also considering other contributing factors - to estimate the impact of your measures.

- Keep abreast of new developments, such as changes in national regulations, technologies, funding or local politics. Regularly think about what current trends mean for your activities.

- Be flexible about updating your measures and making changes to implementation activities. You may need to adapt them due to:

    - Difficulties in implementation activities. If, for example, a measure encounters strong opposition, consider turning it into a temporary experiment that will be properly evaluated after a certain amount of time (e.g. one year), and then keep or discontinue it depending on the results. Often, opposition decreases once people get used to the change and see the benefits (such as in the case of road pricing in Stockholm).

    - Measures or the entire SUMP under-achieving important targets. If individual measures of the entire set of SUMP measures turn out to be less effective as assumed, investigate the reasons and adjust in time. If, for example, new protected bicycle lanes do not get used as much as aimed for, find out if something is wrong with them or if important connections leading to them are missing and react accordingly. If air pollution in your city is stagnating despite your efforts, for example because economic growth enables more and more people to own a car, consider reinforcing or adding air quality measures, such as higher parking fees or road pricing in combination with providing modern electric busses.

    - Technological, legal or political developments that render your measures out of date or make other, more effective measures possible. New types of electric vehicles, for example, might require a redesign of planned infrastructure, or local elections might make measures to redistribute road space possible that would not have found a majority before.

- Adapt wherever necessary in cooperation with action managers. Be brave to stop a measure if it does not work! The implementation programme should be modified throughout the implementation period, based on monitoring results.

- Clearly state the changes to SUMP measures that result from the monitoring process and get formal approval for the most important changes at the political level.

Activities beyond essential requirements

- Include a 'sanity check' in implementation monitoring, meaning that stakeholders, the public and possible peers from other cities provide feedback on how the implementation performs compared to the objectives and targets of the SUMP.

- Have the monitoring and evaluation carried out in a transparent way, preferably by an independent agency to guarantee neutrality, and applying the same indicator set that was used throughout the previous steps. If this seems unrealistic (e.g. due to budget restraints), a self-monitoring and evaluation by authorities is a valid alternative.

- Disseminate your evaluation results, especially those of novel measures, so that others can learn from your experience (see Activity 12.2).

Timing and coordination

- Parallel process during implementation phase.

Checklist

- ✔ Status of implementation activities constantly monitored.
- ✔ Progress towards measure targets and strategic SUMP targets evaluated at regular intervals.
- ✔ Necessary adjustments in implementation of measures identified.
- ✔ Adjustments discussed and agreed with relevant actors.

GOOD PRACTICE EXAMPLE

Lund, Sweden: Yearly monitoring reports summarising the status of target attainment

The city of Lund monitors the actions of their SUMP closely and evaluates them against the targets set by the politicians in the planning process. The number of pedestrians, the use of bicycles, motor vehicles and public transport are therefore measured annually. A survey among citizens collects information on attitudes and mobility behaviour every 4th year. When the targets are not met, the actions are intensified or changes are proposed for the following year.

To visualize and communicate the results of the monitoring process, Lund uses a "traffic light" system: if actions are proceeding well and reach the targets (green), if they need adjustment (yellow) or if they need to be re-planned/ changed/ replaced (red).

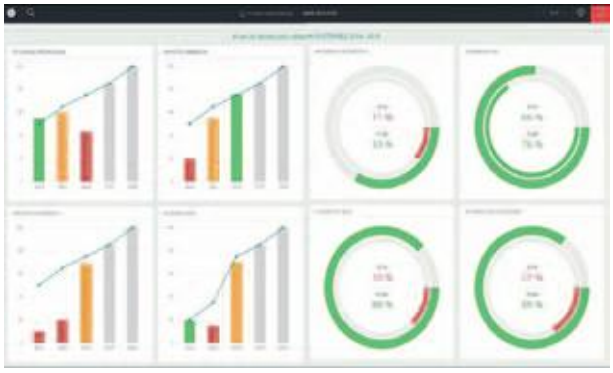
Author: Anders Söderberg, City of Lund, collected by UBC
Image: City of Lund

GOOD PRACTICE EXAMPLE

San Sebastian, Spain: Interactive monitoring platform for SUMP

San Sebastian uses a mobility monitoring platform to track the progress of SUMP measures. The digital tool is based on data provided by existing data collection systems, obtaining very precise and reliable estimations. Managers and decision makers can get an easy overview of the general status, while the application also allows them to go into more detail if they are interested. Progress is visualised in a simple form using traffic light colours to show whether or not the city is on track towards achieving the objectives of the SUMP, or even other municipal strategies, in the respective area.

Author: Municipality of Donostia/San Sebastian, collected by UBC
Image: Municipality of Donostia/San Sebastian



GOOD PRACTICE EXAMPLE

Funchal, Portugal: Systematic measure monitoring to increase acceptance

The monitoring process for pedestrianisation-related measures included a territorial assessment focused on accessibility to identify the areas that could benefit from improving conditions for walking. In addition, traffic counts were analysed to identify traffic flows and to estimate air pollutant emissions. A questionnaire was also circulated to further assess the acceptance of the measures as well as their potential impact. The assessment and measurement of implemented measures were necessary to adopt corrective measures. The strategy proved to be successful in showing the benefits of the measures and increasing acceptance. It is therefore recommended to be used in other sites that could benefit from pedestrianisation measures.

Author: Jose Augusto Batista Vieira, Câmara Municipal do Funchal, collected by Polis
Image: Municipality of Funchal; Mobility and Traffic Division

ACTIVITY 11.2: Inform and engage citizens and stakeholders

Rationale

Communication and engagement with the local population should not end at the planning stage. It is an essential ingredient during all stages of the SUMP process. As implementation is carried out, it is necessary to publicly communicate the progress of the implemented actions, articulating their contribution to the agreed vision and objectives. Citizens and stakeholders who are directly affected by certain actions should be particularly addressed in the process. That way, citizens can realise the connection between their earlier input at a strategic and detailed level and the real changes in their city or neighborhood. This requires honest, ongoing and respectful communication from the city administration to the public - but also vice versa: citizens, the ultimate experts in the actual performance of measures in real life, should be encouraged and should have convenient opportunities to share constructive views about ways to improve and fine-tune measures. Taking such views on board sincerely and responding to them fosters a sense of trust and provides opportunities for improving the implementation process and the final outcomes of measure implementation.

Aims

- Make effective use of resources - taking advantage of both the expertise of professionals and the on-the-ground knowledge of citizens - to achieve the best results possible.
- Increase ownership of measures by involving citizens as much as possible in the monitoring and implementation process.
- Ensure residents are aware of the implications of the changes that are coming to their city, describing the benefits and offering options where changes in daily travel habits will be possible or required.

Tasks

- Talk to citizens or stakeholders who are directly affected (positively or negatively) by a planned measure before starting the implementation, and respond to their concerns. Bear in mind that those who fear being negatively affected will naturally make

more 'noise' than those who benefit from a measure - even if they are in a minority.

- Mitigate negative effects that accompany implementation (e.g. offer support to businesses affected by long-term construction of a new tram route).

- Look for creative ways to engage stakeholders wherever possible (e.g. having children paint footprints on the ground marking safe routes to school).

- Keep the wider public well informed about the progress in measure implementation. Publish evaluation results targeted at citizens and politicians. Present a selected set of indicators (emotional core indicators - see Activity 6.1) in the form of high-quality figures that are easy to understand for non-experts. Provide a general update on the implementation status to the local council every one or two years to keep the SUMP high on the agenda (e.g. in the form of a status report or presentation in a council meeting).

- Highlight milestones of measure implementation and celebrate accomplishments with the community (e.g. a street festival after pedestrianisation).

Activities beyond essential requirements

- Consider options to "co-implement" measures with civic actors (e.g. residents, businesses, artists, sports clubs, schools, senior citizens, trade schools, religious groups, museums etc). Depending on the context they could take over maintenance tasks, provide some light labour, grant access to their own communication channels, engage in training and mentoring activities, report problems, host events, provide data, know-how and ideas or even make financial contributions (crowd-funding/crowd-investment). See the SUNRISE Co-Implementation Guidelines for further inspiration and for a range of concrete examples (e.g. citizen-built bike lanes, place making initiatives with residents, citizen-buses, collective cleaning days and more).

Timing and coordination

- Different forms of citizen and stakeholder engagement are required throughout the entire SUMP process as well as the implementation and monitoring phase.

Checklist

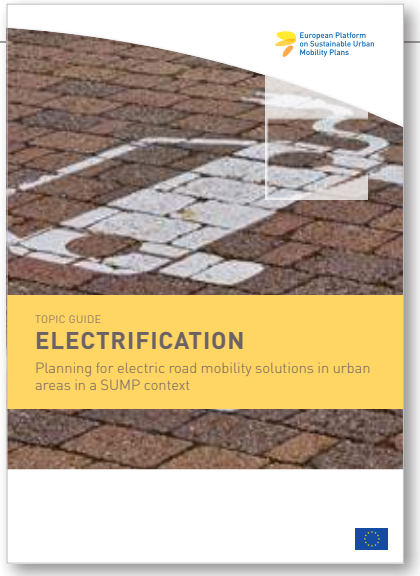
✔ Citizens and stakeholders who are directly affected by measure implementation involved in implementation process.

✔ Solutions for mitigation of negative effects during implementation identified and pursued.

✔ General public informed about progress of measure implementation.

The success of measure implementation is strongly connected to a good communication with the affected stakeholders and citizens. When it comes to electrification measures, such as charging infrastructure or Zero-Emission-Zones, residents need to be engaged and encouraged to be part of the changes. Convincing people to exchange their private cars for other options is not simple, as it cannot be directly controlled by the mobility planning authority, but has to be achieved with a range of communication measures and incentives. In your communication campaign, it is recommended to use a recognisable brand and different channels to target different groups. The messages should focus on the direct benefits for the users (e.g. lifecycle costs, access to charging infrastructure etc.) rather than on the benefits for society. You should make all the existing benefits and incentives widely known, such as financial subsidies and practical advantages given to electric vehicle drivers (e.g. access to Zero-Emission-Zones, free parking, free charging etc.).

More guidance on how to successfully electrify transport in the framework of a Sustainable Urban Mobility Plan can be found in the Topic Guide **Electrification in Sustainable Urban Mobility Planning**.



For more information

SUNRISE project, 2019. Co-Implementation Guidelines, *www.rupprecht-consult.eu/uploads/tx_rupprecht/SUN_D3.1_Co-implementation-Guidelines.pdf*

CH4LLENGE project, 2016. Participation manual - Actively engaging citizens and stakeholders in the development of Sustainable Urban Mobility Plans, *www.eltis.org/resources/tools/sump-participation-kit*

CiViTAS DYN@MO, 2016. Participation 2.0 in the Sustainable Urban Mobility Planning Process - Experiences from the CIVITAS DYN@MO Project, *https://civitas.eu/sites/default/files/participation_2.0_in_the_sump_process_dynamo_web.pdf*

GOOD PRACTICE EXAMPLE

Ljubljana, Slovenia: Temporary street closure leading to permanent redesign of urban space

The city of Ljubljana took advantage of the European Mobility Week in 2013 to start a four-month temporary closure of the central Slovenska Street for all motorised vehicles. This was a step towards transforming the urban space into a new public pedestrian street, which is only accessible by public transport, cycling and walking. It includes new urban furnishing and green space. Four months later, at the end of January 2014, the CO2 level had dropped by 70%, improving the quality of life, air quality and level of noise. Based on the positive results and feedback from the general public, Ljubljana made the closure permanent in September 2015.

Author: Matic Sopotnik, City of Ljubljana, collected by EUROCITIES
Image: City of Ljubljana

GOOD PRACTICE EXAMPLE

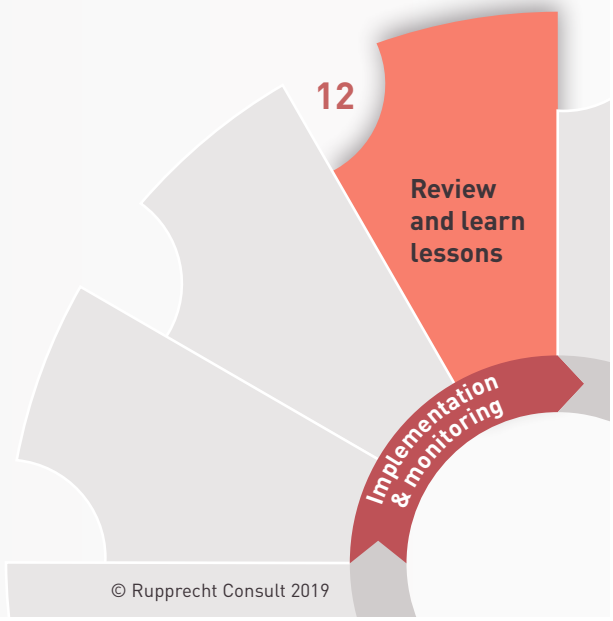
Bologna, Italy: Novel and interactive engagement formats to involve citizens

Based on a multilevel approach, citizens' engagement was the key asset of developing a SUMP for Bologna. In the framework of a "Sustainable Mobility Forum" various stakeholders were invited to work on objectives, strategies, policies and actions. Overall, 55 different municipalities and their citizens participated in public SUMP presentation meetings; the six neighbourhoods of Bologna got engaged in workshops and dedicated info-points. Together with the SUMP development, the "PUMS Bologna Metropolitana Project" aimed to engage all actors and citizens through participatory, informative and communicative activities (co-implementation).

Author: Catia Chiusaroli, Metropolitan City of Bologna, collected by Polis
Image: Metropolitan City of Bologna

STEP 12:
Review and learn lessons

12.1 Analyse successes and failures
12.2 Share results and lessons learned
12.3 Consider new challenges and solutions



The SUMP process is a cycle because it presents a continuous development. The end of the process is also the beginning. The world - and your city - continue to change and develop. Even as you complete the cycle, it is important to look at what went well and what did not, to share and exchange experiences with citizens and to consider the new issues and challenges to be faced as well as possible new solutions to them. In this step, you can learn from what went well and what didn't, and take the lessons learnt into further Sustainable Urban Mobility Planning.

ACTIVITY 12.1: Analyse successes and failures

Rationale

Not everything turns out exactly as planned - sometimes it is for the worse, sometimes for the better. It is important to look carefully to see what went well and what did not go well as there is something to learn from every experience. This evaluation includes both the impact of your efforts on urban mobility and beyond (level of achievement of vision, objectives and targets) and the effectiveness of the planning process itself. It is possible that one went well and the other went wrong.

To identify and understand these successes and failures, you need to involve engaged and affected citizens and actively listen to what they say about the process and its outcomes. These aspects are essential in order to learn and improve your skills and knowledge, which, in turn, helps you to provide a solid basis for the next planning cycle.

Aims

- Evaluate the planning process, the SUMP and its implementation with an eye to understanding what led to successes and failures.
- Enhance your understanding of the Sustainable Urban Mobility Planning process and overall measure impact with the help of citizens and stakeholders.
- Gather lessons for the preparation of the next SUMP generation.

Tasks

- Evaluate the successes and failures of the SUMP through analysing the strengths and weaknesses of all phases and steps as well as their final outcomes.

- Analyse the process looking back to the entire cycle. This can include, for example, participatory observation, focus groups or interviews. Use these to critically review the effectiveness of stakeholder and citizen involvement so as to enhance participation activities in later stages and in future plans.

- Actively involve key stakeholders and citizens to identify accomplishments and improvable steps of the process from their perspective. After years of Sustainable Urban Mobility Planning, people standing outside the process can provide a quite different view and might have observed important aspects that you do not see.

- For impact evaluation, you can begin to assess the broader impacts of the implemented measures once a sufficient number of results are available. Analyse what went well and what went wrong. List objectives and strategic targets that could not be achieved, but that are still on the agenda

- Communicate the 'lessons learned' to the core team and key stakeholders (e.g. the 'steering group').

- Reinforce success stories and ensure that you learn from mistakes in the next round of planning.

Timing and coordination

- Review the effectiveness of the planning and citizen engagement process during the implementation phase.

- Review the overall impact (i.e. did you get closer to the vision?) after a sufficient number of measures have been implemented.

Checklist

✔ Successes and failures of the Sustainable Urban Mobility Plan process evaluated.

✔ Evaluation of measure implementation concluded.

✔ Key stakeholders and citizens involved and different perspectives gained.

✔ Lessons learnt shared and communicated.

GOOD PRACTICE EXAMPLE

Nantes Métropole, France: Comprehensive evaluation of previous SUMP before starting plan development

The Métropole de Nantes has evaluated the main successes and failures of the previous plan (2010-2015) to improve the new SUMP. For this evaluation, the metropolitan region carried out qualitative and quantitative surveys (addressed respectively to 20,000 and 1,000 people) to understand how the mobility behaviour has changed and how the population experienced and observed the different mobility measures implemented since 2010. Additionally, an expert group conducted a qualitative analysis and drew conclusions and recommendations for the next SUMP development. In this process, the consultation of the population and the participation of experts and stakeholders were crucial for the good preparation of the new SUMP.

Author: Lamia Rouleau-Tiraoui, Métropole de Nantes, collected by Polis
Image: Christine Blanchard

ACTIVITY 12.2: Share results and lessons learned

Rationale

All cities have strengths and weaknesses and can learn from others and teach others in different areas and aspects of the SUMP process. Sharing your knowledge and experience first of all helps cities across Europe to move forward and improve together. Secondly, it gives you the opportunity to reflect on your experience and to learn from the others. What you choose to share is also important. People are generally happy to share their successes, but most prefer not to talk publicly about their failures. While this is understandable, some of the best lessons can be learnt from what did not go as planned (either in a positive or negative way).

Aims

- Find opportunities to share your lessons learnt with other cities in your country, region or language area (and beyond, if possible).
- Find opportunities to learn from the experience of others in your country, region or language area (and beyond, if possible). This could be on the SUMP content, process or measures.
- Be willing to share less positive experiences openly as well as - importantly - what you learned from them and how you would do things differently the next time.

Tasks

- Reflect on and document your 'lessons learnt'.
- Share the results of your analysis of successes and failures so that other cities can learn from your experience.
- Reach out to other cities in your country or region that you already have links to and invite them to share and exchange. This could be in the form of a simple ½-day workshop with actors from one or two other cities invited to share, exchange and reflect together.

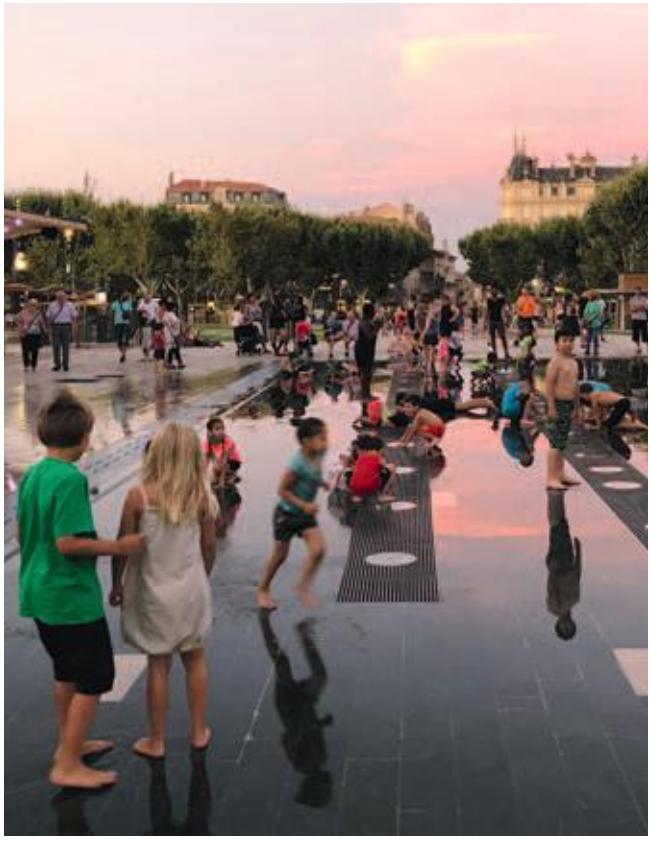


image © Gehl

Activities beyond essential requirements

- Write a case study about an aspect of your city's SUMP experience for Eltis: http://www.eltis.org/discover/case-studies.
- Sign up on the CiViTAS portal to share and exchange with others who are also working on sustainable mobility: *https://civitas.eu*

Timing and coordination

- Begin to share your 'lessons learnt' after you have had time to reflect on - and understand - your successes and failures.

Checklist

✔ Lessons learnt documented and made available to others.

GOOD PRACTICE EXAMPLE

Ginosa, Rivas-Vaciamadrid, Kilkis: Exchanging knowledge in a European learning programme for cities

The CIVITAS SUMPs-Up SUMP Learning Programme 3 allowed small- and medium-sized cities to share knowledge and experiences through various activities. As a result of exchanges, Rivas-Vaciamadrid learned about the steps to select, prioritise, and describe measures and followed these to reorganise its public transport system. The SUMP working group in Kilkis referred to insights about stakeholder engagement, measure selection, monitoring, and evaluation to develop an effective implementation methodology. Ginosa plans to establish a SUMP working group, which would embed learning from the programme into the city's long-term strategies and thereby help foster a more sustainable Ginosa.

Author: Jorge Romea Rodriguez, Rivas Vaciamadrid, Loredana D. Modugno, Ginosa Municipality, Eleftheria Spanou, Kilkis Municipality, collected by ICLEI
Image: Ana Dragutescu

ACTIVITY 12.3: Consider new challenges and solutions

Rationale

Before starting the work on the next generation of your Sustainable Urban Mobility Plan, you should consider new challenges and solutions for urban transport and mobility in your city. You have already adapted and reviewed the process during its implementation, now you have the opportunity to stand back and take a more strategic view of how conditions and expectations have changed - in order to optimise the planning process and measure selection for the future.

After identifying where you stand (Activity 12.1), you have to decide now where you want to go and which lessons learnt, solutions, and knowledge you want to take into the next cycle. Experience shows that each planning cycle helps to improve the expertise and to increase the effectiveness of the next planning round. A first analysis of challenges can influence the design of the new planning process and close the circle between the current and the new SUMP.

Aims

- Get prepared for the next planning round.
- Reflect on experiences in the current planning cycle with a view to new challenges ahead.

Tasks

- Consider new challenges for the future (society, technology, transport system) that could have an impact on the planning cycle and the SUMP implementation. Especially new developments of technologies and data usage might lead to major changes in the near future (e.g. Mobility as a Service, automated driving, big data, shared mobility).
- Identify how policies in other areas could create synergies with mobility policy (land use, energy, environment, economic development, social inclusion, health and safety).
- Get prepared to develop the next generation of your Sustainable Urban Mobility Plan.

- Consider which activities in Steps 1 and 2 of the cycle do not need to be repeated.

Activities beyond essential requirements

- Identify new challenges that have developed during the implementation phase (e.g. through discussion with key stakeholders, data analysis, your identified failures and successes from 12.1).

Timing and coordination

- Before starting development of a new SUMP (still within the period of implementing the current one).
- Consider reviewing and updating the full Sustainable Urban Mobility Plan every 5-10 years. After 10 years the entire document might be outdated, while the measures should be monitored and updated more frequently to increase the likelihood that the most appropriate measures will be implemented.

Checklist

✔ New challenges ahead for urban transport and mobility identified.

✔ Lessons learnt from current planning cycle ready to be used for next integrated planning processes.

✔ SUMP update concluded.

For more information

SUMPs-UP Measure manual for advanced cities with recommendations on how to evaluate new technologies, foster new innovative measures and create a strategy for innovation: *http://sumps-up.eu/publications-and-reports/*

image © Gehl

One of the major future challenges that will come to most people's minds is **Automation**. Manufacturers have already started introducing more and more connected and automated functionalities in their vehicles. But although there is rapid progress towards the deployment of connected and automated vehicles (CAVs), the success of the transition towards CAVs will largely be determined by a good integration of this new technology into the existing urban mobility system as part of SUMP processes. There is a clear need for considering connected and automated driving in SUMP, but its purpose should not be misunderstood as uncritically endorsing the disruptive technologies surrounding CAVs and their impacts, but rather empowering the local authorities to critically review the anticipated technological changes and shape the future according to their expectations. It is vital that cities play a proactive role through a clear and popular city vision – ensuring that they are 'technology-fed' not 'technology-led'.

Further guidance on how to tackle the future challenges of CAVs can be found in the Practitioner Briefing **Road vehicle automation in Sustainable Urban Mobility Planning**.

Next to Automation, Mobility as a Service (MaaS) is widely acknowledged as a major future trend. MaaS can bring together the various new mobility options (sharing systems, micromobility, automation) to contribute to a multimodal system in urban transport.

The Practitioner Briefing **Mobility as a Service (Maas) and Sustainable Urban Mobility Planning** provides the elements to understand what MaaS is, to assess the readiness of a city and to explore possible operational and governance models for MaaS in Sustainable Urban Mobility Planning.

GOOD PRACTICE EXAMPLE

Greater Manchester, UK: Continually updated online evidence base

The Greater Manchester transport strategy 2040 and the new Greater Manchester Delivery Plan (2020-2025) are supported by a comprehensive evidence base structured around six societal trends and issues which drive transport demand in Greater Manchester.

The evidence base is being continually updated to capture future challenges and trends, but also to ensure that the intentions and aspirations featured within the SUMP are grounded in trends and data that are locally and time relevant. It is important for a city to have enough resources to ensure regular, systematic updates of the data/ information, and thus the lasting significance of the evidence gathered.

Author: Ben Brisbourne, Traffic for Greater Manchester Authority, collected by EUROCITIES | **Image:** Greater Manchester

Milestone:
Measure implementation evaluated

Congratulations - you have successfully reached the last milestone of the cycle.

This point in the cycle marks the completion of the measure implementation and its evaluation, the end of the whole cycle, and at the same time the start of a new SUMP process. This milestone presents a point of reflection where you look back to the measures you have planned and implemented, the knowledge and skills you have gained, and the challenges you have faced. On this basis, you dare to take a look into the future. What can you expect of the next planning cycle and which improvements and ideas do you want to tackle in the future? Share the results of the evaluation and, if already decided, communicate your decision to continue the process and to prepare the next Sustainable Urban Mobility Plan. This can take place in the form of a public event, where citizens, stakeholders, and the (local) media are invited.

The completed cycle and its successes deserve to be celebrated with the local community. You could get creative here and present the experiences of the planning process in interactive and diverse formats (e.g. a walking city tour, presentation of before and after, an 'after movie' etc.). Show the people what you have achieved together, what you can be proud of and what the future could still hold when continuing a SUMP approach.

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