



Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan (Second Edition)

**Final Draft for SUMP Conference,
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IMPRINT

About

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(Second Edition)

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Guide to the reader

The publication of this second version of the European Guidelines for Preparing 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 at least some of the rich experience of implementing the concept of Sustainable Urban Mobility Planning since then.

Section 1 introduces the concept of Sustainable Urban Mobility Plans to readers who are not necessarily professional planners, but want to understand the principles and basic elements of the SUMP concept (see chapter 1.1 What is a Sustainable Urban Mobility Plan?). Decision makers in particular may be interested to read about evidence 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 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 How does Sustainable Urban Mobility Planning work?). 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 Sustainable Urban Mobility Planning in Practice.

Cities are the level of government that is closest to the people, therefore the task to plan and provide mobility for citizens lies with them in most European countries. However, national and regional governments play an important role in creating frameworks that enable cities legally, that facilitate cooperation and provide financial support. Chapter 1.4 summarises how national and regional government levels can support the preparation of SUMPs.

Section 2 is a comprehensive step-by-step description of the concept. Although its readers may be primarily planning practitioners and active participants of the planning process, it is written in a style that is understandable also by 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.

Section 3 widens the scope and links to complementary guides that are also based on the concept of SUMP, but look at very specific contexts (like planning in large metropolitan areas), elaborate difficult planning aspects in detail (like financing of measures), or focus on concrete policy fields (like road automation or safety).

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.

Finally, a couple of *Annexes* are planned, but not yet part of this draft version. The aim is to include a glossary of important terms to facilitate a common understanding across different languages and planning cultures; a list of inspiring SUMP's and other useful documents; a planning checklist; a model table of content; various summaries (like an overview of all tools and good practices); and last but not least a list of all experts consulted for the development of this second version of Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan.

Introduction

When the first version of these Guidelines for Sustainable Urban Mobility Planning was published in late 2013,² 168 planning practitioners and other experts from all over Europe had contributed to a systematic 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 Package⁴ that included a definition of the concept of 'Sustainable Urban Mobility Plans' (see chapter 1.1 below).

What have we 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 are being shared by practitioners, numerous (mostly) free tools and knowhow are available on the ELTIS platform (www.eltis.eu), a coordination platform of major stakeholders and projects has been set-up, and annual SUMP Conferences have been held 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 increasingly 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.

Why did we need an update of the SUMP Guidelines?

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 our mobility system that required to rethink and update the original Guidelines. In addition, a wealth of SUMP implementation experience has been collected that needed to be made available as inspiration for practitioners across Europe. And, finally, several projects and initiatives were about to develop additional guidance on specific planning topics; this had to be integrated to form a structured knowledge base.

Therefore, an update process of the SUMP guidance was started in 2018. It included the preparation of this revised version of the SUMP Guidelines, as well as the development of a range of complementary guides on specific aspects of SUMP. These guides elaborate difficult

² Rupperecht 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), http://www.rupperecht-consult.eu/uploads/tx_rupperecht/Pilot_EN_WEB.pdf.

⁴ COM (2013) 91.

planning aspects in more detail (e.g. institutional cooperation), apply Sustainable Urban Mobility Planning to specific contexts (e.g. metropolitan regions), or provide guidance on how to pursue important policy goals (e.g. health) or technical concepts (e.g. automation) in the planning process.

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 has 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 So far, more than 200 transport and urban planners, other practitioners, policy makers, and researchers have contributed to the update. Annex H includes a complete 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 specific thematic reviews has ensured that the document presents proven high-quality planning guidance.

This document is a draft of the new SUMP Guidelines, prepared specifically for the sixth annual SUMP Conference in Groningen, 17-18 June 2019. At this event, the SUMP community will be invited once more to discuss and provide comments. An online feedback form will be open for additional comments until 9 July 2019. The final version will be published at the CIVITAS Forum Conference in Graz, 2 - 4 October, 2019.

⁵ Main authors Rupprecht Consult, the city network partners of SUMP-Us (ICLEI, Eurocities, POLIS, Union of Baltic Cities), the International Association of Public Transport (UITP), and partners in SUMP-related projects (PROSPERITY, SUITS, LOW-CARB) have organised workshops.

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 following 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.

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, including decision makers and other mobility stakeholders that are not planning experts.

1.1 What is a Sustainable Urban Mobility Plan?

1.1.1 Policy context of Sustainable Urban Mobility Plans

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, while 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. But 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 (which is described in the next chapter), while the recommendations for preparing an SUMP have been updated considerably.

1.1.2 Definition of a ‘Sustainable Urban Mobility Plan’

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 in the following section 1.1.3:

1. Plan for sustainable mobility in the 'functional city'
2. Cooperate across institutional boundaries

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.

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

Sustainable Urban Mobility Planning focuses on a process that can support the required “step change” to cope effectively with the complex problems that cities are facing. Therefore, it puts strong emphasis on the need to involve citizens and stakeholders actively, and on wide cooperation across different layers of government and with private actors. It also advocates fact-based planning and decision making (e.g. performance assessment, monitoring and evaluation, quality assurance). The actual content of the plan should be the result of the planning process, i.e. the identified needs and agreed policy priorities. Nonetheless, the SUMP concept requires that the final plan contains both a long-term strategy and measures for short-term implementation. It needs to cover all mobility (of people and goods), modes and services in an integrated manner and the plan must regard the needs of the entire “functional urban area”, rather than only 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:

Traditional Transport Planning	⇔	Sustainable Urban Mobility Planning
Focus on traffic	⇔	Focus on people
Primary objective: Traffic flow capacity and speed	⇔	Primary objectives: Accessibility and quality of life
Modal -focussed	⇔	Balanced development of all relevant transport modes and shift towards sustainable modes
Infrastructure as the main topic	⇔	Combination of infrastructure, market, services, mechanisms, information, and promotion
Sectorial planning document	⇔	Sectorial planning document consistent and complementary to related policies
Short- and medium -term delivery plan	⇔	Short- and medium -term delivery plan embedded in a long-term vision and strategy
Related to an administrative area	⇔	Related to a functioning area based on travel -to-work patterns
Domain of transport engineers	⇔	Interdisciplinary planning teams
Planning by experts	⇔	Planning with the involvement of stakeholders using a transparent and participatory approach
Limited impact assessment	⇔	Intensive evaluation of impacts and shaping of a learning process

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

1.1.3 What are the principles of Sustainable Urban Mobility Planning?

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

Plan for sustainable mobility for the 'functional urban area'

A SUMP is more than a conventional transport plan, it needs to pursue the general aim of improving accessibility and providing high-quality, sustainable sustainable mobility for the entire functional urban area. A sustainable transport system should meet the following basic criteria (that are further broken down and prioritised during the planning process):

- Is accessible and meets the basic mobility needs of all users;
- Balances and responds to the diverse demands for mobility and transport services by residents, businesses and industry;
- Guides a balanced development and better integration of the 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 better 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 traffic safety and security;
- Reduces air and noise pollution, greenhouse gas emissions, and energy consumption; and
- Contributes to a better overall performance of the trans-European transport network and the Europe's transport system as a whole.

Cities are almost always connected with areas around them by daily flows of people and goods. Therefore, the geographic scope of a SUMP needs to be based on the “functional urban area”, depending on local context, this might be a city and its surrounding peri-urban area, an entire polycentric region, or other spatial constellations. This is an important requirement for a plan that is relevant and comprehensive, even if sometimes difficult to meet due to municipal boundaries that may follow quite a different logic.

The definition of “functional urban area” has been agreed by 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 travel-to-work flows to identify the hinterlands whose labour market is highly integrated with the cores.”¹³

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 between 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 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).

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.

<https://www.oecd.org/cfe/regional-policy/Definition-of-Functional-Urban-Areas-for-the-OECD-metropolitan-database.pdf>

- Coordination with public and private sector providers of transport services.

Involve citizens and stakeholders

A Sustainable Urban Mobility Plan focuses on meeting the mobility needs of the people in the functional urban area, including residents, visitors, institutions and companies. It must follow a transparent and participatory approach, which actively involves citizens and other stakeholders throughout the plan development and its 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 and thereby minimises political risks and facilitates SUMP implementation.

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 present situation and the establishment of a baseline against which progress can be measured.

To do this, the Sustainable Urban Mobility Plan identifies objectives and ambitious targets which are consistent with the vision, and defines performance indicators for each. These are then used to measure current and future conditions.

The status analysis also includes a review of the current capacities, resources and institutional set-up for planning and implementation.

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, which covers all modes and forms of transport: Public and private, passenger and freight, motorised and non-motorised, moving and parking traffic; it includes infrastructure and services.

It contains a plan for the short-term implementation of the objectives and targets through measure packages, including an implementation timetable and budget as well as a clear allocation of responsibilities and resources required.

Develop all transport modes in an integrated manner

A Sustainable Urban Mobility Plan fosters a balanced and integrated development of all relevant transport modes, while supporting the shift towards sustainable mobility. The SUMP puts forward an integrated set of measures to improve quality, security, safety, accessibility, and cost effectiveness. The SUMP should include technical, regulatory, promotional and market-based measures and services; vehicles as well as infrastructure.

The Sustainable Urban Mobility Plan typically 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, traffic safety, moving and stationary transport, freight and service delivery, logistics, mobility management, and Intelligent Transport Systems (ITS).

Arrange for monitoring and evaluation

The implementation of a Sustainable Urban Mobility Plan should be monitored closely. Progress towards the objectives of the plan and meeting the targets are assessed regularly based on the chosen performance indicators. To this end, appropriate actions are required to ensure timely access to the relevant data and statistics.

An ongoing monitoring and evaluation of the implementation of measures can suggest revisions of targets and where necessary corrective actions in measure implementation.

A monitoring report that is shared and communicated with citizens and stakeholders informs about the progress in developing and implementing the Sustainable Urban Mobility Plan.

Assure quality

A Sustainable Urban Mobility Plan is a key document for the development of an urban area. Having mechanisms in place to ensure its general professional quality and validating its compliance with the requirements of the Sustainable Urban Mobility Plan concept (i.e. this document) is an effort worth taking. Additional aspects include assurance of data quality and risk management during SUMP implementation.

These tasks can be delegated to external quality reviewers, an oversight institution (e.g. regional or national level) – and it can be facilitated by using tools like the SUMP-UP Self-Assessment tool.

1.2 Benefits of Sustainable Urban Mobility Planning

Why is Sustainable Urban Mobility Planning good for the city? What are the success stories from cities that have turned their Sustainable Urban Mobility Plans into actual policies? Here is a short selection of the benefits of applying this concept.

Working together for better health

With many European cities approaching critically low air quality, the reduced air pollution that results from more sustainable mobility may be the most obvious plus. As of 2015, air pollution contributed to almost 400,000 premature deaths per year in the EU,¹⁴ so the social and economic advantages of improving air quality are clear. Beyond that, the necessity of reducing emissions to mitigate climate change is universally acknowledged, and road transport is the second biggest source of the EU's CO₂ emissions.¹⁵

In Arad, a city of 159,704 people in western Romania, city authorities have calculated that the measures planned in their SUMP will result in a 9% air pollution reduction by 2023.¹⁶ In the Spanish capital Madrid, the SUMP has already seen a 15% pollution reduction occur in just three months, after implementing low emission zones in November 2018.¹⁷ The SUMP in

¹⁴ European Environment Agency, 2018. Air quality in Europe - 2018 report, <https://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, <https://www.eea.europa.eu/data-and-maps/indicators/main-anthropogenic-air-pollutant-emissions/assessment-4>

¹⁶ Municipal Arad, 2017. Planul de Mobilitate Urbană Durabilă al Municipiului Arad, pp 288-289,

¹⁷ Sergio Fernández Balaguer, Municipal Transport Company of Madrid, interview by the authors, March 04, 2019

Toulouse, the largest city in southwestern France, is on track to halve the number of areas above the pollution threshold by 2020.¹⁸

These reductions are easiest to achieve with the buy in of different government departments, and different levels of government – something that planning together makes possible. Nine of ten cities in the EU with the lowest levels of air pollution, have a Sustainable Urban Mobility Plan in place.¹⁹

Reap the benefits in health and safety

Public health and safety also benefit from encouraging active modes of transport, such as walking and cycling. A British study found that there was a 45% lower cancer risk among people who regularly cycled to work.²⁰ Through investments in public infrastructure, Tartu, Estonia's second largest city, managed to double the modal share of cycling in just five years, from 4% to 8%.²¹ Important links like this one between mobility and health are a central reason that the interdepartmental approach mandated by the SUMP concept makes sense. Could this be why eight out of ten of the EU's healthiest cities have a Sustainable Urban Mobility Plan?²²

Better cycling infrastructure, wider pavements and stricter speed limits all contribute to the safety of those trying to get from A to B in a city. Since it began developing its SUMP in the mid-2000s, road accidents in the Polish capital, Warsaw, have declined by 21% and road deaths have gone down by 60%.²³

Get there more easily, with fewer cars

SUMPs can help to improve traffic flow. Since implementing its SUMP in 2017, Ghent has seen travel times to the city centre reduced by 35%, and serious traffic jams have become a thing of the past.²⁴ When infrastructure for travel and transport is well thought out – and especially when there is coordination between mobility and urban planning departments – there is less competition for public space between different forms of transport. SUMPs are a tool to manage a complementarity that better suits everyone's individual mobility needs. For instance, measures providing a choice between travel options can help avoid unnecessary driving through the centre. Since adopting a SUMP in Milan in 2016, the city has brought the number of inhabitants using cars down to 50%, well below the Italian average, and is on track to get down to 46% in the next ten years.²⁵

SUMPs get measurable results in terms of mobility shift. After implementing its SUMP in 2010, Île-de-France, the Paris metropolitan region, saw private motorised vehicles go down by 2%,

¹⁸ CERTU, 2013. 30 years of sustainable urban mobility plans (PDU) in France,

https://www.cerema.fr/system/files/documents/2017/11/1304_Fiche30ansPDU_EN_cle6c8317.pdf.

¹⁹ Numbeo, 2019. Europe: Pollution Index 2019, https://www.numbeo.com/pollution/region_rankings.jsp?title=2019®ion=150.

²⁰ Cycling UK, 2017. Cycling UK Campaigns Briefing, Cycling and Health, https://www.cyclinguk.org/sites/default/files/document/2017/09/health_1c_rv_brf.pdf.

²¹ Tartu Linnavalitsus, 2018. Tartu heade mõtete linn, Tartu linna ja lähiumbruse liikuvusuuring, https://www.tartu.ee/sites/default/files/research_import/2018-12/Tartu_LU_aruanne.pdf.

²² Spotathome, 2019. The world's healthiest cities. Which cities are the best for healthy living?, <https://www.spotathome.com/healthiest-cities-world>.

²³ Kalenkiewicz, E., Bisak, A., 2017. Zarząd Dróg Miejskich w Warszawie, Raport o stanie bezpieczeństwa 2017, https://zdm.waw.pl/wp-content/uploads/2018/05/raport-zdm-web-1_1528982930.pdf.

²⁴ Transport & Mobility Leuven, 2018. Evaluatie Circulatieplan Gent, https://stad.gent/sites/default/files/page/documents/Evaluatie%20Circulatieplan%20Gent_0.pdf.

²⁵ Dr. Paolo Campus, Area Pianificazione Mobilità Milano, interview by the authors, 08 March, 2019.

active modes of transport up by 10% and public transport up by 20%.²⁶ It is even possible to reverse negative mobility trends. Thanks to the promotion of SUMP in France in the 1990's, nearly every major French city has seen a reversal of previous trends in car use: Previous trends, which saw private car travel going up by 22% in the two preceding decades, were halted, replaced by decreases of up to 8%.²⁷ In Szeged, Hungary's third largest city, the SUMP helped to freeze a previous rapid decline in public transport use.²⁸

Winning public support

These results are, and can only be, achieved through the active involvement of local residents that is essential to Sustainable Urban Mobility Planning. By publishing the SUMP and taking into account over 755 citizen reactions, Milan has introduced a low emission zone restricting car use in approximately 70% of the city area and intensive public debates involving stakeholders and citizens has helped to minimise opposition.²⁹ Budapest gathered more than 1000 public comments in a similar process, the majority of which proved that people wanted more environmentally friendly measures – proven public buy-in also helped to create political buy-in.³⁰ People are ready for local leaders to make changes: In Nantes, France, 50% of people surveyed to use the bus even though they have a car at home.³¹

By consulting and working with the public on its sustainable urban mobility measures, Stockholm increased public support from 33% to 67% over five years.³² Besides helping to convince people, Budapest found that this cooperation in planning a SUMP, both internally and with the public, can provide big insights and fresh ideas.³³

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

Alternative modes of transport are often not only more sustainable, but actually more convenient than private cars. The shared mobility network set up as part of Milan's Sustainable Urban Mobility Plan, including electric cars, scooters and bicycles, has demonstrated its appeal by attracting almost half a million subscribers.³⁴

Making the streets safe for everyone, irrespective of their mode of travel, increases urban accessibility and contributes to a higher quality of life. This may be why seven out of ten of the most liveable cities³⁵ in the EU are cities with Sustainable Urban Mobility Plans. Decreasing

²⁶STIF, 2016. The Île-de-France Urban Mobility Plan (PDUIF), https://www.iledefrance-mobilites.fr/wp-content/uploads/2017/04/com_-_brochure_pduif_2016_anglais_ok.pdf.

²⁷ CERTU, 2013. 30 years of sustainable urban mobility plans (PDU) in France, https://www.cerema.fr/system/files/documents/2017/11/1304_Fiche30ansPDU_EN_cle6c8317.pdf.

²⁸ Sándor Nagy, vice mayor of Szeged, interview by the authors, 11 March, 2019

²⁹ Dr. Paolo Campus, Area Pianificazione Mobilità Milano, interview by the authors, 08 March, 2019

³⁰ Budapest Mobility Plan 2014-2030, Vol. 1 Objectives and Measures, pp 12-15, http://www.sump-challenges.eu/sites/www.sump-challenges.eu/files/bmt2016_eng_v3.pdf.

³¹ CERTU, 2013. 30 years of sustainable urban mobility plans (PDU) in France, https://www.cerema.fr/system/files/documents/2017/11/1304_Fiche30ansPDU_EN_cle6c8317.pdf.

³²Centre for Transport Studies, 2017. The Swedish Congestion Charges: Ten Years On, p 21, <http://www.transportportal.se/swopec/CTS2017-2.pdf>.

³³ Máté Lénárt, BKK Centre for Budapest Transport, interview by the authors, 05 April, 2019.

³⁴ Dr. Paolo Campus, Area Pianificazione Mobilità Milano, interview by the authors, 08 March, 2019.

³⁵ Adabi, M., 2018. The 50 most liveable cities in the world in 2018, <https://www.businessinsider.fr/us/most-livable-cities-in-the-world-2018-8>.

levels of individual motorised transport makes streets more attractive, and they change from being mere highways to places of urban life and social cohesion.

Bolstering a sense of place through diverse modes of mobility improves the image of the city, helping local shops and encouraging tourism, local regeneration and international investment. In Copenhagen, pedestrianisation of one street led to a 30% increase in sales in a single year.³⁶ Similarly, the closure of the main street in Madrid to cars during the 2018 Christmas period led to a 9.5% boost in retail spending compared to the previous year.³⁷ While such measures can decrease turnover and excite opposition in the short term, usually a year or so is all it takes for the gains to become evident.

When employees have more mobility options, business also benefits 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. That means that improved mobility leads to greater social equity by pushing up standards for everyone, rather than depriving one group for the sake of the other. The cost benefit analysis that Arad carried out in deciding on the measures for its SUMP showed that € 2.2 million is to be gained for every € 1 million invested.³⁸ Stockholm worked out that its annual socio-economic surplus as a result of mobility measures totalled € 60 million.³⁹

Strength in unity

The more diverse and integrated the sustainable mobility options, the greater the efficiency and resilience of the transport system as a whole. Since implementing the last Sustainable Urban Mobility Plan in 2017 in Ghent, there has been a 25% increase in cyclists within the city centre and a 35% increase outside the centre.⁴⁰ Since implementing its SUMP, which was updated in 2015, Antwerp saw a decrease of 25% cars (approximately 14,000 less) coming into the city on an average weekday.⁴¹

The specific, long-term and integrated nature of a Sustainable Urban Mobility Plan is the most effective way of realising all of these potential benefits. Because it involves a long-term commitment with widely agreed goals, a Sustainable Urban Mobility Plan helps to manage uncertainty, as well as defining clear metrics of iteratively working towards targets.

As a SUMP requires inter-departmental and multi-level cooperation, it creates a shared vision and allows institutions that are not (yet) used to cooperate to remain on the same page. This means an enormous benefit to the effectiveness of policy making.

Budapest cited the development of its Sustainable Urban Mobility Plan as key in more harmonised thinking among different stakeholders, from municipal departments, to state actors, to

³⁶ Mattias Kärrholm, 2012. Retailising Space: Architecture, Retail and the Territorialisation of Public Space, Ashgate: Farnham and Burlington, VT, p 44.

³⁷ Reid, C., 2019. Closing Central Madrid To Cars Resulted In 9.5% Boost To Retail Spending, Finds Bank Analysis. Forbes, 8 March 2019. <https://www.forbes.com/sites/carltonreid/2019/03/08/closing-central-madrid-to-cars-resulted-in-9-5-boost-to-retail-spending-finds-bank-analysis/>

³⁸ Municipal Arad, 2017. Planul de Mobilitate Urbană Durabilă al Municipiului Arad, pp 288-289.

³⁹ Eliasson, J., 2014. The Stockholm congestion charges: an overview. Centre for Transport Studies Stockholm, p 34, <http://www.transportportal.se/swopec/cts2014-7.pdf>.

⁴⁰ Transport & Mobility Leuven, 2018. Evaluatie Circulatieplan Gent, https://stad.gent/sites/default/files/page/documents/Evaluatierapport%20Circulatieplan%20Gent_0.pdf.

⁴¹ Marjolein Salens, City of Antwerp, interview with the authors, 13 March 2019

transport companies.⁴² Such coordination ensures the backup and follow-through that these measures require. Traffic regulations are useless if the police neglect to enforce them; pedestrianisation is only successful when it is embedded in a wider urban mobility strategy. Antwerp is going as far as to develop a joint Sustainable Regional Mobility Plan with 33 surrounding municipalities and the Flemish administration.⁴³

Ready, steady, SUMP!

By making the necessary connections explicit between political priorities, like for example mobility and employment, a Sustainable Urban Mobility Plan ensures that the contribution of mobility to high-level political goals is more generally 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 the tool to effectively manage change and to inspire new ways of thinking.

1.3 How does Sustainable Urban Mobility Planning work?

This chapter introduces the twelve steps of Sustainable Urban Mobility Planning.

Overview

The process of developing and implementing a Sustainable Urban Mobility Plan has been applied in many urban areas across Europe (and worldwide). For visualisation, the “SUMP cycle” uses the clock as a metaphor, which is of course an idealised and simplified representation of a complex planning process (see Figure 2). In reality, steps may sometimes 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 framework conditions - and as long as the overall principles of Sustainable Urban Mobility Planning are followed. Chapter 1.4 discusses these points more widely.

Figure 2 presents the 12 steps of Sustainable Urban Mobility Planning from the perspective of decision makers, while Figure 8 provides a more detailed overview for planners and others involved in the actual planning process.

⁴² Máté Lénárt, BKK Centre for Budapest Transport, interview by the authors, 05 April, 2019

⁴³ Marjolein Salens, City of Antwerp, interview with the authors, 13 March 2019

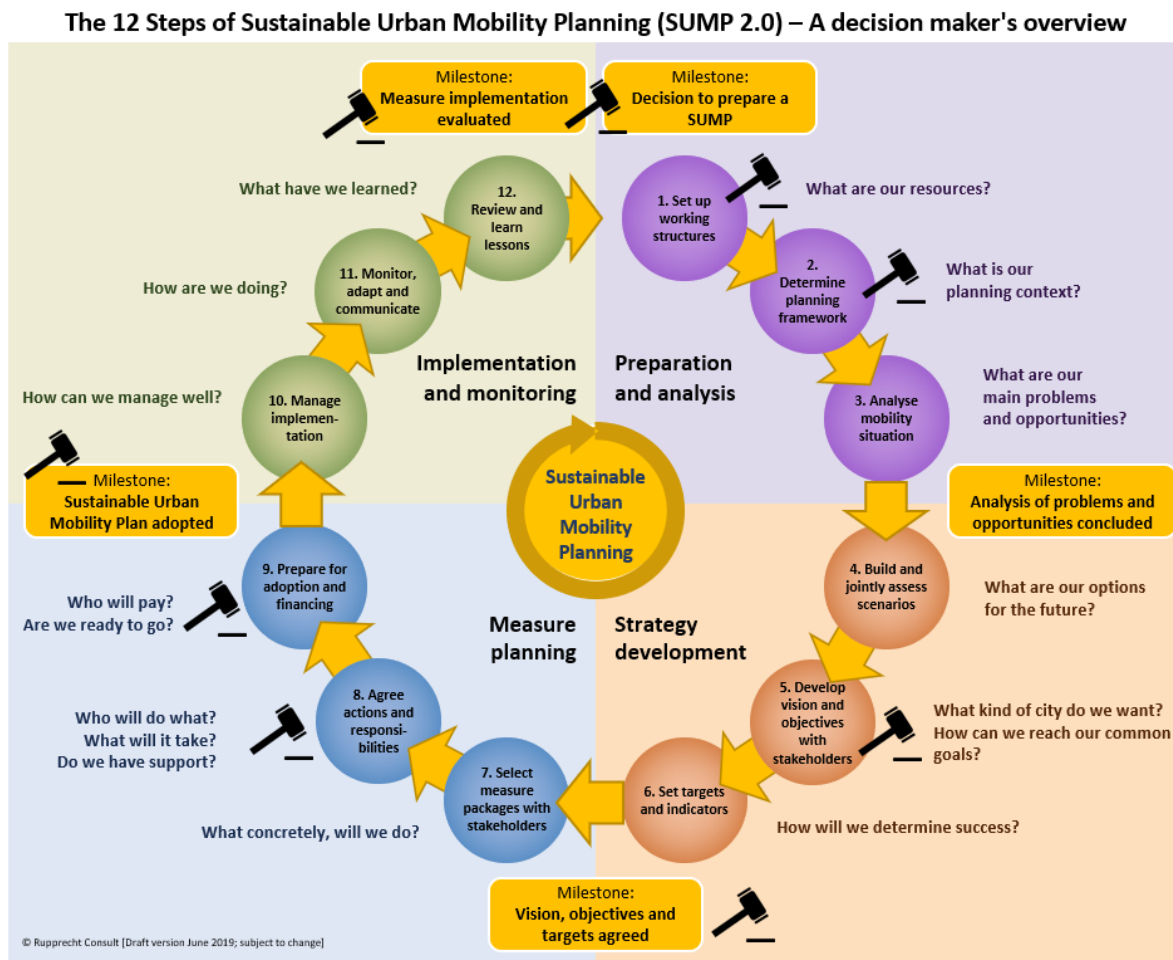


Figure 2: The 12 Steps of Sustainable Urban Mobility Planning (SUMP 2.0) – A decision maker's overview [Draft version, June 2019].

 This symbol indicates points of political involvement during the SUMP process.

Preparation and analysis:

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

- *What are our resources?:* Analyse all available (human, institutional, financial, data) resources for planning and set up adequate working structures to get started.
- At this stage, decision makers need to ensure that the key institutions and policy makers support the SUMP development and contribute to setting up a core planning team.
- *What is our planning context?:* Identify factors that will have an important impact on the planning process, e.g. other plans, legal requirements. Agree the planning timeline, analyse traffic flows to determine the geographic scope of the plan – and ensure that neighbouring authorities and stakeholders are “on board”. Recruit external support as needed. Activities in this and in the previous step are closely linked and often run in parallel.
- A key task for decision makers at this point is to help that the “functional urban area” (see 1.1.3) is chosen 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 modes (and in the entire functional urban area) by using an adequate set of current data sources.

The concluding milestone of this phase is the completed analysis of the major problems and opportunities related to mobility in the planning area.

Strategy development:

The goal of the second phase is to define the direction of the mobility plan in cooperation with citizens and stakeholders. The key questions in this phase are:

- *What are our options for the future?:* Develop alternative scenarios that inform about the potential futures of the planning area. Scenarios try to capture the scope of uncertainty that comes with “looking into the future”. They are usually based on analyses of the planning team and combine the impacts of potential changes of circumstances which can be external (i.e. outside the control of the planning authority, for example demography) as well as reflecting levels of ambition or the direction of basic public policies (e.g. “strong environmental policy focus”).
- *What kind of city do we want?:* Scenarios are used as the factual basis for discussions with citizens and stakeholders. Discussions about scenario impacts help start building a shared understanding of desirable futures, i.e. “where do we want to go?” based on “where are we possibly going (anyway)?”
- Decision makers need to get actively involved in discussing scenario impacts with citizens and agreeing a common vision of mobility (and beyond) in close cooperation with stakeholders.
- *How can we reach our common goals?:* Co-create detailed mobility objectives with stakeholders; consider all modes of transport in the entire urban area.
- *How will we determine success?:* Identify indicators of measurement, make sure that all objectives are covered; agree ambitious, but realistic, measurable targets.
- Decision makers should ensure that SUMP objectives and targets are ambitious, widely shared, and aligned with other policies within and (if relevant) beyond the planning area.

The agreement of a joint vision, objectives and targets is the milestone that concludes the strategy development phase.

Measure planning:

In this phase, the means to achieve the objectives and targets are defined:

- *What concretely, will we do?:* Create a longlist of measures that can be expected to deliver the agreed objectives and targets. Perform an assessment of a long list of measures together with stakeholders based on pre-defined, transparent decision criteria from all areas of ‘sustainability’: economic, environmental, social; consider also long-term impacts. Select those that best contribute to meeting your objectives and its targets, within the financial resources likely to be available. Consider which new mobility services and innovations might be initiated by the private sector? Bundle measures into integrated “measure packages”. Plan evaluation and monitoring for each.
- *Who will do what?:* Operational planning must break “measure packages” down into actionable tasks (or “actions”) for the institutions and departments that will be in charge of their implementation. Describe all actions in detail (including how they are to be evaluated, and with their internal and external interdependencies and risks).
- *What will it take?:* On the basis of action descriptions, agree an implementation timetable. Estimate costs and identify funding sources within partner organisations and from outside; funding applications may already be made at this point. Assign each action to an individual (preferably not an organisation), while a measure leader assures that all

its actions follow the same timetable and approach. Agree implementation priorities in case available funding turns out to be insufficient.

- *Do we have support?:* At this stage it is essential to communicate the concrete ('actionable') content of all measures with the most affected stakeholders (which is often the general public) and with political decision makers. For example, while it may be agreed easily that an active cycling policy is good for the city (e.g. as an objective), 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 building department (e.g. conversion of roadside parking in a certain street to create a cycling lane) may create controversy and will then require specific communication efforts to ensure adoption of the SUMP.
- Decision makers are required at this point to recruit political and public support for the content of the SUMP.
- *Are we ready to go?:* Many authors may have contributed to the various parts of the Sustainable Urban Mobility Plan document. Now it is time to consolidate its sections and create a coherent final document. Make sure that the plan meets high quality standards (and is in line with these SUMP Guidelines) before being officially adopted.
- *Who will pay?:* Following the preliminary cost estimate, it is now time to develop concrete financial plans. Determine investment and maintenance costs, potential changes in revenue streams, identify financial contributors, develop a funding and financing scheme for all measures/ actions. Detailed financial schemes are often included in a SUMP, sometimes they are part of a separate decision making process.

The most important milestone of the SUMP planning process concludes the measure planning stage: The Sustainable Urban Mobility Plan is adopted by the competent body, e.g. the city council(s).

Implementation and monitoring:

While many different institutions are implementing the SUMP, the key tasks of the planning team are to coordinate and monitor.

- *How can we manage well?:* As the SUMP process has reached its implementation stage, where the departments/ institutions that transform the Sustainable Urban Mobility Plan into concrete actions, plan in detail their implementation of physical infrastructure, equipment and services. Procurement of goods and services is a standard process in any public administration, but tendering innovative infrastructures, services or vehicles, as well as “green procurement” require decision makers' attention. These often complex implementation tasks are often not performed by the 'SUMP team', but by technical departments or even by third parties like sharing companies and other mobility providers. Therefore, the overall coordination of the implementation process requires particular attention.
- *How are we doing?:* Based on the monitoring concept agreed before, evaluation will make clear, whether things are going according to plan – so corrective action can be taken! Implementing innovative mobility schemes can be a great disruption (as well as a great benefit) for the daily travellers. Understanding public opinion, based on an active two-way dialogue, is crucial for a successful implementation process.
- *What have we learned?:* This last step of the SUMP cycle is about reviewing successes and failures, as well as communicating these results with the stakeholders and the public – and ideally also on the Eltis Platform with the European SUMP community. Finally, this review process should also consider whether any important context conditions have changed in such a way that new challenges are coming up or new solutions are providing new opportunities. Use the SUMP cycle to revise the plan or update the SUMP on a regular basis.
- Decision makers should take an active interest in understanding what has worked (and what has not).

Milestone 'Measure implementation evaluated' concludes the SUMP cycle.

Summary

So, in summary,

- a political decision initiates the SUMP process and provides overall guidance and leadership;
- a detailed analysis informs scenario building and supports decision making;
- a common vision, objectives, indicators and targets are widely agreed for all objectives;
- based on a long list of measures, integrated measure packages are defined that can deliver the objectives (and meet the targets);
- measure packages are divided into actions (actionable tasks) that are further operationalised prior to implementation;
- overall measure coordination is ensured;
- systematic monitoring may lead to make adaptations in implementation;
- informed conclusions from the implementation provide the ground for a future planning cycle.

A more technical description of the planning cycle and its 32 specific activities is provided in Figure 8 and described in great detail in section 2.

1.4 Sustainable urban mobility planning in practice

Sustainable Urban Mobility Planning is not a theoretical concept, it has been developed "bottom-up", based on the experiences of many planning practitioners and other experts. The principles, and the steps and activities recommended in this second edition of the Guidelines are based on experiences from a very wide range of cities in Europe and beyond. It is, therefore, more than an "inspiration". But it is equally clear that specific national planning and funding frameworks, urban contexts, particular constellations of political power and stakeholder influence will require all sorts of compromises that are bound to lead to adaptation of the concept to local requirements. It is unavoidable for political decision-makers to be pragmatic and work with 'what we have', but it is also politically wise to think beyond one electoral cycle and the political majorities of the day. SUMP should also help to create a better basis for managing future demands. From a strategic political perspective, SUMP is a tool for sustainable and innovative change management. Therefore, the SUMP planning cycle (as presented above in section 1.3) should rather be seen as a spiral: after one planning cycle is complete another cycle should soon start, as in a permanent improvement process.

This section looks at planning mobility policies in the wider context of urban policy making; how SUMP relates to other planning tasks in a city; how the SUMP concept can (and must) be adapted to the specific context of an urban area; and how the challenge of planning in times of major change and uncertainty can be met.

The operational side of planning

The cycle of twelve steps suggests that they should be executed one by one. The clear structure of tasks and checklists appears to recommend following the Guidelines word by word. This is of course not the case, SUMP is a method, not a recipe book! We all know how different cities are and how complex decision making in an urban area can be. The challenge of implementing SUMP is to adapt it to the concrete local context, while staying ambitious and avoiding to make the wrong compromises (see Section 1.3.3 below).

The SUMP cycle (shown in section 1.1 above and in more detail in section 2) is intended as a communication tool to explain what urban mobility planning should be about in an easily understandable form. The cycle may appear to communicate a clear step-by-step sequence, as well as a similar duration of each of the steps. It is clear, however, that this is not necessarily in line with planning practice. For some steps and activities, it is difficult to determine what should be first, because in reality some activities must run in parallel; for example, setting up working structures (see Step 1) and determining the planning framework (see Step 2) overlap strongly in timing and in the people involved. Sometimes a task which seemed complete, needs to be revisited, because some results turn out to be not quite satisfactory. A version of the SUMP cycle has been produced that shows the time spent including potential feedback loops and return arrows to execute steps in relation to each other (see Figure 14).

Planning requirements

Planning is an important aspect in many policy fields and on all levels of government. For local planners it is important to be aware of planning requirements which influence the SUMP (such as land use planning, education, employment) and to understand where responsibilities are located, so that these institutions are part of the SUMP. On the European level mostly voluntary planning recommendations exist, like the Sustainable Energy and Climate Action Plan (SECAP) that is aligned with the Covenant of Mayors climate and energy targets⁴⁴. On the national level infrastructure investment planning is common, while comprehensive environmental and land-use planning are often a regional responsibility.

To be added: Relationship of SUMP and Strategic Environmental Impact Assessment (SEA) and figure to show how different plans relate to each other.

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 sometimes are even supported from the same human and financial resources. However, these processes tend to have different requirements of timing, planning and reporting formats, geographic scope, or responsible authority. Nonetheless, planning is always a process of making choices between different options about the future. Fundamental questions like 'In which type of city do I want my children to live?' are often at the heart of urban planning, irrespective of the specific planning domain.

SUMP can be considered as one wheel in a larger 'planning machine' (see Figure 3). It is difficult to determine which wheel is driving and which is driven by the others, this depends mostly on the time horizon taken. An overall urban development strategy may set the general goals for mobility, which then is an important input into a SUMP, which in turn is driving the development of a detailed sectoral strategy. However, in practice the timing may be completely different, while policy coordination must still ensure consistency and coordinate the timing of related planning processes, as well as their spatial scope, and how they are proposing to implement policies. Apart from avoiding inefficiencies or even conflicts between policies and from

⁴⁴ See guidebook on 'How to develop a Sustainable Energy and Climate Action Plan' by Joint Research Centre; <https://www.em-powering-project.eu/en/new-guidebook-on-how-to-develop-a-sustainable-energy-and-climate-action-plan-secap/>.

saving resources through synergies, it is also important to reduce disturbance through infrastructure construction, uncoordinated introduction of new systems and last but not least, to avoid stakeholder fatigue.

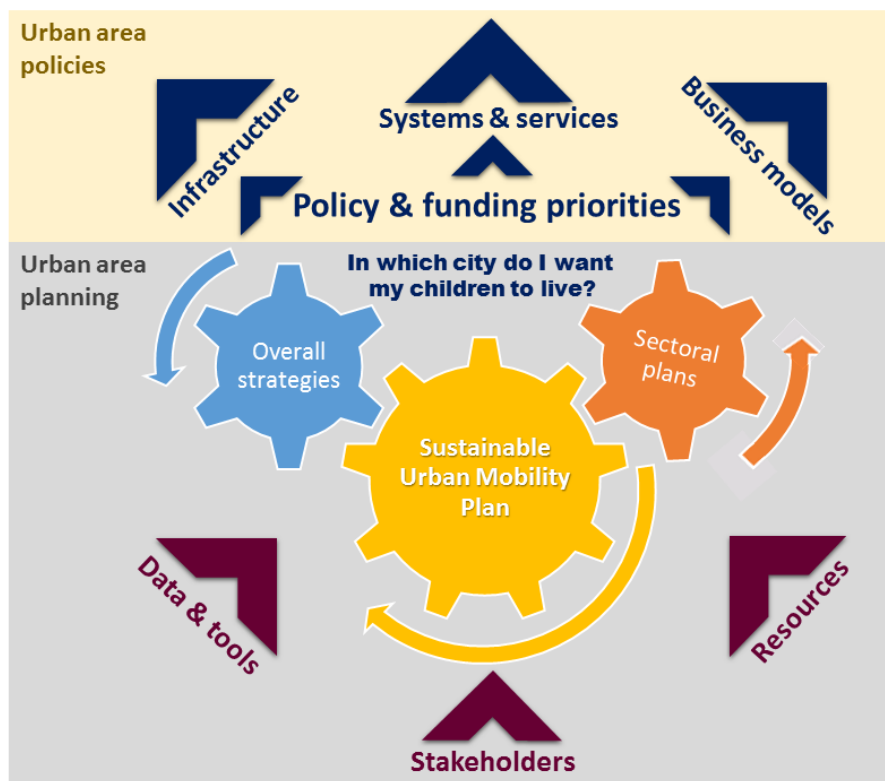


Figure 3: SUMP as an integration process

Adapting the SUMP guidance to the local context

The SUMP method must be adapted to the context and to the specific requirements of each urban area where it is applied – while keeping ambition high! The eight SUMP principles (see 1.1.1 above) distinguish a Sustainable Urban Mobility Plan from a conventional transport plan. Flexibility cannot mean that they are not applied, instead the intensity can be adapted for example to the capacities of a small city that develops its first SUMP, while keeping nonetheless long-term ambitions high.

The SUMP Guidelines provide sufficient room for flexibility and adaptation to local context, but minimum requirements must be met:

- If the SUMP cycle is adapted to local needs, as a minimum its 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; vision, objectives, and targets agreed with stakeholders; a description of actions including their evaluation and financing - all combined into a comprehensive Sustainable Urban Mobility Plan.
- The implementation process must be closely monitored and implementation adapted if needed; citizens and stakeholders must be actively informed of the progress.

Adaptation to local needs can take different forms. The need for adaptation of the mobility strategy could for example arise from a specific policy focus: An urban area may have a very specific function as national port terminal that creates enormous through-traffic, or an island may have very seasonal transport patterns. If such specific situations exist, it is obviously

important to focus the SUMP process on producing a set of objectives and targets that are targeted towards solving the specific mobility problem, while still following the SUMP methodology instead of producing a conventional traffic plan (see also Figure 4).

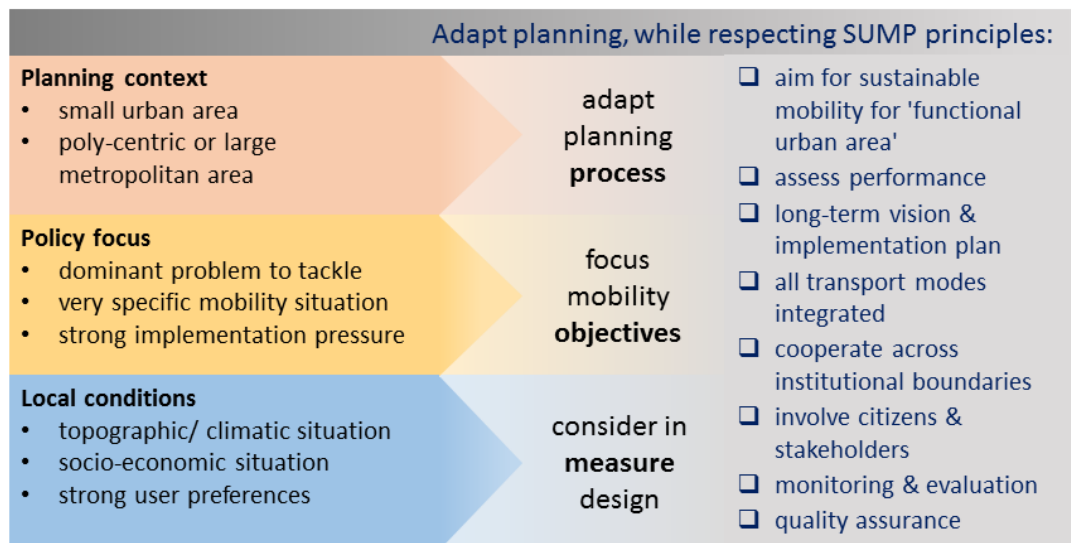


Figure 4: Identification of adaptation needs of the planning process

Planning in times of rapid change

We are living in times of rapid change and a lot is being written about the trends of change in our societies. Global challenges (climate, economy, security – to name only some – and their effects), changes in people's habits, values, and expectations, as well as new options arising from new technologies.⁴⁵ But there is great uncertainty about whether travellers will be using new technologies, how mobility cultures will develop, how municipal finances will develop in light of macroeconomic and demographic challenges and so on.

A CIVITAS expert group suggested a list of such factors, which will over time exert the strongest impact on urban mobility – and should, therefore, be considered as “game changers” of urban mobility.⁴⁶ Irrespective of whether one agrees that exactly these factors will be fundamentally “changing the game of urban mobility” in a particular urban area, 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 electric infrastructure, and its link to energy-related issues (e.g. regenerative local production).
- Increased automation and use of Connected, Intelligent Transport Systems (C-ITS): application of technology in new mobility offers and its impacts for urban form, and function.
- Growth of the data economy: data as the driver of new businesses and policies, but also more fundamental aspects like algorithms increasingly expressing rules and regulations and integration platforms providing new products from existing and new mobility offers.

⁴⁵ As a recent example that is based on an expert consultation process, the Mobility4EU project identified major trends anticipated to significantly impact urban mobility until 2030, see www.mobility4eu.eu/

⁴⁶ [to be added: Reference to SATELLITE document, when available]

- New business concepts for freight and passenger transport: integration platforms providing new mobility products based on existing and new mobility services (e.g. MaaS, platforms for freight exchange).
- Shared mobility: all (non-technical) aspects of shared mobility, e.g. ride hailing, car sharing (especially free-floating schemes), bike sharing.
- Growth of active mobility: walking and cycling, but also new micro-mobility concepts.
- Changing mindsets & behavioural patterns: changes like new mobility patterns of young people, but also more basic changes like growing expectations of users for immediate service same day delivery), easy to use 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, air mobility.

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

To be added: Overview of scenarios

1.5 National and regional SUMP support frameworks

Urban mobility is strongly connected with other policies like environment, safety, health, spatial planning, energy. These are often elaborated both at local, regional and national levels. Many European cities are, therefore, in need of enabling support from higher levels of government, particularly in governance, legislation, funding, monitoring and evaluation, guidance and methodology, education and knowledge exchange.

In the majority of EU Member States national government provides such support, while in some countries, regions have more competencies and national level stakeholders play a more limited role.

1.5.1 Why should national and regional level actors develop a SUMP strategy?

While urban mobility planning is mostly a local competence, cities cannot achieve the ambitious challenges of sustainable urban mobility alone. At the same time, also national and regional actors have much to gain from effective Sustainable Urban Mobility Planning in urban areas, as this contributes also to national/ regional goals. SUMPs help to tackle problems in cities, which improves people's lives, which is the final goal of all government levels. Here are some incentives why national/ regional level actors should support SUMP development:

Improving coherence between different sectoral policies and governance levels: Although urban mobility is closely related to sectoral policies at other governance levels, often a wide range of political and institutional actors – local, regional, national or even European – are in charge of developing such policies. They are summarised in specific planning documents, which are marked by differences in governance and legal frameworks, elaboration processes and specific objectives. The risk of inconsistency and redundancy between approaches is inherent, while coordination would bring multiple benefits. Most prominently, regulation and taxation of land-use, access for disadvantaged people to basic services and infrastructure development would benefit from coordinated efforts.

Enabling local authorities by removing barriers to SUMP elaboration and implementation: Some obstacles are purely local in nature and have to be overcome by local authorities only, others rather fall within an insufficient national framework. For the latter, recent work has highlighted the following barriers:⁴⁷

- Lack of cooperation between city, regional and national levels,
- Limited horizontal integration at national level, with different ministries involved but often not effectively coordinated, 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 on national, regional and local levels,
- Poor culture of monitoring and evaluation with limited or lack of quality control,
- Insufficient professional support, including guidelines, trainings and professionals with required competences.

Optimising and coordinating 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 formulation of a national and regional coordinated funding framework, which is based on a shared understanding of legal and technical aspects, can support sustainable urban mobility. Most importantly, the framework for funding of infrastructure schemes should be framed in a way that promotes transport avoidance and alternative modes.

Promoting innovations and new markets: The definition of a national or regional strategy for mobility can encompass the setting of clearly-defined priorities for mobility solutions, including innovative technologies. For instance, the new Clean Vehicles Directive will demand public bodies to procure a certain minimum share of clean vehicles - while flexibility is left for the effort sharing. Thus, a cooperation between different policy levels will facilitate the roll-out of low and zero emission vehicles. These priorities provide private sector and local authorities with a clear and stable signal that may ease long-term investments.

⁴⁷ See 'SUMP-Status report (2018)' for a more detailed description of barriers and needs.

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. The critical position of cities to implement climate action was recognized by the UNFCCC Conference of the Parties in 2015 (COP 21) in Paris. For example, a crucial strategy to push mobile people away from using a private car is its taxation: purchase and circulation taxes can be implemented by national government departments, while car-independent lifestyles have to be facilitated at the same time, which demands local action.

However, cities have too limited resources and competences to achieve by themselves the required shift towards sustainable mobility. A national or regional support for SUMP can provide a clear trigger for a decrease in greenhouse gas emissions in the transport sector by creating the political, financial and technical frameworks that increase awareness among all stakeholders, from local to national levels and from public and private sectors. Therefore, a national or regional SUMP supporting policy represents a direct contribution to nationally determined contributions (NDCs).

This is also valid for European requirements for air quality. European legislation sets emission limits and regulatory air quality standards for the protection of human health in the long term for the concentrations of certain air pollutants. In 2016, six Member States are exceeding at least one of their emission ceilings. Only four EU countries comply with all regulatory air quality standards while ten Member States exceed these standards for each of these pollutants. Urban mobility is one essential component to act on in order to reduce emissions and improve air quality. Elaborating a national or regional framework for SUMP improves local action by making plans more focused and operational, and thus contributes to meet air quality requirements.

In a nutshell, national and regional governments need cities to achieve their own objectives, as well as to meet their contributions to international engagements and European requirements for air quality, while cities need higher levels of government to support them in achieving a more sustainable mobility. A win-win case!

1.5.2 National and regional level measures and instruments to foster the uptake of SUMP

National actors can support the development of SUMP with a wide range of national actions. Figure 5 shows the core national measures relating to governance, legislation and regulations, funding, monitoring and evaluation, guidelines and methodology, education and knowledge exchange.

Those actions interact strongly: for example, developing a national grant to support quality SUMP elaboration [*Funding*] implies to define what a SUMP is and possibly how to elaborate one [*Legislation and regulation, Guidelines and methodology*]. The funding process should be coordinated with other national stakeholders [*Governance*] and monitored throughout its whole duration [*Monitoring and evaluation*]. Its benefits have to be communicated at several key moments (e.g. launch of the grant) and feedback should be gathered from stakeholders during the whole process [*Governance, Information, knowledge exchange*]. Thus national decision

makers are strongly encouraged to develop a comprehensive national programme. This improves the global coherence, creates synergies and increases visibility by all stakeholders, especially local authorities elaborating SUMP.

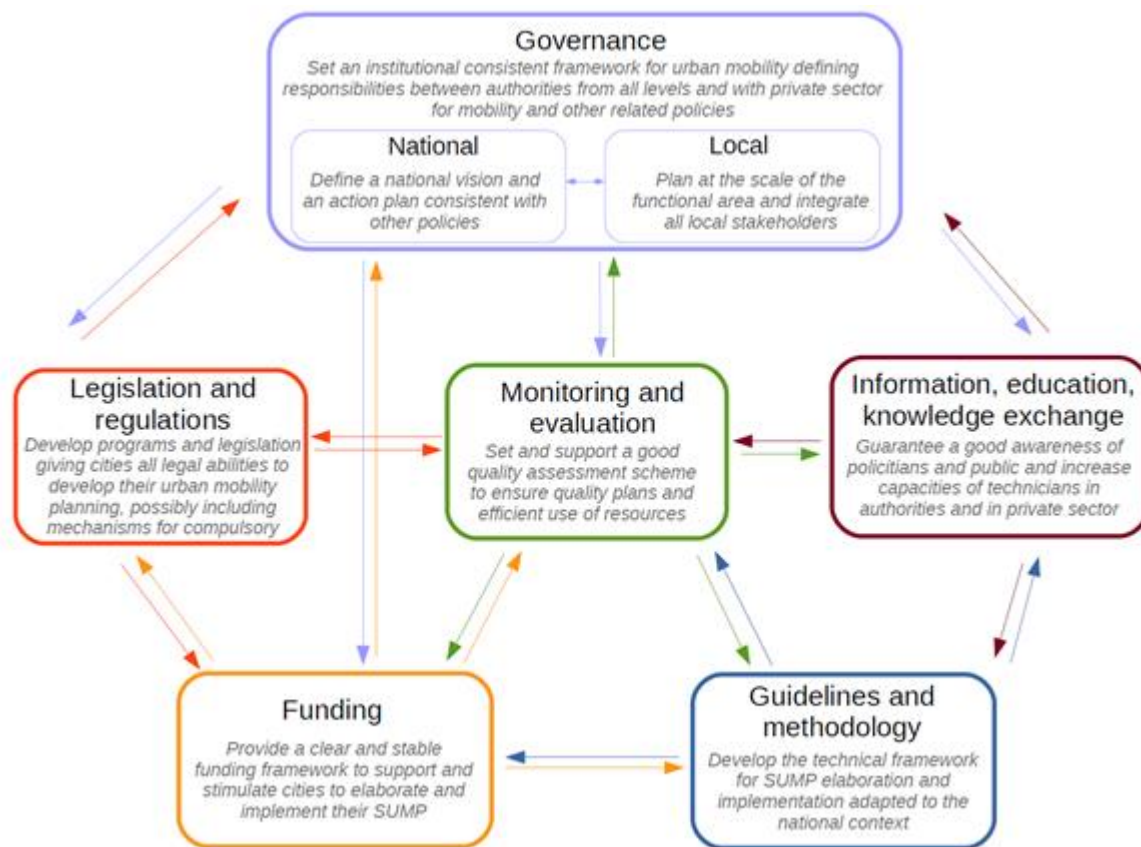


Figure 5: National level measures to foster the uptake of SUMP and their main relations.

Four levels of intervention, building upon each other, distinguish how governments can foster the take-up of the SUMP concept:

1. **Information:** The government provides detailed information about the SUMP concept in the national context and about its benefits. A national platform can facilitate the exchange on the SUMP concept among cities, provide good practice examples, and inform about 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: Granting cities the legal power to introduce levies and charging systems, or introducing experimentation clauses in relevant legislation to allow the testing of new approaches to sustainable mobility.
4. **Regulation:** SUMP is mandatory by law for all cities or based on criteria, e.g. population, category of local authorities.

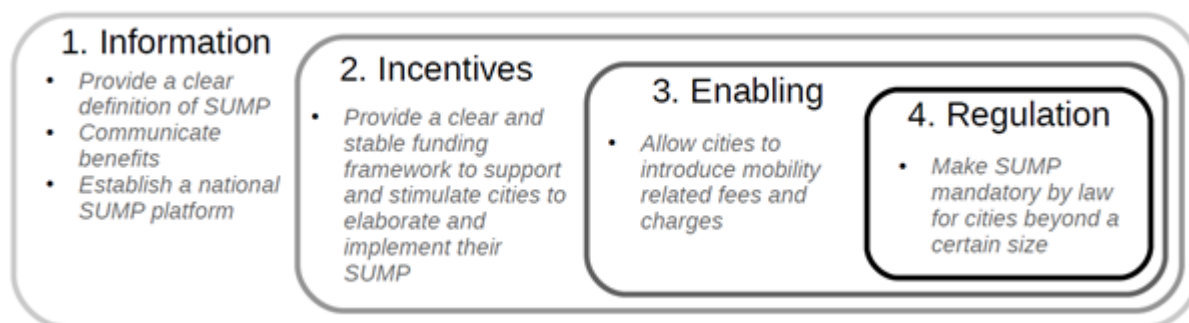


Figure 6: Four levels of intervention.

As highlighted by a recent analysis of national frameworks for SUMP in Europe, there is a real need of effective and coherent national or regional SUMP programmes for local SUMP development and implementation. More detailed needs have been identified for different country profiles.⁴⁸

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 SUMP s 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

Figure 7: Needs of effective and coherent national or regional SUMP programmes for local SUMP development and implementation.

⁴⁸ Durlin, A., Plevnik, A., Balant, M., Mladenovič, L., 2018. Status of SUMP in European member states (SUMP-Up, D5.1).

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 would be involved in the development and implementation of a Sustainable Urban Mobility Plan (SUMP). The guidelines describe the process of how to prepare and implement a SUMP. This process consists of four phases with twelve main steps made up of 32 activities. All four phases of the cycle start and end with a milestone. The milestones mark the completion of a phase that is linked to a decision or an outcome needed for the next phase. All steps and activities should be taken as part of a regular planning cycle in the sense of a continuous improvement process. Each step and the associated activities are presented in detail in this guidance document, including information about:

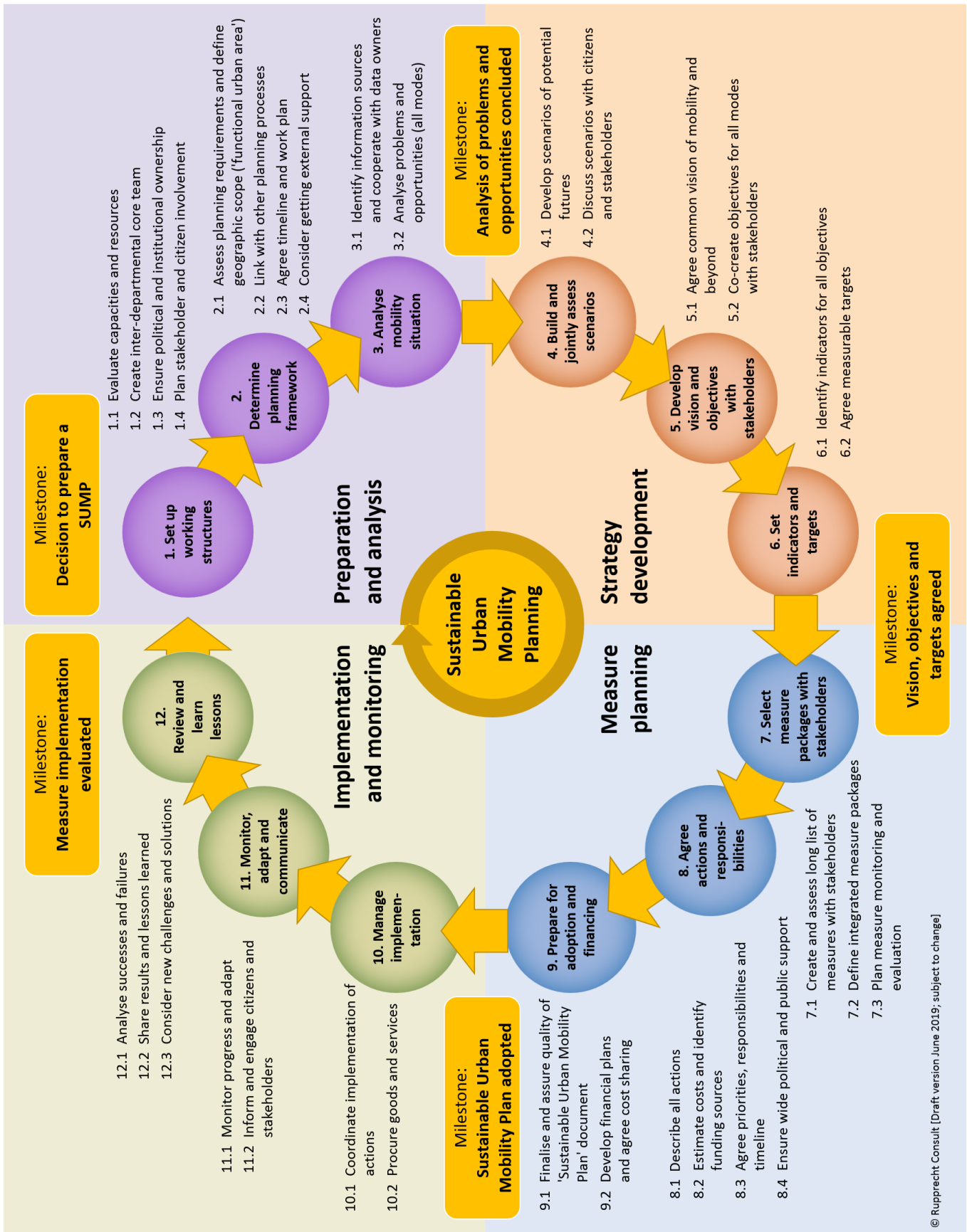
- The rationale of the activity, i.e. the fundamental reasons for conducting the activity, issues to be addressed, and questions to which responses are needed;
- Specific aims of the activity to be performed;
- Main tasks to be completed;
- Activities beyond the essential requirements, for cities and regions that are ambitious to take action beyond regular tasks;
- Timing and coordination requirements with other activities; as well as
- A checklist of steps to be achieved.

It needs to be stressed that the order of the different activities provides a logical rather than a sequential structure.⁴⁹ 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 includes a graphical overview of the planning cycle followed by a detailed description of all steps and activities for developing and implementing a Sustainable Urban Mobility Plan. 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 Sustainable Urban Mobility Plans from across Europe. They 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 good practice examples also illustrate advanced planning activities. Additional examples of good practice can be found at www.eltis.org.

The SUMP cycle (see Figure 8) consists of four phases with twelve main steps made up of 32 activities. All four phases of the cycle start and end with a milestone. The milestones mark the completion of a phase that is linked to a decision or an outcome needed for the next phase. All steps and activities should be taken as part of a regular planning cycle in the sense of a continuous improvement process.

⁴⁹ This aspect is described in detail in chapter 1.4 Sustainable Urban Mobility Planning in practice.



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Figure 8: The 12 Steps of Sustainable Urban Mobility Planning (SUMP 2.0) – A planner's overview. [Draft version, June 2019].

Phase 1: Preparation and analysis

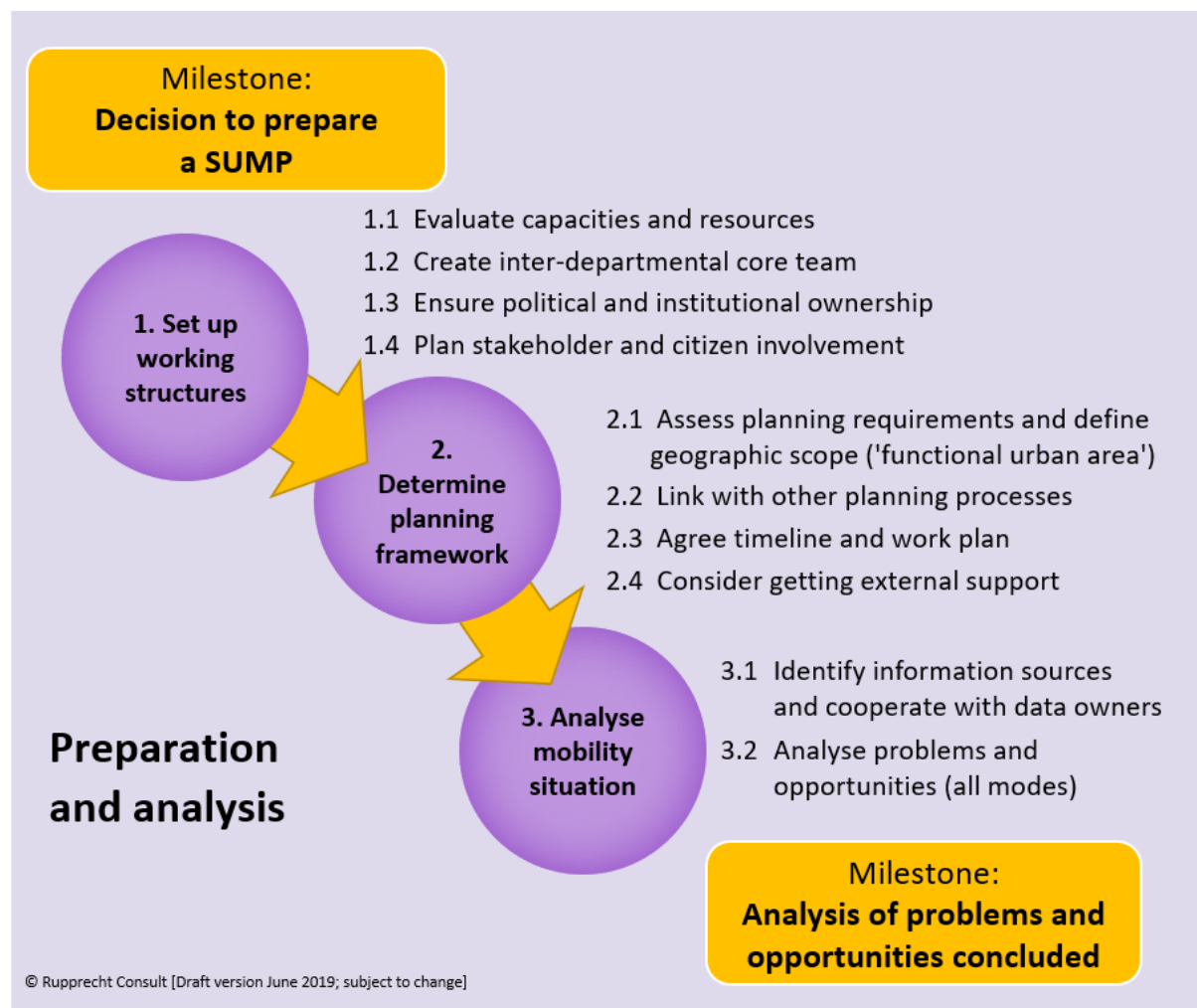
Milestone:
**Decision to prepare a
SUMP**

Starting point: Decision to prepare a SUMP

A decision to improve the situation and a strong idea that change towards greater sustainability is needed should be the starting point for developing a Sustainable Urban Mobility Plan. It should therefore be clear from the outset that urban transport and mobility is not an end in itself but needs to contribute to higher goals, such as quality of life and well-being of the people.

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 Sustainable Urban Mobility Plan. In any case, real commitment is needed to make it a truly sustainable and effective plan. If there is no political 'champion' available on the local level, it can be hard work to convince the right politicians to become supporters. This requires convincing arguments.

A useful approach can be to show the challenges and problems the city faces if nothing is changed, to stress the benefits generated by a Sustainable Urban Mobility Plan and to highlight the fact that good results are rewarded by voters (e.g. pointing to other cities that have applied sustainable urban mobility planning, see also chapter 1.2). This is particularly challenging as the full impact of a Sustainable Urban Mobility Plan only becomes visible after a longer time-span than the electoral cycle. It may be helpful to highlight the option of including measures with high visibility in the Sustainable Urban Mobility Plan, which may help to generate a positive response among citizens and other stakeholders already in the short-term.

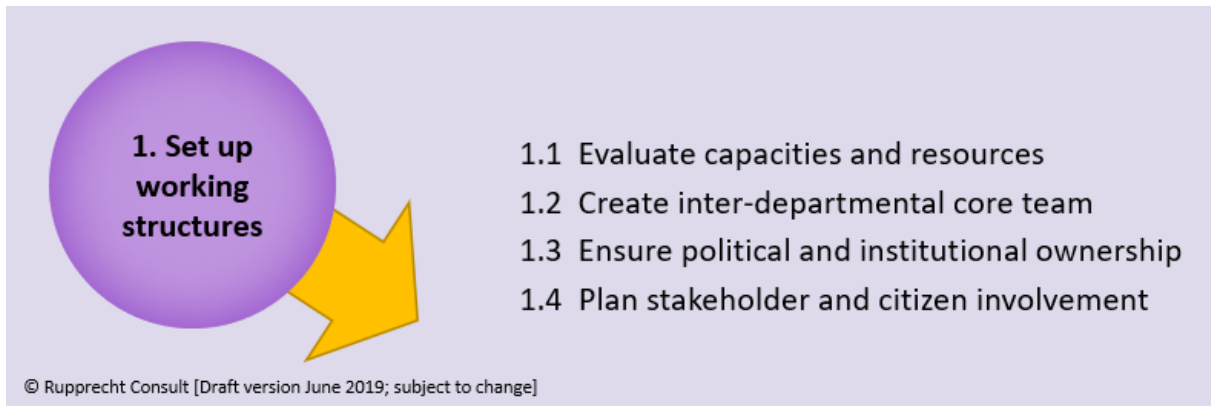


The first milestone and starting point for the initial phase is an explicit decision by policy makers to prepare a Sustainable Urban Mobility Plan. Here all the groundwork for the planning process is done by answering the following questions:

- *What are our resources?:* Analyse all available (human, institutional, financial, data) resources for planning and set up adequate working structures to get started.
- At this stage, decision makers need to ensure that the key institutions and policy makers support the SUMP development and contribute to setting up a core planning team.
- *What is our planning context?:* Identify factors that will have an important impact on the planning process, e.g. other plans, legal requirements. Agree the planning timeline, analyse traffic flows to determine the geographic scope of the plan – and ensure that neighbouring authorities and stakeholders are “on board”. Recruit external support as needed. Activities in this and in the previous step are closely linked and often run in parallel.
- A key task for decision makers at this point is to help that the “functional urban area” (see 1.1.3) is chosen 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 modes (and in the entire functional urban area) by using an adequate set of current data sources.

The concluding milestone of this phase is the completed analysis of the major problems and opportunities related to mobility in the planning area.⁵⁰

Step 1: Set up working structures



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 plan development should be well-connected to all relevant parts of the administration. Dedicated activities to ensure political ownership from the start should be conducted 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 your planning practices, capacities and resources at the beginning is needed to tailor the process to your own local context. It 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. The assessment of current planning practices should determine how closely they align with the principles set out in this guidance document. Closely linked to this is the question of available capacities 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 run a successful plan.

Aims

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

⁵⁰ The phase descriptions at the beginning of the four phases are identical with the content from Chapter 1.3.

- 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 incorporate 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 plan 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 Sustainable Urban Mobility Plan (for example political champions, voiced need for better coordination of municipal activities, synergy with another starting planning process).
 - 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 Sustainable Urban Mobility Plan 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 will help you to stay realistic.

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 designing 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 developing packages (see Activity 7.2).

Checklist

- Strengths, weaknesses and barriers with regard to developing a Sustainable Urban Mobility Plan 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 sustainable urban mobility planning process politically approved.
- Likely financial framework for measure implementation assessed.

Tools

METHODS FOR SELF-ASSESSMENT OF PLANNING PROCESSES

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. Its results page shows how well your planning activities already fulfil the principles of a Sustainable Urban Mobility Plan and provides tailored advice for further improvement. By having all meeting participants complete the questions on their own, and then discussing the similarities and differences in responses as a group, highly relevant insights can be gained.

Link to SUMP Self-Assessment: <http://www.eltis.org/mobility-plans>

Peer review

Another way of assessing the planning environment for a Sustainable Urban Mobility Plan 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 setup, also benchmarking them against the 'best in class'. They can contribute a useful external perspective and feedback on how to best organise its Sustainable Urban Mobility Plan development.

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

TOOLS FOR THE ASSESSMENT OF CAPACITIES

Management skills (required during the entire sustainable urban mobility planning process)	
Project management Financial management Staff management (incl. managing multidisciplinary teams made up of internal and external staff)	
Technical skills (required during the entire process)	
Urban planning and transport planning Other important sectoral policies (economic, social, environmental) Basic knowledge of policy at other levels - regional, national, EU	
Operational skills (required for particular activities)	Related SUMP Activity
Citizen involvement	1.4 Plan stakeholder and citizen involvement 4.2 Discuss scenarios with citizens and stakeholders 5.1 Agree common vision of mobility and beyond 8.4 Ensure wide political and public support 11.2 Inform and engage citizens and stakeholders
Monitoring and evaluation	2.3 Agree timeline and work plan 6.1 Identify indicators for all objectives 7.3 Plan measure evaluation and monitoring 11.1 Monitor progress and adapt 12.1 Analyse successes and failures
Data collection and analysis	3.1 Identify information sources and cooperate with data owners 3.2 Analyse problems and opportunities (all modes)
Modelling and scenario development	4.1 Develop scenarios of potential futures 4.2 Discuss scenarios with citizens and stakeholders 7.2 Define integrated measure packages
Information and public relations	1.4 Plan stakeholder and citizen involvement 8.4 Ensure wide political and public support 11.2 Inform and engage citizens and stakeholders 12.2 Share results and lessons learned
Budget planning	1.1 Evaluate capacities and resources 2.3 Agree timeline and work plan 8.2 Estimate costs and identify funding sources 9.2 Develop financial plans and agree cost sharing
Procurement	10.1 Coordinate implementation of actions 10.2 Procure goods and services

Table 1: Core skill requirements for Sustainable Urban Mobility Planning

ASSESSMENT OF BUDGET REQUIREMENTS FOR PLAN DEVELOPMENT

The costs of developing a Sustainable Urban Mobility Plan differ widely depending on the scope, the availability of existing plans and studies, and the 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 when to use a model).

To be added: typical costs of SUMPs, based on feedback at the SUMP Conference 2019

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 that drives the process forward.

Aims

- Establish efficient working structures for a planning process that makes best use of available resources.
- Achieve an integrated plan that considers linkages between different transport modes, rather than addressing them in isolation, and that 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 Sustainable Urban Mobility Plan.

- 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 crucial as well to achieve a truly integrated planning process whose outcomes are mainstreamed into other sectors. For example, if the Sustainable Urban Mobility Plan 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 (see Tool section of Activity 1.1) 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 Sustainable Urban Mobility Plan. 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.
- 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 plan (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 developed in the team.

GOOD PRACTICE EXAMPLE

Edinburgh, UK: Multi-disciplinary Spatial Policy Team

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 plan.

Tasks

- Identify all relevant stakeholders as well as their objectives, their power, their capacity and their planning resources (e.g. using a stakeholder mapping tool, see skill table and influence-interest matrix in Tools section below).
- Strive for a planning coalition encouraging ownership and avoiding substantial conflicts with one or more powerful actors. 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 on the timing and coordination of political decisions.

Checklist

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

Tools

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 interest in the issue in question. This can, for example, be done by developing an ‘Influence-Interest Matrix’, which groups stakeholders by their level of influence/importance.

Influence-Interest Matrix		
	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

Figure 9: Influence-Interest Matrix (UN-Habitat: Tools to Support Urban Decision Making, Nairobi, 2001, p.24).

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 Sustainable Urban Mobility Plan, 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.

IDENTIFICATION OF RELEVANT STAKEHOLDERS

Functionality	Relevance	Which stakeholders?	Key assets
Political support	Who can assure political support, within the transport sector, and beyond?	<ul style="list-style-type: none"> <input type="checkbox"/> Mayors of the planning cities and city councillors (both majority and opposition) <input type="checkbox"/> Mayors and representatives of neighbouring cities <input type="checkbox"/> Heads of metropolitan areas, provinces, counties, regions <input type="checkbox"/> Representatives of district town halls <input type="checkbox"/> Political parties <input type="checkbox"/> Politicians from different local authorities within the SUMP partnership 	Vision Leadership Power Resources
Transport network competence	Who can assure resources to allow for SUMP implementation?	<ul style="list-style-type: none"> <input type="checkbox"/> Public transport companies (municipal buses, trams and metros and regional buses and trains) <input type="checkbox"/> Owners of transport infrastructure (parking, interchange stations, etc.) <input type="checkbox"/> National railway companies <input type="checkbox"/> Port authorities (when applicable) <input type="checkbox"/> Airport authorities (when applicable) <input type="checkbox"/> Providers of new mobility services (e.g. bike sharing, car sharing) 	Technical feasibility
Expertise, skills, data	Who manages the respective transport networks? Who has the relevant skills and expertise to deliver a technically sound plan, including representatives from other sectors?	<p>Different technical 'Experts' who may come from different organisations:</p> <ul style="list-style-type: none"> <input type="checkbox"/> other city departments or public administration (spatial planning, economic development, environment, health, tourism, leisure etc.) <input type="checkbox"/> Universities <input type="checkbox"/> Research <input type="checkbox"/> Qualified companies <input type="checkbox"/> Specialised agencies <input type="checkbox"/> External organisations (companies, NGOs, etc.) 	Technically sound plan
Stakeholder support	Who can understand public and stakeholder opinions?	<p>Government bodies providing access to stakeholders and citizens. Within city services this can be:</p> <ul style="list-style-type: none"> <input type="checkbox"/> the police force, <input type="checkbox"/> the communication department, <input type="checkbox"/> the city's ombudsman/mediator etc., <input type="checkbox"/> the educational department, by means of frequent contacts with schools, which are important traffic generators, <input type="checkbox"/> colleagues in charge of managing advisory councils in other policy areas (spatial planning, economic development, municipal youth council etc.). 	Values Sense of urgency

Table 2: The Kingdon Model applied to SUMP: functionalities and corresponding relevance, stakeholders and assets (based on CH4ALLENGE Institutional cooperation manual, p.24)

IDENTIFICATION OF RELEVANT STAKEHOLDERS

The table helps you to involve stakeholders that have all the necessary skills and knowledge for a Sustainable Urban Mobility Plan. It allows you to check your ideas whom to involve, and to identify new organisations or people that bring in missing skills or knowledge.

The concept states that Sustainable Urban Mobility Plans are only successful where the partners involved in plan development have four functional abilities:

1. The capacity to gain political support
2. The competence over transport networks and services
3. Technical excellence in SUMP development

GOOD PRACTICE EXAMPLE

Budapest, Hungary: Regular roundtable meetings for decision makers

GOOD PRACTICE EXAMPLE

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

Activity 1.4: Plan stakeholder and citizen involvement

Rationale

A transition towards sustainable mobility requires active support from stakeholders and the wide public. Working with stakeholders is generally considered common practice – but often only certain stakeholders 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 plan and enhance its quality. Only a Sustainable Urban Mobility Plan that was developed in a pragmatic cooperation with important stakeholders will be accepted and effective in practical and financial terms. The involvement of citizens and stakeholders is therefore a fundamental element of a Sustainable Urban Mobility Plan. 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 early planning phases when processes are still open and flexible.
- Design sustainable and supported approaches for the involvement process that will 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.

Tasks

- Establish involvement activities as part of standard planning practices. Identify the planning steps for which stakeholders and citizens will be involved (see Figure 10), and the participation methods suitable to each of them. 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, poorer 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 that a new mobility plan will be developed in which 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 mobility plan website.

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 the Sustainable Urban Mobility Plan 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 plan (see Activity 2.1).
- Involve stakeholders throughout the entire planning process.
- Make sure to involve citizens in important decisions of selected steps (see Figure below). Citizen engagement might be more successful when done well in selected activities instead of trying to involve them in too many activities risking participation fatigue. The figure below recommends useful steps for citizen engagement.

Checklist

- Timing, methods and involved citizen groups identified and decided.
- Involvement strategies finalised.
- Communication plan elaborated.
- Steering group with key stakeholders set up.

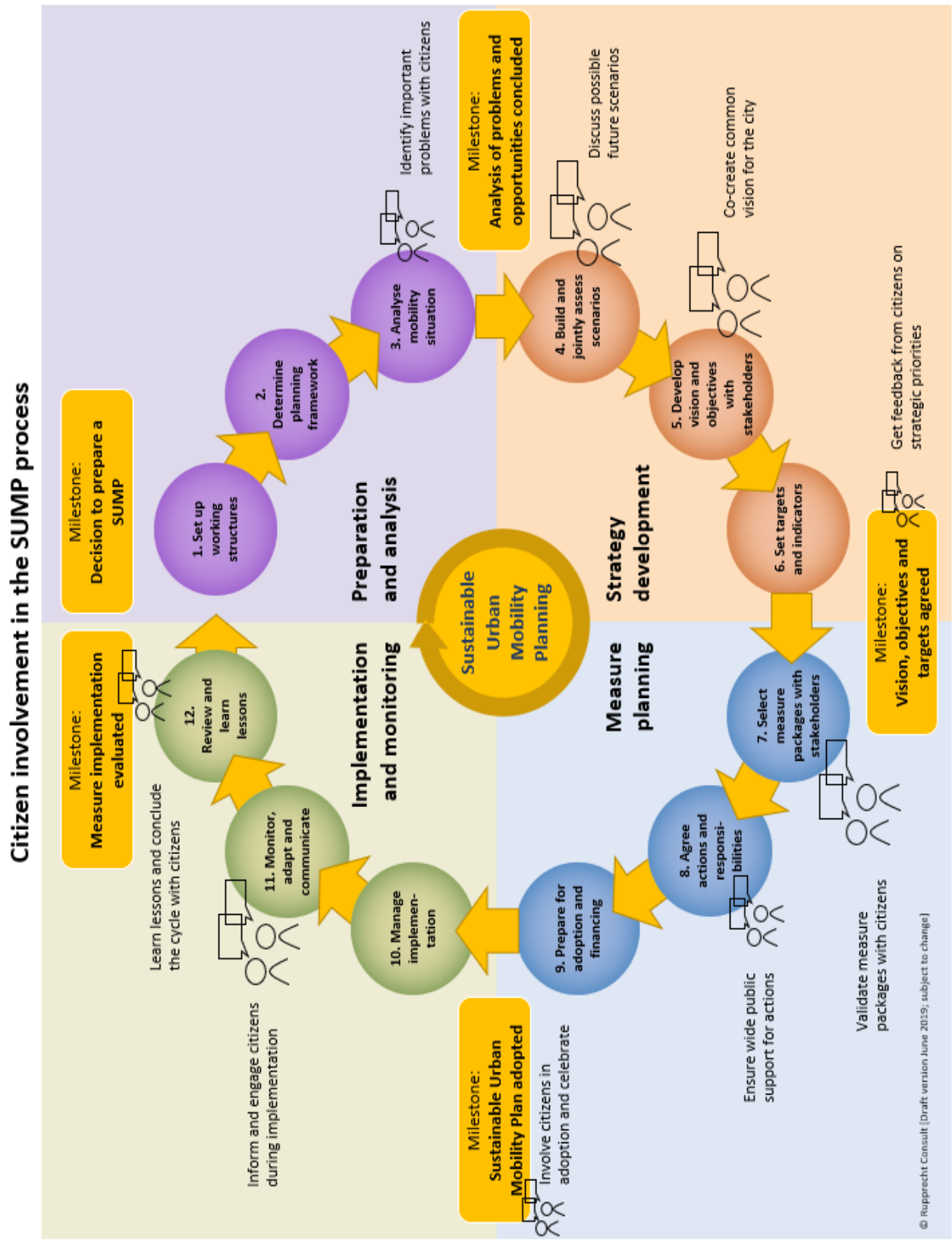


Figure 10: Citizen involvement in the SUMP process. [Draft version, 6th June 2019]

CITIZEN INVOLVEMENT IN THE SUMP PROCESS - DO IT RIGHT!

Citizen involvement should take place in all phases of the SUMP cycle, but not in each of the 12 steps. Figure 10 shows recommended steps and activities for the involvement of citizens. In these steps important decisions need to be taken and the further SUMP process can benefit from ideas, visions and the commitment of local residents. It is crucial to involve citizens in the discussion of scenarios (Activity 4.2), the development of visions (Activity 5.1), the selection and validation of measure packages (Activity 7.2) and during implementation (Activity 11.2). Your SUMP can also benefit from involving citizens for identifying problems in the analysis of the mobility situation (Activity 3.2), when 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 with citizens about the results of the completed phase. Especially the third milestone offers opportunity to validate the strategic direction with citizens, and the milestone of the SUMP adoption can benefit from involving citizens and celebrating the completion of the measure planning phase as well as the formal adoption of the SUMP. When you plan events or other tools and methods for citizen engagement, always be aware of these few rules:

- Be 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 next to an online one.
- It is crucial to communicate that the results of citizen engagement are really used for the process. Promise the participants that every contribution will be considered and give feedback if something is taken into account for the SUMP and the implementation.
- Think about the used languages in the process. You might exclude people from a migrant background if you only use the local language.
- If you plan a public meeting (e.g. a workshop), be thoughtful of the chosen location and make sure its accessible, barrier free, reachable by public transport, provides appropriate equipment and a well-lit room with suitable acoustics. Plan the seating arrangements and be aware of different concepts of seating that do not imply power hierarchies.
- Be considerate of different time schedules of people and set up your event preferably for the evening. An afternoon event would exclude employees.
- Provide a respectful moderation.

Tools

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 of how citizens and stakeholders were involved in the SUMP process in practice. There are of course various other ways to involve stakeholders and citizens depending on the individual planning context of the city.

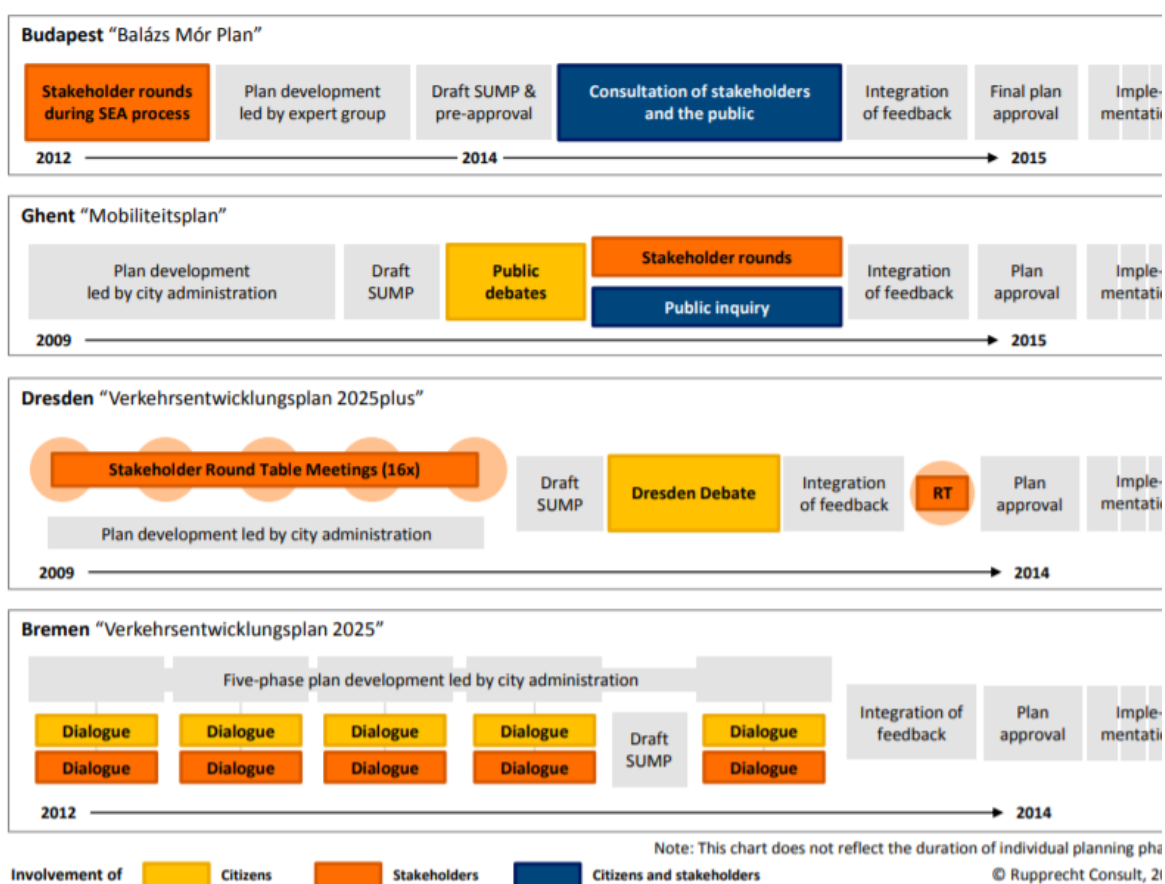


Figure 11: Practice examples of involving citizens and stakeholders into the SUMP process (Rupprecht Consult, 2016, from CHALLENGE Participation Manual: Actively engaging citizens and stakeholders in the development of Sustainable Urban Mobility Plans, p. 17.)

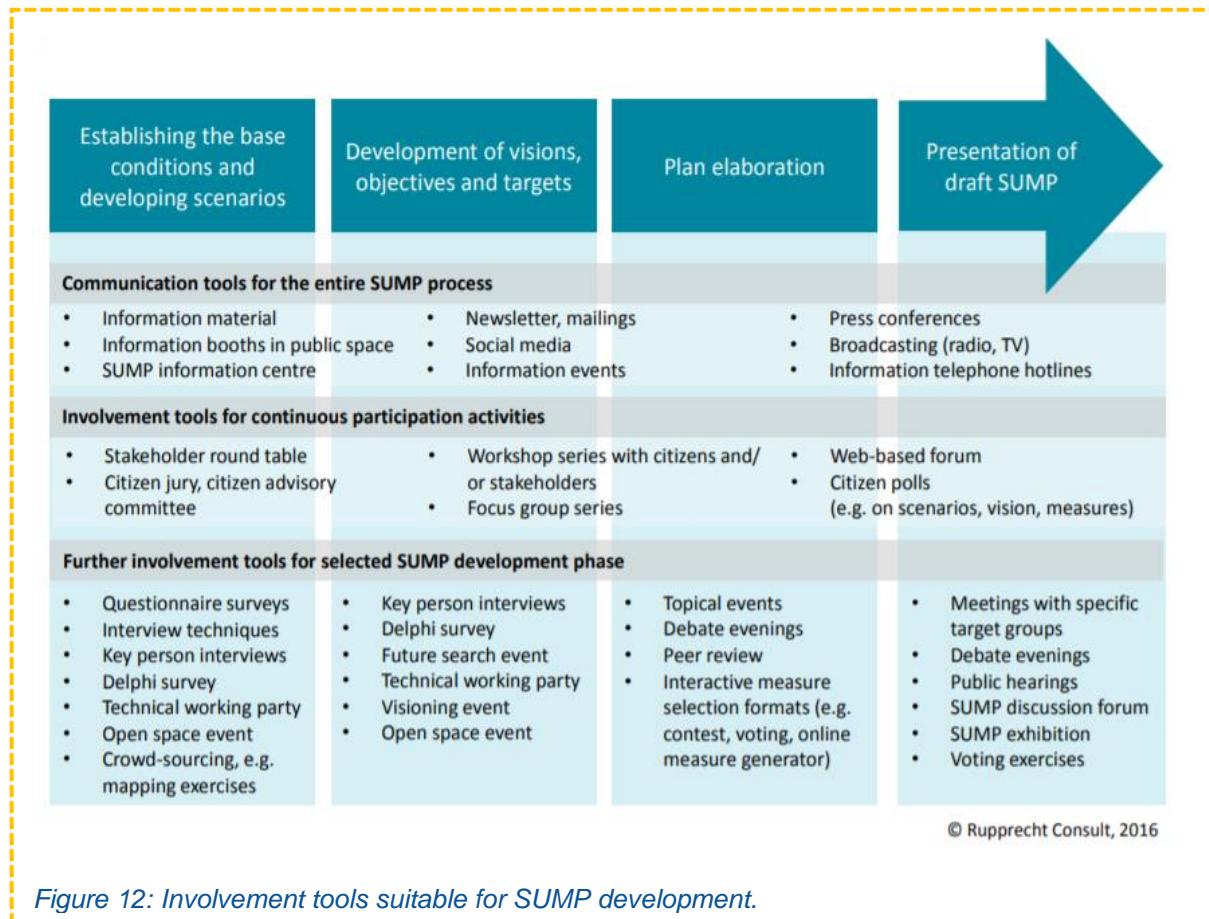


Figure 12: Involvement tools suitable for SUMP development.

To be added: New version of Figure 12.

GOOD PRACTICE EXAMPLE

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

GOOD PRACTICE EXAMPLE

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

Step 2: Determine planning framework

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

© Rupprecht Consult [Draft version June 2019; subject to change]

Hand in hand with the setup of working structures, the planning framework needs to be determined to tailor the Sustainable Urban Mobility Plan development to the local situation. This includes the definition of the geographic scope of the plan, 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 plan 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 Sustainable Urban Mobility Plan 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 Sustainable Urban Mobility Plan exist, the most suitable spatial coverage needs to be agreed by 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 (e.g. urban agglomeration level).

Aims

- Ensure that relevant regional, national and European legal requirements for the Sustainable Urban Mobility Plan 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.

Tasks

Planning requirements

- Identify, document and assess:
 - Legal regulations and guidance on how to develop a Sustainable Urban Mobility Plan, 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 Sustainable Urban Mobility Plan. For example, the plans of a National Road Authority for new or enlarged roads could work against the objectives of a Sustainable Urban Mobility Plan 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 Sustainable Urban Mobility Plan.

Geographic scope

- Analyse transport patterns and administrative boundaries. Define your functional urban area (see Tools 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 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 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).

Activities beyond essential requirements

- 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.
- Ensure coverage of areas linked to major socioeconomic 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.

Tools

THE STATUS OF SUMP REGULATIONS IN EU MEMBER STATES

For more information on regional and national regulations 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

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 (OECD 2012). 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 following profiles provide the functional urban areas of each country. The following information is included:

- Map of the country with all the functional urban areas.
- List of the functional urban areas by population size.
- Population living in functional urban areas.
- Methodological notes on data used.
- Shapefiles of the metropolitan areas by country

To access the profiles, please go to <https://www.oecd.org/> and search for 'functional urban area'.

Source: OECD 2019

GOOD PRACTICE EXAMPLE

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

GOOD PRACTICE EXAMPLE**Kassel, Germany: Synchronised development of municipal and regional SUMP****GOOD PRACTICE EXAMPLE****Grand Nancy, France: Metropolitan inter-municipal local urban plan for housing and development****Activity 2.2: Link with other planning processes****Rationale**

A principal shortcoming of urban transport planning today is the lack of coordination between policies and organisations, far beyond 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 Sustainable Urban Mobility Plan 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 of 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 Sustainable Urban Mobility Plan 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.

GOOD PRACTICE EXAMPLE

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

GOOD PRACTICE EXAMPLE

Monzón, Spain: Harmonized development of SUMP and SECAP

GOOD PRACTICE EXAMPLE

Multiple cities, Belgium: Link with social inclusion policies

GOOD PRACTICE EXAMPLE

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

Activity 2.3: Agree timeline and work plan

Rationale

Ensuring the right timing and a clear work plan are keys 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. It is also crucial to consider ongoing planning and policy-making activities when determining the timing, as elections, legislation processes and other planning activities may influence the planning process. Developing and implementing a Sustainable Urban Mobility Plan 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 create acceptability. A work plan should be approved that indicates all milestones and clearly defines for involved actors who does what and when.

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 for the planning process.
- Ensure 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

- Choose an appropriate timeframe for building a strategic and operative framework to prepare the start of the cycle and the planning process (partly preceding and partly overlapping with the planning process). Setting up the strategic and operative framework is strongly connected to the first milestone and activities in the first phase. The

time needed for this will to a large extent depend on the experience with planning processes, institutional structures, the political context and the local 'planning culture'.

- Establish a timeframe for development of the Sustainable Urban Mobility Plan, including the phases of analysis, strategy development and measure planning: in an ideal case 1.5 years (depending on framework conditions and experience this can become longer). Communicate a provisional timeline so that involved actors can schedule time for their contributions. Include the timeframe for communication and stakeholder and citizen involvement in the framework.
- Choose an appropriate timeframe for implementation of measures: 3-10 years (e.g. depending on the type of measure and synchronisation with funding streams). Focus on the next 10 years, but be aware of long term measures that will start during the 10 year period and continue after (e.g. major projects like the construction of a tram line).
- Choose an appropriate planning horizon to ensure longer term relevance of the Sustainable Urban Mobility Plan; this may be 15-25 years.
- Build in time for evaluation and updating of measures after the plan adoption (see also Activity 11.1). The frequency for reviewing and updating the measure implementation depends on your individual situation, also taking into account legal requirements. Apart from that, this step can be done every 1.5 years.
- Consider reviewing and updating the full Sustainable Urban Mobility Plan every 5-10 years. After 10 years the document might be outdated, while the measures should be monitored and updated more frequently.
- Some cities prefer to define their timeframe through important milestones, and don't use quantified numbers. 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.
- 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.
- Plan some relatively 'quiet' working periods in order to make the general planning more flexible and to avoid severe delays.
- Continue to implement measures with high visibility during framework setup and plan development. This helps to avoid the impression of inactivity, which is particularly important for decision makers.

Relative time requirements of the SUMP steps

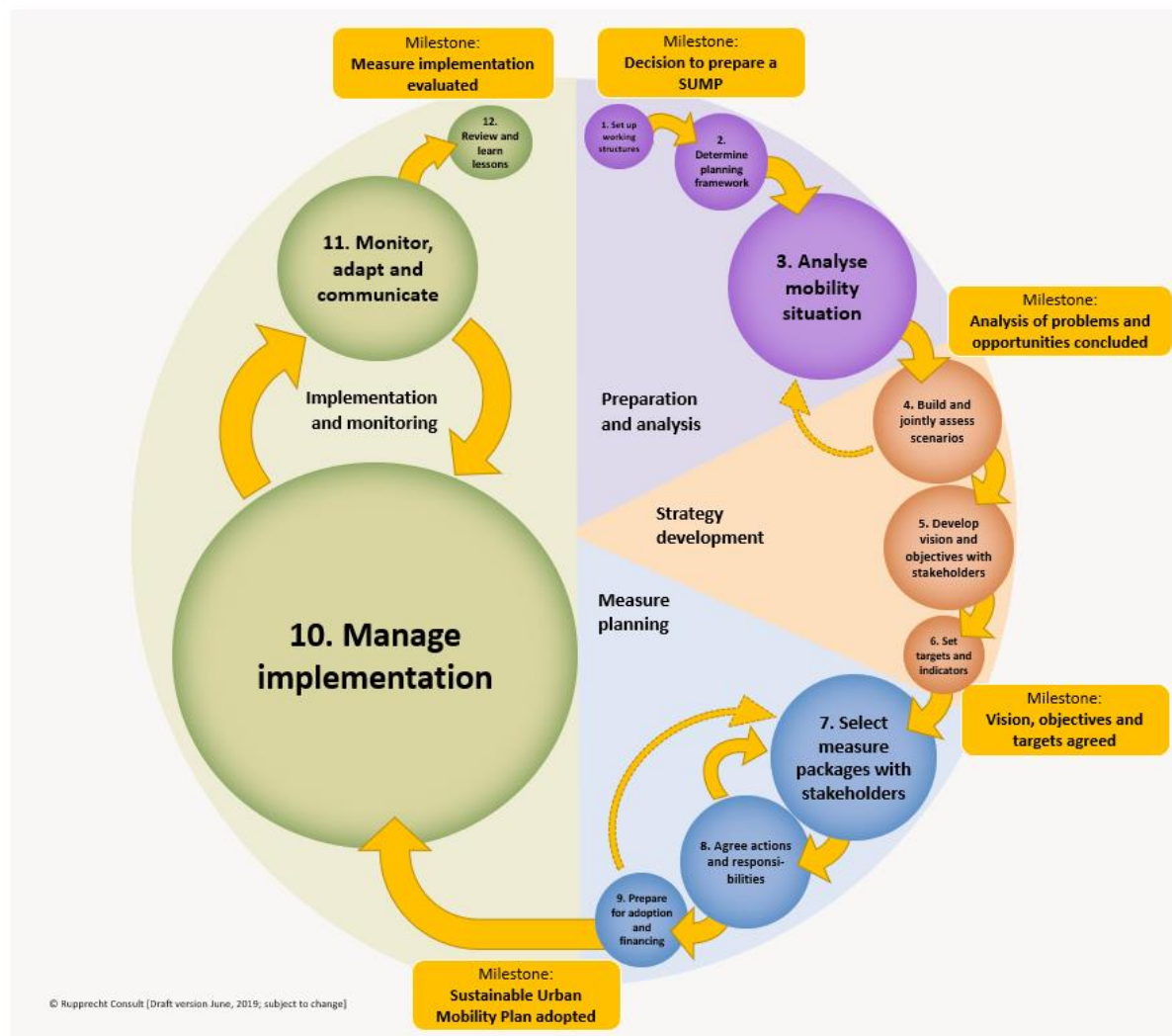


Figure 14: Relative time requirements of the SUMP steps. The visualisation of the 12 steps presents the relative time needed in relation to all other steps in a typical SUMP process. For example, the management of the implementation process usually requires most of the time in the implementation and 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.)

To be added: Recommended timeframes, evaluated in Groningen.

Work plan

- Get a clear political mandate for the development of a Sustainable Urban Mobility Plan. Ensure that the decision makers broadly agree that sustainability principles should be core to the plan 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 planning 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 drivers for sustainable urban mobility planning (informed by 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 the non-English-speaking countries. To this end, 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 plan development.

Checklist

- Realistic basic timeline for sustainable urban mobility planning process prepared.
- Political mandate for developing your plan received.
- 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 keep expertise on 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 Sustainable Urban Mobility Plan by cooperating with experts that contribute fresh approaches or 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, as they cannot be efficiently covered through internal capacity building (or recruitment of new staff).
- Consider getting external support for tasks where a lack of skills in your organisation would reduce quality or prolong the process considerably if attempted internally. Consider this in particular for tasks that municipalities tend to have difficulties with as they are not part of their core activities:
 - Engagement of stakeholders and citizens, such as preparation, organisation and facilitation of events as well as documentation and analysis of discussion results. The administrative efforts of good participation processes should not be underestimated. For example, 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 activities, such as writing attractive news items for print and online, designing public reports (e.g. the mobility strategy and the Sustainable Urban Mobility Plan), facilitating social media channels (which can receive high volumes of comments) and taking professional photos of 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).
 - In countries where a binding legal framework exists: Legal advice to mitigate the risk of having a SUMP cancelled in court.
- Tender and contract external services for the selected tasks on the basis of terms of references.
- When delegating project management activities to a consultant, keep the overall coordination within your planning authority. For all delegated tasks, always foresee sufficient resources and skills for quality management by your organisation. Also integrate capacity building activities in the terms of reference whenever possible so that the internal staff can gain the respective competences.

Timing and coordination

- Consider plans to tender out services when developing timeline and work plan
- Conduct tendering and contracting only after receiving political mandate and approval of work plan

Checklist

- Decision taken which tasks to get external support for, if any
- Services tendered and suitable contractor chosen that understands the SUMP approach

Tools

To be added: Generic structure for terms of references.

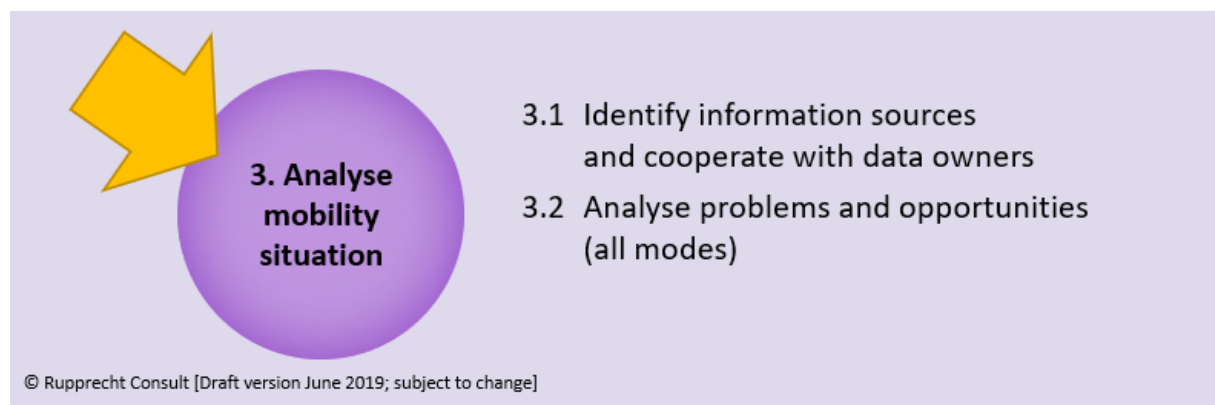
GOOD PRACTICE EXAMPLE

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

GOOD PRACTICE EXAMPLE

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

Step 3: Analyse mobility situation



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 a rational and transparent strategy development. Before conducting an analysis of problems and opportunities in the field of urban mobility and including citizens in the analysis, the information and data

sources need to be identified and cooperation with data owners should be set up. The aim is a target-oriented and focused data collection and analysis, which includes all transport modes and all 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 currently face. 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 time scales 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 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, good communication with data owners and mutual data sharing with them can help to overcome this. Experiences have 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, its quality and accessibility.
- Identify data gaps and additional information needed for your mobility analysis.
- Cooperate with external and internal organisations to complete your dataset.
- 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, 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 likely key objectives (which will be defined in detail in Activity 5.2) and the political priorities that led to the decision to develop a Sustainable Urban Mobility Plan. 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, traffic safety, liveability of streets, accessibility to services, employment and education).
- Consult stakeholders and the general public on the problems and issues that they feel should be addressed by the SUMP.

- 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 explaining how the data will be used and held by your organisation. Agree together on the process to collect and share the data so 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 availability of default values 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 annual counts at key points in the city, or by carrying out 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. traffic counts, GPS data, data collected via apps on smartphones),
 - Quantitative data from surveys (household, on-street, in-vehicle),
 - 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 used open data 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 data and policy aspects of other departments.

Timing and coordination

- Can be started once the core team is set up and the geographic scope defined (see Activity 1.2 and 2.1), at the latest after getting agreement on 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 on 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

To be added: Toolbox on online map-based surveys / data collection

GOOD PRACTICE EXAMPLE

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

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 with 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 are 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 based on data and relevant planning documents both for passenger mobility and freight transport, in the entire functional urban area.
- Prepare a list of problems and opportunities that relate to urban mobility (e.g. accessibility to services, pollution, social inequity, traffic safety, climate protection, land-use patterns and resilience of the network).
- Identify and prioritise key problems to be addressed by your Sustainable Urban Mobility Plan.

Tasks

- Check key planning documents relevant to urban transport for a useful analysis of the current status, problems and strategies. Such documents can include sectoral mobility strategies and 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), from local transport operators and other municipalities. (Builds on Activity 2.2 in your analysis of planning documents.)
- 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 not accessible by public transport, or gaps in the network of cycle 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 plan. 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, traffic safety, liveability of streets, 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 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 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 on the self-assessment (see Activity 1.1) and 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 all main aspects of sustainable urban mobility described.
- Baseline set against which progress can be measured.
- Key opportunities and problems to be addressed by the Sustainable Urban Mobility Plan prioritised.

Tools

FUNCTIONS/ TRANSPORT MODES	MODAL SHARE	QUALITY OF INFRA-STRUCTURE	SAFETY, ENVIRONMENTAL AND HEALTH STATUS	CURRENT STATUS, IMPLEMENTATION OF MEASURES	ANALYSIS
Walking	12%	Poor	Many accidents on road crossings near schools	Low activity	Traffic safety measures is needed
Cycling	7%	Medium	Low use gives small benefits	Efforts to mapping the bicycle network in progress. Low budget for new measures.	Increase the city administration's budget for cycling measures
Bus/tram/ metro/Light rail	16%	Good	New bus-fleet has been installed, less impact on air quality	High activity, public transport strategy planned	Progress in right direction, keep on
Car	65%	Good	Many accidents between vulnerable road users and cars. High use impact air quality.	High activity, new bypass is under construction	Work with car traffic in city centre when new bypass is completed.
Train station and larger interchanges	X	Good	Bus station is not located within walking distance from train station	Low activity	Involve location of interchanges in public transport strategy
Freight	X	Good	Heavy freight traffic in city centre is considered to be a safety risk	Low activity	Increase the city administration's capacity
Analysis	Car is the dominant transport mode	Vulnerable road users feel unsafe	Traffic safety measures is needed addressing many modes of transport	Strengthen capacity is needed in several fields.	X

Figure 15: Example of how an analysis table can be used to define the status of the transport system and give support in what types of measures to select (CH4ALLENGE Measure Selection, 2016, p. 10).

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	15700
Total		7600	38000

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	15700
Total		9200	43000

Figure 16: Example of how to illustrate the consistency between the city's priorities (of transport modes and targets in this example) and what the city actually invests in (CH4ALLENGE Measure Selection Manual, 2016, p. 11).

GOOD PRACTICE EXAMPLE

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

GOOD PRACTICE EXAMPLE

Deinze, Belgium: Accessibility screenings for children and elderly

GOOD PRACTICE EXAMPLE

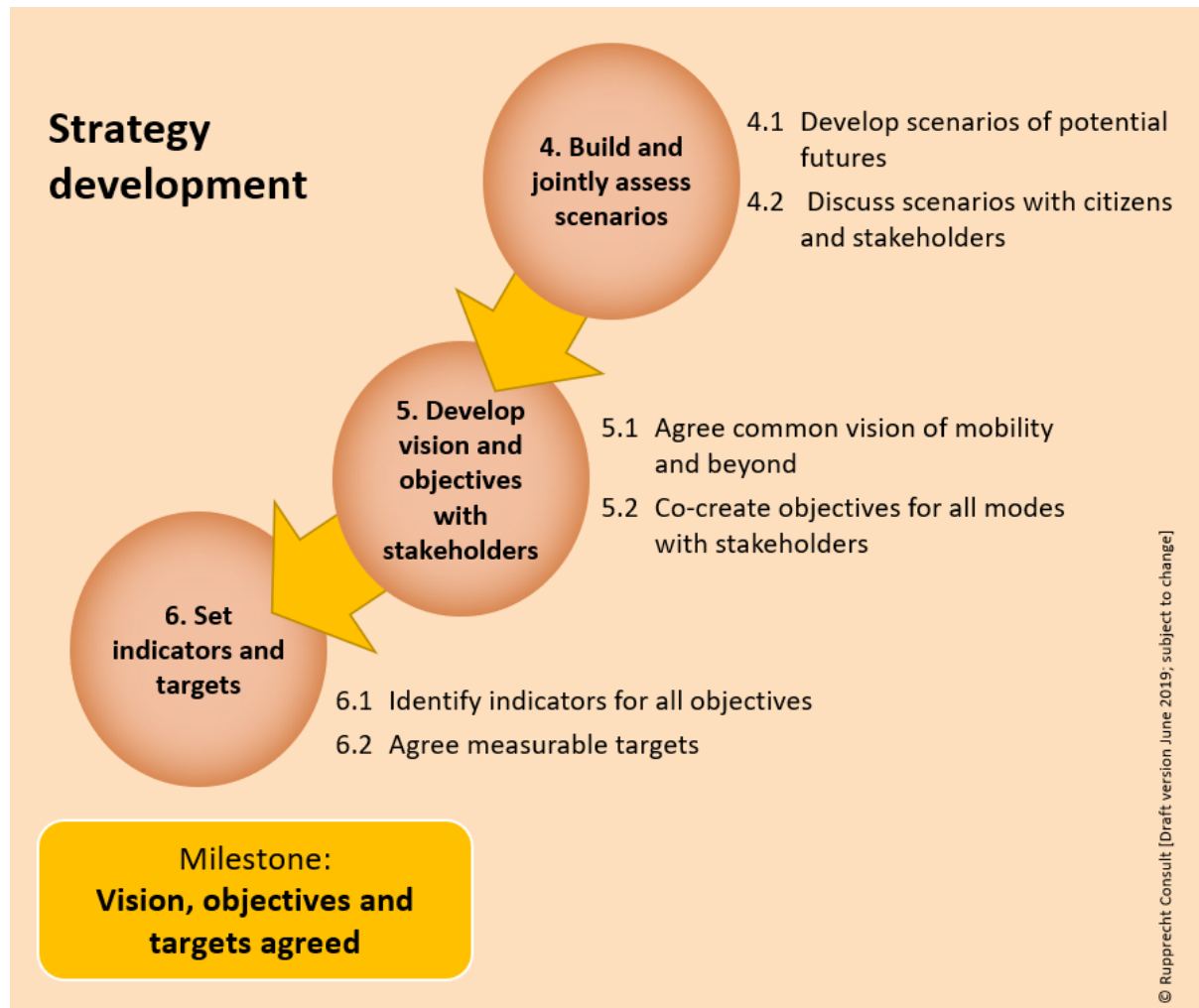
Bremen, Germany: Online citizen participation to assess the mobility situation

Milestone:
**Analysis of problems and
opportunities concluded**

Milestone: Analysis of problems and opportunities concluded

At this point of the cycle, you should have finished all preparational steps and the situation analysis. You have a good overview of the mobility situation, planning framework, and working structures and you know what will be important for dealing with SUMP vision, objectives, targets, and measures in your city. As a fundamental milestone of Sustainable Urban Mobility Plan development, you should have achieved a common understanding of the main problems and opportunities with most important stakeholders. It is possible to involve key stakeholders and local politicians again in order to foster acceptance of the plan, make it 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 plan development. 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'.

Phase 2: Strategy development



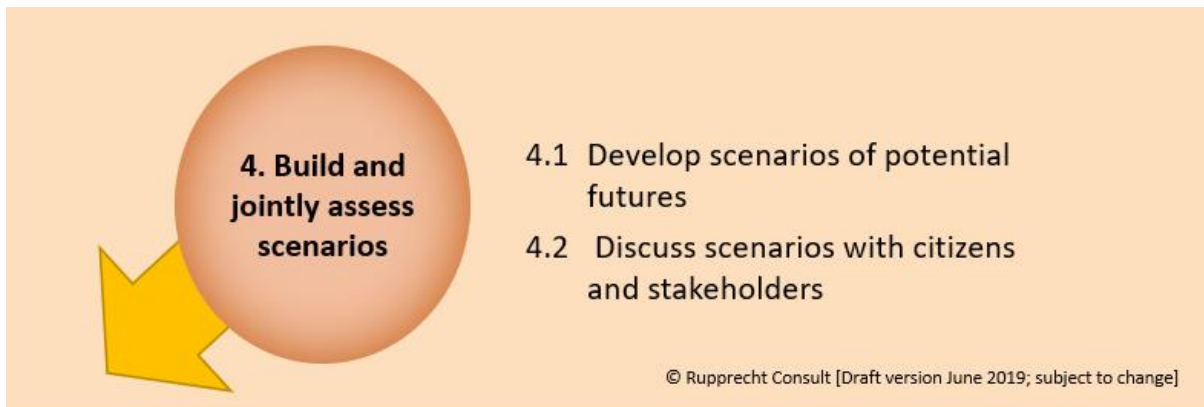
The goal of the second phase is to define the direction of the mobility plan in cooperation with citizens and stakeholders. The key questions in this phase are:

- *What are our options for the future?:* Develop alternative scenarios that inform about the potential futures of the planning area. Scenarios try to capture the scope of uncertainty that comes with “looking into the future”. They are usually based on analyses of the planning team and combine the impacts of potential changes of circumstances which can be external (i.e. outside the control of the planning authority, for example demography) as well as reflecting levels of ambition or the direction of basic public policies (e.g. “strong environmental policy focus”).
- *What kind of city do we want?:* Scenarios are used as the factual basis for discussions with citizens and stakeholders. Discussions about scenario impacts help start building a shared understanding of desirable futures, i.e. “where do we want to go?” based on “where are we possibly going (anyway)?”
- Decision makers need to get actively involved in discussing scenario impacts with citizens and agreeing a common vision of mobility (and beyond) in close cooperation with stakeholders.
- *How can we reach our common goals?:* Co-create detailed mobility objectives with stakeholders; consider all modes of transport in the entire urban area.
- *How will we determine success?:* Identify indicators of measurement, make sure that all objectives are covered; agree ambitious, but realistic, measurable targets.

- Decision makers should ensure that SUMP objectives and targets are ambitious, widely shared, and aligned with other policies within and (if relevant) beyond the planning area.

The agreement of a joint vision, objectives and targets is the milestone that concludes the strategy development phase.

Step 4: Build and jointly assess scenarios



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 vision development.

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 independently from each other the consequences of current trends, potential societal and local changes, as well as alternative strategic policy priorities. 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 of 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 vision, objectives and targets.

Tasks

- Explore possible future developments of the most relevant external factors for urban mobility (i.e. the context that is outside the city's control, such as demography, oil price, economic situation, climate change, 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 become available also in your city. Also 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 forecasted or trend development if the current policy direction is continued and only already planned measures are implemented.
 - Alternative scenarios that describe forecasted developments resulting from different strategic policy priorities. The two most common ways to structure into alternative scenarios are:
 - By main priority (e.g. public transport focus vs. active mobility focus vs. electromobility focus), which shows 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.
 - By level of ambition (e.g. low vs. middle vs. high financial and/or political support in the future), which shows how much more can be reached with more ambition, helping you to convince others to support an ambitious vision and objectives.
- 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 on a strategic level synergies, potential for integration and 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-cases, in order to identify the risks and limitations.) Such an assessment helps to be prepared for potential changes and their effects. It 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)

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.

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

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

What is a 'Scenario'?⁵¹

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).

GOOD PRACTICE EXAMPLE

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

⁵¹ 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).

GOOD PRACTICE EXAMPLE

Leipzig, Germany: Scenario building supported by transport modelling

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 together on them will create a shared understanding of the options for the future. It also helps to create awareness of the interdependencies and tradeoffs between different policies and sectors, the complexity of the strategic decisions to be taken, and the risks to be 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 to discuss 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 of 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 to create synergies and avoid negative side effects? Consider the resilience of your current transport system and of different scenarios against changing external circumstances.

- Discuss the scenarios also with a wide range of people from all parts of society. Aim to use a variety of engagement formats that reach also typically underrepresented groups, such as young people and the elderly, ethnic minorities, poorer people, single parents and people with disabilities. Such formats can include information and feedback boxes or booths in different parts of the city (e.g. on market squares, shopping centres, also in poorer quarters), online and social media feedback, cooperation with organisations representing these groups (e.g. kindergartens, schools, universities, cultural associations, job centres), communication in several languages and representative surveys (see also Activity 1.4).
- 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 main argument for their participation is that their interest could not have been considered in the planning process without them.

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.

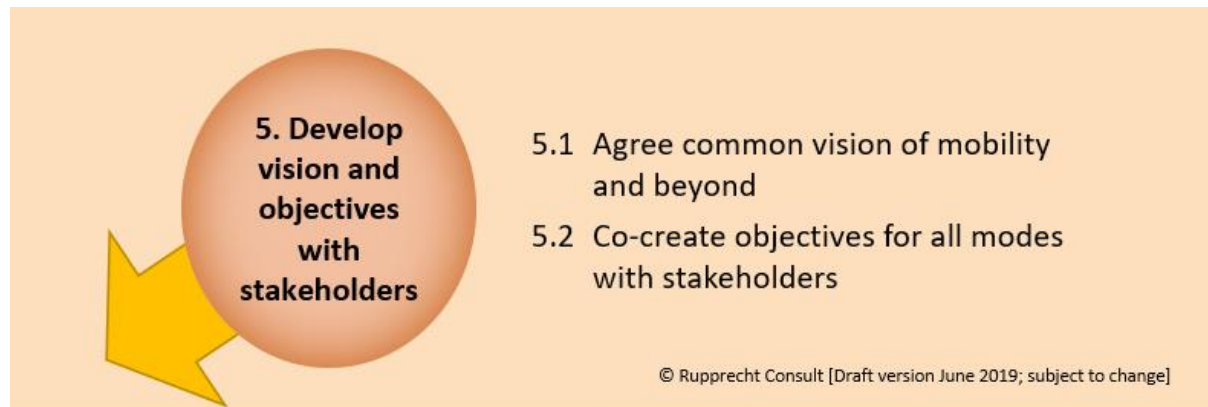
Checklist

- 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

Step 5: Develop vision and objectives with stakeholders



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 such plan. 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 for different context 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 a common ownership.

Activity 5.1: Agree common vision of mobility and beyond

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 concerned, 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 serving as a guiding element for the planning process.
- Broaden the perspective by looking beyond transport and mobility, e.g. quality of life, health, and land use.
- Strengthen the local community identity and the collective ownership of the vision by the public.
- Emphasise the political value of a Sustainable Urban Mobility Plan 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 Sustainable Urban Mobility Plan ‘steering group’ created in Activity 1.4.
- Prepare, hold and follow up 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).
- 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 to the draft vision. Take all contributions seriously, but be clear and open beforehand that not all suggestions can be followed and that a decision will have to be taken based on often contradicting opinions.
- It can be useful to conduct simple opinion polls with the public that show trends and create arguments towards political decision makers.
- Elaborate a draft vision that covers the entire urban agglomeration and all aspects of sustainability. It should also take into account all modes and forms of transport: Public and private, passenger and freight, motorised and non-motorised, 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 best results and were most widely supported.
- Discuss the draft vision and the feedback from citizens with stakeholders and agree on a final version.
- Publish the vision in an easy-to-understand format 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 for different context or even run in parallel.

Checklist

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

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-time horizon (that can even go beyond the time horizon of the SUMP, envisioning a situation in 20-30 years).

Tools

To be added: Formats of visioning

GOOD PRACTICE EXAMPLE

Leuven, Belgium: Widely accepted Leuven Climate Vision

Activity 5.2: Co-create objectives for all modes with stakeholders

Rationale

To provide strategic guidance, a vision needs to be specified by concrete objectives that indicate the type of change desired. Defining objectives means specifying what social, environmental or economic improvements are aimed for, saying 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 Sustainable Urban Mobility Plan 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. Also take into account the results of scenario development, in particular when defining the strategic priorities what areas to focus on to improve the situation.
- Take into account relevant goals on regional, national and EU level.
- Assess and define the desired improvements together with stakeholders. Prepare, hold and follow up in 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 what 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), but 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 of 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 to funding. For example, national environmental agencies may be willing to fund measures if a strong focus is put on greenhouse gas emissions reduction or energy savings.
- During the development of 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 between different stakeholders.

Timing and coordination

- Builds on the vision (Activity 5.1) and leads on 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.

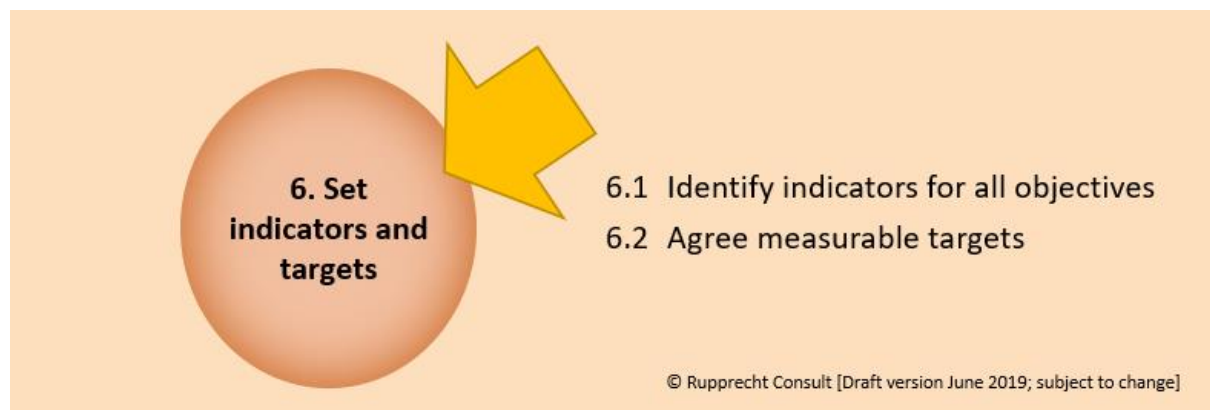
What is an 'Objective'?

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

GOOD PRACTICE EXAMPLE

France: PDU objectives adapted to cities of different size

Step 6: Set indicators and targets



Vision and 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. To ensure that targets will be selected that you are able to monitor with reasonable effort, it is important to first identify the indicators. 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 do not have extensive resources, data or experience to draw on when developing a Sustainable Urban Mobility Plan. While indicators for measure monitoring will be developed later (see Activity 7.3), here the strategic indicators for overall performance of the Sustainable Urban Mobility Plan will be selected, together with

their measurement methods and corresponding data sources that were identified in the preparation phase (see Activity 3.1).

Aims

- Define a set of strategic indicators that allow monitoring of progress towards 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).
- Evaluate the already available data and identified data sources (see Activities 3.1 and 3.2), identify gaps to measure the intended outcomes, 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 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 already implemented and accepted indicators are used.
- Develop a clear definition for each indicator, the reporting format, 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, where 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 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.

What is an ‘Indicator’?

An indicator is a clearly-defined set of data that is used to monitor progress in achieving a particular objective or target. Strategic indicators enable to measure the overall performance of a plan and therefore provide a basis for its evaluation. On a more detailed level, measure indicators allow to monitor the performance of individual measures.

Tools

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 CO ₂ (eq.) /cap. per year].
Air quality	Air pollutant emissions of all passenger and freight transport modes (exhaust and non-exhaust for PM _{2.5}) in the urban area.	Emission harm equivalent index (kg PM _{2.5} eq. per capita per year).

Table 3: Overview about important quantifiable strategic impact indicators for the strategic level of SUMP based on the European sustainable urban mobility indicator set (SUMI) and the international standard (MobiliseYourCity).

Additional urban mobility indicators:

- Affordability of public transport for the poorest 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)

You can find more tools supporting you in selecting indicators in the CIVITAS Tool **Inventory**:

<https://civitas.eu/tool-inventory/indicator-sets>

GOOD PRACTICE EXAMPLE

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

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 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 can 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 strategic indicators (see Activity 6.1), covering all of your objectives.
- Make sure that the agreed 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 stakeholder agreements/commitments that have been made
- Relevant – stresses the importance of choosing targets that matter, that drive urban mobility forward and that support or are in alignment with other targets
- Time-bound – key dates for the achievement of the target are clearly defined

Based on: BUSTRIP Project 2007-2011, *Moving sustainably – Guide to Sustainable Urban Transport Plans*, <http://movingsustainably.ubc-sustainable.net/index.php/movsus:mshome>

Tasks

- Set targets for each of the strategic core indicators (selected in Activity 6.1) to allow monitoring of progress towards the achievement of objectives. Targets should be SMART: specific, measurable, achievable, realistic, time-bound. Be ambitious, but realistic, assessing honestly what can be achieved.
 - Start by defining targets for the strategic indicators that directly measure the desired extent of achievement each of the sustainability objectives (e.g. greenhouse gas emissions from transport reduced by 30% within 10 years). Also 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 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 10 years).
 - Aim to avoid inconsistencies between indicators.
- Involve key stakeholders in target setting. This will ensure that targets are widely supported and realistic, but 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 mobility strategy and the Sustainable Urban Mobility Plan 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 obviously counterproductive. While it is good to be ambitious, you also need to assess honestly what can be achieved with 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, including cycling and walking, within the overall transport usage of an urban area. The modal split of different modes of transport is typically displayed as a percentage value for each mode. It can be calculated for passenger and freight transport based on different units, such as number of trips, volume, weight, passenger-km or tonne-km, but also for different geographic areas (e.g. the functional urban area, city center, district). (edited based on ELTIS SUMP glossary, 2015).

‘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 in the city get around, not only to get a picture of the transport system. Therefore, the first approach is to collect data, calculate, and take a look at the modal split. This is what numerous cities do worldwide, and that is a fact that makes the modal split highly valuable as a global target for a shift towards sustainable modes. The modal split might not be clearly defined or measured consistently in every city, but it still acts as globally understandable value 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 in setting ambitious targets for a shift of the current value, and to compare it with other cities. For example, London has set the ambitious target of 80% of all trips made by London residents being in sustainable modes (walking, cycling and public transport) by 2041. In the context of a Sustainable Urban Mobility Plan process, the modal split can be a part of the analysis of the current mobility situation, but can also present one of the major targets used to evaluate progress towards sustainable mobility. For example, if you see an increase in cycling trips, you did not only come closer to 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 Sustainable Urban Mobility Plan. You can not only compare changes in the transport system over time, you can also measure specific trip purposes, or even focus on different citizen groups, 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 Sustainable Urban Mobility Plan (see Activities 11.1 and 12.1).

Checklist

- Key stakeholders involved in target setting.
- Suitable set of locally achievable targets developed.
- Targets integrated in the mobility strategy and Sustainable Urban Mobility Plan

What is a 'Target'?

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

GOOD PRACTICE EXAMPLE

Dresden, Germany: Strategic targets developed by intensive roundtable process

GOOD PRACTICE EXAMPLE

Örebro, Sweden: Three key targets for traffic development

**Milestone:
Vision, objectives and
targets agreed**

Milestone: Vision, objectives and targets agreed

With reaching the third milestone - halfway through the planning cycle - you have completed the strategic long-term decisions of your Sustainable Urban Mobility Plan. You can now consolidate the results of the strategy development phase in a summary document, which will provide a stable guiding framework for the measure planning phase. You have taken many important decisions regarding the future vision, the city's objectives, and the strategic indicators and targets, which together form the strategic priorities of the Sustainable Urban Mobility Plan. Before entering the next phase, you should consider getting feedback from the citizens on your strategic priorities once more, who will already have provided important input in the discussion of scenarios, the creation of a vision, and sometimes also the definition of objectives. This validates your strategic priorities and ensures public support and acceptance.

Phase 3: Measure planning



In this phase, the means to achieve the objectives and targets are defined:

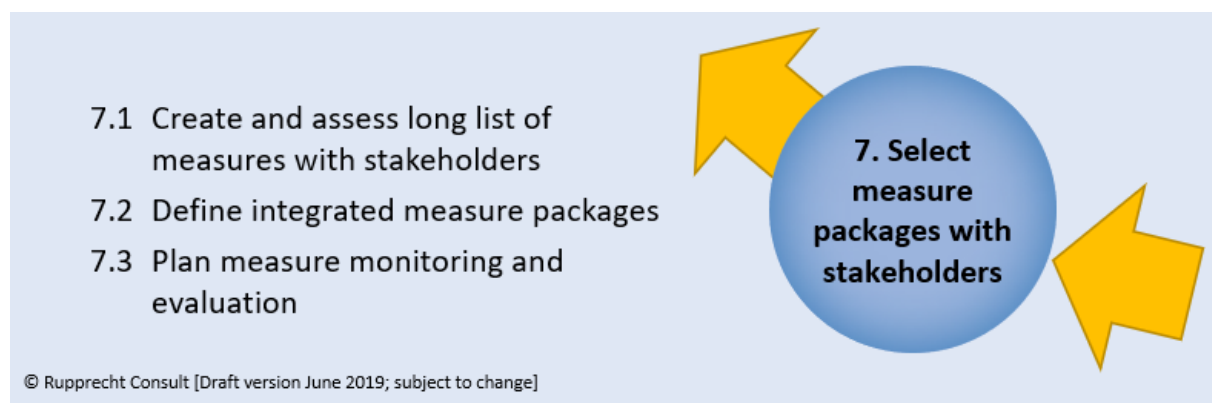
- *What concretely, will we do?:* Create a longlist of measures that can be expected to deliver the agreed objectives and targets. Perform an assessment of a long list of measures together with stakeholders based on pre-defined, transparent decision criteria from all areas of 'sustainability': economic, environmental, social; consider also long-term impacts. Select those that best contribute to meeting your objectives and its targets, within the financial resources likely to be available. Consider which new mobility services and innovations might be initiated by the private sector? Bundle measures into integrated "measure packages". Plan evaluation and monitoring for each.
- *Who will do what?:* Operational planning must break "measure packages" down into actionable tasks (or "actions") for the institutions and departments that will be in charge of their implementation. Describe all actions in detail (including how they are to be evaluated, and with their internal and external interdependencies and risks).
- *What will it take?:* On the basis of action descriptions, agree an implementation timetable. Estimate costs and identify funding sources within partner organisations and from outside; funding applications may already be made at this point. Assign each action to an individual (preferably not an organisation), while a measure leader assures that all its actions follow the same timetable and approach. Agree implementation priorities in case available funding turns out to be insufficient.
- *Do we have support?:* At this stage it is essential to communicate the concrete ('actionable') content of all measures with the most affected stakeholders (which is often the general public) and with political decision makers. For example, while it may be agreed

easily that an active cycling policy is good for the city (e.g. as an objective), 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 building department (e.g. conversion of road-side parking in a certain street to create a cycling lane) may create controversy and will then require specific communication efforts to ensure adoption of the SUMP.

- Decision makers are required at this point to recruit political and public support for the content of the SUMP.
- *Are we ready to go?:* Many authors may have contributed to the various parts of the Sustainable Urban Mobility Plan document. Now it is time to consolidate its sections and create a coherent final document. Make sure that the plan meets high quality standards (and is in line with these SUMP Guidelines) before being officially adopted.
- *Who will pay?:* Following the preliminary cost estimate, it is now time to develop concrete financial plans. Determine investment and maintenance costs, potential changes in revenue streams, identify financial contributors, develop a funding and financing scheme for all measures/ actions. Detailed financial schemes are often included in a SUMP, sometimes they are part of a separate decision making process.

The most important milestone of the SUMP planning process concludes the measure planning stage: The Sustainable Urban Mobility Plan is adopted by the competent body, e.g. the city council(s).

Step 7: Select measure packages with stakeholders



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 long list should be created based on your own expert knowledge, the ideas of stakeholders, 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, 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.
- 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 and 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.
- Ensure 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.

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 Sustainable Urban Mobility Plan.
 - 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 are 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 passengers and freight transport flows are considered.
 - Ensure that all modes are equally considered and compared in assessing costs and benefits.
 - Take operational, enforcement and maintenance needs into consideration.
- 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. Also estimate their costs in more detail.
- 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).

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, acceptability and value for money.
- Results summarised for discussion about final measure selection.
- Most promising measures selected for short list.

For more information

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 with 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:

- CIVITAS SATELLITE publication
- SUMP-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/manuals/>
- CH4ALLENGE Measure Selection manual - Selecting the most effective packages of measures for Sustainable Urban Mobility Plans: <http://www.eltis.org/resources/tools/sump-measure-selection-kit>
- Evidence project measure reviews with evidence on the performance of 22 types of policy measures: <http://www.evidence-project.eu>
- BESTFACT portal of freight transport best practices, contacts and policies: www.bestfact.net
- Complementary SUMP guidance, Section 3: 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 its website of the CiViTAS Initiative for cleaner and better transport in cities (www.civitas.eu).

TOOLS FOR MEASURE IDENTIFICATION

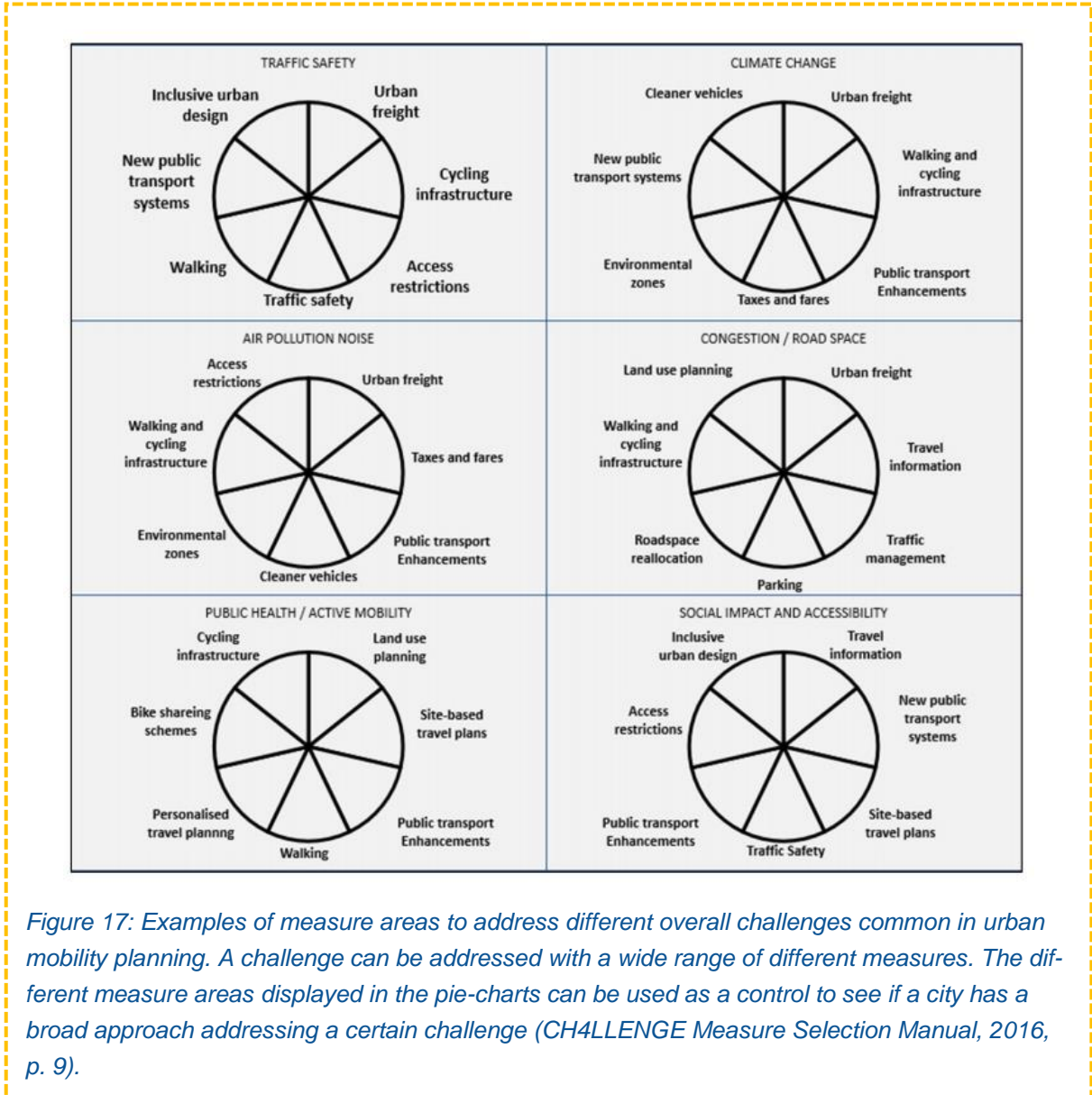


Figure 17: Examples of measure areas to address different overall challenges common in urban mobility planning. A challenge can be addressed with a wide range of different measures. The different measure areas displayed in the pie-charts can be used as a control to see if a city has a broad approach addressing a certain challenge (CHALLENGE Measure Selection Manual, 2016, p. 9).

To be added: Updated version of Figure 17

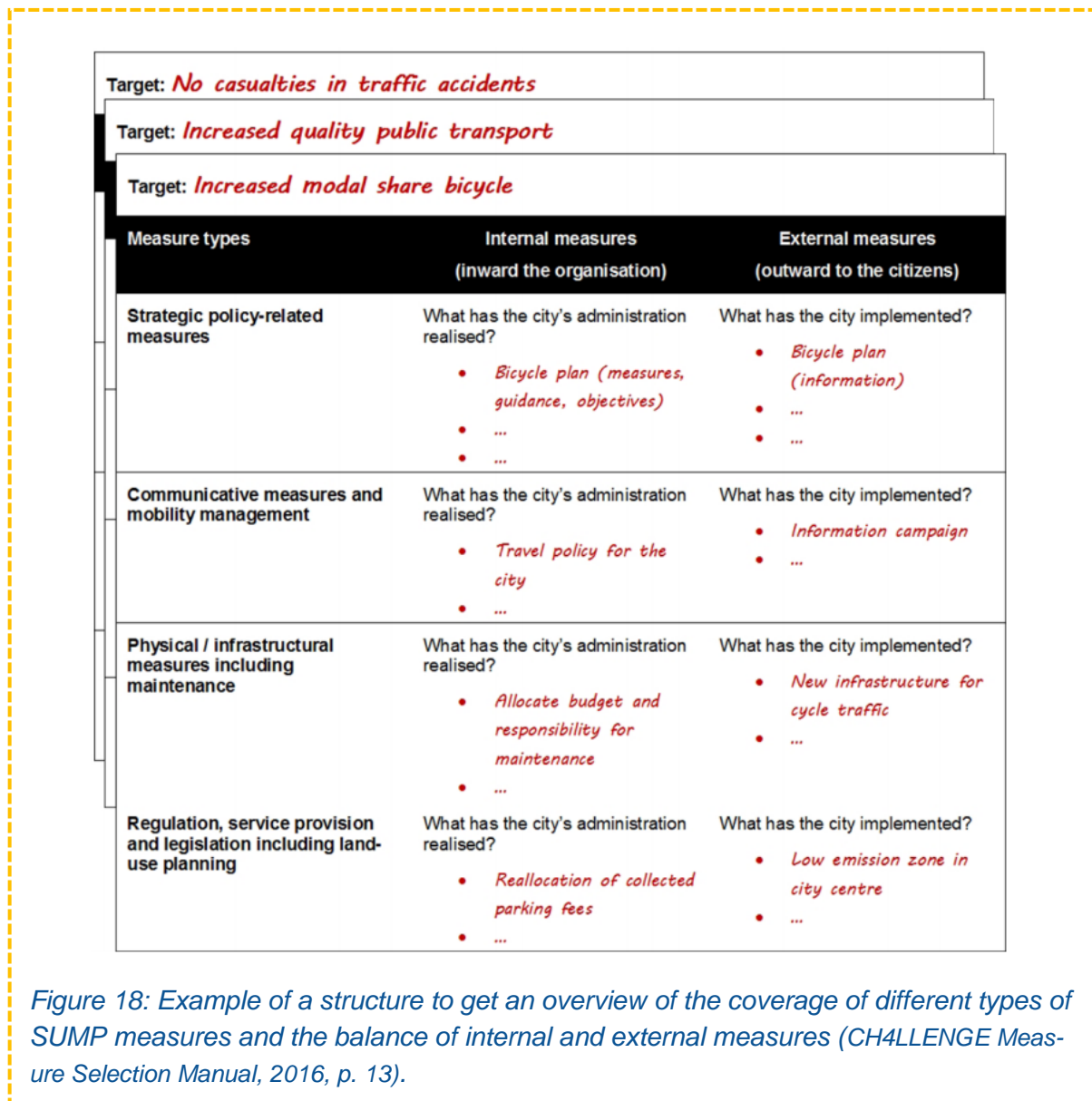


Figure 18: Example of a structure to get an overview of the coverage of different types of SUMP measures and the balance of internal and external measures (CH4ALLENGE Measure Selection Manual, 2016, p. 13).

To be added: Updated version of Figure 18 **Figure 17**

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: <http://www.urban-transport-roadmaps.eu/>

KonSULT measure option generator

This online tool allows users to quickly identify those policy measures that fit their situation. User specify their objectives or problems and the option generator provides a ranked list of 64 measures, with links to detailed measure descriptions: <http://www.konsult.leeds.ac.uk/>

TOOLS FOR MEASURE APPRAISAL

Two examples of how to organise the rating of listed measures. The rating can for example be done by experts from the city in a workshop:

MEASURE	DESCRIPTION OF MEASURE	RESPONSIBILITY	EFFECTIVENESS	FEASIBILITY	COMMENT
Segregated Cycle Facilities	Marked lanes...	Road owner	■ ■ ■	■ ■ ■	Needs to be coordinated with private land owner
Develop mobility management plan	...	Daily delivery group	■ ■	■ ■ ■	Knowledge within administration
...					

Figure 19: Example of list of measures (SUMPS-UP Manual on the integration of measures and measure packages in a SUMP (for beginner cities), 2018, p. 16)

MEASURE / MEASURE PACKAGE	SUMP VISION AND 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.
...						

Figure 20: Example of an impact assessment of the measures and measure packages and reasoning of the expected outcome of the measure. Assessment scale from -2 to 2; -2 = the measure imposes a clear risk on the achievement of the target, 0 = the measure has a neutral effect on the target, 2 = the measure clearly contributes to the target (SUMPS-UP Standards for developing a SUMP Action Plan, 2018, p. 9).

Such an assessment workshop can also be supported by tools that automatically calculate the relative priority of measures once the experts have rated them. This allows to prepopulate the template with quantitative information, e.g. on the approximate costs, to strengthen the fact-base of decisions. It also enables to directly discuss the net results of individual expert ratings in an interactive way. One such tool is the Urban Nodes Assessment Excel template: <https://civitas.eu/tool-inventory/urban-nodes-assessment-tool>

To be added: Updated and merged version of tools for measure appraisal.

GOOD PRACTICE EXAMPLE

Baia Mare, Romania

GOOD PRACTICE EXAMPLE

Granollers, Spain

GOOD PRACTICE EXAMPLE

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

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 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

- Select the best options in the form of packages of measures.
- Ensure exploitation of synergies between measures.
- Use packaging to help overcome the barriers to implementing specific measures.
- Ensure integration of transport modes (intermodality).
- Strive for integration with land-use planning and further sectoral planning activities.
- Validate measure packages with citizens.
- Ensure ownership and high acceptance of your plans 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.

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 into a package),
 - by geography (combining measures in the same area into a package),
 - by costs (combining an effective but expensive key measure with measures that create revenues to achieve lower net costs), 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 GHG 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 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 are 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 to test measures, alone 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, and some behavioural measures) and to predict disruptive changes (see also overview of modelling tools in Activity 7.2).
 - Cost-benefit analyses (CBA) are widely used to appraise the value for money of larger 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 Sustainable Urban Mobility Plan '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.

TOOLS FOR MEASURE PACKAGING

FOUR-STEP PRINCIPLE 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 SUMP 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 SUMP planning.

Source: Measure Selection Step-Up Manual, p.15-16



Figure 21: Types of measures in the different steps in the four-step-principle (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:

<http://www.konsult.leeds.ac.uk/>

FURTHER INFORMATION ON MEASURE PACKAGE ASSESSMENT

- 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 SUMP's play in project prioritisation.
http://www.eltis.org/sites/default/files/evidence_common-practice-reader-final.pdf
- TIDE, 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,
http://www.eltis.org/sites/default/files/trainingmaterials/tide_d_5_1_final.pdf

TOOLS FOR MODELLING IN THE SUMP PROCESS

Transport models are applications aimed at representing the interaction between demand and supply of transport. They allow to forecast and compare something that does not yet exist in quantitative terms. Transport models require time, resources and data to be set up and used, but a well-built model will produce reliable and consistent responses that are of great help in the SUMP process. They can give important contributions at several planning stages, mainly during scenario development, measure appraisal and selection, and monitoring.

The decision about the use of modelling tools for the SUMP is part of the early stages of the planning process. The choice of the most appropriated model type needs to take into account the overall resources in terms of monetary budget and time available and therefore it has to be evaluated in the first phase "Preparation and analysis" in the context of Activity 1.1 "Evaluate capacities and resources".

Once the model has been designed, the collection of the data set needed for its implementation is part of Activity 3.1 "Identify information sources and cooperate with data owners" and Activity 4.1 "Develop scenarios of potential futures". The modelling tools provide their quantitative input in the third phase of the SUMP cycle: "Measure Planning". Indeed, based on the input provided by Activity 7.1 ("Create and assess long list of measures with stakeholders") and Activity 7.2 ("Define integrated measure packages"), modelling tools help to appraise the impact of measures and in particular of different combinations of these measures, taking into account the interaction and potential reinforcing or rebound effects, thereby helping to define the most effective integrated packages. Furthermore, models are also useful for monitoring an evaluation: beside their use to define the baseline scenario (Activity 4.1), they can be useful to monitor changes in the transport system regularly during the implementation phase in order to assess whether you are on track or if you need to react and adapt your actions (Activity 11.1).

Source: TRT Trasporti e Territorio

WHICH TYPES OF MODELLING TOOLS TO CHOOSE (1)

A number of modelling tools and techniques are available to support measures development and appraisal. Transport models can be classified according to the approach used to describe the mobility system:

- **Aggregated models:** neither the spatial context nor the transport network are explicitly represented, area types (e.g. city centre, periphery, suburbs) and link types (e.g. trunk roads, local streets) are used together with demand segments (e.g. commuters, students, city users).
- **Macroscopic models:** space and network are modelled, demand is represented in aggregated terms (e.g. number of trips for a certain purpose made between two zones by a certain mode in peak time) and parameters refer to the behaviour of “average” representative individuals.
- **Microscopic models** (agent-based, microsimulation): simulation of single units (e.g. individuals, households, vehicles) and their individual decisions along a certain time period. Detailed infrastructure’s geometric layout and level of congestion can also be represented in these models.

Transport models can also be distinguished according to their operational capabilities:

- **Uni-modal models:** demand growth forecast is exogenous, as only one transport mode is considered (e.g. private road transport) and the focus of the model is on route choice;
- **Four-step models:** overall transport demand growth is estimated endogenously, several transport modes are considered (e.g. private cars, public transport, cycling etc.) and choice among alternative modes is also endogenously modelled. Modifications in the locations of demand generators (e.g. households) and demand attractors (e.g. jobs) are exogenously modelled;
- **Transport and land use integrated (LUTI) models:** in addition to the capability of four-steps models, the feedback between the transportation system and location choices is taken into account, such as the modifications in the locations of demand generators and demand attractors are exogenously modelled.

The choice of the most appropriate transport model requires evaluating several aspects, such as:

- the problem to be addressed;
- the scale of the policy-making environment;
- the degree of accuracy and level of detail (spatial, analytical) of expected results;
- the availability of data;
- resources available for its development.

From the perspective of SUMP, uni-modal are generally not recommendable as they do not allow to handle the full set of measures of a plan, involving all modes, land use, etc. The ideal transport modelling tool to support assessment of SUMP is an integrated transport and land use one, as it provides the capability of simulating a wide range of interventions ranging from infrastructural projects, pricing, regulation, co-modality to planning of urban space. They also allow to include within the assessment the effects of “rebound” effects due to re-locations 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 time and effort as well as expertise. The use of four-step models can also be a valuable alternative for the assessment of SUMP as the capability of handling transport measures is the same. The feedback of transport modification on land use can be assessed by means of more simplified estimations.

Aggregated models, also called sketch planning models, (a typical example of this category is the Urban Roadmap 2030 model <http://www.urban-transport-roadmaps.eu/> developed on behalf of DG MOVE) are an interesting option for initial policy screening within the SUMP process, as they can be built with significantly less resources and allow to explore and identify appropriate sustainable transport policy measures, quantifying their impacts within a consistent framework and setting up the implementation pathway of the future scenarios. Aggregated models cannot however replace the use of more disaggregated models for detailed assessment.

WHICH TYPES OF MODELLING TOOLS TO CHOOSE (2)

The choice of the most appropriate transport model depends of 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 on transport demand (such as the construction of the new public transport line, the introduction of a new sustainable mode or service, etc.), the more it is recommended to use a disaggregated modelling approach.

		Type of model		
		Uni-modal models	Four steps models	Land use and transport models
	Type of reaction captured by the model	Traffic re-assignment	Traffic re-assignment and demand reaction (change of mode and/or of destination)	Traffic re-assignment, demand reaction and long-term impact on re-localisation of households and economic activities
	Time horizon of the analysis	Short-term	Medium-term	Long-term
Type of measures	Road or public transport schemes	X	X	
	New transport infrastructure	X	X	X
	New transport mode		X	X
	Demand Management Strategies		X	X
	New land-use plan			X

Table 4: Types of models.

Source: TRT Trasporti e Territorio

GOOD PRACTICE EXAMPLE

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

GOOD PRACTICE EXAMPLE

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

Activity 7.3: Plan measure monitoring and evaluation

Rationale

Monitoring and evaluation both of the planning process and of 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 plan 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 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 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 have existing knowledge on 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 plan development budget.

Activities beyond essential requirements

- Integrate an assessment of costs and benefits of the Sustainable Urban Mobility Plan development process.
- Plan for stakeholder involvement in monitoring and evaluation.
- Coordinate with relevant local and regional stakeholders on regional indicators.

Details on the tasks

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

Table 5: Categories of indicators with examples (CH4ALLENGE Monitoring and Evaluation Manual, 2016, p. 28).

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 Sustainable Urban Mobility Plan document (Activity 9.1), see also Figure 22 below.

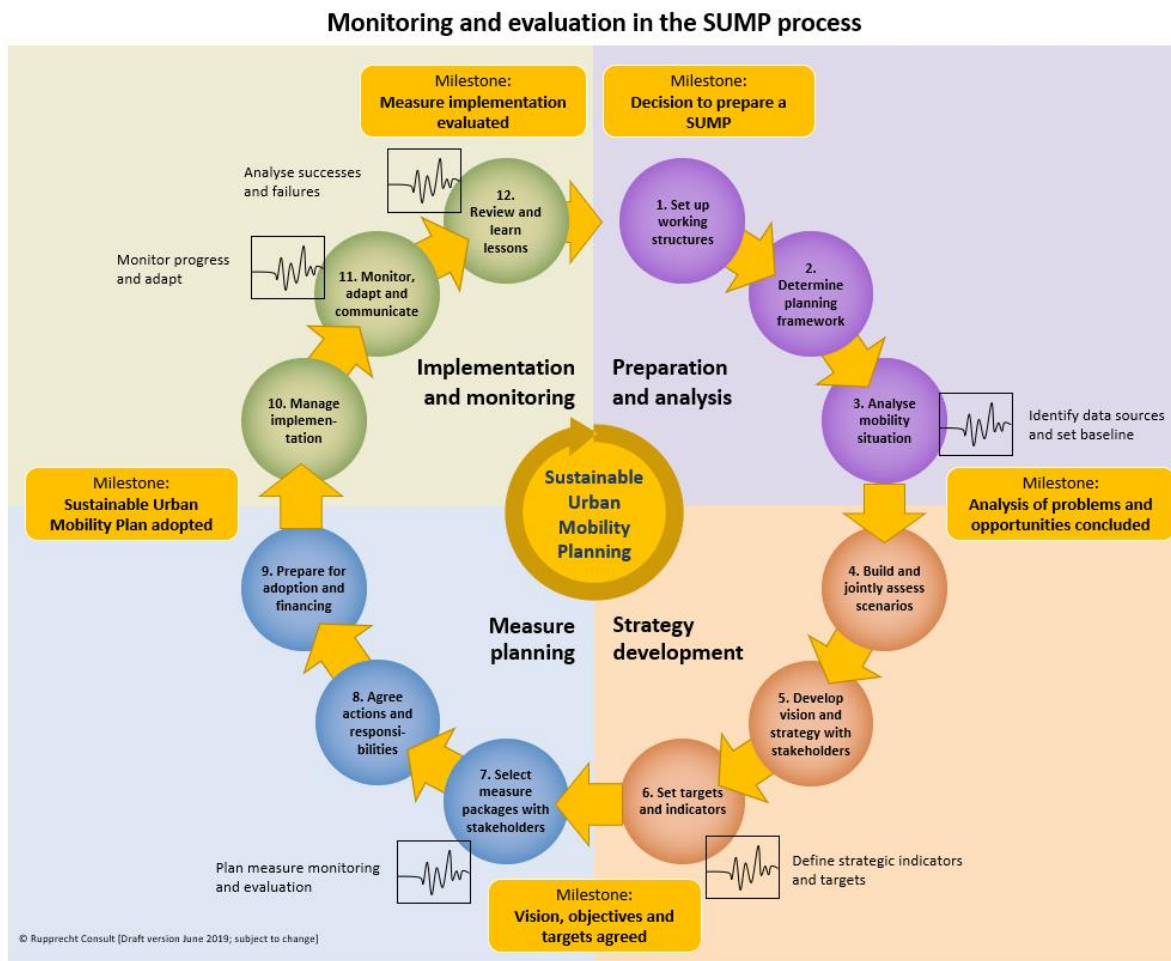


Figure 22: Monitoring and evaluation in the SUMP process [Draft version, June 2019].

Checklist

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

Tools

SUMP indicators	Baseline	Target	Measuring area	Data collection method	Measuring frequency	Responsibility
...						

Measure indicators	Baseline	Target	Measuring area	Data collection method	Measuring frequency	Responsibility
...						

Table 6: Table for overview of monitoring and evaluation of measures.

To be added: Updated version of Table 6

GOOD PRACTICE EXAMPLE

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

Step 8: Agree actions and responsibilities

- 8.1 Describe all actions
- 8.2 Estimate costs and identify funding sources
- 8.3 Agree priorities, responsibilities and timeline
- 8.4 Ensure wide political and public support



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Following the agreement on a 'measure packages', operational planning must break the package 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 rough 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 with the most affected stakeholders (which is often the general public) and with 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 mobility strategy.

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 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 to identify relationships between actions and then decide on the order of their implementation.

Aims

- Define the measures of your Sustainable Urban Mobility Plan 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 as detailed 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?

- 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 and can benefit from each other in the actual implementation.

Activities beyond essential requirements

- 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.
- 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 timeline 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 contingency plans, and dependencies among them.

For more information

- SUMP_s-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.
- CH4ALLENGE Measure Selection manual - Selecting the most effective packages of measures for Sustainable Urban Mobility Plans. <http://www.eltis.org/resources/tools/sump-measure-selection-kit>

Tools

Factsheet of measure example and actions			
Measure: R 2		Marking and extension of cycle paths	
Actions: <ul style="list-style-type: none"> 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	Planning status: Planning/Implementation	Priority very high	Implementation period: short to midterm
Benefitting traffic types: Cycle traffic			
Brief description and implementation goals: <ul style="list-style-type: none"> Creation of a coherent network of cycle paths in City #1 Implementation of the routes planned in the cycling programme to connect important oilways and 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	
Risk assessment:		Low	
Costs and financing			
Investment costs:		Medium	
Annual follow-up costs:		Low	
Financer:		City 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:		Planning department / subcontractor	
Realisation:		Construction company	
Third parties to be involved:		<ul style="list-style-type: none"> Commission for Road Safety and Sustainable Mobile Cycling NGO 	

Figure 23: Example factsheet for different actions of measure “Marking and extension of cycle path”.

GOOD PRACTICE EXAMPLE**Odense, Denmark: Well-designed measure factsheets****GOOD PRACTICE EXAMPLE****Turin, Italy: Comprehensive measure factsheets****Activity 8.2: Estimate costs and identify funding sources****Rationale**

Measure and action planning require a sound assessment of the expected costs and revenues both in the construction and the operation stage. The transformation of the mobility system may cause additional upfront costs that can be higher than for ‘traditional’ measures, but often achieves lower costs in the mid to long-term, in particular when taking into account externalities that are not considered in traditional cost estimations but finally paid for collectively (e.g. impact of air pollution on health, paid for by health insurance fees). One way to refinance additional upfront costs are user fees or other sources of income such as the lease of advertising space in stations. Moreover, demand management measures such as parking management or road charges generate new local revenue streams that can be reinvested into sustainable mobility solutions.

While most investments for SUMP measures tend to come from public budgets, cities and regions can increase their financial resources through tapping European and national funding

programmes, the generation of measure-related revenues, the capture of additional value from infrastructure projects or through attracting external finance, for example via the issuing of municipal bonds. Involvement of the private sector may reduce direct costs for public budgets from construction and service provision. The combination of financing and funding options, however, needs thorough consideration: engaging the private sector for the provision of public services is highly debated; and the introduction of fees and charges often meets political resistance.

Aims

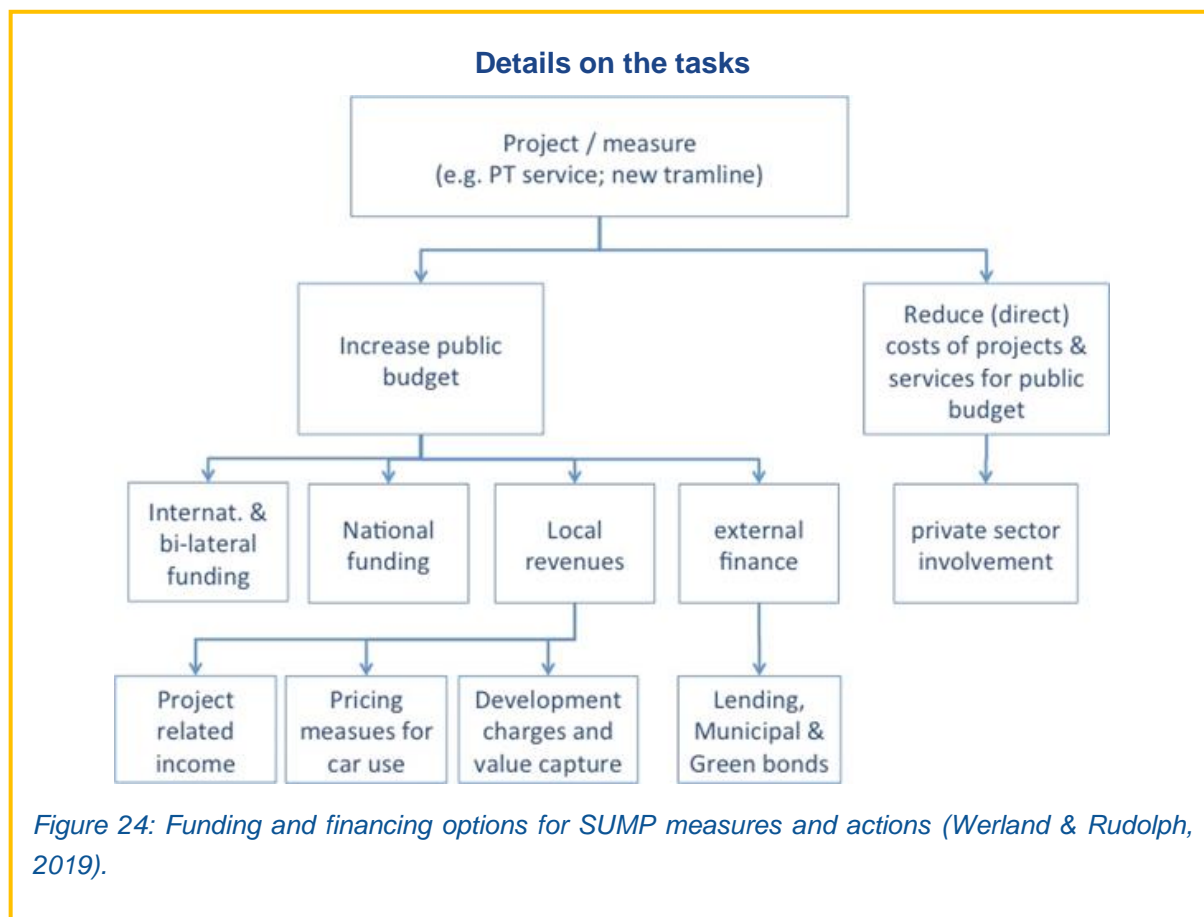
- Assess the financial viability of individual actions within measures to rule out non-viable actions and achieve cost-effective measure designs.
- Assess the contribution of measure-related revenues to the overall budget.
- Identify potential financing instruments and funding sources for all actions.

Tasks

- Assess the actions specified in the previous Activity 8.1 against their investment needs and revenues in the short, medium, and long term, including operation, enforcement and maintenance (Total cost of ownership).
- Estimate direct financial revenues from the actions, e.g. from public transport fares and subscriptions, lease of advertising space at tram stops, parking fees, or concessions, 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.
- Identify financing instruments and funding sources for the selected actions. Assess all options shown in the figure below to identify the most suitable ones. Explore in particular options beyond the local budget, such as:
 - how to access national level funding and EU programmes; and
 - how to engage the private sector, e.g. through public-private partnership arrangements.
- Also consider external costs and benefits in the calculations that are often forgotten in traditional cost estimations but finally paid for collectively (e.g. the impact of air pollution on health, paid for by health insurance fees). Many impacts, such as changes in noise pollution or travel time savings, do not have a market price. Including them requires their monetisation. This can be done by, for example, assessing citizens' 'willingness to-pay' for the benefit or by assigning specific monetary factors to pollution units. The CIVITAS Urban Mobility Tool Inventory⁵² and the Handbook on External Costs of Transport⁵³ provide support for the conversion of relevant effects into monetary units.

⁵² CIVITAS Initiative 2013, CIVITAS Urban Mobility Tool Inventory, <https://civitas.eu/tool-inventory>.

⁵³ Koryhenevzch, A., Dehnen, N., Bröcker, J., Holtkamp, M., Meier, H., Gibson, G.; Varma, A., Cox, V., 2014. Update of the Handbook on External Costs of Transport. Report for the European Commission: DG Move.



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 relatively easily implemented, 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.

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 9.2.

Checklist

- Investment and operational costs of each action defined.
- Financial analysis and assessment of possible funding sources carried out.
- Results summarised for discussion on final selection of actions.

For more information

A selection of funding sources and financing instruments is described in the *SUMP Topic Guide Funding and Financing Options for Sustainable Urban Mobility*.

GOOD PRACTICE EXAMPLE

Vienna, Austria: Employer tax to finance metro

GOOD PRACTICE EXAMPLE

Birmingham, UK: Community Infrastructure Levy

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.
- 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 more 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. Consider other 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 external projects that are likely to impact the mobility system in the city, e.g. a large construction work like the opening of a new tram, or the implementation of congestion charging.
- 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, 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

- The implementation time frame varies from action to action. Choose an appropriate time frame for all actions. Focus on the next 10 years, but be aware of actions requiring longer-term implementation.

Checklist

- Responsible lead implementers for all actions identified.
- Timeline and priorities agreed with stakeholders.
- Agreed actions published to inform the wider public.

Tools

Measure	Description of measure	Connection to SUMP targets	Responsibility	Actions within a measure	Implementation period	Resources needed	Cost	Funding source	Stakeholders involved
Segregated Cycle Facilities	Marked lanes and tracks along major urban streets		Road owner	Analysis of bicycle lanes needed	Year 1: Jan-May	2 traffic and city planners	30 000 € + 20% of fulltime from traffic planner		Bicycle associations
				Develop a bicycle network plan	Year 1: May-Dec	4 traffic and city planners	40 000 €		Bicycle associations, neighbor cities
				Plan and construct bicycle lanes	Year 2-5	Planners, developers	500€/m		Construction companies
Develop mobility management plan	Plan about what, when and how to work with mobility management		City administration	Develop mobility management plan	Year 1: Apr-Oct	Expert on behavior change, traffic planner	30 000 €		
Improve pedestrian crossings on prioritised routes									
...									
...									

Table 7: Example of how to describe measures and measure packages in an action table (SUMPS-UP Standards for developing a SUMP Action Plan, 2018, p. 23).

To be added: Updated version of

GOOD PRACTICE EXAMPLE

Thessaloniki, Greece: Action planning table

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 plan. 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 building department (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 plan 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' plan 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 plans among decision makers, citizens and other stakeholders.
- Provide transparency around planned actions.
- Facilitate adoption of the Sustainable Urban Mobility Plan and effective implementation of actions later on.

Tasks

- Communicate in a transparent and professional way the main elements of the Sustainable Urban Mobility Plan, 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 plan. Also, direct conversations with key decision makers, such as mayors and the heads of larger political parties, can give you important information on how to widen the political support and facilitate plan adoption.
- Actively involve and get feedback from important stakeholders, for example in a meeting of the Sustainable Urban Mobility Plan 'steering group'.
- Actively involve and get feedback from citizens on actions, for example in the form of a public debate evening.
- Make the main elements of the Sustainable Urban Mobility Plan, including its most important actions, a topic in local media. When communicating the actions, emphasise the positive change they contribute to and their role in the Sustainable Urban Mobility Plan. 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 plan development, emphasise the benefits and the time and resources already

invested in the Sustainable Urban Mobility Plan. 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 Sustainable Urban Mobility Plan should be, because it is a costly long-term project serving the city as a whole.

Timing and coordination

- At least prior to finalising and adopting the Sustainable Urban Mobility Plan, but should better run parallel to 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.

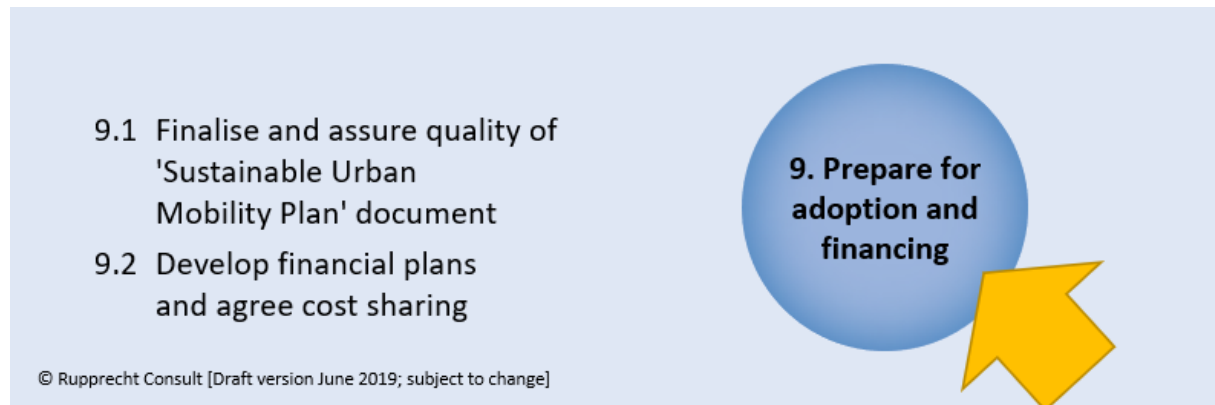
GOOD PRACTICE EXAMPLE

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

GOOD PRACTICE EXAMPLE

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

Step 9: Prepare for adoption and financing



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

9.2 Develop financial plans and agree cost sharing

9. Prepare for adoption and financing

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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. Following a first cost estimate earlier on, it is now also time to develop concrete financial plans for all actions. Based on your organisation's conventions a detailed financial scheme can be included in the plan itself or is part of a separate process.

Activity 9.1: 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 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 in 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 plan.

Aims

- Ensure high quality of the Sustainable Urban Mobility Plan document.
- Ensure that the views of key stakeholders and the wider public have been taken sufficiently into account in the document.
- Finalise the plan document so that it is ready for adoption by political bodies and release to the public.

Tasks

- Compile a full draft of the Sustainable Urban Mobility Plan. 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 plan 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 a good quality.

- Check if views and results of the involvement process with stakeholders and citizens are integrated in the whole document.
- The plan 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 inquiry 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 the plan 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 plan document.
- Brand your plan 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: <http://www.eltis.org/mobility-plans/city-database>.

Timing and coordination

- Quality check when advanced draft of plan document is available.

Checklist

- Final draft of Sustainable Urban Mobility Plan compiled.
- Internal and stakeholder review completed.
- Quality assessment completed.
- Final amendments completed.

Tools

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 plan 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 plan fulfils the principles of a Sustainable Urban Mobility Plan, 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: <http://www.eltis.org/mobility-plans>

BRAND YOUR PLAN!

The first bite is with the eye – giving the SUMP character and creating professionally looking SUMP material is crucial nowadays. Developing a corporate identity for the SUMP can communicate its philosophy, create consistent visibility and help citizens and stakeholders to recognise and remember it. Branding the SUMP may include giving it a catchy title. For example, Budapest named their SUMP – the Balázs Mór Plan – after a famous Hungarian transport engineer who launched the first tram service in Budapest in 1887. Branding may also include developing a visual identity, SUMP theme and colour scheme and designing a dedicated SUMP logo (see examples below).



Budapest's SUMP "Balázs Mór Plan"
Source: BKK Centre for Budapest Transport, 2014



Brno's SUMP logo
Source: City of Brno/ MEDIA AGE, 2015



Visualisation of Ghent's SUMP priorities
Source: City of Ghent, 2014

Figure 25: Brand your plan (CH4ALLENGE Participation Manual, 2016, p. 35).

GOOD PRACTICE EXAMPLE

Greater Manchester, Malmö, Budapest, Vienna: Award-winning SUMPs with good design

Activity 9.2: Develop financial plans and agree cost sharing

Rationale

The implementation of sustainable urban mobility actions requires a sound financial plan. While Activity 8.2 assessed the implementation costs and overall financial viability, this activity deals with concrete financial arrangements and plans in more detail how to finance the actions of the SUMP.

Functional urban areas typically stretch across political and administrative boundaries. This means that funding and financing have to come from different municipal, regional, and national budgets and a number of public and private service providers will be involved. Ensuring a predictable and reliable investment climate requires long-term arrangements among all relevant parties.

In times of scarce public budgets, some cities seek additional funding and financing options and develop business models to attract private sector investments. Private and public mobility investors, however, often are reluctant to invest in sustainable mobility projects, as they do not expect high financial returns, benefits tend to be diffuse and barely monetisable.⁵⁴ In short, many projects often seem not bankable.

Financing includes securing the operation of services and maintenance of assets in the long run, also when initial funding expires. A sound business model also is a precondition to access debt financing instruments and the engagement of the private sector (where appropriate) through bankable projects.

Aims

- Create a budget and a detailed financing plan for each identified priority action (see Activity 8.3), detailing the costs and revenues on an annual basis over its lifetime.
- Ensure the financial viability of actions, also beyond the initial funding period.
- Achieve resilience against potential changes in income streams.
- Agree on the distribution of costs and revenues among all involved organisations.

Tasks

- Financial planning: Determine investment and maintenance costs and related revenue streams per year for all actions.
- Allocate financing and funding sources for all actions, including potential changes in revenue streams per year.
- Compare costs and revenues per year and determine financing gaps that need to be filled from other sources such as public subsidies.
- Define cost recovery ratios for public transport.
- 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.
- Agree on the distribution of costs and revenues among municipalities, regional authorities, the national level, and public and private operators.

⁵⁴ Shergold & Parkhurst 2016

Timing and coordination

- After Activity 8.3, building on the agreed actions with their responsibilities and timeline
- Builds upon and deepens the estimated direct financial costs of actions and identified funding sources (Activity 8.2)

Checklist

- Investment and maintenance costs determined for all agreed actions
- Financing plans established
- Bankability of projects determined
- Division of costs and benefits among relevant actors agreed

GOOD PRACTICE EXAMPLE

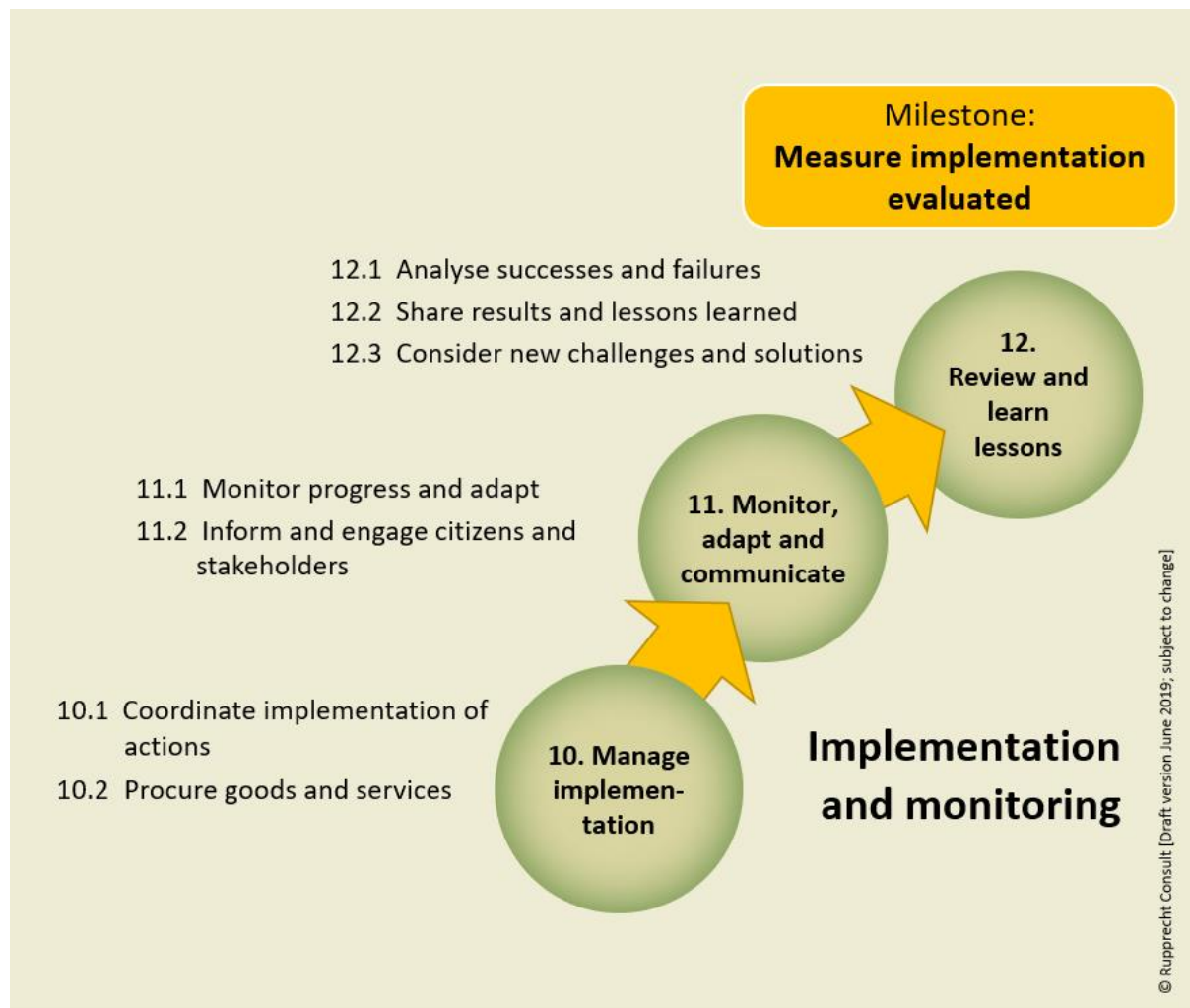
Multiple cities: Examples of bankable projects supported by JASPERS

Milestone:
Sustainable Urban
Mobility Plan adopted

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 plan needs to be legitimised by the elected political representatives of the body/bodies responsible for the development of the plan (e.g. city council, neighbouring administrations, regional council). This is a key step in fostering acceptance of the plan, 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 Sustainable Urban Mobility Plan deserves to be celebrated with the local community. You might organise an event, where stakeholders, the wide public, and (local) media are invited and the final document gets presented to the wide public.

Phase 4: Implementation and monitoring



While many different institutions are implementing the SUMP, the key tasks of the planning team are to coordinate and monitor.

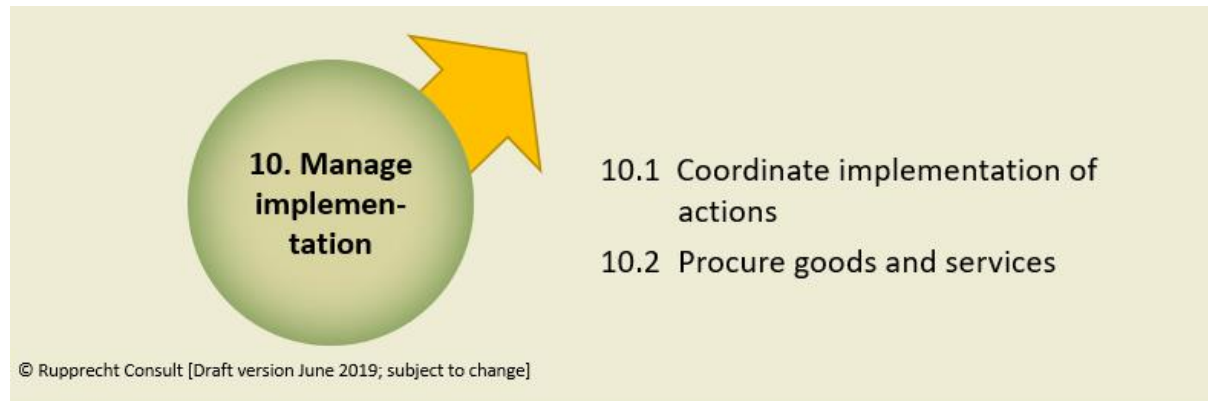
- *How can we manage well?:* As the SUMP process has reached its implementation stage, where the departments/ institutions that transform the Sustainable Urban Mobility Plan into concrete actions, plan in detail their implementation of physical infrastructure, equipment and services. Procurement of goods and services is a standard process in any public administration, but tendering innovative infrastructures, services or vehicles, as well as “green procurement” require decision makers' attention. These often complex implementation tasks are often not performed by the 'SUMP team', but by technical departments or even by third parties like sharing companies and other mobility providers. Therefore, the overall coordination of the implementation process requires particular attention.
- *How are we doing?:* Based on the monitoring concept agreed before, evaluation will make clear, whether things are going according to plan – so corrective action can be taken! Implementing innovative mobility schemes can be a great disruption (as well as a great benefit) for the daily travellers. Understanding public opinion, based on an active two-way dialogue, is crucial for a successful implementation process.
- *What have we learned?:* This last step of the SUMP cycle is about reviewing successes and failures, as well as communicating these results with the stakeholders and the public – and ideally also on the Eltis Platform with the European SUMP community. Finally, this review process should also consider whether any important context conditions have changed in such a way that new challenges are coming up or new solutions

are providing new opportunities. Use the SUMP cycle to revise the plan or update the SUMP on a regular basis.

- Decision makers should take an active interest in understanding what has worked (and what has not).

Milestone 'Measure implementation evaluated' concludes the SUMP cycle.

Step 10: Manage implementation



After plan 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 of the plan 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 Sustainable Urban Mobility Plan '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 plan 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 coordinator in charge of managing its implementation. Ensure that each action coordinator 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. Which actions have strong effects on other actions, so that delays pose a risk to the success of the entire Sustainable Urban Mobility Plan? How can you react if they get delayed?
- Keep regular personal contact with the action coordinators. 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 coordinator to avoid bureaucratic overload). In case of difficulties, intensify communication, provide needed support and use decision maker backup to enforce work plan implementation.
- Regulate and incentivise those elements in the SUMP that rely on activity of private actors.
- Organise regular meetings to check the general status of action implementation. Meetings with all action coordinators should be organised two to three times a year.

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 work plan agreed on for each action.
- Risks assessed and contingency activities planned.
- Procedures for regular status updates by action coordinators established.

GOOD PRACTICE EXAMPLE

West Yorkshire, UK: Project management to ensure a constant dialogue

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 done by specialised staff, but tendering innovative products or 'green procurement' requires decision makers' 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, the procurement of goods and services can add value in the measure implementation chain by minimising negative social and environmental impacts as well as by enabling innovative products and services to penetrate the market.

Aims

- Minimise negative social and environmental impacts of purchasing decisions.
- Facilitate the diffusion and promotion of new technologies and services.
- Develop quality, accessibility and other standards for existing and novel public services, making them a viable and convenient alternative to less sustainable modes.
- Provide new mobility options, and thus support changing travellers' behaviour and the urban mobility system.

Tasks

- Assess and define the real needs of the city in terms of functions, 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.
- Prioritise the goods and services to be procured for each action, along with written standards and required specifications.
- Define the approach to be taken to the procurement process - type of procurement procedure to use, how it should be carried out, and what kind of contract is needed.
- Define the subject of the contract, as an effective way to communicate the city's ambition to the market to take sustainability seriously in the tendering process;
- Define technical specifications, go through the process of selection and exclusion of bidders.
- Ensure transparency of the procurement process in order to increase public and political acceptance and support.

Details on the tasks

The following steps are essential in defining the procurement process:

Step 1: Preparation and planning

- Defining the need in terms of functions - identify and describe the specific need that has to be met.
- Determine the procurement method - the Directives 2014/23-25/EU enable local authorities to conduct different procurement procedures, according to their specific requirements.
- Use joint procurement if appropriate - combine the procurement actions of two or more contracting authorities with only one tender published on behalf of all participating authorities. Joint procurement arrangements may result in lower prices due to economies of scale; to administrative cost savings; and it enables the pooling of different skills and expertise between the authorities.

Step 2: Publication and transparency

- After defining the scope of the procurement (product, service or work) it is necessary to set technical specifications. Specifications are the core of the tender documents since they describe the requirements to be satisfied.
- Use Performance Based Specifications.
- Additional sustainability specifications for products, services and works - In this stage it is possible to define sustainability requirements that are related to characteristics of the product, service or work.

Step 3: Submission of tenders & selection of tenderers

Step 4: Valuation of tenders and award

- Using selection and award criteria - Sustainable urban mobility planning includes innovative procurement criteria as foreseen in the dedicated EC Directives, i.e. the local authority has to account for the life cycle costs as well as for the wider costs and benefits. Apart from the specifications that are necessary preconditions for the success, selection and award criteria focus on the ability to deliver or perform the specified product or services in the most promising way.
- Using life cycle costing as one award criterion - One of the most relevant award criteria is the cost. But there are different ways to define the cost of a product, service, or work. Life cycle costing (LCC) is a method that allows consideration not only of the purchase price of a product or service, but also of any other connected cost component occurring during the use of the product. By that, it is possible to reach true-cost pricing and at the same time in many cases favour sustainable choices – e.g. for low-consuming (and hence low-emission) vehicles.

Step 5: Contract implementation & management

- Monitoring and reporting obligations - Adequate and timely monitoring and reporting are key to ensure compliance and the good performance of suppliers and service providers. Monitoring and reporting can be conducted by the supplier who is asked to provide evidence, the contracting authority can conduct the monitoring by checks and surveys, or a third party can be contracted for monitoring of the implementation process.

Activities beyond essential requirements

- The prioritisation of products, services and works should take into account
 - the market availability of innovative and green products and services and the strategic potential to influence the respective market;
 - the potential to function as a model project and the number of potential replicators;
 - the budget situation and potential additional costs;
 - the availability of measurable sustainability criteria and key performance indicators.

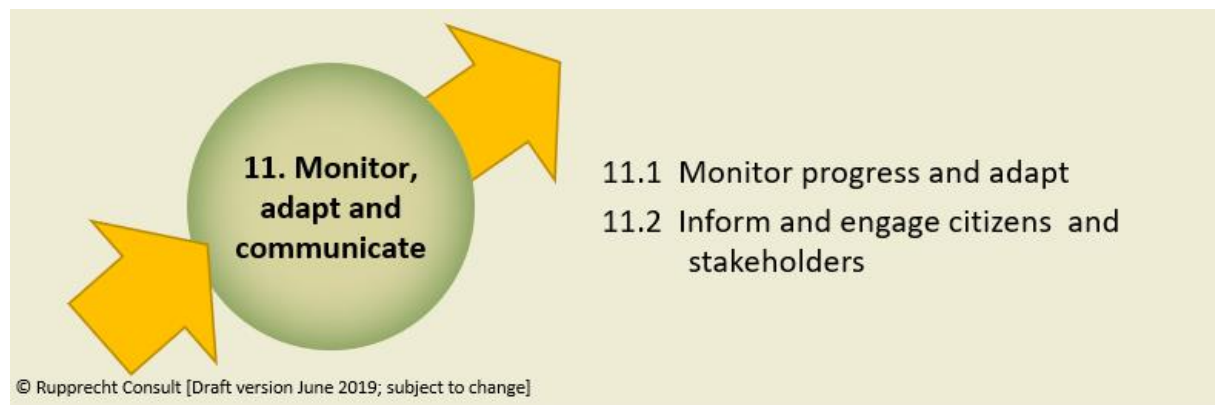
Timing and coordination

- Procurement is usually one of the earlier parts of action implementation, relevant during the entire implementation stage depending on the timing of the different actions.

Checklist

- Procurement needs of the city well defined and agreed on.
- List of personnel and their expertise to lead the procurement process defined.
- Tender specifications defined.
- Tender launched, submissions evaluated and tenderers selected.

Step 11: Monitor, adapt and communicate



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 have 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 objectives. Through regular monitoring and reflection, problems can be identified early and adaptations can be made. The kind of adaptation depends on the specific situation and local context of every city and its Sustainable Urban Mobility Plan. Flexibility during the SUMP process is needed 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 for a need of adaptation of the measure implementation could be internal factors of 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, etc).

Aims

- Keep track of progress towards achieving the targets.
- Identify problems, bottlenecks and other challenges for on-time implementation.
- Adapt to new developments, like changes in the transport system, market developments or new technologies.
- Adapt and optimise the implementation process.

Tasks

- Regularly monitor the progress of implementation and its impact, in terms of outputs and outcomes (see Activity 7.3).
- Include findings that show progress towards strategic indicators and targets (see Activity 6.1 and 6.2), as these will show you whether your measures have achieved what they were intended to.
- Include information that refers to implementation experiences, fulfilment of overall goals, increased levels of awareness etc., as these will be invaluable if you wish to replicate or modify the measure in another location in the future.
- Regularly (every 1-5 years – depending on measures) evaluate the impacts of the measures or bundles of measures. Identify areas where the objectives could not be reached or where new developments rendered the plan out of date.
- Be flexible about updating the plan and making changes to action implementation. For example, if a measure encounters strong opposition, consider adjusting and implementing it as a temporary experiment that will be properly evaluated after a certain amount of time (e.g. one year), and then kept or discontinued depending on the results. Often, opposition decreases once people get used to the change and see the benefits (e.g. like in the case of road pricing in Stockholm).
- Make corrections where necessary in cooperation with relevant actors. The implementation programme should be modified throughout the implementation period based on monitoring results.
- Set out clearly the changes to the Sustainable Urban Mobility Plan that result from the evaluation and get formal approval for the most important changes at the political level.

Activities beyond essential requirements

- Include a 'sanity check' in monitoring of the implementation, 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 Sustainable Urban Mobility Plan.
- 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 the evaluation results for any novel measures that you implement, so that others can learn from your experience (see Activity 12.2).

Timing and coordination

- Parallel process during implementation phase.

Checklist

- Implementation of measures constantly monitored.
- Impacts evaluated at regular intervals.
- Necessary amendments in implementation of measures identified.
- Amendments discussed with actors concerned.
- Evaluation results prepared and published.

Tools

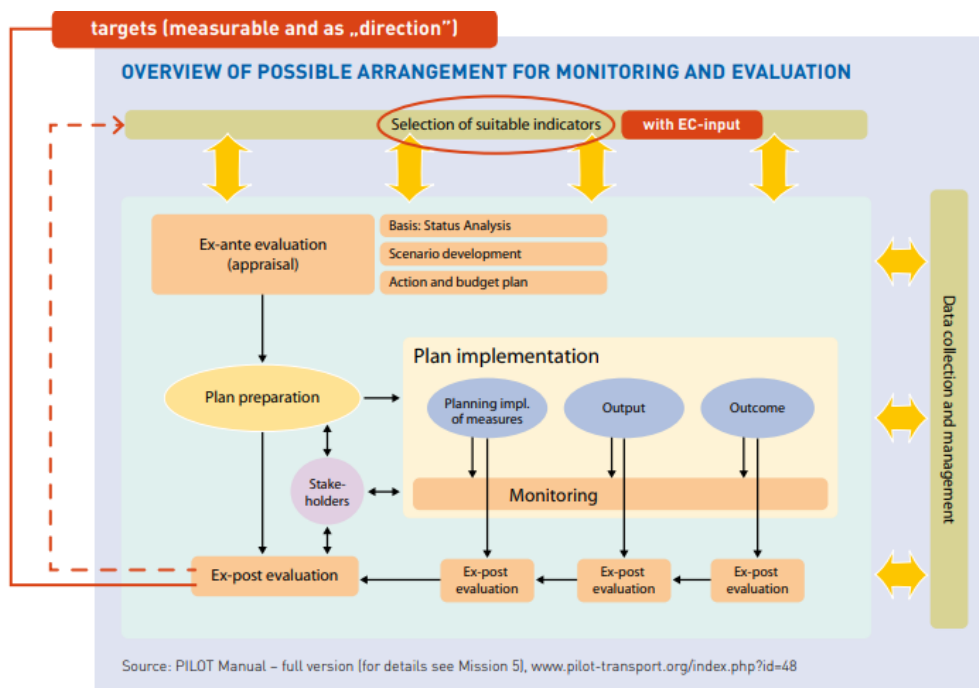


Figure 26: SUMP monitoring and evaluation process

GOOD PRACTICE EXAMPLE

Lund, Sweden: Yearly monitoring reports summarising the status of target attainment

GOOD PRACTICE EXAMPLE

Funchal, Portugal: Systematic measure monitoring to increase acceptance

Activity 11.2: Inform and engage citizens and stakeholders

Rationale

Communication and engagement with local people 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 the contribution to the agreed vision and objectives. Citizens and stakeholders who are directly affected by certain actions should be particularly addressed into the process. That way, citizens can realise the connection between their earlier input at the strategic and detailed level and the concrete 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 about 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 in 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 Sustainable Urban Mobility Plan 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 very well 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 into implementation process.
- Solutions for mitigation of negative effects during implementation identified and pursued.
- General public informed about progress of measure implementation.

For more information

- SUNRISE project, 2019: Co-Implementation Guidelines (not yet published)
- EU CH4LLENGE project, 2016: Quick facts on participation: Actively engaging citizens and stakeholders in the development of Sustainable Urban Mobility Plans, <http://www.sump-challenges.eu/content/participation>
- 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

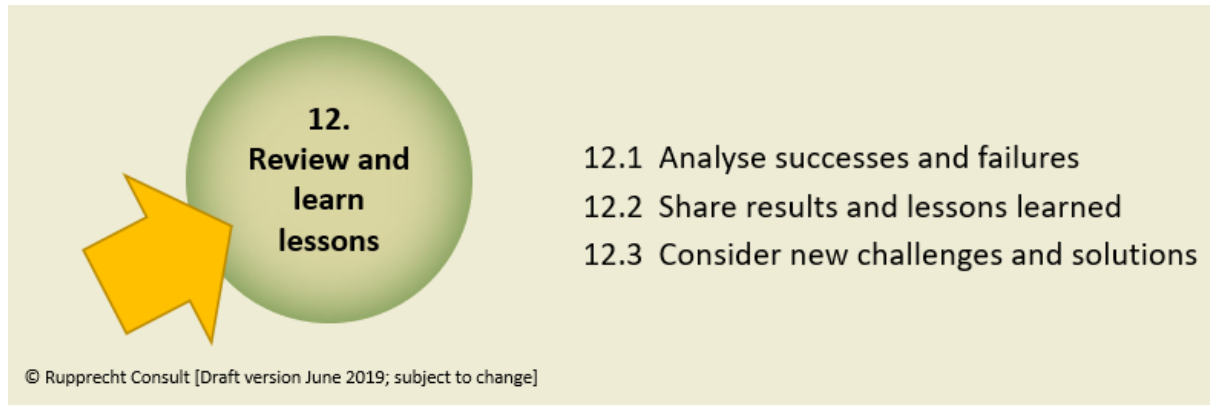
GOOD PRACTICE EXAMPLE

Ljubljana, Slovenia: Measure piloting during European Mobility Week leading to permanent pedestrianisation

GOOD PRACTICE EXAMPLE

Bologna, Italy: Novel and interactive engagement formats to involve citizens

Step 12: Review and learn lessons



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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 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 the further Sustainable Urban Mobility Plan process.

Activity 12.1: Analyse successes and failures

Rationale

Not everything turns out exactly as planned - sometimes 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 not so well. To identify and understand these successes and failures, you need to involve engaged and affected citizens and actively listen to what they thought about the process and its outcomes. These aspects are essential in order to learn and improve your skills and knowledge, which, in turn, helps to provide a solid basis for the next planning cycle.

Aims

- Evaluate the planning process, the plan 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 generation Sustainable Urban Mobility Plan.

Tasks

- Evaluate the successes and failures of the Sustainable Urban Mobility Plan, 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 SUMP planning, people standing outside the process can provide a quite different view and might have observed important aspects that you don't see.
- For the impact evaluation, when a sufficient number of results are available, you can begin to assess the broader impacts of the measures implemented. Analyse what went well and what went badly. List objectives 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

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 firstly helps cities across Europe 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 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.

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

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 the 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 Sustainable Urban Mobility Plan.

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 Sustainable Urban Mobility Plan 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 Sustainable Urban Mobility Plan (still within the period of implementing the current plan).
- 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.

GOOD PRACTICE EXAMPLE

Greater Manchester, UK: Continually updated online evidence base

Milestone:
**Measure implementation
evaluated**

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 Sustainable Urban Mobility Plan 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 and what you can expect of the next planning cycle, as well as which improvements and ideas you want to consider for 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 for your city. This can take place in the form of a public event, where citizens, stakeholders, and the (local) media are invited. The completed cycle and evaluated measure implementation 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.

Section 3 - SUMP guidance on specific topics or contexts

Annexes

Annex A: Glossary

Annex B: List of useful documents and good SUMPs

Annex C: Good practice examples

ACTIVITY 1.2: Create inter-departmental core team	Edinburgh, UK: Multi-disciplinary Spatial Policy Team
ACTIVITY 1.3: Ensure political and institutional ownership	Budapest, Hungary: Regular roundtable meetings for decision makers
ACTIVITY 1.3: Ensure political and institutional ownership	London, Brussels, Dresden, Groningen, Ljubljana: Strong mayors for SUMP
ACTIVITY 1.4 Plan stakeholder and citizen involvement	Brno, Czech Republic: Citizen engagement strategy combining classical and online formats
ACTIVITY 1.4 Plan stakeholder and citizen involvement	Vilnius, Lithuania: Comprehensive engagement achieving broad ownership of the SUMP
ACTIVITY 2.1: Assess planning requirements and define geographic scope of the plan	Basel, Switzerland: Cross-border planning cooperation for a trinational agglomeration
ACTIVITY 2.1: Assess planning requirements and define geographic scope of the plan	Kassel, Germany: Synchronised development of municipal and regional SUMP
ACTIVITY 2.1: Assess planning requirements and define geographic scope of the plan	Grand Nancy, France: Metropolitan inter-municipal local urban plan for housing and development
ACTIVITY 2.2: Link with other planning processes	Bologna, Italy: Metropolitan SUMP linking territorial, mobility and logistics planning
ACTIVITY 2.2: Link with other planning processes	Monzón, Spain: Harmonized development of SUMP and SECAP
ACTIVITY 2.2: Link with other planning processes	Multiple cities, Belgium: Link with social inclusion policies
ACTIVITY 2.2: Link with other planning processes	Lahti, Finland: Integration of land-use and mobility planning
ACTIVITY 2.4: Consider getting external support	Cluj-Napoca, Romania: SUMP development driven by external consultants
ACTIVITY 2.4: Consider getting external support	Thessaloniki, Greece: Expert support to set up a mobility monitoring centre
ACTIVITY 3.1: Identify information sources and cooperate with data owners	Gdynia, Poland: Partnership for data collection between municipality and public transport authority

ACTIVITY 3.2: Analyse problems and opportunities (all modes)	Malmö, Sweden: Comprehensive approach including manual, mechanical, survey- and app-based data collection
ACTIVITY 3.2: Analyse problems and opportunities (all modes)	Deinze, Belgium: Accessibility screenings for children and elderly
ACTIVITY 3.2: Analyse problems and opportunities (all modes)	Bremen, Germany: Online citizen participation to assess the mobility situation
ACTIVITY 4.1: Develop scenarios of potential futures	Maia, Portugal: Scenarios of different ambition to achieve the agreed vision
ACTIVITY 4.1: Develop scenarios of potential futures	Leipzig, Germany: Scenario building supported by transport modelling
ACTIVITY 4.2: Discuss scenarios with citizens and stakeholders	Prague, Czech Republic: Scenario building with strong stakeholder and citizen participation
ACTIVITY 5.1: Agree common vision of mobility and beyond	Leuven, Belgium: Widely accepted Leuven Climate Vision
ACTIVITY 5.2: Co-create objectives for all modes with stakeholders	France: PDU objectives adapted to cities of different size
ACTIVITY 6.1: Identify indicators for all objectives	Milton Keynes, UK: Easily measurable and available set of strategic indicators
ACTIVITY 6.2: Agree measurable targets	Dresden, Germany: Strategic targets developed by intensive roundtable process
ACTIVITY 6.2: Agree measurable targets	Örebro, Sweden: Three key targets for traffic development
ACTIVITY 7.1: Create and assess long list of measures with stakeholders	Baia Mare, Romania
ACTIVITY 7.1: Create and assess long list of measures with stakeholders	Granollers, Spain
ACTIVITY 7.1: Create and assess long list of measures with stakeholders	Bremen, Germany: Multi-criteria assessment with structured expert workshops
ACTIVITY 7.2: Define integrated measure packages	Krakow, Poland: Combination of parking management with traffic limitation and public transport measures
ACTIVITY 7.2: Define integrated measure packages	Tampere, Finland: Mobility management leveraging the opportunity of a tramway project
ACTIVITY 7.3: Plan measure evaluation and monitoring	Greater Toulouse, France: Ambitious monitoring process led by cross-institutional committees
ACTIVITY 8.1: Describe all actions	Odense, Denmark: Well-designed measure factsheets
ACTIVITY 8.1: Describe all actions	Turin, Italy: Comprehensive measure factsheets
ACTIVITY 8.2: Estimate costs and identify funding sources	Vienna, Austria: Employer tax to finance metro

ACTIVITY 8.2: Estimate costs and identify funding sources	Birmingham, UK: Community Infrastructure Levy
ACTIVITY 8.3: Agree priorities, responsibilities and timeline	Thessaloniki, Greece: Action planning table
ACTIVITY 8.4: Ensure wide political and public support	Ghent, Belgium: Public debate evenings, stakeholder meetings and public consultation
ACTIVITY 8.4: Ensure wide political and public support	Lille, France: Bi-annual political committee to steer parking policies on a metropolitan level
ACTIVITY 9.1: Finalise and assure quality of 'Sustainable Urban Mobility Plan' document	Greater Manchester, Malmö, Budapest, Vienna: Award-winning SUMP with good design
ACTIVITY 9.2: Develop financial plans and agree cost sharing	Multiple cities: Examples of bankable projects supported by JASPERS
ACTIVITY 10.1: Coordinate implementation of actions	West Yorkshire, UK: Project management to ensure a constant dialogue
ACTIVITY 11.1: Monitor progress and adapt	Lund, Sweden: Yearly monitoring reports summarising the status of target attainment
ACTIVITY 11.1: Monitor progress and adapt	Funchal, Portugal: Systematic measure monitoring to increase acceptance
ACTIVITY 11.2: Inform and engage citizens and stakeholders	Ljubljana, Slovenia: Measure piloting during European Mobility Week leading to permanent pedestrianisation
ACTIVITY 11.2: Inform and engage citizens and stakeholders	Bologna, Italy: Novel and interactive engagement formats to involve citizens
ACTIVITY 12.1: Analyse successes and failures	Nantes Métropole, France: Comprehensive evaluation of previous SUMP before starting plan development
ACTIVITY 12.2: Share results and lessons learned	Ginosa, Rivas-Vaciamadrid, Kilkis: Exchanging knowledge in a European learning programme for cities
ACTIVITY 12.3: Consider new challenges and solutions	Greater Manchester, UK: Continually updated online evidence base

Annex D: Checklist

Annex E: Model Table of Contents for a SUMP

Annex F: Executive summaries of SUMP Topic Guides and Practitioner Briefings?

Annex G: How these Guidelines were produced and what has changed

Annex H: consulted for development of the Guidelines

SUMP Conference 2018 - Guidelines session (May 2018)

About 80 stakeholders contributed their expectations and ideas for revised SUMP Guidelines in a dedicated session at the SUMP Conference 2018 in Nicosia, Cyprus. A dedicated questionnaire was filled in by 178 conference participants.

SUMPs-Up internal workshop (Dec 2018)

The SUMPs-Up partners participated in a full-day workshop to develop input for the revised SUMP cycle and plan the practicalities of the update.

Expert	Organisation	Country
BOEHLER Susanne	Rupprecht Consult	Germany
BOSCHETTI Florinda	Polis	Belgium
BRAND Lasse	Rupprecht Consult	Germany
CHINELLATO Matilde	EUROCITIES	Belgium
CRÉ Ivo	Polis	Belgium
DRAGUTESCU Ana	ICLEI	Germany
DURLIN Thomas	Cerema	France
HORVAT Marko	ICLEI	Germany
MOUREY Thomas	Polis	Belgium
RUPPRECHT Siegfried	Rupprecht Consult	Germany
STAELENS Peter	EUROCITIES	Belgium

ICLEI Breakfast at Sustainability's (Dec 2018)

Over 50 stakeholders from the SUMP community gathered in Brussels. In a two-hour group work they discussed the challenges and developed suggestions for the new Guidelines how to address four key aspects in the second half of the SUMP cycle: Timing, responsibilities and budgets; monitoring and evaluation; political support and plan adoption; procurement and management and monitoring of implementation.

Rupprecht Consult practitioner focus group (Feb 2019)

Lunch-to-lunch workshop in Cologne where a selected group of leading SUMP practitioners discussed and developed concrete suggestions for four challenging planning aspects: SUMP in the context of other planning activities; scenarios, modelling and simplified impact assessment methods; transition from measure planning to implementation; adaptive implementation.

Expert	Organisation	Country
AVRAMOV Metodi	Sofia Urban Mobility Centre	Bulgaria

BRAND Lasse	Rupprecht Consult	Germany
FEDDERKE Simone	Fachzentrum Nachhaltige Urbane Mobilität des Landes Hessen	Germany
GAUCE Kristina	UAB Gaučė ir Ko	Lithuania
GERTHEIS Antal	Mobilissimus	Hungary
MEEUWISSEN Marcel	Twente Region/City of Enschede	Netherlands
NOVOTNY Vaclav	IPR - City of Prague	Czech Republic
RAZVAN Ghiurco	City of Cluj-Napoca	Romania
RUPPRECHT Siegfried	Rupprecht Consult	Germany
SALEM Samuel	Thessaloniki / TheTA	Greece
STEFANELLI Tito	TRT Transporti e Territorio	Italy
TOLNER Gerard	City of Groningen	Netherlands
VALENTINI Thomas	Monza Mobilità	Italy
ZWOLINSKI Tomasz	City of Krakow	Poland

Polis Governance Working Group (Feb 2019)

Over 30 city representatives and mobility providers discussed different ways to govern and regulate new shared mobility solutions. A specific group work session in the end developed suggestions how to reflect this aspect in the new Guidelines.

EUROCITIES Spring Mobility Forum (Mar 2019)

1.5-hour focus group session where member cities provided input on the draft SUMP cycle and other elements of the new Guidelines.

Expert	Organisation	Country
ACQUAVIVA LUIGI	UCSA	Italy
ALBRECHT Susann	LEIPZIG	Germany
ATANASOV Lyubomir	BURGAS	Bulgaria
CATLOW Ian	LONDON	United Kingdom
CHADRABOVA Lucie	PRAGUE	Czech Republic
CHINELLATO Matilde	EUROCITIES	Belgium
CHIUSAROLI Catia	BOLOGNA	Italy
COHEN Celine	TOULOUSE	France

DE JONG Klaasjan	PROVINCE ZUID-HOLLAND	The Netherlands
DEGENKAMP Mark	UTRECHT	The Netherlands
DELPANO Alessandro	BOLOGNA	Italy
DROULERS Lucie	NANTES	France
HELF Christoph	MUNICH	Germany
HOMEM DE GOUVEIA Pedro	LISBON	Portugal
HOTA Emir	SARAJEVO	Bosnia and Herzegovina
HUTTUNEN Anna	LAHTI	Finland
KALDA Anu	TALLINN	Estonia
KOLEV Tsvetan	SOFIA	Bulgaria
NEUGEBAUER Tim	MANNHEIM	Germany
OVASKA Sanna	TAMPERE	Finland
POCIŪTĖ-MIKŪTIENĖ Jurga	VILNIUS	Lithuania
SIČIŪNIENĖ Aušra	VILNIUS	Lithuania
WAGNER Verena	KARLSRUHE	Germany
WOLTER Andreas	COLOGNE	Germany
ZILIĆ Kemo	SARAJEVO	Bosnia and Herzegovina

UITP & LOW-CARB public transport expert workshop (May 2019)

Discussion on the role of public transport authorities and operators in the SUMP process and development of suggestions how to better integrate public transport in the planning cycle. 2 hour group work in World Café format.

Validation workshop (Jun 2019)

Full day workshop to validate the content of new Guidelines draft. Detailed chapter-by-chapter discussion of the document.

Expert	Organisation	Country
BOSCHETTI Florinda	Polis	Belgium
BRAND Lasse	Rupprecht Consult	Germany
BRUNNER Lisa Marie	Rupprecht Consult	Germany

CHINELLATO Matilde	EUROCITIES	Belgium
CRÉ Ivo	Polis	Belgium
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RAPACZ Piotr	DG MOVE	Belgium
RUPPRECHT Siegfried	Rupprecht Consult	Germany
SCHNEIDER Jochen	JASPERS	Belgium
STAELENS Peter	EUROCITIES	Belgium

**Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan
(Second Edition)**

Final Draft for SUMP Conference, 12 June 2019