TOPIC GUIDE:

SUSTAINABLE URBAN MOBILITY PLANNING IN SMALLER CITIES AND TOWNS

Imprint

Contents

Guide to the reader

This document provides guidance on how to successfully develop and implement a Sustainable Urban Mobility Plan (SUMP) in smaller cities and towns. It applies the concept of SUMP, as outlined by the European Commission's Urban Mobility Package[1] and described in detail in the European SUMP Guidelines (second edition)[2], to the planning realities of urban areas with less than 100,000 inhabitants. Based on analyses of their specific challenges and opportunities, it presents planning methods, tools and policies that have proven to be effective – accompanied by good practise examples from all over Europe. As a self-standing document, this SUMP primer allows you to get the essentials of the SUMP Guidelines without having to consult the extensive main Guidelines. As a transport planner or policymaker of a smaller city or town, we recommend reading this guide first.

Sustainable Urban Mobility Planning is a strategic and integrated approach to dealing with the complexity of urban transport. Its core goal is to improve accessibility and quality of life by achieving a shift towards sustainable mobility. SUMP advocates fact-based decision making guided by a long-term vision for sustainable mobility. It requires a thorough assessment of the current situation and future trends, a common vision with strategic objectives, and an integrated set of regulatory, promotional, financial, technical and infrastructural measures. Implementing these measures to deliver the objectives should also be accompanied by reliable monitoring and evaluation. In contrast to traditional planning approaches, SUMP particularly emphasises the involvement and cooperation across different levels of government, with citizens, stakeholders, and private stakeholders. Further emphasis should also be placed on the coordination of policies between sectors (transport, land use, environment, economic development, social policy, health, safety, energy, etc.).

This document is part of a compendium of guidance documents, complementing the revised second edition of the SUMP Guidelines. They elaborate on difficult planning aspects in more detail, provide guidance for specific contexts, or focus on important policy fields. Two types of guidance document are available. While 'Topic Guides' provide comprehensive planning recommendations on established topics, 'Practitioner Briefings' are less elaborate documents addressing emerging topics with a higher level of uncertainty.

So far, guidance documents have been published on how to address the following topics in a SUMP process:

- Planning process: Participation; Monitoring and evaluation; Institutional cooperation; Measure selection; Action planning; Funding and financing; Procurement.

- Contexts: Metropolitan regions; Polycentric regions; Smaller cities; National support.

- Policy fields: Safety; Health; Energy (SECAPs); Logistics; Walking; Cycling; Parking; Shared mobility; Mobility as a Service; Intelligent Transport Systems; Electrification; Access regulations; Automation; Resilience; Social impact assessment; Gender and vulnerable groups.

They are part of a growing knowledge database that will be regularly updated with new guidance contexts. The latest documents are always available in the 'Mobility Plans' section of the European Commission's urban mobility observatory Eltis (www.eltis.org).

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1   Annex 1 of COM(2013) 91.

2   Rupprecht Consult (editor), Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan, Second Edition, 2019.

Executive summary

This guide applies the SUMP Guidelines to the planning realities of smaller cities and towns. Recent surveys have shown that cities with a population of less than 100,000 are much less likely to develop Sustainable Urban Mobility Plans (SUMPs) than their larger counterparts and are also underrepresented in good practice databases and the community of experts. This indicates that they face specific challenges and need a dedicated guidance document for this target group.

Smaller cities and towns often have fewer resources and expertise for strategic mobility planning, making it more difficult to develop SUMPs. They also tend to have a stronger car-dependency and weaker public transport, which can make it feel even more daunting to pursue a sustainable vision. On the other hand, smaller cities and towns often have well-connected social communities and more walkable and bikeable distances, offering ideal opportunities for sustainable mobility.

Based on an analysis of their specific challenges and opportunities, this guide provides smaller cities and towns with planning methods, tools and policies that have proven to work well in smaller urban areas. It also includes a variety of good practice examples from all over Europe, highlighting the benefits of SUMP for some of the most common problems in smaller cities and towns.

"smaller cities and towns often have well-connected social communities and more walkable and bikeable distances"

Image @Freepik

Image: Lindau ©Eurocities – European Mobility Week

1. Introduction: The specific mobility challenges in smaller cities and towns

Many of the resources on sustainable mobility planning are aimed at larger cities. However, a large number of European citizens live in smaller cities and towns, which face their own specific challenges. In this guide, we take a closer look at the planning methods, tools and policies that have proven to work well on a smaller scale.

1.1.   Target group

This guide is written for transport planners and policymakers in smaller cities and towns, defined[3] as settlements with a population of 5,000 to 100,000 people and a density of more than 300 people per km². This differentiates them from rural areas and larger cities. Compared with other continents, Europe is characterised by many smaller cities and towns[4]. Half of all the cities in the EU, 420 out of 828, are smaller cities (population of 50,000 to 100,000) and are home to 7.5 % of the population.[5] There are over 8,000 towns with 5,000 to 50,000 inhabitants which accounts for 21.6 % of the population.[6] Together, this means that almost 30 % of the EU population live in smaller cities and towns.

But population size and density are not the only important factors for transport planning: the administrative and functional position of a settlement also has a strong impact.[7] The administrative competencies of smaller cities and towns vary considerably between countries, but in most EU member states they represent a segment of the local government with some degree of authority for mobility planning in its territory.

The functional position of cities is influenced by their size. The majority have a clustering effect of jobs, services and other functions that serve other settlements in their hinterland.[8] This causes daily flows of people and goods between the cities and their surroundings. While towns usually provide basic infrastructure and daily services for the surrounding communities, smaller cities tend to also provide periodical services, such as hospitals, cinemas, law practices, public swimming pools and secondary schools.

However, the functional position does not only depend on the size of the settlement, but also on its spatial location in relation to other cities:

- If there are no cities of similar or bigger size close by (centre of its catchment area), the settlement usually is an administrative and economic centre with more jobs and services and many inbound commuters.

- If it is part of a network of two or more smaller cities of similar size located close to each other (polycentric region), they tend to share functions, leading to a network of inbound and outbound traffic flows.

- However, if the town is located close to one or more bigger cities (for example within a metropolitan area), it usually offers fewer jobs and services and many residents commute to the neighbouring bigger city for work and periodical services. Depending on how close by it is, a smaller city can even function more like a suburb.

The economic strength and growth dynamics also influence the means and possibilities for sustainable mobility. While smaller cities in metropolitan areas are often growing, mainly as affordable housing locations for commuters, many other towns struggle to remain prosperous and competitive in a globalised economy.

Even though many different kinds of smaller cities and towns exist, they face common challenges in mobility planning such as limited resources, car-dependent communities and weak public transport.

This guide is written for the full range of smaller cities and towns, providing examples of different types, sizes and geographic locations – but leaving aside extreme cases with very specific challenges, such as tourist destinations with major seasonal variations. In general, it should be understood as a flexible and inspirational document rather than providing strict instructions. Planners and policy-makers are encouraged to select what is optimal for them and to make adaptions as required to their specific planning situation.

1.2.   Mobility challenges

Smaller cities and towns develop Sustainable Urban Mobility Plans less often, and are less familiar with strategic transport planning than bigger cities, due to limited resources and the perception that the negative impact of traffic is less severe.[9] This perception misses the manifold consequences of a transport system. For example, while air pollution indeed tends to be less of a problem, smaller cities are often heavily affected by the lack of activity of their residents, the effect of shop closures or the discontinuation of other services in the town centre, by young people moving away, by unsafe roads and speeding cars, and by noise from through traffic.

Mobility situation

In terms of the mobility situation, smaller cities and towns tend to be car-oriented communities with a low share of public transport. Getting around by car is often the easiest option, as there is little congestion and few parking constraints. Residents benefit from more walkable and bikeable distances within the town, but travel longer distances on average, as many people commute to other towns for work, school or other daily necessities. This and the often lacking infrastructure for walking and cycling leads to a lower share of active modes.

Providing attractive public transport is often a challenge in smaller cities. If it is in place, it tends to have a low frequency and does not cover all areas.[10] In many cases, it is too costly to provide regular public transport due to a small number of potential users as well as often large areas that need to be covered. On the other hand, these cities face the same demographic changes as larger municipalities with a rising number of older people and a poor public transport service at the same time.[11] A challenge is to organise public transport regionally, across municipal borders. Since many people commute to other towns every day to work, study or shop, this is a crucial issue, but often not coordinated well.[12]

These specific circumstances mean that different types of measure are useful in smaller cities and towns compared to bigger cities. Measures that require a certain density or city size (e.g. free-floating car or bike-sharing, metros, trams) or large investments and specialised technical capacities (e.g. Intelligent Transportation Systemmeasures) tend to be difficult. On the other hand, there are often opportunities to greatly improve the situation with proven measures (e.g. walking and cycling paths, modernised bus systems, safe road

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3   Combination of ESPON and Eurostat definitions. ESPON: https://www.espon.eu/programme/projects/espon-2013/applied-research/town-%E2%80%93-small-and-medium-sized-towns; Eurostat: http://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:City ; http://ec.europa.eu/regional_policy/sources/docgener/focus/2012_01_city.pdf. ESPON & Eurostat: Town > 5,000; Small city = 50,000 – 100,000. Density of >300/km² = town in ESPON terminology.

4   Eurostat 2016, p.9, http://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-01-16-691

5   Based on data for EU27 + Croatia, Iceland, Norway and Switzerland for 2006: European Commission 2012, p.4, http://ec.europa.eu/regional_policy/sources/docgener/focus/2012_01_city.pdf

6   Servillo L., Atkinson R., Smith I., Russo A., Sýkora L., Demazière C., Hamdouch A. (2014) TOWN, small and medium sized towns in their functional territorial context, Final Report, Espon, Luxembourg, p.8. https://www.espon.eu/programme/projects/espon-2013/applied-research/town-%E2%80%93-small-and-medium-sized-towns

7   Akademie Für Raumforschung und Landesplannung (2016): "Space in Crisis – The Future of Small & Medium-Sized Cities" (Conference note). & https://www.ippr.org/files/publications/pdf/city-systems_June2016.pdf

8   https://www.espon.eu/programme/projects/espon-2013/applied-research/town-%E2%80%93-small-and-medium-sized-towns

infrastructure), because these "low-hanging fruit" have not been harvested due to a lack of investment. Many solutions specifically target the mobility structure of smaller communities (e.g. on-demand buses) or work particularly well there (e.g. cost efficiently and quickly creating a useful cycling network with speed reductions and bicycle boulevards).

Planning context

In terms of planning, limited resources and capacities can sometimes be a substantial barrier. These are manifested on several levels. Smaller cities have smaller budgets, there are fewer people available to work on strategic mobility planning and the staff can be less specialized since one person must usually cover several planning and management areas.[13]. As a result, there can be weaker coordination of planning activities in the region, and measures can be selected ad-hoc with limited consideration of strategic goals.

If SUMPs are developed, they are often dependent on the motivation, enthusiasm and skills of only a few decision makers[14] and innovative projects must often be outsourced to external consultants[15]. Lower capacities make it also harder to acquire new knowledge and resources. Planners often lack the time and expertise to apply for funding, especially for EU funds, or to learn from available European knowledge and good practice, which is often too general and from bigger cities.[16] It can also be more difficult for them to shape and adapt to related planning activities at e.g. regional, national or TEN-T level.

This guide acknowledges the difficult context in smaller cities and provides concrete advice on how to achieve a good SUMP with limited resources. Once it is in place, a SUMP can make life for planners significantly easier. Having a plan with clear measures and a list of priorities as something to lean against, a planner can use the limited time to focus on more operative tasks.

On the other hand, lower institutional complexity can facilitate effective SUMP processes. Smaller cities tend to have fewer challenges with institutional cooperation than bigger cities due to the smaller size of the administration[17]. Under the right conditions, it can be easier to move ahead and implement measures as fewer people must be involved in the decision-making. This makes it even more important to have a leader, optimally the mayor, who makes sustainable mobility their topic and drives it forward. If such a political champion is in place, together with a committed group of supporters and planners that does not have to be large, they can improve things rather quickly, much faster than in a bigger city where they risk getting entangled in the complex web of city governance.

However, the ability to act quickly also has its limits. Smaller cities are often quite dependent on higher planning levels, such as the regional level, especially with regard to public transport and major road infrastructure. They tend to have less planning authorities of their own and less power to influence the surrounding territory and involve neighbouring local authorities than a larger city[18].

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13   http://sump-network.eu/fileadmin/user_upload/trainings/all_english/PROSPERITY_SUMP_SMC_Resource_pack_EN.pdf p.6; Schutz 2000, p.3, http://onlinepubs.trb.org/onlinepubs/millennium/00130.pdfn; https://www.suits-project.eu/wp-content/uploads/2018/12/Contextualisation-of-project-cities.pdf p.35 and p.41. "often lack the time to build knowledge and expertise in certain subject areas due to the low personnel capacity. This missing expertise, as well as technical studies or economic studies, must be purchased at great expense from external consultants, what does not always lead to the desired success." (p.41); Often no one working specifically on urban mobility. The topic is covered by other departments, e.g. for architecture or economics. That is the reason why small towns usually hire external consultancies to develop the SUMP. Source: Dr. Andrius Jarzemskis, Smart Continent, personal communication 23/01/2020

14   http://www.epomm.eu/newsletter/v2/eupdate.php?nl=0216&lan=en

15   "Mobility planners, especially in smaller cities, usually have a traffic planning background, with a high focus on infrastructure, motorized traffic and planning procedures. In addition, in smaller cities, the mobility departments are very small and often only one person is responsible for mobility planning. Therefore, projects that require expertise in innovative subject areas are often outsourced." https://www.suits-project.eu/wp-content/uploads/2018/12/Contextualisation-of-project-cities.pdf p.44

16   https://www.suits-project.eu/wp-content/uploads/2018/12/Contextualisation-of-project-cities.pdf p.41

17   https://www.suits-project.eu/wp-content/uploads/2018/12/Contextualisation-of-project-cities.pdf p.37
However, institutional complexity is not always lower in smaller cities. This depends on the institutional setup in each country. In France, for example, the situation is the other way around. In big cities, almost all competences are gathered at the inter-municipality level, which is the same as the planning authority. In smaller cities, inter-municipal planning authorities tend to have less competences, as municipalities tend to keep more competences. In particular regarding road infrastructures (including pathways, cycle lanes, ...). So that the complexity is higher and the coordination is more difficult. Source: Thomas Durlin, Cerema, personal communication, 31/01/2020.

18   Urban mobility planning in cities and towns with less than 100.000 inhabitants. Planning challenges and opportunities, Luca Mercatelli - AREA Science Park, 1st European Conference on Sustainable Urban Mobility Plans, Trieste Sopot, Poland 12-13/6/2014.

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2. The benefits of SUMP for smaller cities and towns

2.1. Mobility benefits

Remaining attractive places to work and live

Smaller cities and towns need to actively shape their future if they want to remain economically prosperous and attractive places to live and work, and a Sustainable Urban Mobility Plan can help them to achieve this. There is a general trend in Europe of young people moving to bigger cities to study or find work.[19] Many smaller cities outside metropolitan areas struggle to compete in the globalised economy. They have difficulty in creating knowledge-based jobs that, for example, could convince young people to move back to their hometowns following their university studies. This is particularly difficult for smaller cities in Central-Eastern Europe, many of which have lost over a quarter of their population since their countries joined the EU in 2004.[20] Many smaller cities are also struggling to attract highly-qualified residents of working-age for existing jobs, including doctors and others needed for basic services. This is also a big problem for global companies located in smaller areas, as many hidden European champions struggle to attract qualified employees despite offering high salaries. Widespread cuts in public services due to tight public budgets and austerity programmes tend to reinforce the decline.

At the same time, smaller cities have positive attributes that bigger cities usually lack, such as less noise, cleaner air, a safer and greener environment, and a tight-knit social network. This offers great opportunities, especially to attract young families if smaller cities manage to provide the level of accessibility to jobs and culture that people expect. As a policymaker in a smaller city, you may want to consider helping your city to innovate and become an attractive place to work and live – by building on your strengths, such as more walkable and bikeable distances and a pleasant living environment, and combining them with better access to the amenities people want. Bike-friendly, walkable and attractive public spaces have become major selling points to attract and retain residents.

Improving the health of citizens

Even though green spaces and nature are close by, residents of smaller cities show decreasing levels of daily activity, which negatively affects their health. This is partly due to reliance on the car in towns and smaller cities, which SUMPs can help to address.

Preparing for an ageing society / Providing accessibility for all

Europe's population is ageing but, due to urbanisation and the emigration of young people to bigger cities, the

> **"From my point of view, especially since Benidorm is a tourist city, SUMP helps to clearly visualise all the transport measures and engage both visitors and citizens, with an informed approach." – Jesus Alba, Responsible for SUMP development in Benidorm, Spain (pop. 68,721)**

population of smaller cities is ageing more quickly. In shrinking towns far from metropolitan regions, especially in Central-Eastern Europe, it is mainly older people who remain, so the average age is rising.[21] This creates new challenges for cities that need to provide mobility options for a growing number of older people who cannot or do not want to drive a car anymore.

SUMP helps to improve access to services (shops, school, health, culture, ...) and jobs, in particular for non-motorized people. This includes not only older people but everyone who does not own a car, such as children, young adults, low-income households and people who cannot drive due to health reasons. In particular, there are significant problems connected with mobility in smaller cities, mainly for young people. Alternative solutions are needed for them to get to their evening activities, where the car is often the only possibility. As a transport planner in a small city, you may want to consider a SUMP that includes the construction of an attractive cycling network and better public transport options in the evenings and weekends to help address this problem.

As a transport planner, you may want to consider using both transport and land-use planning tools to provide better opportunities to move around without a car, to make life easier for almost everyone, even those who

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19   PETITE – Sustainable Urban Mobility Plans for Small Cities and Towns p.6

20   Source: Dr. Andrius Jarzemskis, Smart Continent, personal communication 23/01/2020.

21   Source: Dr. Andrius Jarzemskis, Smart Continent, personal communication 23/01/2020.

have a car. Any family will benefit if their children can walk, cycle or take the bus to school. Many children like to be independent, and their parents avoid being the "taxi service", driving them to every single hobby and activity.

Addressing congestion, safety and liveability issues
Despite their smaller size, towns also face safety problems, liveability issues and noise problems due to growing motorisation. This holds true especially for growing commuter towns or towns along major roads, which have to deal with a high level of through traffic. The deterioration of air quality and growing noise levels that come with population growth and densification are intensely debated in many smaller cities, as they threaten the very advantages that residents value in smaller towns. Commuter towns located close to bigger cities are often booming but face the additional challenge of becoming anonymous residential areas and losing their own character and liveliness. A SUMP can help to develop strategies to address these liveability issues and to work towards an attractive, vibrant town.

2.2. Planning Benefits

Achieving visibility and securing funding
SUMP helps to coordinate at higher political levels. It helps to achieve visibility and to be recognised. Smaller cities are often disadvantaged in the competition for national or EU funding because their voice is considered less important. As a policymaker of a small city, you may be used to having less access to higher-level forums and networking events as well as less capacity to have your voice heard through lobbying.[22]

> **The benefits of SUMP are many. One of the main positive aspects is to plan mobility thinking around all modes of transport and prioritize those actions that generate greater improvement for air quality and sustainability. It is a good tool to highlight the actions needed to achieve real modal shift." - Laura Llavina, Head of Mobility Services at the Municipality of Granollers, Spain (pop. 61,275)**

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22   PETITE – Sustainable Urban Mobility Plans for Small Cities and Towns p.6

Image Tivat © Eurocities – European Mobility Week

SUMP helps to resolve this by showing a project integrated within a sound strategic framework. This can help get better access to funding: a) helps to have projects in the pipeline to be able to react quickly once funding opportunities arise, b) helps planners to demonstrate the impact of individual measures on key performance indicators, making funding proposals more attractive, c) is a competitive advantage especially when applying for EU funds.[23]

Coordinating actions regionally
Mobility planning in smaller cities requires the coordination of policies and services of many stakeholders – transport and urban planners, local and regional policy makers, urban and interurban public transport providers – within and across different

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> **"Ginosa has recently received regional funding of 3 million euros thanks to its SUMP strategy" - Loredana Modugno, Municipality of Ginosa, Italy (pop. 22,226)**

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administrative boundaries.[24] SUMP is a good vehicle to structure the process and improve cooperation both horizontally and vertically. It helps smaller cities to generate a multi-level and multi-stakeholder dialogue on how to develop the mobility system in the region, resulting in a number of coordinated measures.

Making more effective use of limited resources[25]
As a small city administration, developing a SUMP may help you use your limited resources more effectively.

Firstly, you can save financial resources. The plan includes packages of measures, prioritised by their likely contribution to the objectives of the city. This helps smaller cities to invest their limited budget into measures that deliver. SUMP moves the focus from building new road infrastructure to a more balanced mix of measures. By combining infrastructure and technical measures with regulatory, promotional and financial measures, mobility goals can be achieved much more efficiently. Choosing the most effective measures is particularly important in smaller cities because individual measures tend to use a larger share of the budget (a new bus station or crossroads entail similar costs in a large and

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23   Speech of Herald Ruijters, Director DG MOVE, at CIVITAS Forum 2019

24   Poly-SUMP Guidelines p.5

25   Source: Rasmus Sundberg, Trivector, personal communication 20/01/2020

a small city, but the budget of a smaller city is always lower).[26]

Secondly, a SUMP can save time for planners. With a clear strategy backing you as a planner, you can use your limited time to focus on more operative tasks. The plan helps to avoid having to look into the likely usefulness of measures whenever they (re)appear in the local political debate. It also gives guidance to respond to requests by politicians or citizens. Having the "why", "what" and "when" clearly agreed, planners can switch focus to the actual implementation of measures. This aspect is particularly important for smaller towns where a municipal employee might have many areas of responsibility, not only transport.

Boosting resilience through effective knowledge management[27]
Since the number of personnel focusing on transport is limited in the administration of a small city, the administration's combined knowledge depends on the knowledge and skills of a few people. If one of these officials retires or leaves for another job, important administrative knowledge might be lost. A SUMP captures some of the knowledge and helps new staff to get a clear overview of the current situation and future plans. The implementation can continue without being questioned.

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26   In a small city, an expensive measure, such as a new bridge for car traffic, can use up a whole year's budget, making it impossible to finance for example new bike lanes. This makes it even more important to ~~prioritise the most effective measures.~~

27   Source: Rasmus Sundberg, Trivector, personal communication 20/01/2020

3. The 8 SUMP principles in the context of smaller cities and towns

> **"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."**
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> Source: Rupprecht Consult (editor), Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan, Second Edition, 2019, p.9.

Sustainable Urban Mobility Planning, as defined in the European Commission's Urban Mobility Package, is based on eight guiding principles.[28] These principles are equally important for smaller cities as for larger cities, but the way they are put into practice tends to differ due to the more limited resources and different transport system:

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

The core aim of sustainable urban mobility planning is to improve accessibility and provide safe, clean and equitable mobility for the entire 'functional urban area'. To achieve this, you should plan for this integrated area of daily flows of people and goods, rather than a municipal administrative area.

As a transport planner of a small city, you may want to consider this principle as most traffic flows often cross smaller cities' municipal boundaries. Planning based on actual flows of people and goods is an important criterion to generate a relevant and comprehensive plan.

The aim of improving accessibility and providing safe, clean and equitable mobility is usually challenging for smaller cities (see above, strong car dependency). It requires cooperation at the functional urban area (FUA) level, e.g. to offer an attractive regional bus network that no municipality could implement on their own. As a policymaker of a small city located in FUA, it is generally not possible to lead a SUMP for the entire area, but it is still possible to give important impulses.

This also holds true for smaller cities that are located within the commuting zone of a bigger city. The decisions

of the dominating core city or higher political levels often have a strong effect on their accessibility and mobility. For example, when a bigger core city needs to decrease the number of car commuters due to high air pollution, it limits road access and expands public transport. Then surrounding municipalities develop new housing areas without public transport access, resulting in congested roads, long commutes and pollution. But good cooperation with the dominant urban centre and the regional level can help to achieve good accessibility and sustainable mobility. It can help to identify common problems that require cooperation (e.g. congested roads for commuters), and solutions which will benefit all municipalities (e.g. better commuter train or bus connections, park & ride facilities or bicycle highways).

2 Cooperate across institutional boundaries

Sustainable urban mobility planning is characterised by a high level of cooperation. This includes cooperation with a wide range of departments relevant to mobility (especially transport, land use, environment, economic development, social policy, health, safety, and energy), exchange with higher levels of government and coordination with transport providers.

Just as much as regional cooperation (see principle 1), a close exchange within the local administration is also important for smaller cities, as it helps to achieve synergies and avoid inconsistent or competing policies by different sectors. Positive relationships with colleagues from other sectors are important to even get the SUMP process started. As financial and technical resources are limited, deciding to develop a mobility plan requires a genuine commitment. The decision to prioritise this will be easier if you make it clear that a

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28   This section draws strongly on Annex 1 of the Urban Mobility Package (COM (2013) 913), but has been adapted by the authors of this guide to the planning realities of smaller cities and towns.

mobility policy will contribute to the aims of other sectors (health, environment, economy, social policy, etc.).

As part of a SUMP process, joint measures are often implemented with pooled resources from several sectors. For example, a cross-sectoral challenge exists if fewer pupils walk to school, which makes them less focused in class, creating an educational problem, but also causes safety risks from cars dropping off children in front of schools, creating a mobility problem. A common walking campaign carried out together with the police, educational and mobility departments (or units) would tackle the problems each of them is facing.

As a planner in a small city, you may be busy with standard tasks and have little time for extra work. Therefore, it is important to organise cross-sectoral cooperation not as an extra burden or a heavy formalised process, but as something that will help you save time and be part of standard routines. This will come easier in smaller cities, where the administration tends to be less specialised and less divided into departmental silos.

3 Involve citizens and stakeholders

Sustainable urban mobility planning follows a transparent and participatory approach. Citizens and a diverse set of civil society and transport stakeholders are actively involved throughout the planning process to ensure a high level of acceptance and support. This minimises political risks and facilitates implementation.

Limited resources in smaller cities can make it difficult to find time for participation activities. This calls for a focused and hands-on approach to participation. In terms of stakeholders, a sound planning dialogue with politicians and other key stakeholders that could block actions should be the priority. Expert committees, institutional and personal contacts are also useful means to establish cooperation based on mutual trust.

In terms of citizen participation, smaller cities can use the social ties of their community to reach a wide audience with limited effort. While society is spread across many different niches in bigger cities, towns still hold events which gather all parts of society, such as the annual spring celebration or similar public festivals. In addition, there are often local associations that are very committed to the traditions and to the future of their town. Therefore, as a planner, you might consider using

these gatherings and groups to anchor the SUMP process within the local community.

4 Assess current and future performance

Sustainable urban mobility planning builds on a thorough assessment of the current and future performance of the transport system. It identifies the main problems and opportunities for sustainable mobility, including future trends, and establishes a baseline and alternative scenarios against which progress can be measured.

It is essential, especially for smaller cities, to stay focused and make the best use of available resources. Analysis of current and future performance is best achieved by identifying key issues, and then focusing any in-depth analysis on these. Establishing a few core indicators may give a good overview of how sustainable mobility in the town is developing. To reduce the effort, use existing data collected by other organisations as much as possible (public transport operator statistics, national statistics on registered vehicles, police data on road accidents, etc.).

There is a risk that a SUMP analysis may focus in great depth on road transport, at the expense of walking and cycling. As active mobility is a crucial pillar of sustainable mobility in any small city or town, it is important to achieve the correct balance of analysis across modes. Nowadays a broad range of tools exists for walking and cycling analysis that helps to quickly identify the barriers and gaps in the network.

Traditional data collection methods can provide more than enough information for a good analysis and qualitative scenarios can be just as useful. When faced with limited resources for SUMP development, it is recommended to cover the basics well, and to focus the detailed technical analysis only on those aspects that require more specific attention.

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

Sustainable urban mobility planning follows a long-term vision for urban mobility and breaks it down into strategic objectives. It equally needs to plan for short-term implementation of the vision and objectives through

measure packages, specifying their timing, budget and responsibilities.

Goal-oriented planning is a key element of SUMP that is equally important for smaller and bigger cities. Analyses of successful cities show that what they share is a broad political agreement on a mobility vision – which they follow consistently.[29] In cities such as Copenhagen, Freiburg, Ghent, Groningen, Malmö, Strasbourg, Vienna or Vitoria Gasteiz, sustainable mobility is no longer an issue for certain political parties or planning departments as it is the norm across the political spectrum and planning sectors.

While it takes persistence and dedication to establish a broad agreement, the actual definition of a vision can be a quick exercise in smaller cities. If prepared well, it can happen for example in a condensed workshop format with the most involved colleagues, politicians and key stakeholders.

Develop all transport modes in an integrated manner

Overall, it is a challenge for all cities to implement measures that deliver the vision. Once specific projects are discussed, it can be difficult to assert the importance of long-term objectives against gut feelings and short-term political gains, resulting in the implementation of measures that are not always in line with the agreed objectives. While many smaller cities are good at agreeing on the vision and objectives at a high-level, it can often be a struggle to turn them into actions.[30] A major focus of the SUMP process should therefore be the identification and planning of effective measures, even if some of the measures are not immediately popular.[31] To achieve genuine change with a SUMP after its adoption, the difficult discussions of funding, completion dates and responsibilities may be unavoidable. This usually happens in a series of meetings gathering all those who should play a role in financing, designing and

implementing measures – at the end of which timing, budget and clear responsibilities for the next 2-3 years can be agreed and politically adopted, as well as the framework for delivering on the longer term goals.

Sustainable urban mobility planning fosters integrated development of all relevant transport modes while supporting a shift towards sustainable mobility. It uses integrated sets of regulatory, promotional, financial, technical and infrastructural measures to achieve its vision and objectives. The measures usually cover collective mobility (traditional public transport as well as new sharing services), active mobility (walking and cycling), multimodality, road traffic and parking, and urban logistics, focusing on improving road safety, equitable accessibility, the liveability of public spaces, and air and noise pollution in all areas.

Smart allocation of different types of measure is useful in any city as it makes actions more effective and increases their acceptability. It is beneficial, especially for cities with tight budgets, to think beyond building new infrastructure. It usually provides better value-for-money to start with improvements of the existing infrastructure, combined with regulatory and promotional measures, as well as efficiency measures that decrease operational costs.

Promoting sustainable mobility can feel like a daunting task in many smaller cities where most travel is done by car and public transport is weak. The choice of measures depends on the specific situation of each city, but it is usually an important part of the solution to improve connections by car to other modes of transport. To create better conditions for walking and cycling, planners may address parking management and speed reduction schemes as crucial measures, for example starting around schools, in the town centres and in some residential areas. For more advanced cities, circulation plans can be a powerful tool to shift towards sustainable mobility.

For travel between towns, a better regional organisation of the bus system, including the integration of fares and schedules, often makes a big difference. Restructuring the network around public transport hubs with feeder services also has great potential. This can be combined with regional cycle paths leading to the hubs, to exploit the current trend towards electric bicycles, Park+Ride and Bike+Ride facilities, and on-demand buses that serve rural areas. For towns within metropolitan regions,

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29 Tom Rye, CIVITAS Prosperity project, Experience and good practice in Sustainable Urban Mobility Planning in other European countries, 9th May 2019.

30 Assessment based on many years of working with smaller Swedish cities. Source: Rasmus Sundberg, Trivector, personal communication, 21/01/2020.

31 For example, traffic calming and parking management. For more details on recommended measures for smaller cities and towns see chapter 5.

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a better connection should be targeted to the public transport systems of nearby bigger cities.

> ### The delicate issue of cars
> Any change creates concern. A key message to increase support by car drivers and politicians can be that SUMP is not against the car, but in favour of a more effective use of cars, as well as providing real options for those who do not wish to use a car. While a private car driving door-to-door with a single occupant is indeed an ineffective use of energy and road space, cars are an important part of a multimodal mobility system. They bring people to public transport hubs (first-mile), allow for common journeys to work or school (carpooling), can be shared to fulfil specific needs such as transporting heavy items or getting to remote locations for recreation (car sharing) – and will of course remain the primary transport mode for many rural areas.

Towns can get active in other ways beyond transport measures. High-speed internet and teleworking options can contribute to improved job accessibility without the need to travel; while the support of public services, schools, health care, entertainment venues and creative spaces can attract new residents and revitalize towns. For more details on recommended measures for smaller cities and towns see chapter 5.

Arrange for monitoring and evaluation

The implementation of a SUMP and its mobility measures is monitored and evaluated closely. General progress towards strategic objectives and targets is assessed regularly based on clear indicators. Systematic monitoring of individual measures allows to adapt to changing circumstances and optimise future actions.

This is probably the principle that is omitted first when time and resources are limited. But even with the tightest of budgets, it pays off to think about monitoring, as it lets you improve actions and thus save money in the future. Evaluation can also be important to ensure continued public support for measures.

Planners in smaller cities are especially recommended to limit themselves to a small number of progress indicators that do not require unrealistic amounts of data collection. It is more useful to regularly get a rough status update than to conduct a very detailed analysis every 20 years. To make data collection manageable, cooperation with other organisations is useful. Together, different municipal units, public transport operators, regional authorities, the national statistics office, and sometimes local universities can present a good dataset that helps to avoid unrealistic amounts of data collection.

A pragmatic approach is recommended also for the monitoring of measures. The impact of every action can not be measured, but it pays off to monitor the most critical and controversial measures. This will help to increase public and political support, and to convince critics with data when the public debate gets emotional.

Assure quality

A Sustainable Urban Mobility Plan is a key document for the development of an urban area. To ensure high quality in all mobility planning activities, mechanisms should be in place to review the quality of the plan and to manage risks during its implementation. These tasks can be delegated to external quality reviewers or another government institution (e.g. at the regional or national level), while they can be facilitated by using tools like the SUMP Self-Assessment.

4. Sustainable urban mobility planning steps in smaller cities and towns

The 'SUMP cycle' has established itself as the main visualisation of a planning process following the SUMP principles. It provides a clear structure of four phases and twelve steps that planners can follow. This is, of course, an idealised representation of a complex planning process. Steps often run in parallel, the order of tasks may be adapted to specific needs, or a step may be partially omitted because results are available from another planning exercise. Nonetheless, the SUMP cycle provides useful guidance in structuring and keeping track of the process. In a nutshell, the SUMP process includes the following key tasks:

- A political decision initiates the SUMP process and provides overall guidance and leadership;
- Effective working structures are set up that bring key stakeholders 'on board' and allow for effective cooperation within the 'functional urban area';

- A sound analysis identifies the main problems and opportunities and informs decision making;
- A shared vision, objectives and targets set the strategic direction;
- Integrated measure packages are defined that can deliver the objectives and targets;
- Measure packages are operationalised, including responsibilities and financing;
- Based on all previous decisions, a SUMP is adopted that combines a long-term vision and clear implementation plan;
- Overall measure coordination and regular monitoring ensure an efficient implementation;
- Systematic evaluation of the implementation provides the basis for the next planning cycle.

Figure 1: The 12 Steps of Sustainable Urban Mobility Planning (2nd Edition) – A decision maker's overview

The general structure of the SUMP cycle is equally applicable to smaller cities and towns as to larger urban areas. All twelve steps are important. However, the method by which the steps are conducted and the balance between them usually differs. Smaller cities tend to:

- Require less time for plan development. One year including plan approval is common, whereas larger cities usually need considerably more time.[32] The perception that it takes a lot of time to develop a SUMP is often mentioned as a barrier by smaller cities.[33] This is why we provide simplified methods in each of the twelve steps, to help you develop a good SUMP with limited time and effort.

- Place emphasis on the operational phase (second half of the cycle), and less on the strategic phase (first half).[34] Since the mobility system tends to be less complex and there are fewer sectoral strategies to coordinate and integrate, the development of the vision and objectives is often completed in a timely manner. What is more challenging is the selection and implementation of effective measures that can achieve the objectives.[35] Therefore, we have put a particular emphasis on this step by including an entire chapter with recommended measures for smaller cities and towns (chapter 5).

- Focus on the regional level. Coordination with higher political levels is very important for smaller cities, which are often dependent on them. Attractive public transport, for example, is hard to realise without good coordination at the regional level. We suggest raising the profile of a SUMP by developing it at the level of the functional urban area right from the start. If this is not possible, exchange and involvement of regional planning should take place in at least the areas with the highest coordination needs.

4.1. PHASE 1: Preparation and analysis

Milestone:
Decision to prepare a SUMP

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

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

Depending on the national and local context, a legal obligation from the national level, an official decision by a local political body (such as the local council), or a commitment by the local administration can be the driving force. Several strategies can help to reach a decision for developing a SUMP:

Find a framework for SUMP
A project or measure can be the trigger to start the SUMP process. With the decision for a major infrastructure project (e.g. a new bypass road or railway connection) comes the necessity to embed it into a wider planning framework. During the process of developing a SUMP, earlier decisions e.g., for major infrastructure projects should be reassessed. In the SUMP process these projects should be to validated according to the strategic SUMP objectives. This could lead to an adjustment of the original projects decision, and can possibly lead to modifications of the original project design and/or flanking measures. A SUMP can help to maximise the positive impact of such projects (that are often driven by actors outside the town), providing complementary

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32   6 to 12 months for rural mobility plans and 1 to 2 years for medium-sized cities is common in France according to Thomas Durlin, Cerema. 1 year, including gaining political approval, is common in Sweden according to Rasmus Sundberg, Trivector.

33   Martina Hertel, Difu (2018): German Municipalities and Mobility Concepts: Transport Development Plans (VEP) and Sustainable Urban Mobility Plans (SUMP), CIVITAS Forum Conference 2018, Umeå.

34   http://www.german-sustainable-mobility.de/wp-content/uploads/2015/08/GPSM_Recommendations-for-Mobility-Master-Planning_english_final.pdf

35   Source: Rasmus Sundberg, Trivector, personal communication, 21/01/2020

measures, long-term targets and a participative approach. An infrastructure project that affects the entire region may even provide the impetus to launch a SUMP at the level of the functional urban area together with neighbouring municipalities.

Relate to current problems – and show how a SUMP would help to solve them

A useful approach is to show the challenges and problems the city will face if nothing changes, to stress the benefits generated by a Sustainable Urban Mobility Plan, and to highlight the fact that voters will reward good results. To communicate urgency, it can be effective to simulate the negative consequences of business-as-usual development (e.g. in terms of future congestion and resulting economic losses, or in terms of indicators such as road fatalities or years of life lost due to air pollution) and to present these to politicians with the help of maps and figures. When communicating the benefits, it is often helpful to make a link to current high-priority issues in your city - such as air quality, traffic, road safety, affordability of housing or economic growth - by explaining how a SUMP can help to resolve them.

Turn your weaknesses into strengths

If the city has a limited budget and decision-makers voice the concern that there are insufficient resources for a SUMP, point to other cities that have achieved major improvements with a modest investment. Many of the most successful cities did not initiate expensive projects, but rather clever decisions and reorganisation. For example, making the best of their limited budget, using their expertise to be creative within the existing city structure[36].

Consider small-scale measures for quick wins

Political commitment can be challenging to achieve as the full benefits of a SUMP only become visible after a time span longer than the electoral cycle. It may be helpful to highlight the option of including smaller-scale measures with high visibility in the SUMP. These can generate public support in the short-term and trigger the first decision to develop a SUMP. For example, the temporary transformation of public spaces with "light and cheap" solutions can help people visualise the possible positive changes (e.g. reallocation of street space, a temporary bike path separated by flower planters or parklets instead of parking spaces).

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36   Tom Rye, CIVITAS prosperity presentation, "Experience and good practice in Sustainable Urban Mobility Planning in other European countries", 9th May 2019

Get inspired by other cities

Many cities in Europe (and globally) have already faced this decision stage and plenty of them then took the decision to develop their first SUMP. It can be a great argument to point to these cities that have successfully carried out Sustainable Urban Mobility Planning. Eltis – the urban mobility observatory and European city networks provide an excellent basis to learn and get inspired by the stories of others.

4.1.1. 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 to set up effective working structures. To achieve a truly integrated planning process, the core team responsible for SUMP development should be well connected to all relevant areas of the administration. Dedicated activities should be conducted from the start to ensure political ownership and stakeholder and citizen engagement should be planned early on. The first step aims at achieving both effective working structures and broad 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 considered when setting up the working and participation structures.

Aims

- Get a realistic and clear picture of the strengths and weaknesses of current planning practice;
- Secure the necessary range of skills for managing and driving the process;
- Establish efficient and interdisciplinary working structures for an effective planning process;
- Create a sound basis for durable cooperation between all stakeholder groups;
- Develop a transparent planning culture that is based on the regular involvement of citizens.

Tasks

Evaluate planning practice, capacities and resources

- Carry out an honest self-assessment of current transport planning activities. The outcome does not necessarily have to be made public. It is

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Methods for assessment of planning practices

Internal meeting and review with SUMP Self-Assessment

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

Link to SUMP Self-Assessment: *www.sump-assessment.eu*

Peer review

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

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

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Budget requirements for SUMP development

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

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recommended to use the online SUMP Self-Assessment (see below) to identify what already works well in your city, and what could be improved when developing the SUMP;

- Assess skills available within the leading organisation(s) and among stakeholders. To overcome a lack of skills, several smaller cities could rely on a common mobility planning knowledge centre. In the long run, they could even establish a combined planning authority that plans for a wider region, such as the West Midlands Combined Authority in the UK, or the Public Works Department in the Ministry of Transport, Communications and Works in Cyprus;
- Define the required budget for the SUMP development process and ensure political approval.

To overcome a lack of resources, smaller cities belonging to the same region could pool their resources to conduct selected planning steps together, for example, a common diagnosis (step 3);

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

Create a multidisciplinary SUMP 'core team'

- Appoint a project coordinator with responsibility, mandate and resources to facilitate and drive the planning process forward.

- Also appoint a more senior project director, e.g. a department head or mayor, who provides the necessary high-level support to ensure cooperation - and who promotes the SUMP process on a steering level if needed.

- Set up a multidisciplinary core team that is regularly involved throughout the entire development of the SUMP. The team should include members with transport and urban planning skills, but also with knowledge of related planning areas, such as economic, social and environmental policies. To achieve an integrated planning process, the outcome of which is mainstreamed into other sectors, the team should include members from several departments or units, not only transport planners. In smaller cities, the team usually consists of only a few people and, in towns, the project coordinator might even do most of the work alone.

- Discuss the results of your self-assessment of planning practice, or ideally conduct it together as a team, to develop a common understanding of sustainable urban mobility. Emphasise linkages between different transport modes as well as between urban structures (density, functions, socio-economic patterns, ecosystems) and mobility.

- Promote the idea of Sustainable Urban Mobility Planning to colleagues beyond the core team, for example by organising lunch talks or an excursion to a model city for sustainable mobility (where also politicians could be invited). When dealing with colleagues who have very traditional, car-centric

views, often because they learned their profession long ago, it can be useful to invite external experts with authority, e.g. from a renowned transport institute.

Set up SUMP 'steering group'

- Identify all relevant stakeholders as well as their objectives, power, capacity and planning resources (e.g. using a stakeholder mapping tool).

- Meet key politicians and practitioners personally at an early stage to discuss their views and involvement. Strive for a broad coalition that supports your SUMP, optimally including not only the governing party but also the opposition.

- 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. Strive to include the main transport providers and colleagues from the district and regional level in the steering group. Smaller cities often lack planning authority over important parts of their transport infrastructure (e.g. bigger roads) or the public transport system.[37] Therefore, it is particularly important that tasks, for which e.g. road administrations, districts, counties or transport

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37   Le plan de déplacements simplifié (PDS) - Planifier les déplacements dans une ville Moyenne, p.11

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associations are responsible, will be jointly discussed as part of the SUMP.[38]

- Find ways to cooperate well with powerful stakeholders outside the steering group, such as the head of the chamber of commerce, CEOs of large local companies, or the editor-in-chief of the local newspaper. These key people often have a strong political reputation and could block the process if they feel left out.

- Involve relevant politicians early on, e.g. the transport committee of the local council. To convince policymakers of new ideas:

- Use examples of successful smaller cities, show that it is something which also concerns them, and consider doing a study trip to such a city.

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38   http://www.german-sustainable-mobility.de/wp-content/uploads/2015/08/GPSM_Recommendations-for-Mobility-Master-Planning_english_final.pdf p.44

- Provide a good story, such as that having a SUMP is part of being a modern city.

- Focus your communication on results, not on methodology or activities.

Plan citizen involvement

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

- Identify the planning steps in which citizens will be involved, and the participation methods suitable for each of them. The most common methods t are public discussions or citizen forums. But also look for creative and fun ways to engage people (e.g. having children paint footprints on the ground marking safe routes to school).

- Use the influence and social ties of your community. While the population in bigger cities is divided into

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Organisational change

SUMP often requires changes in the planning culture of local authorities. However, this can be difficult, as it is associated with uncertainties. People typically prefer to stick to established working routines and may fear a higher workload, especially if change is imposed from the top.

Working with local authorities, the CIVITAS SUITS project has developed an 8-step organizational change process for the transport and planning departments of smaller cities. It focuses on creating buy-in by those that have to implement the changes to daily working routines. In summary, the process, which aligns well with the SUMP cycle, is to:

1. Form of a powerful coalition within the local authority.
2. Jointly develop a vision for change.
3. Identify the correct change agent as a driver responsible for making change happen.
4. Communicate the vision widely and involve colleagues in defining specific goals and activities to achieve the vision.
5. Let the change happen in small increments and keep up the momentum in the long term.
6. Celebrate quick wins and keep reinforcing the vision.
7. Learn from the process and the results - adapt goals and activities if necessary.
8. Anchor the changes and the change process in corporate culture, e.g. written guidelines, new forms of communication or planning inside the local authority.

For details see: www.suits-project.eu
Authors: Sebastian Spundflasch, Technische Universität Ilmenau; Ann-Marie Nienaber & Andree Woodcock, both Coventry University

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When and how to involve the public?

Citizens can be involved in many stages of the planning process, but quality is more effective than quantity. It is more useful when done well in one or two steps than trying to engage the public too often and thereby risking participation fatigue. The following steps and methods often work well:

- Identify important problems (step 3): Online map-based survey, walkability inspection
- Co-create common vision (step 5): Future search workshop or citizen forum
- Validate measures and actions (step 7-8): Focus group meeting, feedback booths in public spaces
- Get feedback on draft SUMP and celebrate (step 9): Feedback form on city website, press conference after adoption
- Inform and engage during implementation (step 11): Neighbourhood information event, posters at implementation site, satisfaction surveys

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What to do in case of scarce resources for participation activities?

- Prioritise an effective planning dialogue with politicians and other key stakeholders. These powerful actors can block your actions later if they feel left out, so it is crucial to engage them effectively. Use working groups, expert committees and personal contacts to establish a cooperation based on mutual trust.
- Use existing information on people's opinions. Information from existing citizen surveys and opinion polls is a valuable input for the planning process. Especially if you do not manage to have dedicated participation events.
- Involve associations that represent a diversity of people. To ensure that all parts of society get heard, it can be more efficient to involve citizen and community groups rather than individual residents, as it takes considerable effort to reach a representative number of people.
- Citizen feedback on a public draft is the minimum. If citizens were not involved before, they have to at least have the possibility to comment on the final SUMP draft. Make the draft easily accessible and inform residents via local media, although note that without an effective voice during the preparation of a SUMP, there may not be a sufficient sense of ownership at this stage to mobilise sufficient feedback on the draft SUMP

Source: Inspired by: Rasmus Sundberg, Trivector, personal communication 23/01/2020.

What are 'Citizens' and 'Stakeholders'?

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

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

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

many different niches and interests with their own clubs and associations, in towns there sometimes still exist forums that unite all parts of society. This could for example be the association that organises the annual city festival, spring celebration, or other main public festivals. For a SUMP it is important to involve these stakeholder hubs to anchor the process in the town community.

- Involve not only associations that have mobility as their main topic but also those from related areas. In some cities, there are strong nature protection groups, local heritage clubs or similar associations that traditionally do not get involved in transport issues but can become important supporters of your plans.

- Actively work with media and the public, provide information on the vision and benefits of SUMP for society, and for every single citizen. Proactively contradict assumptions, for example, that the overall aim is that citizens cannot drive their car anymore.

- Consider branding your planning process 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.

- In all participation activities, it is crucial to be transparent and to communicate how the results are used.

4.1.2. Step 2: Determine the planning framework

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, 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 ensure reliability for involved actors. If a lack of capacity has been previously identified, appropriate arrangements need to be made to get external support for SUMP development.

Aims

- Align to relevant regional, national and European legal requirements;

- Define the geographic scope of your plan, usually covering the functional urban area of actual mobility patterns (e.g. travel-to-work area);

- Achieve integration of SUMP development with relevant sectoral policies at the local and regional level;

- Develop a tailored timeline and work plan that fit the local context;

- Cover skill gaps with external experts, if needed, but maintain coordination and develop internal expertise.

Tasks

Define the planning area

- Identify, document and assess existing legal regulations and requirements on how to develop a SUMP in your country, relevant regional and national funding criteria, and higher-level plans and strategies that might influence your SUMP. For example, the plans of a National Road Authority for new or enlarged roads could work against the objectives of a SUMP by encouraging more car driving into the city.

Functional urban areas in EU Member States

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

- The urban core consists of a population cluster with a density of at least 1,500 inhabitants per km².

- A municipality is part of the urban core if at least 50% of its population lives in the cluster.

- The 'hinterland' is identified as the 'worker catchment area' of the urban labour market, outside the densely inhabited core. All municipalities having at least 15% of their employed residents working in a certain urban core are defined to be part of the urban hinterland.

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

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

Source: OECD 2019

The Poly-SUMP Methodology
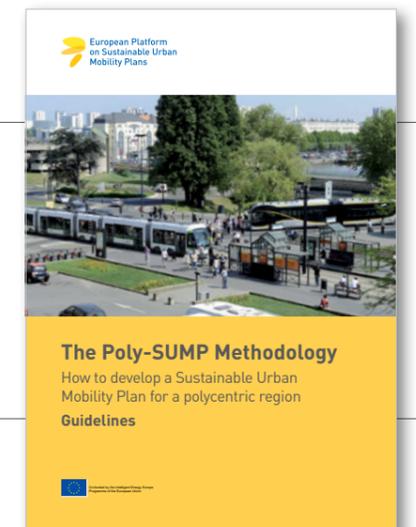How to develop a Sustainable Urban
Mobility Plan for a polycentric region
Guidelines

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

- Analyse transport patterns and administrative boundaries to identify your functional urban area (i.e. travel-to-work area). Then define the geographic scope of the SUMP and negotiate overall responsibility for the plan.

- If possible, a SUMP should cover this integrated mobility area, which in most cases goes beyond the administrative boundaries of a municipality. This means that several smaller cities develop a plan together. Sometimes it is developed by a regional authority, but more often by cities that form an inter-municipal planning organisation or just cooperate ad-hoc.

- This inter-municipal SUMP, which selects the overall goals, priorities and larger measures, often works as an umbrella for local mobility plans. They can be developed by the different municipalities to focus on questions of specific relevance to them, for example, to define local measures for their city centre.[39]

- If developing a full SUMP with several cities turns out to be too complicated, the different cities can also

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39 http://www.german-sustainable-mobility.de/wp-content/uploads/2015/08/GPSM_Recommendations-for-Mobility-Master-Planning_english_final.pdf p.46

Box 1: Lahti, Finland: Integration of land-use and mobility planning

Best Practice Example

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

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

choose to develop their individual plans. However, they should still strive to coordinate their measures as much as possible with each other, for example in a regular roundtable or working group, establishing common goals.

- In some countries, certain mobility aspects are mandatorily planned at the regional level. Often this concerns public transport and larger roads. In this case, local SUMPs still define the overall vision for the entire mobility system but need to be closely coordinated with regional sectoral plans so that the goals of the different plans align. In terms of measures, SUMPs then often focus more on the remaining mobility aspects, as the sectoral plans already define detailed measures for their area.

Link with other planning processes

- Identify local sectoral strategies for transport and mobility (e.g. strategies for different transport modes), as well as local plans from other policy domains that may have an impact on urban mobility (e.g. land use, energy, environment, economic development, social inclusion, health and safety). Also identify relevant plans of local transport operators, service providers and other municipalities in the planning area.
- Review whether the goals of the plans support or discourage sustainable urban mobility objectives. For example, a land-use policy that makes use of brownfield land is supportive, while one that promotes urban sprawl without a strong underlying transport framework conflicts with the principles.

While SUMPs are rarely mandatory - spatial plans usually are - which makes it particularly important to contribute to the mobility perspective.[40] Overall, a SUMP should be integrated with the sustainable urban development strategies that set the overall vision and objectives for the city to coordinate and mediate between the different sectoral objectives and plans.[41]

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

Agree on the timeline and work plan

- Take sufficient time to prepare the planning process thoroughly. The time needed to achieve a political decision, set up working structures and define the planning framework varies considerably between cities.
- Define a timeframe for plan development. One year, including plan approval, is common in smaller cities.
  - Mobility analysis: 2 to 6 months
  - Strategy development (vision, objectives and targets): 1 to 3 months

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40   Source: Dr. Andrius Jarzemskis, Smart Continent, personal communication 23/01/2020.

41   https://urban.jrc.ec.europa.eu/urbanstrategies/

- Measure planning (measures, action and responsibilities): 2 to 6 months
- Plan adoption: few weeks to half a year
- Plan update: after 5 to 10 years
- 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, so the beginning of a mayor's mandate can be a good time to start the process.
- Calculate some 'quiet' working periods to make the general planning more flexible and to avoid severe delays. In addition, remember to include the time needed for communication as well as stakeholder and citizen involvement.
- Draft an overall work plan for the SUMP process indicating all necessary milestones. Agree on management procedures and tasks with the SUMP 'core team' and 'steering group'. Ensure that everyone who is supposed to contribute to the process gets approval and a sufficient time allocation from their line managers. Then get a formal political decision to proceed with the planning process.

Consider getting external support

- Decide which tasks require external support, as a) a lack of skills in your organisation would reduce the

quality or prolong the process considerably, and b) they cannot be efficiently covered by internal capacity building (or the recruitment of new staff).

- Due to limited internal capacity, external support is often crucial in smaller cities. There is a tendency to outsource the development of the entire plan, but this is not recommended, as the resulting plan risks being too external and not sufficiently accepted by municipal planners.[42] Instead involve external specialists for specific tasks (see examples of suitable tasks in box below), maintain overall coordination and make sure that the combined internal knowledge of the town, its transport system and mobility patterns is used in the process.[43]
- When delegating project management to a consultant, keep the overall coordination within your planning authority. For all delegated tasks, always foresee sufficient time and resources for quality control by your organisation. Integrate capacity-building activities within the terms of reference whenever possible, so that your internal staff can

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42   BUMP lessons learned, p.32, http://www.bump-mobility.eu/Download.ashx?url=/media/93314/lessons-learnt-while-coaching-cities.pdf

43   BUMP project, 2016: Guidelines for the definition of Sustainable Urban Mobility Plans: 'Developing Sustainable Urban Mobility Plans in medium and small cities'. Lessons learnt while coaching cities within the framework of the BUMP Project. p.7

Examples of tasks requiring external support

Tasks	Details
Preparation, organisation and facilitation of stakeholder and citizen events, documentation and analysis of discussion results.	The administrative efforts required to carry out effective participation processes should not be underestimated. The review of comments is usually done manually, which requires considerable time. Engaging a neutral facilitator can also help to avoid (old) conflicts and support a group to collaborate in a constructive atmosphere.
Communication with the public	Communications activities, such as writing attractive news items for print and online use, designing public reports (e.g. the mobility strategy and the SUMP), facilitating social media channels (which can receive high volumes of comments) and taking professional photos during events.
Analysis of the mobility situation, including data collection	This could be either the entire analysis or specific technical subtasks (e.g. analysis of the quality of cycling infrastructure, collection of traffic count data, walkability analysis, execution of a household survey).

Box 2: Koprivnica, Croatia: Early external support for the SUMP team

Best Practice Example

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

Author: Nebojsa Kalanj, collected by ICLEI
Image: City of Koprivnica
For details see: SUMP Annex p.16

gain the respective competencies for the next planning process.

- Decide whether tasks can be tendered as a bundle (normally tasks that are closely related, e.g. citizen engagement and communication) or if they require very specific skills and need to be tendered separately (e.g. data collection or, even more specifically, a household survey or an analysis of the quality of cycling infrastructure).

- Tender and contract external services for the selected tasks. Use clear terms of reference that describe the tasks as precisely as possible, including a timeline and specific outputs for each task. Use suitable criteria for the selection of offers, which need to be specified in the terms of reference. In addition to the price, you should give appropriate weighting to content criteria (e.g. quality of the described concept and methods, and the expertise of proposed personnel). Experience has shown that quality pays off, and unrealistically low offers often lead to low-quality results or follow-up costs for cities.

4.1.3. Step 3: Analyse the mobility situation

The last step of the preparation and analysis phase is to assess the mobility situation of your city. This is a major milestone that provides the basis for rational and transparent strategy development. A good mobility analysis is crucial in helping to define appropriate policies, and provides the necessary baseline against which progress can be measured. Before conducting the analysis, information and data sources need to be identified and cooperation should be established with

data owners. The aim is to conduct a focused and manageable analysis that includes all relevant transport modes and identifies the main problems and opportunities in the field of urban mobility.

Aims

- Identify information needs in terms of political priorities and probable objectives and get a good overview of the available data.

- Achieve a good set of information by combining data available in different parts of your organisation, in other organisations, and (if needed) by collecting new data.

- Analyse the current status of all relevant transport modes and sustainability aspects to identify and prioritise key issues that need to be addressed by your SUMP.

Tasks
Identify information needs

- Define the information needed for a status assessment in your city. An analysis table (see toolbox below) can provide guidance for this. Focus on the general aims of sustainable urban mobility and the political priorities that led to the decision to develop a SUMP. For example, if a political priority is to improve road safety, then data on fatalities is required. Usually, a status analysis needs information on the status and trends of:

- all transport modes available in your city (e.g. walking, cycling, public transport, vehicle sharing, private motorised transport, multimodality, freight);
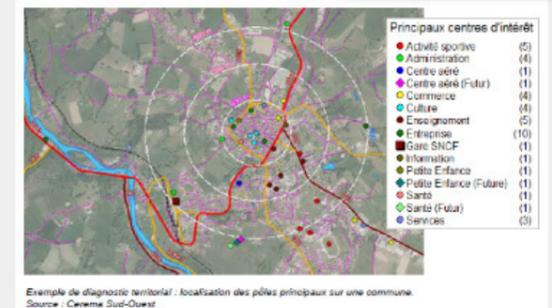
- relevant sustainable mobility aspects for your city (e.g. air pollution, traffic noise, road safety, the liveability of public spaces, equitable accessibility to services, employment and education).

- Check existing planning documents for analyses relevant to sustainable urban mobility. Such documents may include sectoral mobility strategies and plans (e.g. on walking, cycling, public transport, road transport, parking, freight) as well as plans and documents from other relevant policy areas (e.g. land use, energy, environment, economic development, social inclusion, health and safety), from local transport operators and other municipalities. Wherever useful, the planning process should build on the results of existing plans and strategies.

Collect a good data set

- Perform a data audit to identify what information is available. Get an overview of sources, identify available data and assess its quality and accessibility. Since resources for data collection are very limited, your own unit or department will often lack data on many aspects of the baseline. Therefore, it is particularly useful to also map the data that other parts of your authority and other organisations can provide (e.g. neighbouring municipalities, the police, public transport operators, regional authorities, universities, national ministries).

- Collaborate with other organisations, for example to access public transport operator statistics, police data on road accidents or regional traffic surveys. Agree on the process for exchanging data so that all

partners benefit from a common set of information (e.g. secure data-sharing platform that respects confidentiality and legal requirements).

- Retrieve the available data, synthesise its contents and identify data gaps for your main mobility issues.

- Collect additional data to fill important gaps. Data can be collected by a variety of means. For example, trends in the number of pedestrians can be determined by carrying out manual counts annually at key points in the city, by installing counting machines or by conducting a household survey. The choice of method depends on the resources available,

Box 3: Spatial Analysis of main travel destinations

Best Practice Example

Example de diagnostic territorial : localisation des pôles principaux sur une commune.
Source : Cerema Sud-Ouest

Example of a spatial analysis of main travel destinations in a town (workplaces, administrations, cultural and sports facilities, schools and kindergartens, health facilities, etc.). Such accessibility maps help to detect underserved areas.

Source: Cerema, Plan de mobilité rurale, juin 2016, p.27

Selection of useful data collection methods for smaller cities and towns:

- To measure traffic flows: Manual traffic counts at key locations (involving student workers or volunteers, such as retired people, can help save resources);

- To analyse the network: Comparison of travel times with different modes between major destinations, using online navigation tools (e.g. town centre to main housing areas, to biggest nearby employers, and to bigger nearby cities);

- To assess infrastructure quality: Site visits at key locations (criteria catalogues for this available online), can also be organised as workshops with groups of citizens to understand the user perspective;

- To understand opinions on a specific topic: Short surveys or interviews in the street, data from journals, blogs, social media, the local newspaper;

- To identify problem areas: Online maps where residents can locate negative and positive areas for specific transport modes (many online tools available, but the analysis of responses takes time);

- To get an in-depth status: Household surveys (important representative data, but expensive, usually done in bigger intervals such as every 5 years; to save costs they can be organised regionally or face-to-face interviews can be partially replaced with phone interviews).

the size of the city and the level of reliability required. In addition, consideration should be given to how data will be used – data collection can be costly and time consuming, and it is important to tailor this data collection to subsequent analysis activities in order to best use available resources. When faced with these limited resources, it is also preferable to use basic data collection methods that are relatively easy to implement.[44]

Analyse the current mobility situation

- Analyse your data in a goal-oriented manner. Use spatial analysis methods, for example by mapping

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44   Detailed list of different data collection methods see pp.108 https://www.suits-project.eu/wp-content/uploads/2018/12/Gap-Analysis-on-data-collection-and-analysis-methodologies.pdf

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road accidents, air pollution and noise levels, areas far from any parks, areas inaccessible by public transport, or gaps in the network of cycle paths and footpaths. In terms of sustainability aspects, focus on those that are important in your town, leave aside any that are not so relevant (e.g. air quality). In terms of transport modes, make sure to not only assess motorised traffic, but to also take walking and cycling seriously as modes of daily mobility that need proper analysis.

- For your priority topics, go beyond a simple description of the status and aim to understand the underlying reasons (barrier analysis). For example, why do most people still drive to the centre and park there despite the good availability of Park & Ride? Strive for data explaining the motivation for mobility behaviour that you want to influence, for example by

including qualitative behaviour-related questions in mobility surveys. This information will help to choose effective measures later on.

- Prepare a baseline analysis to identify and prioritise the main problems to be addressed by your SUMP. As far as possible, try to quantify the current status of mobility and transport and visualise it on maps.

Your baseline should include the status, trends and problem areas of all transport modes used in your city as well as the main sustainable mobility issues. Present not only your weaknesses but also your strengths, for example in a SWOT-table (Strengths-Weaknesses-Opportunities-Threats). It is motivating for your planning process to visualize the strong sides that your city can build upon.

Milestone:
Analysis of problems and opportunities concluded

At this point of the cycle, you have finished the preparational steps and status analysis. As a fundamental milestone of Sustainable Urban Mobility Planning, you should have achieved a common understanding of the main problems and opportunities that is shared by the most important local politicians and other key stakeholders. To strengthen the political basis for the upcoming strategy development, it can be helpful to summarise your key findings in a short 'baseline report' and present it to the local council.

Figure 2: Example of how an analysis table can be used to define the status of the transport system (baseline analysis) (adapted from Sundberg, R., 2018. SUMPs-Up Manual on the integration of measures and measure packages - Start, p. 10.)

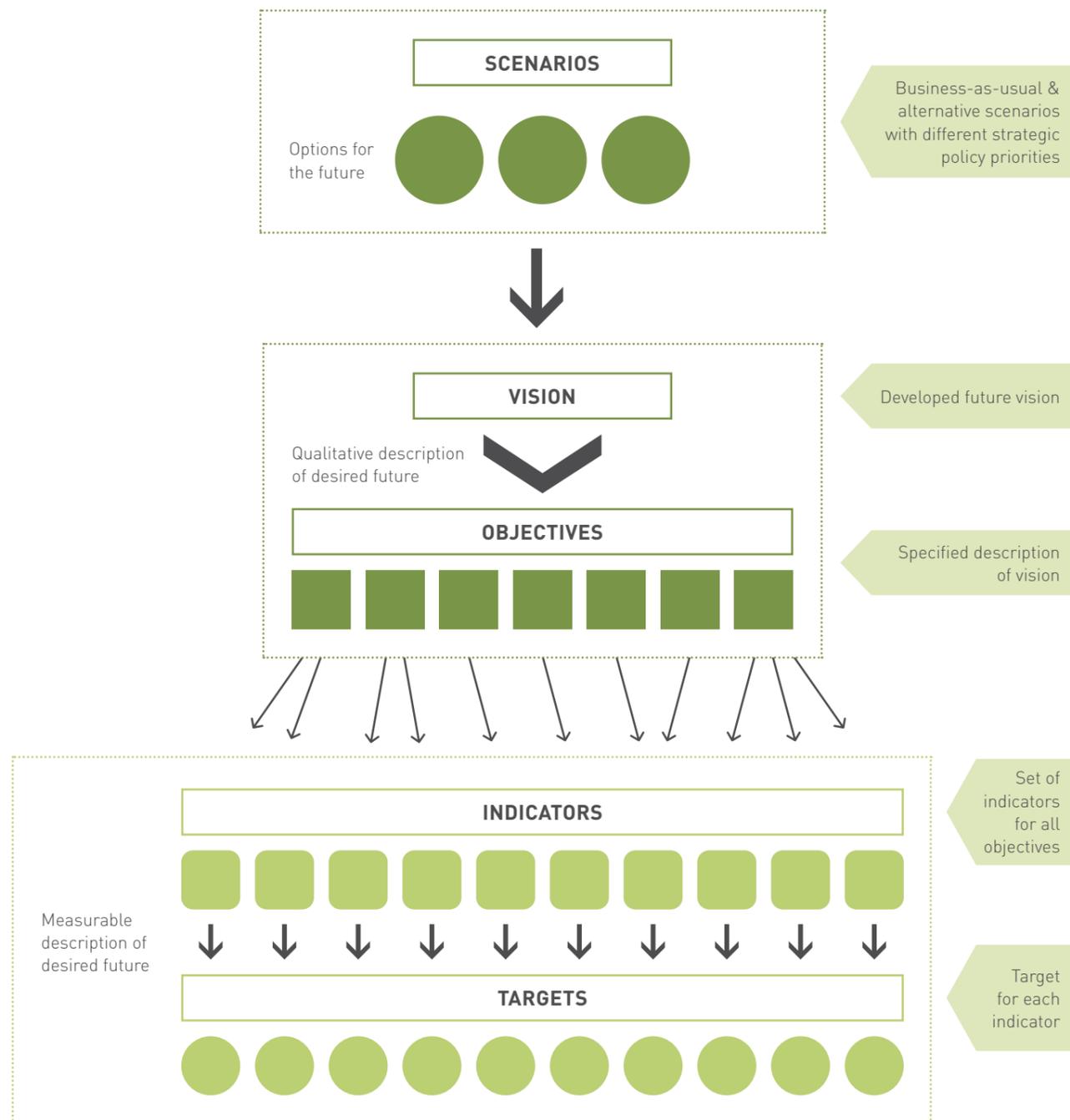| FUNCTIONS / TRANSPORT MODES	MODAL SHARE	QUALITY OF INFRASTRUCTURE	SAFETY AND LIVEABILITY	ENVIRONMENT AND HEALTH	EQUITABLE ACCESSIBILITY	STATUS OF MEASURE IMPLEMENTATION	MAIN RECOMMEN-DATIONS
Walking	12%	Poor	Many accidents on road crossings near schools	Less and less pupils walking to school	Some areas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

Image ©Freepik

4.2. PHASE 2: Strategy development

4.2.1. Step 4: Build and jointly assess scenarios

Scenarios describe the future situation that will exist in the background over the horizon of the SUMP, and which may include general effects such as population growth, as well as possible underlying transport or planning policies. Based on the analysis of challenges and opportunities developed previously, scenarios should be identified that explore these likely changes in external factors (e.g. demography, information technology, climate) and alternative strategies to react to external policies that are to be implemented. By illustrating different possible future situations, they can inform and inspire the subsequent development of your vision and objectives. In smaller cities and towns, the scenarios will usually be short qualitative descriptions rather than modelled forecasts.

Transport planning may be part of a more general and less fragmented, overall, planning activity (e.g. strategic spatial planning for integrated and sustainable urban development strategies). This less fragmented planning means that externalities need to be more comprehensively considered in scenarios and measures. For example, the growing recognition and feasibility of teleworking is a driver for developing high-speed connected workplaces (e.g. small-town teleworking centres).

Figure 3: Overview of the main steps (scenarios, vision, objectives, targets) of Phase 2

Aims

- Understand the risks and opportunities related to current trends and possible changes of circumstances.
- Explore the likely impact of different strategic policy directions.
- Create a factual basis for the subsequent development of a vision, objectives and targets.

What is a 'Scenario'?

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

Tasks

- Explore how important external changes for urban mobility might develop in the future (i.e. the factors that are outside the city's control, such as demography, oil price, economic situation, climate or other crisis, technological innovations, working hours, changes from the regional government and neighbouring metropolitan areas, or level of political support for sustainable mobility). Consider current trends and likely changes as projected by recent expert reports. Analyse trends in bigger cities in your country, such as digital mobility innovations, as they might also come to smaller cities.
- Analyse the likely impacts of changing circumstances on your local transport system. This includes the effects of global or national changes (e.g. new technologies enabling convenient on-demand buses,

automated driving, or changes in national funding for urban 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. Will they provide new options? Or will they make certain sustainable policies harder?

- Develop several scenarios that describe alternative policy priorities and their likely impacts. In smaller cities and towns, scenarios will usually be short qualitative descriptions rather than modelled forecasts with exact figures. Based on past results of policy strategies in your city and similar cities, scenarios can be developed by one or several experts without a lot of effort, mainly using their own judgement. This could be a brainstorming exercise answering the question, "what would probably happen if we pursued a certain policy strategy?" At least three scenarios should be developed:

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

  - Alternative scenarios that describe likely developments resulting from different strategic policy priorities (e.g. public transport focus vs. active mobility focus vs. electromobility focus). Such scenarios show the contribution of different policy direction, helping you to define areas for the greatest focus. It is recommended to include only sustainable policy direction, as the business-as-usual scenario already allows for comparison with a less sustainable scenario.

- Assess how the scenarios would be affected by changes in external factors. (It can be useful to specifically search for circumstances where things might go wrong, worst-case scenarios, to identify the risks and limitations.) Such an assessment helps you to be prepared for potential changes and their effects and lets you understand which scenarios are more future-proof. It can also promote the visibility of the limits and risks of the status quo (business-as-usual scenario), explaining why changes are needed to prepare for the future, even in cases where most people are content with the current situation.

4.2.2. Step 5: Develop a vision and objectives with stakeholders

You are ready to get started with the main steps of developing a Sustainable Urban Mobility Plan. Developing a common vision and objectives are cornerstones of

every SUMP. A vision is a qualitative description of the desired mobility future, which is then specified by concrete objectives. As guiding elements for the selection of targets and measures, the two provide the basis for all subsequent steps. A good vision and objectives need to be widely accepted in the city; therefore, it is crucial to co-create them with stakeholders and establish common ownership.

Aims

- Agree on an inspiring mobility vision that is widely supported and well-known;
- Formulate clear objectives and strategies that can guide measure selection;
- Emphasise the political value of the SUMP and ensure the commitment of key stakeholders and decision-makers.

What is a 'Vision'?

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

What is an 'Objective'?

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

Tasks

- Establish a representative group of key stakeholders that will contribute to the development of the vision and objectives. This could be the SUMP 'steering group'.
- Organise one or several visioning meetings with the stakeholders. Introduce group work and other interactive formats to create an open, respectful and fruitful dialogue (see visioning methods below). In the beginning, provide basic information to ensure a common level of knowledge. This should include information on any existing visions, as well as the results of the mobility analysis (Step 3) and the scenarios (Step 4). Use maps, visualisations and

concrete examples from other cities as much as possible to inspire discussions on questions such as:

- What are the main problems and opportunities at the moment that need to be addressed?
- Which future problems and opportunities does the business-as-usual scenario reveal?
- What kind of city do we want our children to live in?
- What social, environmental or economic improvements do we need to get to the future we want?
- Which of the alternative policy strategies are preferable?
- What level of ambition is needed to achieve sustainable mobility in the future?

- Draft a vision and objectives based on the results of the stakeholder meeting(s). While the vision can take many shapes – often it is simply a short inspirational text, sometimes with an accompanying appealing picture – the objectives need to state clearly what is to be 'reduced', 'increased' or 'maintained' (e.g. increase road safety). Objectives often already include strategic priorities what to focus on to improve the situation. For example, a city might not only set the objective to improve air quality and liveability but already decide to reduce car use or to become a 'city of short distances' to achieve this. These priorities only provide strategic direction (goal-oriented planning) and should not be too detailed as the exact means are defined only during measure planning (Step 7 and following).

- Consider aligning your objectives to those of external funding bodies to make the measures included in the Sustainable Urban Mobility Plan attractive for funding. For example, national environmental agencies may be willing to fund measures if a strong focus is put on energy savings or the reduction of greenhouse gas emissions.

- Consider directly engaging citizens in the development of the vision and objectives, e.g. via meetings or workshops similar to the stakeholder meetings. At the minimum, you should actively inform the public about the process (e.g. in the local newspaper or on social media) and provide them with the possibility to give feedback on the draft vision and objectives. Take all contributions seriously, but be clear and open beforehand that not all suggestions can be followed and that decisions will have to be
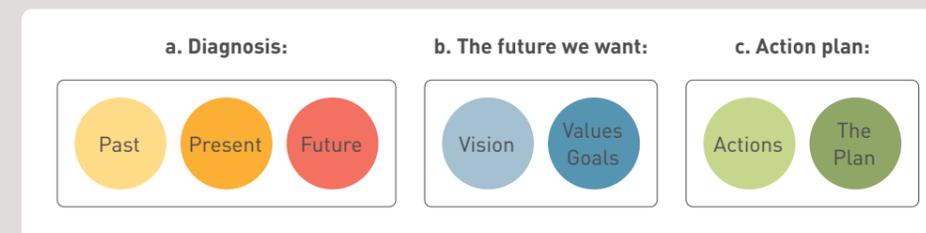
Future search workshop

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

A Future Search Workshop is typically built around three themes:

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

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

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

If you do not have enough resources for a three-day workshop, you can also conduct a shortened version in less time and with a smaller group, for example the SUMP 'steering group'. The effect will not be entirely the same, but if organised well, even in a half-day workshop or two 2-hour afternoon workshops a creative group dynamic can be achieved that unites stakeholders around a common vision. Especially if time is short, make sure to create a positive and trustful atmosphere and focus on the common ground. Steer discussions away from daily disagreements about details to the question how an 'ideal future city' for our children could look like.

Figure 4: The three themes of a Future Search Workshop (*Source: Adell, E., Ljungberg, C., 2014, The Poly-SUMP Methodology, p. 21*)

a. Diagnosis: Past · Present · Future
b. The future we want: Vision · Values Goals
c. Action plan: Actions · The Plan

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

Inspirational list of objectives

Due to limited resources, it is important for smaller cities to prioritise. Many objectives are desirable, but there will not be enough time and budget to achieve all of them. Therefore, it is recommended to select a small number of the most urgent main objectives, rather than trying to cover all aspects. The following list may serve as inspiration:

- Stop population decline and become a town that attracts young families and creative people.
- Become a liveable city for all ages with public spaces that suit everyone from 8 to 80 years
- Improve the connection between smaller towns to achieve good accessibility in the entire functional urban area.
- Improve road safety (especially around schools)
- Increase walking and cycling to improve people's health and achieve climate goals.
- Reduce noise pollution in badly affected residential areas.
- Increase the share of the population that has access to attractive public transport.
- Offer high-speed internet throughout the entire region.

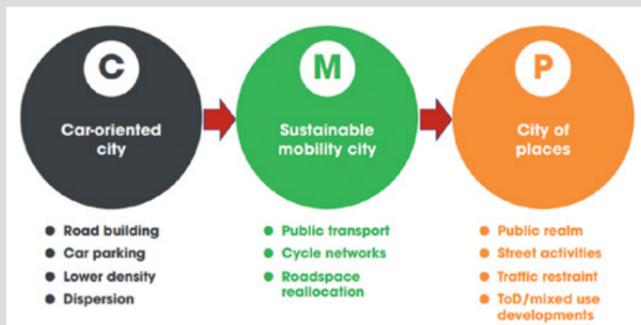taken based on opinions that often contradict one another.

- Keep policymakers in the loop. Consider discussing the draft vision and objectives with leading politicians from all parties, which can also happen in informal meetings, to achieve broad ownership. It can be useful to conduct simple opinion polls with the public; the trends that they reveal can serve as arguments to convince policymakers.

- Discuss the draft vision and objectives, as well as the feedback from citizens and policymakers, with the 'steering group' and agree on a final version.

Figure 5: Urban mobility visions with their typical types of policy measures

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

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

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

Box 4: Leuven, Belgium: Widely accepted Leuven Climate Vision

Best Practice Example

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

Author: Tim Asperges, City of Leuven, collected by Polis
Image: KarlBruninx
For details see: SUMP Annex p.39

Box 5: France: SUMP objectives adapted to cities of different size

Best Practice Example

In France, a new law on mobility was adopted in 2019. SUMPs (now called "mobility plans", previously named "PDU – Plan de déplacements urbains") are compulsory for urban areas of over 100,000 inhabitants. These SUMPs are assigned eleven mandatory objectives for SUMP.
Smaller cities can voluntarily develop either a full mobility plan or a simplified mobility plan, where the legal definition of the objectives is more flexible. The guidelines (under preparation) introduce a distinction between core objectives, which should be integrated by all (mandatory or voluntary) SUMPs, and optional objectives that a smaller city could integrate or not when developing a simplified plan, depending on its level of ambition.

Author: Thomas Durlin, Cerema, collected by Rupprecht Consult
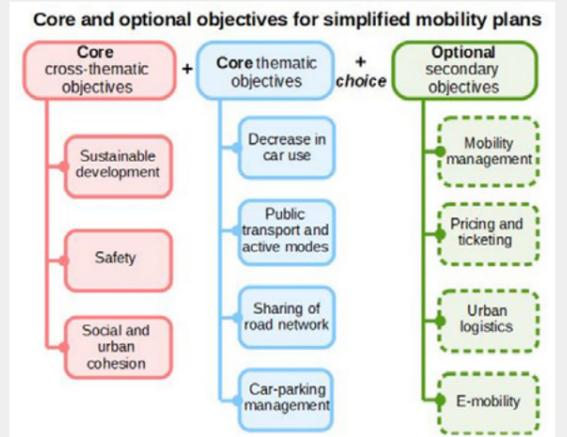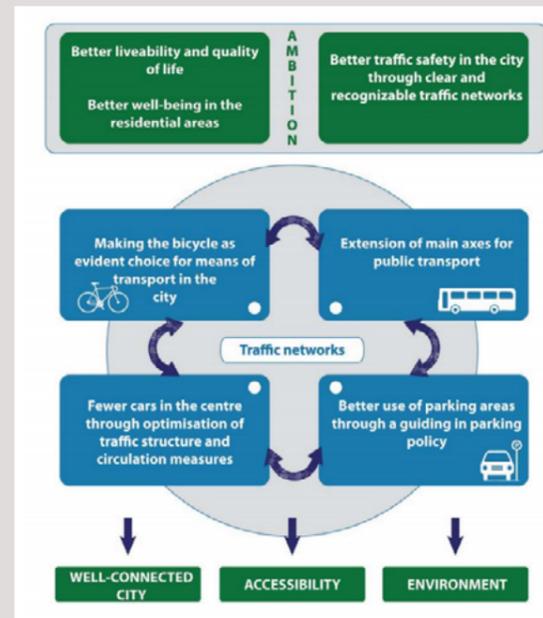Image: Cerema
For details see: SUMP Annex p.42

Figure 6: Sint-Niklaas, Belgium

Source: http://sump-network.eu/fileadmin/user_upload/SUMPs/PROSPER-ITY_SUMP_Sint_Niklaas_Summary_EN.pdf

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

4.2.3. Step 6: Set targets and indicators

Vision and objectives provide an important qualitative description of the desired future. However, this alone is not sufficient. To make these changes measurable, a suitable set of strategic indicators and targets needs to be selected. Regular monitoring can be a challenging task, especially for smaller cities where no one in the administration is trained for it and most of the SUMP is developed by external consultants.[45] The main aim is therefore to define a small set of 'core' targets that is feasible, ambitious, and mutually consistent. It should enable you to monitor general progress towards objectives without requiring unrealistic amounts of new data collection.

Aims

- Define a manageable set of strategic indicators that enable you to monitor and communicate progress towards the objectives.

- Decide on feasible, ambitious and mutually consistent targets that provide a clear commitment as to how you want to change mobility in the city.

Tasks

- Specify your objectives and identify which main aspects need to be monitored.

- Develop a small number of 'core' indicators that are easily measurable, comprehensible, and clearly linked to your objectives. Keep it simple, as someone will have to regularly measure the indicators.

  - Before you start developing your own indicators, check your data audit (see Step 3) to see which

45   Source: Dr. Andrius Jarzemskis, Smart Continent, personal communication 23/01/2020.

indicators other organisations are using. Progress is much easier to monitor if you can rely on data that is regularly collected by others (e.g. regional or national surveys, public transport operator statistics).

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

- Include one or two emotional indicators that are useful for communication purposes. They 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).

- Develop a clear definition for each indicator, the reporting format and an outline of how data is measured, how the indicator is calculated from the data and who is responsible for these tasks.

- Set measurable and time-bound targets that clearly describe how much each indicator should change by which year (e.g. 30% reduction of greenhouse gas emission from urban transport within 10 years; or share of sustainable transport modes above 50% within 10 years). Be ambitious but realistic. While it is good to aim high, unrealistic targets are counterproductive and can be demotivating.

- Also include intermediate targets that represent milestones towards the long-term targets (e.g. 15% reduction of greenhouse gas emissions from urban transport within 5 years; or share of sustainable transport modes above 40% within 5 years).

- Consider discussing the targets in a SUMP 'steering group' meeting to ensure that they are widely supported and realistic. However, be careful not to let lobby groups block ambitious change that serves the majority of people.

- Make the targets a part of the SUMP document to formally adopt them (see Step 9).

Figure 7: Overview of important quantifiable strategic impact indicators, based on the European sustainable urban mobility indicator set (SUMI) and the international standard (MobiliseYourCity)

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

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

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

What is a 'Target'?

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

What is an 'Indicator'?

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

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

SUMI Indicators

To overcome existing barriers and accelerate the uptake of high-quality SUMPs Europe-wide, the European Commission pursues the idea of a common EU-framework for sustainable urban mobility indicators (SUMI). SUMI offers a tool to evaluate the effectiveness of implemented measures and policies, to compare a city's progress over time, as well as to compare with and benchmark against other EU cities. An indicator set that was originally developed by the World Business Council for Sustainable Development (WBCSD), provided the starting point for SUMI, which was tailored to the European context. The indicator set, composed of 19 indicators. This was tested in 46 European urban areas and covers all major policy areas.

Sources: Finger, M., Serafimova, T., Towards a common European framework for sustainable urban mobility indicators, Policy Briefs, 2020/39, Florence School of Regulation, Transport Retrieved from Cadmus, European University Institute Research Repository, at: https://hdl.handle.net/1814/68840 64

Box 7: Örebro, Sweden: Three key targets for traffic development

Best Practice Example

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

Author: Lovisa Blomér, City of Örebro, collected by UBC
Image: Örebro Municipality
For details see: SUMP Annex p.48

Milestone:
Vision, objectives and targets agreed

With reaching the third milestone - halfway through the planning cycle - you have completed the strategic phase of your Sustainable Urban Mobility Plan. Many important decisions regarding vision, objectives and targets have been taken, which together form the strategic priorities of the SUMP. These results can now be consolidated in a summary document, which will provide a stable guiding framework for the measure planning phase.

Before entering the next phase, you should consider communicating your strategic priorities to the public, for example with an article in the local newspaper, a short webinar, and by publishing the summary on your website. If possible, you should also get them adopted by policymakers (e.g. in the local councils) to establish an even more solid base for the measure phase.

4.3. PHASE 3: Measure planning

4.3.1. Step 7: Select measure packages with stakeholders

The development of effective measure packages is the core of Sustainable Urban Mobility Planning. Only well-selected measures will ensure that the defined objectives and targets are met. The selection should transparently assess potential measures for their effectiveness and feasibility, considering experience with similar policies in other cities. To maximise synergies and help overcome barriers, measures should then be bundled into integrated packages.

Aims

- Identify the most suitable and cost-effective measures to achieve your vision and objectives.
- Learn from experienced smaller cities and practitioners to consider all relevant options.
- Ensure efficient use of available resources and avoid selection of financially unrealistic measures.
- Ensure high acceptance of your measure packages among decision-makers, citizens and other stakeholders.
- Define monitoring arrangements for the most important measures.

What is a 'Measure'?

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

What is a 'Measure Package'?

A measure package is a combination of complementary measures, often from different categories, which are well coordi-nated 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 measures (option generation)

- Generate 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. Use databases of measures and lists of measure types to get inspired (see below and chapter 5).

- Involve stakeholders in drawing up the long list of measures, for example, the SUMP 'steering group'.

- Be sure to include a combination of investment, operational and organisational measures for all relevant transport modes in the long list. Also aim for a mix of measures with effects which are short, middle, and long term.

- Consider implementation risk for measures. Recognise that additional technical work will be required to fully define measures where technical or financial risk is high, particularly for larger investments.

- Learn from others' experience. Identify measures that have already been successfully implemented in other smaller cities and get in touch with their planners. This avoids 're-inventing the wheel' and making costly mistakes where others may already have experience.

Assess measures (option appraisal)

- Appraise all measures in your long list to identify the most suitable for your SUMP. Assess their 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).

  - A relatively quick approach used by most smaller cities is expert ratings of multiple criteria (simplified multi-criteria analysis), for example in a series of workshops. To follow this approach, a group of qualified experts should be gathered (e.g. the SUMP 'steering group' or 'core team'). After presenting a measure, each expert rates individually, scores are discussed as a group,
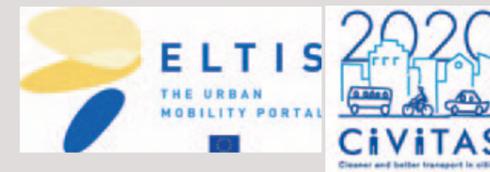
Databases of urban mobility measures

There is such a wide range of possible measures that it can be overwhelming. To make the search easier, chapter 5 describes the most promising measures for smaller cities and towns. Beyond that, you can consult a variety of online measure databases to get inspired:
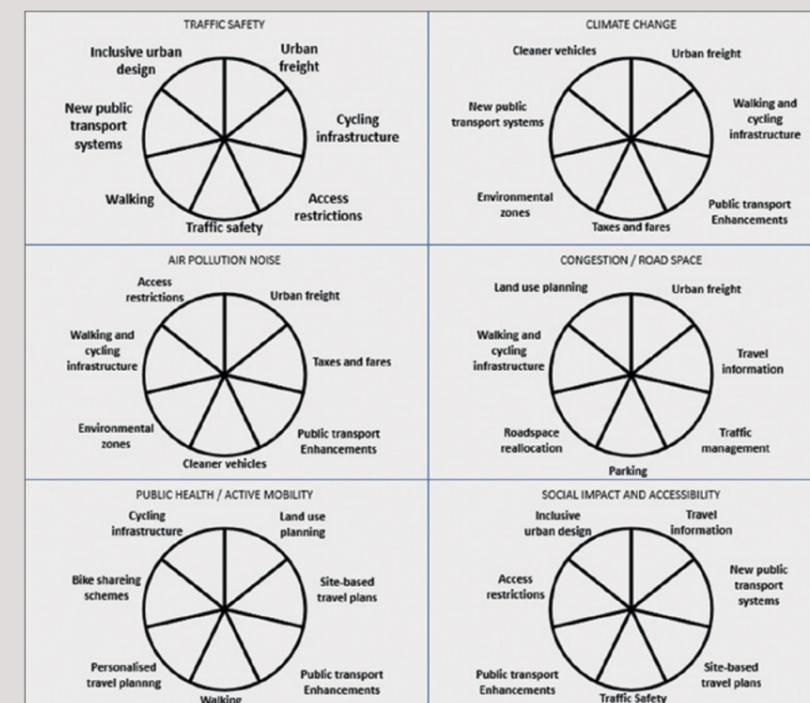
- SUMPS-UP Manuals on the integration of measures and measure packages in a SUMP (three versions for beginner, intermediate and advanced cities), including a long list of over 100 measures for 25 categories: http://sumps-up.eu/publications-and-reports/

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

- SUMP Topic Guides and Practitioner Briefings: The different guides include a range of recommended measures for specific topics or contexts: https://www.eltis.org/mobility-plans/topic-guides

At the European level, the two most comprehensive resources are the case study sections of Eltis (www.eltis.org), i.e. the European Commission's urban mobility portal, and the CiViTAS Initiative for cleaner and better transport in cities (www.civitas.eu).

Tools for measure identification

Figure 8: Examples of measure areas to address different overall challenges common in urban mobility planning. A challenge can be addressed with a wide range of different measures. The different measure areas displayed in the pie-charts can be used as a control to see if a city uses all relevant areas to address a certain challenge (Sundberg, R., 2018. SUMPs-Up Manual on the integration of measures and measure packages - Step up, p. 9).

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 box 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 (www.konsult.leeds.ac.uk) and the Urban Transport Roadmaps tool (www.urban-transport-roadmaps.eu), which can both inform impact appraisal with impartial estimates of expected effectiveness.

- A transport model can provide support in understanding the effectiveness and transport impact of more substantial measures on the transport network, For smaller cities, where the transport network is relatively simple, the use of a transport demand model requires appropriate scaling (if one is used at all). The transport model needs to be at an appropriate level of detail to reflect the complexity or simplicity of the study area, and whereas larger cities might use Variable Demand Models, a more simple model specification will be appropriate for a small city[46]

- Based on the assessment results, reduce your long list to a shortlist with the most promising measures. Especially if you are faced with very tight budgets, limit yourself to only a few measures for each of your objectives rather than an overly complex list that will be hard to implement.

- Prepare more detailed descriptions of the shortlisted measures, defining where and when they would be implemented, and who will be affected. Also, estimate their costs and appraise their feasibility in more detail. Modify them based on the results to avoid unrealistic projects and ensure cost-effectiveness. For example, if it turns out that certain key measures risk being unfeasible, replace them with other measures to ensure the shortlist still achieves your objectives.

- Involve other departments (including the financial department) early on and provide benefits for

46   Further discussion on transport model scoping is available at www.jaspersnetwork.org/plugins/servlet/documentRepository/displayDocumentDetails?documentId=222

participating. That will help you to define responsibilities and cost-sharing later on (see Step 8 and 9).

Define measure packages

- Explore different methods for grouping measures, for example:

  - by type of measure (striving for a mix of land use, infrastructure, regulation, 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 that resolve the same problem to a package),

  - by geography (combining measures in the same area into one package),

  - by cost (combining an effective but expensive key measure with measures that create revenue, to achieve lower net costs),

  - by bundling for external financing (grouping measures in need of external financing that: i) support one clearly defined objective; ii) are implemented in the same impact area; iii) share the same project owner; and iv) have similar implementation periods), or

  - around bigger projects (such as a new bicycle network, seeking measures which complement and reinforce such projects).

- Group measures into packages to increase their acceptability and effectiveness. Check that you:

  - Prioritise measures that avoid and shift traffic before investing in expensive infrastructure that improves it. The four-step method can be a useful tool to find cost-effective measures (see box below).

  - Integrate proposed transport measures with land-use planning, and where possible also with environmental, health or economic measures.

  - Have a balance of short-term and long-term measures.

- Conduct a risk assessment of the selected measure packages. In its most simple form, this can be a brainstorming exercise which assumes the effectiveness of the measures depends on what

Tools for measure appraisal

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

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

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

would happen if they changed, and how to mitigate those risks.

- Discuss the selected measure packages with stakeholders and involve them in the selection

process, for example in a meeting of the SUMP 'steering group'. Also consider asking for feedback from citizens, for example in public meetings or

information booths on the market square. Then make a final selection of measure packages.

Monitor and evaluate measures

Tools for measure packaging

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

- **Step 1: Rethink!** Solutions influencing travel demand and choice of transport mode (land-use planning, demand management/ mobility management).

- **Step 2: Optimise!** Solutions for a more efficient use of the existing transport system (infrastructure, vehicles etc.).

- **Step 3: Reconstruct!** Reconstruction of existing infrastructure.

- **Step 4: Build new!** Investments in infrastructure and larger reconstructions.

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

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

Figure 10: Types of measures in the different steps in the four-step-principle (*Source: Swedish Transport Administration et al., 2014*)

- Plan monitoring and evaluation of the most important measures or measure packages. Usually, it will not be possible to evaluate all measures, so focus on the most controversial and most expensive. This helps you to systematically learn from experience, but also to provide evidence of the effectiveness of the SUMP

and its measures, which is essential for long-term success, as it allows decision-makers to justify where financial resources were used. For each of the main measures:

- Outcome: What impact is expected from it? Define a suitable outcome indicator to be able to evaluate success, 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? Define a suitable output indicator to be able to monitor the extent to which the measure has been carried out, e.g. km of new bus lanes or number of new buses in operation.

- Input: What resources are you spending? Monitor the investment and maintenance costs (including labour costs) of each measure to react in time if costs get out of hand.

- If measuring outcome is too complicated, also simple satisfaction surveys on specific measures

can be very useful. For example, you could ask shop owners and residents of the street about their satisfaction with a new pedestrian zone, or look at economic statistics to see how it has benefited turnover?

- Agree on clear responsibilities and a budget for monitoring and evaluation.

4.3.2. Step 8: Agree on actions and responsibilities

Once the 'measure packages' have been agreed, operational planning must break them down into actionable tasks (or 'actions') for the departments and institutions in charge of their implementation. Clear responsibilities, implementation priorities and timelines need to be agreed, based on detailed action descriptions and cost estimations. The main aim of this step is to agree on a widely supported set of clearly defined actions that helps to achieve the vision and objectives.

Figure 11: Overview table to plan monitoring and evaluation activities filled with example indicators

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

Aims

- Identify links between actions and find the best order of implementation.
- Ensure that all actions are clearly prioritised and realistically deliverable.
- Secure efficient allocation of resources (human, knowledge, time).
- Achieve a formal agreement on responsibilities, timeline and resource contributions among all partners involved in implementation.

Tasks

- Break measures down into several actions. This refers to the specific tasks needed for implementation, e.g. the construction of a bicycle highway first needs a study to identify where commuters regularly cycle, a comparison with the current cycling network, an analysis of land ownership, an assessment of suitable locations to cross bigger roads etc. which then may lead to a public consultation and the tendering process before the administrative approval process and finally the construction can start.
- Identify links between different actions to set up the most effective order of implementation. 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. parking fees) should be implemented in a package with or preceded by popular ones (e.g.

What is an 'Action'?

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

cheaper public transport tickets) to increase acceptability.

- Specify the actions and present them in an overview table (see template table below), including detailed action descriptions, legal requirements, expected contribution to objectives, as well as suggested priorities, responsibilities, timeline, cost estimates and funding sources.
- Assess the financing requirements and identify financing instruments and funding sources for the selected actions. Assess all the following options to identify the most suitable ones. Explore options beyond the local budget.
- Revenue funding: tickets, parking fees, advertisements;
- Private sector involvement, e.g. through public-private partnership arrangements or via companies' mobility management funds;
- Fundraising activities involving appropriate sponsors (but consider compatibility with marketing strategy);
- Local taxes and budgets: from different municipalities and different policy domains;

Box 8: Sweden: Green Bonds programme to finance municipal projects

Best Practice Example

Kommuninvest, an organisation collectively owned by many Swedish municipalities, raises funds from investors through a Green Bonds programme, which it then lends to its member municipalities for sustainable projects. By pooling municipal projects, investors get a secure fixed income product with guaranteed climate benefits. Municipalities on the other hand benefit from better loan terms, an easy application procedure and loans even for smaller projects. To be eligible, projects must fall into one of eight categories and meet certain sustainability criteria, such as contributing to national or regional environmental goals. Eligible in the category clean transportation are for example trains, metros, trams, buses and infrastructure supporting public transport and other sustainable transport modes.

Source: https://www.interregeurope.eu/policylearning/good-practices/item/2739/green-bonds-financing-climate-friendly-investments-projects/, collected by Rupprecht Consult.
Image: Kommuninvest of Sweden

- National/regional subsidies and EU funding[47];
- External loans, municipal and green bonds.
- Identify sources of funding for preparatory feasibility and market studies needed for larger (infrastructure) investments.
- Organise meetings to discuss the proposed actions with all those who could play a role in financing, designing and implementing them. Make sure to involve other units and relevant external organisations in the discussions (e.g. regional road authority, district administration).
- Agree on the timing, budget and clear responsibilities for each action. Focus on the next 2-3 years in your detailed planning, but also perform outline planning for the next 10 years.
- Aim for a formal agreement by decision-makers (e.g. heads of all units and organisations that have a role) to provide a reliable framework.
- Foster ownership and high acceptance of your planned actions by involving decision-makers, stakeholders and the public:
  - Consider organizing a dedicated information session in the local council well ahead of the official process to adopt the SUMP. Direct conversations with key decision-makers, such as mayors and the heads of larger political parties, can also give you important information on how to broaden the political support and facilitate adoption.

- Organise a meeting of the SUMP 'steering group' to present and discuss the final selection of actions.
- Flag the main elements of the SUMP, including the most important actions, as a topic in the local

European funding

An overview of current EU funding sources for cities is available at https://ec.europa.eu/info/eu-regional-and-urban-development/topics/cities-and-urban-development/funding-cities_en

Further advice on European funding opportunities is provided by:
- European Investment Project Portal
- European Investment Advisory Hub
- JASPERS
- fi-compass

More information on action planning

SUMPS-UP
Standards for developing a SUMP Action Plan (available in 8 EU languages)

https://sumps-up.eu/publications-and-reports/

47   https://www.eltis.org/in-brief/eu-funding

Figure 12: Example of a measure map giving an overview of planned changes (Buxtehude, Germany, population 40,000)

Source: https://www.buxtehude.de/portal/seiten/verkehrsentwicklungsplan-gute-resonanz-bei-zweiter-buergerbeteiligung-900000675-20351.html

media. When communicating the actions, emphasise the positive change they are contributing to and their role in the SUMP. If possible, use quantifiable evidence of expected benefits and attractive visual elements, such as before-after pictures from other cities.

4.3.3. Step 9: Prepare for SUMP adoption and financing

Following first cost estimates earlier on, it is now time to develop detailed financial plans with a focus on the actions to be implemented first. Based on your organisation's conventions, a detailed financial scheme can be included in the SUMP itself or is part of a separate process. The Sustainable Urban Mobility Plan summarises the outcome 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.

Aims

- Create a detailed financing plan for first-phase actions.
- Ensure the financial viability of actions, also beyond the initial funding period.
- Finalise a high-quality SUMP document ready for adoption by political bodies and release to the public.

Tasks

- Prepare financial projections for first-phase actions that describe all expenditure (up-front investments as well as operation and maintenance costs) and related revenue per year.
- Coordinate with other municipalities, regional institutions, the national level and public and private operators to jointly fund measures. Agree on the distribution of costs and revenue.
- Allocate financing and funding sources for these actions, including potential changes in revenue streams per year.
- For each external financier, prepare a separate detailed financing plan for their investments in the

Figure 13: Example of how to describe measures and measure packages in an action table (based on Mattson, C., 2018. SUMPs-Up Standards for developing a SUMP Action Plan, p. 23.)

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

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first phase of implementation (often the next 1-2 years).

- Compile a full draft of the SUMP. Conduct a public consultation process and finalise the Strategic Environmental Assessment as appropriate.
- Make final amendments for cooperation with key stakeholders. Finalise the text and turn it into a document that receives wide political and public support, for example by adjusting sensitive aspects that would stop key decision-makers from supporting it. Be careful not to dilute it too much, it must be ambitious enough to achieve its sustainability objectives.

- Consider branding your SUMP to communicate its core idea, create consistent visibility and help citizens and stakeholders to recognise and remember it (e.g. Brussels named its SUMP "Good Move"[48]) Branding may include giving it a catchy title, developing a visual identity, theme and colour scheme; and designing a dedicated logo.

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48   https://mobilite-mobiliteit.brussels/en/good-move

SUMP Self-Assessment tool

To check the quality of the planning process to develop your final Sustainable Urban Mobility Plan, it is recommended to use the online SUMP Self-Assessment tool. The tool can be used at all stages of the planning cycle - both to evaluate and improve mobility planning at the beginning and during the process, and to assess the quality of the SUMP before it is finalised. The Self-Assessment consists of tailored sets of questions depending on your planning context and interests. After completing the questionnaire, the results page will show you how well your document fulfills the principles of a SUMP, enabling you to identify the strengths and weaknesses of your approach. It will provide you with tailored advice for further improvement, good practice examples and links to guidance for your specific situation. To ensure a diverse feedback on your final document, the SUMP Self-Assessment should be completed by several people of the SUMP core team.

Link to SUMP Self-Assessment: www.sump-assessment.eu

Typical structure a Sustainable Urban Mobility Plan

1. Background, local context and short overview of development process (including stakeholder and citizen involvement)
2. Results of mobility analysis and scenario exercise
3. Vision, objectives and key targets
4. Measure packages with their actions (including timeline, responsibilities and sometimes financing)
5. Monitoring and evaluation scheme

Milestone:
Sustainable Urban Mobility Plan adopted

The most important milestone of the planning process is the adoption of the Sustainable Urban Mobility Plan by as broad a political coalition as possible. The SUMP needs to be legitimated by the elected political representatives of the body/bodies responsible for the development (e.g. city council, neighbouring administrations, regional council). This is a key step in fostering acceptance, making it accountable and providing an agreed-upon framework for measure implementations. The adoption process may take a few months and will depend on the national regulatory framework and administrative structure. Once it is adopted, your final SUMP deserves to be celebrated with the local community. You might organise an event, where stakeholders, the wider public and (local) media are invited and the final document is presented publicly.

4.4. PHASE 4: Implementation and monitoring

4.4.1. Step 10: Manage implementation

After SUMP adoption, the implementation phase can begin. 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 generally not performed by the 'SUMP team', but by the responsible technical planners. Therefore, a good handover and continuous effective coordination by the 'SUMP team' is vital to ensure a coherent approach.

Aims

- Ensure sound coordination among all involved parties to facilitate an effective implementation process.
- Address potential risks and guarantee transparency.
- Ensure timely procurement of all goods and services needed for the implementation.

Tasks

- Stay pro-active as the SUMP core team to ensure continuity between process development and implementation. Continue to meet regularly (e.g. monthly) throughout the implementation phase to keep a good overview of progress and to plan contingency activities in case actions are not on track.
- Prepare action factsheets that provide all key information in a structured manner (see example below) and hand them over to the colleagues in charge of their implementation.
- Agree on management procedures and responsibilities. Each action should have one main person in charge of managing its implementation.

Ensure that each action manager summarises the agreements in a work plan that serves as a common framework for all stakeholders involved in implementing the action.

- Assess risks and plan for contingencies (continuation of analysis in Step 8). Which actions have strong effects on other actions, potentially creating delays that could pose a risk to the success of the entire SUMP? How can you react to such delays?
- For procurement processes, aim for joint procurement with other authorities that may result in lower prices due to economies of scale (e.g. joint procurement of buses or traffic lights). Also consider sustainability aspects as minimum requirements or award criteria, and highlight life cycle costing, instead of the purchase price alone, as a cost criterion. This better describes the true cost for you as a buyer and at the same time often favours sustainable choices, e.g. low-consumption (and therefore low-emission) vehicles.
- Keep regular personal contact with the action managers. Agree on what format and how often to get status updates from them (e.g. short informal phone calls only between SUMP coordinator and action manager to avoid bureaucratic overload). In case of difficulties, intensify communication, provide needed support and use decision-maker backup to enforce the implementation of actions.
- Organise regular meetings to check the general status of action implementation. Meetings with the group of all action managers should be organised annually.

Figure 14: Example factsheet for different actions of measure "Marking and extension of cycle paths"

Measure: R 2	Marking and extension of cycle paths

Actions:
- R 2.1   Opening pedestrian zones and one-way streets for cyclists
- R 2.2   Implementation signposting Street #1 – Street #10
- R 2.3   Traffic calming Street #1 – Street #10
- R 2.4   Further routes according to cycling program (2018-2022)

Traffic types involved: Cycle traffic	**Planning status:** Planning/Implementation	**Priority:** very high	**Implementation period:** short to midterm
Benefitting traffic types: Cycle traffic			

Actions:
- Creation of a coherent network of cycle paths in City #1
- Implementation of the routes planned in the cycling programme to connect important destinations in the city (residential areas, city centre, shopping centres, universities, schools, businesses).
- Promoting cycling by improving road safety for cyclists
- Increasing the perception of cyclists as equal road users
- Increasing the share of cycling in the city of City#1

Measure efficiency	
Contribution to the achievement of objectives:	Very high
Contribution to improving environmental compatibility:	Very high
Contribution to improving environmental compatibility:	Low
Costs and financing	
Investment costs:	Medium
Annual follow-up costs:	Low
Financer:	Budget of City#1
Eligibility of funding:	tbd
Measure implementation	
Dependency on other measures:	R 1: bicycle traffic programme and according responsible
Requirements for other measures:	
Owner / responsible / control	Department of Housing and Municipal Economics, responsible for bicycle traffic
Planning:	Construction company
Realisation:	
Third parties to be involved:	• Commission for Road Safety and Sustainable Mobility • Cycling NGO

4.4.2. Step 11: Monitor, adapt and communicate

Systematic monitoring during implementation is an important part of Sustainable Urban Mobility Planning. It clarifies whether the process is on track, allowing corrective actions to be taken if needed. During implementation, the wider public is usually directly affected by visible changes in the city for the first time and therefore expresses high interest in it. Accordingly, a successful implementation process must inform and engage the local community regularly.

Aims

- Identify problems and bottlenecks early and adapt where needed.
- Keep track of progress towards achieving the wider SUMP targets.
- Increase ownership of measures by involving citizens in the implementation process.

Tasks

Monitor progress and adapt

- Keep track of implementation activities through regular personal contact with the action managers.
- Regularly collect data for measure-level indicators (defined in Step 7) to monitor the progress of the main measures towards their targets (every 1-5 years, depending on the type of measures).
- Regularly collect data for the strategic indicators (defined in Step 6) to monitor progress towards your general SUMP targets (usually every 1-2 years).
- Be flexible about updating your measures and making changes to implementation activities. You may need to adapt them due to:
  - Difficulties in implementation activities. If, for example, a measure encounters strong opposition, consider turning it into a temporary experiment that will be properly evaluated after a certain amount of time (e.g. one year), and then keep or discontinue it depending on the results. Often, opposition decreases once people get used to changes and see the benefits (such as in the case of traffic calming of a public square in Koprivnica, Croatia).
  - Under-achievement of important targets. If individual measures of the entire set of SUMP measures turn out to be less effective than assumed, investigate the reasons and adjust in time. If, for example, new protected bicycle lanes are not used as much as intended, find out if something is wrong with them or if important connections leading to them are missing and react accordingly.

- Technological, legal or political developments that render your measures obsolete or make other, more effective measures possible. New types of electric vehicle, for example, might require a redesign of planned infrastructure, or local elections might lead to measures to redistribute road space that would not have found a majority before.
- Clearly state the changes to SUMP measures that result from the monitoring process and get formal approval for the most important changes at the political level.

Inform and engage the public

- 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 the minority.
- Mitigate negative effects that accompany implementation (e.g. offer support to businesses affected by long-term construction of a new tram route).
- Keep the wider public well informed about the progress in measure implementation. Publish evaluation results targeted at citizens and politicians. Present your emotional core indicators (see Step 6) in the form of high-quality figures that are easy to understand for non-experts. Provide a general update on the implementation status to the local council every one or two years to keep the SUMP high on the agenda (e.g. in the form of a status report or presentation in a council meeting).
- Highlight milestones of measure implementation and celebrate accomplishments with the community (e.g. a street festival after pedestrianisation).

4.4.3. Step 12: Review and learn lessons

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. Now that you have completed the cycle, it is important to have a look at what went well and what did not, to share experiences and to take the lessons learnt into the next planning cycle.

Aims

- Evaluate the successes and failures of the planning process.
- Find opportunities to exchange lessons learnt with other cities.
- Enhance your understanding of effective Sustainable Urban Mobility Planning.
- Prepare for the next SUMP cycle.

Tasks

- Evaluate the successes and failures of the SUMP. Reflect on the quality of the different planning phases with people who were closely involved in the process and with people who only had a minor role.
  - Meet with the SUMP 'core team' and with the SUMP 'steering group' to discuss what went well and what did not. You can achieve a more honest evaluation by also giving them the opportunity to provide anonymous feedback, for example with an online survey or a feedback box at the meeting.
  - Consider asking managers of individual measures, less-involved stakeholders and citizens that participated in events for their opinion. Focus groups or short interviews work well, but it is also useful to simply provide an opportunity for anonymous online feedback.
- For impact evaluation, you can begin to assess the broader impact of the implemented measures once enough results are available. Identify what was achieved, but also list objectives and strategic targets that were not met but are still important.
- Share the results of your analysis of successes and failures so that other cities can learn from your experience. Consider reaching out to other cities in your country or region that you already have connections with and invite them to share and exchange. This could be in the form of a simple ½-day workshop with one or two other cities.
- Get prepared to develop the next generation of your SUMP. Consider new challenges for the future (society, technology, transport systems) that could have an impact on the planning cycle. Especially development of new technologies and data usage might lead to major changes soon (e.g. Mobility as a Service, automated driving, big data, shared mobility).

Box 10: Lund, Sweden: Yearly monitoring reports summarising the status of target attainment

The city of Lund monitors the actions of their SUMP closely and evaluates them against the targets set by the politicians in the planning process. The number of pedestrians, the use of bicycles, motor vehicles and public transport are therefore measured annually. A survey among citizens collects information on attitudes and mobility behaviour every 4th year. When the targets are not met, the actions are intensified or changes are proposed for the following year.

To visualize and communicate the results of the monitoring process, Lund uses a "traffic light" system: if actions are proceeding well and reach the targets (green), if they need adjustment (yellow) or if they need to be re-planned/ changed/ replaced (red).

Author: Anders Söderberg, City of Lund, collected by UBC
Image: City of Lund
For details see: SUMP Annex p.72

Best Practice Example

- Where appropriate, identify the aspects that feed into higher level plans (e.g. regional or national plans)

and communicate these effectively as input for those planning cycles.

Box 11: Ginosa, Rivas-Vaciamadrid, Kilkis: Exchanging knowledge in a European learning programme for cities

Best Practice Example

The CIVITAS SUMPs-Up SUMP Learning Programme 3 allowed small- and medium-sized cities to share knowledge and experiences through various activities. As a result of exchanges, Rivas-Vaciamadrid learned about the steps to select, prioritise, and describe measures and followed these to reorganise its public transport system. The SUMP working group in Kilkis referred to insights about stakeholder engagement, measure selection, monitoring, and evaluation to develop an effective implementation methodology. Ginosa plans to establish a SUMP working group, which would embed learning from the programme into the city's long-term strategies and thereby help foster a more sustainable Ginosa.

Author: Jorge Romea Rodriguez, Rivas Vaciamadrid, Loredana D. Modugno, Ginosa Municipality, Eleftheria Spanou, Kilkis Municipality, collected by ICLEI
Image: Ana Dragutescu
For details see: SUMP Annex p.78

📍 **Milestone:**
Measure implementation evaluated

Congratulations - you have successfully reached the last milestone of the cycle.

The completed cycle and the achieved success deserve to be celebrated with the local community. You could get creative here and present the experience of the planning

process in interactive and diverse formats (e.g. a walking city tour, a presentation of before and after scenarios, an 'after movie', etc.). Show people what you have achieved together, what you can be proud of and what the future could still hold when continuing the SUMP approach.

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5. Sustainable mobility measures for smaller cities and towns

Mobility planning does not provide one-size-fits-all solutions. Which measures are most suitable for your town depends very much on the specific mobility situation and city structure – and on the actions that have already been implemented. However, some measures have proven to work well in many smaller cities and towns. It is therefore recommended to start with these if they are not yet covered. This chapter presents such proven approaches in 10 categories, described in more detail below, which are meant to inspire you when selecting measures for your town:[49]

- Safe and healthy schools
- Liveable residential areas within a well-structured street network
- Strengthening cycling as a daily mode of transport
- Strengthening walking
- Parking management for a vibrant city centre
- Public space activation
- Attractive places for working and living
- Attractive public transport
- Tailored car and ride-sharing
- Sustainable freight and logistics

Before delving into the different measure areas, there are some general considerations on the kind of measures that tend to be most useful for smaller cities and towns. For strategic reasons, it can be clever to start with popular measures that show quick results and create support for further changes. Well-known problem spots that affect many people present such an opportunity, for example, an ugly train station, a dead city centre or traffic accidents close to schools. Measures that address them usually receive a lot of positive attention from the public. Geographically, it can be beneficial to start with the town centre and then work your way outwards from there. Most people pass through the centre at least sporadically, which means visible improvements there can illustrate to a large share of the population what is possible. In approaching problem spots and the town centre, "light

and cheap" solutions and strong collaboration with residents help to achieve quick results (see info on placemaking in the section on public space activation below). In recent years, more and more cities have started to first implement temporary solutions to test them, optimise them and then make them permanent.

Another important constraint for many smaller cities is their limited financial resources. Therefore, the following types of measure tend to be particularly useful:

- Smaller and low-cost measures
- Mobility management / organisational and communication measures
- Improvements in existing infrastructure rather than expensive new infrastructure
- Efficiency measures which decrease costs for operation
- Measures that rely partly on volunteers, such as volunteer-run buses
- Cross-sectoral measures that combine mobility with cultural and social aspects.

Usually, it is recommended to cover the fundamentals before getting into the complexities for example of complicated technical systems, unless such expertise is available locally. In most cases, it will be more effective to implement measures that have proven to work well in other cities rather than venturing into unknown territory. European databases such as Eltis and CiVITAS offer a richness of case studies for you to explore, of which the measure sections below give you a first taste. However, experienced smaller cities sometimes manage to position themselves as test fields for very advanced technologies, enabling them to attract large amounts of funding and investments. Due to a less complex traffic system, they can provide a more controlled learning environment to evaluate new measures. Helmond in the Netherlands is one such example, which has established itself as a leader in automated vehicles and is now part of many European innovation projects. Another example is electric buses in Sweden, where the industry tested fully electric bus fleets first in several small cities before they were implemented in the larger cities.[50]

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49   Based on own expertise and inspired by an extensive review of existing literature, such as CEREMA, Le plan de mobilité rurale, who recommends focussing on the aspects that can be improved such as short trips, longer trips between city centres, short trips that can be done by biking or walking, parking, support for elderly, rural networks and intermodality.

50   Source: Rasmus Sundberg, Trivector, Sweden, personal communication 20/01/2020.

> **"Sometimes, the smartest decisions aren't the most expensive or technologically advanced. We have found that innovation and social change can be implemented through community cooperation – often without a big budget."**
> **Jorge Romea Rodríguez, Head of the Department for Environment and Mobility, City of Rivas Vaciamadrid (Spain, population 80,000)**

5.1. Safe and healthy schools

Traffic safety at schools is a growing problem in many towns, and a good topic to kick off broader changes. Many parents perceive it as too dangerous for their children to walk, cycle or take the bus to school. Therefore, they take them by car, causing unregulated drop-off situations in front of the school gates, which in turn make it less safe for other children to walk or cycle. This vicious circle not only causes congestion, safety risks, and costs parents considerable time every day. The lack of physical activity also negatively affects the health and motor, cognitive, and social development of children.[51]

School mobility is a good topic to start with because everyone can agree on the aim: to provide safe and healthy traffic conditions for children. It also is an emotional topic that receives a lot of attention. Many people have contact with schools in some way – as parents, grandparents, or siblings – and will notice positive changes. And many people will benefit once children can get to school on their own: parents can save time, children can stay healthy, learn to navigate the city, and usually enjoy the independence, and schools profit from more focused pupils.[52] Focusing on safer routes to schools can therefore be an ideal showcase for sustainable mobility in general.

Safe infrastructure

School mobility requires a combination of infrastructure improvements and support measures.[53] Safe

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[51] https://www.ivm-rheinmain.de/kommunaler-service/schulisches-mobilitatsmanagement/

[52] For example, in the UK 48 % of children would like to cycle to school, but only 2 % actually do so (www.theguardian.com/environment/riding-bikes-to-school-werecreating-a-cycling-culture-here), from https://www.eltis.org/sites/default/files/supporting_and_encouraging_cycling_in_sumps.pdf p.13

[53] A "Safe System approach" requires a combination of safe infrastructure, safe speeds, safe road users and good quality emergency response. https://etsc.eu/how-safe-is-walking-and-cycling-in-europe-pin-flash-38/

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infrastructure and safe speeds are the basis, without which it will be hard to convince anyone to send their children to school on their own. Safe infrastructure for cycling is complex for a small city or town with very low cycling awareness or a lack of cycling culture. Therefore, planners and policymakers should also refer to the section below on Strengthening cycling as a daily mode of transport.

- The easiest and cheapest way to increase safety is to reduce speed limits, for example by introducing car-free or 10km/h zones directly around schools and 30km/h zones in the wider area. Also, restrictions during certain times of the day can be useful, such as 'school streets'. To make sure that cars keep to the new speed limits, road infrastructure should signal the need for careful driving. Narrowing bits of the roads, speed bumps, raised pedestrian crossings or even giving road sections a different colour can help to achieve this.

- Enforced bans on dropping off pupils directly in front of the school gates avoid chaos at the beginning and end of school days. Clear signs and a person enforcing the rule (traffic police or teacher) might be needed especially in the initial phase. Dedicated drop-off spots located a bit further away, coordinated with supervised walking buses from the drop-off location to the school gates can be offered as an alternative.

- To enable cycling to school, there is a need to create a basic, coherent, safe, comfortable, and attractive bicycle network quickly and inexpensively within urban areas (see Strengthening cycling as a daily mode of transport).

- To make it more convenient to cycle, high-quality bicycle parking should be provided at schools, preferably weather-protected facilities with a roof.

- To allow children to take public transport, a bus (or train) stop needs to be provided close to each school, with regular connections that are well-timed with the beginning and end of lessons. Most towns also offer subsidised tickets for pupils to make it affordable.

- To be able to prioritise your efforts and identify problem spots, it can be useful to ask the pupils directly. They can draw their usual way to school on a city map, marking areas they perceive as dangerous or annoying and supporting this with photos if they like. This will provide a good data basis, and children and parents are usually enthusiastic to help improve their school routes.

Best Practice Example

Box 12: Bolzano, Italy: School streets

'School streets' is a concept that was first introduced in Bolzano, Italy (pop. 107,000). The basic idea is that all motorised traffic is closed off for about 30 minutes at the beginning and end of the school day. This has helped to improve safety, reduce congestion and increase the share of children walking and cycling to school. By now, 'school streets' have spread to many other countries. As people tend to be sceptical in the beginning, they often start as a pilot project before being made permanent.

For details see: https://www.880cities.org/wp-content/uploads/2019/11/school-streets-guide-book-2019.pdf
Photo: http://www.metamorphosis-project.eu/case-studies/school-street

School mobility management

Safe speeds and infrastructure should be combined with soft measures to maximise the effect.

- A school route map that shows the most accessible and convenient routes for walking and cycling helps pupils and parents to plan the way to school.

- Organising 'pedestrian buses' or 'walking buses', in which parents (or other adults) act as 'drivers' who walk along a fixed route to pick up children on their way to school, can lower parents' concerns. Letting pupils paint the signs for the meeting points adds a creative element and makes the measure visible.

- This also works for groups of cyclists, called 'school train'. The safety of cyclists increases when they cycle as a group, as they become more visible.

- Cycling training at primary schools ensures that everyone gets the chance to learn to cycle – and knows the traffic rules. This is offered by traffic police in many countries.

- Carpooling of parents, so that one parent picks up several other children on their way to school, is common in many towns and reduces the number of cars. Parents usually take turns on different days.

Schools can support this, for example, with matchmaking at parents' evenings.

- 'Park & stride', consisting of parking the car 500 to 1000m away from school and walking the remaining distance together, encourages active mobility also for families who live too far to walk or cycle the whole trip.

- Campaigns are a good opportunity to kick off these offers and raise awareness. You can either design your own action days or participate in one of the many existing campaigns. The traffic snake game, for example, is a mobility education game based on creating competition between classes on who travels to school the most sustainably. In most European countries, many other such action weeks exist, often organised by public authorities, mobility associations or insurance companies. Campaigns are also a good opportunity for joint projects by several departments, such as a common walking campaign or cycling competition by police, educational and mobility departments.

- Don't underestimate the potential for the school students to act as 'champions' of behavioural

Best Practice Example

Box 13:Griesheim, Germany: Playable school routes

Griesheim (pop. 27,000) redesigned its streets for children. The city installed about 100 objects and sculptures on school routes to give children the opportunity to experience their way to school in a new way. Those objects were designed to relax, play, jump, and climb or to make the way easier to remember.

For details see:
http://sump-network.eu/fileadmin/user_upload/Innovation_Brief_Children_as_active_stakeholders_in_the_process_of_city_transformation_web.pdf
Source: www.metamorphosis-project.eu

change, particularly at primary level. Engagement with and enthusing students can be highly effective.

- To implement several of these measures in a structured package, schools can develop School Mobility Plans. For more inspiration, see this factsheet[54].

5.2. Liveable residential areas within a well-structured street network

Liveable neighbourhoods are crucial for smaller cities and towns, whose main added value is a high quality of living. To attract residents, it is a must to offer a pleasant living environment with less noise, cleaner air and more green spaces than bigger cities. Measures to increase liveability go hand in hand with safe and healthy school mobility. As many schools are located in residential areas, traffic calming around schools directly benefits residents and can serve as a first step towards similar steps in the wider area. Accordingly, the two are a good package to start with, because neighbourhood liveability measures also tend to be popular with residents if communicated well.

Road network
The best approach to achieve calm residential areas while ensuring good general accessibility is a well-structured street network. The aim is a network that steers motorised traffic for medium and longer distances to main roads, and only allows first and last-mile traffic

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54 https://www.trafficsnakegame.eu/wp-content/uploads/2014/05/Factsheet2-Mobility-management-measures-for-schools.pdf; and a detailed handbook in German: https://www.ivm-rheinmain.de/wp-content/uploads/2013/12/ivm_Schulisches_MM_Handbuch_2013.pdf

at low speeds in the residential areas. For a systematic approach, it is useful to classify the function of your roads, identifying which ones should serve through traffic, and which ones can be traffic-calmed.

The first step to improve residential streets is to lower speed limits. 30km/h should be the maximum. Beyond that, lowering speeds down to 10km/h on selected streets, declaring them 'play streets', or even making some streets car-free, can give a huge benefit to the neighbourhood. Such streets will quickly become new playgrounds where children play football, draw with chalk or jump rope.

To make sure that cars keep to the new speed limits, road infrastructure should signal the need for careful driving. Narrowing bits of the roads, speed bumps, raised pedestrian crossings or giving road sections a different colour can support this. Also, speed cameras and systems of one-way streets help to improve safety and keep traffic out. Traffic calming should be combined with awareness campaigns that explain the benefits so that they are not perceived as restrictions. After an initial period of getting used to the new situation with possible complaints, for example, the experience from hundreds of towns all around Europe shows that residents enjoy living in traffic-calmed neighbourhoods.

For more experienced towns, one of the most powerful methods to prevent through-traffic in residential areas – and the town centre – is to use circulation plans. Such plans define town sections, for example by dividing the centre into 3-5 sections, and redirect all car traffic between them through primary roads around the centre (e.g. ring roads). Buses can usually still travel as before to encourage public transport usage. Applied to individual residential areas, a circulation plan could mean that all cars need to enter and leave at a single entrance. A good circulation plan is amongst the most

Best Practice Example

Box 14: Houten, Netherlands: Sustainable city structure
Population 49,000. Commuter town about 9 km southeast of Utrecht.

"Houten is internationally known for its urban design. Because of the city structure, people are encouraged to travel by bike and train. Distinctive qualities of Houten include the accessibility of the railway station, green and water zones throughout the whole city, numerous soccer and basketball fields, high standard of accommodation for different groups and the child-friendly bicycle paths. It is one of the safest cities in the Netherlands. Cyclists and cars are able to avoid each other: an extensive network of bicycle tracks connects the different parts of the town, while cars have to go to the city ring road before they can go to another part of the city."

For details see: https://bicycledutch.wordpress.com/2018/01/16/houten-cycling-city-of-the-netherlands-2018/ & many other sources available on the internet

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cost-effective measures available to cities. It can be implemented without high costs and has shown impressive results in Houten, Gent, Leuven and other Dutch and Belgian towns. Such a plan allows residents good accessibility by car for longer trips, but strongly encourages cycling and walking for journeys inside the city, as these modes will become the easiest and fastest way to get around.

Integrated urban and mobility planning
Besides the roads, the location and site layout of residential neighbourhoods are important factors to achieve high liveability. Newly developed areas should be planned as safe and pleasant neighbourhoods built for sustainable mobility from the start, and existing areas can benefit from a range of measures that can be integrated into neighbourhood mobility plans.

Location issues: To avoid urban sprawl, newly developed areas should be located within walking or cycling distance of the city centre or close to a bus or train station with frequent connections. As mobility routines are shaped right after moving in, sustainable transport solutions should already be in place when new developments are carried out, which requires good cooperation of urban and mobility planners. Following

the vision of a 'city of short distances', you should also think about the accessibility of shops and other services. Planning for local shops not only in the centre but also in the different districts and surrounding villages will add to their attractiveness.

Site layout issues: Public space design and parking options have a strong influence on mobility in residential areas. Effective measures to promote sustainable mobility include pooling all parking spots at the edge of the neighbourhood (where car sharing options could also be offered), providing weather-protected bicycle parking close to the housing, building pleasant walking and cycling paths within the neighbourhood and offering frequent bus connections close by. In some towns, this has been common practice for many years, such as in Lund (Sweden, pop. 92,000), where most new residential areas have communal car parks at the edge of the area instead of parking places in front of each house. Other towns have made big steps forward in recent years, such as Ljutomer (pop. 3,300), which was the first Slovenian town to comprehensively re-design and traffic-calm a neighbourhood, named Juršovka.

For new developments, parking standards are a powerful tool to free up land for green spaces and make the cost of living more affordable. Traditionally, most countries

Best Practice Example

Box 15: Examples of neighbourhood redesigns

Source: Aljaz Plevnik, Prosperity, PROSPERITY_SUMP_SMC_Training_slides_EN, p.72

have used minimum requirements, which force developers to build a certain number of parking spaces per household. Such minimum requirements raise the cost of buildings and/or create urban areas that are dominated by (on-street) car parking. Instead, it is recommended to use maximum car parking allowances (e.g. not more than 0.8 parking spaces per household) or tradable parking rights, if legislation in your country allows it.[55]

5.3. Strengthening cycling as a daily mode of transport

Cycling is a mode of transport to be encouraged in towns and small cities, where the distances are comparatively short. However, the journey to work may not be the first thing to focus on as many people may work in neighbouring towns or cities. Instead, a good way to start improving cycling in a smaller city is by focusing on the journey to school and other non-work-related destinations.

School journeys are commonly carried out by car but could improve children's independence, health and learning outcomes if done by bicycle instead (see Safe and Healthy Schools on page 51). Other non-work-related journeys with good bicycle potential include journeys to shopping, sports, and recreational activities. Thus, the town centre (for shopping) and recreational facilities should be accessible by bicycle. Measures necessary to make this a safe and attractive option include appropriate traffic calming and reduced speeds. Once such routes have safe speed limits, they can serve as the backbone of a good walking and cycling network that can be completed with a few strategically located separated bicycle paths.

Cycling infrastructure
High-quality cycling networks within urban areas can help to avoid short-distance car trips. The same basic criteria apply for small cities as for larger ones: There

55 https://park4sump.eu/fields-activities/standards

Images: ©Freepik

must be a coherent, direct, safe, comfortable, and attractive network.[56][57]

The European Cyclists' Federation recommends cycling only be mixed with motorised traffic if:

- speeds are low (max 30 km/h),

- volumes are low (Transport for Greater Manchester currently applies a figure of 4,000 vehicles per day – or 6 per minute in the peak hour – as the threshold above which segregation for bicycles would be required), and

- vehicle weights are low (absence of heavy goods vehicles, i.e. lorries).[58]

These guidelines suggest opportunities for smaller cities to create a basic bicycle network quickly and inexpensively. As large parts of the road network in smaller cities (especially residential areas) usually have low vehicle traffic volumes, meeting these criteria should be manageable. Speed limits can be reduced, and traffic calming introduced, and some streets can be turned into cycle streets.

A cycle street is a high-quality cycle connection also used by low levels of motorised traffic. Within urban areas, cycle streets should be considered for main cycling routes (2000+ cyclists/day) with low traffic speeds (less than 30 km/h). In a cycle street, cyclists should perceptibly dominate the streetscape and traffic. A rule of thumb is that there should be at least twice as many cyclists as cars on the road.[59]

56 "The decisive factor for more bicycle use is cycle-friendly infrastructure! Cycle-friendly infrastructure in the sense of providing a network of cycle routes that is based on the 5 Dutch core design principles: coherence, directness, safety, comfort and attractiveness (CROW, 2017)." Cycling briefing p.10, https://www.eltis.org/sites/default/files/supporting_and_encouraging_cycling_in_sumps.pdf

57 European Commission's guidance for cycling projects in the EU. https://ec.europa.eu/transport/themes/urban/cycling/guidance-cycling-projects-eu_en

58 Cycling briefing p.10, https://www.eltis.org/sites/default/files/supporting_and_encouraging_cycling_in_sumps.pdf

59 Fact sheet on cycle streets from the EU PRESTO project: https://ec.europa.eu/energy/intelligent/projects/sites/iee-projects/files/projects/documents/presto_fact_sheet_cycle_streets_en.pdf

Box 16: Arnhem-Nijmegen, the Netherlands: Cycle Superhighway

Best Practice Example

The Arnhem-Nijmegen Cycle Superhighway was completed in 2015 as a collaboration among the four cities of Arnhem (pop. 153,000), Nijmegen (pop. 169,000), Overbetuwe (pop. 48,000) and Lingewaard (pop. 47,000). The route is 15.8 km long and was built for inter-urban commuting between the cities. Because of its attractiveness, the route is also often used for recreation. Speed is not the key goal in building cycle superhighways. More important is that they provide a route that is separated from car traffic and has minimal stops. Most cyclists feel safer when separated from car traffic, and the lack of stops reduces the amount of physical energy required to cover the distance.

For more details: https://www.citylab.com/transportation/2017/06/cruising-a-superhighway-built-for-bikes/531246/
https://bicycledutch.wordpress.com/2015/09/29/the-f325-fast-cycle-route-arnhem-nijmegen/
Source: Bicycledutch

Traffic calming infrastructure, such as speed bumps, kerb extensions or narrowed roads help to make sure that drivers adhere to speed limits. These can be implemented relatively quickly and attractively, for example, using planters.

Over the longer term, making access to the town centre by bicycle more attractive will help encourage people to leave their cars at home for local journeys. Similarly, making it inconvenient to drive through the town centre (i.e. allowing only in-and-out access) helps to change perceptions of the centre as a destination.

Bicycle parking facilities should be built in public spaces, apartments, houses, schools, offices, commercial centres, etc. Parking should allow you to lock both the frame and a wheel to the rack.

A good inter-urban cycle network can enable town-to-town cycle commuting. This becomes even more attractive with the ever-increasing use of pedelecs (electrically supported bicycles), which are a particularly

attractive option for hilly or windy areas. Cycle paths between towns can take the form of a cycle superhighway,[60] such as the one between Arnhem and Nijmegen in the Netherlands. These allow higher speeds and are completely separated from car traffic to provide a pleasant cycling experience.

A basic check that engineers can integrate when designing and building cycling infrastructure is to consider the challenge set out by the US NGO People for

60 'Cycle highways', or 'fast cycling routes', are "high standard bicycle paths reserved for cyclists for fast and direct commuting over long distances." At present, fast cycling route projects can be found primarily in northwest European countries. CHIPS, an EU funded North-West Interreg project, compared different cycle highways in the region, and analysed similarities and differences between the projects: https://www.nweurope.eu/projects/project-search/cycle-highways-innovation-for-smarter-people-transport-and-spatial-planning/. See also: https://www.eltis.org/sites/default/files/supporting_and_encouraging_cycling_in_sumps.pdf p.10

Box 17: Karditsa, Greece: Bicycle paths and promotion

Best Practice Example

Karditsa (pop. 44,000) is the first city in Greece to be certified as a Cycle-Friendly Employer by the European Cyclists' Federation. It is one of the most bicycle-friendly cities in Greece with a network of approximately 20 km of bicycle paths and a modal share of 30% for cycling. It has also had a bike sharing system since 2013. Kardista takes advantage of European Mobility Week as an opportunity to promote cycling and environmentally-friendly mobility. It has also developed child-friendly pedestrian facilities and car-free central streets.

For details see: https://www.youtube.com/watch?v=LYGGlaepq40
https://ecf.com/news-and-events/news/city-karditsa-becomes-first-cycle-friendly-employer-greece
Images: ECF news & EMW

Bikes to "build it for Isabella".[61] Isabella is a fictional 12-year-old girl who is starting to explore her world and develop her independence. It is the task of planners and engineers to ensure that cycling facilities are built safely enough so that Isabella can use them – and her parents can feel comfortable with her doing so.

Cycling promotion

As well as providing safe and attractive infrastructure, it is also necessary to promote cycling as a healthy and easy way to get around.

Participation in European Mobility Week[62] can serve as a focal point of awareness-raising, skill-building and education around cycling – for example as a friendly competition with neighbouring towns on who motivates most people to cycle that week. Such awareness-raising activities are most effective when combined with visible improvements to cycle infrastructure (e.g. celebrating the opening of a new cycle street or cycle path).

Bicycle sharing systems

A bicycle-sharing system in a smaller city allows for mid-distance journeys (2-3 km) where public transport is not available, or service is irregular. If a town has many tourists, a shared bike system may also serve visitors. The value of such a system increases when it also offers users access to shared bikes in neighbouring towns. Depending on the distance, the topography and the availability of public transport, options include taking public transport from town to town and using shared bikes locally or using shared bikes to travel from town to town. This is done, for example, in the hilly Rhine-Sieg District of Germany with pedelecs.

Box 18: Rhine-Sieg District, Germany: Regional pedelec sharing

RVK e-bike offers a fleet of shared pedelecs that are available in seven towns in the hilly Rhine-Sieg District of Germany. The company advertises that its system is "ideal for commuters to Bonn and Cologne" or "to cycle to the neighbouring town". Users can cycle from town to town or to the nearest train station for a multi-modal journey.

For details see: https://www.nextbike.de/en/rvk/

Also, shared bike systems, by their very presence on the streets, serve to raise awareness of cycling as a mode of transport.

5.4. Strengthening walking

Walking is an often-underrated mode of transport. Regardless of people taking the bicycle, bus, motorcycle or car, the first and last metres will always be on foot. And even on its own, walking can cover a considerable share of trips; be it walking to school in the morning, walking to a restaurant at lunchtime, walking to a local shop after work, walking to the pub on Friday night, walking to the bakery on a Sunday morning, or many other occasions. As a city, it pays off to promote walking not only for its transport function but also due to its many health and liveability benefits. It is a mode that needs proper planning – also in smaller cities, which have a strong, but often decreasing, walking tradition (see SUMP Practitioners Briefing on walking)

Planning for walking is closely related to safe school mobility, liveable residential areas, parking management and public space activation, but applies to a range of measures beyond these areas. The key aim is to provide conditions that make it pleasant and easy to walk.

- The network of pavements: Direct and easy to follow routes are the heart of a walkable city. Wherever people would like to travel, they should be able to walk. This calls for safe and unobstructed pavements on all streets. If your town has very few pavements, it is recommended to start with residential streets and the places with most frequent walking (including transit hubs, education sites, health care facilities, shopping areas, sport and leisure amenities and employment zones).[63] If your town already has pavements on most or all streets, useful measures could be to widen popular pavements, to introduce pedestrian priority areas, or to add pedestrian shortcuts (small extra connections that are not next to streets and allow more direct routes than by car).

- Road crossings: A walkable city needs sufficient opportunities to cross roads safely and directly, without detours or changing levels. Crossing points should have minimal waiting times and allow for sufficient time to cross even for the slowest pedestrians.[64] This offers room for improvement in

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61 "Build it for Isabella" is an initiative of the NGO People for Bikes: https://peopleforbikes.org/blog/a-new-north-star-in-bikeway-design-build-it-for-isabella/

62 https://mobilityweek.eu/home/

63 Walking briefing p.15 https://www.eltis.org/sites/default/files/supporting_and_encouraging_walking_in_sumps.pdf

64 Walking briefing p.16 https://www.eltis.org/sites/default/files/supporting_and_encouraging_walking_in_sumps.pdf

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Box 19: Pontevedra, Spain: Pedestrianisation with good communication

Pontevedra (pop. 83,000) began its transformation process in 1999 by pedestrianising the old town. In the following years, a comprehensive strategy was implemented to prioritise active modes. Cars were stopped from crossing the city and street parking was reduced. All surface-level car parks in the city centre were closed and replaced with underground parking and free parking on the periphery. Traffic lights were substituted with roundabouts, the car-free zone was extended to larger parts of the city centre, and the speed limit in the outer zones was reduced to 30 km/h. All of this has been complemented by information and awareness raising campaigns.

Pontevedra's measures have shown impressive results. On the same streets where 30 people died in traffic from 1996 to 2006, only three died in the subsequent 10 years, and none since 2009. CO2 emissions went down by 70%, nearly 65% of all trips within the main urban area are now made on foot or by bicycle and, while other towns in the region are shrinking, central Pontevedra has gained 12,000 new inhabitants. This has also paid off politically. While there was some initial opposition to the radical changes proposed by the newly elected mayor in 1999, people have rewarded him for his courage by re-electing him five times since then.

Metro-style map of Pontevedra showing typical walking times

For details see: https://www.eltis.org/discover/case-studies/metrominuto-public-transport-alike-pedestrian-map-pontevedra-spain and https://www.theguardian.com/cities/2018/sep/18/paradise-life-spanish-city-banned-cars-pontevedra

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Box 20: Torrelodones, Spain: Active mobility network developed from key locations

Torrelodones (pop. 23,000, 29 km from Madrid) was a typical example of fast-growing car-dominated suburban sprawl before it developed its SUMP in 2011-2012. Initiated by the newly elected neighbourhood party, the plan defined a traffic calming strategy and a pedestrian and cycling network, starting from key locations such as schools, sport centres and cultural buildings. In 2012-2013, an ambitious programme of interventions put the SUMP into practice. By carefully selecting locations and designing 'low-cost' interventions where appropriate, the efficiency of the measures was maximised. Active participation of the population, also during the design phase, ensured public support. The actions turned out to be highly successful, helping the neighbourhood party to win the two following local elections in 2015 and 2019 with a bigger majority – and to continue their path towards walkability.

For details see: http://www.epomm.eu/newsletter/v2/content/2016/0216/doc/torrelodones_case_study.docx

Before

After

almost any town. Typical measures are, for example, to install additional crossing points, to reduce waiting times for pedestrians, to turn traffic lights into zebra crossings, or to raise the crossing or provide other infrastructure which slows down cars at dangerous spots.

- Walking environment: To make walking a pleasant experience, cities should provide clean, well-lit paths with interesting ground floors or greenery around. Trees and other objects that provide shade or rain protection help to address the impact of the weather. Sufficient seating and toilets make the city more accessible to older people and create meeting places for everyone. Parks and waterways increase the attractiveness of a walking route immensely. Reducing vehicle speeds, and thereby noise and pollution levels is another effective measure to make pavements more appealing.

- Signposting: Streets should have legible, clear signing and on-site information to encourage specific journey planning and exploration on foot. Even though smartphone navigation is widespread today, a dedicated system of signposts for pedestrians still makes the town easier to navigate, especially for visitors. Signposts should show the direction and distance to important destinations, potentially complemented by maps of the surrounding area.

5.5. Public space activation

The revitalisation of public spaces is an important issue for many smaller cities, whose centres are often in crisis due to decreasing purchasing power, online shopping, and large-scale shops outside town. While a pleasant living environment tends to be the main added value of smaller cities, it needs to be complemented with vibrant meeting places that meet people's needs for social exchange and entertainment. The aim is to strengthen the social functions of a town centre so that it offers a lively atmosphere, attracting people from bigger cities. Public space activation is closely related to parking management and support for walking, but includes an additional set of strategies.

An attractive town centre combines a variety of functions. It does not only offer shopping, but also leisure, entertainment, and cultural facilities, as well as public services, jobs, and housing. It is accessible for all parts of society and perceived by the local community as their

central meeting point.[65] This results in "visible activity" throughout the day and evening. To strengthen this mix, a range of strategies is available, which are most effective when city administration and local stakeholders work together towards a common vision.[66]

- In terms of land use planning, cities should foresee a mix of uses in the centre. Large zones of only retail and offices should be avoided, as they tend to have little activity in the evenings, creating areas that are perceived as unsafe and dull. Nearby parks and green spaces attract visitors who wish to combine a relaxing walk with shopping and other activities. To keep the centre competitive, it is also recommended to limit the expansion of retail areas outside the city whilst steering new development of housing, jobs, and retail towards the centre.[67]

- In terms of economic policies, active management by the city can help to avoid too high concentrations of large retail chains and offices, which otherwise cluster in prime spots as they can pay the highest rents. Instead, an interesting combination of different

Figure 15: Example of a summer street in Malmö, Sweden.

Image:© Malmö stad (https://malmo.se/Uppleva-och-gora/Parker-och-gronom-raden/Sommargator.html)

65   Andres Coca-Stefaniak, Association of Town & City Management, 2013: successful town centres – developing effective strategies. https://thegreatbritishhighstreet.co.uk/pdf/Successful-Town-Centres.pdf

66   Andres Coca-Stefaniak, Association of Town & City Management, 2013: successful town centres – developing effective strategies. https://thegreatbritishhighstreet.co.uk/pdf/Successful-Town-Centres.pdf p.10

67   Aud Tennøy, Odd Midtskog, Kjersti Visnes Øksenholt and Njål Nore (2014): Summary: What can be done to make city centres more attractive locations for retail and service?, Norwegian Centre for Transport Research. https://www.toi.no/getfile.php/1337147/Publikasjoner/T%C3%98I%20rapporter/2014/1334-2014/sum-1334-2013.pdf

offers is needed, including cafés, restaurants, cinema/theatre/library, and local shops that might not have the highest turnover but are essential for an attractive diversity. After analysing which offers are lacking or struggling to survive, the city can directly favour them in new rental contracts in the properties that are publicly owned. Dedicated pop-up stores help people to test their business ideas for a few weeks. And if they want to make their new shops

permanent, for example, programmes that subsidise rents for the first months can help them to establish themselves.

- In terms of building and street design, interesting ground floor zones are crucial, with a variety of shops, restaurants, open offices, services like libraries, art galleries and more. Public space should be attractive and well maintained, with sufficient

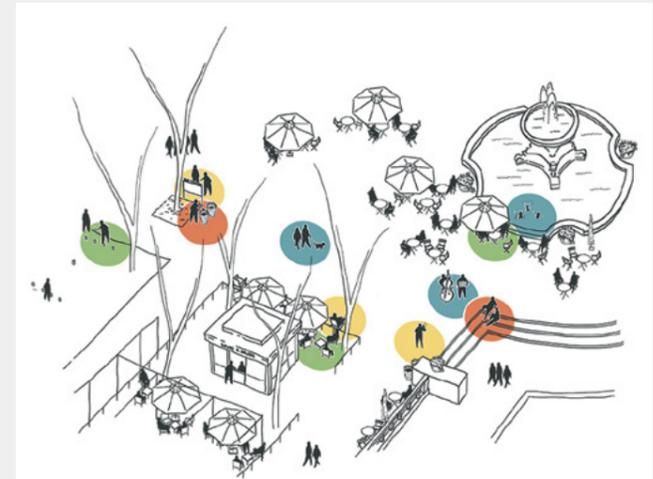### Box 22: Place making

Best Practice Example

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

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

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

Source: Project for Public Spaces

Box 23: Kruševac, Serbia: Step by step towards a liveable centre

Best Practice Example

Krusevac (pop. 81,000) started its step-by-step approach towards a pedestrianised city centre in 2015. That year, the main street was closed to motorised traffic every evening from 6 to 10pm during European Mobility Week. During the following three years, the time period was extended every year, so that by 2019 the main street was car-free every evening from mid-April to mid-October. This proved so popular that 50% of respondents in a 2019 survey were in favour of a pedestrianised centre in 2021, and only 6% wanted it to remain the same. As a result, the city centre will get a permanent new and more liveable look for its 650th anniversary in 2021.

For details (in Serbian) see: SUMP document, survey results and videos

Left: Main street during the day; Right: Main street in the evening
Source: Jelena Nikolić, City of Kruševac

green and seating possibilities. Where new areas are developed, small plots and many different architects, instead of one large developer, tend to create a more diverse architecture. In existing areas, traffic calming, and parking reorganisation can free up space for more street activities. Especially if shopping streets are still used by through traffic, redirecting this traffic to other streets or around town can make a big difference. For example, more and more cities introduce "summer streets" programmes, where certain streets are pedestrianised and equipped with benches, plants, and street art during warmer seasons of the year. This particularly benefits restaurants and cafés, which can install outdoor seating.

- Festivals and other events are a good complement to activate the centre. They can be a significant contribution to the local economy and foster a sense of community and pride of place. Events may range from fairs or cultural festivals to markets or "light nights", inviting residents and visitors to experience their town centre at night through a diverse offer of street performances and music.[68] Good cooperation with local stakeholders is crucial here. Often the city administration just facilitates and supports, while residents and shop owners take the initiative to organise events.

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68   Andres Coca-Stefaniak, Association of Town & City Management, 2013: successful town centres – developing effective strategies. https://thegreatbritishhighstreet.co.uk/pdf/Successful-Town-Centres.pdf p.27

Box 24: Cēsis, Latvia: Changing by experimenting

Best Practice Example

As the first measure of its traffic safety and calming guidelines, Cēsis (pop. 18,000) redesigned one of the central squares in May 2019. The square was previously inefficiently used only for car traffic. By using a placemaking approach with light and cheap materials, it has now become a real town square. Redesign happened over the May holidays, giving time for the citizens to comprehend the traffic changes, and citizens were informed in various ways. Despite this, the change still caused a polarised debate. But today, one year after implementation, the newly designed town square has become an integral part of the centre. This successful experiment has strengthened the municipality's confidence in using light, cheap, and effective solutions for further mobility improvements in the town.

Source: Evija Taurene, Cēsis municipality

Left: Square before (photo Jurģis Rudmiezis); Right: Square after redesign (photo Oskars Ušpelis)

Left, middle and right: Quick temporary solutions for redesign combined with public events

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When having to prioritise limited resources in a small town, according to American downtown revitalisation specialist David D. Milner[69] it is useful to give top priority to the following three areas:

- Restaurants and drinking places: Vital social amenities that can survive in small towns, because they have low rent and labour costs and do not need very high turnover to be viable.

- Parks and public spaces: Better choices than formal entertainment venues (theatres, museums, arenas), because they are usually less expensive to build and maintain, and tend to draw more visitors. Important to involve residents and businesses to make them lively places, in the long run, e.g. supporting the organisation of events.

- Cinemas: Often struggling to survive due to online competition, but a great asset for street life, especially in office-dominated areas that would otherwise be empty after business hours. New cinemas are almost impossible to attract, but the challenge is to keep existing cinemas open, vibrant, and profitable, e.g. with the help of crowdfunding or as community-owned businesses.

5.6. Parking management for a vibrant city centre[70]

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69   N. David Milder, 2015, Some Strategies for Small Town Downtown Revitalization, https://bit.ly/34rtazS

70   Author: Patrick Auwerx, Mobiel 21, coordinator of CIVITAS Park4SUMP

Parking is a controversial topic in many cities but has huge transformational potential. Good parking management can help free valuable public space, making towns more attractive, improving congestion, road safety and air pollution; and generating revenue. This is particularly important for towns with a medieval structure or narrow streets, where space is very limited. But the topic needs good communication, preparation, and a strategic approach for planners to be successful.

<u>Good measures and policies to start with</u>

Parking policies can be implemented incrementally. Instead of building more parking infrastructure, which attracts more cars, cities should continually improve the management of the existing capacity. This is also more cost-efficient.

Most cities start with a controlled parking zone with time restrictions and parking fees in the centre or relocate parking to areas that have lower parking pressure (e.g. to the edge of the centre, or Park & Ride at public transport hubs). The objective is to limit on-street parking and re-design these spaces for other (more sustainable) public use. Paid or time-restricted zones can then be gradually expanded, fees increased, parking regimes differentiated (including exemptions for people with special needs) and private parking can be used by the public in exchange for a fee. Effective but fair parking enforcement (with appropriate fines) is always an integrated part of parking management.

How to determine the right level of parking fees?

Box 25: Example with a good balance between parking fees in different zones and public transport:

Best Practice Example

Zones => Parking regime	Center (on-street)	Outskirts (+400m) (on-street)	Off-Street	Public Transport ticket
High turnover area (Shop and go places)	20' max	30' max	2h/2€	1.8 €
Short term	1h/2€ 2h/5€	Blue zone (max 2h)* 1h/1€ 2h/3€	2h/2€	
Long term	Not allowed	4h/7 €	8h/5 €	
24h (permit parking)	Not allowed	Permit 50€-200€ /year	8 € (visitors) Permits	

*for – 40000 cities as transitional measure

Parking is never free of charge. Parking on public ground is always heavily subsidised, which means that non-car drivers also pay for these costs. A fair level of parking fees is about finding a balance (see Box#). This should take a range of aspects into account, such as:

- Standard of living, average income in the country
- Existing and projected mobility patterns
- Availability of alternatives (bicycle parking, car sharing, public transport …)
- Area specifications (parking pressure, residential, shopping, centre, or outskirts)
- Short / long term: longer-term can be gradually increased
- On-street / off-street: harmonisation of tariffs (make on-street more expensive) leads to a reduction of the number of vehicles searching for parking places
- Enforcement costs

How to overcome public, political or media resistance?

- Highlight the benefits: The only feasible way to convince people is to show that the situation will improve because of the proposed changes. Parking management gives back public space to all citizens – not only cyclists, pedestrians, and public transport users, but also shop owners, residents, and everyone else who might have parked their car a bit further away but enjoys the pleasant atmosphere. Use visualisations and photos from other towns to make benefits tangible.
- Use data and numbers to counter feelings and emotions about feared impact: Successful examples from similar cities help to show likely impact before introducing measures. Data collection before and after the introduction of parking management (e.g. surveys of shop revenue in the pedestrianised street) provides evidence of the real impact.
- Be transparent about what parking revenue is used for: Re-invest in sustainable travel alternatives or involve neighbourhoods in how to spend the budget.
- Survey occupancy rates (should be max. 85%) to ensure priority users find space easily.
- Make agreements with neighbouring cities on parking tariffs to avoid car drivers searching for the cheaper options 'next door'.
- Be courageous: People usually complain when new parking measures are introduced, but initial

opposition turns into support when they see the positive impact.

What about the impact on shopping?

Consumers value the range of shops and the shopping environment. In most cities, car drivers are not the ones to increase retail turnover. In smaller cities it is important to provide a high quality, people-friendly shopping environment, not dominated by traffic. For those who come by car to the city centre, special regimes – e.g. shop and go – can be applied (see Sint-Niklaas example).

For details see:

CIVITAS Park4SUMP

Park4SUMP Good Reasons and Principles for Parking Management Volume 2

Park4SUMP Practitioner Guide on Parking and Sustainable Urban Mobility Planning

RESOLVE M&E tool

5.7. Attractive places for working and living

Accessibility to jobs is a key challenge for smaller cities and more particularly for shrinking towns outside metropolitan areas as people often move away to bigger cities because of employment and higher education. You then may need to consider new approaches and leverage digital technologies to make your town an attractive place for working and living.

Planning for attractive places for working and living requires different elements. The first element to consider is an improvement of the conditions for residents who have a certain flexibility in their jobs. Of course, it is useful to fight for existing jobs and to attract new traditional jobs. But this is not enough. You need to consider new approaches to attract people by providing the services they need.

- To attract older people, cities can support the development of public services, e-government services, on-demand buses, and good health care services.
- To attract young people and artists, cities can support the creation of digital infrastructure, co-working opportunities, and creative spaces.

As a policymaker for a smaller city, you can take certain steps to attract new residents who either do not need jobs, will bring their job with them, or can create their

Sint Niklaas, Belgium: Comprehensive parking management as part of a SUMP

Parking Management is one of the six guiding principles in the second SUMP of Sint Niklaas (pop. 77 000), adopted in 2014. In order to improve the quality of life in residential areas and create a traffic-calmed and safe city centre that gives priority to walking and cycling, the city implemented several parking measures:

- Push long-term parking (incl. for residents) to 7 central off-street parking facilities
- Harmonisation of parking tariffs so that off-street is cheaper than on-street parking
- Pedestrianisation and removal of 85 on-street parking spots in main shopping street
- Allowing loading + bicycle parking in the car-free area
- Stop and shop' parking spots free for 30 min (controlled via road surface sensors)
- Simplification (less variation) and better communication of parking tariffs
- Expanding the blue zones (short term) dedicated to residents, thus lowering the parking pressure by long-term parked cars.
- Better observation and monitoring of parking indicators: demand&supply, occupation …
- Multiple use of private parking space, such as supermarkets, in areas with high needs
- Removal of on-street parking places in order to realise cycle lanes
- Decriminalisation of parking enforcement

A new parking deal for a liveable neighbourhood

The residential neighbourhood Elisabeth is faced with high parking pressure. When a new co-housing development was planned, the future-owners complained about construction costs being too high when complying with traditional parking standards. The city agreed on piloting a new, more sustainable, parking strategy:

1. The new housing development is excluded from new residential parking permits by an administrative intervention (new street name outside the blue zone area)
2. The developer will offer car sharing instead, minimum bicycle parking standards will increase the use of bicycles among the new residents.
3. Through a participative process, other car owners in the neighbourhood are nudged to exchange their on-street parking permit for a dedicated private place in a double use parking (e.g., supermarkets, hospitals, offices). The goal is to reduce on-street parking in the Elisabeth area by 115 spaces (- 50%).

For details see:
SUMP (EN summary, also available in other languages)
Interview with Sint-Niklaas' vice-mayor of Mobility Carl Hanssens
Park4SUMP video of Sint-Niklaas

Left: Shopping street Stationsstraat. Right: Main Square with half-open parking garage (capacity 360 pl.) and re-owned public space. In earlier days 440 cars were parked here on-street.
Photos © Sint-Niklaas

Best Practice Example

Box 26: SOHO SOLO (Small Office Home Office), France

Soho Solo project provides funding and professional meeting space to support the relocation of people who work from home to rural areas. The project has good active outreach and clear online information for interested parties.

Eight purpose-built telecentres are used to receive customers and suppliers in a professional environment, and provide internet access and IT equipment to support professional and private work, discussions and meetings.
Soho Solo also sets up meetings between local businesses and new residents to help integrate them, create local connections and use their new skills and ideas,

Within the first five years of its existence, the project managed to attract 258 new Soho Solos and 800 new inhabitants including their families.

For more details: https://www.soho-solo-gers.com/
Source: Soho Solo Gers : travailler et vivre à la campagne, teletravail gers (soho-solo-gers.com)

own good job. These new residents are often talented young families, midlife career changers and active retirees.[71]

Attract those who do not need jobs
These potential residents are often wealthy seniors or holiday homeowners. Wealthy seniors will be critically attracted to good health care services and specific senior living homes. Cities can support e-government services, online shopping, mobile health consultations that are held in a different town or village every day (e.g. DB Medibus – on the road doctor's office[72]) but also on-demand transport services (for more details see INCLUSION[73]). On the other hand, holiday homeowners may be attracted to towns that are within a two- to three-hour drive or train ride from big metropolitan areas, which requires cities to maintain or develop well-connected transport networks.

Attract those who create their own jobs or bring their jobs with them
These potential residents tend to rely heavily on electronic communications instead of being bound to a particular location. More specifically they work in website design and services; graphics services; managing

investment funds; business consulting with bosses/clients in other places. They can be freelancers, translators, journalists, academic researchers, craftspeople or creatives looking for a slower pace and a more rustic environment. Finally, others may be looking for a career change and may open restaurants, bars, hotels or retail shops in your area.

- These people will need a reliable internet connection, postal services, and decent transport links. To attract these people, cities can provide proper digital infrastructure and high-speed internet, which will also allow existing companies to reach more customers. Cities can consider opening telecentres and co-working spaces (e.g. telecentres Soho-Solo in Gers[74]). The popularity of such spaces has drastically increased recently (during the Covid-19 pandemic) and smaller towns should consider developing them more systematically to provide their existing residents with remote working spaces.

- To attract these new residents, cities can support good public services such as schools, shops and supermarkets, health care services, public swimming pools, sports clubs, etc. Supporting the development of new services, such as unmanned grocery shops and e-trade pick up spots, can be a plus. Good communication on the amenities of cities is an important consideration, and should include online mapping of their location, as beautiful scenery, appealing town centres and social amenities are attractive to new residents

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71 https://urbact.eu/sites/default/files/import/Projects/Creative_ Clusters/documents_media/URBACTCreativeClusters_TAP_INTELI_ Final_01.pdf p.6

72 https://land-der-ideen.de/wettbewerbe/deutscher-mobilitaetspreis/ preistraeger/best-practice-2019/db-medibus

73 http://www.h2020-inclusion.eu/

74 Cerema, Plan de mobilité rurale, juin 2016, p.72

- To specifically attract creatives, cities can consider developing flexible, temporary and low-cost creative spaces for convergence and experimentation (such as artist residencies, live-work housing, creative incubators, meeting spaces, etc.). Inviting visiting artists to temporarily reside in these creative spaces can turn them into new permanent residents.[75]

Work with existing employers
Another important group to consider is existing employers. As major traffic generators and multipliers

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75 https://urbact.eu/sites/default/files/import/Projects/Creative_ Clusters/documents_media/URBACTCreativeClusters_TAP_INTELI_ Final_01.pdf p.8

Best Practice Example

Box 27: Company mobility management Mahle, Austria
- Winner of VCÖ mobility award 2019
- Rural area: St. Michael ob Bleiburg = pop. 532, in a municipality of 2200 inhabitants -> many employees commute from surrounding areas
- With around 3,000 employees, Mahle is the biggest employer in a rural region
- New express bus, coordinated with the S-Bahn and with the start of the shifts
- Low-cost meal tariffs -> save € 120 per month on fuel costs, etc.

When it became necessary to enlarge the company, Mahle decided to use company mobility management to motivate employees to switch to public transport and bicycles. The measures were coordinated by the Carinthia Transport Association on behalf of the Province of Carinthia. The S-Bahn service was improved back in December 2017, making more train connections available to Mahle employees. Since August 2018, an electric bus has been running between the St. Michael train station and the operating sites, to bring employees to the company premises. The e-bus replaces the diesel-powered company transport, and is also included within the range of bus routes available to the public. To encourage those living within cycling distance of their workplace to switch to cycling, improvements have been made to the bike connections and the number of bike parking spaces has been significantly increased. Lockable bicycle boxes were also installed at the St. Michael train station. As a further incentive, there is a low-cost public transport job ticket available for employees.

Source: https://www.vcoe.at/files/vcoe/uploads/Mobilitaetspreis%202019/MP19_PreistraegerInnen_Mappe.pdf

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Best Practice Example

Box 28: Bad Berleburg, Germany

Core town pop 7,000; 19,700 with surrounding villages
The town was facing structural difficulties, such as a slightly shrinking population over the past 20 years, being located relatively far from larger cities in a mountain range, and had to cut public expenses (by concentrating and combining public services offered in the surrounding villages).
The "Town of villages", as it calls itself, developed a vision for a liveable countryside (Bad Berleburg 2030) with a participative process. A strategy was developed to support an ageing society, with good living and working conditions in the core town and the 22 surrounding villages by 2030.

Amongst the projects are:
- "Digital Town Centre", a platform where residents of each village can communicate, plan and ask each other for help.
- "Cognitive Village", a project helping older people to buy online from the local shop.
- Welcome services to tackle the shortage of skilled workers (e.g. meetings) and a network of mentors for new residents and people who return after living elsewhere.
- Reinforced health services and outreach to active and nature-oriented tourists.

Source: https://www.nachhaltigkeitspreis.de/wettbewerbe/staedte-und-gemeinden/preistraeger-staedte-und-gemeinden/2019/kleinstaedte-und-gemeinden/bad-berleburg/
Photo: https://www.bad-berleburg.de/index.phtml?sNavID=1746.323&La=1

for many employers and customers, companies can play a key role in supporting sustainable mobility. Small towns should work beyond their borders, as major employers of residents may be located 50 km away, and reach out to local towns to create a combined regional approach.

As a key element, small cities and towns may consider developing mobility management for major employers which generate commuter and business travel. A range of options are available as sustainable mobility solutions to reduce commuter traffic:

- Organise special commuter buses to take employees to their place of work instead of commuting by car.
- Offer public transport passes. Instead of a private car, employees should receive a personal mobility budget for company and private travel, which can include a monthly pass for public transport, a certain number of car-share trips and taxi travel.
- Provide (electric) bikes on the same basis as a traditional company car, where an employee has the exclusive use of a vehicle within and beyond working hours as a job perk, in this case an e-bike. To make this attractive, companies may use the money they save to provide extra benefits such as a wage increase, a public transport pass, etc.
- Support ride-sharing platforms for employees. In Stuttgart, Baden-Württemberg, the ride-sharing platform Pendlernetz allowed the municipality to quickly develop ridesharing throughout the region.
- Encourage medium and smaller companies to use an available car-share scheme instead of launching their own scheme. Car-share providers often provide dedicated stations for commercial customers at their company location as they can guarantee a minimum usage. By agreeing with a car-share provider to reserve certain vehicles exclusively for the company at certain times (e.g. two cars Monday-Friday 8 am-5 pm), a reliable number of cars can always be made available.[76]
- Support the development of company fleet management. Companies can create a pool of (electric) bikes and (electric) cars for business travel instead of subsidising company cars that employees would also use in their spare time. This helps to save costs because it reduces the number of commuter vehicles and the number of parking places, especially

for rarely-used vehicles (see the section on car sharing below)

- Encourage companies to introduce paid car-parking at the workplace while simultaneously ensuring good bicycle parking and possibly changing rooms, showers, lockers, pumps and a pool of bicycles.
- Discuss with big companies the possibility of shifting their working hours to decrease commuting peaks (e.g. by starting the day 15 minutes earlier/later)
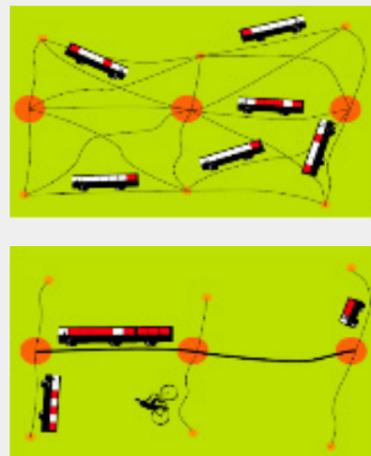
In smaller cities, the city administration is often one of the biggest employers. Therefore, as a policymaker from a city administration, you should start with mobility management measures within your own organisation. Like this, you can set an example for other companies and organisations, also bearing in mind that many trips in a small city are connected to people and goods in the public sphere.

5.8. Attractive public transport

Public transport is fundamental to the mobility system: it guarantees everyone's access to public services, employment, education and training. Despite its critical role, it can be a challenge to provide attractive public transport services in smaller cities and towns. Lower population density makes this generally more challenging, but often the services also fail to respond to the needs of users. This can manifest itself in an insufficient number of stops or stops in the wrong

Figure 16: Strategy to develop the bus network in the region Gooi en Vechtstreek, Netherlands
Source: Jordy van Slooten

Best Practice Example

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locations; vehicles may not be suitable for use by older people; frequencies and operating times of bus services may not be appropriate, and potential passengers are often unaware of services due to insufficient provision of information. Furthermore, ageing and shrinking populations have led to decreasing passenger numbers and revenue, followed by cuts in public transport services in many smaller cities.

However, the trend of deteriorating services and budget cuts can be reversed. Public authorities across Europe have been developing new forms of public transport services and complementary "soft" measures to breathe new life into the transport networks of smaller cities and towns.

Regional integration of public transport

Public transport is often provided by a single operator whose area is limited to one municipality or city. Crossing the border between transport operators often means having to collect information from two different sources. The timetables are unlikely to be adjusted to one another and customers will possibly have to buy two tickets. These factors can make a trip across "borders" highly uncomfortable.

To make public transport more user-friendly, operators must reorganise their services and better interlink the operational area with adjacent regions. This is particularly important in smaller cities, where most journeys may cross city borders. For smaller towns without any public transport, organisation at the regional level may be the only way to make it viable in the first place.

Regional integration includes an adjustment of timetables with adjacent operators to make transitions as smooth as possible, as well as a one-stop-shop for information and booking. For instance, a common online journey planner and booking portal help users to find everything they need for a regional journey in one place. The following examples illustrate inspiring approaches by transport operators to establish partnerships for seamless cross-border travel.

In the Area of Alba Iulia in Romania, public transport cooperation has been established between the city Alba Iulia (pop. 75,000) and seven adjacent rural localities (combined pop. 23,259). The previous system had several gaps, such as non-adjusted timetables of urban and rural services and limited stops. To improve this, a single private operator got a contract from the inter-municipal authority to provide an integrated public transport offer for the entire area. By implementing a coherent network and a more reliable service, it managed to considerably increase the number of public transport users. (For details see: https://ruralsharedmobility.eu/wp-content/uploads/2019/08/SMARTA-GP-Alba-Iulia.pdf)

In the region around the German city of Ravensburg (pop. 51,000) the transport association BODO created a one-stop-shop for public transport. Twenty public transport providers have been successfully integrated. Travellers in the region can now book their tickets on a single platform while crossing multiple operator borders. The price is determined by the number of designated zones. BODO is a management company that does not operate any buses or trains itself, but provides information and a booking portal for the transport services of the transport providers. (For details see: https://www.bodo.de/)

Box 30: Groningen-Assen Region, Netherlands: Mobility hubs and attractive main lines

Best Practice Example

The Public Transport Agency of Groningen-Drenthe has adopted a strategy based on mobility hubs. Currently, there is a network of over 50 hubs in the two provinces so that no resident is further than 15 km away from them. Public transport is structured around trains and fast high-capacity buses with frequent direct connections between cities and towns. To connect these main lines effectively to other modes used for the last- and first-mile, the mobility hubs offer Park & Ride, Bike & Ride and car-sharing options, along with charging facilities and a range of comfort services.

For details see: https://www.eltis.org/sites/default/files/sump2019_b5_deboer_betty_region-gronigen.pdf

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Best Practice Example

Box 31: Zalaegerszeg, Hungary: On-demand minibuses for remote residential areas

The city of Zalaegerszeg (pop. 57,000) is surrounded by several outer residential areas, where connections to local bus routes are sparse or not available at all. In the ZERGE project, a new bus service is tested in three of these areas. The routes were organized based on suggestions by the residents in two field tests. The buses run on demand for registered residents, who have to book at least 30 minutes in advance. In order to promote the launch of the new service, communication materials were prepared and several newspaper articles published. Living lab events were held for residents to gather information, and a press conference was held on-site at the bus line.

For details see: https://mobilissimus.hu/en/news/first-zerge-rolled-out
Author: Mobilissimus

In the German district, Minden-Lübbecke residents can purchase the so-called "LandEiAboPlus". With this monthly ticket, they can use public transport throughout an area comprising six municipalities. Ticket holders can also take their own e-bikes on buses and trains.(For details see: https://www.landei-mobil.de/)

Smooth multi-modal mobility chains: interlinking public transport with other modes
Public transport users always combine different means of transport, as they walk, cycle, scoot or drive to and from the bus or train stop. To optimise these multimodal mobility chains, a good integration of public transport with other modes is indispensable.

A well-developed feeder system around high-frequency main lines facilitates access to public transport. This can include demand-responsive bus lines bringing people to a train station, Park & Ride spaces at a station, and high-quality cycle paths or pleasant footpaths leading to a bus stop. Such feeder services are essential in small towns, with low-density bus or train stops that might not be located on a main line.

Mobility stations (also called mobility hubs) have proven to be a sound concept to connect smaller cities and towns to main lines. As bus networks with many slow and infrequent lines tend to be less attractive than networks with fewer fast and frequent lines, it can be beneficial to restructure the system around public transport nodes with feeder services. The mobility stations themselves serve as attractive nodes where people change from the bicycle, (shared) car or (on-demand) bus to high-frequency buses or trains. They are built to make multi-modal journeys as smooth as possible. Therefore, they include not only safe bicycle and car parking, charging and sharing offers, but often also additional services, such as comfortable waiting facilities, public toilets,

wi-fi access or even parcel pick-up boxes and working spaces.

However, the different modes should not only be physically integrated. To provide the flexibility that people expect, public transport operators need to also offer mobility packages that integrate services beyond buses and trains with a single ticket. Such packages, usually offered as monthly tickets, can comprise public transport, (time budgets for) car sharing and taxis, bicycle rental systems and other services.

In the German district, Minden-Lübbecke residents can purchase the so-called "LandEiAboPlus". With this monthly ticket, they can use public transport throughout an area comprising six municipalities. Ticket holders can also take their own e-bikes on buses and trains. For details see: https://www.landei-mobil.de/

Promotion and marketing measures
Reliance on cars is particularly high where people are unaware of alternatives. Therefore, promotion and marketing can be very cost-effective measures to increase public transport use. This does not have to be unidirectional information. Active promotion invites the target groups to give feedback, engaging them in a communicative exchange.

The SmartMove project promoted public transport use through active mobility consultancy, achieving an 18% increase in passengers on average in its partner regions. Following a face-to-face discussion about their personal mobility needs, tailor-made information was given to members of different target groups. The approach includes:

• actively informing people about public transport services based on their individual needs,

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For more information on how to electrify the transport system as part of a SUMP process, see the SUMP Topic Guide on electrification:

https://www.eltis.org/sites/default/files/electrification_planning_for_electric_road_transport_in_the_sump_context.pdf

Best Practice Example

Box 32: Inexpensive and efficient measures to rescue underperforming public transport systems

In many Central-Eastern European cities, public transport is considered as a basic social service and not as an attractive and preferred transport mode. These cities typically suffer from a lack of financial support or political motivation. In addition, both the authority and the operator tend to have low expectations towards service quality and fleet standards. As a result, prestige and attractiveness of public transport become very low. While many cities still have a high level of public transport use, it has been rapidly decreasing over the past years.

In many cases, the situation is justified, due to a lack of financing. But not all measures are expensive. To tackle their public transport problems, cities should also use inexpensive but efficient measures. Combined within a tailor-made package, "hard" and "soft" measures can serve as rescue belts for local public transport systems in decline – bringing them back on track to become high-quality services that offer an attractive alternative to the car.

The Innovation Brief "Inexpensive and efficient measures to rescue underperforming public transport systems" proposes specific solutions for declining public transport systems. It offers recommendations for infrastructure (e.g. bus priority lanes), vehicles (e.g. purchase and refurbishment of second-hand vehicles) and their interior (e.g. maintenance, corporate identity). But it also addresses "soft" and inexpensive aspects such as the placement and design of network maps and timetables.

For details see:
http://sump-network.eu/fileadmin/user_upload/downloads/innovation_briefs/PROSPERITY_Innovation_Brief_Inexpensive_and_Efficient_measures_for_PT_EN.pdf
Author: András Ekés and Antal Gertheis, Mobilissimus

Left: Second-hand bus in Varna (BG). By purchasing a mass-produced model, spare parts and operation can be guaranteed on a longer-term. But after many years at the new operator, the original owner's corporate identity is still on the bus.
Right: Local bus timetable in Székesfehérvár (HU) showing only the departure times from the terminus, so that users must calculate the arrival time to the given stop themselves.

• implementing measures that reduce barriers to public transport use, such as practical traveller training for older people; and

• actively adapting offers and services based on feedback.
For details see: http://www.smartmove-project.eu/uploads/Documents/SmartSolutions.pdf

Demand responsive public transport services
Public transport in bigger cities works best with high-capacity vehicles running on frequent and fixed schedules. However, in smaller cities and towns it can make sense to follow a different approach. In less densely populated areas, oversized vehicles risk having low occupancy rates, leading to an inefficient use of resources and to increased fuel costs. Here, flexible

demand responsive services using smaller vehicles can be a cost-effective solution.[77]

The mobility provider Kolumbus introduced an on-demand bus service in the small town of Sauda, Norway (pop. 5,000). The price corresponds to a normal bus fare and the bus is said to come around 15 minutes after ordering online or via a telephone call. Furthermore, the operating hours are adapted to school holidays when the ordinary buses do not operate. (For details see: https://www.kolumbus.no/en/routes/on-demand-routes/hentmeg/)

In the German town of Monschau (pop. 12,000), the mobility provider ASEAG established an On-Demand service called NetLiner. Travellers choose a starting point and their destination out of a dense network of possible stops. The NetLiner can be booked online or via telephone, and connects Monschau with its surrounding towns. (For details see: https://www.aseag.de/fahrplan/netliner-fuer-monschau/)

For very small towns or secondary lines, where professional bus services are too expensive, also community- or volunteer-driven services are an option. They can be used to provide basic services (often only one or two departures per day) in areas not covered by other public transport.

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77   For a range of further examples of demand responsive public transport, see the good practice case of the SMARTA project: https://ruralsharedmobility.eu/good-practices/

Clean fleets and alternative fuels

The use of public transport is undoubtedly more sustainable than driving a private car. However, conventional buses run on combustion engines producing unhealthy and unecological emissions. Substituting them for example with electric buses can have a significant positive impact on air quality.

With two converted electric buses, Koprivnica, Croatia (pop. 30,000) has been spearheading clean public transport systems and became an example for other towns in the region. The result is a reduction of CO_2 emissions by 20 % in relation to the current bus fleet operation. (For details see: https://civitas.eu/measure/planning-public-transport-system and https://civitas.eu/measure/low-emission-public-transport-koprivnica)

Eberswalde, Germany (pop.40,000) has followed a somewhat different approach by using trolleybuses powered with electricity through trolley wires. Unlike light rail, trolleybuses do not need tracks and, when also equipped with a battery, can simply get around obstacles or even leave the trolley wire network to cover wider areas. (For details see: https://bbg-eberswalde.de/index.php/wir/das-unternehmen/eu-projekte/488-eu-projekt-trolley-2-0)

5.9. Tailored car and ridesharing

Best Practice Example

Box 33: Flensburg, Germany: Public-Private partnership for a car-sharing service

90,000 population

In Flensburg, car sharing was integrated in 2013 as a measure in the city's climate protection plan. The aim of the municipality together with the provider Cambio was to achieve a publicly visible vehicle fleet and a meaningful spatial coverage with car-sharing stations in the core city. The partners of the urban climate alliance (e.g. municipal actors, transport companies etc.) are the main carriers of the car-sharing offer and make their business trips with the vehicles. This guarantees a basic clientele. Each partner installed a car-sharing station. In addition, the vehicles can be used by residents living nearby.
Characteristics of car sharing in Flensburg:
* 14 vehicles at 6 stations
* 705 customers (50% company and administration with approximately 35% of journeys, 15% students, 35% private)
* an average of 24 new customers per month
* 7 hours and 30 minutes average daily load
* one to three trips per car per day

The launch of the offer was supported by marketing campaigns in public transport, at stops and in the town hall. Already in the second year of operation, the system was fully economically viable.

Source: https://www.eltis.org/sites/default/files/integration_of_shared_mobility_approaches_in_sumps.pdf p.25, source Michael Glotz-Richter Der Verein Klimapakt Flensburg, an dem unter anderem Wohnungsbaugesellschaften, aber auch die Stadtwerke und andere Unternehmen beteiligt sind, hat den bundesweit aktiven Carsharing-Anbieter Cambio in die Stadt gelockt. – Quelle: https://www.shz.de/14696221
More information on Flensburg case: https://carsharing.de/gute-beispiele-carsharing-foerderung-kommunen

Shared mobility services are a sound complement to walking, cycling and conventional route-based buses. They can fill gaps that other modes have problems to cover, and help to increase the number of passengers per car. As smaller cities do not have the population density to easily attract private providers, municipal planners have an important role to play in the initiation phase.

Car sharing

Station-based car sharing provides access to a car for specific uses that other modes can not easily cover. For example, this can be to transport goods home from the hardware store or to take a trip to the countryside at the weekend. In smaller cities and towns, its main aim is to replace cars that are not used every day, such as second or third cars within the same household.

Car sharing is a realistic option for smaller cities as, according to aBCS survey, car-sharing vehicles were available in almost half (46.8 per cent) of all towns with 20,000 to 50,000 inhabitants last year.[78]

The role of the municipalities is to:

* Provide space for car-sharing stations, which is usually parking space.

* Support the launch of car-sharing offers, to help it get established and give the idea of added legitimacy.

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78   https://www.spiegel.de/auto/carsharing-angebot-waechst-vor-allem-in-kleinstaedten-und-auf-dem-land-a-d78c7b3a-4205-4221-9df4-809f86a8614e

* Optimising the existing fleet may create room in the existing budget for electric vehicles.[79]

Small cities can implement car-sharing by:

* Teaming up with a car-sharing provider and local companies. Local companies and municipal administration can be the main carriers of a car-sharing offer and make their own business trips with the vehicles, which guarantees a basic clientele. Each partner should implement a car-sharing station. There should be a possibility for residents to use the municipal fleet in the evenings and on weekends. The Swedish city of Linköping (population >100,000 in the city) for example shares a fleet of biogas-fuelled cars with its residents.

* Considering sustainable fuel vehicles for the carpool. Carsharing suits itself well to electric cars because cars are used for many short trips and short distances. Due to a high level of usage, the higher purchase cost of electric cars tends to be offset by lower fuel costs relatively quickly. Cities can also consider cooperating with local energy providers.

Towns face different challenges to smaller cities in implementing car-sharing services. The concentration of people who are ready to arrange their mobility without a private car and share cars with others is lower. Therefore, the density of potential car-sharing users is lower. Fewer car-sharing vehicles lead to a lower

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79   http://www.elmos-project.eu/fileadmin/content/documents/Internal_reports_surveys_tenders/2013-11-15_ELMOS_report_electric_car_sharing.pdf _Implementing a large scale car sharing scheme (BF)

Best Practice Example

Box 34: Puy-de-Dome, France: Labelled carpooling spaces

"With the desire to promote eco-mobility, the departmental council of the Puy-de-Dome retained the development of carpooling in 2007 as a strong action of its Agenda 21. After an inventory carried out in 2009, carpools in the northeast of the department were labelled. Building on the positive feedback from this experiment, the departmental council decided to generalize the approach by labelling carpools throughout entire department.

Significant collaboration, discussions and agreements between the municipalities and the communities of municipalities resulted in the labelling of nearly 100 carpooling areas in 2012.

The departmental council wishes to facilitate carpooling and to provide user-relevant, well-equipped, and secured sites. The labelling process depends on the location (often near other "wild" sites), the road coating of existing car parks, accessibility, lighting, capacity, the security of entrances and exits and the proximity to other modes of transport".

Source: Cerema, Plan de mobilité rurale, juin 2016, p.56

> **Box 35: SMARTA Project – Smart Rural Transport Areas**　　　　　Best Practice Example
>
> The SMARTA consortium has identified good practice examples in rural mobility, not only related to public transport but also to transport modes such as ride-sharing schemes for residents in rural areas.
>
> One of its good practice examples in terms of ride-sharing is RezoPouce, in France. This is an organised hitch-hiking service which started in 2009 and is now deployed in around 2,000 municipalities across France, covering about 20% of rural areas. It shows the potential of local communities in supporting each other with a simple and well-organised hitch-hiking service, supported by the RezoPouce Association. RezoPouce is used for all kinds of trips including commuting and education. Average waiting time: 6 minutes; 50% less than 5 minutes, 90% less than 10 minutes.
>
> See more in details https://ruralsharedmobility.eu/good-practices/
> Sources: https://ruralsharedmobility.eu/good-practices/ & https://ruralsharedmobility.eu/wp-content/uploads/2019/08/SMARTA-GP-Rezopouce.pdf

probability of bookings since various booking requests cannot be easily accommodated by the available cars during high demand periods. Fewer cars also mean it is less economically feasible to employ full-time paid staff. But towns can respond to these challenges in different ways:

- Towns should set up their own car-sharing services and use a volunteer-run organisation to maintain it. The success of such voluntary undertakings depends on the resourcefulness and activity of individual ˝doers˝. Nonetheless, successful examples show that car-sharing participation in smaller cities and communities can match or even surpass the participation levels in large cities when population size is taken into consideration (e.g. Vaterstetten near Munich in Germany, Albertslund in Denmark, Moorcar in Great Britain, The Swiss example: Mobility Car-sharing)[80].

- The administrations of smaller cities and communities can support the development of local car-sharing services by becoming business customers of the car-sharing service and using it for their own work-related travel. They can reduce the economic risk in the start-up phase by guaranteeing (possibly for a pre-established period) a minimum level of use and by financially supporting new car-sharing offers through the district, external sponsors or other carsharing associations. They can use their communication channels within the community to promote the service.[81] Municipalities can provide municipal vehicles as public car-sharing vehicles outside of business hours. Towns can maintain support ideally through public relations and

communication or logistically when creating parking spaces for car-sharing.[82]

- Peer-to-peer car-sharing is another alternative, and towns can promote the use of private apps which provide this service.

Ridesharing

The development of carpooling has several major advantages. The cost for cities is relatively low compared to the organisation of public transport services and it can replace a regular public transport network or low-traffic on-demand transport, generating significant savings[83]. Small cities and towns are able to support peer-to-peer ridesharing. Carpooling should be organised around stations and identified axes, creating a well-located and identified station network, either through label implementation or via a website. Cities can use urban design to visually identify stations by implementing floor markings and display panels. The implementation of ridesharing services requires cooperation across ridesharing operators to create a common vision.

To successfully promote ridesharing in small cities and towns, municipalities need to implement additional actions such as awareness campaigns on sustainable development or road safety and continuously inform residents on ridesharing offers as an integrated part of the local transport network.

To reach a particular users volume, cities should:

- Actively promote and communicate on ridesharing offers as part of a political vision to make ridesharing visible

- Take a multimodal approach to local mobility

80　https://www.carsharing.de/images/stories/pdf_dateien/factsheet_9_e_v2.0.pdf

81　https://www.suits-project.eu/wp-content/uploads/2019/12/Workbook_module-2.pdf

82　https://carsharing.de/gute-beispiele-carsharing-foerderung-kommunen

83　Cerema, Plan de mobilité rurale, juin 2016, p.56

- Reduce the fragmentation of mobility solutions by pooling ridesharing services at the regional level, for example.

5.10. Sustainable freight and logistics

Freight traffic can be a big burden on smaller cities and towns, particularly if there is no bypass road. Freight delivery is also a major topic in towns with narrow streets, for example, due to a medieval structure that was never designed for cars, let alone trucks. In all cities, the growing demand for online shopping has increased the number of van deliveries, which often block roads or pavements during unloading. Even though small cities and towns seldom address freight traffic in their planning activities, several solutions exist to improve sustainable freight logistics.

Implementing sustainable freight logistics might require a high degree of coordination among different stakeholders, but small cities and towns could have an advantage over bigger cities through existing communication channels between the municipality and local businesses. As a planner, you may want to consider certain soft measures, such as traffic regulation measures or urban infrastructure development.[84] Such solutions can be implemented by:

- Setting up certain peak times when there are high numbers of pedestrians and cyclists while offering alternative recommended routes for heavy vehicles.[85] Electronic access systems can also regulate access for freight vehicles. For example, in Koprivnica, surveillance cameras were installed at all main entrances to the city centre (4-5 entrances) with automatic fines for trucks if they enter outside permitted times.[86]

- Restricting access to motorized vehicles in certain zones, which can also promote the use of more sustainable freight vehicles, such as cargo bikes.

- Limiting space for vehicles and tourist buses within specific areas. One possibility is to use guarded barriers on certain entrances to prevent vehicles from entering.

- Designing urban space to facilitate further pedestrian and cyclist safety through the implementation of roundabouts instead of crossings with traffic lights.

- Creating loading and parking restrictions, reservation systems, timeshare of parking spaces, or peak-hour clearways. These measures can reduce congestion and improve safety and liveability, but also require public and private acceptance and coordination with other parties. [87]

- Promoting a card system on loading and unloading for shop owners and hostelry owners (for non-labelled vehicles). To implement such a system, you may consider monitoring the historic centre businesses to know how often they need to enter the city in their own vehicles. The card system aims to reduce the number of journeys by restricting access without impacting business activities within the area.

- Opening urban consolidation centres (UCC) and closing parts of the city to traffic while consolidating deliveries of goods to schools, local businesses and other municipal organisations. Small cities should consider developing partnerships with neighbouring municipalities to coordinate UCCs and provide accessible deliveries of public services, such as postal services and cleaning. In 1999 in Sweden, Borlänge (population 50,000) and three

> **Box 36: Sint-Niklaas, Belgium: Redirecting freight traffic to higher-level roads with truck ban zones**　　Best Practice Example
> 24,250 population
>
> Through the creation of its SUMP, the city of Sint-Niklaas introduced a guiding freight route, supported by an extensive ban on passing through freight traffic on the roads. The creation of a network for freight traffic had to be constructed in a way to enable freight traffic to be redirected to the higher-level road network. To improve traffic safety and traffic liveability, four large zones of 3,5 tons except for local traffic providing local supplies were introduced within the city's territory.
>
> Source: http://sump-network.eu/fileadmin/user_upload/SUMPs/PROSPER-ITY_SUMP_Sint_Niklaas_Summary_EN.pdf

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84　http://www.enclose.eu/upload_en/file/deliverables/Enclose%20SULP%20Portfolio.pdf

85　https://www.eltis.org/sites/default/files/urban_road_safety_and_active_travel_in_sumps.pdf p.35

86　Source: SLP3 Webinar 3, Speaker: Nebojsa Kalanj

87　https://civitas.eu/sites/default/files/Results%20and%20Publications/civ_pol-an5_urban_web.pdf

other rural municipalities set up a distribution centre and reduced the number of deliveries by 75%.[88]

Introducing cargo bikes

As a planner or policymaker of a small city or town, especially if your city has a historical centre with narrow streets and high density, you may wish to consider promoting the use of cargo bikes for deliveries, and especially last-mile deliveries. It is essential to evaluate the level of ambition of a city in implementing a cargo bike scheme for freight logistics, and to decide on the capacity needed to implement a suitable service for the needs of local residents. Public-private partnerships should also be considered when implementing cargo bike services, to share the first investment costs and implementation risks. You can promote the use of cargo bikes by implementing several measures, such as: [89]

- Testing cargo bike-sharing schemes in a variety of settings, for private citizens as well as for the commercial sector. Municipalities can rent electric-assist cargo bikes to organisations and businesses on a trial basis for their deliveries and logistical needs, before permanently implementing this solution.

- Securing a financing scheme by implementing a cargo bike scheme at the city/federal/county level.

- Extending bicycle networks and tracks, bicycle parking and bicycle stations that provide mechanical

assistance (see the section on strengthening cycling as a daily mode of transport above)

- Customizing cargo bikes for specific services such as couriers, to help visually identify the different uses of cargo bikes.

- Strengthening the regulative framework of other modes of freight transport to promote the use of cargo bikes for last-mile deliveries instead of motorized services.

- Using cargo bikes for waste and recycling collection in narrow city centre streets (like Alba Lulia Municipality in Romania).

Best Practice Example

Box 37: Maribor, Slovenia: Last-mile delivery by electric cars and cargo bikes

94,000 population

The city administration promoted last-mile delivery by electric car and cargo bike in the city centre to avoid air pollution and regulate deliveries in pedestrian zones. Delivery companies had to adapt and cover the financial resources to purchase environmentally-friendly vehicles. Other public services also adapted to cargo bikes to carry out their services using sustainable mobility solutions. Overall, the municipality noticed less traffic during the day in pedestrian zones, and surveys were conducted to learn and adapt the implementation process based on the different stakeholders involved.

Source: https://www.interregeurope.eu/policylearning/good-practices/item/2867/last-mile-delivery-by-electric-cars-and-cargo-bikes-in-urban-areas/
Image: Cargo bike from Maribor public cleaning company "snaga". https://ibikemaribor.tumblr.com/post/124051269099/recently-we-noticed-new-cargo-bike-from-maribor,
Author: Mariborska kolesarska mreža (Maribor Cycling Network)

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[88] http://www.epomm.eu/newsletter/v2/eupdate.php?nl=0216&lan=en

[89] http://cyclelogistics.eu/sites/default/files/downloads/D2.1_General_Analysis_Report_CityChangerCargoBike_final.pdf

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7. Annex - Checklist

PHASE 1: Preparation and analysis ☑

Step 1: Set up working structures

Current strengths and weakness identified.	☐
Required skills and financial resources for planning process analysed.	☐
Budget for SUMP process politically approved.	☐
Coordinator of the planning process and core team set up.	☐
Stakeholder groups identified and political support established.	☐

Step 2: Determine planning framework

Relevant national and regional documents reviewed.	☐
Geographic scope of the plan defined (if possible, the functional urban area) and politically agreed.	☐
Key authorities from the planning area included in the core team and steering group.	☐
Relevant policy linkages identified (spatial planning etc.) and dialogue on policy integration established.	☐
Timeline and work plan developed and politically approved.	☐
Needs for external support identified, services tendered and suitable contractor chosen who understands the SUMP approach.	☐

Step 3: Analyse mobility situation

Information needs to be specified.	☐
Available data identified and gaps defined.	☐
Data sharing with external owners of relevant information agreed.	☐
Additional data collected, if needed.	☐
Mobility situation analysed.	☐
Key opportunities and problems to be addressed by the SUMP prioritised.	☐

PHASE 2: Strategy development ☑

Step 4: Build and jointly assess scenarios

Impacts of potential changes in external factors explored.	☐
Different alternative scenarios described, including a business-as-usual scenario.	☐
Sensitivity of scenarios to changing circumstances assessed.	☐

Step 5: Develop vision and objectives with stakeholders

Visioning meetings conducted with a group of key stakeholders (SUMP 'steering group').	☐
First draft of vision and objectives developed.	☐
Draft discussed with stakeholders, optimally also with policymakers and citizens.	☐
Stakeholder agreement on final vision and objectives.	☐

Step 6: Set indicators and targets

Set of strategic core indicators defined, including reporting format and measuring method.	☐
Measurable and time-bound targets for all strategic indicators agreed on.	☐

PHASE 3: Measure planning ☑

Step 7: Select measure packages with stakeholders

Long list of potential measures created.	☐
Measures assessed with an eye to effectiveness, acceptability and value for money.	☐
Most promising measures selected for shortlist.	☐
Shortlisted measures described and assessed in more detail.	☐
Measures bundled into integrated packages.	☐
Selected packages validated with stakeholders and final selection done.	☐
Monitoring arrangements for the most important measures defined.	☐

Step 8: Agree actions and responsibilities

All actions identified, defined, and described.	☐
Relationships between actions identified.	☐
Financial analysis and assessment of possible funding sources carried out.	☐
Responsible lead implementers for all actions identified.	☐
Timeline and priorities agreed with stakeholders.	☐
Information and opportunity for feedback provided to decision-makers, stakeholders and the public.	☐

Step 9: Prepare for adoption and financing

Detailed financial plans prepared and agreed for actions requiring financing in the first phase of SUMP implementation.	☐
Sustainable Urban Mobility Plan document of high quality finalised.	☐

PHASE 4: Implementation and monitoring ☑

Step 10: Manage implementation

Handover of factsheets to action managers.	☐
Implementation steps agreed for each action.	☐
Procedures for regular status updates established.	☐

Step 11: Monitor, adapt and communicate

Status of implementation activities constantly monitored and necessary adjustments made in time.	☐
Progress towards measure targets and strategic SUMP targets evaluated at regular intervals.	☐
People directly affected by measures involved in the implementation process.	☐
Solutions for mitigation of negative effects during implementation identified and pursued.	☐
General public informed about progress of measure implementation.	☐

Step 12: Review and learn lessons

Successes and failures of the Sustainable Urban Mobility Plan process evaluated.	☐
Lessons learnt documented and exchanged with other cities.	☐
New challenges ahead for urban transport and mobility identified.	☐

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