

SUMPS-UP

SUMPs-Up Mobility Practitioners Webinar

20 March 2019

Measure Selection in Sustainable Urban Mobility Plan Development

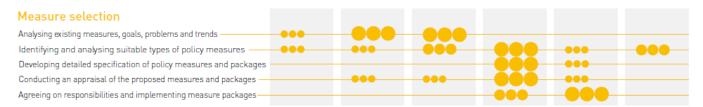


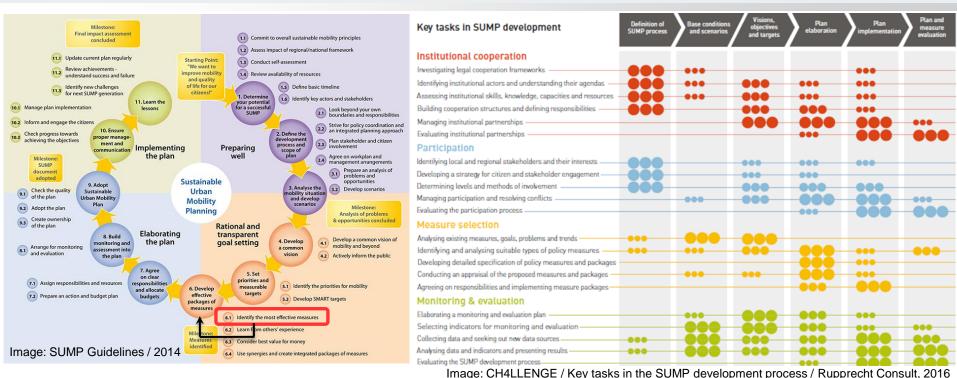
Image: CH4LLENGE - Addressing Key Challenges of Sustainable Urban Mobility Planning





The context





Measure selection - an important step of reaching the targets of the SUMP and they are the core part of the final document.

Practitioners need to be aware of the challenges in order to conduct an effective and efficient SUMP process with the aim of achieving a high-quality SUMP.

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Learning objectives for this webinar





Measure selection is...

• **the process** of identifying the most suitable and cost effective policy measures **to achieve the SUMP's vision and objectives** and overcome the identified problems.

What do we need to know about it?

- to understand the process of selecting, assessing and packaging transport measures to address the needs and problems in different city contexts;
- to be able to assess and evaluate the impacts of these measures once implemented.

Measure selection in a nutshell!



Let's take a first look at the topic of measure selection!

- Understanding mobility needs and transport problems of cities is difficult when thinking and implementing sustainable urban mobility;
- We need to understand how measures can meet the needs and address the problems! And...
- To think beyond any preconceived solutions open to new solutions based on the evidence. It will later help in assessing the impact of the measure.







Images: eltis.org / Harry Schiffer, and City of Ljubljana

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Measure selection as part of the SUMP process Definitions



What is a measure?

 An action that can be implemented to contribute to reaching one or more policy objectives in a SUMP and to overcome one or more identified problems;

What is a package measures?

 A combination of different measures which have been grouped together in a package - to contribute more effectively to policy objectives and problem resolution;

What is an option generation?

The process by which possible measures (or (packages) are identified.



Images: Urban Mobility Plan Vienna https://www.wien.gv.at/st adtentwicklung/studien/p df/b008443.pdf

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What is an option appraisal?

 The process by which a proposed measure or package is assessed in advance of its implementation

Measure selection as part of the SUMP process The key challenges



Measure selection is a challenge for five principal reasons

- 1. Cities have a very wide range of measures available to them too easy to **overlook solutions** which would be more effective
- 2. Many stakeholders and politicians have **preconceived ideas** as to what should be done, and evidence suggests that these solutions are often not the most cost-effective;
- 3. The most **cost-effective measures** are often **not the most easily implemented** split responsibilities, lack of funding, and public opposition can limit what is done;
- 4. A SUMP is likely to draw on several measures, but the performance, and implementability, will depend on how they are packaged;
- 5. A SUMP needs to be more than a wish-list of measures prior to implementation each measure needs to be defined in detail, assessed in terms of its likely impact.



1. Determine the baseline, reviewing already implemented measures and the status of the city's current transport system.

Cities can use this 4 steps-structure for developing a validated and verified list of feasible, effective measures

- 2. Create a list of measures designed to address the city's vision and targets for more sustainable urban planning as well as the prioritised challenges.
- **3. Rate measures** using a rating system to identify measures that are effective and feasible for the city.
- **4. Describe and gain approval** for selected measures.

Source: SUMPs-Up Manual on the integration of measures and measure packages in a SUMP - http://sumps-up.eu/manuals/ 7



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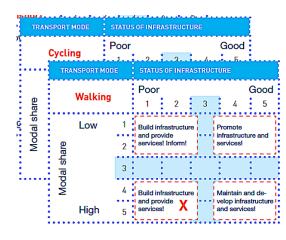
1. Determine the baseline, reviewing already implemented measures and the status of the city's current transport system.

Determine the baseline

- city's status avoid thinking about solutions before you have agreed on your vision and objectives. These will help you to understand what problems you face
- different key elements should be analysed as shown in the table

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

- Deepens the knowledge about the current status;
- Determines the capacity for measure implementation;
- Done systematically for each mode of transport.



Source: SUMPs-Up Manual on the integration of measures and measure packages in a SUMP - http://sumps-up.eu/manuals/



2. Create a list of measures designed to address the city's vision and targets for more sustainable urban planning as well as the prioritised challenges.



Identify measures which might best help solve identified problems - the option generation is not an easy task!

Strategic policy measures for monitoring and data gathering

Facilities traffic excluded to increase traffic safet Develop mobility	DESCRIPTION OF MEASURE	RESPONSIBILITY		
	Marked lanes and tracks along major urban street. Motorised traffic excluded to increase traffic safety for cyclists.	Road owner		
Develop mobility management plan				

Capacity building activities

Source: SUMPs-Up Manual on the integration of measures and measure packages in a SUMP - http://sumps-up.eu/manuals/

Traffic safety measures

Infrastructure for pedestrians and cyclists

Promotion of sustainable

modes of transport and awareness campaigns

A list of measures - a good start for cities

 Increase internal knowledge and awareness - capacity building with politicians and planners in the organisation; Choose:

rding
Traffic
management

 physical measures to improve the infrastructure regarding safety, walking and cycling;

Parking

management measures - increase the efficiency of the existing transport system.

Parking management



2. Create a list of measures designed to address the city's vision and targets for more sustainable urban planning as well as the prioritised challenges.



An increasingly wide range of policy measures available to European cities

Long list of measures included in the START **SUMPs-Up** Manual on the integration of measures and measure packages in a SUMP http://sumps-up.eu/manuals/ based on different sources

ANNEX I

Long list of measures

Readers guide: This list of measures has been assembled with the aim to give inspiration to planning authorities in the process to selecting measures related to a SUMP. The list of measures and their description are based on several sources. When information is available online the measure is linked. Sources used in the list are: EVIDENCE, DELTA, KonSULT, Trivector, Vruits, Civitas, Copenhagenize.

SUMPs-Up European Programme for Accelerating the Take-up of Sustainable Urban Mobility Plans Responsible author(s): Trivector Traffic AB

The long list of measures is divided in to 25 different measure areas based on the Evidence structure. For each measure area, a number of measures are described and the connection to Civitas' policy fields are displayed.

1. Walking	11. Parking	21. Cycling infrastructure
2. Urban freight	12. New public transport systems	22. Congestion charges
3. Travel information	13. New models of car use	23. Cleaner Vehicles
4. Traffic safety	14. Marketing and rewarding	24. Bike sharing schemes
5. Traffic management	15. Land use planning	25. Access Restrictions
6. Taxes and fares	16. Integration of modes	
7. Site-Based Travel Plans	17. Inclusive urban design	
8. Roadspace reallocation	18. e-ticketing	
9. Public transport Enhancements	19. Environmental zones	
10. Personalised travel planning	20. Electric Battery and fuel cell vehicles	

1. Walking (link)

NAME OF MEASURE	DESCRIPTION OF MEASURE	CIVITAS POLICY FIELD
Pedestrian areas & routes	Measures to influence pedestrian behaviour and to provide safe and attractive pedestrian areas.	
Create (temporarily) pedestrian areas		
Intelligent pedestrian crossings	An Intelligent Pedestrian Detector (IPD) that provides real-time information to the Traffic Signal regarding the number of pedestrians waiting to cross, detected via the IPD, as they approach the crossing and they enter the detection area. The Traffic Signal extends the pedestrian green phase based on how many people are waiting to cross or on the number of still crossing pedestrians. The Light Demand can be switched off when the number of pedestrians isn't sufficient (based on the defined threshold). While VRUs are waiting for pedestrian green phase and during it, if the demand is active (i.e. if the number of people waiting to cross exceeds a predefined threshold) the Light Demand is also activated, regardless of the light cycle. This Light Demand is intended to alert vehicles about the presence of pedestrians in the scene. The illumination system (Light Demand) is used to highlight the crossing and its surroundings, warning vehicles about the presence of pedestrians and thus enhancing their safety	Car independent Lifestyles
Increase accessibility for elderly or disabled	Ensure accessibility for elderly or disabled people in form of smooth, even pavement, submerged pavement edge and tactile surfaces	Safety and security
people	Sabinerged pavement edge and tactic sariaces	

2. Urban freight [link]

NAME OF MEASURE	DESCRIPTION OF MEASURE	CIVITAS POLICY FIELD
	Lorry routes are used to achieve Positive Routeing by specifying the routes which lorries can take.	
management systems	a number of telematics systems which use remote devices on both freight vehicles and trailers to control and monitor freight operations and present this data in a useable format to freight managers, either as real time data or static data.	
ban for lorries / HGVs	In order to avoid congestion on main travel routes, a driving ban for lorries/ HGVs [Heavy Goods Vehicles] during peak travel times should be implemented (for example on weekends).	



2. Create a list of measures designed to address the city's vision and targets for more sustainable urban planning as well as the prioritised challenges.



A wide range of appropriate measures needs to be considered - there is a risk that the best options are overlooked and money could be wasted!

A good option generation process is crucial – to find the interventions that offer the highest return.

The full range of options should look across all modes.

Measure Option Generator

Please select objectives, problems or indicators.

You can assign weights (0 to 5) to indicate the relative importance of each category you have selected.

0 = do not use, 1 = low importance, 5 = high importance.



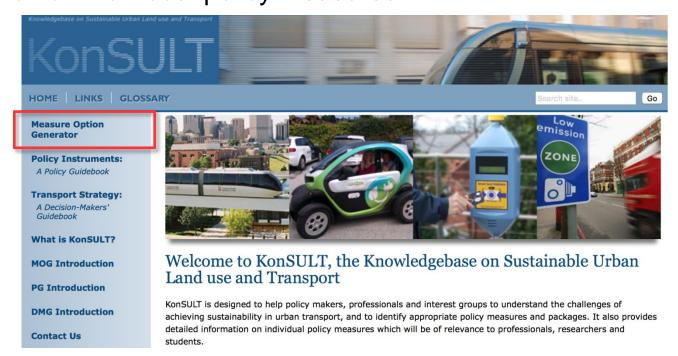
Specification of objectives in KonSULT Source: www.konsult.leeds.ac.uk



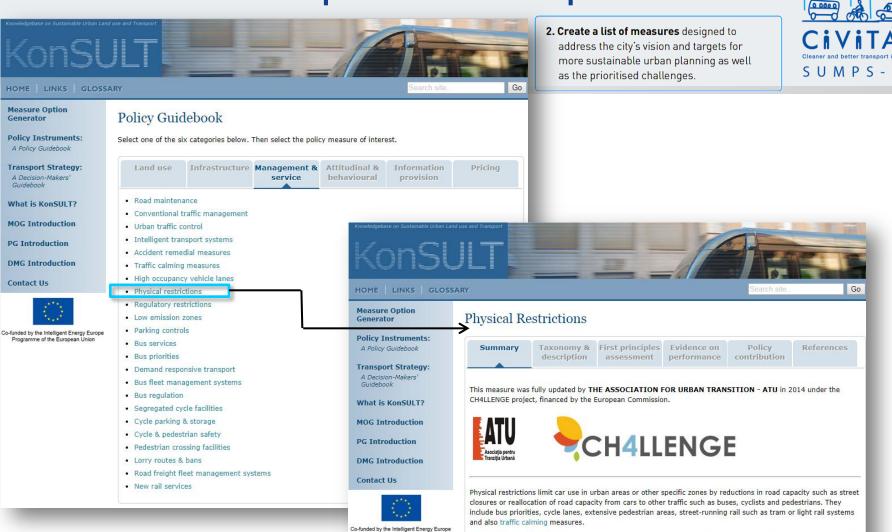
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2. Create a list of measures designed to address the city's vision and targets for more sustainable urban planning as well as the prioritised challenges.

KonSULT - designed to help policy makers, professionals and interest groups to understand the challenges of achieving sustainability in urban transport, and to identify appropriate policy measures and packages. It provides detailed information on individual policy measures.



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





Physical restrictions on car use aim to reduce the volume of vehicles to achieve a more balanced allocation of road space. These measures can also improve the attractiveness of public transport, provide better facilities for cyclists

However, demand impacts will vary according to the capacity of a network at the site where a physical restriction is implemented. If capacity is reduced on a few roads or areas but there is still capacity available on other routes, drivers may divert onto an alternative route which still has available capacity. This will reduce traffic congestion on a

specific road, but not lead to an overall reduction in the level of car traffic in an urban area.

and pedestrians, and improve environmental quality and safety.

Programme of the European Union

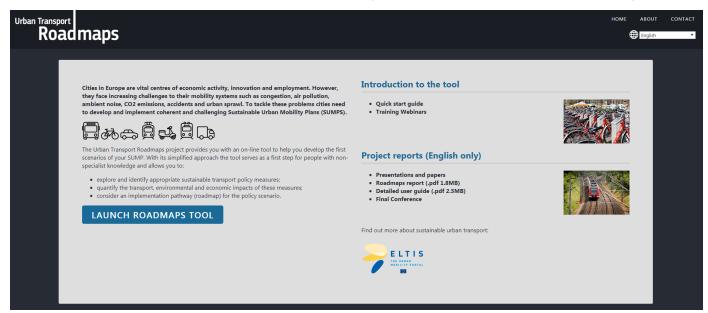
2. Create a list of measures designed to address the city's vision and targets for more sustainable urban planning as well as the prioritised challenges.



Other option generators — The Urban Transport Roadmap on-line tool to help you develop the first scenarios of your SUMP.

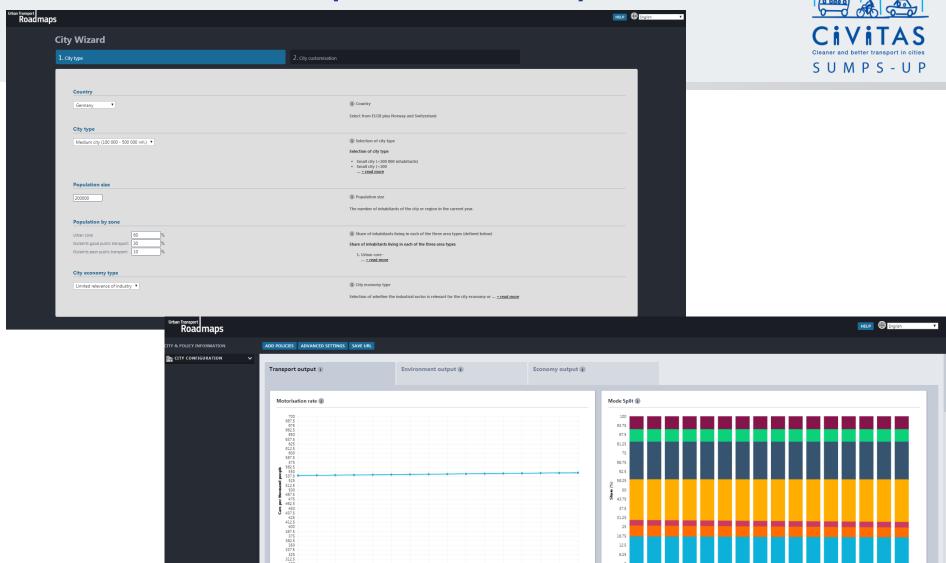
With its simplified approach the tool serves as a first step to:

- explore and identify appropriate sustainable transport policy measures;
- quantify the transport, environmental and economic impacts of these measures;
- consider an implementation pathway (roadmap) for the policy scenario.



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





Cars per thousand people

2023 2024 2025 2026 2027 2028 2029 2030

SAVE AS: .CSV IMAGE

2015 2016 2017 2018 2019 2020 2021 2022

SAVE AS: .CSV IMAGE

2. Create a list of measures designed to address the city's vision and targets for more sustainable urban planning as well as the prioritised challenges.



Other option generators presented in SUMPs-Up Manuals on the integration of measures and measure packages based on sources such as EVIDENCE, MaxExplorer and CIVITAS

MaxExplorer

MaxExplorer is an interactive tool to help "mobility management-beginners" in choosing the mobility management measures most appropriate to their specific situation. – available EPOMM platform and describes 27 featured measures. www.epomm.eu/index.php?id=2745

EVIDENCE

EVIDENCE - The EVIDENCE website contains a set of 22 mobility measure reviews and training materials for academics and trainers.

www.evidence-project.eu/index.php

CIVITAS

Innovative urban transport solutions - challenges, lessons and recommendations regarding measures within CIVITAS policy fields http://civitas.eu/sites/default/files/civitas-plus-innovative-urban-transport-solutions-www-final.pdf

Measure selection as part of the SUMP process Main barriers to implementing



SUMP measures may be rejected! - less effective SUMP



Various types of barriers:

- Governance lack of autonomy from national government, inconsistent policies across government boundaries and a mismatch of public and private sector objectives;
- Financial particularly a PT related issue reluctance to increase fees;
- Legal lack of legal powers to implement a particular measure, legal responsibilities split between agencies, and regulations that require involvement of the private sector;
- Political acceptability politicians fear of lack of public acceptance, when different parties hold opposing views and oppose the measure;
- **Technical barriers** lack of key skills and expertise significant barrier to progress, and is aggravated by rapid changes in policy and new technologies

Rate measures using a rating system to identify measures that are effective and feasible for the city.



Rate measures to identify the ones that are effective and feasible for the city!

The most important aspects to consider:

- if the measure can be implemented,
- if it contributes to a more sustainable city and
- if it is feasible

Ranking the measures in KonSULT Source: www.konsult.leeds.ac.uk

Measure Option Generator

The list below shows all the policy measures within KonSULT in rank order based on their ability to contribute to the context which you have specified.

The absolute scores are arbitrary, but by comparing them you can judge the relative contribution of different measures.

To find out more about any of the measures listed, simply click on it.

By clicking on the Package Option Generator button you can investigate how these policy measures can combine with one another. The process is explained in subsequent screens.

Package	Option Gene	erator				
Save res	ults					
rank	code	category	cost	timescale	measure	score
1	209	Infrastructure	medium	medium	Pedestrian areas & routes	83
2	102	Land Use Measures	neutral	long	Land use to support public transport	60
3	208	Infrastructure	medium	medium	Cycle networks	52
4	305	Management and service measures	medium	short	Accident remedial measures	51
5	605	Pricing	neutral	medium	Road user charging	45
6	304	Management and service measures	medium	medium	Intelligent transport systems	45

Source: SUMPs-Up Manual on the integration of measures and measure packages in a SUMP - http://sumps-up.eu/manuals/

MEASURE	EFFECTIVE- NESS	FEASI- BILITY	COMMENT
Segregated Cycle Facilities			Needs to be coordinated with private land owner
Develop mobility manage- ment plan		•••	Knowledge within admin- istration
Improve pedestrian crossings on prioritised routes			Other stakeholder is responsible for most of the routes
	•	• •	19



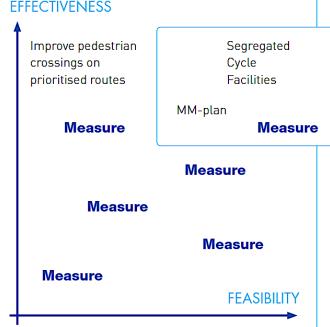
Rate measures using a rating system to identify measures that are effective and feasible for the city.



USE DIAGRAMS!

They are easier to be presented to politicians and citizens!

 When the rating is completed, a summarise of the highest rated (or most prioritised) measures can be brought on when proceeding with the SUMP planning process



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

Source: SUMPs-Up Manual on the integration of measures and measure packages in a SUMP http://sumps-up.eu/manuals/



4. Describe and gain approval for selected measures.



THE LIST OF MEASURE IS FINALISED

Gain approval among politicians, citizens and other stakeholders!

- A key element for success achieve a common understanding among stakeholders and politicians regarding more costly or advanced measures
- Send a draft document of the strategic choice of measures to different interested parties for consultation

GAIN APPROVAL AMONG CITIZENS! — their approval and understanding is

important, if not vital



How to package measures



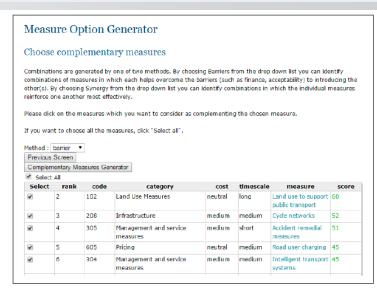
A step forward...measures packaging

No measure on its own will be sufficient to achieve a city's objectives or overcome its problems!

Two ways how policy measures can work together in a package:

- 1. Synergy they can achieve more together than either would on its own - the effect of two measures together is greater than the sum of the individual effects of the two of them alone
- They can facilitate other measures in the package by overcoming the barriers to their implementation

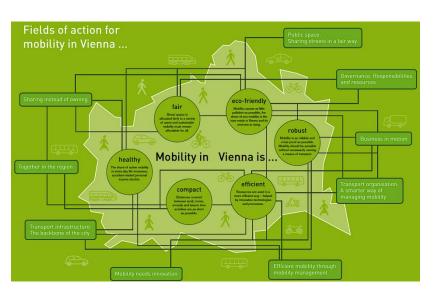
CIVITAS



Measure selection as part of the SUMP process How to package measures



CONTRIBUTIONS OF THE MEASURES TO THE OBJECTIVES Fields of action/Measures	fair	healthy	eco-friendly	robust	efficient	compact
Governance: Responsibilities and resources						
01 More resources for active mobility						
02 Cooperation and services of the City Administration to the districts						
03 Local mobility plans						
04 Planning tools and processes for the future of public transport						Г
05 Coordination and classification of the street and route network						
06 New priorities and requirements for transport expert assessments						
07 Creation of a data sharing system on mobility						
Public space: Sharing streets in a fair way						
08 Focus on coexistence in traffic						
09 More quality and safety of school forecourts						
10 Temporary opening of streets for active mobility						
11 More quality of street spaces – appealing design and amenities						
12 Repurposing of street areas						
13 High importance of eco-mobility in new street spaces						
Efficient mobility through mobility management						
14 Consultancy on multi-modal mobility: a one-stop shop						
15 Mobility management in schools and enterprises						
16 Mobility management for new neighbourhoods						
17 Introduction of an online housing and mobility calculator						
18 Private-law agreements on mobility issues						
Sharing instead of owning						
19 Further development of bike sharing systems						
20 Closer interlinkage of classic car sharing with public transport						
21 Support to new systems of car sharing						
22 Establishment of mobility points						
Transport organisation: A smarter way of managing mobility						
23 Compilation of a Vienna intersection register						
24 Shorter waits for pedestrians and cyclists						
25 More intersections with simplified control						
26 Accelerating major public transport lines						
27 Shortening distances for cyclists						



Images: Urban Mobility Plan Vienna / https://www.wien.gv.at/stadtentwicklung/studien/pdf/b008443.pdf



Measure selection as part of the SUMP process How to package measures



Box 4: Examples packages of demand management measures

OECD has described six different packages of demand management measures that can be used as an inspiration and an explanation of how a package of measures can be composed (OECD 2002):

- Provide viable alternatives to driving alone while gradually increasing road transport costs.
 - E.g. park-and-ride, ridesharing platforms, improving quality of public transportation, enhancing car-sharing association memberships when building accommodations with limited amount of parking, road pricing, car-pooling lanes, parking fees.
- 2. Integrate land use and transport demand measures. E.g. require (Green) Transport Plans in office and housing developments, avoid urban sprawl and dedicated land for commerce in places without public transport.

Source: SUMPs-Up Manual on the integration of measures and measure packages in a SUMP http://sumps-up.eu/manuals/

- Introduce Green Transport Plans. A green transport plan is basically a package of measures for a certain area or organisation.
- 4. Implement traffic reduction measures in city centres along with logistics measures for freight transport. E.g. lorry routes & bans, time access restrictions, incentives and subsides, urban consolidation centres, integrating logistics planning into land use planning, parking management.
- 5. Institute road user charges in co-ordination with intelligent traffic management systems. E.g. parking charges, congestion charges, multimodal information & trip advice, dynamic guidance and information systems.
- 6. Promote virtual mobility and more flexible labour market. E.g. telecommunications, telework, flexible working hours, company travel policies.

References



Extrapoli Publico or Sudenable Utan

Guidelines: Developing and Implementing a Sustainable Urban Mobility Plan

The SUMP Guidelines are available on the ELTIS-platform, www.eltis.org/guidelines/sump-guidelines.

These guidelines are intended for urban transport and mobility practitioners and other stakeholders involved in the development and implementation of a Sustainable Urban Mobility Plan.

The guidelines are introducing the concept and the benefits of Sustainable Urban Mobility Plans and contain a description of the 11 steps of the SUMP-process (Rupprecht Consult, 2014).



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

Based on the SUMP process there are also guidelines available for how to develop a Sustainable Urban Mobility Plan for a polycentric region.

www.eltis.org/sites/eltis/ files/tool/polysump-sump-guidelines-final.pdf.



Measure selection: Selecting the most effective packages of measures

For more information about the theory and evidence behind measure selection, see

Measure selection – Selecting the most effective packages of measures for Sustainable

Urban Mobility Plans. The publication produced in the CH4LLENGE project gives a wide introduction to the subject measure selection, how measure selection is an important part in sustainable urban mobility planning and what evidence and principal constraints there are

regarding measure selection.
www.sump-challenges.eu/kits

http://sumps-up.eu/manuals/











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Thank you!

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