Training on SUMPs

Module 4:
Measure selection

14.11.2018

Enrico Pastori

TRT Trasporti e Territorio

Agenda

1. Introduction to SUMPORT Training Module 4: objectives and agenda
2. Recap from previous training modules
3. Policy measures for sustainable urban mobility
4. Tools and approaches to select the best mix of integrated policy measures

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Introduction

TRT and our experience in Sustainable Urban Mobility Planning

- **TRT**: quantitative analysis, planning and economic assessment of transport systems and policies since 25 years
- Pioneer study on Sustainable Urban Transport Plans (SUTP) launched by the EC DG ENV in 2005
- Co-author of the **EU SUMP Guidelines "Developing and Implementing a Sustainable Urban Mobility Plan"**
- Key **EU projects dealing with SUMPs**: Eltis, European Urban Transport Roadmaps 2030, PUMAS, CIVITAS WIKI, BUMP (SUMP training activities to Italian cities), CIVITAS PROSPERITY, Urban Mobility Indicators
- Chair of the **Coordinating Group of the EU SUMP Platform**
- Design and evaluation of **urban and regional sustainable mobility plans** in Italy: Parma, Alessandria, Padova, Piacenza, Naples, Aosta, Sicilian Islands, Prato, Vicenza and Milan

Introduction

SUMPORT Training programme

MODULE		CONTENT
N.	One	**Setting the scene** • European policies on sustainable urban mobility • Basic concept and benefits of SUMP • EU support and guidance
Timing	July 2017	
Location	Valencia (ES)	
N.	Two	**Introduction to the SUMP planning cycle** • Preparation • Development • Implementation • Monitoring
Timing	December 2017	
Location	Koper (SI)	
N.	Three	**Case studies and best practices** • Relevant experiences at EU level • Workshop exercises: self-assessment
Timing	June 2018	
Location	Igoumenitsa (EL)	
N.	Four	**Measure selection** • Policy measures for sustainable urban mobility • Tools and approaches to select the best mix of measures
Timing	November 2018	
Location	Barcelona (ES)	

Introduction

Objectives of Module 4

- To identify the main **thematic areas** of policy measures
- To have a further look at **measures for port cities**
- To understand the range of **infrastructure, operational and organisational measures**
- To understand the benefits of establishing effective **'packages‘ of measures**
- To understand **appraisal tools** to inform option analysis, assess and prioritise measures, packages and scenarios
- To have insight about the **Urban Transport Roadmap tool**

Introduction

Agenda of Module 4: Measure selection

13.30 – 15.00	**Introduction:** ▪ Objectives and agenda of training Module 4 ▪ Recap from previous modules **Policy measures for sustainable urban mobility** ▪ Thematic areas ▪ Resources ▪ Further examples related to the port-city relationship
15.00 – 15.30	*Coffee break*
15.30 – 17.00	**Tools and approaches to select the best mix of integrated policy measures** ▪ Methodology and key issues ▪ Konsult option generator ▪ Urban Transport Roadmap tool

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Recap from Module 1: the SUMP concept

What is a Sustainable Urban Mobility Plan?

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 e**valuation** principles

Recap from Module 1: the SUMP concept

A CHANGE OF PARADIGM

Traditional Transport Planning	⇔	Sustainable Urban Mobility Planning (SUMP)
Focus on traffic	⇔	Focus on **people**
Primary objective: Traffic flow capacity and speed	⇔	Primary objectives: Accessibility and quality of life, as well as sustainability, economic viability, social equity, health and environmental quality
Modal-focussed	⇔	**Balanced development of all relevant transport modes** and shift towards cleaner and more sustainable transport modes
Infrastructure focus	⇔	**Integrated set of actions** to achieve cost-effective solutions
Sectorial planning document	⇔	Sectorial planning document that is **consistent and complementary to related policy areas** (such as land use and spatial planning; social services; health; enforcement and policing; etc.)
Short- and medium-term delivery plan	⇔	Short- and medium-term delivery plan embedded in a **long-term vision and strategy**
Related to an administrative area	⇔	Related to a **functioning area** based on travel-to-work patterns
Domain of traffic engineers	⇔	**Interdisciplinary planning teams**
Planning by experts	⇔	Planning with the involvement of stakeholders using a transparent and **participatory approach**
Limited impact assessment	⇔	Regular **monitoring and evaluation** of impacts to inform a structured learning and improvement process

Recap from Module 1: the SUMP concept

SUMP Main Characteristics

- A **clear vision, objectives and a focus on achieving measurable targets** that are embedded in an overall sustainable development strategy
- A **long-term vision and clear implementation plan**. A long-term strategy and a plan for short-term implementation, specifying the timing for implementation, clearly allocating responsibilities and identifying resources and finances
- A **participatory approach** that involves citizens and stakeholders from the outset and throughout the planning process
- A **pledge for sustainability** to balance economic development, social equity and environmental quality
- An **integrated approach** that considers practices and policies of different policy sectors, authority levels, and neighbouring authorities
- A **review of transport costs and benefits**, taking into account wider social costs and benefits

Recap from Module 1: the SUMP concept

BENEFITS

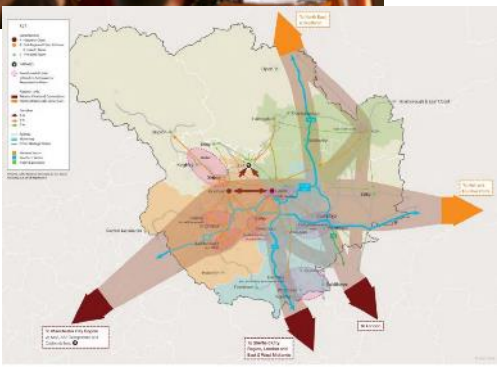
- **Improving quality of life**. Well-coordinated policies result in more attractive public spaces, improved road safety, better health, and less air and noise pollution
- **Saving costs - creating economic benefits**. Mobility is a major enabler for a local economy. A healthier environment and reduced congestion helps to substantially reduce costs to the local community and attract new businesses
- **Contributing to better health and environment**. More sustainable mobility directly translates into better air quality and less noise. Travelling more actively (by walking and cycling more often) is good for citizens' health
- **Making mobility seamless and improving access**. Sustainable urban mobility planning is an excellent tool to create multi-modal door-to-door transport solutions
- **Making more effective use of limited resources**. At a time when financial resources are limited, it is even more important to ensure that the solutions adopted make the most cost-effective use of the funds available




Recap from Module 1: the SUMP concept

BENEFITS

- **Winning public support.** Involvement of stakeholders and citizens is a basic principle of a SUMP. Obtaining a high level of "public legitimacy" reduces the risk of opposition to the implementation of ambitious policies
- **Preparing better plans**. An integrated and interdisciplinary approach to planning (with different departments bringing in their expertise) helps to put a mobility plan on a broader basis
- **Fulfilling legal obligations effectively**. Cities have to meet many, sometimes competing legal requirements. A Sustainable Urban Mobility Plan offers an effective way to respond through one comprehensive strategy
- **Using synergies, increasing relevance**. Urban mobility problems often span administrative boundaries, relate to multiple policy areas or concern a wide range of departments and institutions
- **Moving towards a new mobility culture**. As examples of many cities show, the outcome of continued sustainable urban mobility planning is a common vision of a new mobility culture



Recap from Module 2: SUMP Planning cycle

SUMP Guidelines

Online SUMP Guidelines

SUMP Glossary

SUMP Self-Assessment Tool

SUMP Guidelines

- Foreword
- Introduction
- Phase I: Preparing well
- Phase II: Rational and transparent goal setting
- Phase III: Elaborating the plan
- Phase IV: Implementing the plan
- Publication details
- Annex A: Glossary
- Annex B: Reference list
- Annex C: Good practice examples
- Annex D: Checklist
- Annex E: Experts consulted in workshops

Step 1: Determine your potential for a successful SUMP

Step 2: Define the development process and scope of the plan

Step 3: Analyse the mobility situation and develop scenarios

Step 4: Develop a common vision

Step 5: Set priorities and measurable targets

Step 6: Develop effective packages of measures

Step 7: Agree on clear responsibilities and allocate budgets

Step 8: Build systems for monitoring and assessment into the plan

Step 9: Adopt the SUMP

Step 10: Ensure proper management and communication (when implementing the plan)

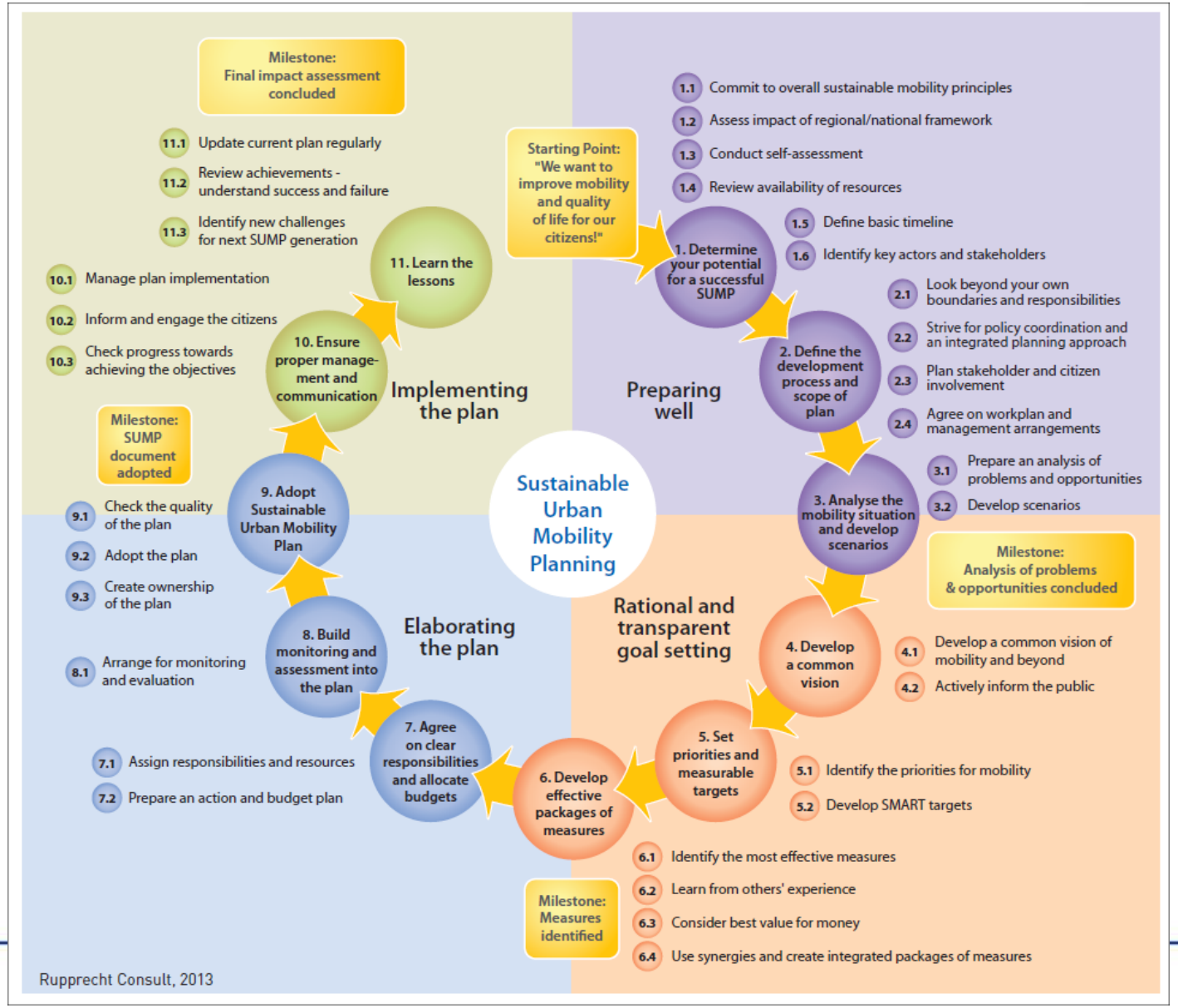
Step 11: Learn the lessons

http://www.eltis.org/guidelines/sump-guidelines

Recap from Module 2: SUMP Planning cycle

The Process

4 PHASES,
11 MAIN STEPS
AND 32
ACTIVITIES



Recap from Module 3: Case studies & best practices

SUMP Award

TURDA

CiViTAS
Cleaner and better transport in cities
PROSPERITY

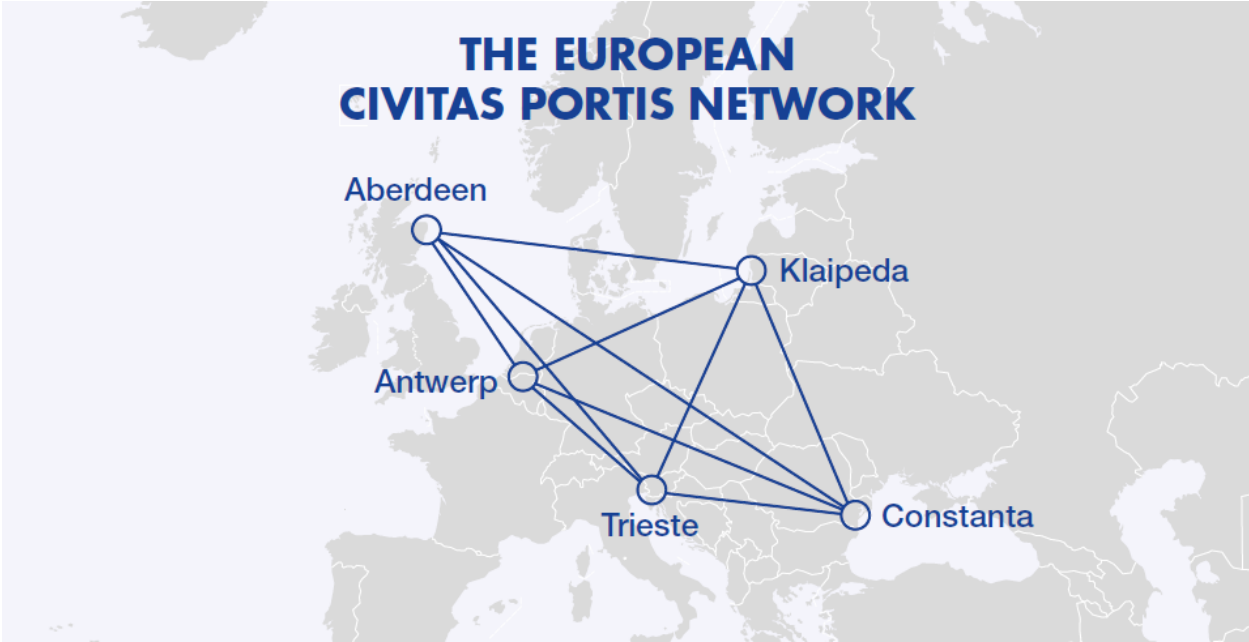
CHAMPION CITIES

http://sump-network.eu/interesting-sumps/

Recap from Module 3: Case studies & best practices

CIVITAS PORTIS

- 5 EU cities currently (2016-2020) working together on sustainable mobility in terms of commuter's traffic as well as transport and logistics
- They work together on good, innovative and sustainable solutions to improve access to their cities and ports



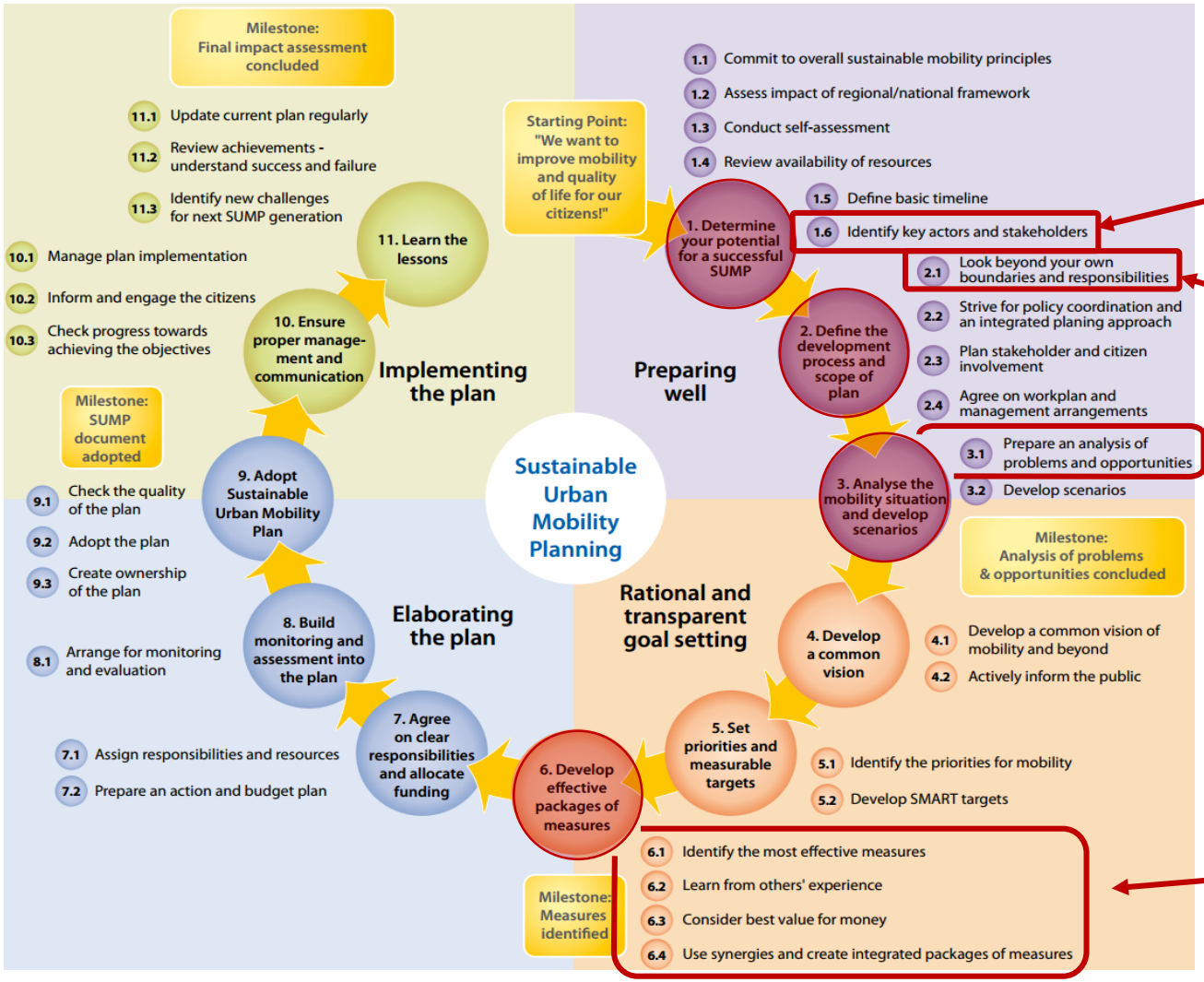
http://civitas.eu/portis

Recap from Module 3: Port cities specificities

KEY ELEMENTS

- **Integrating city- and port-related traffic flows** (both passengers and freight)
- Port as a **gateway** to the region/Country: long distance connections and crossing traffic
- Port as a **relevant (often main) trip attractor** (both for passengers and freight)
- **Cruise ship related traffic** and **touristic flows**
- **Touristic and leisure** trip purposes for non-local people and tailored transport solutions (cycling and walking measures, public transport, innovative solutions, etc.)
- **Spatial constrains**: city might be closed between sea and mountains
- **Land-use planning**: renewal and reuse of formerly port (customs) segregated areas and links with the city
- **Institutional cooperation**: municipalities and port authorities not always speak the same language

Recap from Module 3: Port cities specificities



LINKS WITH THE SUMP CYCLE

Stakeholders and key actors involved in port-related issues

Long-distance transport corridors and involved authorities

What are the problems? How to quantify them?

What can be set of integrated measures to tackle the port-related problems?

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Toolbox of measures: the CIVITAS knowledge base

- CIVITAS is a network of cities for cities dedicated to cleaner, better transport in Europe and beyond
- Since 2002, the CIVITAS Initiative has tested and implemented **over 800 measures** and urban transport solutions as part of demonstration projects in more than **80 Living Lab cities** Europe-wide
- The project works on **10 thematic areas**, related to sustainable transport mobility covering: Car-Independent Lifestyles, Clean Fuels & Vehicles, Collective Passenger Transport, Demand Management Strategies, Integrated Planning, Mobility Management, Public Involvement, Safety & Security, Transport Telematics, Urban Freight Logistics.

www.civitas.eu/mobility-solutions

Toolbox of measures: the CIVITAS knowledge base

Car-Independent Lifestyles

- cycling
- walking
- car-sharing
- bike-sharing
- car-pooling
- co-modality

http://www.civitas.eu/TG/car-independent-lifestyles

Toolbox of measures: the CIVITAS knowledge base

Clean Fuels and Vehicles

- electric mobility
- fuelling infrastructures
- hybrid vehicles
- bio fuels
- biogas and compressed natural gas
- cleaner fleets

http://www.civitas.eu/TG/clean-fuels-and-vehicles

Toolbox of measures: the CIVITAS knowledge base

Collective Passenger Transport

- accessibility
- intermodality
- service improvements
- ticketing systems
- innovative PT systems
- fleet management
- procurement schemes

http://www.civitas.eu/TG/collective-passenger-transport

Toolbox of measures: the CIVITAS knowledge base

Demand Management Strategies

- congestion charging
- access restrictions
- parking management and strategies
- low emission zones
- car-free zones
- priority lanes
- mobility credits
- financial incentives and disincentives

http://www.civitas.eu/TG/demand-management-strategies

Toolbox of measures: the CIVITAS knowledge base

Integrated Planning

- land-use
- housing
- new developments
- Sustainable Urban Mobility Plans

http://www.civitas.eu/TG/integrated-planning

Toolbox of measures: the CIVITAS knowledge base

Mobility Management

- marketing and communications
- personal and company travel plans
- mobility info centres

http://www.civitas.eu/TG/mobility-management

Toolbox of measures: the CIVITAS knowledge base

Public Involvement

- multi-stakeholder consultations
- information campaigns
- participatory processes

http://www.civitas.eu/TG/public-involvement

Toolbox of measures: the CIVITAS knowledge base

Safety and Security

- traffic calming
- infrastructure design
- shared space
- cycle highways
- secure school paths
- anti-vandalism measures

http://www.civitas.eu/TG/safety-and-security

Toolbox of measures: the CIVITAS knowledge base

http://www.civitas.eu/TG/transport-telematics

Transport Telematics

- Intelligent Transport Systems
- communication
- routing
- smartphone applications
- plate recognition system

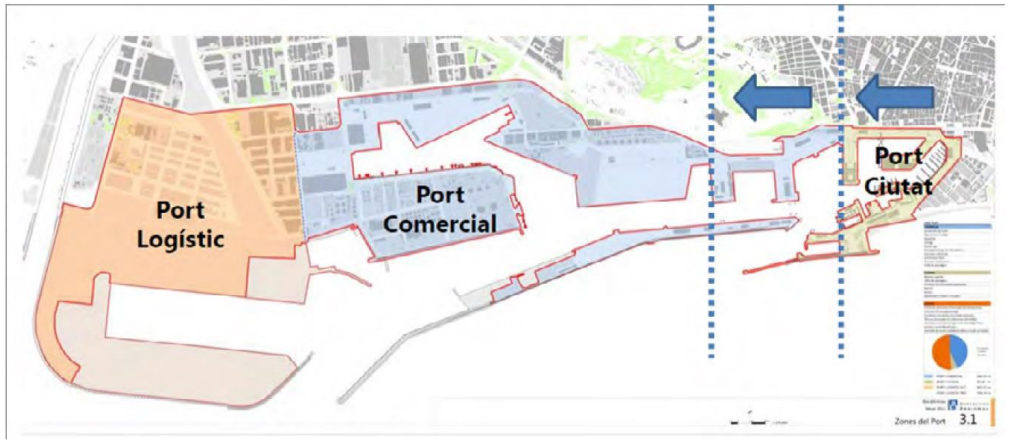
Toolbox of measures: the CIVITAS knowledge base

Urban Freight Logistics

- urban delivery centres
- distribution schemes
- fleet management
- cycle logistics
- freight partnerships
- urban freight transport plans

http://www.civitas.eu/TG/urban-freight-logistics

Examples of policies for port cities



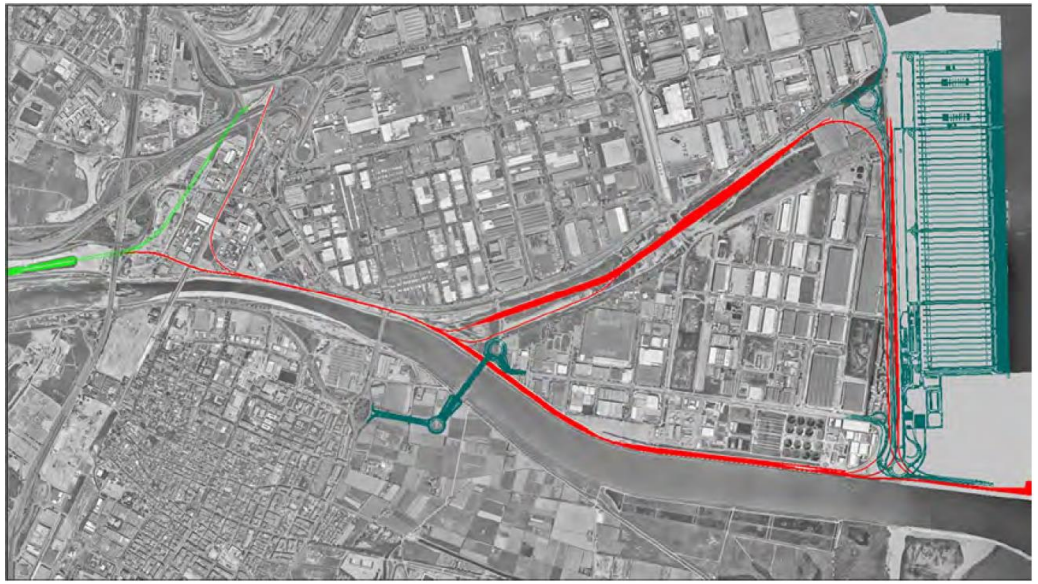
ENSURE CONSISTENCY BETWEEN URBAN MOBILITY PLANS AND PORT CONNECTIONS

- Well in advance of the implementation of city/port redevelopment projects, **plans for improving access to the port** must always take into account the **local urban mobility plans**
- Both **people** and **goods**, as well as **all modes of transport**

Barcelona

- The port of Barcelona needs **more space for developing port activities**: ambitious programme to expand towards the south
- Internal reorganisation of port spaces and uses, as well as **adapting the access points to the new facilities**
- The **coastal ring road** and the Corridor de Llobregat constitute the principal link between the port, the metropolitan area, and the hinterland: this sometimes causes traffic congestion and limits the port's capacity
- To address these problems, the city has undertaken the **reorganisation of the rail and road access points from the south**, as well as expansion of the ring road

Examples of policies for port cities



Barcelona: new rail access

Barcelona: new access point from south

Examples of policies for port cities

RELY ON - AND COMPLEMENT - THE EXISTING TRAFFIC GRID

- Extending the network of existing road and rail to city/port territory is a means of **integrating these territories into the urban structure**
- These **new links** (incl. pedestrian access, bicycle paths, tramways, buses, etc.) particularly important when parts of the port have been cut off by railways, highways, etc.

Marseille

- The **demolition of a highway overpass** which separated the Joliette Docks from their maritime façade, plus the construction of a tunnel, made it possible to create a 2.5 km urban boulevard
- The new **boulevard is 45 m wide**, with room for pedestrian and cycling paths
- Over the last ten years, the Grand Port Maritime de Marseille and Euroméditerranée have contributed to a **sweeping transformation in the waterfront area**

Examples of policies for port cities

USE THE WATERWAY AS A LOGISTICS TOOL FOR THE URBAN DISTRIBUTION OF GOODS

- Urban pressure is always intense in urban ports: **greater demand for goods** and more intense use of roadways.
- **Using the waterways for goods** distribution is becoming more and more attractive.
- However, all stakeholders must agree on these new logistics strategies

Paris

- Since October 2012, the food products destined for 80 Franprix stores located in the heart of Paris are being distributed via the Seine
- The **goods are first transported in containers** between the port of Bonneuil-sur-Marne and the port of Bourdonnais in the centre of Paris, before being **delivered by truck on the last leg of their itinerary to the retail stores**, all of which are located within a radius of 4 km
- This initiative is also enabling development of the quays located within the urban area and will make port activities more acceptable to the Paris population.

Examples of policies for port cities

CREATE WALKING CIRCUITS AND PROMENADES

- Promenades can be used not just to enliven the waterfront, but also to **reconnect the city with its port**
- The inclusion of promenade routes in city/port projects is both a means of **revitalising newly reassigned spaces** and introducing new visual perspectives of the city and port

Malaga

- "Las Palmeral de las Sorpresas", the waterfront promenade, is notable not just for the creation of a high-quality public space, but also for its re-creation of a route linking the city centre with the sea, through the port
- **Permeability, continuity and accessibility** were identified as the key priorities when considering how best to **restore the links between the city centre and port**

Exercise

Discussion

- **Which policy measures are more relevant in your city?**
- **To what extent and how were they kept into account in your SUMP?**

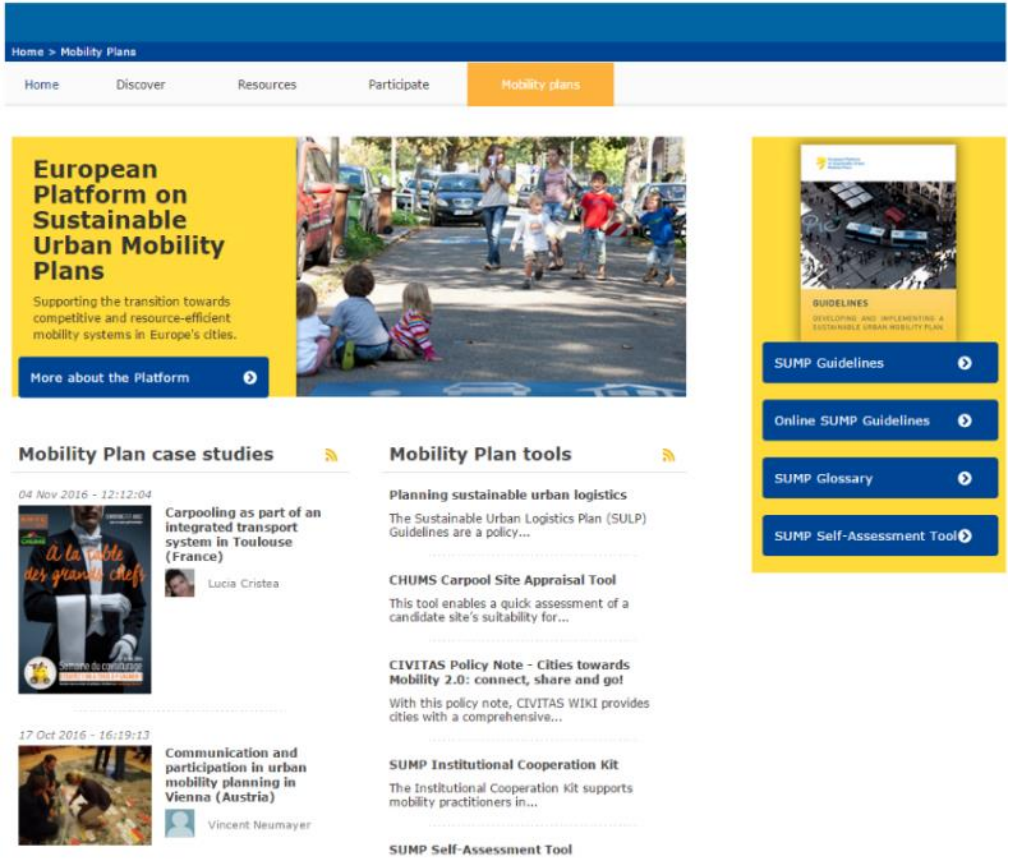
Exercise

- **Which (package of) measures would you implement (are you implementing) to tackle the port-related issues?**

Toolbox of measures: further resources

The Mobility Plans portal provides you with a wealth of information on how to develop and implement a SUMP, including:

- **Information** about the elements of a SUMP
- **Guidelines** on the process of developing and implementing a SUMP
- Selected **tools, guides, handbooks** and reports to support urban mobility professionals in their work
- **Case studies** that analyse selected local examples of the development and implementation of mobility plans
- A **Forum** on which Friends of Eltis discuss all matters related to sustainable urban mobility
- A **database** on the involvement of cities in EU activities related to sustainable urban mobility planning



www.eltis.org/mobility-plans

Toolbox of measures: further resources

Annual EU Conferences on SUMPs

The EU SUMP Platform organises annual conferences to promote the concept of SUMPs across the EU.

The conferences highlight the latest developments in urban mobility planning, foster the exchange of ideas and experiences and offer a networking opportunity:

1. Sopot (Poland) in 2014
2. Bucharest (Romania) in 2015
3. Bremen (Germany) in 2016
4. Dubrovnik (Croatia) in 2017
5. Nicosia (Cyprus) in 2018
6. Groningen (The Netherlands) in 17-18 June 2019

Toolbox of measures: further resources

The European SUMP Award

The European SUMP Award recognises local authorities that have developed a Mobility Plan that satisfies the diverse transport needs of people and businesses, whilst improving quality of life. The award highlights a different aspect of mobility planning in each edition:

- The 1st edition of the award opened in 2012 and recognised **stakeholder and citizen participation** in the SUMP process
- The 2nd SUMP Award edition looked at successful **territorial and policy integration**
- The 3rd SUMP Award recognised outstanding work regarding **monitoring and evaluation** of the SUMP
- The 4th SUMP Award focused at providing for **multimodality and intermodality**
- The 5th SUMP Award acknowledged the integration of **urban freight**
- The 6th SUMP Award focused on **shared mobility** in sustainable urban mobility planning
- The 7th SUMP Award focused on **multimodality**

SUMP Award

http://mobilityweek.eu/sump-award/

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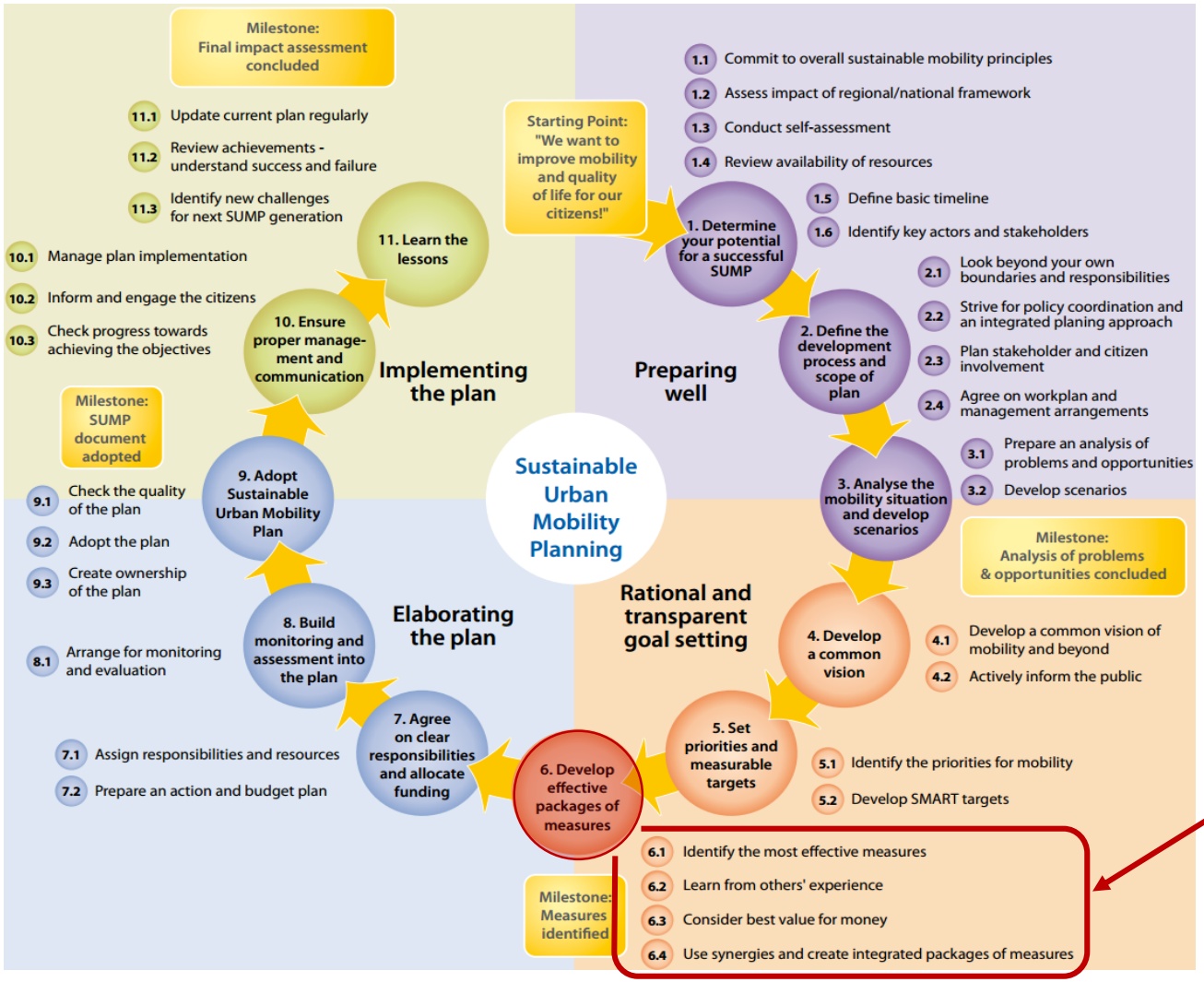
Selection of measures

Rationale

- Measure selection is the **process of identifying the most suitable and cost effective mobility and transport measures** to achieve the vision and objectives of a Sustainable Urban Mobility Plan (SUMP) and to overcome the identified local problems
- Even where vision, objectives and problems are defined, it may not be obvious **what measures are most appropriate**

Selection of measures



LINK WITH THE SUMP CYCLE

Develop effective package of measures

Selection of measures

Distinguish between measures and projects

- Defining optimum set of solutions for SUMP objectives:
  – Solutions considered for each objective
  – Measures/projects tested using the analysis tools as appropriate

- Different categories of measures including:
  – **Infrastructure**: requires capital investment in physical works

  – **Operational measures**: describe actions to improve operation of transport (eg. travel information, ticketing, traffic management or other intelligent transport systems)

  – **Organisational measures**: involve changes to the structures that oversee the implementation of transport solutions, implemented at institutional level or within specific authorities/agencies

Selection of measures

Each measure needs to be specified in detail, often by defining one or more projects.

In doing this, cities need to consider:

- where the measure should operate?
- when it should operate?
- who will use it?
- how intensively it should be used?

Selection of measures

Information required on each measure:

- **Describe the measure in detail**:
  Location, technology, scope, objective addressed and expected impact

- **Any experience of implementing this measure**:
  This can be used as the basis for inclusion

- **Project implementability**:
  Is it possible to implement this project in the study area - are there any risks that will need to be overcome?
  Does it need other, supporting measures to succeed?

Selection of measures

Aiming for most cost effective set of SUMP solutions to meet objectives:

- Start with **long-list of measures**:
  screen measures to remove those measures that do not support the objectives

- **Identify individual measures** that address numerous objectives:
  likely to be most cost efficient solutions for SUMP

- **Consider all possible interventions** and not exclude low cost solutions

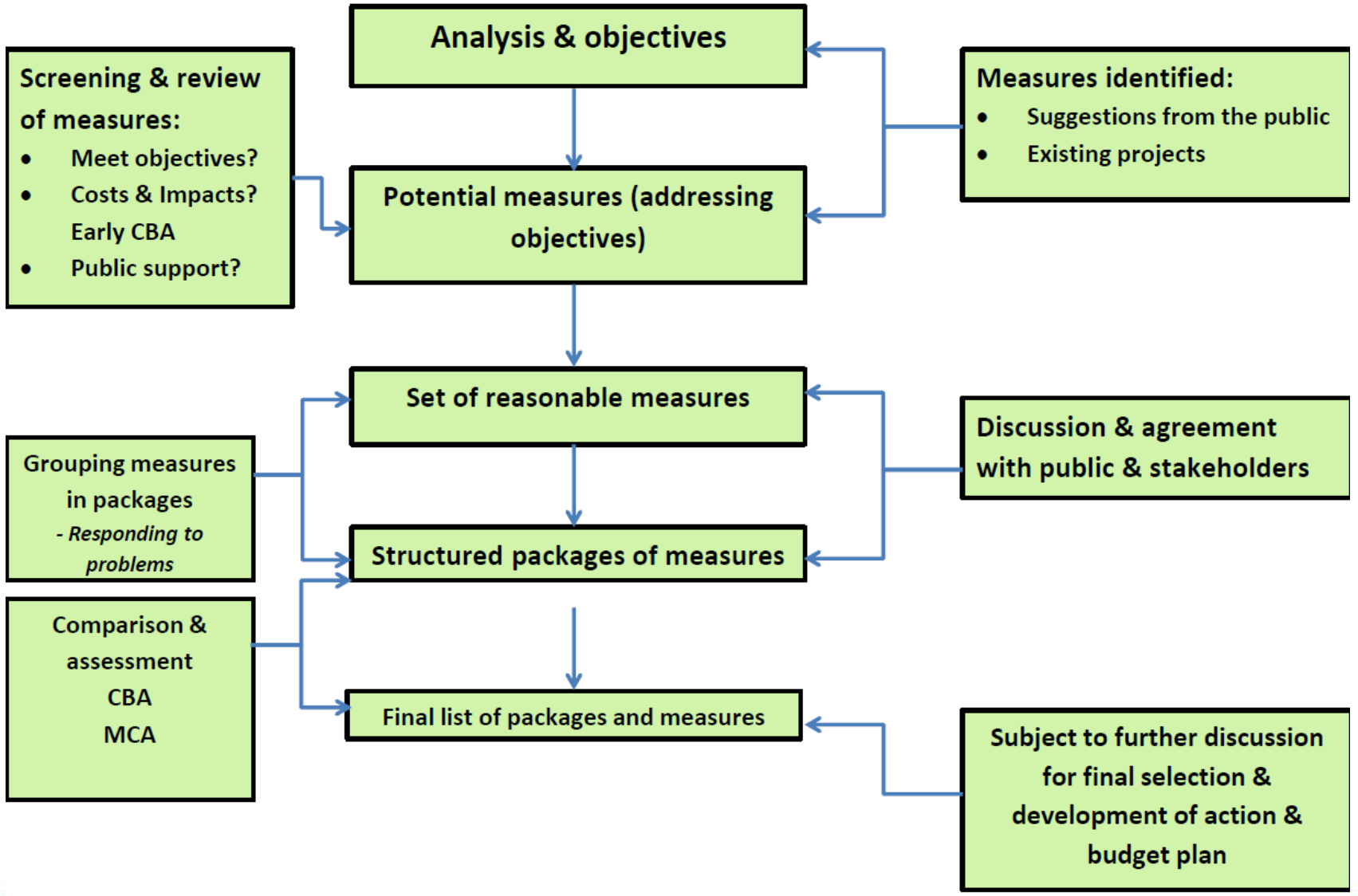
Selection of measures

Establishing a realistic set of measures for the SUMP:

- Measures should clearly link to outcome of the analysis work and established SUMP objectives
- Include measures from previous considerations:
  projects under implementation do not need further assessment (Business-as-Usual-Scenario)
- Measures reviewed and filtered according to how they meet the objectives.
  The ones that poorly support or conflict with objectives can be omitted from subsequent consideration
- Any further work required to develop measure concepts should be identified (e.g. additional feasibility studies)

Selection of measures

The process



Selection of measures

Range of tools available to help the filtering/screening process:

- Use of Cost-Benefit Analysis (CBA) to assess overall value for money of different interventions
  - ✓ For well-developed projects or those with feasibility studies undertaken

- Use of Multi-Criteria Analysis (MCA) to provide a mix of assessment criteria on projects:
  - ✓ Mix of qualitative, quantitative or monetised criteria to evaluate project suitability

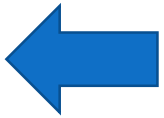
Selection of measures

Multi-Criteria analysis

OPTION SELECTION MCA MATRIX			INTERVENTION 1: (Brief Description)	INTERVENTION 2 : (Brief Description)	INTERVENTION 3 : (Brief Description)	INTERVENTION 4: (Brief Description)	INTERVENTION 5: (Brief Description)
EVALUATION CRITERIA	CATEGORIES	CRITERIA	*Describes how the intervention performs against the criteria.* Suggested (qualitative) scoring scale: -Large adverse/negative (--); -Slight adverse/negative (-); -Neutral (0); -Slight beneficial (+); -Large beneficial (++);				
	Accessibility						
	Safety						
	Integration (e.g. other modes)						
	Economics						
	Environment						
ACTION							

Selection of measures

- Understanding the connection between problems identified, solutions and contribution to vision & strategic SUMP themes
- Different types of measures – which ones are appropriate?
  - **Infrastructure schemes**
  - **Planning & sperational**
  - **Organisation/regulation**



combination of these

- Long list of measures identified to tackle solutions – consider:
  - Contribution to addressing problem?
  - Contribution to supporting SUMP policy objective/theme?
  - Assessment of costs and benefits & wider MCA?
  - Feedback from the public & stakeholders?
  - Synergy with other schemes and initiatives?

Selection of measures

Screening outcomes

- Range of different outcomes:

  – **Scheme rejected**: shows poor case for the project/measure
  – **Scheme accepted**: some of which will be considered a high priority with a strong case for early implementation
  – **Scheme accepted**: other schemes accepted but with a lower priority – there is a clear case but not for immediate implementation
  – **Scheme accepted:** however the case may be conditional ie. The measure may be dependent on other issues/measures

- Consider ‘state of readiness’ and deliverability too

Selection of measures

Challenges while assessing measures

- Making one thing a priority implies other things are not.
  This can generate resistance from stakeholders and require difficult decisions to be made
- The process must be flexible and robust.
  The technical process may need to be balanced with political and practical requirements
- Requires robust evidence about scheme impacts
- Stakeholder expectations need to be managed
- The process can be time consuming and resource intensive unless well managed

Selection of measures

Challenges while assessing measures

- The assessment process should:

  – inform decision makers' choices, not dictate them
  – be based on a technically robust and defendable process
  – involve a wide range of officers, politicians and stakeholders in the process
  – produce a realistic and deliverable balanced programme of schemes and interventions
  – allow sufficient time for development of the methodology (involving consultation, testing and modification), and training for those involved in the process

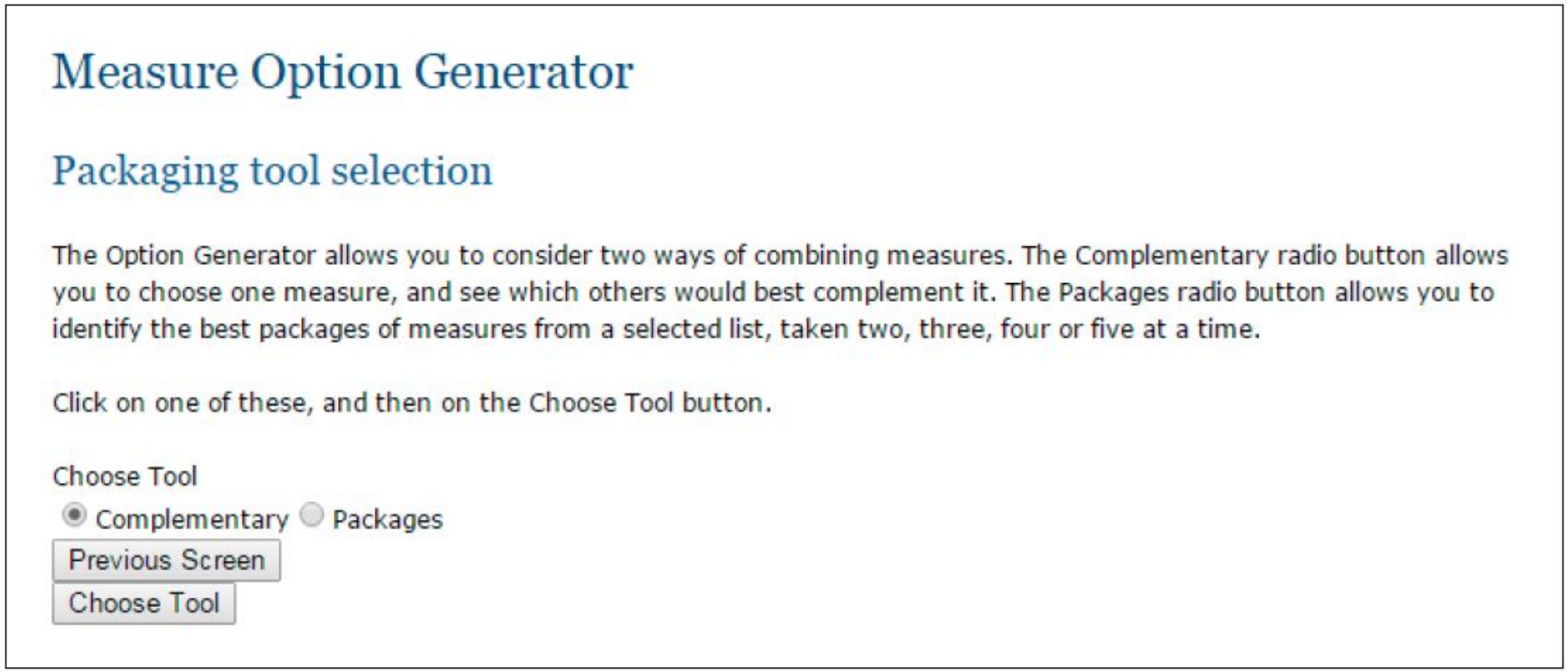
Selection of measures

CH4LLENGE has developed a **Measure Option Generator**

- Incorporated into the Knowledgebase on Sustainable Urban Land use and Transport (KonSULT): http://www.konsult.leeds.ac.uk/
- Identifies appropriate policy measures and packages for their specific contexts
- Users specify context, including their objectives and strategy:
  Measure option generator provides an ordered list of the 64 measures contained in the knowledge base

Selection of measures

Choosing between complementary measures and packages in KonSULT



Selection of measures

Specifying the search for complementary measure in KonSULT

Measure Option Generator

Choose complementary measures

Combinations are generated by one of two methods. By choosing Barriers from the drop down list you can identify combinations of measures in which each helps overcome the barriers (such as finance, acceptability) to introducing the other(s). By choosing Synergy from the drop down list you can identify combinations in which the individual measures reinforce one another most effectively.

Please click on the measures which you want to consider as complementing the chosen measure.

If you want to choose all the measures, click "Select all".

Method : barrier

Previous Screen

Complementary Measures Generator

Select All

Select	rank	code	category	cost	timescale	measure	score
☑	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

Selection of measures

Ranking of measures to complement Pedestrian Areas in KonSULT

Presentation Options

Number of complementary policy measures: 100

Minimum score: -100

Apply Changes

Save results

Rank	Measure1	Measure2	Total
1	Pedestrian areas & routes	Land use to support public transport	65
2	Pedestrian areas & routes	Accident remedial measures	64
3	Pedestrian areas & routes	Cycle networks	61
4	Pedestrian areas & routes	Bike sharing	57
5	Pedestrian areas & routes	Intelligent transport systems	56
6	Pedestrian areas & routes	Regulatory restrictions	56
7	Pedestrian areas & routes	Parking standards	55
8	Pedestrian areas & routes	Promotional activities	55
9	Pedestrian areas & routes	School travel plans	55
10	Pedestrian areas & routes	Concessionary fares	55

Selection of measures

Ranking of packages in KonSULT

Presentation Options

Number of packages policy measures: 100

Minimum score: -100

Apply Changes

Save results

Rank	Measure1	Measure2	Measure3	Measure4	Measure5	Total
1	Cycle networks	Intelligent transport systems	Road user charging	Pedestrian areas & routes	Land use to support public transport	61
2	Cycle networks	Road user charging	Pedestrian areas & routes	Land use to support public transport	Bike sharing	59
3	Intelligent transport systems	Road user charging	Pedestrian areas & routes	Land use to support public transport	Bike sharing	59
4	Cycle networks	Intelligent transport systems	Road user charging	Pedestrian areas & routes	Bike sharing	59
5	Cycle networks	Intelligent transport systems	Pedestrian areas & routes	Land use to support public transport	Bike sharing	59

Selection of measures

SUMP packages of measures

- Following problem identification possible to identify measures – option generation
- Consider how to establish the most appropriate ‘package’ of measures
- Long list of measures assessed for appropriateness = shortlist of promising measures: Screening process
- Selection and prioritisation of measures – option appraisal:
  - Informed by Multi-Criteria Analysis
  - Informed by stakeholder engagement
  - Scenario techniques based on modelling

Selection of measures

SUMP packages of measures

Isolated measures likely to have only limited impact:

- Packages of measures can make use of synergies and reinforce each other
- Analysis of measures & options helps inform meaningful combined packages of measures
- Packages finally selected should aim for integration of transport modes (inter-modality), with land-use planning and other sectoral planning activities (e.g. environmental, health or economic measures)

Selection of measures

SUMP packages of measures

- Effective packages of measures and possible synergies identified
- Set of packages of measures selected as input for discussion on final selection and action and budget plan
- Well-selected measures ensure that defined SUMP objectives and targets are met
- Selection of SUMP measures builds on:
  - Effective dialogue with city stakeholders
  - Experience from other places with similar policies and evidence of success

Selection of measures

SUMP packages of measures

- Each SUMP objective to have groups of measures developed that respond to identified problems:
  - Outcome is comprehensive, balanced set of measures
  - Qualitative assessment of groups of measures against alternatives to establish preferred set

- Final result is list of potential groups of measures which significantly support SUMP objectives:
  - Focus on effective and efficient solutions and now considered for inclusion in the SUMP
  - Ready to move forward to testing and developing SUMP strategy

Selection of measures

Key issues

- **Option generation** is often highlighted as one of the weaknesses of urban transport policy formulation

- A failure to consider the **full range of possible measures** can lead to:
  - an over-reliance on preconceived ideas
  - a tendency to focus on *supply-side* measures rather than *demand-side* measures
  - lack of experience of the wider range of policy measures available
  - lack of evidence of the performance of those measures in other contexts

Selection of measures

Key points to note

- Has the SUMP gone through a screening process to assess measures for the SUMP strategy:
  - Contribution towards objectives?
  - Stakeholder feedback?
- Synergies & packages of SUMP Measures:
  - Have effective packages of measures been identified?
  - Package integration: With land use planning? Other city sectors? (health, education etc.)
- Scenarios been considered for the future?
    - Do scenarios support SUMP Vision & objectives?
- Have preferred package of measures been selected for discussion on final plan selection?

Exercise

Discussion

- How have you identified the measures for your city?
- How have you prioritized them and integrated them in packages of measures?
- What was the process?
- Which tools (if any) have you used?

The Urban Transport Roadmaps tool

Urban Transport Roadmaps

A quantitative tool to support developing of scenarios, setting priorities and targets, developing effective packages of measures in the SUMP planning cycle

The Urban Transport Roadmaps tool

Urban Transport Roadmaps

- Free, on-line, policy support tool
- No ambition to replace more sophisticated models
- It allows an assessment of alternative solutions that is **strategic**, **quantitative**, **theoretically solid**, **tailored to the specific context**, possible with **limited resources and in a short time**
- Scope:
  - preliminary assessment of alternative hypotheses of intervention (packages of measures)
  - estimation of the magnitude of the resources needed and expected impacts

The Urban Transport Roadmaps tool

Key features

- The ability to screen and assess transport policies and measures
- Provide quantitative outputs covering a range of metrics
- Adaptable to different city circumstances
- Very easy to use – no experience in transport modelling required
- No specific software required
- Covers all relevant transportation/travel modes

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

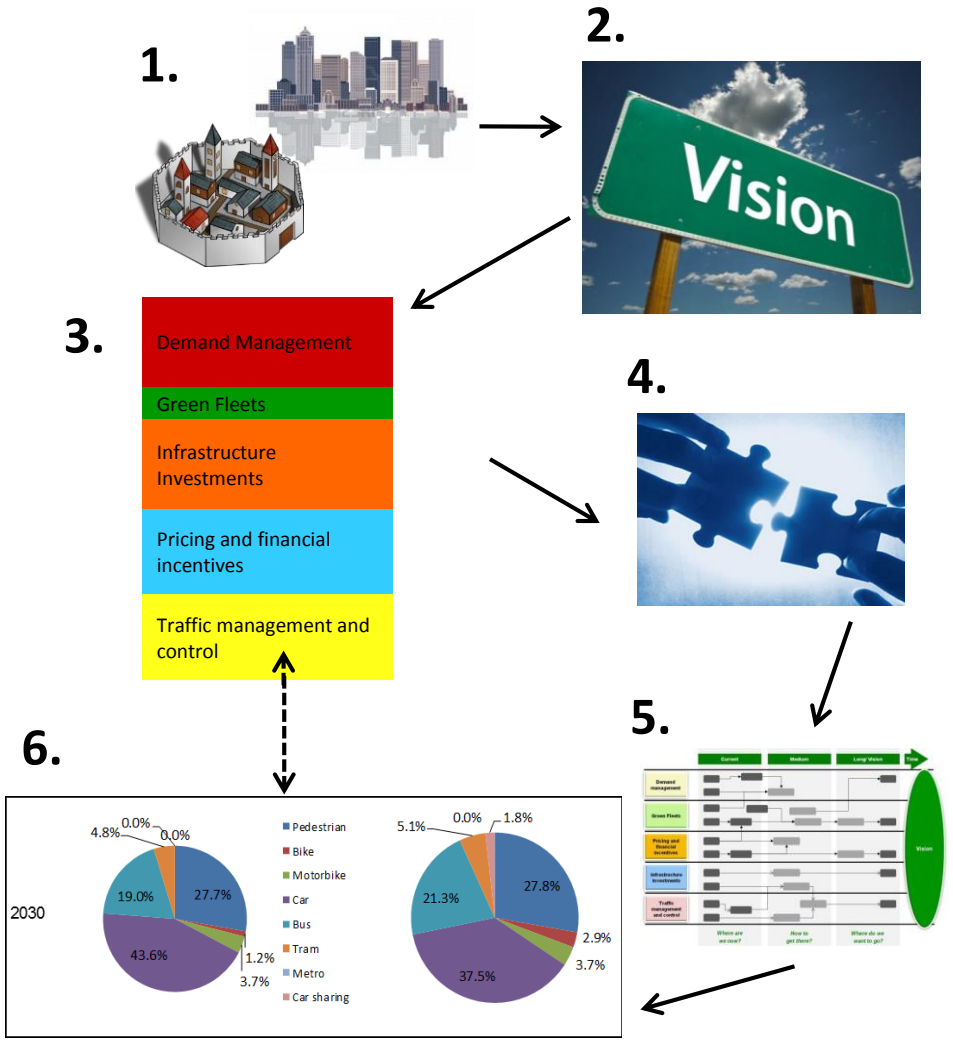
The Urban Transport Roadmaps tool

Developing a roadmap

1) Analyse the current situation
   Before deciding on future policies, it is essential to know where you currently stand

2) Setting the vision (objectives)
   Higher level aims of the SUMP (e.g. cut congestion caused by cars)

3) Identify policy measures
   available to define a scenario to move towards the objectives:
   - policy measures are different, some require physical investments others are mainly a matter of setting (and enforcing) different rules
   - the type of impact expected from each measure is different, some have complementary effects, and some may have conflicting effects



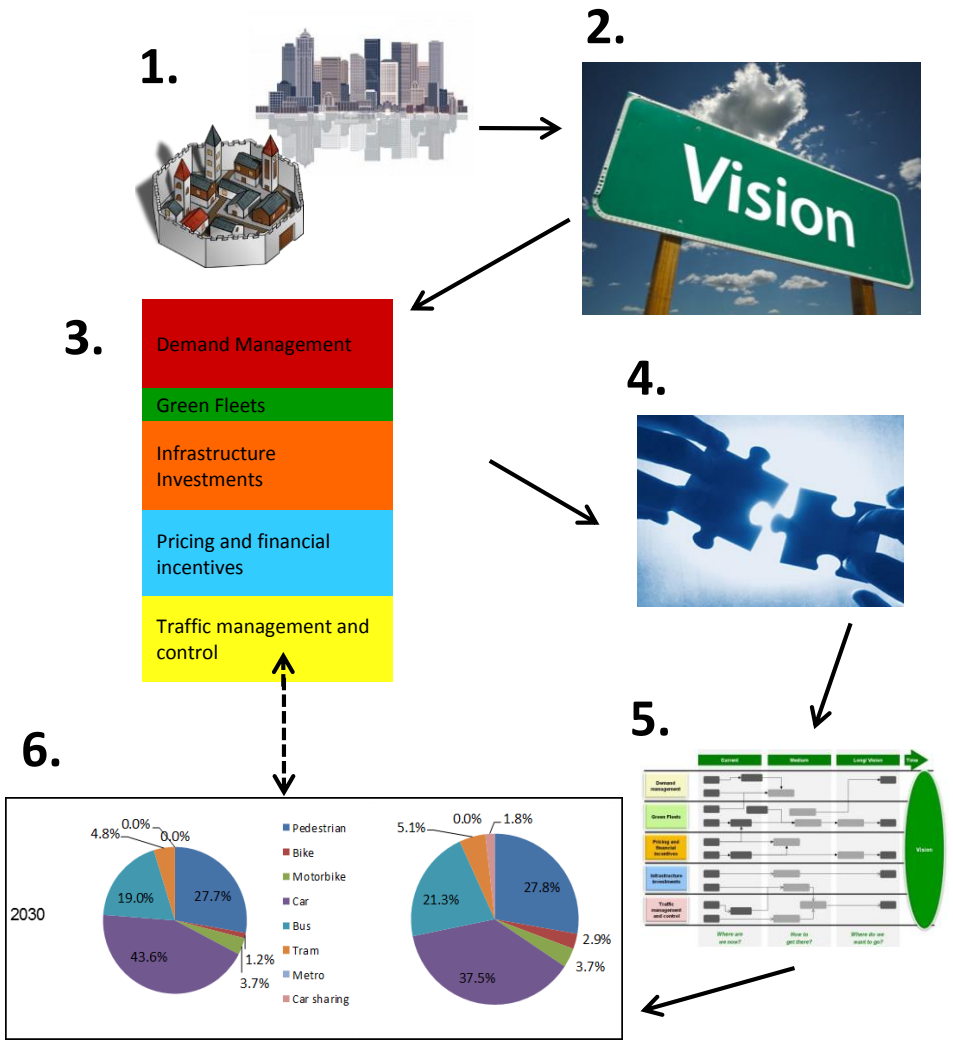
The Urban Transport Roadmaps tool

Developing a roadmap

4) Grouping of policy measures in consistent strategies
Having in mind the objectives and building on the classification of the policy instruments, alternative scenarios can be developed according to the nature of the measure, the strength of the interventions, their expected effectiveness and implementation costs

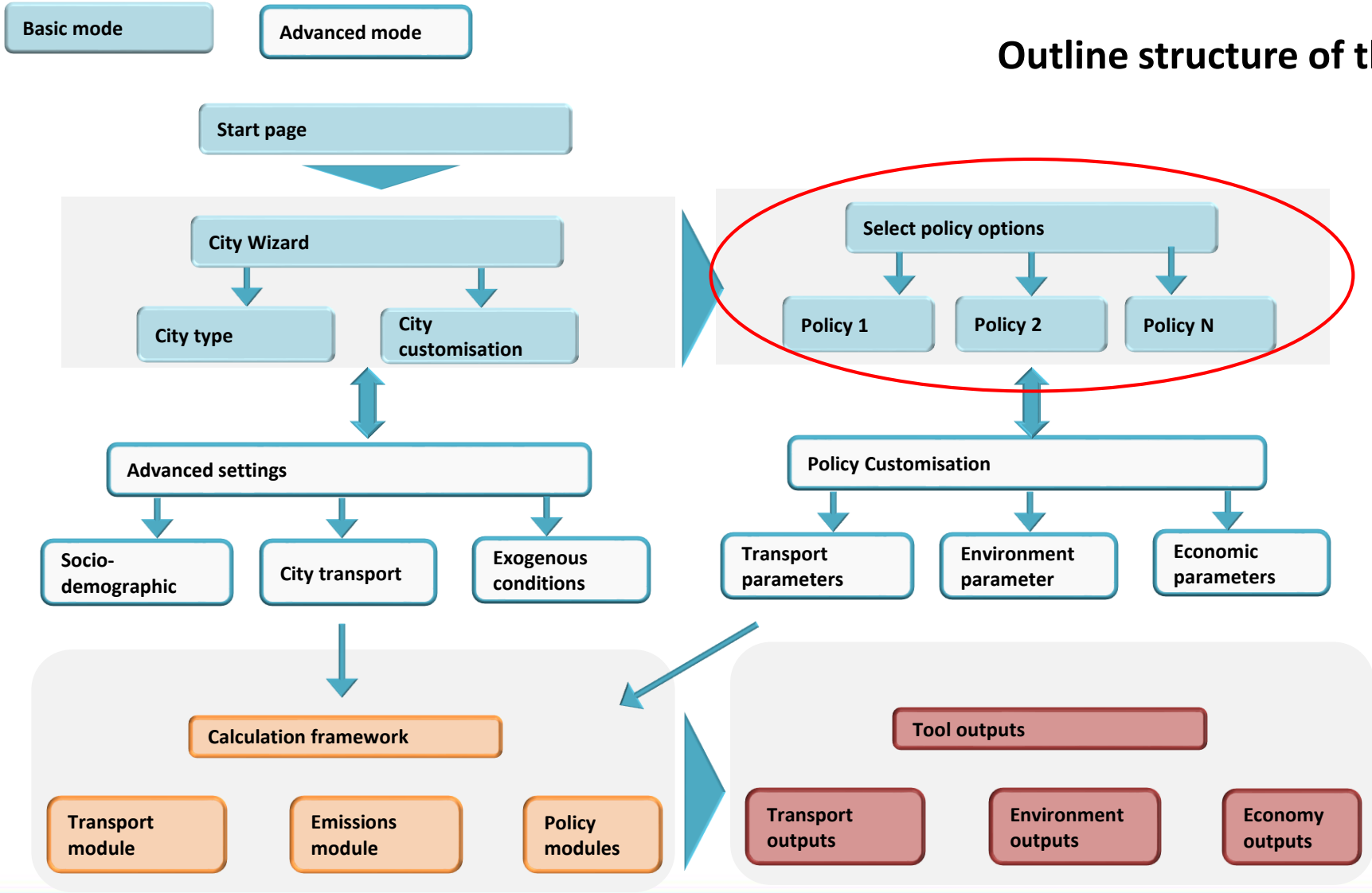
5) Specify the pathway and timelines to proceed towards scenarios' goals
A "roadmap" is more than a list of potential measures, it includes: timing, relationships between different interventions, stakeholders involved and others

6) Assess the outcomes
Compare transport, environmental and economic impacts



The Urban Transport Roadmaps tool

Outline structure of the tool



The Urban Transport Roadmaps tool

The Policy Toolbox

There is a wide range of policy measures for urban strategies

A prioritized set of policy measures based on:

1. **Policy type**
2. **Institutional level of implementation**
3. **Effectiveness**

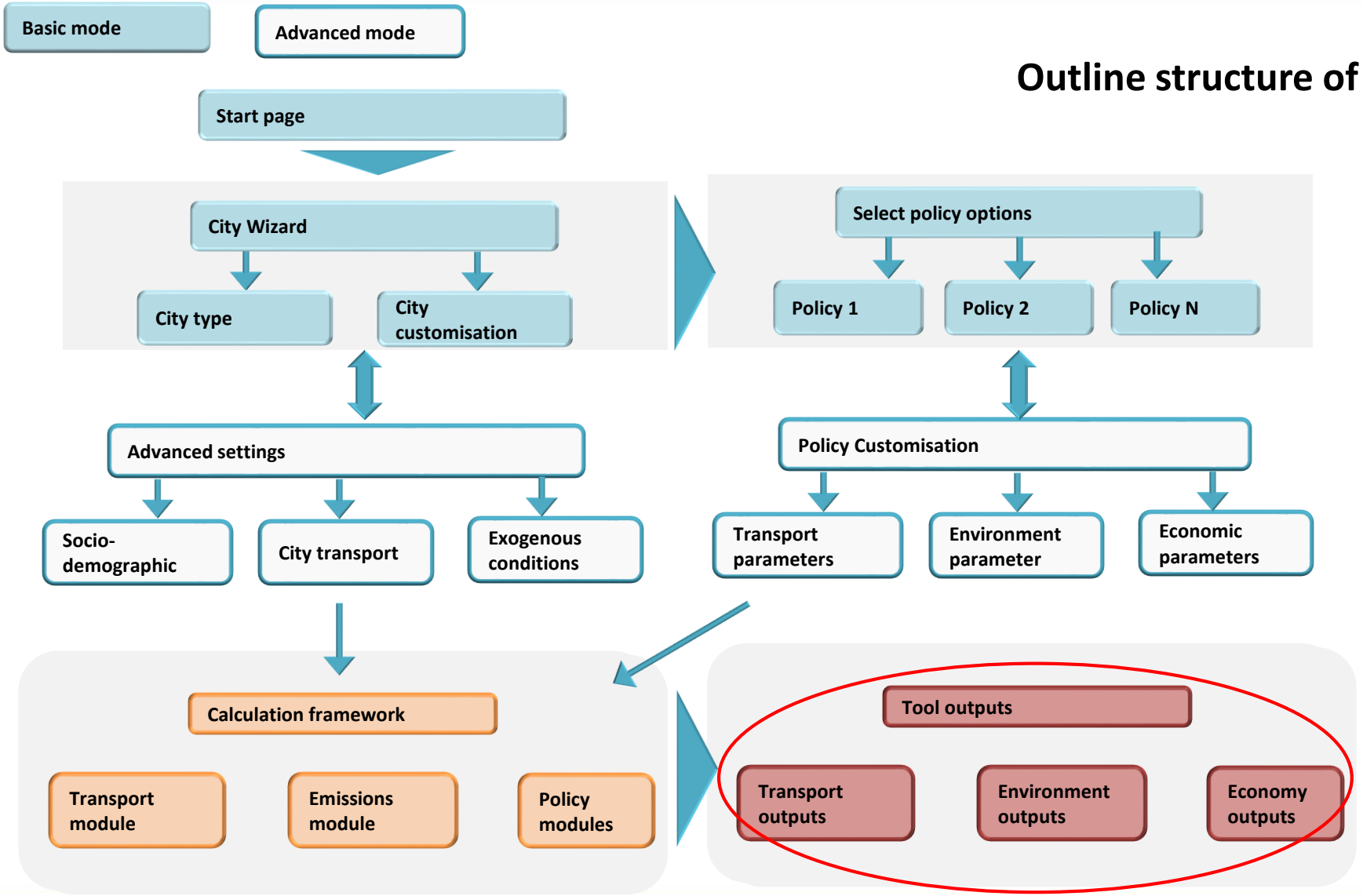
The Urban Transport Roadmaps tool

Policy Type	Measure
Demand Management	• Sustainable travel information and promotion • Bike Sharing Scheme • Car sharing (Car Clubs) • Delivery and Servicing Plans • Land-use planning - density and transport infrastructure
Green Fleets	• Green energy refuelling infrastructures • Green public fleets
Infrastructure Investments	• Bus, trolley and tram network and facilities • Walking and cycling networks and facilities • Park and ride • Metro network and facilities • Urban Delivery Centres and city logistics facilities
Pricing and financial incentives	• Congestion and pollution charging • Parking pricing • Public Transport integrated ticketing and tariff schemes
Traffic management and control	• Legal and regulatory framework of urban freight transport • Prioritising Public Transport • Access regulation and road and parking space reallocation • Traffic calming measures

The Policy Toolbox

The Urban Transport Roadmaps tool

Outline structure of the tool



The Urban Transport Roadmaps tool

Tool outputs

Transportation outputs

- Cars per thousand inhabitants
- Mode split
- Average car speed in peak / off-peak hours
- Average bus speed in peak / off-peak hours
- Average distance per trip
- Share of freight traffic in peak / off-peak hours
- Penetration of alternatively fuelled vehicles
- Vehicle km travelled

Environment / safety outputs

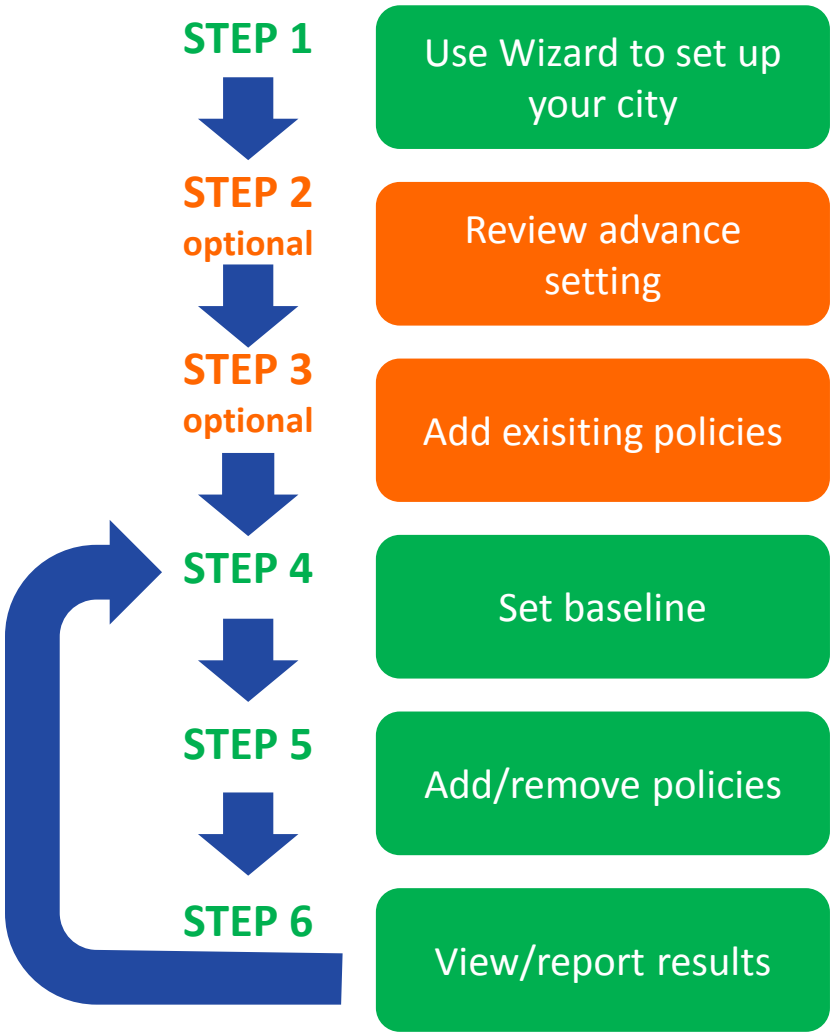
- CO_2 emissions
- PM emissions
- CO emissions
- NOx emissions
- VOC emissions
- Energy consumption by fuel type
- Energy consumption by mode
- Number of accidents
- Fatalities per 100,000 inhabitants

Economic outputs

- Transport expenditure per individual
- Total transport expenditure/revenue by the public administration
- External or Social costs of transport

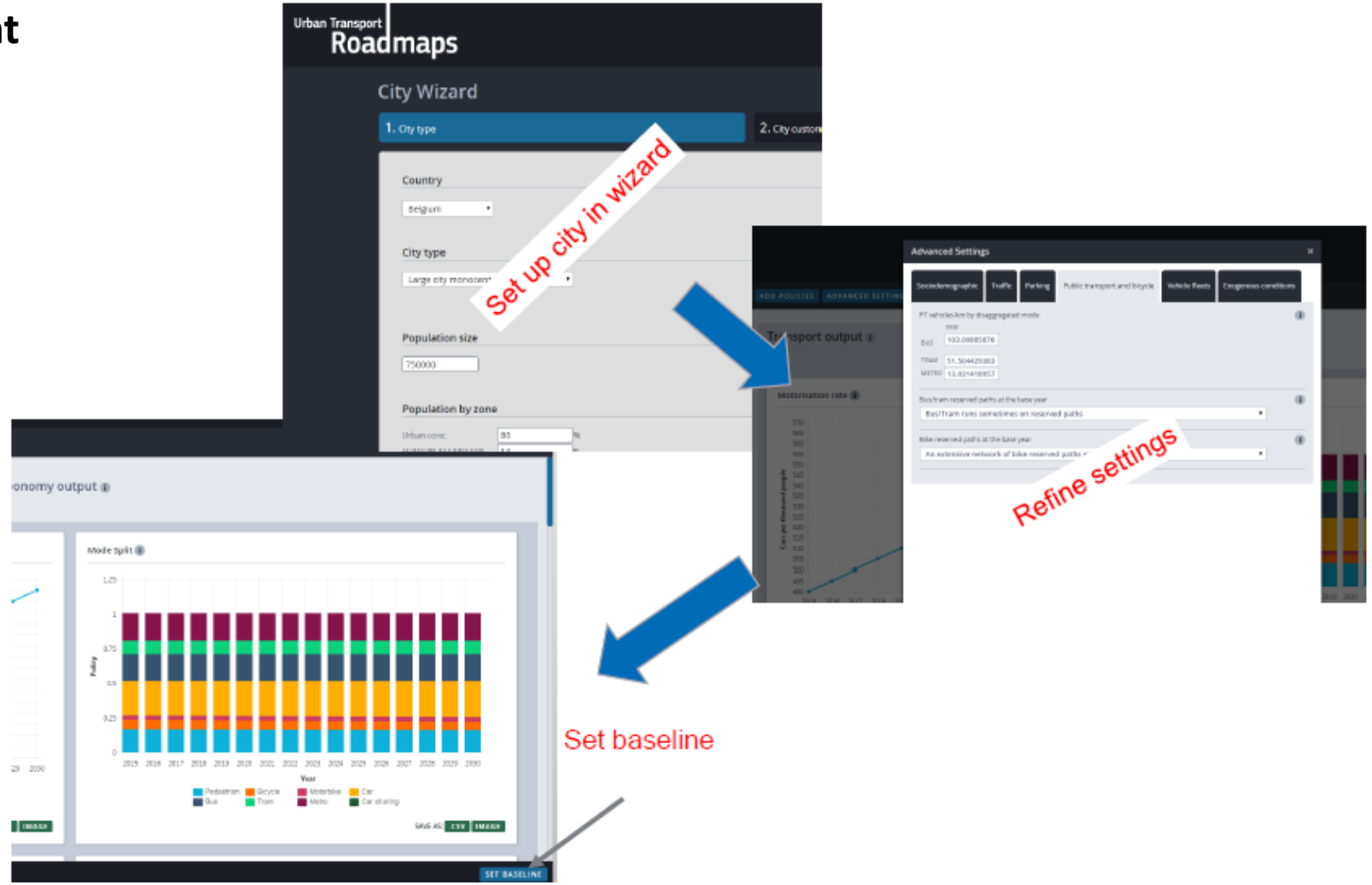
The Urban Transport Roadmaps tool

Setting up and assessment process



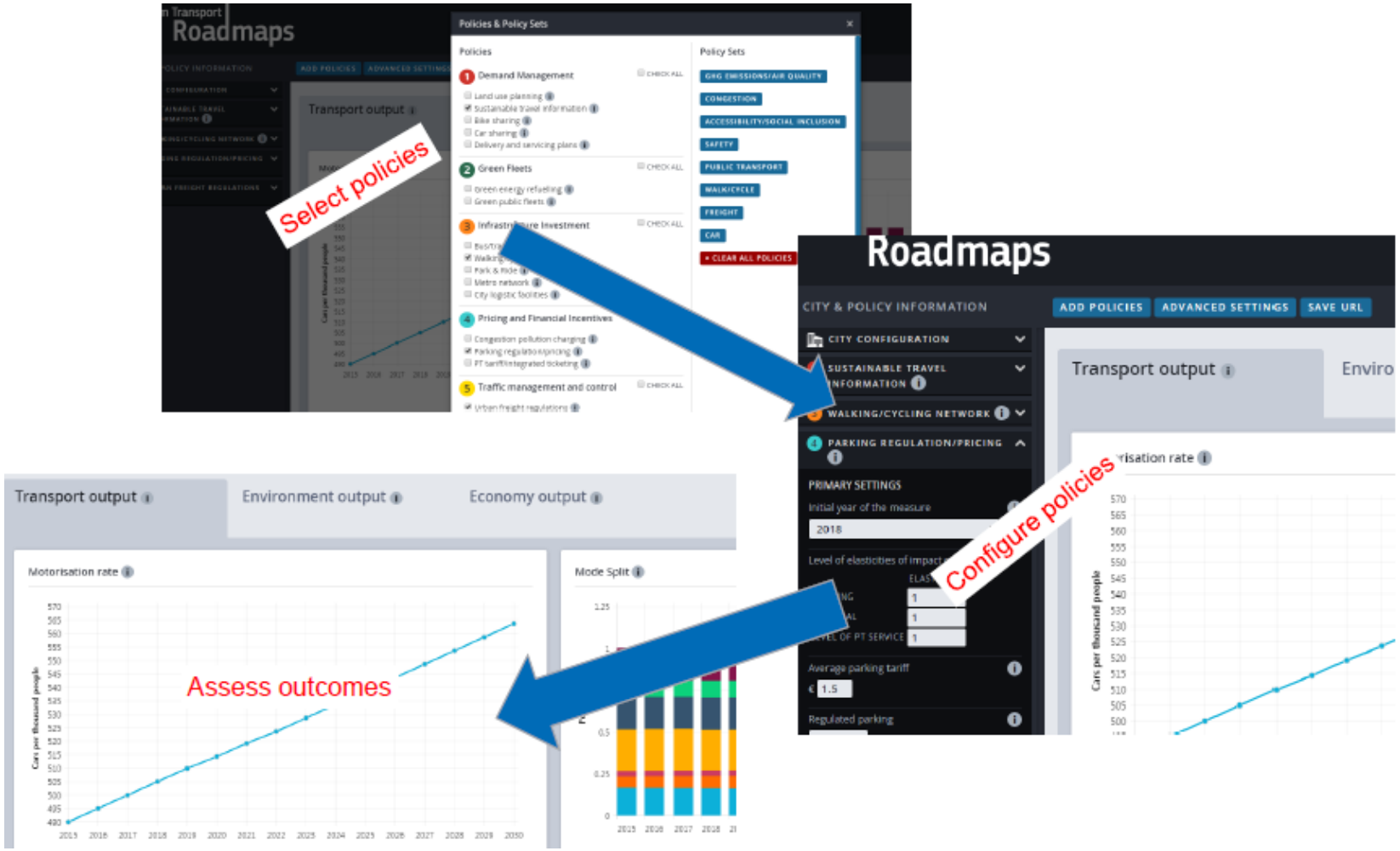
The Urban Transport Roadmaps tool

Analysing the current situation



The Urban Transport Roadmaps tool

Exploring policies

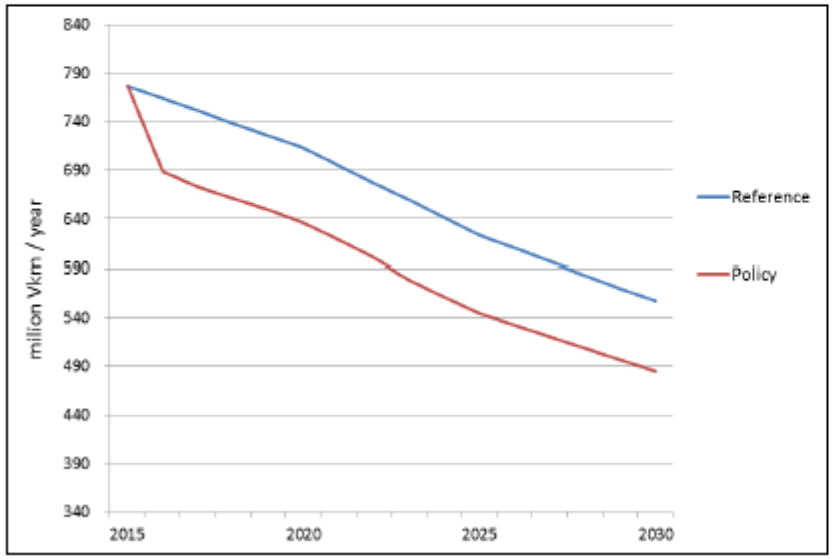


The Urban Transport Roadmaps tool

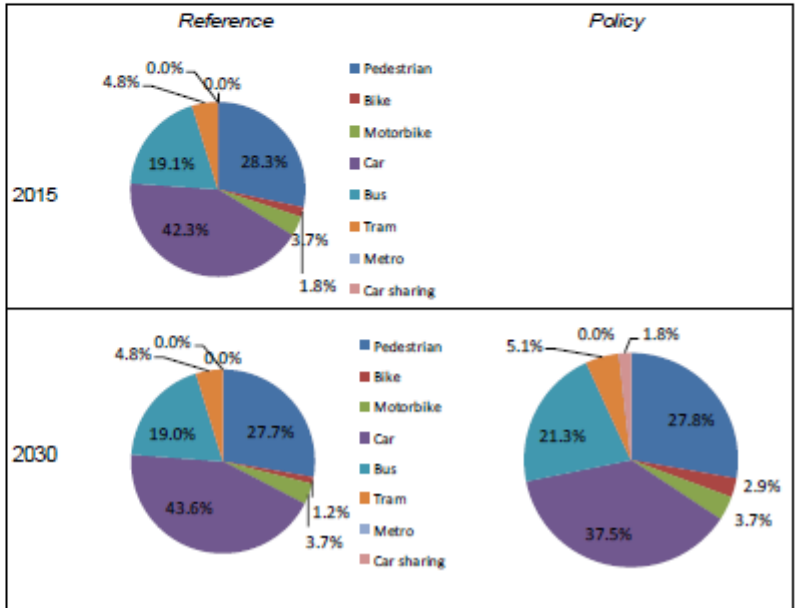
Check and compare the results

Domain	Indicator		Base year (2015)	Reference trend in 2030	Roadmap + Ref trend in 2030
Transport	Vkm travelled by conventional cars (gasoline/diesel) (Mio vkm/year)	Abs. Value	776.7	556.9	484.8
		% Diff. to base year		-28.3%	-37.6%
		% Diff. to Reference		0.0%	-12.9%
	Car mode share		42.3%	43.6%	37.5%
	PT mode share		23.9%	23.8%	26.4%

Vkm travelled by conventional cars



Mode split



Thank you for your kind attention

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