

COMMON TOOL (GUIDELINES) FOR SOLEZ ACTION PLANS ELABORATION

Deliverable D.T.1.2.1

Version 1
03 2017





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Version: 1.0	Date of version: 01/03/2017
Project: SOLEZ	
Duration of the project: 36 Months	
Project coordination: Comune di Vicenza	
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1 Introduction

This document provides overall and transferable guidelines for SOLEZ Action Plans elaboration within the 8 Functional Urban Areas (FUAs) of the SOLEZ project. Action Plans for the project target FUAs will cover short-medium timeframe and vision identifying a set of low-carbon mobility actions and measures connected with traffic regulation and access restriction schemes (including LEZ, LTZ, etc.), contributing to reduce the negative side effects of these so-called “push” interventions.

A “push” measure is one that is imposed on operators and citizens with a view to influence operational practices (mobility behaviours) such as regulatory constraints (e.g. access restrictions) as well as financial instruments (e.g. road tolls, etc.). In this respect, this document is aimed at guiding competent Local Administrations within the project target FUAs in the elaboration and drawing up of a strategic and implementation-driven transport planning document for defining effective and shared low-carbon mobility actions targeted to short-medium timeframes as well as long term visions.

These actions need to be considered as so-called “pull” interventions being measures designed to encourage more sustainable and low-carbon mobility by offering added-value services, ICT-based applications for smart parking, ICT tool for planning the city bus transport electrification, etc.

The guidelines are based on common and transnationally usable procedures for the elaboration of low-carbon mobility Action Plans at FUA level, defining local based priorities and demand-oriented measures for increasing the effectiveness and acceptability of traffic restriction policies (e.g. LEZ).

This document has been designed following the objective of ensuring overall compatibility and compliance with the most relevant and well-recognized European sustainable mobility



planning guidelines and other existing supporting instruments for planning, designing and implementation sustainable transport measures. SOLEZ Action Plans are expected to contribute to the achievement of EC targets for traffic reduction, improving capacities of Public Administrations for low-carbon mobility planning and increasing acceptability of interventions in the project target FUAs.

Low-carbon mobility Action Plans at FUA level will be elaborated thought the involvement of relevant stakeholders. Stakeholders involvement is strongly suggested within the Action Plans elaboration process enabling to identify and agree potential low-carbon mobility actions and policies connected with traffic regulation and/or access restriction schemes (e.g. LEZ, LTZ, etc.) to reduce the negative side effects of these “push” interventions. Official adoption of Action Plan is an important step. Political representatives should formally adopt SOLEZ Action Plan: the format of adoption and its circumstances will depend on the national/local regulatory framework,



2 Development of low-carbon mobility action plan

2.1 Common guidance and definitions

The need for more sustainable and integrative planning processes in sectors related to urban mobility has been widely recognised. At the European level, Sustainable Urban Mobility Plans (SUMP) have gained increased recognition and importance as well. The European Commission's Action Plan on Urban Mobility aims at accelerating the take-up of sustainable urban mobility planning in Europe by providing guidance material, promoting best practice exchange, identifying benchmarks, and supporting educational activities for urban mobility professionals. Sustainable urban mobility planning received a further significant push when the EU transport ministers adopted conclusions on the Action Plan on Urban Mobility in Luxembourg on 24 June 2010.

The Council of the European Union “supports the development of Sustainable Urban Mobility Plans for cities and metropolitan areas [...] and encourages the development of incentives, such as expert assistance and information exchange, for the creation of such plans”.

In the EU Action Plan on Urban Mobility, there are presented the intentions of the Commission to provide help on how to optimise urban mobility efficiency, including on improving the links between long-distance, inter-urban and urban transport, aiming to ensure efficient ‘last mile’ low-carbon mobility. It focuses on how to better incorporate passenger and freight transport in local policies and plans and how to better manage and monitor transport flows. In the Freight Transport Logistics Action Plan, “A holistic vision should cover freight transport and pay attention to aspects of land use planning, environmental considerations and traffic management, alongside a number of other factors. Facilitating freight and passenger transport demand management should be an integral part of town planning and offers opportunities for the deployment of innovative ICT-based solutions”.

Sustainable urban mobility planning is focused on the level of the urban agglomeration. Nevertheless it is embedded in a wider local and regional framework for planning activities in the field of urban mobility. This includes for example regulations, funding streams or higher level strategies for spatial and transport development (e.g. a regional transport plan, where one exists). It is crucial to assess the impact of the local / regional framework to fully exploit opportunities and avoid conflicts with other competent authorities at a later point. Gain a clear perspective on how regional and national framework will influence the sustainable urban mobility planning process and design of measures.

There is a substantial amount of national guidance that applies more generally to the development of sustainable mobility strategy. Whilst the following information is not exhaustive it provides a good basis for elaborating low-carbon mobility action plans targeted to Functional Urban Areas (FUAs).

Different approaches to sustainable urban mobility planning exist throughout Europe.



The France and English national guidance is focused on integrated and sustainable mobility systems that supports economic growth, whilst simultaneously reducing adverse impacts on society and environment. In France, it is mandatory for all agglomerations with more than 100,000 inhabitants to develop a Plan de Déplacements Urbains - PDU (the French SUMP). Transport authorities in agglomerations with less than 100,000 inhabitants may choose to develop a PDU on a voluntary basis. In the case of Paris, the Mobility Master Plan (named PDU) was adopted by the Paris City Council in February 2007. The 2007 MMP represents the global transport policy of Paris, integrating largely, for the first time, urban goods movements. The MMP aims at improving air quality and public health, promoting accessibility and social justice, making the city more pleasant, increasing its economic performance. One of the main stated objectives is to reduce car traffic by 40% and greenhouse gas emissions by 60% by 2020. In the case of London, The London Freight Plan (Sustainable freight distribution: a plan for London) supports the Mayor's Climate Change Action Plan and informs future changes to the Mayor's London Plan, transport and environmental strategies.

There is a large list of terms and definitions covering sustainable and low-carbon mobility planning topic. The same applies to the number of approaches found in the related literature.

Mobility Management is primarily a demand-oriented approach to passenger and freight transport that involves new partnerships and new tools. The aim is to support and encourage a change of attitude and behaviour towards sustainable modes of transport. The tools of mobility management are based on information, communication, organization and co-ordination. These tools require promotion. Mobility Management, which is both a novel and promising concept to promote sustainable transport, varies from country-to-country both in terms of scope and level of implementation (EPOMM - European Platform on Mobility Management).

Transportation Demand Management (TDM), also known as Mobility Management, is a general term for various strategies that increase transportation system efficiency. TDM treats mobility as a means to an end, rather than an end in itself. It emphasizes the movement of people and goods, rather than motor vehicles, and so gives priority to more efficient modes (such as walking, cycling, ridesharing, public transit and telework), particularly under congested conditions. It prioritizes travel based on the value and costs of each trip, giving higher value trips and lower cost modes priority over lower value, higher cost travel, when doing so increases overall system efficiency.

Sustainable Urban Mobility Plan (SUMP) 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 as well as evaluation principles. The three elements of a SUMP are as follows:

- Planning (process): the core of the methodology.



- Plan (content of the document): beyond providing a plan outline, putting focus on actual examples of effective measures.
- Policy (implementation process of the plan and its final appraisal): a new element to facilitate implementation.

ELTIS provides SUMP guidance as well as CIVITAS provides a SUMP e-course. Online version of the SUMP Guidelines “Developing and implementing a Sustainable Urban Mobility Plan” is available on the following website: <http://www.eltis.org/guidelines/sump-guidelines>. In the “Guidelines: Developing and Implementing a Sustainable Urban Mobility Plan” ELTISPLUS project, presents an overview of The SUMP cycle. The document (having no special references regarding Freight Transport) structures the SUMP cycle into 11 elements (main steps) and a number of 32 activities detailing specific tasks. While some countries such as the UK (Local Transport Plans) or France (Plans de Déplacements Urbains) may be considered forerunners, the SUMP approach is new or non-existent in other parts of the EU. The benefits and added values of a SUMP need to be communicated to decision-makers, planners and other urban mobility stakeholders in order to convince them of the advantages of using this approach in their own urban context. In general, SUMPs englose chapters dedicated to urban freight transport. Municipalities may consider an SUMP and a UFT (integrated in SUMP or stand alone) as other plans on the urban agenda. It is important to emphasise that sustainable and low-carbon mobility planning is not a completely new planning approach, but that it rather builds on existing planning activities. But it is possible that in the future climate, economic, technical and informational challenges the innovative aspects to really enter into a new dimension.

Mobility Master Plans (MMPs) are intended to represent the global transport policy of a large municipality, including urban goods movements. MMPs aim to improve air quality and public health, promote accessibility and social justice, making cities more pleasant and increasing economic performance. In the UK, the equivalent document is the Local Transport Plan, drawn up by towns and cities, either individually or (where the towns and cities work closely together) on a pooled basis.

A **Freight Strategy** represents both an expression of the cumulative understanding of freight issues within an authority and an action plan of schemes and measures designed to meet the objectives of promoting efficient and sustainable freight movements. Importantly those objectives should complement all other local transport plan objectives. On occasions strategies and actions for freight and public transport are developed separately and can often contain conflicting policies. Within a Freight Strategy, authorities should include an analysis of synergies and conflicts with other policies both within other areas of the local transport plan and other planning policies.

With “bus priority” measures now a familiar sight in many towns and cities, urban areas provide an ideal opportunity to review “goods vehicle priority”. There may be many opportunities where greater use could be made of priority lanes by allowing goods vehicle access without prejudicing the efficiency of public transport (multimodal transport lanes). This should, of course, be judged on a case by case basis. Where bus priority measures use



existing road space, goods vehicles are often accorded the same low priority as the private car. Through partnership, rather than confrontation, better use can be made of road space in urban areas allowing both public transport and goods vehicles to operate more efficiently and sustainably. Taking into account the potential synergies between passenger transport and freight transport in urban areas, and the fact that in the passenger transport the use of “urban mobility plan” concept is usual, may be a reason to use the term “Urban Freight Mobility plan” (UFM) as a synonym for “Urban Freight Transport plan” (UFT).

The following chapters describe in detail the steps proposed by the SOLEZ project without neglecting the integration of SUMP with passenger transport, aimed to support Public Administrations in the elaboration of low-carbon mobility action plans targeted to FUAs, integrating push and pull measures in a unitary vision, congruent with other relevant transport sectors plans, policies and strategies.

2.2 Step-by-step process for Action Plans elaboration

This document is aiming at developing effective strategies and common approaches to elaborate low-carbon mobility planning in the project target FUAs and beyond. According with also the well-recognized ELTISplus “Guidelines. Developing and Implementation a Sustainable Urban Mobility Plan” (January 2014), this document provides a common and smart step-by-step process addressed to Public Authorities which are planning to draw up low-carbon mobility Actions Plans at FUA level.

The main steps for the elaboration such low-carbon mobility Action Plans are indicated as follows:

- **Step 1:** Assess low-carbon mobility framework in FUA
- **Step 2:** Conduct self-assessment
- **Step 3:** Identify relevant major actors (stakeholders) in FUA
- **Step 4:** Mobility diagnosis and goals setting for FUA
- **Step 5:** Develop scenarios and long-term vision
- **Step 6:** Develop effective low-carbon mobility actions

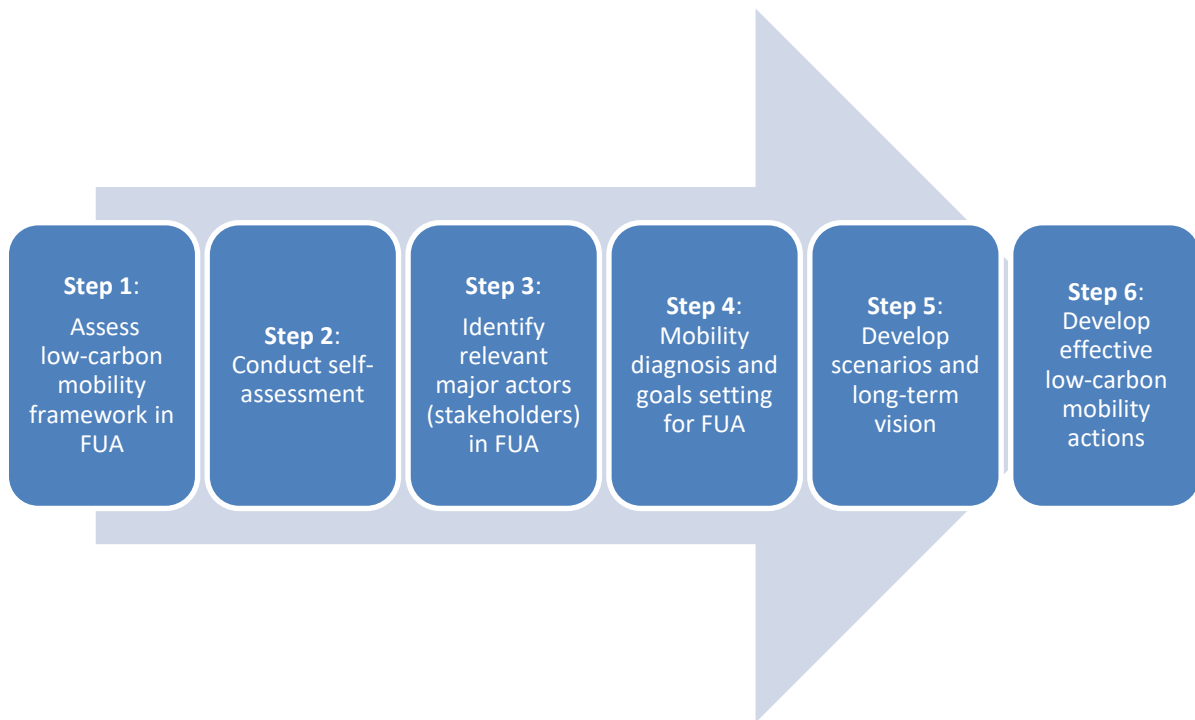


Figure 1: SOLEZ step-by-step process for the elaboration of low-carbon mobility Action Plans

2.3 Assess low-carbon mobility framework in FUA

The first step for the development of low-carbon mobility Action Plan is the definition of the overall low-carbon mobility framework in FUA. Objective of this first step is the definition of **baseline scenario** regarding actual transport and mobility framework conditions at FUA level in terms of legislative and regulatory framework, transport and mobility planning framework, sustainable transport modes in operation and/or planned, passenger and/or freight transport partnerships, etc.

Before starting to point out any action and “pull” measure for increasing effectiveness and acceptability of traffic restriction policies in the context of FUA mobility planning, it is quite important to **assess overall low-carbon mobility framework in municipalities of FUA** (with specific focus on main cities in terms of number of inhabitants as well as being main traffic and mobility attractor). In this respect, Public Authority leading the task of Action Plan elaboration is recommend to set-up a preliminary assesment of the current situation regarding regulatory constraints and obligations for the implementation of access restriction schemes in FUA, relevant transport and mobility strategic plans in place and under development (including any pull measure already “in agenda” in strategic transport documents approved by Local Administrations), low-carbon passenger and freight mobility services in operation in FUA municipalities as well as Quality Partnerships.

All above planned and/or ongoing solutions are aimed at promoting environmentally sensitive, economic and energy efficient transport to serve the needs of business and the wider community.

Once defined and assessed overall low-carbon mobility framework in FUA, Public Authority “leading the task” will be in the position of having a complete and exhaustive



understanding of transport and mobility framework at FUA level in order to conduct a self-assessment at the beginning phase identifying critical factors (enablers and barriers) for a successfully planning and implementation of low-carbon mobility policies enabling to well-balancing pull and push mobility actions and schemes.

Action points:

- Understand the current vision of the cities in FUA regarding low-carbon mobility aspects
- Assess the current situation regarding regulatory constraints and obligations for planning and implementation access restriction schemes in FUA
- Assess the current situation regarding any pull measure “in agenda” in strategic transport and mobility documents (including energy plans) approved by Public Authorities in FUA
- Assess the current situation regarding low-carbon passenger and freight mobility services in operation in FUA as well as existing passenger or freight quality partnerships (including MoS)

2.4 Conduct self-assessment

The second step for the development of low-carbon mobility Action Plan in FUA is to conduct a self-assessment by Public Authority “leading the task”, **identifying potential drivers and barriers**, which may support the process of consolidating the vision and defining strategic objectives at FUA level.

A common challenge for planners in local administrations who support sustainable mobility planning is to convince decision makers of the benefit of this approach. If there is no “champion” available on the local level, it can be hard work to convince the right politicians to become supporters of developing low-carbon mobility Action Plans at FUA level, by showing the challenges and problems the city faces if nothing is changed, to stress the benefits generated by the adoption of a combination of push and pull measures in FUAs. This is particularly challenging as the full impact of a sustainable mobility plan only becomes visible after a longer time-span than the electoral cycle. It may be helpful to point to the option of including “quick win” solutions in the Action Plans, which may help to generate a positive response among citizens and key stakeholders in the short-term at FUA level.

Depending on the national and local context, a legal obligation can be the driving force for developing low-carbon mobility Action plan in FUAs. Nevertheless real commitment is needed to make it a truly sustainable and effective plan. At the beginning of sustainable mobility planning process, it is necessary to determine potential to elaborate a successful action plan. This depends on many internal and external factors that provide an overall framework for the planning and implementation of access restriction schemes. Many internal and external factors can influence overall framework for the planning process and Plans implementation. The current positive vision of a city regarding sustainability aspects (e.g. limiting urban sprawl by transforming brownfield land) is a favourable factor. **SWOT**



analysis at the beginning of the planning process enables to identify strengths and weaknesses, threats and opportunities as well as the critical factors of success that may offer a first indication on the potential to run a successful low-carbon mobility planning process.

The analysis of the **barriers** for passenger and freight traffic may reveal contextual factors (e.g. economic, institutional, financial, etc.) or process related factors (e.g. bureaucracy). SWOT analysis will enable to determinate institutional, legal and financial barriers that might affect the whole planning process as well as **drivers** that can support the development process for Action Plans setting. The outcome of self-assessment by SWOT analysis does not necessary have to make public.

“Promoter” Public Authority is recommended to carry out a SWOT analysis at the beginning of the planning process - before stakeholders’ involvement - in order to clearly define internal and external key factors to be considered for the elaboration and adoption of low-carbon mobility Action Plans.

Action points:

- Perform SWOT analysis in order to assess potential drivers and barriers for low-carbon mobility initiatives (push and pull measures) setting and adoption in FUA Action Plans
- Elaborate a first estimation of potential barriers and drivers that might negatively affect (barriers) or positively support (drivers) the elaboration and adoption of FUA Action Plans

2.5 Identify relevant major actors (stakeholders) in FUA

The third step for the development of low-carbon mobility Action Plan in FUA is to timely and effectively engage relevant major actors in mobility and transport sector at FUA level, **identifying urban mobility stakeholders and understanding their potential role and position in the process.**

This is an important condition to achieve the overall goals of sustainable and low-carbon mobility planning in FUAs. This can help to identify possible conflicts and coalitions between stakeholders as well as how these in turn may affect your planning process in terms of geographical coverage, policy integration, resource availability as well as overall legitimacy. This is required to develop appropriate ways to deal with dominant or weak stakeholders as well as with intermediary positions.

Stakeholder cooperation and policy integration are fields that need to be addressed in this phase, which should be concluded with an agreement on the work plan and management arrangements.

The role of **public actors** in terms of merchandise transport and mobility solutions is essential for facilitating passenger and freight movements that should be in the same time fluent, effective and environmentally, economically and socially friendly. It is important to



identify coordination requirements and potential across all relevant policy domains at FUA level especially in areas most closely related to mobility (including land use, energy, environment, social inclusion, economic development, health and safety). Regular communication and exchange among Public Authorities of target FUA is recommended by the involvement of different competent departments in charge of mobility and transport planning, land-use planning, environmental protection, public works, etc.

On the other hand, “promoter” Public Authority (“leading the task”) needs to involve local stakeholders including private businesses, business associations as well as civil society organisations.

The overall engagement strategy for the elaboration and adoption of low-carbon mobility Action Plans at FUA level has to address four main questions, which need to be considered at the beginning:

- Why is the engagement process being undertaken?
- Who should be involved in the decision-making process?
- How will engagement be undertaken?
- When should different activities take place?

Based on the extensive process of consultation with all involved stakeholders, Public Authorities elaborating Action Plans might formalize and sign a **medium-term agreement** among the involved parties by a Memorandum of Understanding (MoS) and/or a transport Quality Partnership in which the involved parties formalize their commitment to adopt low-carbon mobility actions aimed at supporting the program of minimizing energy consumption and pollutant emissions at FUA level.

Detailed information on stakeholders’ engagement approaches and techniques will be defined in the SOLEZ common tool for passenger and freight transport stakeholders involvement at FUA level.

Action points:

- Identification of major public actors in FUA by competent departments in charge of mobility and transport planning, land-use planning, environmental protection, public works, etc.
- Identification of urban mobility stakeholders and understanding their role and position in FUA
- Ensure a fair representation of the organizations
- Perform first actions to set up and sign a MoS or a transport Quality Partnerships



2.6 Mobility diagnosis and goals setting for FUA

The fourth step for the development of low-carbon mobility Action Plan is to carry out passenger and freight mobility diagnosis helping to **understand the current traffic and mobility situation** and related issues hindering effective mobility in target FUA. This will enable to define appropriate low-carbon mobility policies well-addressing local constraints, mobility patterns and identified problems.

The analysis should be as comprehensive as possible but also needs to be manageable with the given resources and timelines. A quantified review of the current status of important mobility and transport developments (e.g. traffic situation, accessibility of services and transport facilities, road safety, public transport services, PM_{10} and $PM_{2.5}$ limit exceedance days, etc.) in the urban agglomeration of the main municipalities of FUA should be undertaken as well. Since a commonly accepted definition of the “urban agglomeration” will probably never exist, the most suitable spatial coverage needs to be agreed on by the stakeholders concerned. On the one hand, the area for which the respective local and regional authorities are responsible needs to be taken into consideration.

Actual traffic and mobility patterns need to be taken into account as well, covering the functional agglomeration. Anticipation of a political-level agreement on a suitable planning perimeter and responsibilities is an essential requirement for the Action Plans elaboration.

Baseline data may be obtained by activities of desk research, field survey (e.g. survey for flow generators, traffic counting, etc.), statistical analysis of data and identification of criticalities.

This work phase will be focus on desk research activities aimed at collecting, from certified and reliable sources information and data necessary to understand the current dynamics of the movement of passenger and freight in the investigated area of target FUAs. This activity involves the acquisition and analysis of relevant documentation and statistical information available by the competent Local Authorities, Institutes/Research Societies, Chamber of Commerce, Trade Associations, Universities, etc. To complete or integrate the collected basic data and information, it may be important to carry out specific field surveys or automatic traffic counting (by inductive loops).

Qualitative and quantitative analysis will enable to draw a comprehensive picture of the mobility phenomenon in FUA (e.g. localisation of main black spots, main road network corridors used by commuters within FUA, transport corridors characterized by high levels of traffic congestion, etc.) and identify main bottlenecks that characterize passenger and freight mobility at FUA level.

Qualitative and quantified review of the current status of mobility in FUAs should be provided by:



- preparing a list of deficits, problems and opportunities that relate to urban transport and mobility (e.g. services' accessibility, traffic safety, climate protection, land-use patterns, etc.);
- developing a better understanding of what is really needed to know in order to enhance the low-carbon mobility planning phase for Action Plans development at FUA level;
- selecting suitable indicators that describe the status of transport and mobility in FUA;
- identifying and prioritising key problems to be addressed by low-carbon mobility Action Plan.

The comprehensive mobility diagnosis at FUA level will enable to identify main bottlenecks and problems to be faced at FUA level by planning and implementing traffic restriction schemes and other restrictive policies for passenger and freight transport (push measure) in combination with added-value transport services as well as ICT-based mobility management systems (pull measures).

“Promoter” Local Authority who are leading low-carbon mobility Action Plan elaboration, is recommended to further **translate identified mobility bottlenecks and problems at FUA level in strategic objectives and achievable goals** addressed to reach a more environmental, economic and societal sustainability of passenger and freight mobility in FUA. In this respect, goals setting and strategic objectives definition has to be coherent with national/regional/local strategic objectives pointed out in strategic transport and mobility planning documents including SUMP, Mobility Master Plans, Urban Mobility Plans, Sustainable Energy Action Plans, Agenda21, etc.

Public Authorities are expected to build their FUA Action Plans on the framework informed by the national goals and challenges, relevant regional objectives, local goals and strategic objectives.

Local goals and strategic objectives should be in the form of desired outcomes addressed to difference timeframes and should look outside the transport agenda to wider corporate priorities.

Sustainable and low-carbon mobility needs to be considered as the balanced management of the economic, environmental and social issues affecting passenger and freight transport that:

- complies with or environmental standards, regulations or targets aimed at reducing emissions of climate change gases, improving air quality and minimising impacts from accidents, spillages or wastes;
- ensures passenger and freight is run efficiently, reduces unnecessary journeys, minimises journey distances and maximises loads with effective planning and operation;



- complies with labour, transport and human rights standards and regulations ensuring that employees and communities can function in a healthy and safe environment;
- minimises the negative impacts of passenger and freight activities on local communities.

Action points:

- Understand current traffic and mobility situation (e.g. traffic situation, PM10 limit exceedances)
- Understand the current dynamics of the movement of passenger and freight in FUA
- Identify and prioritize key problems to be addressed by low-carbon mobility Action Plan in FUA
- Translate mobility bottlenecks and problems at FUA level in strategic objectives and goals

2.7 Develop scenarios and long-term vision

The fifth step for the development of low-carbon mobility Action Plan at FUA level is to develop scenarios and long-term vision towards the achievements of set goals and strategic objectives, according with strategic transport planning documents as well as actions already in policy agendas.

The definition of the geographical area covered by low-carbon mobility Action Plans and the right timing, in co-relation with time availability of resources and dynamics of stakeholders' involvement are other key factors for success. SOLEZ Action plans should cover common timeframes as follows:

- short-medium term (1-5 years),
- long-term vision (10 years).

Short-medium timeframe (1-5 years) cover “quick wins” actions and policy measures to be planned and implemented in reasonable timelines enabling to achieve tangible results. This represents the target timeframe of SOLEZ low-carbon mobility Action Plans that should include push and pull actions to be delivered by involved municipalities of FUA within the project timeframe or shortly beyond.

On the other hand, definition of an ambitious **long-term vision** (10 years) for future transport and mobility system in FUA is recommended to effectively address main challenges and expectations for smarter and sustainable mobility for passenger and freight in “smart” cities and regions in EU.

Low-carbon mobility Action Plans at FUA level should be based on both “quick wins” solutions targeted to short-medium term as well as “ambitious” mobility strategies in FUA targeted to long-term vision covering all transport modes, passenger and freight, walking and cycling, parking, etc.



The “quick win” solutions should be mostly short-term measures that can be quickly implemented, having good visibility, contributing to reach strategic objectives and benefiting of funding streams.

Long-term vision should identify strategic choices for passenger and freight transport investment and demand management strategies and measures under the three sustainability-oriented headings:

- environment,
- economy,
- society.

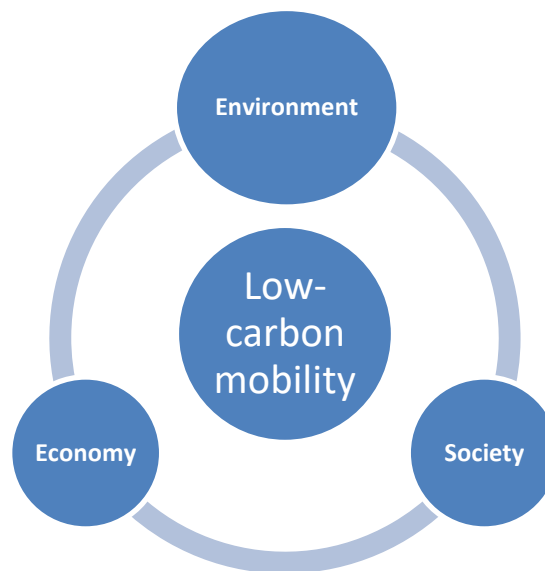


Figure 2: Sustainability-oriented headings of low-carbon mobility framework

Policy scenarios should assess interdependencies between sectoral trends: transport, land use, environmental, economic development, demography, etc., identifying in a basic way synergies, potential for integration as well as negative effects of sectoral trends. Appropriate techniques such as modelling are indicated to support scenario development and appraisal. Traffic modelling techniques can effectively support to set future mobility scenarios because they could work with interoperable modules covering selected aspects of transport and mobility or other relevant policy fields. On the other hand, a smarter and cost-effective solution can be successful experiences for similar urban and regional contexts, likely impacts from other modelling studies and design solutions.

The development of low-carbon mobility scenarios in FUAs to be include in the Action Plans should be undertaken not only internally to the competent Public Authorities but most important through a **constructive dialogue with local stakeholders** discussing and agreeing on shared mobility strategies.



The vision is more likely to be accepted and effective if defined by involved Public Authorities of FUA in partnership with key local stakeholder engaged within low-carbon mobility planning process.

Action points:

- Develop scenarios and long-term vision towards set goals and strategic objectives, according with relevant strategic transport planning documents as well as actions already in policy agendas
- Describe scenarios distinguishing between short-medium timeframe and long-term vision

2.8 Develop effective low-carbon mobility actions

The sixth step for the development of low-carbon mobility Action Plan in FUA is to develop cost-effective push and pull low-carbon mobility measures addressed to the two considered timeframes.

The last step is to determine which **strategy (package of low-carbon mobility measures)** serves the vision. The development of effective low-carbon mobility measures is at the core of Action Plans aimed at ensuring at the end that the defined strategic objectives and goals are met. The selection of low-carbon mobility measures should build on discussions with key stakeholders, consider experience from other places with similar policies and ensure value for money. Essentially, at this stage, measures are identified in response to the questions: what, how, where and when?

Measures need to contribute to achieving the vision, strategic objectives and goals defined within the previous steps. A set of options needs to be identified that realistically fits with the available resources. The first action is about gaining an overview of possible low-carbon mobility measures.

There is a wide range of possible measures. This means that identifying the most suitable measures for a local context in target FUAs will require some desktop work and talking with members of the project team as well as stakeholders. Identifying the most effective measures should be based on more than individual experience, desktop research and local exchange. In this respect, it is quite important to consider any transport and mobility initiative at local / FUA level which is already “in agenda” of Local Authorities within relevant strategic planning documents, Memorandum of Understanding (MoU) as nonbinding agreement between two or more parties outlining the terms and details of an understanding including each parties' requirements and responsibilities, FQPs, etc.



The SOLEZ project is addressing to set up and implement on the one hand restrictive policies for passenger and freight transport in the form of LEZs, LTZs, etc., on the other hand measures addressed to compensate these restrictions by offering added-value services, ICT smart applications, etc. Both categories of actions (respectively “push” and “pull” measures) are aimed at achieving traffic flow and air pollution reduction at FUA level, increasing modal split towards more sustainable transport modes, improving capacities of Public Authorities for low-carbon mobility planning, etc.

It can be extremely valuable to learn from the experience of those who have already implemented measures which are considering transferable and potentially applicable in areas with different peculiarities such as small medium cities, urban areas with traffic congestion and/or air pollution problems, etc. Coordinated and integrated measures of intervention are indicated as follows:

- **Regulatory measures** in terms of demand management strategies such as restriction in accessing cities and surrounding areas (e.g. creation or extension of LEZs, pedestrian areas as well as LTZs, restrictions on the time slots to access the city center, limiting access to vehicles on the basis of the relative emission factors and/or weight, etc.);
- **Pricing measures** in terms of demand management strategies (e.g. payment to access a specific urban area, payment to transit on a specific road corridor, charging for parking, etc.);
- **Organizational measures** designed to create alternative and innovative low-carbon mobility systems including added-value mobility services, ICT smart applications, e-supporting tools.

Regulatory measures and pricing measures have to be considered as “push” measures which impose operators and citizens with a view to influence operational practices (mobility behaviours), divided into regulatory constraints (e.g. access restrictions) and financial instruments (e.g. road tolls, etc.).

On the other hand, **organizational measures** have to be considered as “pull” measures offering less car dependent mobility solutions (car sharing, carpooling, walking and cycling), last-mile logistics services based on low-carbon principles, smart parking solutions, public transport electric-driven offering, etc. All these pull measures are aimed at enabling to reduce disadvantages produced by traffic restriction policies to people living, working or visiting the concerned areas and to increase business opportunities of mobility services suppliers (low-carbon freight delivery solutions in/from LEZ, multimodal transport corridors, sustainable passenger mobility services, park & ride, etc.).

Measures should be considered in “packages” rather than in isolation to take into account potential synergies. Measure selection will be guided not only by effectiveness but also by value for money.



Closely linked to the self-assessment is the question of the available resources for carrying out the low-carbon mobility planning process and for implementing measures. This includes human resources (i.e. available staff and skills) as well as financial resources. Especially in times of tight budgets for urban transport and mobility, it is crucial to get the most impact possible for the resources spent. The proposed measures should be assessed in view with a realistic and timely implementation with given resources. Essentially, at this stage answers are found to the questions: who and how much? When a final set of low-carbon measures has been selected, it is time to **assign responsibilities and resources**. This requires close coordination and discussion among all actors that will have a role in developing and implementing the measures or packages of measures.

It is important to secure efficient and effective allocation of resources (human, knowledge, funds) and validate a realistic plan by checking the consistency between planned activities, set targets and allocated budgets. While it may be common practice to bring in external expertise for particular technical tasks it is also important to think about building up expertise in its own organization and co-operating with other stakeholder over the long term. The aim is to cover immediate skill requirements, by sub-contracting if needed, but also to develop and keep expertise on sustainable mobility planning at FUA level within the organization itself. It is recommended to assess the likely budgetary framework, also considering local/regional/national as well as EU funding opportunities.

Financial resources may come from: i) local taxes (e.g. a special local transport tax for public transport paid by public or private enterprises, developers, etc.); ii) revenue funding (tickets, parking fees, city center pricing, congestion charging, advertisements, private sector operators, developers, industry; knowledge and skills - SMEs); iii) fundraising activities involving appropriate sponsors; iv) local budgets (from different municipalities and different policy domains), v) state/EU subsidies.

It is important to ensure good coordination between different funding sources, organize meetings with concerned local stakeholders to discuss on low-carbon mobility measures as well as to involve citizens for presenting final package of measures included in SOLEZ Action Plans at FUA level.

SOLEZ Action Plans will include a minimum set of information for each measure/action as follows:

- 1) **WHAT:** Action description
- 2) **WHY:** Addressed strategic objectives and goals
- 3) **WHERE:** Territorial area(s) for action implementation
- 4) **WHEN:** Timing for action design and implementation
- 5) **WHO:** Assigned responsibilities within Public Authorities of FUA
- 6) **HOW:** Key stakeholders to be involved
- 7) **HOW MUCH:** Assigned resources (human, knowledge, funding sources)



Action points:

- Determine which strategy (package of low-carbon measures) serves the vision in target FUA
- Define “quick win” solutions targeted to short-medium term as well as low-carbon mobility strategies targeted to long-term vision, covering all transport modes, passenger/freight mobility
- Define the geographical area covered by the Action Plan at FUA level
- Provide for each action / measure the following information:
 - 1) Description of the action/measure (WHAT),
 - 2) Strategic objectives and goals addressed by the action/measure (WHY),
 - 3) Geographical area interested by the action/measure within target FUA (WHERE),
 - 4) Scheduling the action/measure both short-medium term and long-term vision (WHEN),
 - 5) Clear indication of assigned responsibilities within Public Authorities of FUA (WHO)
 - 6) Identification of key local stakeholders to involved for action delivering (HOW)
 - 7) Define resources considering local/regional/national/EU opportunities (HOW MUCH)

3 Final adoption of SOLEZ Action Plans

Low-carbon mobility Action Plans for FUA will summarize the outcomes of all previous six steps.

After a final check, the political representatives should formally adopt SOLEZ Action Plan at FUA level.

It is also important to ensure that the plan is widely accepted among stakeholders and citizens. To ensure that the previous agreements are well-reflected drafts of the plan need to be reviewed internally and by important external stakeholders, including external reviewers.

The format of adoption of SOLEZ Action Plans and its circumstances will depend on the national/local regulatory framework and administrative structure. In general terms, it needs to be achieved:

- Those authorities responsible for drawing up the action and budget should also adopt it, ensuring compliance with national/local regulation regarding its adoption and (where applicable) minimum sustainable mobility planning requirements. The possibility that party involved could take legal action against it that contravenes these rules should be anticipated.

- Action Plans has to be assessed with an eye to procedural requirements and to be compliance with EC/National/Regional/Local regulatory and mobility-planning framework.

The official adoption of the SOLEZ Action plan at FUA level is an important step.

In advance, as follow-up to this step it is necessary to inform and involve stakeholders (joining meetings) and citizens to ensure broad ownership of the Plan. They should have the feeling it is “their” plan, which aims at improving mobility and quality of life for everyone. It is important to finally celebrate this milestone with the citizens of FUA. Before its presentation to the public, necessary updating and fine-tuning action will be implemented based on the pilot actions’ results.

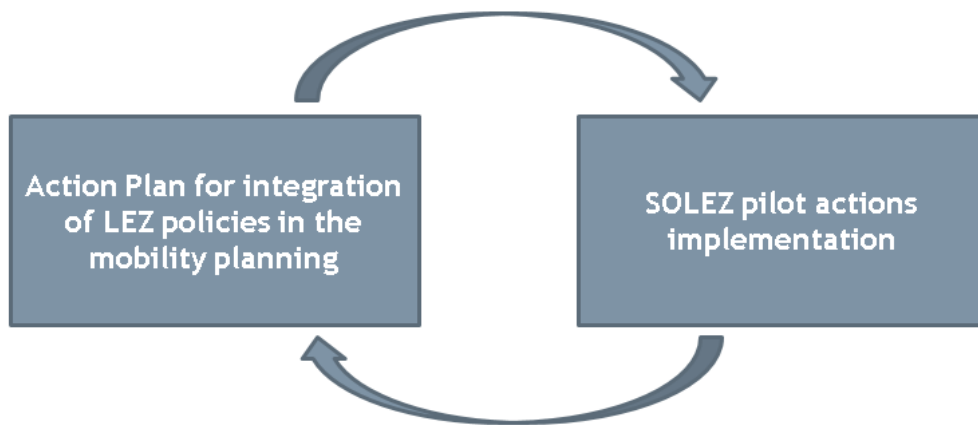


Figure 3: Circle process for the Action Plans elaboration and final validation

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