



#### Horizon 2020

## Societal Challenge: Improving the air quality and reducing the carbon footprint of European cities



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Integrated Climate forcing and Air Pollution Reduction in Urban Systems

# D5.5 – Report on green strategy and implementation plan in one each of the cities

WP5 Integrated assessment for short to medium term policies and measures

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#### 1 INTRODUCTION

The aim of this deliverable is to describe the environmental long-term protection strategies, i.e. the green strategies, in the ICARUS participating cities based on the project results. The core of the strategies is on considering health, air quality and climate impacts, as well as costs and utility losses. In the process of developing the green strategies, applyication of political and social criteria has been made (as identified within the work in tasks T5.1-T5.3 and presented in the deliverable D5.4 — "Final report on integrated assessment of policies") (ICARUS, 2019). The participating cities were extensively involved in this process and they have used the information produced by ICARUS to formulate environmental protection strategies (supported by their technical partners). Furthermore, the cities have applied political and social criteria, supported by the ICARUS team, to identify effective, acceptable and implementable policies. In task T5.4 the development of consistent, clear, and feasible policy recommendations has been made. A continuous process evaluation scheme has been applied in the framework of T5.4 in order to discover barriers and drivers for the implementation of win-win measures in each ICARUS city, and to find ways to support drivers and avoid/mitigate barriers.

## 1.1 Concept/approach

The concept for assessing the potential for successful implementation of the strategies follows the idea of a feasibility assessment approach, where the aim is to identify the strengths and weaknesses of the proposed policy scenarios/measures, opportunities and threats, the resources required for implementation, and ultimately the prospects for success. This has been accomplished by the following steps:

- 1. Through a questionnaire focusing on the status analysis, vision building, objective and target setting, policy and measure selection, active communication and monitoring/evaluating activities. The questionnaire is based on a set of questions that follow the steps in the measure/policy preparation and their adoption process. Both technical and non-technical (organisational) measures have been considered in this process. The score provides an orientation regarding how well the specific policy scenario/measure is developed in terms of following the main sustainability planning principles, which are considered the cornerstones for successful implementation.
- 2. Through the process evaluation scheme, where, following the identified barriers and drivers for a policy/strategy implementation, the most efficient way is identified. In practical terms this means that measures with highest potential of implementation (costs, stakeholders' support, spatial availability etc.) and expectation of achieving significant air pollution and GHGs reductions in ICARUS cities have been selected.

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## 1.2 Organisation of the report

After the introduction, Chapter 2 is dedicated to an overview of selected measures and policies aimed at contributing to the development of the green strategies, which have been previously filtered down from a list of possible measures/policies. The filtering was based on the potential contribution of the measures and polices to air pollution reduction (for details, refer to the ICARUS deliverable D5.2 – "Two databases of a) policies and b) measures towards integrated win-win solutions on the urban scale" and D5.4 - "Final report on integrated assessment of policies", ICARUS 2017, 2019). Chapter 3 includes the results of the work related to assessing the potential for success for these measures/policy scenarios, following the principles of sustainable planning, while Chapter 4 presents the results of process evaluation aimed at identifying the barriers and drivers for implementation of the measures/policies in the cities. Chapter 5 collects conclusions, discussion and suggestions for future work.

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## 2 OVERVIEW OF SELECTED POLICY SCENARIOS/MEASURES BY CITIES

This section provides an overview of urban policy long-term scenarios chosen for the integrated assessment and further evaluation in the ICARUS project.

The total number of analysed policy scenarios is 21, with approximately 2-4 measures for each ICARUS city. The respective scenarios have been selected out of the policy and measure list as presented and described in ICARUS Deliverable D5.4 (ICARUS, 2019), based on their potential for air pollution reduction (based on the evaluation of emission/pollution reduction, contribution to climate change, health impacts, and costs). The selection was done based on the *significant positive impact* and *minor possible positive impact* in terms of emission/air pollution, morbidity/mortality reduction and significant or minor possible positive financial impact, as described in Chapter 7 of ICARUS D5.4 deliverable (ICARUS, 2019).

The policies and measures underlying the scenarios cover a wide range of possible abatement options for different emission source sectors. More than half of the chosen policy scenarios are associated to the transport sector (14 out of 21). The most recurrent themes are:

- Reduction of motorized individual transportation by measures such as:
  - Promotion of a switch from road transportation to more environmentally friendly transportation modes such as public transportation, walking and cycling.
  - Introduction of new metro lines and further public transport infrastructure expansion.
  - Reserved infrastructure for public transportation and dedicated bus lanes.
  - New parking regulations according to air quality criteria.
- Introduction of Low Emission Zones and driving bans.
- Renovation of the public passenger transport vehicle fleet (CNG, hybrid or electric buses).

Traffic reductions and sustainable transportation modes have been selected for further evaluation in all cities. A scenario representing the increasing electrification of the urban fleet – either private vehicles or urban buses – has been selected in Brno, Thessaloniki, Stuttgart, Ljubljana and Milan. The reduction of motorised traffinc (access restriction) and promotion of sustainable transport means (cycling, walking) has been chosen for further analysis in Athens, Stuttgart, Milan, Brno, Thessaloniki – even though the specific design of the measure varies from city to city.



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The scenarios related to the transport sector are followed by the energy sector - building and households (in combination with the industrial sector) with one third of the policy scenarios (7 out of 21). These include:

- Replacement of fossil heating technologies by technologies such as:
  - o High efficiency gas boilers.
  - o Heat pumps and solar heating.
- Implementation of energy saving measures by insulation and renovation of the building stock.
- Energy efficiency in the cement industry: Use of refuse derived fuels.

The list of selected policy scenarios/measures is presented in Table 1.

Table 1: A description of the policy scenarios/measures

City	No	Scenario name	Scenario description
Athens (Attica)	1	SusMob	Promotion of sustainable mobility through eco- driving, cycling and walking in the Greater Athens Area (Attica)
Athens (Attica)  2 SusMobPuT driv Area priv		SusMobPuT	Promotion of sustainable mobility through eco- driving, cycling and walking in the Greater Athens Area (Attica) as well as minimizing the use of private passenger cars in Athens metropolitan area by enhancing public transportation means
Basel 1 NoHeat		NoHeat	Replacement of fossil heating technologies by heating pumps and solar heating (until 2020: 1/3 will be replaced; until 2030:100%)
Basel	3	FirewoodBan	Introduction of a ban on small combustion of firewood (2030 scenario)
Basel	4	NoHeatFirewood	Replacement of fossil heating technologies combined with the introduction of a firewood ban (2030 scenario)
Brno	1	M1opti	Promoting low carbon electric vehicles
Brno	2	M2opti	Reduction of the motorized vehicles in the city and increase of the usage of clean transportation (i.e. walking, biking and using public transport)



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Brno	3	M2zero	Reduction of the motorized vehicles in the city and increase of the usage of clean transportation (i.e. walking, biking and using public transport)
Ljubljana	1	M1_DecreaseCAR	Decrease of personal car use (the combination of the car reduction measures and parking policy will lead to a decrease of personal cars on incoming roads/avenues by 20 %); specifically the promotion of electromobility is planned to result in an additional 2% of emission reduction (M1) (2030 scenario)
Ljubljana	2	M2_IncreasePT	Increased share of public transport use (increased use of PT on the account of better service and transfer from car users) (The renovation of the public passenger transport fleet and the reduction of personal car use is also integrated in this scenario ) (2030 scenario)
Ljubljana	3	M3_Ptfleet	Renovation of public passenger transport vehicle fleet (CNG, hybrid buses); the replacement of EURO 0,1,2 buses with CNG propulsion system (86 buses in total) (The reduction of personal car use is also integrated in this scenario, but no increase of public transport is assumed) (2030 scenario)
Ljubljana	4	M4_DistrHEAT	Increased utilization and expansion of district heating systems; renovation of the system - replacement of existing combustion units with more appropriate means (i.e. 70% reduction of coal use) (2030 scenario)
Madrid	4	Logistics	Public-private collaboration in order to make urban logistics processes more efficient
Madrid	5	EnEff	Regeneration of neighbourhoods by improving energy efficiency and thermal insulation of the building stock and re-naturalization of the city
Milan	1	AreaB	Low Emission Zone (Area B): Control and tracking of access into the city by banning up to Euro 3 diesel cars (up to Euro 4 from October 2019)



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Milan	2	ElectricBus	Conversion of all public buses to electric ones by 2030
Stuttgart	1	ScEL	Promoting low carbon electric vehicles (share in vkm to 7% in 2020, 20% in 2030)
Stuttgart	2	ScUV	Promoting environmentally friendly transport modes (walking, cycling, PT) (decrease of individual transport by 7% in 2020; 20% in 2030) (2030 scenario)
Stuttgart	4	Sc1	Increase of building insulation (+2%) and heating system exchange to high efficiency gas boilers
Thessaloniki (region)	2	M2	Promotion of cycling/walking, green vehicles and public transport
Thessaloniki (region)	4	M4	Energy efficiency in the cement industry: Use of refuse derived fuels

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## 3 POTENTIAL FOR SUCCESFUL IMPLEMENTATION OF POLICY SCENARIOS/MEASURES

At the beginning of the policy scenario/measure planning and/or implementation process, it is necessary to determine the potential for its success. This depends on many internal and external factors that provide an overall framework for the planning process and policy scenario/measure implementation.

A policy scenario/measure implementation tackles air pollution related problems in urban areas more efficiently. It is the result of a structured process that comprises status analysis, vision building, objective and target setting, policy and measure selection, active communication, monitoring and evaluation.

Building on existing practices and regulatory frameworks, the basic characteristics and key activities in preparing of an efficient policy scenario /measure planning and implementation process are (adapted after ELTIS, 2019):

- Long-term vision and clear implementation plan;
- Participatory approach;
- Balanced and integrated policy scenario/measure development;
- Horizontal and vertical integration;
- Assessment of current and future performance;
- Consideration of external costs for all considered options and modes;
- Regular monitoring, review and reporting;

Each of these is briefly described below.

#### Long-term vision and clear implementation

A successful policy scenario/measure is based on a long-term vision, which covers all relevant sectors. It contains a plan for the short-term implementation of the strategy, which includes an implementation timetable and budget plan as well as a clear allocation of responsibilities and resources required for the implementation of policies and measures set out in the plan.

#### Participatory approach

A successful policy scenario/measure focuses on people and meeting their basic needs related to transport, energy etc. and in connection to the environmental quality. It follows a transparent and participatory approach, which brings citizens and other stakeholders on board from the onset and throughout the policy scenario/measure development and implementation process.

Participatory planning is a prerequisite for citizens and stakeholders to take ownership of the policy scenarios/measures in question. It makes public acceptance and support more likely

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and thus minimises risks for decision-makers on one side while facilitating the plan implementation on the other.

#### Balanced and integrated policy scenario/measure development

A successful policy scenario/measure fosters a balanced development of all relevant air pollution related activities. The plan puts forward an integrated set of actions to improve performance and cost effectiveness with regard to the declared goals and objectives. These actions include technical, promotional and market-based measures and services as well as infrastructure.

#### Horizontal and vertical integration

The development and implementation of a policy scenario/measure follows an integrated approach with high level of cooperation and consultation between the different levels of government and relevant authorities.

Integrated planning and implementation encompasses:

- a) A commitment to sustainability, i.e. balancing economic development, social equity and environmental quality.
- b) Consultation and cooperation between different departments at the local level to ensure consistency and complementarity with policies in related sectors (transport, energy, land use and spatial planning, social services, etc.).
- c) Close exchange with relevant authorities at other levels of government (e.g. city, municipality, region).
- d) Coordination of activities between authorities of neighbouring urban and peri-urban areas.

#### Assessment of current and future performance

The development of a policy scenario/measure focuses on achieving ambitious, measurable targets derived from short-term objectives, aligned with a vision and embedded in an overall sustainable development strategy. A successful policy scenario/measure builds on a thorough assessment of the current and future performance of the urban system in terms of tackling air pollution and climate change. It provides a comprehensive review of the present situation and the establishment of a baseline against which progress can be measured.

The status analysis includes a review of the current institutional set-up for planning and implementation. Suitable indicators should be identified to describe the current status of the urban pollution.



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A strong policy scenario/measure sets measurable targets, which are based on a realistic assessment of the baseline and available resources. In this context, it also identifies specific performance objectives, which are realistic in view of the current situation in the urban area as well as ambitious in regard with the defined objectives and targets.

Specific indicators are used to measure progress towards targets.

#### Consideration of external costs

The development of a successful policy scenario/measure should contain a review of costs and benefits. This should take account of the wider societal costs and benefits, also across sectors, to inform the choice of actions.

#### Regular monitoring, review and reporting

The implementation policy scenario/measure should be monitored closely. Progress towards its objectives and meeting the targets are assessed regularly based on the indicator framework. To this end, appropriate actions are required to ensure timely access to the relevant data and statistics.

The review of policy scenario/measure implementation could in turn suggest revisions of targets and where necessary corrective actions.

A monitoring/evaluation plan transparently shared and communicated with citizens and stakeholders informs about the progress in developing and implementing of the policy scenario/measure in question while providing another important fundament for successful acceptance of the policy scenario/measure by the society.

A process evaluation may serve as an important tool for steering the planning and implementation phases of the policy scenario/measure – executed on a regular basis, it may detect the barriers and drivers accompanying the process early enough in order to allow for appropriate corrective actions. The results may also be beneficial in terms of providing lessons learnt to be used for the future development of similar policy scenarios/measures, or for transfer to other urban areas.

The assessment of potential for successful implementation and operation of the policy scenarios/measures is based on a questionnaire about the policy scenario/measure development process and its contents. These are structured along the following eight clusters of activities:

- 1 Potential for success.
- 2 Development process, scope.
- 3 Analysis of the situation and development of scenarios.
- 4 Common vision and citizen engagement.
- 5 Priorities and targets.

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- 6 Measures effectiveness.
- 7 Responsibilities & funding.
- 8 Monitoring and evaluation.

#### 1 - POTENTIAL FOR SUCCESS

#### **Activity 1.1: Commit to following sustainability principles**

A plan can only call itself sustainable if certain economic, social and environmental criteria are taken into account. An underlying understanding of, and commitment to, sustainability principles is the basis to direct the policy scenario/measure development process at strategic level. The main aim thereof is to ensure that basic sustainability principles are taken into account throughout the whole planning process.

#### Activity 1.2: Assess impact of European/ national/regional/ local framework

The plans are usually embedded in a wider planning framework. This includes for example regulations, funding streams or higher level strategies for spatial and transport development (e.g. a national transport plan, where one exists). It is crucial to assess the impact of the regional and national audit planning framework to fully exploit opportunities and avoid conflicts with higher level authorities at a later point.

#### **Activity 1.3: Conduct self-assessment**

A self-assessment at the beginning of the plan development process is needed to identify strengths and weaknesses of the current planning practices and to understand the potential to successfully prepare a policy/measure in question. The assessment should determine how closely current planning practices align with the planning guidelines and identify the barriers and drivers that might influence the plan development process.

#### **Activity 1.4: Review availability of resources**

Closely linked to the self-assessment is the question of the available resources for carrying out the policy scenario/measure development and implementation process. This includes human resources (i.e. available staff and skills) as well as financial resources. Without sufficient resources it will be difficult to run a successful plan. For some public authorities, the specific skills required for running the policy scenario/measure planning and implementation process can exceed the capacities of their staff. While it may be common practice to bring in external expertise for particular technical tasks, it is also important to



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think about building up expertise and co-operating with other stakeholders over the long term.

#### **Activity 1.5: Define basic timeline**

Ensuring the right timing is a key to success. The activities in the policy scenario/measure development process partly depend on each other – interdependencies need to be carefully translated into a logical sequence of all the tasks necessary to complete the process (e.g. having identified problems before discussing objectives) and harmonised with the local conditions.

It is also crucial to consider on-going planning and policy-making activities when determining the timing for the planning process. Election periods, legislation processes, regulation processes or other planning activities may influence the planning process through their influence on the institutional context (e.g. change of decision makers, changing legislation).

#### Activity 1.6: Identify key actors and stakeholders

Identifying stakeholders and understanding their potential role and position in the process is important to achieve the overall goals of policy scenario/measure planning/development. This can help to identify possible conflicts and coalitions between stakeholders, and how these in turn may affect your planning process in terms of geographical coverage, policy integration, resource availability and overall legitimacy. This is needed to develop appropriate ways to deal with dominant or weak stakeholders and with intermediary positions.

#### 2 - DEVELOPMENT PROCESS, SCOPE

#### Activity 2.2: Strive for policy coordination and an integrated planning approach

A principal shortcoming of planning today is the lack of coordination between policies and organisations, far beyond an integration of transport modes (e.g. coordination with land-use planning, environmental protection, social inclusion, gender equity, economic development, safety, health, education, information technologies). Addressing this deficit represents a major challenge for policy scenario/measure planning, but is also a main source for innovation and improvement.

#### Activity 2.3: Plan stakeholder and citizen involvement



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Working with stakeholders is generally considered common practice – but often only certain stakeholders actually have a say in planning. It is crucial to involve all different types of stakeholders throughout the planning process, addressing their specific requirements. This helps to legitimise the plan and enhance its quality. Stakeholder involvement supports the development of a more effective and (cost) efficient plan. A dedicated strategy is needed for the involvement of stakeholders, drawing on different formats and techniques when dealing with authorities, private businesses, civil society organisations, or all of them together. Citizens are a special sub-group of stakeholders. Involving them in planning is a fundamental duty of local authorities to ensure the legitimacy and quality of decision making. Involving citizens in planning is also a requirement stipulated by EU directives and international conventions (DIRECTIVE, 2003).

#### 3 – ANALYSIS OF THE SITUATION AND DEVELOPMENT OF SCENARIOS

The last step of preparing well for the policy scenario/measure development is to analyse the reference situation and develop scenarios of possible future situations. This provides the basis for setting goals in a rational and transparent way. As a first activity, a thorough analysis is needed of the problems and opportunities in the field of interest. This is an important milestone as it feeds into the development of different scenarios.

#### Activity 3.1: Prepare an analysis of problems and opportunities

Before deciding on future policies, it is essential to know where you currently stand. This knowledge is often very fragmented and incomplete. Like pieces of a puzzle, data and information need to be put together in order to describe what is going on, and to name the related problems. This analysis is crucial in helping to define appropriate policies and provides the necessary baseline against which progress can be measured. The analysis should be as comprehensive as possible, but also needs to be manageable with the given resources. The analysis should also include the resilience of the urban transport systems (i.e. their capacity to absorb stressors or shocks) towards both expected and unexpected events (e.g. energy shortage, natural disaster), especially if they affect long-term decisions.

#### **Activity 3.2: Develop scenarios**

Scenarios help stakeholders better understand the likely combined effects that the interventions within the policy scenario/measure will have. By illustrating different future situations, it allows them to assess independently the consequences of current trends, measures already programmed, and new policy choices. Examining the effects of these different scenarios enables to set realistic targets for outcome indicators.



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#### 4 - COMMON VISION AND CITIZEN ENGAGEMENT

Developing a common vision is one of the cornerstones of policy scenario/measure preparation. It provides the basis for all subsequent steps that will define concrete targets and measures. The vision can only be the guiding element if it is widely accepted among stakeholders and citizens; therefore it is crucial to create a common ownership of the vision.

#### Activity 4.1: Develop a common vision of mobility and beyond

A vision provides a qualitative description of a desired urban future and serves to guide the development of appropriate planning measures. It needs to place policy scenario/measure in question back into the wider context of urban and societal development. The vision should be prepared taking into consideration all policy perspectives concerned, especially general policy frameworks (e.g. Agenda21, strategic plan), urban and spatial planning, economic development, the environment, social inclusion, gender equity, health and safety.

The policy scenarios/measures should be based on a long-term vision for the entire urban agglomeration.

#### Activity 4.2: Actively inform the public

A common vision is the starting point for developing concrete measures. The planning outcomes can only be successful if citizens understand what the vision is about and if they support the broader goals. While it is not always possible to involve citizens directly in the vision building, they should at least actively be informed about the vision building process and its outcomes. This helps to create awareness and broad acceptance.

#### 5 - PRIORITIES AND TARGETS

A vision is an important qualitative description of the desired future, but this alone is not sufficient. It needs to be backed-up by concrete objectives, which indicate the type of change desired. Finally, these changes also need to be measureable. This requires selecting a well-thought-out set of targets that focus on selected areas (indicators).

#### **Activity 5.1: Identify the priorities**



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Defining objectives means specifying what social, environmental or economic improvements are required, saying exactly what needs to be "reduced", "increased" or "maintained". Objectives are higher level aims of the policy scenario/measure (e.g. cut pollution caused by congestion of passenger cars) while measures (e.g. access restriction) are the means to achieve them. This contrasts with a planning approach that focuses on the delivery of schemes and infrastructure without reference to higher level objectives.

The definition of objectives will provide focus and structure between the development of the vision and the setting of targets. Continued stakeholder involvement is a must to ensure acceptance of the identified priorities.

#### **Activity 5.2: Develop SMART targets**

Targets represent the most concrete form of commitment in a policy scenario/measure, stating the desired degree of change within a given timeframe. They are needed to assess whether an adopted measure really achieves the desired outcomes. Targets should be SMART (specific, measurable, achievable, realistic, time-bound) and refer to the agreed objectives. Targets are essential for monitoring and evaluation purposes. The selection of indicators needs to keep that in mind. Target setting provides transparency and clarity on what is planned to be achieved in terms of improving the air quality in the city.

#### **Smart targets**

- **S**pecific precisely described using quantitative and/or qualitative terms that are understood by all stakeholders.
- Measurable the current situation has been measured and is known. Resources are also in place to measure the changes (qualitative and quantitative) that occur.
- Achievable based on the technical, operational and financial competencies available and stakeholder agreements/commitments that have been made
- Relevant stresses the importance of choosing targets that matter, that drive the measure forward and that support or are in alignment with other targets

Time-bound – key dates for the achievement of the target are clearly defined

#### **6 – MEASURE EFFECTIVENESS**

#### Activity 6.1: Identify the most effective interventions/measures

Measures need to contribute to achieving the vision, objectives and targets. A set of options needs to be identified that realistically fits with the available resources. The first step is about gaining an overview of possible interventions/measures. These should be



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considered in "packages" rather than in isolation so as to take into account potential synergies.

#### Activity 6.2: Learn from others' experience

Identifying the most effective measures should be based on more than the past experience, desktop research and local exchange. It can be extremely valuable to learn from the experience of those who have already implemented measures. This avoids "reinventing the wheel" and making costly mistakes that others may already have learnt from.

#### Activity 6.3: Consider best value for money

Policy scenario/measure selection should be guided not only by effectiveness, but also by value for money. Especially in times of tight budgets, it is crucial to get the most impact possible for the resources spent. This will require a basic assessment of options with an eye on costs and benefits. This will also help you be realistic about what measures can be implemented and to choose only measures that seem financially feasible.

#### 7 - RESPONSIBILITIES & FUNDING

Closely connected to the selection of policy scenarios/measures is the clear determination of responsibilities and the elaboration of an action and budget plan. This is a key part and requires formal approval by all key stakeholders.

#### **Activity 7.1: Assign responsibilities and resources**

When a final set of measures has been selected, responsibilities and resources must be assigned. A clear picture of who is in charge of an action and where the funding comes from is a cornerstone of successful policy scenario/measure development. This requires close coordination and discussion among all actors that will have a role in their development and implementation.

#### Activity 7.2: Prepare an action and budget plan

Based on the discussion on responsibilities and funding sources with the concerned actors, a confirmed action and budget plan is needed. It includes a detailed summary of the measures, of established priorities for implementation and of schedules. These specifications will be the basis for smooth implementation; it needs broad agreement from decision makers and stakeholders and will form a core part of the final plan.

#### 8 - MONITORING AND EVALUATION



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Monitoring and evaluation of both the planning process and of the implementation of the measures are crucial to the effectiveness of the plan. A monitoring and evaluation mechanism helps to identify and anticipate difficulties in the preparation and implementation of the policy scenario/measure, and, if necessary, to "revise" them in order to achieve targets more efficiently and within the available budget. It will also provide proof of their effectiveness as well as to allow the justification of the financial resources spent.

The reporting should ensure that the results of the evaluation feed back into the public debate, thus enabling all actors to consider and make the necessary corrections (e.g. if targets are achieved or if measures appear to be in conflict with one another). The monitoring and evaluation mechanisms should be defined early and become an integrated part of the policy scenario/measure.

Based on these clusters of activities, a checklist questionnaire has been prepared in order to examine the potential for success for the selected policy scenarios/measures in the ICARUS cities.

The questionnaire was filled with the cooperation of the city representatives/stakeholders.

The questionnaire comprises a total of 46 yes-no questions (an example of the questionnaire is presented in Annex)

- Each general question represents one point (a total of 35 points)
- Excellence Questions (a total 11 points): cover criteria of a particularly advanced policy scenarios/measures, awarding processes of exceptionally high quality
- Foundation Questions: indicate basic success requirements

The summary of the results in terms of the potential for successful implementation for the selected measures is presented in table 2 below – the detailed results are presented in Annex.



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Table 2: Summary of results - potential for successful implementation

City	No	Scenario name	<ul><li>1- Potential for success</li><li>(9 POINTS)</li></ul>	2 - Development process, scope (5 POINTS)	3 – Analysis of the situation and scenarios (8 POINTS)	4 - Common vision and citizen engagement (5 POINTS)	5 - Priorities and targets (4 POINTS)	6 - Measures effectiveness (4 POINTS)	7 - Responsibilities & funding (6 POINTS)	8 - Monitoring and evaluation (8 POINTS)	OVERALL SCORE (46 POINTS)
Athens (Attica)	1	SusMob	3	3	2	1	1	1	0	0	11
Athens (Attica)	2	SusMobPuT	3	3	2	1	1	1	0	0	11
Basel*	1	NoHeat	1	1	4	0	0	0	0	0	6
Basel*	3	FirewoodBan	0	0	4	0	0	0	0	0	4
Basel*	4	NoHeatFirewood	0	1	4	0	0	0	0	0	5
Brno	1	M1opti	5	4	6	5	3	2	2	1	28
Brno	2	M2opti	4	4	6	5	3	2	1	1	26
Brno	3	M2zero	4	4	6	5	3	2	1	1	26
Ljubljana	1	M1_DecreaseCAR	6	1	4	5	3	2	3	1	24
Ljubljana	2	M2_IncreasePT	4	3	2	3	2	2	4	2	22
Ljubljana	3	M3_Ptfleet	5	3	2	3	2	2	4	1	22
Ljubljana	4	M4_DistrHEAT	4	1	4	0	2	1	4	1	17
Madrid	4	Logistics	1	2	6	2	1	2	2	0	16
Madrid	5	EnEff	1	2	6	2	1	2	2	0	16
Milan	1	AreaB	7	3	6	3	2	2	5	4	32
Milan	2	ElectricBus	7	3	6	5	3	3	5	5	37
Stuttgart	1	ScEL	5	2	6	1	2	2	1	0	20
Stuttgart	2	ScUV	5	2	6	1	2	2	1	0	20



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City	No	Scenario name	<ol> <li>Potential for success</li> <li>POINTS)</li> </ol>	2 - Development process, scope (5 POINTS)	3 – Analysis of the situation and scenarios (8 POINTS)	4 - Common vision and citizen engagement (5 POINTS)	5 - Priorities and targets (4 POINTS)	6 - Measures effectiveness (4 POINTS)	7 - Responsibilities & funding (6 POINTS)	8 - Monitoring and evaluation (8 POINTS)	OVERALL SCORE (46 POINTS)
Stuttgart	4	Sc1	5	2	6	0	2	1	1	0	18
Thessaloniki (region)	2	M2	6	2	4	4	3	2	1	2	24
Thessaloniki (region)	4	M4	9	5	8	5	4	4	6	8	46

<sup>\*</sup> Basel key stakeholders were not involved in responding to the questionnaire. The study team filled them in using local knowledge and public data. This may explain the low scores for Basel relative to the other case study cities.

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### 4 PROCESS EVALUATION OF POLICY SCENARIOS/MEASURES

#### 4.1 General

The process evaluation is aimed at helping to identify barriers and drivers in planning and implementing the measures for increasing air quality in ICARUS cities. The main task in this regard is to guide the cooperation and communication with city representatives in order to obtain the information about the process of developing the city policies and measures as well as to gain insights for assessing the feasibility of measures/policies developed within ICARUS for each city.

The Process Evaluation is defined as follows:

"Process evaluation concerns the evaluation of the processes of planning and implementation including the roles of information, communication and participation".

Process evaluation – sometimes also referred to as formative evaluation – is a method for implementation assessment carried out while the activities are forming or happening. In some projects, the European Commission has pushed for an emphasis on process evaluation right from the beginning of the demonstration projects. One of the ambitions was to quickly detect and overcome unexpected barriers. If problems are detected early enough in the implementation period, process evaluation would allow correcting the design of a specific activity/measure/solution etc. In addition, the identification of drivers of the implementation could be used to further promote these drivers for an even more successful measure implementation.

The main objectives of process evaluation are:

- Getting insight to drivers and barriers during preparation, implementation and operation of the measures.
- Getting insight to roles of communication and participation.
- Getting at the stories behind the data.
- Contributing to cross-site evaluation and policy recommendations.
- Contributing to transferability and up-scaling of proposed interventions (activities/measures/solutions).

Within the last two points the attention is focused on "Transition Thinking" highlighting the policy scenarios/measures as transition instruments: how do they contribute to a real change in our behaviour. Process evaluation is hence supposed to directly benefit the ICARUS project by identifying and handling factors, which influence the sound implementation of proposed policy scenarios/measures. Furthermore, the identification of workplan deviations / underachievements / successes and the analyses of the respective reasons is another process evaluation objective.



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The actual benefits of process evaluation for an ongoing measure implementation may be subtle and relatively difficult to grasp. It could even be argued that process evaluation has its largest value if understood as a tool or an experience source for the improvement of future (measure planning and implementation) processes.

The process evaluation framework addresses the basic characteristics of evaluating and monitoring complex systems. The overall message is that monitoring changes in complex systems asks for a participatory and interactive process that connects and confronts different stakeholders and tries to look at changes and problems in a holistic fashion by coupling the various levels. It doesn't just check whether things are proceeding as planned but creates room for innovative solutions and perspectives.

Monitoring transitions requires a different type of monitoring than the current practice, which describes monitoring as the routine collection of information based on fixed and predetermined indicators. Transition monitoring should be demand driven instead of data driven and will often value interactions, qualitative information, mutual influence and formative uses above reduction, quantifying, linear causal relationships and ex-post judgement. Transition monitoring is the process to observe both on-going dynamics of a transition and actions to influence this transition in order to gain insight on how to intervene more effectively.

The first step is to gather information of all policy scenarios/measures in a way that provides insight in the process and content of the solutions in relation to the steering principles of deepening, broadening and up-scaling. The scheme below can be used as a basis for the information to be gathered. Furthermore, the scheme is combined with the most important phases of the measures: preparation, implementation and conducting/execution.



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USTUTT, AUTH, CSTUTT			
Steering	Deepening	Broadening	Scaling up
dimensions Success criteria	actions aimed at learning as much as possible from the experiment in the specific context	actions aimed at repeating the experiment in other contexts or connecting to other functions and domains	actions aimed at embedding the experiment in dominant ways of thinking, doing and organizing
Process			
Room in budget and planning	<ul> <li>allocating resources         (time, money,         knowledge, etc.) to an         open search and         learning process;</li> </ul>	<ul> <li>allocating resources to interaction with other domains and partners;</li> </ul>	- allocating resources to (early) involvement of key actors at a strategic level;
Space in the process	- building in space for reflection on and adjustment of the vision and learning goals;	- building in space for reflection on the connection to the broader context;	- building in strategic reflection on barriers and opportunities in dominant ways of thinking, doing and organizing;
Quality of learning process	- organizing a broad, reflexive and social learning process;	- focusing the learning process on how experiments can reinforce each other;	- focusing the learning process on how learning experiences can be embedded in dominant ways of thinking, doing and organizing;
Supportive incentives / assessment mechanisms	- developing supportive incentives / assessment mechanisms that increase the quality of learning;	- developing supportive incentives / assessment mechanisms that stimulate interaction with other domains and partners;	- developing supportive incentives / assessment mechanisms that stimulate feeding back results to key actors at a strategic level;
Competences of project participants	- selecting project participants with an open mind and willingness to learn;	<ul> <li>selecting project participants that are able to look outside the borders of their discipline and are strong 'connectors';</li> </ul>	- selecting project participants that are able to communicate and 'anchor' project results at a strategic level;



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Strategic management  Substance	- the management guarantees that project results are related to the societal challenge;	- the management guarantees the interaction with other domains and partners;	- the management guarantees connection to key actors and developments at strategic level;
Connection to societal challenge	- connecting project goals explicitly to societal (transition- )goals;	- cooperating with partners and developing new partnerships to realize shared societal goals;	- adapting to sense of urgency with regard to societal challenge;
Sustainability vision / future perspective	<ul> <li>project participants</li> <li>share a long term</li> <li>sustainability vision;</li> </ul>	- developing an overarching sustainability vision to provide guidance to different experiments;	<ul> <li>drawing attention to the sustainability vision at a strategic level;</li> </ul>
System analysis (dominant culture, practices, structure in sector)	- project participants share perspective on dominant ways of thinking, doing and organizing in the sector (from which the experiment deviates);	- identifying similar experiments and potential new partners, application domains and functions;	- identifying key actors with power and willingness to influence dominant culture, practices and structure;
Learning goals/ desired changes (innovation)	- formulating explicit learning goals with regard to desired (interrelated) changes in culture, practices and structures;	- repeating the experiment in other contexts and experimenting with new functions is part of the learning goals;	- anticipating and learning about barriers and opportunities in dominant culture, practices and structures is part of the learning goals;
Intended results	<ul> <li>distinguishing results in generic and context specific;</li> </ul>	- sharing results with other experiments and potential application domains;	- stimulating structural (regime) support and resources for results;

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The second step includes an in-depth analysis. This step aims at getting more insight in problems, chances, opportunities, threats etc. with respect to a selected smart solution through the identification of main barriers and drivers. It is carried out together with stakeholders/experts within and outside of a team dedicated to a policy scenario/measure in question. Working methods consist of extended interviews and relevant measure documentation. The information itself consists of three layers: actual events (a time line), perceptions of actors involved and perceptions and observations of people not involved.

#### 4.2 Identification of barriers and drivers

The following categories for barriers and drivers have been used for the process evaluation - presented in the table 3 below, including indications of their influence on a successful measure implementation (adapted after CIVITAS METEOR, 2007).

Table 3: Overview of categories for barriers and drivers of implementation

Category	Subcategory	Interpretation as Barrier	Interpretation as Driver
Politics and Strategy	Opposition/ Commitment	Opposition of key actors based on political and/or strategic motives; Lack of sustainable development agenda or vision	Commitment of key actors based on political and/or strategic motives; sustainable development agenda /vision
	Conflict/ Coalition	Conflict between key actors due to diverging material interests and expectation of redistributive losses	Coalition between key actors due to shared/complementary material interests and expectation of redistributive benefits
Planning	Technical	Insufficient technical planning and analysis to determine requirements of measure implementation	Accurate or visionary technical planning and analysis to determine requirements of measure implementation
	Economic	Insufficient economic planning and market analysis to determine requirements for measure implementation	Accurate economic planning and market analysis to determine requirements for measure implementation



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			,
	Policy Conflict/ Synergy	Conflicting policies or policy frameworks hampering measure implementation	Synergetic policies or policy frameworks fostering measure implementation
	User assessment	Lack of user needs analysis; Limited understanding of user requirements	Thorough user needs analysis; Good understanding of user requirements
Institutions	Administrative Structures and Practices	Hampering administrative structures, procedures and routines	Facilitating administrative structures, procedures and routines
	Legislation and Regulation	Hampering laws, rules, regulations and their application	Facilitating laws, rules, regulations and their application
Cooperation	Partnership and Involvement	Failed or insufficient partnership arrangements and limited involvement of key actors	Constructive partnership arrangements and open involvement of key actors and/or other stakeholders
	Key Individuals	Lack of leadership, individual motivation or know-how of key persons	"Local champions" motivating actors and catalysing the process
Citizen Participation		Insufficient or poorly performed consultations with and involvement of citizens	Broad consultations with and involvement of citizens
Information and Public Relations		Insufficient information of key stakeholders; lack of awareness raising activities	Information of key stakeholders; Awareness raising activities
Technology		Technology failure; additional requirements	New potentials offered by technology
Public Funds and Subsidy		Dependency on public funds and subsidies	Availability of public funds and subsidies



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Exchange and Mutual Learning	Relative isolation of the measure and lack of exchange with other cities	Exchange with other cities on experiences and lessons learned
Cultural and Life Style	Hampering cultural circumstances and life style patterns	Facilitating cultural circumstances and life style patterns
Problem Pressure	not applicable	Severity of problems to be solved (e.g. air pollution)

#### **Process barriers**

Process barriers are events or overlapping conditions that hampers the process to obtain strategic, project related or *policy scenario/measure based* objectives (goals). In the checklist below there is a number of barrier fields and examples of barriers, which might have been encountered in trying to reach these objectives. These are also the main focus in assessing feasibility.

Barrier fields and examples of possible barriers are:

Barrier field	Examples of barriers	
Political /	Opposition of key actors based on political and/or strategic motives,	
strategic	lack of sustainable development agenda or vision, impacts of a local	
	election, conflict between key (policy) stakeholders due to diverging	
	believes in directions of solution	
Institutional	Impeding administrative structures, procedures and routines,	
	impeding laws, rules, regulations and their application, hierarchical	
	structure of organizations and programs	
Cultural	Impeding cultural circumstances and life style patterns	
Problem	Complexity of the problem(s) to be solved, lack of shared sense of	
related	urgency among key stakeholders to sustainable mobility	
Involvement,	Insufficient involvement or awareness of (policy) key stakeholders,	
communication	insufficient consultation, involvement or awareness of citizens or	
	users	
Positional	Relative isolation of the measure, lack of exchange with other	
	measures or cities	
Planning	Insufficient technical planning and analysis to determine requirements	
	of measure implementation, insufficient economic planning and	
	market analysis to determine requirements for measure	
	implementation, lack of user needs analysis: limited understanding of	
	user requirements	
	Institutional  Cultural  Problem related Involvement, communication  Positional	



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8	Organizational	Failed or insufficient partnership arrangements, lack of leadership,	
		lack of individual motivation or know-how of key measure persons	
9	Financial	Too much dependency on public funds and subsidies, unwillingness of	
		the business community to contribute financially	
10	Technological	Additional technological requirements, technology not available yet,	
		technological problems	
11	Spatial	No permission of construction, insufficient space	
12	Other		

#### **Process drivers**

Process drivers are events or overlapping conditions that stimulates the process to obtain objectives/goals. In the checklist below there is a number of driver fields and examples of possible drivers, which might have been encountered in trying to reach the objectives.

Driver fields and examples of possible drivers are:

NR	Driver field	Examples of drivers	
1	Political /	Commitment of key actors based on political and/or strategic motives,	
	strategic	presence of sustainable development agenda or vision, positive	
		impacts of a local election, coalition between key (policy) stakeholders	
		due to converging (shared) believes in directions of solution	
2	Institutional	Facilitating administrative structures, procedures and routines,	
		facilitating laws, rules, regulations and their application, facilitating	
		structure of organizations and programs	
3	Cultural	Facilitating cultural circumstances and life style patterns	
4	Problem	Pressure of the problem(s) causes great priority, shared sense of	
	related	urgency among key stakeholders to sustainable mobility	
5	Involvement,	Constructive and open involvement of policy key stakeholders,	
	communication	constructive and open consultation and involvement or citizens or	
		users	
6	Positional	The measure concerned is part of a (city) program and/or a	
		consequence of the implementation of a sustainable vision, exchange	
		of experiences and lessons learned with other measures or cities	
7	Planning	Accurate technical planning and analysis to determine requirements	
		of measure implementation, accurate economic planning and market	
		analysis to determine requirements for measure implementation,	
		thorough user needs analysis and good understanding of user	
		requirements	
8	Organizational	Constructive partnership arrangements, strong and clear leadership,	
		highly motivated key measure persons, key measure persons as 'local	
		champions'	



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9	Financial	Availability of public funds and subsidies, willingness of the business	
		community to contribute financially	
10	Technological	New potentials offered by technology, new technology available	
11	Spatial	Space for physical projects, experimentation zones	
12	Other		

The barriers and drivers are cited specifically for the following phases of the policy scenario/measure lifetime – these include:

- ✓ <u>Preparation phase</u>: the policy scenario/measure is developed in detail and design work for the measure is conducted. At the end of this phase all planning details are fixed, including all decisions and permissions that are a pre-condition for starting the implementation phase.
- ✓ <u>Implementation phase</u>: the policy scenario/measure is being implemented in real life. At the end of this phase the measure starts operation.
- ✓ <u>Operation phase</u>: the policy scenario/measure is opened to the public, i.e. users are able to increase their utility. The first phase of operation lies within the time-frame of the ICARUS Initiative and can be analysed and evaluated by ICARUS. The long-term running is the outstanding time until the measure comes to the end of its life, which could be caused by technical facts, programme termination, end of funding, redesign, or reconstruction.



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## 4.3 Process evaluation results per city

## 4.3.1 Athens

City		Policy scenario / measure name	
ATHENS		Athens(Attica)_SusMob_Promotion of sustainable mobility through cycling and walking	
Objectives			
Increase the cyclin	ng and walking mode	share	
PROCESS BARRIE	RS		
Phase	Barrier field (e.g. financial, political, spatial)	Specification of barrier	
Planning	POLITICAL	Local elections on June 2019 and pre-election period	
Implementation	POLITICAL, INSTITUTIONAL, PLANNING, FINANCIAL, SPATIAL	Local elections on June 2019, Coordination among different related stakeholders/actors.  Time-consuming internal procedures, Insufficient technical planning and analysis to determine requirements of measure implementation, dependency on public funds and subsidies.  No permission of construction, insufficient space	
Operation	ORGANIZATIONAL (TENTATIVE BARRIER)	insufficient partnership arrangements, lack of leadership	
Future development of the measure / upscaling; feasibility	-	-	
PROCESS DRIVER	PROCESS DRIVERS		
Phase (1)	Driver field (e.g. financial, political, spatial)	Specification of driver	



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Planning	POLITICAL / STRATEGIC, POSITIONAL	Commitment of key actors based on political and/or strategic motives, presence of sustainable development agenda or vision, The measure concerned is part of a (city) program and/or a consequence of the implementation of a sustainable
		vision
Implementation	INVOLVEMENT, COMMUNICATION, FINANCIAL, INSTITUTIONAL, PLANNING	Open involvement of policy key stakeholders, Availability of public funds and subsidies, facilitating structure of organizations and programs, facilitating laws, rules, regulations and their application, Accurate technical and economic planning
Operation	ORGANIZATIONAL, INVOLVEMENT, COMMUNICATION, CULTURAL	Constructive partnership arrangements, strong and clear leadership, key measure persons as 'local champions', Facilitating cultural circumstances and life style patterns
Future development of the measure / upscaling; feasibility for	POLITICAL	Political will, Development of city/region vision

#### **ACTIONS TAKEN**

**Involvement, communication:** Constructive and open involvement of policy key stakeholders, constructive and open consultation and involvement or citizens or users, campaigns to promote sustainable mobility

#### **INTERPRETATION**

The measure shows a strong basis for future implementation. There may have been some difficulties in the planning and implementation stage due to uncertain election outcomes, but this has later been overcome by a commitment of key actors based on political and/or strategic motives, presence of sustainable development agenda or vision as a part of a (city) program and/or a consequence of the implementation of a sustainable vision. Additionally, a strong support by stakeholders, the availability of funds and efficient organisation has created a strong basis for the feasibility in implementation and operation. Due to facilitating



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cultural circumstances and life style patterns this measure has been well accepted among the public, which has given it an even stronger impetus for the successful future development and upscaling. This is also a prerequisite for a successful shift of the personal car use mentality towards the widespread use of other means of transport. It should be emphasised, that besides the promotion activities per se, a stronger attention must be given to the improvement of walking and cycling infrastructure in order to further increase the potential for change of travel habits, while due to low maintenance costs, efficient travel speeds, positive impact on human health as well as the experience that cycling brings to users is cycling in urban settlements, the increase in its popularity should be the main agenda for tackling the urban mobility air pollution issues.

City	Policy scenario / measure name
ATHENS	Athens(Attica)_SusMobPuT
Objectives	

#### Objectives

Promotion of sustainable mobility through eco-driving, cycling and walking in the Greater Athens Area (Attica) as well as minimizing the use of private passenger cars in Athens metropolitan area by enhancing public transportation means

#### **PROCESS BARRIERS**

Phase	Barrier field	Specification of barriers
	(e.g. financial,	
	political, spatial)	
Planning	POLITICAL	Local elections on June 2019 and pre-election period
Implementation	POLITICAL,	Local elections on June 2019, Coordination among
	INSTITUTIONAL,	different related stakeholders/actors time-
	PLANNING,	consuming internal procedures, Insufficient
	FINANCIAL,	technical planning and analysis to determine
	SPATIAL	requirements of measure implementation,
		dependency on public funds and subsidies, No
		permission of construction, insufficient space
Operation	ORGANIZATIONAL	insufficient partnership arrangements, lack of
	(TENTATIVE	leadership
	BARRIER)	·
	,	
Future	POLITICAL	political will and city vision
development of		



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the measure / upscaling; feasibility		
PROCESS DRIVERS		
Phase	Driver field (e.g. financial, political, spatial)	Specification of drivers
Planning	POLITICAL / STRATEGIC, POSITIONAL	Commitment of key actors based on political and/or strategic motives, presence of sustainable development agenda or vision , The measure concerned is part of a (city) program and/or a consequence of the implementation of a sustainable vision
Implementation	INVOLVEMENT, COMMUNICATION, FINANCIAL, INSTITUTIONAL, PLANNING	open involvement of policy key stakeholders, Availability of public funds and subsidies, facilitating structure of organizations and programs, facilitating laws, rules, regulations and their application, Accurate technical and economic planning
Operation	ORGANIZATIONAL, INVOLVEMENT, COMMUNICATION, CULTURAL	Constructive partnership arrangements, strong and clear leadership, key measure persons as 'local champions', Facilitating cultural circumstances and life style patterns
Future development of the measure / upscaling; feasibility for	POLITICAL	Political will, Development of city/region vision

#### **ACTIONS TAKEN**

**Involvement, communication:** Constructive and open involvement of policy key stakeholders, constructive and open consultation and involvement or citizens or users, campaigns to promote sustainable mobility.

#### INTERPRETATION



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It is evident that there have been some difficulties in the planning and implementation stage due to uncertain election outcomes, but this has later been overcome by a commitment of key actors based on political and/or strategic motives, presence of sustainable development agenda or vision as a part of a (city) program and/or a consequence of the implementation of a sustainable vision. Additionally, a strong support by stakeholders, the availability of funds and efficient organisation has created a strong basis for the feasibility in implementation and operation. In relation to the cultural aspects (public acceptance) it could be stated that this measure has strong potential for the successful future development and upscaling, primarily the walking part. In regard with cycling, it should be emphasised, that beside the promotion activities per se, a stronger attention must be given to the improvement of infrastructure as well as to the provision of efficient multimodality options (bike-tram, bike-train) in order to further increase the potential for change of travel habits. Namely, cycling is the most effective means of transport primarily in shorter distances (up to 5 km) and sufficiently effective in medium long distances (up to 10 km) and in more densely populated areas. In order to increase its share in a Great Athens area a substantial effort must be placed into the multimodal travel options in order to reach the full potential that cycling has to offer.



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### 4.3.2 Basel

City		Policy scenario / measure name
BASEL		NoHeat
Objectives		
Replacement of fo	ossil heating tech	nologies by heating pumps and solar heating (until 2020:
1/3 will be replace	ed; until 2030:100	9%)
PROCESS BARRIEI	RS	
Phase	Barrier field	Specification of barriers
	(e.g. financial,	
	political,	
	spatial)	
Planning	POLITICAL	Strong opposition from commerce and industry because
		of higher costs
Implementation	POLITICAL	Long political debate before implementation
-		
Operation	PLANNING	Database of heating devices had to be updated
Future	POLITICAL	Unclear if full replacement of all fossil fuel devices is
development of		happening until 2030, due to political pressure
the measure /		exemption permits might be given out
upscaling;		
feasibility		
PROCESS DRIVERS	S	
Phase <sup>(1)</sup>	Driver field	Sussification of duivous
Phase (-)	(e.g. financial,	Specification of drivers
	political,	
	spatial)	
Planning	POLITICAL	Green and leftist parties strongly pushed for this
		scenario
lmmlamacutatic:		
Implementation	<del>-</del>	-
Operation	INSTITUTIONAL	Administrative structures available and organized
Future	-	-
development of		
the measure /		



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upscaling;		
feasibility for		

The policy was mainly driven by politics. The costs for home owners were criticized by opponents and the effectiveness of the measure doubted. In the end the parliament voted for the measure and the law came into effect in 2017.

### **INTERPRETATION**

There appears to be quite a strong opposition towards the measure due to associated higher costs, but eventually the measure was accepted by the political circles. In terms of social acceptance, it is still unclear whether the measure will gain strong support towards 2030 in order for measure to be fully implemented (100%). In such cases a share of the population would always rather stick to what they are used to. In addition, such changes also require the adaptation of the heating systems in houses and this is also not a favourable options for some, therefore a scepticism exists whether a full implementation of measure is feasible as planned by 2030.

City		Policy scenario / measure name	
BASEL		FirewoodBan	
Objectives			
Introduction of a	ban on small combus	tion of firewood (2030 scenario)	
PROCESS BARRIE	PROCESS BARRIERS		
Phase	Barrier field	Specification of barriers	
	(e.g. financial,		
	political, spatial)		
Planning	INVOLVEMENT	Lack of awareness/involvement. Brief public debates	
		every winter when PM2.5 values are high. But no	
		stakeholder is pushing the subject.	



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Implementation	INVOLVEMENT	See above
Operation	INVOLVEMENT	See above
Future development of the measure / upscaling; feasibility	INVOLVEMENT, COMMUNICATION	See above

## **PROCESS DRIVERS**

		,
Phase	Driver field	Specification of drivers
	(e.g. financial,	
	political, spatial)	
Planning	-	-
Implementation	TECHNOLOGICAL	New technologies like heat pumps offer attractive
		alternatives for renewable heating.
Operation	-	-
Future	OTHER	Effective air pollution control measures in other
development of		sectors might raise awareness of the air pollution
the measure /		produced by firewood.
upscaling;		,
feasibility for		

## **ACTIONS TAKEN**

Efforts to raise awareness about the problem.

## **INTERPRETATION**

Due to lack of awareness and involvement, this measure was never implemented or seriously discussed. Effective air pollution control in other sectors might raise awareness which may contribute to successful tackling of the problem in the future.



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## 4.3.3 Brno

City		Policy scenario / measure name	
BRNO		Brno_M1_OPTI - Promoting low carbon electric	
		vehicles	
Objectives			
Increase usage of	the low-carbon vehi	cles within the area of the City of Brno	
PROCESS BARRIEF	RS		
Phase	Barrier field	Specification of barriers	
	(e.g. financial,		
	political,		
	spatial)		
Planning	PLANNING/	Placing charging stations in sufficient density in the	
	SPATIAL	city.	
	STATIAL		
Implementation	POLITICAL/	Propagation of the usage/purchasing of the electric	
implementation	FOLITICAL/		
	FINANCIAL	vehicles by citizens and companies. Dependent on the subsidies. Electric cars are still much more	
		expensive than regular cars.	
Onematics	TECHNOLOGICAL	Maintanana of the stations and the surface of	
Operation	TECHNOLOGICAL	Maintenance of the stations and the system of	
		payment in the city.	
	TECHNIC: COLOR:		
Future	TECHNOLOGICAL	It is possible that other low-carbon technologies	
development of		(hydrogen, bioCNG) will increase. Our assumptions	
the measure /		were done for electric cars solely.	
upscaling;			
feasibility			
PROCESS DRIVERS			
Phase	Driver field	Specification of drivers	
	(e.g. financial,		
	political,		
	spatial)		



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Planning	POLITICAL/	Overall European support of the low-carbon	
	FINANCIAL	vehicles. Many grants relevant for low-carbon cars	
		European and national.	
		Laropean and national	
Implementation	INSTITUTIONAL/	City of Brno is replacing its own fleet to low-carbon	
	COMMUNICATION	fleet, serving as an example. Communication of such	
		exchange is promoted in the city media.	
		,	
	<b>a</b> = .=		
Operation	SPATIAL	Possibility of electric cars, driving in the reserved	
		lanes. Even though, reserved lanes are not very	
		abundant in the city of Brno.	
Future	COMMUNICATION	The measure positively affects the attitude towards	
development of		sustainable transport options	
the measure /			
upscaling;			
feasibility for			
	L		

These policies are only part of the Sustainable mobility plan and they have not been introduced so far. Thus, any description cannot be provided.

#### **INTERPRETATION**

It is evident that the measure has a relatively high social acceptance as well as political support. There are however some technological concerns possibly affecting a widespread of the electric car technologies, but since these are currently in the development phase their upscaling to the point that could hinder the propagation of electric vehicles in unlikely.

City	Policy scenario / measure name
BRNO	Brno_M2_OPTI/ZERO - Reduction of the motorized vehicles in the city and increase of the usage of clean transportation (i.e. walking, biking and using
	public transport)



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Objectives			
Reduction of the I	motorized vehicles in t	the city by 42/22% respectively.	
PROCESS BARRIEI	RS		
Phase	Barrier field	Specification of barriers	
	(e.g. financial,		
	political, spatial)		
Planning	PLANNING/	Providing enough alternative means of	
	SPATIAL	transportation in sufficient quality.	
Implementation	POLITICAL/	Propagation of the alternative ways of travelling.	
•	CULTURAL/	Implementation of several restrictions. There may	
	PROBLEM RELATED	be a strong opposition against any restrictions	
		related to the usage of the personal cars.	
		related to the dauge of the personal cars.	
Operation	TECHNOLOGICAL	Building of the additional cycling ways/lanes. New	
орогинон.		trolley and tram lanes and P+R. In recent years, the	
		building of this infrastructure was not very effective.	
		Saliding of this initiastractare was not very effective.	
Future	TECHNOLOGICAL/	City circuit must be completed.	
development of	SPATIAL	,	
the measure /			
upscaling;			
feasibility			
PROCESS DRIVERS	c		
PROCESS DRIVER.	•		
Phase	Driver field	Specification of driver	
	(e.g. financial,		
	political, spatial)		
Planning	POLITICAL/	Overall knowledge about air quality related to the	
	INVOLVMENT	transportation must be communicated clearly to all	
	COMMUNICATION	citizens/stakeholders.	
Implementation	INSTITUTIONAL/	City of Brno must carefully communicate all	
•	COMMUNICATION	promotions/restrictions, using multiple media.	
		, , , , , , , , , , , , , , , , , , , ,	



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Operation	SPATIAL/ ENVIRONMENTAL	Planned measurements of the air quality before/after implementing of the measure.
Future development of the measure / upscaling; feasibility for	COMMUNICATION	The measure positively affects the attitude towards sustainable transport options

Communication and promotions of alternative transport using multiple media.

## **INTERPRETATION**

It is evident that the measure has a relatively high political support, but the nature of measure (restrictions to personal car use) can present an important cultural barrier. In regard to the PT potential the measure exhibits a high level of feasibility potential mainly due to the fact that there is already a high usage of public transport in the modal split of Brno. An efficient air quality related promotions could further encourage the widespread of acceptance of alternative transport measure and thus provide further support in feasibility of implementation.



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## 4.3.4 Ljubljana

City	Policy scenario / measure name
LJUBLJANA	M1_ReducedCar

## **Objectives**

Decrease of personal car use (the combination of the car reduction measures and parking policy will lead to a decrease of personal cars on incoming roads/avenues by 20 %); specifically, the promotion of electromobility is planned to result in an additional 2% of emission reduction.

## **PROCESS BARRIERS**

Phase	Barrier field (e.g. financial, political, spatial)	Specification of barriers
Planning	PLANNING	Lack of a momentum/drive/elan for larger sustainable transport measures, currently only small (mostly infrastructural) investments are taking place.
	SPATIAL	Infrastructure construction as a precondition for corridor implementation; Ljubljana inner ring construction (it shows, that COL sees implementation of the corridor as a barrier).
	CULTURAL Traffic experts' opposition towards the for passenger cars	
		General attitude towards the importance of car flow in traffic planning instead of the mobility (flow of people)
Implementation	POLITICAL	Lack of political intent/agenda/interest - there is a will but the actual realisation is poor; the sustainable mobility has lost the importance compared to the



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		golden period (2018-2016; Civitas Elan, Green Capital Award).
		Small measures are in force at the moment; apart
		from the P+R system no large sustainable mobility
		measures are being implemented.
	OD CANUCATION AL	
Operation	ORGANISATIONAL,	Car transport is given priority, although the policies
	POLITICAL	in force are supporting the opposite vision.
Future		The most effective measure for a decrease of
development of		personal car use would have been the city tax, but
the measure /		the implementation was cancelled due to a strong
upscaling;		protest of the citizens.
feasibility		P

## **PROCESS DRIVERS**

Phase	Driver field	Specification of drivers
	(e.g. financial,	
	political, spatial)	
Planning	CULTURAL,	A need for change.
	PROBLEM	
	RELATED	
Implementation	ORGANISATIONAL	Small, partial measures for improving cycling walking are in force.
Operation	COMMUNICATION	Multiple media coverages of sustainable transport; media and some leaders support for changes in transport culture and policy.
Future development of the measure / upscaling; feasibility for	ORGANISATIONAL	The driver in this regard is the fact that the sustainable transport remains as a priority in the planning documents; however stronger shift toward the actual implementation is crucial for success.

## **ACTIONS TAKEN**

Small scale NGO lead actions have been organised.



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### **INTERPRETATION**

In planning documents, a stronger support for financing sustainable transport measures is required – namely, the current practice has been experiencing a significant halt. Several NGO lead actions have been organised to address the sustainable transport and to push the implementation back on track, but with limited success. Even some privately funded projects have been implemented (large parking zones in the city centre) which are contrary to the official transport policy and they undermine its purpose and goals. It is evident that the attention has been diverted to the other more economically related investments (tourist infrastructure etc.), therefore it could be argued that the feasibility of implementing a large scale sustainability oriented transport measures is diminished.

In order to reduce pollution at the expense of traffic, Ljubljana will continue to accelerate its development in the coming years electromobility at the strategic as well as the implementation level, while at the same time it will provide less pollution with support infrastructure for compressed natural gas (CNG) vehicles. It will actively monitor and adopt environmental status and trends necessary measures according to the results of the measurements.

City		Policy scenario / measure name
LJUBLJANA		M2_IcreasePT
Objectives		
Increased share o	f public transport us	e (increased use of PT on the account of better service
and transfer from	car users)	
PROCESS BARRIE	RS	
Phase	Barrier field	Specification of barriers
	(e.g. financial,	-
	political,	
	spatial)	
Planning	FINACIAL	Low number of PT passengers hinders rational
		measure planning – due to the economics behind the
		PT company operations, the decisions must be

supported by revenues.



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Implementation	TECNOLOGICAL	Technical issues affecting the accuracy of displayed information for PT bus arrival; complaints of the users.
Operation	ORGANISATIONAL	Smart solutions operator has ceased operation in Ljubljana; poor support for PT priority at intersections.
Future development of the measure / upscaling; feasibility		There is a significant decrease of PT passengers; there is a lack of systematic data collection, which could inform rationale decision-making; the PT priority at intersections was shut down; the construction of yellow lanes has ceased – some of the existing yellow lanes have been removed.
		The larger investments into PT (tram lines, rapid bus transport) have been omitted from the long-term planning documents.
PROCESS DRIVER	s	
Phase	Driver field (e.g. financial, political, spatial)	Specification of drivers
Planning	ORGANISATIONAL	Firm cooperation with PT company and traffic infrastructure operators/controller software developer.
Implementation	CULTURAL	public support of the measure (positive feedback on the implementation)
Operation	-	-
Future development of the measure / upscaling; feasibility for	-	-



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Communication activities with the users (citizen engagement), strong stakeholder involvement.

#### **INTERPRETATION**

Following the barriers listed here, we have observed a serious decline in PT usage in Ljubljana and this is in line with the halted efforts to actually decrease the passenger car travel in the city. Namely, without the limitation to the personal car traffic, there can be no stimulation for the passengers to turn to PT. Along with that also the technical measures for increased PT travel speeds have been given less importance (some of them have even been cancelled from operation), such as the PT priority lanes and priority at intersections, fully functional P+R system etc. Although the measures have shown a positive impact at first and provided faster travel and a more reliable forecast of bus arrivals while even reversing the trend of declining PT trips in the short term, the length of the yellow lanes was too small, and the intersections unadjusted to such arrangements, so bus speeds did not increase enough to keep the PT competitive. All of this has resulted in the fact that with the current approaches, this measure cannot be deemed feasible for an extensive upscaling in the near future as to contribute significantly to the air pollution reduction from transport.

City	Policy scenario / measure name
LJUBLIANA	M3_PTfleet

## **Objectives**

Renovation of public passenger transport vehicle fleet (CNG, hybrid buses); the replacement of EURO 0,1,2 buses with CNG propulsion system (86 buses in total)

#### **PROCESS BARRIERS**

Phase	Barrier field (e.g. financial, political, spatial)	Specification of barriers
Planning	PROBLEM RELATED	Planning of a measure was too ambitious in terms of predicting future relevant events (availability of suitable buses, financial crisis/recession, political support, etc.).



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Implementation	ORGANISATIONAL	CNG filling station construction and permitting delayed and due to problems with non-responsive construction company hired; however this has not significantly impacted the implementation process
Operation	-	-
Future development of the measure / upscaling; feasibility	FINANCIAL	Financial aspects of the fleet renovation.

## **PROCESS DRIVERS**

Phase	Driver field (e.g. financial, political, spatial)	Specification of drivers
Planning	POLITICAL	Strategic decision of COL and LPP top management towards more environmental friendly vehicles meaning that CNG buses will replace at least half of the fleet.
Implementation	TECHNOLOGICAL	Environment friendly technology: lower fuel consumption = lower emissions = PT operator's environmental friendly image
Operation	-	-
Future development of the measure / upscaling; feasibility for	PROBLEM RELATED	Replacement of an entire fleet with CNG/electrics buses.

## **ACTIONS TAKEN**

Stronger stakeholder involvement, reorganisation of financial framework.



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#### INTERPRETATION

Good public passenger transport is the backbone of mobility in large and medium-sized cities, while also providing optimal accessibility conditions from the wider metropolitan region. Provision of attractive, fast and comfortable public passenger transport is essential to ensuring that mobility is central in the city and beyond. Quality public passenger transport services must be fast, accessible and affordable; it must be possible to easily switch between different means of transport (bus - train - bicycle - car). Foundations quality offers of public passenger transport are: cooperation between bus and rail transport, supply new, comfortable, capacity and environmentally friendly vehicles, as well as quality information support to the system and users. Only such a public passenger transport system will compete with the passenger car and be able to take the lead the role of mobility in Ljubljana and the wider urban region, however the technological aspect is only one segment for a successful implementation of PT system. The other such as the availability of appropriate number of buses to cover the necessary demand in terms of frequency, the routes, attractiveness compared to private cars or other means of transport etc. is another side of a potential success story, however these aspects are difficult to achieve by an independent work and effort of a PT operator - it must be done in synergy with the city administration, spatial planning and transport authorities and this may be more difficult to achieve.

City	Policy scenario / measure name	
LJUBLJANA	M4_DistrHEAT	
Objectives		
Increased utilization and expansion of district heating systems; renovation of the system - replacement of existing combustion units with more appropriate means (i.e. 70% reduction of coal use)		

### **PROCESS BARRIERS**

Phase	Barrier field (e.g. financial, political, spatial)	Specification of barriers
Planning	SPATIAL	Occupancy of space with existing municipal infrastructure - conditioned technological and implementation;



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	LEGISLATIVE	Placement of the heating network in the space - demanding administrative procedures for obtaining a building permit and the opinions of the contractors;  Inability to obtain the easement of landowners to operate a hot water network outside public areas owned by the City of Ljubljana;  Inappropriate heating units are not forbidden by law, which makes the transition to cleaner technologies more difficult.
Implementation	FINANCIAL	High cost of construction of hot water network and connections (no subsidies for the network / a large part of the cost of construction of the connection falls to the owners of the buildings);
	TECHNOLOGICAL/ FINANCIAL / PROBLEM RELATED	District heating is often not recognized as a modern / popular / affordable heating option by building owners who are in the process of changing their heating mode.
	PROBLEM RELATED	From an environmental point of view, they become a barrier to the price of CO2 coupons when the amount of the coupon price does not correlate with the price of electricity;
	TECHNOLOGICAL	The technology-related environmental aspect is the lowering of the NOx emission limit, which occasionally causes problems for gas turbine manufacturers to achieve these values or require additional input into the DeNOx device.
Operation	FINANCIAL	In recent years the price of electricity on the market places cogeneration units in a subordinate position relative to clean power plants, and the relationship between the price of natural gas and electricity has also been problematic.



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	T	
Future development of the measure / upscaling; feasibility	TECHNOLOGICAL	Natural gas as a fossil fuel is still unacceptable to proponents of a carbon-free society
PROCESS DRIVER	s	
Phase	Driver field (e.g. financial, political, spatial)	Specification of drivers
Planning	POLITICAL	High political priority for district heating (EC, Pures, Air Quality Ordinance, etc.)
		Political support exists as an appropriate support scheme for high-efficiency CHP is adopted;
	PROBLEM RELATED (ENVIRONMENTAL)	The technology is cleaner than coal, reducing greenhouse gas, dust and the like. Consequently, the fuel is suitable for the transition to a carbon-free society;
Implementation	FINANCIAL	It is possible to obtain an Eco Fund subsidy (for a thermal station) to connect an existing building (change of heating mode);
Operation	PROBLEM RELATED (ENVIRONMENTAL)	The environmental driver is the limitation of NOx and SOx emissions quotas and the cost of CO2 coupons. Given the lower CO2 emissions from the use of natural gas, this is an influential factor that is reflected through the cost-effectiveness of operations; -
Future development of the measure / upscaling; feasibility for		The amount of investment in a cogeneration unit is higher than that of a conventional power plant; the Local Energy Concept and the Ordinance on the Priority Use of Energy Products for Heating in the City of Ljubljana set high priority for district heating,



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therefore, new buildings are generally connected to district heating
From a social point of view, the project, with sober reflection and unburdening, is exclusively carbon-free, renewables are very acceptable as the resource is cleaner and enables a transition to a carbon-free society

Communication activities to improve acceptance among the political circles in the early stages of measure planning process (from year 2000 onwards).

Significant efforts have been made to overcome the administrative issues regarding the zoning and licensing process of district heating expansion.

#### **INTERPRETATION**

The main goal for the introduction of LPG technology is to replace part of the very old production units with the new unit, thus ensuring the continuation of reliable supply of heat within the City of Ljubljana; Also important is the fact, that this is a highly efficient cogeneration unit, which is identified as an appropriate technology in terms of primary fuel efficiency and energy savings, and as such it contributes significantly to meeting the country's commitment to reducing CO2 emissions and meeting the goals of cogeneration in systems district heating.

From a social point of view, and with a sober reflection and unburdening of a need for a carbon-free power source, the LPG is proved to be quite acceptable as the resource that is cleaner and enables a transition to a carbon-free society and it is here to stay at least in the mid-term period.



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## 4.3.5 Madrid

City		Policy scenario / measure name	
MADRID		Urban distribution of goods using low emission vehicles	
Objectives			
	•	access and timetables for low emission vehicles in the gulated parking zones (SER)	
PROCESS BARRIEF	RS		
Phase	Barrier field (e.g. financial, political, spatial)	Specification of barriers	
Planning	POLITICAL/ STRATEGIC	Opposition of key actors based on political and/or strategic motives, conflict between key (policy) stakeholders due to different points of view of implementation the measure.	
Implementation	TECHNOLOGICAL	Additional technological requirements, technology not available yet, cost of technology	
Operation	TECHNOLOGICAL	Technology not available yet, cost of technology	
Future development of the measure / upscaling; feasibility	FINANCIAL	Technology cost: Cost to business community	
PROCESS DRIVERS	S		
Phase	Driver field (e.g. financial, political, spatial)	Specification of drivers	
Planning	POSITIONAL	The measure concerned is part of a (city) air quality and climate change plan	
Implementation	INSTITUTIONAL	Facilitating laws, rules, regulations and their application	



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Operation	ORGANIZATIONAL	Collaboration with all stakeholders
Future development of the measure / upscaling; feasibility for	SPATIAL TECHNOLOGICAL	Space for physical projects, experimentation zones as ECCENTRIC Project  New technology available.

Working Groups were created with the main stakeholders to regulate the access of urban distribution of goods to "Madrid Central". Consensus were established about conditions of access and the lack of supply of less polluting vehicles to carry out the urban distribution of goods.

The Sustainable Mobility Ordinance was approved.

#### INTERPRETATION

The opposition of key actors based on political and/or strategic motives, combined with the lack of appropriate technological solutions along with the financial issues might prove a significant barrier for the full scale implementation of this measure. Although the experimentation zone during the eccentric has proven successful the transferability to other areas bight be problematic, mainly because it forces the users to adopt different operation patterns, dynamics etc. The related pollution reduction and improved quality of life in the areas in question usually do not justify higher costs of operations in the eyes of the goods delivery companies. Therefore, it could be expected that some reluctance might still appear in future. The applications of the related legislation and related processes of stakeholder engagement will play a crucial role in the feasibility of a large scale implementation.

City	Policy scenario / measure name
MADRID	Interventions in buildings and municipal facilities
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#### **Objectives**

Moving towards a zero emissions model through energy efficiency and the use of renewable energies, acting on municipally owned buildings and street installations that use energy. Development of programmes to improve heating and cooling installations, implementation of PV systems, technological communication platforms, implementation of environmental



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management and energy management systems, and fulfilment of the municipal commitment to buildings with nearly-zero positive energy consumption.

PROCESS BARRIERS			
Phase	Barrier field (e.g. financial, political, spatial)	Specification of barriers	
Planning	POLITICAL / STRATEGIC/ FINANCIAL	Lack of shared sense of urgency among Policymakers to take actions related with energy efficiency and sustainability.  Lack of consensus to create specific budget to address the measure.	
Implementation	INVOLVEMENT	If the policy makers and in this case local authorities are not aware of the problem, is very difficult to adopt and take actions to implement the measure.	
Operation	PROBLEM RELATED	Re-conversion of energy systems based on coal or petrol to new and efficient heating/cooling system require to adapt the buildings to the newest materials. Therefore, additional refurbishment have to be done in most of the public buildings leading to previously closing these buildings and relocate its occupants.	
Future development of the measure / upscaling; feasibility	FINANCIAL	The implementation of the measure is feasible, cost- effective and sustainable, however at this moment the lack of specific budget to accomplish all the technical adaptations that buildings require make the viability of the measure really difficult.	
PROCESS DRIVERS	PROCESS DRIVERS		
Phase	Driver field (e.g. financial, political, spatial)	Specification of drivers	



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Planning		
	POLITICAL / STRATEGIC INSTITUTIONAL	Commitment of Policymakers and stakeholders to develop an ambitious plan to modernize and introduce cost-efficient energy systems based on renewable energies throughout all the public buildings.
	FINANCIAL	Coordinated efforts among institutions can facilitate the design and the application of the measure.
	-	Availability of public funds is essential to address the changes required.
Implementation		
	ORGANIZATIONAL	The consensus among all Policymakers is needed and critical to promote the changes that are required to introduce modern and sustainable energy systems.
Operation		
	PLANNING	In order to satisfy all the technical requirements needed to address the complexity of the measure, an exhaustive planning is required including the timing and all priorities.
Future	FINANCIAL	Once approved the public funding the measure can
development of	1117,11401712	easily being implement in all public buildings.
the measure /		cash, semg implement in an pashe sandings.
upscaling; feasibility for		

A Madrid 2030 Roadmap has been developed establishing energy efficiency objectives.

A contractual tool has been tendered to provide flexibility in the monitoring and execution of energy efficiency measures.

Training for energy managers has been intensified for proper facilities management.

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#### **INTERPRETATION**

Lack of shared sense of urgency among policymakers to take actions related with energy efficiency and sustainability combined with lack of consensus to create specific budget to address the measure might prove a significant barrier for the full scale implementation of this measure. Re-conversion of energy systems based on coal or petrol to new and efficient heating/cooling system require to adapt the buildings to the newest materials. Therefore, additional refurbishment has to be done on most of the public buildings leading to relocations etc., which might cause new problems. Therefore, it could be expected that some reluctance might still appear in future. The positive aspect is the fact that there is strong commitment of policymakers and stakeholders to develop an ambitious plan to modernize and introduce cost-efficient energy systems based on renewable energies throughout all the public buildings.



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# 4.3.6 Milan

City		Policy scenario / measure name
MILAN		AreaB
Objectives		
Low Emission Zor	ne (Area B): Control ar	nd tracking of access into the city by banning up to
Euro 3 diesel cars	(up to Euro 4 from Oc	ctober 2019)
PROCESS BARRIE	RS	
Phase	Barrier field	Specification of barriers
	(e.g. financial,	·
	political, spatial)	
Planning	CULTURAL	Impeding cultural circumstances and life style
		patterns
	PROBLEM RELATED	Lack of shared sense of urgency among citizens
		and some stakeholders (e.g. commercial/private
		services) to sustainable mobility
	POSITIONAL	First attempt in Italy of a such measure for
		transport
	POLITICAL /	Conflict between some policy stakeholders due to
	STRATEGIC	diverging beliefs in directions of solution
	INVOLVEMENT,	Insufficient consultation, involvement or
	COMMUNICATION	Insufficient consultation, involvement or awareness of citizens or users
	COMMUNICATION	awareness of citizens of users
Implementation	PROBLEM RELATED	Lack of shared sense of urgency among key
		stakeholders to sustainable mobility
	FINANCIAL	Unwillingness of the citizens to contribute
		financially (e.g. buy a new car)



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Operation	TECHNOLOGICAL	Technological problems or malfunctioning
Future development of the measure / upscaling; feasibility	FINANCIAL OTHER	Unwillingness of the citizens to contribute financially (e.g. buy a new car) or to change their behaviour with transports  Insufficient implementation of corresponding improvements in public transports (metro/bus)
PROCESS DRIVERS	S	
Phase	Driver field (e.g. financial, political, spatial)	Specification of driver
Planning	POLITICAL / STRATEGIC POSITIONAL PROBLEM RELATED	Presence of sustainable development city vision  The measure concerned is part of a city program and/or a consequence of the implementation of a sustainable vision, lessons learned with the previous similar measure applied just in the city centre ("Area C")  Need to take effective actions to face the well-known air pollution problems in the city (need to act)
Implementation  Operation	FINANCIAL  INSTITUTIONAL  /COMMUNICATION  ENVIRONMENTAL	Relative low-cost measure for the municipality  Wide coverage on media (TV/newspapers/radio/web/advertising): this boosted the discussion about Air Quality improvement among citizens and stakeholders. The topic of Environmental Pollution became of primary importance in the political agenda.  Improvements of Air Quality in urban area due to
Future development of the measure /	OTHER	emission reduction from vehicles.  Reduced health costs related to air pollution in urban area



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upscaling; feasibility for	Big-data collection and data management about transports in the urban area: analysis of the improvements (reduced time spent on the roads, less car accidents, better liveability)

Communication strategies and media campaigns to put the air pollution and sustainable transport back on the priority list emphasizing the benefit of Air Quality improvement on the population health and life conditions.

Ground data measurements of Air Quality by monitoring network showed reduction of Air Pollution levels in the city centre (Area C): higher improvements are expected for Area B (wider area than Area C) measure implementation.

#### INTERPRETATION

It is evident that the measure has a relatively high political support, but the nature of measure (restrictions to personal car use) can present an important cultural barrier. In regard to the PT potential the measure exhibits a high level of feasibility potential mainly due to the fact that there is already a high usage of public transport in the modal split of Brno. An efficient air quality related promotions could further encourage the widespread of acceptance of alternative transport measure and thus provide further support in feasibility of implementation.

City		Policy scenario / measure name
MILAN		ElectricBus
Objectives		
Conversion of all	public buses to elect	ric ones by 2030
PROCESS BARRIE	RS	
Phase	Barrier field (e.g. financial, political, spatial)	Specification of barriers



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Planning	PROBLEM	Lack of shared sense of urgency among key
	RELATED	stakeholders to sustainable mobility
	FINIANICIAL	Now would deconded to multiply and and substitute
	FINANCIAL	Very much dependent on public funds and subsidies
Implementation	TECHNOLOGICAL	Additional technological requirements.
	PROBLEM	Complexity of the problem to be solved due to the
	RELATED	construction of new infrastructure (e.g. recharge of
		the bus fleet).
Operation	PLANNING	Insufficient market analysis of the final costs (cost of
		bus ticket; management of fleet; cost of energy).
Future	NONE	The bus fleet is already planned to be completely
development of		renewed by 2030 – no upscaling
the measure /		
upscaling;		
feasibility PROCESS DRIVERS	<u> </u>	
PROCESS DRIVER		
	•	
Phase	Driver field	Specification of drivers
		Specification of drivers
	Driver field (e.g. financial, political,	Specification of drivers
Phase	Driver field (e.g. financial, political, spatial)	
	Driver field (e.g. financial, political,	Alternative energy experimentation, energy
Phase	Driver field (e.g. financial, political, spatial)	
Phase	Driver field (e.g. financial, political, spatial)	Alternative energy experimentation, energy
Phase	Driver field (e.g. financial, political, spatial)	Alternative energy experimentation, energy
Phase	Driver field (e.g. financial, political, spatial)	Alternative energy experimentation, energy
Phase	Driver field (e.g. financial, political, spatial) POSITIONAL	Alternative energy experimentation, energy consumption rationalization.  The measure concerned is part of a city program and/or a consequence of the implementation of a
Phase	Driver field (e.g. financial, political, spatial) POSITIONAL	Alternative energy experimentation, energy consumption rationalization.  The measure concerned is part of a city program
Phase	Driver field (e.g. financial, political, spatial) POSITIONAL	Alternative energy experimentation, energy consumption rationalization.  The measure concerned is part of a city program and/or a consequence of the implementation of a
Phase	Driver field (e.g. financial, political, spatial) POSITIONAL  POSITIONAL	Alternative energy experimentation, energy consumption rationalization.  The measure concerned is part of a city program and/or a consequence of the implementation of a sustainable vision.
Phase	Driver field (e.g. financial, political, spatial) POSITIONAL  POSITIONAL	Alternative energy experimentation, energy consumption rationalization.  The measure concerned is part of a city program and/or a consequence of the implementation of a sustainable vision.  Need to take effective actions to face the well-
Phase	Driver field (e.g. financial, political, spatial) POSITIONAL  POSITIONAL	Alternative energy experimentation, energy consumption rationalization.  The measure concerned is part of a city program and/or a consequence of the implementation of a sustainable vision.
Phase	Driver field (e.g. financial, political, spatial) POSITIONAL  POSITIONAL	Alternative energy experimentation, energy consumption rationalization.  The measure concerned is part of a city program and/or a consequence of the implementation of a sustainable vision.  Need to take effective actions to face the well-



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Operation	ENVIRONMENTAL	Reduction in CO2 and other GHGs emissions and of air pollutants related to fuel combustion. Noise reduction.
	TECHNOLOGICAL	Development of Smart Grid: Electrical distribution network combined with an intelligent counter system, renewable sources and computerized systems that allow safe and effective energy management.
Future development of the measure / upscaling; feasibility	OTHER	Reduced health costs related to air pollution in urban area and reduction of noise-related health impacts.

Communication strategies to put the air pollution and sustainable transport back on the priority list emphasizing the benefit of Air Quality improvement on the population health and life conditions.

A study of feasibility has been done and it will continue during operational phase in order to overcome technological problems related to the management of a full electrical bus fleet and for the creation of an innovative energy smart grid.

Municipality of Milan already started to train staff for the management of the new electric bus fleet.

#### INTERPRETATION

Based on the fact that this measure is primarily oriented towards implementation of a notso- new technology, the barriers encountered do not pose much risk in terms of feasibility of implementation. The major issue in this regard would be of financial nature, but due to the fact that this is already planned and the finances for implementation are ensured (apart from the sales revenues during operation), significant drawbacks are not expected.



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## 4.3.7 Stuttgart

4.5.7 Stuttgart				
City		Policy scenario / measure name		
STUTTGART		Sc1 - Increase of building insulation (+2%)		
		and heating system exchange to high		
	efficiency gas boilers			
Objectives				
Promoting energy	efficient systems at n	ew buildings, retrofitting older buildings and changing		
of heating system	S.			
PROCESS BARRIE	RS			
Phase	Barrier field	Specification of barriers		
	(e.g. financial,	- Formand and a second		
	political, spatial)			
Planning	FINANCIAL,	Unwillingness of citizens, financial questions		
	POLITICAL, OTHER,	(funding), political decisions, technical progress and		
	TECHNICAL,			
	INSTITUTIONAL	realisation. And there are some institutional		
	INSTITUTIONAL	differences in some climate and air quality questions		
		and energetic questions.		
Implementation	TECHNICAL,	Technical and financial realisation and conviction of		
	FINANCIAL,	citizens and building investors/owners and		
	OTHER,	institutional differences in some climate and air		
	INSTITUTIONAL	quality questions and energetic questions.		
Operation	TECHNICAL,	Technical and financial realisation and conviction of		
Operation	FINANCIAL, OTHER	citizens and building investors/owners.		
	TINANCIAL, OTTIER	citizens and building investors/owners.		
Future	POLITICAL,	Technical progress and environment questions,		
development of	FINANCIAL,	financial realisation (funding) and conviction of		
the measure /	TECHNICAL,	citizens and building investors/owners and		
upscaling;	OTHER,	institutional differences in some climate and air		
feasibility	INSTITUTIONAL	quality questions and energetic questions.		
PROCESS DRIVER				
Phase	Driver field	Specification of drivers		
	(e.g. financial,			
	political, spatial)			
Planning	POLITICAL,	Political interests and debates, funding,		
	FINANCIAL	implementation in development plans.		



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Implementation	COMMUNICATION, POLITICAL, OTHER, INSTITUTIONAL	Funding and other advantages, implementation in development plans, civic associations.
Operation	FINANCIAL, POLITICAL, INSTITUTIONAL, OTHER, COMMUNICATION	Funding, implementation in development plans, civic associations, political debates and public communication.
Future development of the measure / upscaling; feasibility for	POLITICAL, FINANCIAL, INSTITUTIONAL, OTHER	Funding, implementation in development plans, civic associations, political debates and public communication.

Communication in air quality plan and action plans to make the measure more attractive. Communication in media and with leaflets and other actions in public spaces.

## **INTERPRETATION**

From the descriptions it is evident that there is strong political will as well as intent behind this measure, which is clearly shown by the inclusion in the development plans and dedicated funding. However, the main obstacle in the feasibility of realisation lies in the suitability of technical progress and the differences in opinion of citizens and building investors/owners and related institutions in regard with climate and air quality questions and energetic questions, which could result in a delay in implementation.

City	Policy scenario / measure name
STUTTGART	ScEL - Promoting low carbon electric vehicles
	(share in vkm to 7% in 2020, 20% in 2030)
Objectives	
Promoting low carbon electric vehicles.	
PROCESS BARRIERS	



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Phase	Barrier field	Consideration of horriors
Phase		Specification of barriers
	(e.g. financial,	
	political,	
	spatial)	
Planning	Technological,	Technical progress, unwillingness of citizens, financial
	Financial, other	questions.
Implementation	Technical	Technical progress and realisation.
Operation	Technical	Technical realisation.
Future	-	-
development of		
the measure /		
upscaling;		
feasibility		
PROCESS DRIVER	<u> </u>	
T ROCESS DRIVER	<b>J</b>	
_		
Phase	Driver field	Specification of drivers
Phase		Specification of drivers
Phase	(e.g. financial,	Specification of drivers
Phase	(e.g. financial, political,	Specification of drivers
	(e.g. financial, political, spatial)	·
Phase Planning	(e.g. financial, political,	Update of air quality plan, update of inner-city action
	(e.g. financial, political, spatial)	·
Planning	(e.g. financial, political, spatial) Political	Update of air quality plan, update of inner-city action plans.
	(e.g. financial, political, spatial)	Update of air quality plan, update of inner-city action plans.  Presentation of air quality plan and action plans in
Planning	(e.g. financial, political, spatial) Political	Update of air quality plan, update of inner-city action plans.
Planning Implementation	(e.g. financial, political, spatial) Political	Update of air quality plan, update of inner-city action plans.  Presentation of air quality plan and action plans in media.
Planning	(e.g. financial, political, spatial) Political  Communication  Financial,	Update of air quality plan, update of inner-city action plans.  Presentation of air quality plan and action plans in
Planning Implementation	(e.g. financial, political, spatial) Political Communication	Update of air quality plan, update of inner-city action plans.  Presentation of air quality plan and action plans in media.
Planning Implementation	(e.g. financial, political, spatial) Political  Communication  Financial,	Update of air quality plan, update of inner-city action plans.  Presentation of air quality plan and action plans in media.
Planning Implementation Operation	(e.g. financial, political, spatial) Political  Communication  Financial,	Update of air quality plan, update of inner-city action plans.  Presentation of air quality plan and action plans in media.
Planning Implementation Operation Future	(e.g. financial, political, spatial) Political  Communication  Financial,	Update of air quality plan, update of inner-city action plans.  Presentation of air quality plan and action plans in media.
Planning  Implementation  Operation  Future development of the measure /	(e.g. financial, political, spatial) Political  Communication  Financial,	Update of air quality plan, update of inner-city action plans.  Presentation of air quality plan and action plans in media.
Planning Implementation Operation Future development of	(e.g. financial, political, spatial) Political  Communication  Financial,	Update of air quality plan, update of inner-city action plans.  Presentation of air quality plan and action plans in media.

Communication of air quality plan and action plans to make the measure more attractive. Communication in media and with leaflets.



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## **INTERPRETATION**

Apart from the fact that the promotion of electromobility has been included in the air quality plan and consequently some financial incentives being available, the measure faces strong barriers in terms of technical progress/realisation and public acceptance. As a result of this, it remains the question of organisation how this measure will reach the full potential.

City			Policy scenario / measure name	
STUTTGART			ScUV - Promoting environmentally friendly	
			transport modes (walking, cycling, PT) (decrease of individual transport by 7% in	
			2020; 20% in 2030) (2030 scenario)	
Objectives				
Promoting and d	evelop new and a	ttractive e	nvironment friendly transport modes like new	
bicycle lanes, foot	tpaths and expans	ion of pub	lic transport.	
PROCESS BARRIE	RS			
Phase	Barrier field		Specification of barriers	
	(e.g. financial,			
	political,			
Planning	spatial) Financial,	Havillingness of citizens (due to topographic relations)		
Fiailillig	political, other	_	Unwillingness of citizens (due to topographic relations), financial questions (especially in public transport	
	pontical, other	questions), political decisions.		
		·		
Implementation	Technical,	Technical and financial realisation.		
	financial			
Operation	-	-		
Future	Political,	Find nev	v alternatives and possibilities for financing	
development of	financial,	(especial	ly public transport), political interests.	
the measure /	technical			
upscaling; feasibility				
PROCESS DRIVER	<u> </u> S			
. No debt Billient				
Phase	Driver field		Specification of drivers	



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(e.g. financial, political, spatial)	
Political,	Political interests and debates, financial structures of
financial	public transport.
Communication	Funding of job ticket and e-bikes.
Financial	Realisation of funding.
Political,	Political interests in funding and expansion of public
financial	transport and bicycle lanes etc.
	political, spatial)  Political, financial  Communication  Financial  Political,

Communication in air quality plan and action plans to make the measure more attractive. Communication in media and with leaflets and other actions in public spaces.

## **INTERPRETATION**

Political interest and availability of funding already are a strong foundation in terms of feasibility for the development of this measure, however the downside remains on how to find an even better conditions for financing to increase the currently low public acceptance.



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# 4.3.8 Thessaloniki

City		Policy scenario / measure name	
THESSALONIKI		M2- Promotion of cycling/walking, green vehicles	
		and public transport	
Objectives	Objectives		
Promotion of citiz	ens' health balance a	nd life quality, reduction of environmental pollution,	
make the city lead	der in clean- transpor	t.	
PROCESS BARRIE	RS		
Phase	Barrier field (e.g. financial, political, spatial)	Specification of barriers	
Planning	FINANCIAL	Too much dependency on public funds	
Implementation	SPATIAL	Road and traffic conditions	
		Lack of facilities for cycling/walking	
		Lack of vehicle charging point	
Operation	COMMUNICATION	Encourage citizens to adopt new walking a cycling behaviours	
Future development of	NONE	All public buses and municipal vehicles will be replaced with electric ones by 2030.	
the measure /			
upscaling;		10km of cycle lanes is to be built into the	
feasibility		administrative boundaries of the Municipality of	
		Thessaloniki.	
PROCESS DRIVER	S		
Phase	Driver field	Specification of drivers	
	(e.g. financial,	_	
	political, spatial)		
Planning	POSITIONAL	The measure is a part of a city program/vision	
Implementation	INVOLVEMENT,	Actions to promote cycling/Develop campaigns of	
	COMMUNICATION	personalized the benefits of cycling/create city maps for bike users	



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Operation	PLANNING FINANCIAL	Create infrastructure for electric vehicles/ s/create special parking spaces  Very low prices to electric charging point/ reduction of parking fees	
Future development of the measure / upscaling; feasibility for	OTHER	Reduce air pollution and urban noise	

Municipality of Thessaloniki has already started with the implementation of the specific measure.

Many communication measures have been arising to promote walking and cycling.

Free use of public transport has been implemented on heavily polluted days.

Education awareness campaigns already started.

Fit low cost electric vehicle charging points onto lamp columns have been designed.

#### **INTERPRETATION**

Although the measure is a part of the city programme/vision, the nature of the measure, which focuses primarily on promotion ow walking/cycling in could prove inefficient in terms of providing significant changes in behaviour. It could prove that social acceptability may prove an important factor for decreased success of the measure, also considering the fact that the current status of walking and cycling facilities in not optimal. In addition, the improvement of the infrastructure is mainly dependant on public funds, which could in turn prove problematic in terms of feasibility.

City	Policy scenario / measure name
THESSALONIKI	M4-Energy efficiency in the cement industry:
	Use of refuse fuels
Objectives	
Increase the use of alternative fuels in	the cement production in order to reduce CO2
emissions.	



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PROCESS BARRIE	PROCESS BARRIERS				
Phase	Barrier field (e.g. financial, political, spatial)	Specification of barriers			
Planning	COMMUNICATION	Lack of knowledge of some stakeholders and local authorities and citizens regarding the use of alternative fuels in cement sector			
Implementation	POLITICAL/ ENVIRONMENT	Excessive bureaucracy in regards to permitting for co-processing / Energy recovery not supported on national level			
Operation	OTHER	Lack of suitable waste / High quality waste not available to the cement sector in sufficient quantity / Waste processing industry is not well-developed / National economic situation doesn't allow investments in waste industry			
Future development of the measure / upscaling; feasibility	CULTURAL	Public acceptance of incineration in general is low			
PROCESS DRIVER	S				
Phase	Driver field (e.g. financial, political, spatial)	Specification of drivers			
Planning	PLANNING	Most Greek cement plants are technically ready to increase their use of waste-derived alternative fuels			
Implementation	INVOLVEMENT, COMMUNICATION	Alleviate the bureaucratic barriers for permitting			
Operation	TECHNOLOGICAL	Investment has been made in plant level to allow for higher co-processing rates			
Future development of the measure /	POLITICAL	EU's push to adhere to waste framework directive / Better compliance with EU directives			



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upscaling; feasibility for	ENVIRONMENTAL	Lower product	environmental ion	impact	of	cement

- Co-operate with the local waste management industry to ensure suitable quality of processed waste and plan the development of more advanced waste treatment methods.
- Ensure reliable waste collection and treatment system and ensure stable stream of pre-treated waste to the cement industry.
- Consultation/ informing the local authorities, stakeholders and citizens that the industry will comply with the specifications.
- Communication strategies in order to notify the lower environmental impact of cement production by using alternative fuels.

#### INTERPRETATION

Since the measure is not affecting the Thessaloniki urban area in a larger scale the listed barriers could in fact prevail the benefits, and could hinder the implementation of the measure. Given the fact that there is also a low public acceptance of the measure it could in the end result that the measure will not be prioritised compared to other air pollution measures.

The positive aspect in terms of feasibility may be, that usually the industry is not dependent of the public funding; usually the decisions of top management are also independent to a certain extent in other aspects. Measures can be therefore implemented outside of the public decision-making framework, however, the public support is always beneficial. Compliance with regulation is a prerequisite.

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## 4.4 Key findings about feasibility of policy scenarios/measures

In this section key findings about feasibility of policy scenarios/measures are presented along with the barriers and drivers, which contribute to decisions about their implementation.

### 4.4.1 ENERGY: BUILDINGS & HOUSEHOLDS

Barriers appear in all phases of the efficient energy associated interventions; in planning they congregate mostly around political/legislative, spatial and financial fields. During implementation and operation phases the financial and technological barriers are the most prominent.

Driving factors are mainly associated with the political support due to environmental benefits in preparation stages, followed by the availability of technological advancements and available financial support.

During the implementation an ample effort must be placed in communication activities to improve acceptance among the political circles in the early stages of measure planning processes as well as to raise awareness - make the measure more attractive for general public, which would in turn facilitate the bottom-up support for realisation. Technological advancements can serve as an important factor in this regard, combined with the detailed information about environmental benefits. The adoption of a detailed air quality monitoring/evaluation plan combined with *ex-ante* modelling techniques is also of high importance in this case (ICARUS, 2019). Significant efforts have to be made to overcome the administrative issues regarding the spatial issues within the study/intervention areas (zoning and licensing processes).

#### 4.4.2 TRANSPORT

## 4.4.2.1 Car-independent lifestyles

The provision of mobility alternatives to car usage is an essential component of any comprehensive strategy for transport related air pollution and GHGs reduction in the cities. Among these, public transport and measures for decreased car ownership/usage (car sharing) are the two groups of policy measures considered. At the same time, cycling and walking related measures are recognised as a valid alternative for the promotion of this behavioural shift.

#### **Public transport**

Public transport measures often face institutional, financial and spatial barriers, and these generally become apparent in the initial phases of implementation. No such obstacles usually



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appear during the operational phase. Extra investments and/or institutional adjustments are often required for implementation, and it is usual for political drivers to play an important role in all phases of implementation.

In case of fleet management (replacing the propulsion system, renovation of the fleet etc.), the most frequently mentioned barriers during the planning/preparation phase are: lack of political support, technological, institutional and organisational. Financial barriers during implementation were also frequently cited. During the operational phase, mostly technological and organisational barriers were mentioned. Strong political will to support and implement these measures is a major driver in some cases, together with a set of organisational factors aimed at smoothing the entire process.

Increasing the Public Transport (PT) users by the promotion and improvement of service is both desirable and feasible, however, the main barriers are cultural and technological in nature. Integration and homogenisation of ticketing systems, hardware and software issues, and real-time data problems can hamper the technical feasibility of implementation. Another barrier presents itself when multiple operators are involved, as various co-operative arrangements between operators and authorities need to be made. The drivers are diverse, but are mainly organisational in nature. Multiple stakeholder involvement sessions and good planning of interactive stages are crucial factors for success. Users and stakeholders are usually quite accepting of measures relating to PT fleet management, and the usual intent is to up-scale such measures.

#### **Car-sharing**

Barriers are mainly concentrated around political, financial and technological factors. Driving factors during the implementation of these measures included high congestion levels, parking costs, shortage of parking spaces and high costs of owning a car. But even if these particular conditions are not present, positive results are equally achievable by pulling other levers, such as introducing financial incentives and offering free use of services on a trial basis.

A paradigm shift is needed to make a move away from car use and car ownership to alternative mobility services. Such a shift involves not only changing people's minds, but changing legislation and forms of social organisation, which is challenging, but feasible.

In this regard, a number of important conditions need to be taken into account if these ideas and programmes are to be put in motion.

#### Cycling

The promotion of cycling consists of various interventions. The enhancement of cycling infrastructure, for example, is hampered by several barriers, and at various stages. Cultural and political aspects present the greatest difficulties during the preparation phase. Financial



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and planning barriers are highest during the implementation stage, while cultural and organisational factors are again more influential at the operational phase.

Stable political support, resulting in tailor-made legislation and combined with very early workshops, encourages stakeholder involvement and contributes to the generation of new ideas and consequently feasibility of related actions.

The wider improvement and provision of cycle and pedestrian infrastructure has been deemed a feasible component of future city-wide transport policies in most cities that have implemented such measures. Such measures will bring greater benefits to active travellers by way of well-connected networks, a safe cycling environment and improved security. In general, measures aimed at creating or improving existing cycling infrastructure are considered as feasible and therefore also suitably transferable to other parts of the cities.

# 4.4.2.2 Alternative fuels and driving technologies

Strong political will to support and implement these measures is a major driver, together with a set of organisational factors aimed at smoothing the entire process. Barriers are more diverse and are concentrated especially in the planning and preparation phase, namely: technological gaps, absence of legislation, lack of political support and insufficient financial planning.

It is feasible in most situations to implement and/or up-scale to fuels and propulsion systems that are more environmentally sustainable. However, operating conditions, costs involved in implementation, operational and performance characteristics, fuel availability and the extent to which a fuel meets environmental objectives present certain limits. Other factors that play a role include legacy systems, training, and public or political acceptance. Cities that have achieved impressive results have already taken the initiative to assess up-scaling potential. Decisions on some measures, however, will depend on the impacts of the global economic downturn on regional economies. On the other hand, it is not easy to transfer measures promoting alternative fuels to other cities because a number of conditions need to be met. National legislation can also hamper feasibility to switch to clean fuels. The relative attractiveness of fuel alternatives depends on tax rates, legislation and regulation, supply reliability, and general technical and operational competency.

#### 4.4.2.3 Efficient urban logistics

Interventions covering the implementation of new freight operating modes or distribution schemes were hampered by several barriers at various stages. Lack of political support and stakeholder involvement as well as financial issues were identified as the main barriers during the preparation stage. At the implementation and operational stages organisational barriers were deemed the most influential.



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New distribution schemes are generally characterised by high feasibility for implementation. However, local constraints in the urban structure can have negative impacts. Integration with pre-existing services could be beneficial. An analysis of success factors highlights the fact that cities should seize the opportunity to combine measures and maximise benefits.

#### 4.4.2.4 Demand and traffic management strategies

#### Low emission zone

Access management measures are often unpopular with the public, both in financial and spatial terms. As a result, political support and excellent communication with the public are powerful drivers. Accurate measurements of environmental parameters, up-to-date technology and good quality data are important drivers at the operational stage. Research and development measures have strong potential in this case. However, it is worth noting that expertise in conducting research is of utmost importance, e.g. in the development and use of computer models. Involvement of the right partners with appropriate expertise is crucial. *Exante* studies require significant effort in data gathering to ensure that models are able to produce sound and consistent outcomes.

Regarding the feasibility of implementation - if a measure proposes the introduction of a payment system to enforce access limitations, there will be strong political and public opposition. Moreover, the feasibility of such a measure depends to a large extent on local and national legal norms, such as privacy legislation regarding the use of cameras and data. European legislation (e.g. GDPR Regulation) must also be taken into account at this stage. Despite being a very important issue and a powerful tool, road pricing is not normally expected to command public or political support. Citizens and stakeholders must be informed and considered as 'part of the solution and not part of the problem' – i.e. in the process of measure preparation it is important that they sense the "ownership of the measure". However, for successful implementation and operation, it is crucial not to base approval of a measure solely on citizen support, at least not initially. Citizen support can grow after implementation once people experience the benefits of reduced congestion and pollution. On the whole, large-scale trials are preferable to small technology demonstrations.

#### Parking management

For the measures associated with parking management, barriers mainly occur in the preparation phase. Finding political support and commitment for potentially unpopular measures, such as parking charges, has proved to be difficult. Securing the right location for park-and ride facilities is a frequently encountered spatial barrier. Planning barriers primarily result in delays in implementation. In addition, cultural barriers (increased parking fees, negative past experiences with similar facilities) play quite a prominent role.

Drivers were mentioned most frequently in relation to the preparation phase, but were also said to influence the other implementation phases. Political support and commitment, the

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availability of funds as well as involvement and communication with stakeholders were the associated drivers.

Whenever a measure proposes to introduce a payment system to change parking behaviour, considerable opposition from politicians and the general public is to be expected. What is needed for success in these cases is to obtain public support and to engage in clear dialogue with the public.

#### 4.4.2.5 Enhanced environmental conscious behaviour in traffic

Culture and communication-related problems combine to form the main barrier for changing traffic behaviour through eco-driving programmes. Course attendance is usually low, but as far drivers are concerned, well-established training programmes, equipment and communication are proven success factors.

For eco-driving to be considered successful, a strong support at a strategic level, either within companies and/or municipalities is required. Front-runners and influencers are needed and the car drivers involved require full technical support. Options for acquiring additional interest might include training courses for electric vehicles, which would provide comparative evidence against standard cars.

#### 4.4.3 INDUSTRY

In case of increasing the refuse derived fuels as a means to increase energy efficiency in the cement industry the barriers appear in all stages of the measure development. The most important ones are associated with communication and political fields – primarily this refers to a lack of knowledge about the technology, which results in poor public acceptance and low political support. On the other hand, drivers that have been cited for all stages would allow for a successful implementation and operation of the facility (available technology, financial and political support).

In terms of ensuring feasibility, it is important to start the communication strategies as early as possible in order to provide evidence about the lower environmental impact of cement production by using alternative fuels as well as to dedicate the additional effort to consultation activities, informing the local authorities, stakeholders and citizens that the industry will comply with the technological specifications regarding the environmental parameters. A detailed monitoring/evaluation scheme foreseeing accurate measurements of environmental parameters is crucial in this regard.

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### 5 CONCLUSIONS AND DISCUSSION

The majority of policy scenarios/measure exhibit relatively high feasibility for implementation/operation. This could be due to the fact that since these are primarily sustainability oriented approaches, most of them have been designed and developed following the most modern planning concepts and paradigms, which *per se* meet the success criteria adopted here. Some of them have been faced by significant barriers during the development or implementation process, but since these are hierarchically important interventions, the barriers have been overcome before they could seriously hamper the implementation. The only barriers lagging through several phases are financial ones, but with a strong interest for realisation these can eventually be overcome as well (various financial instruments).

#### Policy scenario/measure implementation management

As mentioned before, the majority of policy scenarios/measures analysed here are of strategic nature, and as such they provide a solid framework for implementation, but even so, they do not specify in detail how the specific interventions will be executed. It needs to be emphasised that the implementation process also needs to follow a structured approach to refine targets and to plan, detail, manage, communicate and monitor the implementation of measures. These processes will be much shorter than the planning itself and therefore need to be flexible enough to adapt to new situations. They need to be institutionalised in the organisation that is in charge of implementing a measure. Namely, a good policy scenario/measure does not automatically lead to good results. It is crucial to deliver the goals effectively and to apply appropriate management to oversee the implementation and to manage risks.

To allow for the most effective transition from an idea about the air quality and climate change improvement measure to the actual impact thereof, the following should be taken into account:

- <u>Intervention definition</u>: This stage involves the detailed definition of the policy scenario/measure, either based on the objectives or through the direct identification of the problems or issues to be addressed. It includes the specification of requirements and the identification of constraints, as well as the selection of performance indicators.
- Option generation: Several options (e.g. different features or routes) need to be prepared
  to find the most effective and efficient scheme which maximises stakeholder support.
  Various tools can be used to aid professional creativity and stakeholder involvement in the
  option generation process.
- Option assessment: This involves the appraisal of options/alternatives with regard to their potential impacts (air pollution, climate change, health and cost-effectiveness/cost-



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benefit). Typically, this process assesses many characteristics, covering impacts on the environment, society as well as local economy.

- Formal decision making: The decision is made by the responsible institution (or delegated body for smaller schemes), taking into account the findings of the option assessment stage. It includes agreement on the preferred option, arrangements for when the project will be implemented and by whom, and the allocation of resources.
- Monitoring and evaluation: Data on the performance of the policy scenario/measure are collected and analysed to determine whether the objectives have been met. This can lead to improvements in future policy scenario/measure design and can contribute to the evaluation of the strategy of which it has formed one part.

The former requires agreements with all actors involved in measure implementation. Therefore, it is highly beneficial to formalise the roles of actors involved in measure implementation, to ensure sound coordination among all parties involved, to help facilitate an efficient and effective implementation process, to address potential risks and synergies and to ensure transparency of implementation.

#### Citizen/stakeholder engagement

Another important aspect, often considered as an imposition rather than benefit, is the information to and the engagement of citizens. This is actually a crucial requirement not only while developing a policy scenario/measure, but when they are directly affected by a specific implementation. As implementation goes on, it is also necessary to inform the wider public about the progress.

This is a prerequisite to ensure acceptance of unattractive measures, to raise awareness for opportunities or restrictions that come with measure implementation and consequently enhance ownership of measures. This is best achieved to directly address the citizens or stakeholders that are directly affected (positively as well as negatively) by a planned measure before starting the implementation, and respond to their concerns. It should be noted here that those who are negatively affected will naturally make more "noise" than those who benefit from a measure. Also important is to mitigate possible negative effects that accompany measure implementation (e.g. support for businesses affected through long-lasting reconstruction of a pedestrian zone).

To keep citizens/stakeholders as active partners a highlight of milestones of measure implementation must be disseminated in all possible ways – for example, celebration of accomplishments with citizens (e.g. street festival after reconstruction of a pedestrian zone).

## Reflection to the assessment process



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In a reflection of an assessment process it should be noted that the selection of the measures to be appraised as green strategies was done on a basis of assessment conducted within the ICARUS deliverable D5.4- "Final report on integrated assessment of policies". Afterwards, the selection has undergone another screening process in collaboration with the selected groups of stakeholders in each ICARUS city.

Also the representativeness of the selected stakeholders should be discussed here – namely, the development of the measures has been done throughout a lengthy planning and administrative processes and there exists a possibility of personnel change, the possibility that in a particularly large city authority bodies the most relevant stakeholders have not been available at the time the meetings were organised. Similar could be stated for the involvement of NGOs.

It shoud be also noticed that there might be a question of how accurately the questionnaire was translated and presented to the specific stakeholder groups by the local ICARUS partners – both, in terms of language and in terms of practices/methods used in specific cities in reference with their planning processes. This may be viewed as a potential source of bias in the obtained responses from the cities. Thus, the assessment results could not be directly comparable between the cities due to different persons answering the questions/ different understanding of questions/ different degree of stakeholder and city representative involvement in the answering process, as mentioned earlier.

Another point would be the various depth of addressing the issue. For example, some stakeholders have been more dedicated to address the questions regarding policy scenarios/measures, while other exhibited only minor interest for cooperation. As a result, different viewpoints have been collected, different hierarchy of the issues has been presented, which resulted in difficulties in interpretation of the results in a manageable format.

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#### **ANNEX**

Based on the clusters of activities in Chapter 3, a checklist questionnaire has been prepared to examine the potential for success for the selected policy scenarios/measures.

The purpose of this questionnaire was to understand the process behind the development of the policy scenario/measures selected for a detailed analysis in ICARUS in order to examine their potential for successful implementation/operation. The questionnaire was filled in with the cooperation of the city representatives/stakeholders.

The questionnaire comprises a total of 46 yes-no questions (an example of the questionnaire is presented in this Annex).

- Each general question represents one point (a total of 35 points)
- Excellence Questions (a total 11 points): cover criteria of a particularly advanced policy scenarios/measures, awarding processes of exceptionally high quality. They are highlighted in yellow in the next sections.
- Foundation Questions: indicate basic success requirements. They are highlighted in light-blue in the next sections.

The questionnaire filled in by the local stakeholders in each ICARUS city is reported below.

	1 - Potential for success	If yes, tick box		
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.			
2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.			
3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.			
4	A peer-review methodology for analysing the strengths and weaknesses has been used.			
5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.			
6	The sources for funding the process of developing the policy scenario/measure has been assessed			



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7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).					
8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.					
9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.					
	2 - Development process, scope					
21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.					
22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.					
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level .					
24	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.					
25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.					
	3 - Situation and scenarios					
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.					
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.					
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.					
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.					
35	A reference to a business-as-usual scenario has been described.					
36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.					
37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?					



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38	Policy scenario/measures and their impacts have been discussed with					
	the group of key stakeholders?					
	4 - Common vision					
41	The policy scenario/measure contains a long-term vision of urban mobility.					
42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders?					
43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.					
44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.					
45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.					
	5 - Priorities and targets					
<b>51</b>	The policy scenario/measure clearly sets out overall objectives.					
52	The overall objectives/targets of the policy scenario/measure have					
53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.					
54	The policy scenario/measure describes and is based on a set of SMART (Specific-Measurable-Achievable-Realistic-Time Bound) targets.					
	6 - Measures					
<mark>61</mark>	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?					
<mark>62</mark>	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).					
<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.					
<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.					
	7 - Responsibilities & funding					
71	Responsibilities for the implementation of measures have been allocated.					
72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.					
73	A budget plan, setting out funding requirements and sources has been prepared.					



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74	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.					
75	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.					
<b>75</b>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.					
	8 - Monitoring & assessment					
<mark>81</mark>	A data collection strategy has been developed.					
82	A monitoring and evaluation plan has been developed. (Including process evaluation)					
83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.					
84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.					
85	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.					

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# Results for potential for success per city

# Athens

City	No	Scenario name	Scenario description  Promotion of sustainable mobility through eco-driving, cycling and walking in the Greater Athens Area (Attica)	
Athens (Attica)	1	SusMob		
Athens (Attica)	2	SusMobPuT	Promotion of sustainable mobility through eco-driving, cycling and walking in the Greater Athens Area (Attica) as well as minimizing the use of private passenger cars in Athens metropolitan area by enhancing public transportation means	

1 1 1	1 SusMob	Promotion of sustainable mobility through eco-driving, cycling and
(Attica)		walking in the Greater Athens Area (Attica)

# 1 - Potential for success

Т.	1 - Potential for success					
	Performed	Not performed				
	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.			
	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.	4	A peer-review methodology for analysing the strengths and weaknesses has been used.			
į	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.			
		8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.			
		9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy			



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#### **SCORE**: 3/9

The strong point for this measure lies in the fact that the responsible planning authority has in fact made a formal commitment to make sustainability principles the underlying basis for the intervention. Also the reflection on the strengths and weaknesses of your existing local planning practices has been made. It was also made sure, that the development of the measure is in line with the hierarchically higher planning documents. However, no analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken, which can lead to organisational issues when detailing the measure implementation. Also, no relevant existing plans and regulations have been reviewed which may pose a problem in terms of legislative compliance.

# 2 - Development process, scope

	2 Detelopment process, scope				
	Performed		Not performed		
<b>21</b>	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.	22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.		
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.		
24	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.				

#### **SCORE:** 3/5

During the policy scenario/measure development process and determining the scope of intervention, a reference to policies and plans which already exist or are being developed on the local level has been made. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have been regularly involved during that phase. A cooperation process with all neighbouring authorities on the spatial coverage of the policy scenario/measure has even been established. However, the roles, responsibilities and timing for measure development have not been agreed in that regard. An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have also not been drafted, which may present in organisation aspect of measure implementation, resulting mainly in possible delays in implementation, with only a minor effect on the overall feasibility.



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#### 3 - Situation and scenarios

Performed		Not performed	
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.	33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.
		35	A reference to a business-as-usual scenario has been described.
		36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.
		37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?
	F 2/0	38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?

#### **SCORE: 2/8**

A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy...) has been conducted during the preparation of policy scenario/measure together with an analysis of air quality and noise pollution, including identification of hotspots which presents an important leverage for acquiring the critical mass for measure implementation. On the other hand, a lack of a reference business-as-usual scenario can lead to a dilemma whether the measure in question will actually bring the necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored. This can result in the lowered public/stakeholder acceptance rate in future.



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#### 4 - Common vision

	Performed	Not performed	
41	The policy scenario/measure contains a long-term vision of urban mobility.	42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders?
		43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.
		44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.
		45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.

## **SCORE:** 1/5

The policy scenario/measure does contain a long-term vision of urban mobility, which has not been developed in cooperation with a representative group of key stakeholders and can therefore be characterised as potentially vague in terms of actual achievements thereof. The lack of creating a common vision in collaboration or engagement of stakeholders may prove problematic further down the process when the implementation of the policy scenario/measure is underway — a lack of "ownership" of the measure may occur and this could have a negative effect on the feasibility.

# 5 - Priorities and targets

Performed			Not performed
<b>51</b>	The policy scenario/measure clearly sets out overall objectives.	52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes ( stakeholders, citizens).
		53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.



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The policy scenario/measure describes a is based on a set of SMART (Speci Measurable Achievable Realistic Times Bound) targets.
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#### **SCORE:** 1/4

In regard to setting priorities and targets, the policy scenario/measure clearly sets out overall objectives, however these are not characterised as a set of SMART targets. It also lacks an assessment feedback obtained through public participation and involvement processes (stakeholders, citizens...).

#### 6 - Measures

	Performed		Not performed
61	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?	62 63	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).  Elected representatives and decision makers have been taken to visit other cities
		64	with the proposed policy scenario/measure in place.  The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with
			neighbouring authorities.

## **SCORE: 1/4**

The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets, however the identification and selection of policy scenarios/measures through has been done through public participation and involvement processes (stakeholders, citizens...), which may cause a lower level of social acceptance of the measure once the implementation and operation commences.

#### 7 - Responsibilities & funding

Performed		Not performed
	71	Responsibilities for the implementation of measures have been allocated.



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	72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.
	<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.
	<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.
	<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.
	<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.

# **SCORE:** 0/6

The funding has not been given special attention within the preparation phase of this measure – this can lead to serious issues in feasibility of this measure from a financial perspective. In addition, no decision making has taken place based on the CBA results.

# 8 - Monitoring & assessment

Performed	Not performed		
	<mark>81</mark>	A data collection strategy has been developed.	
	<mark>82</mark>	A monitoring and evaluation plan has been developed. (Including process evaluation)	
	83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.	
	84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.	



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		Mechanisms		for	the	interactive
	85		sce	nario/	measui	and citizens e monitoring seen.
· · · · · · · ·						

# **SCORE:** 0/5

Monitoring and assessment was not a part of the planning, which may present difficulties in determining if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.

#### 1 - Potential for success

1 - P(	1 - Potential for success				
	Performed	Not performed			
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.		
3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.	4	A peer-review methodology for analysing the strengths and weaknesses has been used.		
7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.		
		8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.		
		9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.		



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#### **SCORE:** 3/9

The strong point for this measure lies in the fact that the responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the intervention. Also the reflection on the strengths and weaknesses of your existing local planning practices has been made. It was also made sure, that the development of the measure is in line with the hierarchically higher planning documents. However, no analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken, which can lead to organisational issues when detailing the measure implementation. Also, no relevant existing plans and regulations have been reviewed which may pose a problem in terms of legislative compliance.

### 2 - Development process, scope

	Performed		Not performed
21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.	22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.
24	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.		

#### **SCORE**: 3/5

During the policy scenario/measure development process and determining the scope of intervention, a reference to policies and plans which already exist or are being developed on the local level has been made. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have been regularly involved during that phase. A cooperation process with all neighbouring authorities on the spatial coverage of the policy scenario/measure has even been established. However, the roles, responsibilities and timing for measure development have not been agreed in that regard. An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have also not been drafted, which may present certain issues in organisation aspect of measure implementation, resulting mainly in possible delays in implementation, with only a minor effect on the overall feasibility.

#### 3 - Situation and scenarios



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	Performed		Not performed
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.	33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.
		35	A reference to a business-as-usual scenario has been described.
		36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.
		37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?
		38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?
	NF. 2/0		

#### **SCORE: 2/8**

A diagnosis of the main problems related to air pollution sources related to urban transport and mobility has been conducted during the preparation of policy scenario/measure together with an analysis of air quality and noise pollution, including identification of hotspots which presents an important leverage for acquiring the critical mass for measure implementation — this is especially relevant where the measure is based on promotion activities (i.e. soft measures). On the other hand, a lack of a reference business-as-usual scenario can lead to a dilemma whether the measure in question will actually bring the necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored. This can result in the lowered public/stakeholder acceptance rate in future.



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4 - Co	4 - Common vision						
	Performed		Not performed				
41	The policy scenario/measure contains a long-term vision of urban mobility.	42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders?				
		43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.				
		44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.				
		45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.				
The posterior development of the posterior t	RE: 1/5 colicy scenario/measure does contain a long- loped in cooperation with a representative acterised as potentially vague in terms of act mon vision in collaboration or engagement of process when the implementation of the p mership" of the measure may occur and this co	group tual a stakel olicy	of key stakeholders and can therefore be chievements thereof. The lack of creating a nolders may prove problematic further down scenario/measure is underway – a lack of				
5 - Pr	5 - Priorities and targets						
Performed			Not performed				
51	The policy scenario/measure clearly sets out overall objectives.	52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and				



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		involvement processes ( stakeholders, citizens).		
	53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.		
	54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.		
SCORE: 1/4				

In regard to setting priorities and targets, the policy scenario/measure clearly sets out overall objectives, however these are not described as a set of SMART targets. It also lacks an assessment feedback obtained through public participation and involvement processes ( stakeholders, citizens...).

#### 6 - Measures

	Performed	Not performed	
61	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets.		The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).  Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.
		<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.

## **SCORE:** 1/4

The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets, however the identification and selection of policy scenarios/measures through has not been done through public participation and involvement processes (stakeholders,



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	ns), which may cause a lower level of mentation and operation commences.	f soci	al acceptance of the measure once the
7 - Re	esponsibilities & funding		
	Performed		Not performed
		71	Responsibilities for the implementation of measures have been allocated.
		72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.
		<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.
		<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.
		<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.
		<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.
The fo	E: 0/6 unding has not been given special attention vead to serious issues in feasibility of this meation making has taken place based on the CBA	sure f	rom a financial perspective. Additionally, no
	,		
8 - M	onitoring & assessment		



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Performed		Not performed	
		81	A data collection strategy has been developed.
		<mark>82</mark>	A monitoring and evaluation plan has been developed. (Including process evaluation)
		83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.
		84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.
		<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.

# **SCORE:** 0/5

Monitoring and assessment was not a part of the planning, which may present difficulties in determining if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.



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# Basel

City	No	Scenario name	Scenario description
Basel	1	NoHeat	Replacement of fossil heating technologies by heating pumps and solar heating (until 2020: 1/3 will be replaced; until 2030:100%)
Basel	3	FirewoodBan	Introduction of a ban on small combustion of firewood (2030 scenario)
Basel	4	NoHeatFirewood	Replacement of fossil heating technologies combined with the introduction of a firewood ban (2030 scenario)

City: Policy scenario/measure		nario/measure	Description
Basel	1	NoHeat	Replacement of fossil heating technologies by heating pumps and solar heating (until 2020: 1/3 will be replaced; until 2030:100%)

# 1 - Potential for success

Performed			Not performed	
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.	
		3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.	
		4	A peer-review methodology for analysing the strengths and weaknesses has been used.	
		5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.	
		6	The sources for funding the process of developing the policy scenario/measure has been assessed	



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	7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).
	8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.
	9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.

## **SCORE**: 1/9

The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the intervention. Apart from that, no other political incentive has been in force during the development of this measure, such as the reflection on the strengths and weaknesses of your existing local planning practices, the assessment of compliance with the hierarchically higher planning documents, no analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken, which can lead to organisational and possibly legislative issues when detailing the measure implementation.

# 2 - Development process, scope

Performed			Not performed
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.
		22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.
		<mark>24</mark>	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.
		25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.



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# **SCORE:** 1/5

During the policy scenario/measure development process and determining the scope of intervention, a reference to policies and plans which already exist or are being developed on the local level has been made. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health) have been regularly involved during that phase. A cooperation process with all neighbouring authorities on the spatial coverage of the policy scenario/measure has even been established. However, the roles, responsibilities and timing for measure development have not been agreed in that regard. An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have also not been drafted, which may present in organisation aspect of measure implementation, resulting mainly in possible delays in implementation, with only a minor effect on the overall feasibility.

#### 3 - Situation and scenarios

Performed			Not performed
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	35	A reference to a business-as-usual scenario has been described.
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.	37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.	38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?



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#### **SCORE:** 4/8

In the phase of developing the policy scenario/measure, a diagnosis of the main problems related to air pollution sources related to urban transport and mobility has been conducted during the preparation of policy scenario/measure together with an analysis of air quality and noise pollution, including identification of hotspots has been made which presents an important leverage for acquiring the critical mass for measure implementation — this is especially relevant where the measure is based on promotion activities (i.e. soft measures).

A selection of suitable indicators to describe the air pollution situation in the designated area has also been made, along with the availability and quality of related existing data, which serves as a good basis for monitoring activities later on. On the other hand, a lack of a reference business-as-usual scenario can lead to a dilemma whether the measure in question will actually bring the necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored. This can result in the lowered public/stakeholder acceptance rate in future.

#### 4 - Common vision

Performed	Not performed	
	The policy scenario/measure contains long-term vision of air quality relat measures.	
	The long-term vision of air quality related measures has been developed cooperation with a representative group key stakeholders?	
	The policy scenario/measure clearly explain how it serves the city vision in the mode efficient and effective way and why.	
	Stakeholders and citizens have be informed about the vision building proceand have been given the opportunity provide feedback.	
	The stakeholders and citizens have be enabled to get actively involved in t development of the vision.	

#### **SCORE:** 0/5

The strength of the common vision in terms air quality is poor for this measure. Namely, no steps, that would insure a long term dedication have been performed. This may prove problematic further down the process when the implementation of the policy scenario/measure is underway – a lack of "ownership" of the measure may occur and this could have a negative effect on the feasibility.



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#### 5 - Priorities and targets

Performed	Not performed	
	The policy scenario/measure clearly set out overall objectives.	
	The overall objectives/targets of the police scenario/measure have been assessed through public participation and involvement processes ( stakeholders citizens).	
	The stakeholders and citizens have bee informed about the overall objectives of th measure and were invited to provid feedback.	
	The policy scenario/measure describes and is based on a set of SMART (Specifi Measurable Achievable Realistic Time Bound) targets.	

# **SCORE:** 0/4

Priorities and targets have not been addressed in the process of development of this policy/measure. This can present a serious drawback in the process of determining the success of the action — the main objective is to achieve the 100% coverage by the year 2030, but the lack of public participation could in turn result in a less efficient implementation.

#### 6 - Measures

Performed	Not performed	
	<b>61</b>	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?
	<mark>62</mark>	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).



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<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure
64	in place.  The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.

#### **SCORE:** 0/4

The policy scenario/measure lakes the description on how it will contribute to the achievement of the agreed vision, objectives and targets, nor has the identification and selection of policy scenarios/measures through been through public participation, involvement and partnership processes (stakeholders, citizens, authorities...), which may cause a lower level of social acceptance of the measure once the implementation and operation is under way.

# 7 - Responsibilities & funding

Performed	Not performed		
	71 Responsibilities for the implementation of measures have been allocated.		
	An action plan, outlining e.g implementation priorities, schedules, risk and contingency actions has been prepared		
	A budget plan, setting out funding requirements and sources has been prepared.		
	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.		
	The proposed policy scenario/measure had been appraised for their costs and related benefits - CBA analysis during the measure planning process.		
	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.		

**SCORE:** 0/6



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The funding has not been given special attention within the preparation phase of this measure – this can lead to serious issues in feasibility of this measure from a financial perspective. Also, no decision making has taken place based on the CBA results.

# 8 - Monitoring & assessment

Performed	Not performed		
	81 A data collection strategy has been developed.		
	A monitoring and evaluation plan has been developed. (Including process evaluation)		
	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.		
	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.		
	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.		

# **SCORE:** 0/5

Monitoring and assessment was not a part of the planning, which may present difficulties in determining if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.



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City: Policy scenario/measure		ario/measure	Description
Basel	3	FirewoodBan	Introduction of a ban on small combustion of firewood (2030 scenario)

# 1 - Potential for success

Performed	Not performed		
	1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	
	2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.	
	A reflection on the strengths an weaknesses of your existing local plannin practices with regard to developing the policy scenario/measure has been made.		
	4	A peer-review methodology for analysing the strengths and weaknesses has been used.	
	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.	
	The sources for funding the process of developing the policy scenario/measure had been assessed		
	7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).	



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		A timeframe for the preparation and
	8	implementation of the policy
		scenario/measure has been defined.
		Relevant stakeholders (objectives, power,
		capacity; vulnerable groups), their impact
	9	and role early on in the policy
		scenario/measure preparation process have
		been identified.
 - 1-		

#### **SCORE:** 0/9

The measure exhibits poor performance in terms of potential for success from the political aspect. No formal commitment to make sustainability principles the underlying basis for the intervention, no political incentive has been in force during the development of this measure, such as the reflection on the strengths and weaknesses of your existing local planning practices, the assessment of compliance with the hierarchically higher planning documents, no analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken. This can seriously affect the feasibility of measure implementation.

### 2 - Development process, scope

Performed	Not performed		
	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.		
	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.		
	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.		
	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.		
	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.		



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### **SCORE:** 0/5

During the policy scenario/measure development process and determining the scope of intervention, no policy coordination and an integrated planning approach has been followed.

Also, the exclusion of referencing of policies and plans which already exist or are being developed on the local level, exclusion of stakeholder engagement in planning process etc. presents a significant downside in the process; it may become a major challenge for sustainable planning, but is also a main source for uncertainty in terms of social acceptance and temporal feasibility, causing significant delays and barriers in implementation.

#### 3 - Situation and scenarios

Performed		Not performed	
<b>31</b>	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	35	A reference to a business-as-usual scenario has been described.
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.		A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.	38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?

# **SCORE:** 4/8

In the phase of developing the policy scenario/measure, a diagnosis of the main problems related to air pollution sources has been conducted during the preparation of policy scenario/measure together with an analysis of air quality, including identification of hotspots has been made which presents an



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important leverage for acquiring the critical mass for measure implementation. This is relevant in cases where the measure strongly affects the changes in behaviour/habits, as is the case here. A selection of suitable indicators to describe the air pollution situation in the designated area has also been made, along with the availability and quality of related existing data, which serves as a good basis for monitoring activities later on. On the other hand, a lack of a reference business-as-usual scenario can lead to a dilemma whether the measure in question will actually bring the necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored. This can result in the lowered public/stakeholder acceptance rate in future.

#### 4 - Common vision

Performed		Not performed
	41	The policy scenario/measure contains a long-term vision of air quality related measures.
	42	The long-term vision of air quality related measures has been developed in cooperation with a representative group of key stakeholders?
	43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.
	44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.
	45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.

#### **SCORE:** 0/5

The strength of the common vision in terms air quality is poor for this measure. Namely, no steps, that would insure a long term dedication have been performed. This may prove problematic further down the process when the implementation of the policy scenario/measure is underway – a lack of "ownership" of the measure may occur and this could have a negative effect on the feasibility.

### 5 - Priorities and targets



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Performed	Not performed				
	51	The policy scenario/measure clearly sets out overall objectives.			
	52	The overall objectives/targets of the polic scenario/measure have been assessed through public participation are involvement processes ( stakeholder citizens).			
	The stakeholders and citizens have beinformed about the overall objectives of the measure and were invited to proving feedback.  The policy scenario/measure describes and is based on a set of SMART (Speciments Measurable Achievable Realistic Times Bound) targets.				

Priorities and targets have not been addressed in the process of development of this policy/measure - the lack of public participation could in this phase could result in a less efficient implementation in the following phases of measure development.

## 6 - Measures

Performed	Not performed		
	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?		
	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).		
	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.		



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	The policy scen	ario/r	neasure inco	orpo	rates
<b>64</b>	cross-boundary	inte	erventions	to	be
<del>0 4</del>	implemented	in	partnership	)	with
	neighbouring au	thoriti	es.		

The policy scenario/measure lacks the description on how it will contribute to the achievement of the agreed vision, objectives and targets, nor has the identification and selection of policy scenarios/measures been through public participation, involvement and partnership processes (stakeholders, citizens, authorities...), which may cause a lower level of social acceptance of the measure once the implementation and operation is under way.

# 7 - Responsibilities & funding

Performed	Not performed		
	71	Responsibilities for the implementation of measures have been allocated.	
	72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.	
	A budget plan, setting out funding requirements and sources has been prepared.		
	<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.	
	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.		
	<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.	

#### **SCORE**: 0/6

The funding has not been given attention within the preparation phase of this measure – this can lead to serious issues in feasibility of this measure from a financial perspective.

# 8 - Monitoring & assessment



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Author(s): JSI, ADDMA, SWISS-TPH, MU, ISCIII, EUC, USTUTT, AUTH, CSTUTT	Version: Final	111/203			

Performed	Not performed		
	81 A data collection strategy has been developed.		
	A monitoring and evaluation plan has been developed. (Including process evaluation)		
	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.		
	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.		
	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.		

Monitoring and assessment was not a part of the planning, which may present difficulties in determining if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.

City: Policy scenario/measure		nario/measure	Description	
		NoHeatFirewood	Replacement of fossil heating technologies combined with the introduction of a firewood ba (2030 scenario)	
1 - Potential for success  Performed			Not performed	



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1 1	
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.
2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.
3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.
4	A peer-review methodology for analysing the strengths and weaknesses has been used.
5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.
6	The sources for funding the process of developing the policy scenario/measure has been assessed
7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).
1	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.
9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.

The measure exhibits poor performance in terms of potential for success from the political aspect. No formal commitment to make sustainability principles the underlying basis for the intervention, no political incentive has been in force during the development of this measure, such as the reflection



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Author(s): JSI, ADDMA, SWISS-TPH, MU, ISCIII, EUC, USTUTT, AUTH, CSTUTT	Version: Final	113/203				

on the strengths and weaknesses of your existing local planning practices, the assessment of compliance with the hierarchically higher planning documents, no analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken. This can seriously affect the feasibility of measure implementation.

# 2 - Development process, scope

	Performed		Not performed
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.
		22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.
		24	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.
		25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.

#### **SCORE: 1/5**

During the policy scenario/measure development process and determining the scope of intervention, a reference to policies and plans which already exist or are being developed on the local level has been made. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health) have been regularly involved during that phase. A cooperation process with all neighbouring authorities on the spatial coverage of the policy scenario/measure has even been established. However, the roles, responsibilities and timing for measure development have not been agreed in that regard. An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have also not been drafted, which may present in organisation aspect of measure implementation, resulting mainly in possible delays in implementation, with only a minor effect on the overall feasibility.

#### 3 - Situation and scenarios



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Performed		Not performed	
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	35	A reference to a business-as-usual scenario has been described.
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.	37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.	38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?

#### **SCORE:** 4/8

In the phase of developing the policy scenario/measure, a diagnosis of the main problems related to heating has been conducted during the preparation of policy scenario/measure together with an analysis of air quality, hotspots etc.; this represents a solid basis for informing the initial decision making processes in the types of measures where strong political intervention is crucial, along with the public acceptance of changing their habits.

A selection of suitable indicators to describe the air pollution situation in the designated area has also been made, along with the availability and quality of related existing data, which serves as a good basis for monitoring activities later on. On the other hand, a lack of a reference business-as-usual scenario can lead to a dilemma whether the measure in question will actually bring the necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored. This can result in the lowered public/stakeholder acceptance rate in future, which in this case can be an important factor.

#### 4 - Common vision

Performed Not performed
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41	The policy scenario/measure contains a long-term vision of air quality related measures.
42	The long-term vision of air quality related measures has been developed in cooperation with a representative group of key stakeholders?
43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.
44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.
45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.

The process of adopting of a common vision in terms air quality is poor for this measure. Namely, no steps, that would insure a long term dedication have been performed. This may prove problematic further down the process when the implementation of the policy scenario/measure is underway – a lack of "ownership" of the measure may occur and this could have a negative effect on the feasibility.

# 5 - Priorities and targets

Performed	Not performed	
	The policy scenario/measure clearly sets out overall objectives.	
	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes ( stakeholders, citizens).	
	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.	



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Bound) targets.		a set of SMART (Specific- Achievable- Realistic Time-
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Priorities and targets have not been addressed in the process of development of this policy/measure - the lack of public participation could in this phase could result in a less efficient implementation in the following phases of measure development.

#### 6 - Measures

Performed	Not performed
	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?
	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).
	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.
	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.

#### **SCORE:** 0/4

The policy scenario/measure lacks the description on how it will contribute to the achievement of the agreed vision, objectives and targets, nor has the identification and selection of policy scenarios/measures been through public participation, involvement and partnership processes (stakeholders, citizens, authorities...), which may cause a lower level of social acceptance of the measure once the implementation and operation is under way, because the users may want to be presented with clear evidence that the changes they must undertake, but are unwilling to conform with them, will actually contribute to the reduction of the problem, without creating new ones (in terms of reliability, financial aspects etc.).

## 7 - Responsibilities & funding



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Performed	Not performed	
	71	Responsibilities for the implementation of measures have been allocated.
	72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.
	<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.
	<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.
	<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.
	<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.

The funding has not been given attention within the preparation phase of this measure – this can lead to serious issues in feasibility of this measure from a financial perspective.

# 8 - Monitoring & assessment

Performed	Not performed		
	81 A data collection strategy has been developed.		
	A monitoring and evaluation plan has been developed. (Including process evaluation)		
	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.		



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84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.
<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.

Monitoring and assessment was not a part of the planning, which may present difficulties in determining if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.

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# **Brno**

City	No	Scenario name	Scenario description	
Brno	1	M1opti	Promoting low carbon electric vehicles	
Brno	2	M2opti	Reduction of the motorized vehicles in the city and increase of the usage of clean transportation (i.e. walking, biking and using public transport)	
Brno	3	M2zero	Reduction of the motorized vehicles in the city and increase of the usage of clean transportation (i.e. walking, biking and using public transport)	

City: Policy scenario/measure			Description		
Brno	1	M1opti	Promoting low carbon electric vehicles		

# 1 - Potential for success

	Performed	Not performed		
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.	
<mark>З</mark>	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.	4	A peer-review methodology for analysing the strengths and weaknesses has been used.	
6	The sources for funding the process of developing the policy scenario/measure has been assessed	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.	
7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).	9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.	



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	A timeframe for	the	preparation	n and
8	implementation	of	the	policy
	scenario/measure h	as be	en defined.	

#### **SCORE:** 5/9

The strong point for this measure lies in the fact that the responsible planning authority has in fact made a formal commitment to make sustainability principles the underlying basis for the intervention. Also the reflection on the strengths and weaknesses of your existing local planning practices has been made, along with the allocation of resources for implementation and confirmation of the timeframe for planning/implementation of the measure. On the other hand, no peer-review methodology for analysing the strengths and weaknesses has been used, no gap analysis of qualifications and skills within the planning authority has been undertaken, which, considering the low complexity of the measure, is not considered as a major drawback in terms of feasibility of implementation.

#### 2 - Development process, scope

L		are opinion process, scope				
		Performed	Not performed			
	21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.	22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.		
	23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level .				
	<mark>24</mark>	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.				
	25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.				

#### **SCORE:** 4/5

During the policy scenario/measure development process and determining the scope of intervention, a reference to policies and plans which already exist or are being developed on the local level has been made. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have been regularly involved during that phase. A cooperation process with all neighbouring authorities on the spatial coverage of the policy scenario/measure has even been established. An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have also not been drafted, which can add to the more linear and



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efficient work during the measure development. However, the roles, responsibilities and timing for measure development have not been agreed – this may present some issues in organisation aspect of measure implementation, resulting mainly in possible delays in implementation, but with only a minor effect on the overall feasibility.

#### 3 - Situation and scenarios

	Performed		Not performed	
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.	36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.	
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.			
35	A reference to a business-as-usual scenario has been described.			
37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?			
38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?			

#### **SCORE:** 6/8

In the phase of developing the policy scenario/measure, a diagnosis of the main problems related to air pollution sources related to urban transport and mobility has been conducted during the preparation of policy scenario/measure together with an analysis of air quality and noise pollution, including identification of hotspots has been made which can serve as a basis for determining the measure necessity. The availability and quality of existing data related to the measure outputs has also been assessed, which serves as a good basis for monitoring activities later on, although the selection of suitable indicators to describe the air pollution situation in the designated area has not been confirmed at this stage. Additionally, a lack of a reference business-as-usual scenario can lead



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to a dilemma whether the measure in question will actually bring the necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored. This can result in the lowered public/stakeholder acceptance rate in future.

#### 4 - Common vision

	Performed		Not performed		
41	The policy scenario/measure contains a long-term vision of urban mobility.				
42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders?				
43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.				
44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.				
45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.				

#### **SCORE:** 5/5

The policy scenario/measure contains a long-term vision of urban mobility, which has also been developed in cooperation with a representative group of key stakeholders and can therefore be characterised as particularly strong. Creating the common vision in collaboration or engagement of stakeholders may prove to be quite encouraging further down the process when the implementation of the policy scenario/measure is underway – a sense of "ownership" of the measure vision may further increase the feasibility of the implementation.

# 5 - Priorities and targets

Performed		Not performed	
51	The policy scenario/measure clearly sets out overall objectives.	54	The policy scenario/measure describes and is based on a set of SMART (Specific



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		Measurable Bound) targe	 Realistic	Time-
52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes ( stakeholders, citizens).			
53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.			

## **SCORE:** 3/4

In regard to setting priorities and targets, the policy scenario/measure clearly sets out overall objectives, however these are not described as a set of SMART targets. The assessment has been made through public participation and involvement processes (stakeholders, citizens...), and the feedback has also been obtained under the same principles. This makes for a strongpoint in terms of ownership of the measure and public acceptance, which serves as an important aspect of feasibility.

#### 6 - Measures

Performed		Not performed	
<mark>61</mark>	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?	<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.
<mark>62</mark>	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).	<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.



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#### **SCORE:** 2/4

The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets, and along with the fact that the identification and selection of policy scenarios/measures through has been done through public participation and involvement processes (stakeholders, citizens...) this makes for a quite strong foundation for a successful implementation. This often results in an increased level of social acceptance of the measure once the implementation and operation commences. The fact that elected representatives and decision makers have not been taken to visit other cities with the proposed policy scenario/measure in place does not have a direct effect on the implementation of the measure in this case (due to the measure specifics).

# 7 - Responsibilities & funding

Performed		Not performed	
71	Responsibilities for the implementation of measures have been allocated.	72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.
<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.	<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.
		<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.
		<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.

#### **SCORE**: 2/6

The funding has not been given attention within the preparation phase of this measure, apart from the preparation of a budget plan without any formal agreements, action plans or the CBA as a guide for the detailed decision making. This can lead to serious issues in feasibility of this measure from a financial and organisational perspective.

## 8 - Monitoring & assessment



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83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.	81	A data collection strategy has been developed.
		<mark>82</mark>	A monitoring and evaluation plan has been developed. (Including process evaluation)
		84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.
		<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.

# **SCORE:** 1/5

Monitoring and assessment was a part of the planning to the point where arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders. No other activities else have been included in the measure, which may present difficulties in determining if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.



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		nario/measure	Description
Brno	2	M2opti	Reduction of the motorized vehicles in the city and increase of the usage of clean transportation (i.e. walking, biking and using public transport)
Brno	no 3 M2zero a		Reduction of the motorized vehicles in the city and increase of the usage of clean transportation (i.e. walking, biking and using public transport)

## 1 - Potential for success

Performed			Not performed	
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.	
3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.	4	A peer-review methodology for analysing the strengths and weaknesses has been used.	
7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.	
8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.	6	The sources for funding the process of developing the policy scenario/measure has been assessed	
		9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.	

# **SCORE:** 4/9

The strong point for this measure lies in the fact that the responsible planning authority has in fact made a formal commitment to make sustainability principles the underlying basis for the intervention. Also the reflection on the strengths and weaknesses of your existing local planning



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practices has been made, along with the allocation of resources for implementation and confirmation of the timeframe for planning/implementation of the measure. On the other hand, no peer-review methodology for analysing the strengths and weaknesses has been used, no gap analysis of qualifications and skills within the planning authority has been undertaken, which, considering the relatively complex nature of the measure, could be considered as a potential major drawback in terms of feasibility of implementation. Namely, the reduction of motorised traffic and related increase of sustainable travel modes requires a great deal of coordination, therefore a well-orchestrated team is a prerequisite for success.

# 2 - Development process, scope

	Performed	Not performed		
21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.	22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.	
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.			
24	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.			
25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.			

#### **SCORE:** 4/5

During the policy scenario/measure development process and determining the scope of intervention, a reference to policies and plans which already exist or are being developed on the local level has been made. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have been regularly involved during that phase. A cooperation process with all neighbouring authorities on the spatial coverage of the policy scenario/measure has even been established. An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have also not been drafted, which can add to the more linear and efficient work during the measure development. However, the roles, responsibilities and timing for measure development have not been agreed – this may present some issues in organisation aspect of measure implementation, resulting mainly in possible delays in implementation, but with only a minor effect on the overall feasibility.



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#### 3 - Situation and scenarios

	Performed	Not performed		
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.	36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.	
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.			
35	A reference to a business-as-usual scenario has been described.			
37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?			
38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?			

#### **SCORE:** 6/8

In the phase of developing the policy scenario/measure, a diagnosis of the main problems related to air pollution sources related to urban transport and mobility has been conducted during the preparation of policy scenario/measure together with an analysis of air quality and noise pollution, including identification of hotspots has been made which presents an important leverage for acquiring the critical mass for measure implementation — this is especially relevant where the measure is based on changing the users habits and behavioural patterns. The availability and quality of related existing data has been assessed, which serves as a good basis for monitoring activities later on, although the selection of suitable indicators to describe the air pollution situation in the designated area has not been confirmed at this stage. Additionally, a lack of a reference business-as-usual scenario can lead to a dilemma whether the measure in question will actually bring the necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored. This can result in the lowered public/stakeholder acceptance rate in future.



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#### 4 - Common vision

	Performed	Not performed
41	The policy scenario/measure contains a long-term vision of urban mobility.	
42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders.	
43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.	
44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.	
45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.	

## **SCORE:** 5/5

The policy scenario/measure contains a long-term vision of urban mobility, which has also been developed in cooperation with a representative group of key stakeholders and can therefore be characterised as particularly strong. Creating the common vision in collaboration or engagement of stakeholders may prove to be quite encouraging further down the process when the implementation of the policy scenario/measure is underway – a sense of "ownership" of the vision by the users increases the feasibility of the implementation.

# 5 - Priorities and targets

Performed			Not performed	
<b>51</b>	The policy scenario/measure clearly sets out overall objectives.	54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.	
52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and			



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	involvement processes ( stakeholders, citizens).	
53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.	

#### **SCORE:** 3/4

In regard to setting priorities and targets, the policy scenario/measure clearly sets out overall objectives, however these are not described as a set of SMART targets, which otherwise could help to steer the implementation in the right direction, once the complexity of the measure becomes evident. The assessment has been made through public participation and involvement processes (stakeholders, citizens...), and the feedback has also been obtained under the same principles. This makes for a strongpoint in terms of ownership of the measure and public acceptance, which serves as an important aspect of feasibility.

#### 6 - Measures

Performed			Not performed		
<mark>61</mark>	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?	<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.		
<mark>62</mark>	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).	<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.		

#### **SCORE**: 2/4

The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets, and along with the fact that the identification and selection of policy scenarios/measures through has been done through public participation and involvement processes (stakeholders, citizens...), this makes for a quite strong foundation for a successful implementation. This often results in an increased level of social acceptance of the measure once the implementation and operation commences.

#### 7 - Responsibilities & funding



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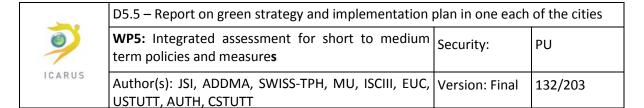
	Performed	Not performed		
71	Responsibilities for the implementation of measures have been allocated.	72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.	
		<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.	
		<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.	
		<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.	
		<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.	

# **SCORE:** 1/6

The funding has not been given attention within the preparation phase of this measure, apart from the allocation of allocation of responsibilities – this can lead to serious issues in feasibility of this measure from a financial and organisational perspective.

# 8 - Monitoring & assessment

	Performed	Not performed		
83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.	<mark>81</mark>	A data collection strategy has been developed.	
		<mark>82</mark>	A monitoring and evaluation plan has been developed. (Including process evaluation)	
		84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.	



	<mark>85</mark>	Mechanisms engagement during policy	of stake		
		and evaluatio	n have be	een fore	eseen.

## **SCORE:** 1/5

Monitoring and assessment was a part of the planning to the point where arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders. No other activities else have been included in the measure, which may present difficulties in determining if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.



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# Ljubljana

City	No	Scenario name	Scenario description
_		M1_DecreaseCAR	Decrease of personal car use (the combination of the car reduction measures and parking policy will lead to a decrease of personal cars on incoming roads/avenues by 20 %); specifically the promotion of electromobility is planned to result in an additional 2% of emission reduction (M1) (2030 scenario)
Ljubljana	2	M2_InsreasePT	Increased share of public transport use (increased use of PT on the account of better service and transfer from car users) (The renovation of the public passenger transport fleet and the reduction of personal car use is also integrated in this scenario) (2030 scenario)
Ljubljana	3	M3_Ptfleet	Renovation of public passenger transport vehicle fleet (CNG, hybrid buses); the replacement of EURO 0,1,2 buses with CNG propulsion system (86 buses in total) (The reduction of personal car use is also integrated in this scenario, but no increase of public transport is assumed) (2030 scenario)
Ljubljana	4	M4_DistrHEAT	Increased utilization and expansion of district heating systems; renovation of the system - replacement of existing combustion units with more appropriate means (i.e. 70% reduction of coal use) (2030 scenario)

City: Policy scenario/measure		nario/measure	Description		
Ljubljana 1 M1_DecreaseCAR		M1_DecreaseCAR	Decrease of personal car use (the combination of the car reduction measures and parking policy will lead to a decrease of personal cars on incoming roads/avenues by 20 %); specifically the promotion of electromobility is planned to result in an additional 2% of emission reduction (M1) (2030 scenario)		
1 - Potential for success					
Performed			Not performed		



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1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	<mark>4</mark>	A peer-review methodology for analysing the strengths and weaknesses has been used.
2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.
3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.	9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.
6	The sources for funding the process of developing the policy scenario/measure has been assessed		
7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).		
8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.		

#### **SCORE:** 6/9

The strong point for this measure lies in the fact that the responsible planning authority has in fact made a formal commitment to make sustainability principles the underlying basis for the intervention. Also a revision of the existing European, national and regional level has been included in the process of policy preparation as well as the reflection on the strengths and weaknesses of the local planning practices, along with the allocation of resources for implementation and confirmation of the timeframe for planning/implementation of the measure. On the other hand, no peer-review methodology for analysing the strengths and weaknesses has been used, no gap analysis of qualifications and skills within the planning authority has been undertaken, which, considering the relatively complex nature of the measure, could be considered as a potential major drawback in terms of feasibility of implementation. Namely, the reduction of motorised traffic and related increase of sustainable travel modes requires a great deal of coordination including a continuous involvement of stakeholders, which was not the case here; this could become an issue when detailed actions for car traffic reduction are being put in place.

#### 2 - Development process, scope



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	Performed	Not performed	
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.
		22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.
		<mark>24</mark>	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.
		25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.

#### **SCORE:** 1/5

During the policy scenario/measure development process and determining the scope of intervention, a reference to policies and plans which already exist or are being developed on the local level has been made. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health) have not been regularly involved during that phase. A cooperation process with all neighbouring authorities on the spatial coverage of the policy scenario/measure has also not been established, which also goes for dedicating the roles, responsibilities and timing for measure development. An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have also not been drafted, which may present in organisation aspect of measure implementation, resulting mainly in possible delays in implementation, but with only a minor effect on the overall feasibility.

#### 3 - Situation and scenarios

Performed		Not performed	
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.



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34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.	33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.
37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?	35	A reference to a business-as-usual scenario has been described.
38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?	36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.

#### **SCORE:** 4/8

In the phase of developing the policy scenario/measure, a diagnosis of the main problems related to air pollution sources related to urban transport and mobility has been conducted during the preparation of policy scenario/measure together with an analysis of air quality and noise pollution, including identification of hotspots has been made which presents an important leverage for acquiring the critical mass for measure implementation — this is especially relevant where the measure is based on changing the users habits and behavioural patterns. The availability and quality of related existing data has not been assessed, nor has the selection of suitable indicators to describe the air pollution situation in the designated area been confirmed at this stage, which can undermine the efforts when the results need to be presented to the public at a later stage in order to clearly show the benefits, or to have the evidence when trying to transfer the policy to other areas. Additionally, a lack of a reference business-as-usual scenario can lead to a dilemma whether the measure in question will actually bring the necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored.

#### 4 - Common vision

	Performed		Not performed	
41	The policy scenario/measure contains a long-term vision of urban mobility.			
42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders.			
43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.			



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	Stakeholders and citizens have been	
44	informed about the vision building process	
44	and have been given the opportunity to	
	provide feedback.	
	The stakeholders and citizens have been	
45	enabled to get actively involved in the	
	development of the vision.	

#### **SCORE:** 5/5

The policy scenario/measure contains a long-term vision of urban mobility, which has also been developed in cooperation with a representative group of key stakeholders and can therefore be characterised as particularly strong in this regard. Creating the common vision in collaboration or engagement of stakeholders may prove to be quite encouraging further down the process when the implementation of the policy scenario/measure is underway – a sense of "ownership" of the vision by the users increases the feasibility of the implementation.

## 5 - Priorities and targets

	Performed		Not performed	
<b>51</b>	The policy scenario/measure clearly sets out overall objectives.	53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.	
52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes ( stakeholders, citizens).			
54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.			

#### **SCORE:** 3/4

In regard to setting priorities and targets, the policy scenario/measure clearly sets out overall objectives, along with the description of a set of SMART targets. The assessment has been made through public participation and involvement processes (stakeholders), however the feedback from the public has not been obtained, which could result in an opposition when measure is implemented and the restrictions are put in force. This can also mean lower acceptance and lower impact in terms of policy/measure success – i.e. changing travel habits and consequently air pollution reduction.



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#### 6 - Measures

Performed		Not performed	
<b>61</b>	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?		The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).
<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.	<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.

#### **SCORE**: 2/4

The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets. Since the measure affects also the traffic from neighbouring municipalities (daily migrants), another strong point lies in the fact that policy scenario/measure incorporates cross-boundary interventions in partnership with neighbouring authorities.

The weak point is that the identification and selection of policy scenarios/measures has not been done through public participation and involvement processes (stakeholders, citizens...), which could result in a decreased level of social acceptance of the measure once the implementation and operation commences.

# 7 - Responsibilities & funding

Performed		Not performed	
71	Responsibilities for the implementation of measures have been allocated.	72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.
<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.	<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.
<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.	<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.



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#### **SCORE:** 3/6

The dedication to funding (budget plan, formal agreements) and allocating responsibilities has been given relatively high attention within the development of this policy. On the other hand, an outline of the implementation priorities, schedules, risks and contingency actions has not been prepared in details. Also, the CBA was not used as a guide for the detailed decision making. This can lead to serious issues in feasibility of this measure from a financial and organisational perspective.

## 8 - Monitoring & assessment

	Performed		Not performed	
83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.	<mark>81</mark>	A data collection strategy has been developed.	
		<mark>82</mark>	A monitoring and evaluation plan has been developed. (Including process evaluation)	
		84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.	
		<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.	

#### **SCORE:** 1/5

Monitoring and assessment was a part of the planning to the point where arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders. No other activities else have been included in the measure, which may present difficulties in determining if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.



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City: Policy scenario/measure		nario/measure	Description
Ljubljana	2	M2_InsreasePT	Increased share of public transport use (increased use of PT on the account of better service and transfer from car users) (The renovation of the public passenger transport fleet and the reduction of personal car use is also integrated in this scenario ) (2030 scenario)

# 1 - Potential for success

Performed			Not performed
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.
6	The sources for funding the process of developing the policy scenario/measure has been assessed		A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.
8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.	4	A peer-review methodology for analysing the strengths and weaknesses has been used.
9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.
		7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).

# **SCORE:** 4/9

The strong point for this measure lies in the fact that the responsible planning authority has in fact made a formal commitment to make sustainability principles the underlying basis for the intervention ant that the relevant stakeholders have been identified and included in the process. Also, the



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allocation of resources for implementation and confirmation of the timeframe for planning/implementation of the measure has been clearly defined.

Although the revision of the existing European, national and regional level has not been included in the process of policy preparation, no peer-review methodology for analysing the strengths and weaknesses has been used, no gap analysis of qualifications and skills within the planning authority has been undertaken, this is not to be considered as a major drawback in terms of feasibility of implementation, since the measure is more-or-less limited to operations within the PT company and does not have a direct relations to the city authority.

## 2 - Development process, scope

Performed			Not performed
21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.		The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.
22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.	25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.		

#### **SCORE:** 3/5

During the policy scenario/measure development process and determining the scope of intervention, a reference to policies and plans which already exist or are being developed on the local level has been made. A cooperation process with neighbouring authorities has even been established and along with allocating the roles, responsibilities and timing for measure development this makes for a strong foundation in terms of feasibility.

An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have not been drafted, which can reduce the work efficiency during the measure development, causing potential delays, etc. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have not been regularly involved during the preparation phase, posing a threat for decrease in reaching the air pollution reduction objectives of this measure.



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#### 3 - Situation and scenarios

	Performed		Not performed	
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.	31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	
38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?	32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	
		33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.	
		35	A reference to a business-as-usual scenario has been described.	
		36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.	
		37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?	

#### **SCORE:** 2/8

Since this measure covers only the PT aspect and not the entire traffic system in Ljubljana, the scenario in the phase of developing the policy scenario/measure, only limited analysis of air quality and noise pollution, including identification of hotspots has been conducted. A diagnosis of the main problems related to air pollution sources related to urban transport and mobility has not taken part during the preparation phase. The availability and quality of related existing data has also not been assessed, nor has the selection of suitable indicators to describe the air pollution situation in the designated area been confirmed at this stage, which can undermine the efforts when the results need to be presented to the public at a later stage in order to clearly show the benefits, or to have the evidence when trying to transfer the policy to other areas. Additionally, a lack of a reference business-as-usual scenario can lead to a dilemma whether the measure in question will actually bring the



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necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored.

#### 4 - Common vision

	Performed		Not performed
41	The policy scenario/measure contains a long-term vision of urban mobility.	44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.
42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders	45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.
43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.		

## **SCORE:** 3/5

The policy scenario/measure contains a long-term vision of urban mobility, which has also been developed in cooperation with a representative group of key stakeholders, however the in-depth stakeholder/citizen engagement was not included in the process — due to the more technical character of the measure, this should not have a great impact on measure implementation.

## 5 - Priorities and targets

	Performed		Not performed
<b>51</b>	The policy scenario/measure clearly sets out overall objectives.	52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes ( stakeholders, citizens).
54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.		The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.



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#### **SCORE:** 2/4

The policy scenario/measure clearly sets out overall objectives, along with the description of a set of SMART targets, however, these have not been assessed through public participation and involvement processes (stakeholders) and the feedback from the public has not been obtained, which could result in lesser increase in PT usage (public not being aware of the benefits, potential opposition to the passenger car restriction due to PT priority at intersections etc.).

#### 6 - Measures

Performed			Not performed
<mark>61</mark>	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?		The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).
<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.	<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.

#### **SCORE**: 2/4

The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets in terms of air pollution. Since the PT improvement includes the extension of lines to neighbouring municipalities (daily migrants), another strong point lies in the fact that policy scenario/measure incorporates cross-boundary interventions in partnership with neighbouring authorities.

The weak point is that the identification and selection of policy scenarios/measures has not been done through public participation and involvement processes (stakeholders, citizens...), which could result in a slower increase of PT usage.

# 7 - Responsibilities & funding

Performed		Not performed	
71	Responsibilities for the implementation of measures have been allocated.	<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.



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72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.
<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.	
<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.	

#### **SCORE:** 4/6

The dedication to funding (budget plan, formal agreements) and allocating responsibilities has been given relatively high attention within the development of this policy, including the preparation of an outline of the implementation priorities, schedules, risks and contingency actions. Nevertheless, the CBA was not used as a guide for the detailed decision making, which can pose some feasibility issues from a financial and organisational perspective.

### 8 - Monitoring & assessment

Performed			Not performed
<mark>81</mark>	A data collection strategy has been developed.	<mark>82</mark>	A monitoring and evaluation plan has been developed. (Including process evaluation)
83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.	84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.
		<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.

### **SCORE:** 2/5

Monitoring and assessment was a part of the planning to the point where arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders and a data collection strategy has been developed. No other activities else have been included in the measure, which may present difficulties in determining, if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.



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City: Policy scenario/measure		nario/measure	Description
Ljubljana	3	M3_Ptfleet	Renovation of public passenger transport vehicle fleet (CNG, hybrid buses); the replacement of EURO 0,1,2 buses with CNG propulsion system (86 buses in total) (The reduction of personal car use is also integrated in this scenario, but no increase of public transport is assumed) (2030 scenario)

### 1 - Potential for success

	Performed		Not performed
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.
2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.	<mark>4</mark>	A peer-review methodology for analysing the strengths and weaknesses has been used.
6	The sources for funding the process of developing the policy scenario/measure has been assessed	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.
8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.	7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).
9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.		

# **SCORE:** 5/9

The strong point for this measure lies in the fact that the responsible planning authority has in fact made a formal commitment to make sustainability principles the underlying basis for the intervention and that the relevant stakeholders have been identified and included in the process, also following the existing European, national and regional level. Also, the allocation of resources for



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implementation and confirmation of the timeframe for planning/implementation of the measure has been clearly defined.

Although the peer-review methodology for analysing the strengths and weaknesses has not been used, no gap analysis of qualifications and skills within the planning authority undertaken, this is not to be considered as a major drawback in terms of feasibility of implementation, since the measure is entirely under the PT company jurisdiction and does not have a direct relation to the city authority. The only potential issue could be, that no direct reflection to the local planning policies has been made, which could interfere with the dynamics of measure implantation, however, this cannot be considered as a major concern in any way.

### 2 - Development process, scope

	2 Development process, scope				
Performed			Not performed		
21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.		The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.		
22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.	25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.		
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.				

#### **SCORE:** 3/5

During the policy scenario/measure development process and determining the scope of intervention, a reference to policies and plans which already exist or are being developed on the local level has been made. A cooperation process with neighbouring authorities has even been established and along with allocating the roles, responsibilities and timing for measure development this makes for a strong foundation in terms of feasibility.

An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have not been drafted, which can reduce the work efficiency during the measure development, causing potential delays, etc. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have not been regularly involved during the preparation phase, posing a threat for decrease in reaching the air pollution reduction objectives of this measure.



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#### 3 - Situation and scenarios

Performed			Not performed
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.
38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?	33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.
		34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.
		35	A reference to a business-as-usual scenario has been described.
		36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.
		37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?

#### **SCORE: 2/8**

Since this measure covers only the PT aspect and not the entire traffic system in Ljubljana, the scenario in the phase of developing the policy scenario/measure, only limited analysis of air quality and noise pollution, including identification of hotspots has been conducted. A diagnosis of the main problems related to air pollution sources related to urban transport and mobility has not taken part during the preparation phase. The availability and quality of related existing data has also not been assessed, nor has the selection of suitable indicators to describe the air pollution situation in the designated area been confirmed at this stage, which can undermine the efforts when the results need to be presented to the public at a later stage in order to clearly show the benefits, or to have the evidence when trying to transfer the policy to other areas. Additionally, a lack of a reference business-as-usual scenario can lead to a dilemma whether the measure in question will actually bring the necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored.



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### 4 - Common vision

Performed			Not performed	
41	The policy scenario/measure contains a long-term vision of urban mobility.	44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.	
42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders.		The stakeholders and citizens have been enabled to get actively involved in the development of the vision.	
43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.			

### **SCORE:** 3/5

The policy scenario/measure includes a long-term vision of urban mobility, which has also been developed in cooperation with a representative group of key stakeholders, however the in-depth stakeholder/citizen engagement was not included in the process — due to the more technical character of the measure, this should not have a great impact on measure implementation.

### 5 - Priorities and targets

Performed			Not performed	
<b>51</b>	The policy scenario/measure clearly sets out overall objectives.	52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes ( stakeholders, citizens).	
54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.	53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.	

### **SCORE**: 2/4

The policy scenario/measure clearly sets out overall objectives, along with the description of a set of SMART targets, however, these have not been confirmed through public participation and involvement processes (stakeholders) and the feedback from the public has not been obtained, which



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could result in lesser increase in PT usage (public not being aware of the benefits, potential opposition to the passenger car restriction due to PT priority at intersections etc.).

#### 6 - Measures

Performed		Not performed	
<mark>61</mark>	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?		The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).
<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.	<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.

#### **SCORE:** 2/4

The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets in terms of air pollution. Since the PT improvement includes the extension of lines to neighbouring municipalities (daily migrants), another strong point lies in the fact that policy scenario/measure incorporates cross-boundary interventions in partnership with neighbouring authorities.

Due to the technical nature of the measure and due to the fact that the decision-making regarding this measure was limited to the PT company management, the public participation and involvement has not played an important role in the measure development process and in terms of feasibility.

# 7 - Responsibilities & funding

Performed		Not performed	
71	Responsibilities for the implementation of measures have been allocated.	<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.
72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.		The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.



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	A budget plan, setting out funding requirements and sources has been prepared.	
<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.	

#### **SCORE:** 4/6

The dedication to funding (budget plan, formal agreements) and allocating responsibilities has been given relatively high attention within the development of this policy, including the preparation of an outline of the implementation priorities, schedules, risks and contingency actions. Nevertheless, the CBA was not used as a guide for the detailed decision making, which can pose some feasibility issues from a financial and organisational perspective.

# 8 - Monitoring & assessment

	Performed	Not performed	
<mark>81</mark>	A data collection strategy has been developed.	82	A monitoring and evaluation plan has been developed. (Including process evaluation)
		83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.
		84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.
		<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.

### **SCORE:** 1/5

Monitoring and assessment was a part of the planning only to the point where a data collection strategy has been developed (primarily for parameters affecting the performance of the busses, not related to the overall air pollution reduction strategy). No other activities else have been included in the measure, which may present difficulties in determining, if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.



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City: Policy scenario/measure		ario/measure	Description
Ljubljana	4	M4_DistrHEAT	Increased utilization and expansion of district heating systems; renovation of the system - replacement of existing combustion units with more appropriate means (i.e. 70% reduction of coal use) (2030 scenario)

# 1 - Potential for success

Performed		Not performed	
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	<b>3</b>	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.
2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.	<mark>4</mark>	A peer-review methodology for analysing the strengths and weaknesses has been used.
6	The sources for funding the process of developing the policy scenario/measure has been assessed	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.
8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.	7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).
		9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.

# **SCORE:** 4/9

The measure exhibits its strengths in the fact that the responsible planning authority has in fact made a formal commitment to make sustainability principles the underlying basis for the intervention, which was in line with the existing European, national and regional level policies and plans. Also, the



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allocation of resources for implementation and confirmation of the timeframe for planning/implementation of the measure has been clearly defined.

Although the peer-review methodology for analysing the strengths and weaknesses has not been used, no gap analysis of qualifications and skills within the planning authority undertaken, this is not to be considered as a major drawback in terms of feasibility of implementation, since the measure is operated exclusively by the energy company without a direct link to the city authority. The only potential issue could be, that no direct reflection to the local planning policies or inclusion of the stakeholders has been made, which could interfere with the dynamics of measure implantation, concerning the issuance of construction permits for the district heating pipelines in designated areas.

### 2 - Development process, scope

2-0	2 - Development process, scope				
Performed		Not performed			
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.		
		22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.		
		<mark>24</mark>	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.		
		25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.		

#### **SCORE:** 1/5

During the policy scenario/measure development process and determining the scope of intervention, a reference to policies and plans which already exist or are being developed on the local level has been made. On the other hand, the measure development process has been mainly limited to the heat distribution company. Consequently, the institutions representing the relevant policy areas closely related to air quality (e.g. environment, health) have not been regularly involved in the process, which related to the fact that work plan for the planning process, dedication of responsibilities and milestones has not been agreed, which may present issues in organisational aspect of measure implementation, resulting in possible delays.



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#### 3 - Situation and scenarios

	Performed		Not performed
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	35	A reference to a business-as-usual scenario has been described.
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.	37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.	<mark>38</mark>	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?

### **SCORE:** 4/8

The developing phase of this policy scenario/measure consisted mainly of a diagnosis of the main problems related to heating together with an analysis of air quality, hotspots etc.; this represents a solid basis for decision making processes. A selection of suitable indicators to describe the air pollution situation in the designated area has also been made, along with assessment of the availability and quality of related existing data, which serves as a good basis for monitoring activities later on. On the other hand, a lack of a reference business-as-usual scenario can lead to a dilemma whether the measure in question will actually bring the necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored. This can result in the lowered public/stakeholder acceptance rate in future, but with a limited impact on feasibility.

#### 4 - Common vision

Performed	Not performed
	The policy scenario/measure contains a long-term vision of air quality related measures.



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42	The long-term vision of air quality related measures has been developed in cooperation with a representative group of key stakeholders?
43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.
44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.
45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.

#### **SCORE:** 0/5

The process of adopting of a common vision in terms air quality is poor for this measure. Namely, no steps, that would insure a long term dedication have been performed. This may prove problematic further down the process when the implementation of district heating system is underway – a lack of "ownership" of the measure may occur and this could have a negative effect on the feasibility, primarily in terms of reluctance to connect to the district heating system, but this is expected in a very low extent which will not affect the feasibility of implementation. In terms of fuel replacement, this may result in a stronger opposition only if new less pollution technologies become available, but this is unlikely to happen during the lifetime of this measure.

# 5 - Priorities and targets

	Performed		Not performed
<mark>51</mark>	The policy scenario/measure clearly sets out overall objectives.	52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes ( stakeholders, citizens).
54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.	53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.

# **SCORE: 2/4**

The policy scenario/measure clearly sets out overall objectives, along with the description of a set of SMART targets, however, these have not been assessed through public participation and involvement processes (stakeholders) and the feedback from the public has not been obtained, which could result



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in lesser increase in PT usage (public not being aware of the benefits, potential opposition to the passenger car restriction due to PT priority at intersections etc.).

#### 6 - Measures

	Performed		Not performed
<mark>61</mark>	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?	<mark>62</mark>	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).
		<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.
		<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.

### **SCORE:** 1/4

The policy scenario/measure includes the description on how it will contribute to the achievement of the agreed vision, objectives and targets, but on the other hand it lacks the identification and selection of policy scenarios/measures, that have been done through public participation, involvement and partnership processes (stakeholders, citizens, authorities...). Since this is political/management type of measure, the absence of stakeholder/citizen engagement should not have any significant impact on the feasibility.

# 7 - Responsibilities & funding

	Performed		Not performed
71	Responsibilities for the implementation of measures have been allocated.	<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.
72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.		The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.



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<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.	
<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.	

#### **SCORE:** 4/6

The dedication to funding (budget plan, formal agreements) and allocating responsibilities has been given relatively high attention within the development of this policy, including the preparation of an outline of the implementation priorities, schedules, risks and contingency actions. Nevertheless, the CBA was not used as a guide for the detailed decision making, which can pose some feasibility issues from a financial and organisational perspective.

# 8 - Monitoring & assessment

	Performed		Not performed
81	A data collection strategy has been developed.	82	A monitoring and evaluation plan has been developed. (Including process evaluation)
		83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.
		84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.
		<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.

#### **SCORE:** 1/5

Monitoring and assessment was a part of the planning only to the point where a data collection strategy has been developed (primarily for parameters affecting the performance of the busses, not related to the overall air pollution reduction strategy). No other activities else have been included in the measure, which may present difficulties in determining, if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.



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# Madrid

City	No	Scenario name	Scenario description
Madrid	4	Logistics	Public-private collaboration in order to make urban logistics processes more efficient
Madrid	5	EnEff	Regeneration of neighbourhoods by improving energy efficiency and thermal insulation of the building stock and re-naturalization of the city

City: Policy scenario/measure		ario/measure	Description
Madrid	4	Logistics	Public-private collaboration in order to make urban logistics processes more efficient
Madrid 5 EnEff Regeneration of neighbourhoods by impro energy efficiency and thermal insulation of building stock and re-naturalization of the cit			

# 1 - Potential for success

Performed	Not performed		
	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.		
	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.		
	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.		
	A peer-review methodology for analysing the strengths and weaknesses has been used.		



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A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.
The sources for funding the process of developing the policy scenario/measure has been assessed
<ul> <li>The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).</li> </ul>
A timeframe for the preparation and implementation of the policy scenario/measure has been defined.
Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.

# **SCORE:** 1/9

Due to the fact, that none of the elements of success have been performed within the development of this measure, the feasibility of this measure is questionable. Namely, the responsible planning authority has made no formal commitment to make sustainability principles the underlying basis for the intervention. Besides that, no other political incentive has been in force during the development of this measure, such as the reflection on the strengths and weaknesses of the existing local planning practices, the assessment of compliance with the hierarchically higher planning documents, no analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken, which can lead to organisational and possibly legislative issues when detailing the measure implementation etc.

#### 2 - Development process, scope

	Performed		Not performed
24	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.	<b>21</b>	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.



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25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.	22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.
		23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level .

#### **SCORE:** 2/5

During the policy scenario/measure development an internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones has been drafted, which can help to increase the work efficiency during the measure development. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have been regularly involved during the preparation phase, which presents additional leverage for reaching the air pollution reduction objectives of this measure.

On the other hand, a reference to policies and plans which already exist or are being developed on the local level has not been made and along with lack of agreement in terms of cooperation, roles, responsibilities and timing for measure development, this makes for a potentially weak foundation in terms of feasibility.

### 3 - Situation and scenarios

Performed		Not performed	
<b>31</b>	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	35	A reference to a business-as-usual scenario has been described.
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.		
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.		



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36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.	
38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?	

#### **SCORE:** 6/8

In the phase of developing the policy scenario/measure, a diagnosis of the main problems related to air pollution sources related to urban transport and mobility has been conducted during the preparation of policy scenario/measure together with an analysis of air quality and noise pollution, including identification of hotspots has been made which presents an important leverage for acquiring the critical mass for measure implementation — this is especially relevant where the measure is based on changing the users habits and behavioural patterns. The availability and quality of related existing data has also been assessed, together with the selection of suitable indicators to describe the air pollution situation, which can aid the presentation of the success to the public at a later stage in order to clearly show the benefits, or to have the evidence when trying to transfer the policy to other areas. Also, the alternatives to understand the likely effects of different combinations of air pollution related interventions have been explored. On the contrary, a lack of a reference business-as-usual scenario and qualitative analysis techniques (e.g. through expert judgement, can lead to a dilemma whether the measure in question will actually bring the necessary improvements.

#### 4 - Common vision

Performed		Not performed	
44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.	<b>ZI</b> 1	The policy scenario/measure contains a long-term vision of urban mobility.
45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.	42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders?
		43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.

#### **SCORE:** 2/5

Creating the common vision in collaboration or engagement of stakeholders may prove to be quite encouraging, however the vision is currently not included in the air quality policy in relation to energy/mobility which would be the of a key importance in terms of defining the foundation for feasibility of implementation.



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Performed		Not performed	
53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.	<b>51</b>	The policy scenario/measure clearly sets out overall objectives.
		52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes ( stakeholders, citizens).
		54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.

# **SCORE:** 1/4

In the process of setting priorities and targets of the policy scenario/measure, the feedback from the public has not been obtained, which could be characterised as a good starting point. It is yet to be conformed if these findings will eventually be transferred into the policy in question, because otherwise this would make for a vague basis for the actual implementation of the policy/measure and its future success in terms of air quality improvement.

# 6 - Measures

Performed			Not performed		
<mark>61</mark>	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?	<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.		
<mark>62</mark>	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).	<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.		



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#### **SCORE:** 2/4

The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets, and along with the fact that the identification and selection of policy scenarios/measures through has been done through public participation and involvement processes (stakeholders, citizens...), this makes for a quite strong foundation for a successful implementation. This often results in an increased level of social acceptance of the measure once the implementation and operation commences.

# 7 - Responsibilities & funding

Performed		Not performed		
72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.	71	Responsibilities for the implementation of measures have been allocated.	
<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.			
		<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.	
		<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.	

### **SCORE**: 2/6

The dedication to funding (budget plan, formal agreements) and allocating responsibilities has been addressed to the point where a budget plan, setting out funding requirements and sources has been prepared, including the preparation of an outline of the implementation priorities, schedules, risks and contingency actions. Nevertheless, responsibilities for the implementation of measures have not been allocated, and the CBA was not used as a guide for the detailed decision making, which can pose some feasibility issues from a financial and organisational perspective.

### 8 - Monitoring & assessment

Performed	Not performed



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81 A data collection strategy has be developed.	een
A monitoring and evaluation plan has be developed. (Including process evaluation	
83 Arrangements for policy scenario/meas monitoring and evaluation have be discussed with a group of key stakeholder.	een
84 The policy scenario/measure explains he stakeholders and citizens will be keep informed about the implementation monitoring and evaluation.	ept
Mechanisms for the interaction of stakeholders and citized during policy scenario/measure monitor and evaluation have been foreseen.	ens

# **SCORE:** 0/5

Monitoring and assessment was not a part of the planning, which may present difficulties in determining if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.

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# Milan

City	No	Scenario name	Scenario description
Milan	1	AreaB	Low Emission Zone (Area B): Control and tracking of access into the city by banning up to Euro 3 diesel cars (up to Euro 4 from October 2019)
Milan	2	ElectricBus	Conversion of all public buses to electric ones by 2030

	City: Policy	y scer	nario/measure	Description
diesel cars (up to Euro 4 from October 2019)	Milan	1	AreaB	Low Emission Zone (Area B): Control and tracking of access into the city by banning up to Euro 3 diesel cars (up to Euro 4 from October 2019)

# 1 - Potential for success

	Performed		Not performed
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	4	A peer-review methodology for analysing the strengths and weaknesses has been used.
2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.
3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.		
6	The sources for funding the process of developing the policy scenario/measure has been assessed		
7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).		



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8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.
9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.

#### **SCORE**: 7/9

The strong point for this measure lies in the fact that the responsible planning authority has in fact made a formal commitment to make sustainability principles the underlying basis for the intervention. Also a revision of the existing European, national and regional level has been included in the process of policy preparation as well as the reflection on the strengths and weaknesses of the local planning practices, along with the allocation of resources for implementation and confirmation of the timeframe for planning/implementation of the measure. Relevant stakeholders, their impact and roles have also been identified, which makes for a solid foundation in measure implementation. On the other hand, no peer-review methodology for analysing the strengths and weaknesses has been used, no gap analysis of qualifications and skills within the planning authority has been undertaken, which, considering the relatively complex nature of the measure, could be considered as a potential major drawback in terms of feasibility of implementation.

#### 2 - Development process, scope

	Performed		Not performed
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	<b>21</b>	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.
24	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.	22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.
25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.		

### **SCORE:** 3/5

In the phase of policy scenario/measure development a reference to existing policies and plans on the local level has been made, internal work plan for the planning process (indicating steps to be taken, responsibilities and milestones) has been drafted, which can help to increase the work



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efficiency during the measure development. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have been regularly involved during the preparation phase, which presents additional leverage for reaching the air pollution reduction objectives of this measure.

On the other hand, a lack of agreement in terms of cooperation, roles, responsibilities and timing for measure development, this makes for a potentially weak foundation in terms of efficient implementation.

#### 3 - Situation and scenarios

	Performed		Not performed
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	35	A reference to a business-as-usual scenario has been described.
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.		
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.		
37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?		
38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?		

#### **SCORE:** 6/8

In the phase of developing the policy scenario/measure, a diagnosis of the main problems related to air pollution sources related to urban transport and mobility has been conducted during the preparation of policy scenario/measure together with an analysis of air quality and noise pollution, including identification of hotspots has been made which presents an important leverage for



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acquiring the critical mass for measure implementation — this is especially relevant where the measure is based on changing the users habits and behavioural patterns. The availability and quality of related existing data has also been assessed, together with the selection of suitable indicators to describe the air pollution situation, which can aid the presentation of the success to the public at a later stage in order to clearly show the benefits, or to have the evidence when trying to transfer the policy to other areas. On the contrary, a lack of a reference business-as-usual scenario, can lead to a dilemma whether the measure in question will actually bring the necessary improvements. Also, alternatives to understand the likely effects of different combinations of air pollution related interventions have not been explored.

#### 4 - Common vision

Performed			Not performed		
41	The policy scenario/measure contains a long-term vision of air quality related measures.	42	The long-term vision of air quality related measures has been developed in cooperation with a representative group of key stakeholders.		
43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.	45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.		
44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.				

#### **SCORE:** 3/5

The policy scenario/measure does contain a long-term vision of urban mobility, which has not been developed with an in-depth cooperation with a representative group of key stakeholders (they have merely been informed about the process and invited to provide feedback – no 2-way communication took part) and can therefore be characterised as potentially vague in terms of actual achievements thereof. The lack of creating a common vision with active involvement of stakeholders may prove problematic further down the process when the implementation of the policy scenario/measure is underway – a lack of acceptance of the measure may occur and this could have a negative effect on the feasibility.

#### 5 - Priorities and targets

Performed	Not performed



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			The overall objectives/targets of the policy scenario/measure have been assessed
<b>51</b>		52	through public participation and
	The policy scenario/measure clearly sets		involvement processes ( stakeholders,
	out overall objectives.		citizens).
	The stakeholders and citizens have been		The policy scenario/measure describes and
53	informed about the overall objectives of the	54	is based on a set of SMART (Specific
33	measure and were invited to provide	54	Measurable Achievable Realistic Time-
	feedback.		Bound) targets.

### **SCORE:** 2/4

In regard to setting priorities and targets, the policy scenario/measure clearly sets out overall objectives, however these are not described as a set of SMART targets, which otherwise could help to steer the implementation in the right direction, once the complexity of the measure becomes evident. The assessment has not been made through an in-depth public participation and involvement processes (stakeholders, citizens...), although the feedback has been obtained. This makes for a strongpoint in terms of ownership of the measure and public acceptance, which serves as an important aspect of feasibility.

#### 6 - Measures

Performed		Not performed	
<mark>61</mark>	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?	<mark>62</mark>	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).
<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.	<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.

#### **SCORE**: 2/4

The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets in terms of air pollution. Since the restriction affects the daily migrants from neighbouring municipalities, another strong point lies in the fact that policy scenario/measure incorporates cross-boundary interventions in partnership with neighbouring authorities.

The downside is, that the identification and selection of policy scenarios/measures through has not been done through public participation and involvement processes (stakeholders, citizens...), which may cause a lower level of social acceptance of the measure once the implementation and operation commences.



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# 7 - Responsibilities & funding

	Performed	Not performed		
71	Responsibilities for the implementation of measures have been allocated.	<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.	
72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.			
<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.			
<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.			
<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.			

### **SCORE:** 5/6

The dedication to funding (budget plan, formal agreements) and allocating responsibilities has been given relatively high attention within the development of this policy, including the preparation of an outline of the implementation priorities, schedules, risks and contingency actions. Additionally, the CBA was used as a guide for the detailed decision making, which can provide an extra leverage from a financial and organisational perspective, whereas the fact of not reaching a formal agreement has by decision makers and key stakeholders on the action and budget plan could undermine that.

# 8 - Monitoring & assessment

Performed			Not performed		
<mark>81</mark>	A data collection strategy has been developed.	<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.		
82	A monitoring and evaluation plan has been developed. (Including process evaluation)				



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83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.	
84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.	

### **SCORE:** 4/5

Monitoring and assessment was given significant attention during the planning of the measure to the point where the monitoring and evaluation activities have been developed (data collection strategy, monitoring/evaluation plan) that have also been discussed with a group of key stakeholders. The policy also foresees informing of stakeholders and citizens about the implementation, monitoring and evaluation results, which presents a solid basis for determining, how much the measure has contributed to actual air pollution improvement.

City: Policy scenario/measure		nario/measure	Description
Milan	2	ElectricBus	Conversion of all public buses to electric ones by 2030

### 1 - Potential for success

Performed			Not performed		
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	<mark>4</mark>	A peer-review methodology for analysing the strengths and weaknesses has been used.		
2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.		
3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.				



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	Performed		Not performed
2 - D	evelopment process, scope		
The simade interior the color the co	RE: 7/9 strong point for this measure lies in the fact to a formal commitment to make sustain vention. Also a revision of the existing Europe e process of policy preparation as well as the planning practices, along with the allocation e timeframe for planning/implementation of roles have been identified, which makes for a other hand, even If no peer-review methodological used or gap analysis of qualifications and extaken, this should not be considered as a permentation, because of the more technical and affect the acceptance/change of behavior cted that could have an impact on the implementation.	ability ean, n reflec of reso the m solid egy for d skill otent spect ur is	principles the underlying basis for the ational and regional level has been included tion on the strengths and weaknesses of the ources for implementation and confirmation neasure. Relevant stakeholders, their impact foundation in measure implementation. On analysing the strengths and weaknesses has is within the planning authority has been ial major drawback in terms of feasibility of of the measure. No significant change, that foreseen, therefore no opposition is to be
	have been identified.		
9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process		
8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.		
7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).		
6	The sources for funding the process of developing the policy scenario/measure has been assessed		



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23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.
24	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.	22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.
25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.		

### **SCORE:** 3/5

In the phase of measure development process and defining scope a reference to policies and plans which already exist or are being developed. An internal work plan for the planning process (indicating steps to be taken, responsibilities and milestones) has also been drafted, which can help to increase the work efficiency during the measure development. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have been regularly involved during the preparation phase, which presents a good leverage for reaching the air pollution reduction objectives of this measure.

On the other hand, lack of agreement in terms of cooperation, roles, responsibilities and timing for measure development, makes for a potentially weak foundation in terms of efficiency of the work, which may result in implementation delays.

#### 3 - Situation and scenarios

Performed		Not performed		
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.	
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	35	A reference to a business-as-usual scenario has been described.	



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33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.	
36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.	
37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?	
38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?	

#### **SCORE:** 6/8

In the phase of developing the policy scenario/measure, a diagnosis of the main problems related to air pollution sources related to urban transport and mobility has been conducted during the preparation of policy scenario/measure which presents an important leverage for acquiring the critical mass for measure implementation. The availability and quality of related existing data has also been assessed, together with the selection of suitable indicators to describe the air pollution situation, and description of possible alternatives, which can aid the presentation of the success to the public at a later stage in order to clearly show the benefits, or to have the evidence when trying to transfer the policy to other areas. On the contrary, a lack of air quality and noise pollution analysis (including identification of hotspots) and a lack of a reference to a business-as-usual scenario, can lead to a dilemma whether the measure in question will actually bring the necessary improvements.

#### 4 - Common vision

	Performed	Not performed
41	The policy scenario/measure contains a long-term vision of urban mobility.	
42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders.	
43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.	



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44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.	
45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.	

#### **SCORE:** 5/5

The process of adopting of a common vision in terms air quality is very strong for this measure. Namely, all steps, that would insure a long term dedication have been performed.

### 5 - Priorities and targets

Performed		Not performed		
<b>51</b>	The policy scenario/measure clearly sets out overall objectives.	54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.	
52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes ( stakeholders, citizens).			
53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.			

#### **SCORE**: 3/4

In regard to setting priorities and targets, the policy scenario/measure clearly sets out overall objectives, however these are not described as a set of SMART targets, which otherwise could help to steer the implementation in the right direction, once the complexity of the measure becomes evident. Setting priorities and targets has also been made through an in-depth public participation and involvement processes (stakeholders, citizens...). This makes for a strongpoint in terms of ownership of the measure and public acceptance, which serves as an important aspect of feasibility.

#### 6 - Measures

Performed Not performed
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			Elected	representatives	and	decision
<b>61</b>	The policy scenario/measure makes clear	<mark>63</mark>	makers h	ave been taken to	visit of	ther cities
01	how it will contribute to the achievement of		with the	proposed policy so	enario	/measure
	the agreed vision, objectives and targets?		in place.			
	The identification and selection of policy					
	scenarios/measures through has been done					
<mark>62</mark>	through public participation and					
	involvement processes ( stakeholders,					
	citizens).					
	The policy scenario/measure incorporates					
<mark>64</mark>	cross-boundary interventions to be					
04	implemented in partnership with					
	neighbouring authorities.					

#### **SCORE:** 3/4

The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets in terms of air pollution. Another strong point lies in the fact that policy scenario/measure incorporates cross-boundary interventions in partnership with neighbouring authorities. Also, the identification and selection of policy scenarios/measures has been done through public participation and involvement processes (stakeholders, citizens...), which can benefit the success of the implementation. The fact, that elected representatives and decision makers have not been taken to visit other cities with the proposed policy scenario/measure in place does not play a significant role here, since this is a highly technical measure with advantages already known, however, the benefits of learning best practices may help in terms of more efficient implementation.

# 7 - Responsibilities & funding

Performed		Not performed		
71	Responsibilities for the implementation of measures have been allocated.	<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.	
72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.			
<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.			
<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.			



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	The CBA	has bee	en used as	a ba	sis for
<mark>76</mark>	decision	making	regarding	the	policy
	scenario/	measure i	implementa <sup>:</sup>	tion.	

#### **SCORE:** 5/6

The dedication to funding (budget plan, formal agreements) and allocating responsibilities has been given high attention within the development of this policy, including the preparation of an outline of the implementation priorities, schedules, risks and contingency actions. Additionally, the CBA was used as a guide for the detailed decision making, which can provide an extra leverage from a financial and organisational perspective, whereas the fact of not reaching a formal agreement has by decision makers and key stakeholders on the action and budget plan could undermine that.

#### 8 - Monitoring & assessment

	Performed	Not performed
<mark>81</mark>	A data collection strategy has been developed.	
<mark>82</mark>	A monitoring and evaluation plan has been developed. (Including process evaluation)	
83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.	
84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.	
<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.	

### **SCORE:** 5/5

Monitoring and assessment was given significant attention during the planning of the measure to the point where the monitoring and evaluation activities have been developed (data collection strategy, monitoring/evaluation plan) that have also been discussed with a group of key stakeholders. The policy also foresees informing as well as interactive engagement of stakeholders and citizens about the implementation, monitoring and evaluation results, which presents a very solid basis for determining, how much the measure has contributed to actual air pollution improvement.



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# Stuttgart

City	No	Scenario name	Scenario description
Stuttgart	1	ScEL	Promoting low carbon electric vehicles (share in vkm to 7% in 2020, 20% in 2030)
Stuttgart	2	ScUV	Promoting environmentally friendly transport modes (walking, cycling, PT) (decrease of individual transport by 7% in 2020; 20% in 2030) (2030 scenario)
Stuttgart	4	Sc1	Increase of building insulation (+2%) and heating system exchange to high efficiency gas boilers

City: Policy scenario/measure		nario/measure	Description	
Stuttgart	1	ScEL	Promoting low carbon electric vehicles (share in vkm to 7% in 2020, 20% in 2030)	
Stuttgart	2	ScUV	Promoting environmentally friendly transport modes (walking, cycling, PT) (decrease of individual transport by 7% in 2020; 20% in 2030) (2030 scenario)	

# 1 - Potential for success

Performed			Not performed		
2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.		The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.		
3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.		
4	A peer-review methodology for analysing the strengths and weaknesses has been used.	6	The sources for funding the process of developing the policy scenario/measure has been assessed		



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7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies	9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have
	and strategies (e.g. the land use plan).		been identified.
8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.		

#### **SCORE:** 5/9

During the development of this measure, the revision of the existing European, national and regional level has been included in the process of policy preparation as well as the reflection on the strengths and weaknesses of the local planning practices, along with the allocation of resources for implementation and confirmation of the timeframe for planning/implementation of the measure. The peer-review methodology for analysing the strengths and weaknesses has also been used in order to provide a better ground for success. On the other hand, relevant stakeholders, their impact and roles have not been identified, which makes for a somewhat weak foundation in measure implementation. Same goes for a lack of gap analysis of qualifications and skills within the planning authority has been undertaken, this should not be considered as a potential major drawback in terms of feasibility of implementation, because of the more of a "soft" nature of the measures.

The only major drawback could be characterised by the fact, that the responsible planning authority hasn't made a formal commitment to make sustainability principles the underlying basis for the intervention, which could result in public not taking the promotion activities as important.

### 2 - Development process, scope

	Performed	Not performed	
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	<mark>21</mark>	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.
24	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.	22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.
		25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.



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### **SCORE:** 2/5

During the measure development process and defining scope a reference to policies and plans that already exist or are being developed. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have been regularly involved during the preparation phase, which presents a good leverage for reaching the air pollution reduction objectives of this measure.

On the other hand, the absence of an internal work plan indicating steps to be taken, responsibilities and milestones, agreements in terms of cooperation, roles, responsibilities and timing for measure development, makes for a potentially weak foundation in terms of efficiency of the work, which may result in implementation delays and inefficient impact in terms of public acceptance and behaviour change.

#### 3 - Situation and scenarios

	Performed		Not performed
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	35	A reference to a business-as-usual scenario has been described.
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	<mark>38</mark>	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.		
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.		
36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.		
37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?		



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### **SCORE:** 6/8

In the phase of developing the policy scenario/measure, a diagnosis of the main problems related to air pollution sources related to urban transport and mobility has been conducted during the preparation of policy scenario/measure which presents an important leverage for acquiring the critical mass for measure implementation. The availability and quality of related existing data has also been assessed, together with the selection of suitable indicators to describe the air pollution situation, and description of possible alternatives, which can aid the presentation of the success to the public at a later stage in order to clearly show the benefits, or to have the evidence when trying to transfer the policy to other areas. On the contrary, a lack of air quality and noise pollution analysis (including identification of hotspots) and a lack of a reference to a business-as-usual scenario, can lead to a dilemma whether the measure in question will actually bring the necessary improvements.

### 4 - Common vision

Performed			Not performed
41	The policy scenario/measure contains a long-term vision of urban mobility.	42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders.
		43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.
		44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.
		45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.

### **SCORE:** 1/5

The policy scenario/measure does contain a long-term vision of urban mobility, which has not been developed in cooperation with a representative group of key stakeholders and can therefore be characterised as potentially vague in terms of actual achievements thereof. The lack of creating a common vision in collaboration or engagement of stakeholders may prove problematic further down the process when the implementation of the policy scenario/measure is underway — a lack of "ownership" of the measure may occur and this could have a negative effect on the feasibility.

### 5 - Priorities and targets



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Performed		Not performed	
<mark>51</mark>	The policy scenario/measure clearly sets out overall objectives.	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes (stakeholders, citizens).	
54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.	53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.

### SCORE: 2/4

The policy scenario/measure clearly sets out overall objectives, along with the description of a set of SMART targets, however, these have not been assessed through public participation and involvement processes (stakeholders) and the feedback from the public has not been obtained, which could result in lesser increase in sustainable transport options usage.

#### 6 - Measures

Performed			Not performed
61	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?		The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).
<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.	<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.

#### **SCORE**: 2/4

The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets. Since the measure affects also the traffic from neighbouring municipalities (daily migrants), another strong point lies in the fact that policy scenario/measure incorporates cross-boundary interventions in partnership with neighbouring authorities.

The weak point is that the identification and selection of policy scenarios/measures has not been done through public participation and involvement processes (stakeholders, citizens...), which could result in a decreased level of social acceptance of the measure once the implementation and operation commences.



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# 7 - Responsibilities & funding

Performed			Not performed
71	Responsibilities for the implementation of measures have been allocated.	72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.
		<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.
		<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.
		<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.
		<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.

## **SCORE:** 1/6

The funding has not been given attention within the preparation phase of this measure, apart from the allocation of allocation of responsibilities – this can lead to serious issues in feasibility of this measure from a financial and organisational perspective.

# 8 - Monitoring & assessment

Performed	Not performed		
	81 A data collection strategy has been developed.		
	A monitoring and evaluation plan has been developed. (Including process evaluation)		



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	83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.
	84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.
	<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.

## **SCORE:** 0/5

Monitoring and assessment was not a part of the planning, which may present difficulties in determining if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in order to follow the success of the measure implementation/operation in regard to air pollution.

City: Policy scenario/measure		Description			
Stutt	gart	4	Sc1	Increase of building insulation (+2%) and heating system exchange to high efficiency gas boilers	
1 - Pc	1 - Potential for success				
Performed			Not performed		
2	Euro have	pean, in	regulations and plans from the national and regional level that nplications for the policy neasure have been reviewed.	onal level that the policy made a formal commitment to make sustainability principles the underlying bas	
3	weak pract	nesso ices	tion on the strengths and es of your existing local planning with regard to developing the nario/measure has been made.	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been	
	polic	y scei	ialio/illeasure has been made.		undertaken.

6

been assessed

developing the policy scenario/measure has

the strengths and weaknesses has been

used.



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7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies	9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have
	and strategies (e.g. the land use plan).		been identified.
8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.		

### **SCORE:** 5/9

During the development of this measure, the revision of the existing European, national and regional level has been included in the process of policy preparation as well as the reflection on the strengths and weaknesses of the local planning practices, along with the allocation of resources for implementation and confirmation of the timeframe for planning/implementation of the measure. The peer-review methodology for analysing the strengths and weaknesses has also been used in order to provide a better ground for success. On the other hand, relevant stakeholders, their impact and roles have not been identified, which makes for a somewhat weak foundation in measure implementation. Same goes for a lack of gap analysis of qualifications and skills within the planning authority has been undertaken, this should not be considered as a potential major drawback in terms of feasibility of implementation, because of the more technical nature of the measure.

The only major drawback could be characterised by the fact, that the responsible planning authority hasn't made a formal commitment to make sustainability principles the underlying basis for the intervention.

## 2 - Development process, scope

Performed		Not performed	
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.
<mark>24</mark>	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.	22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.
		25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.



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### **SCORE:** 2/5

During the measure development process and defining scope a reference to policies and plans which already exist or are being developed. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have been regularly involved during the preparation phase, which presents a good leverage for reaching the air pollution reduction objectives of this measure. On the other hand, the absence of an internal work plan indicating steps to be taken, responsibilities and milestones, agreements in terms of cooperation, roles, responsibilities and timing for measure development, makes for a potentially weak foundation in terms of efficiency of the work.

### 3 - Situation and scenarios

	Performed		Not performed
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	35	A reference to a business-as-usual scenario has been described.
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	<mark>38</mark>	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.		
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.		
36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.		
37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?		

## **SCORE:** 6/8

In the phase of developing the policy scenario/measure, a diagnosis of the main problems related to air pollution sources related to urban transport and mobility has been conducted during the



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preparation of policy scenario/measure which presents an important leverage for acquiring the critical mass for measure implementation. The availability and quality of related existing data has also been assessed, together with the selection of suitable indicators to describe the air pollution situation, and description of possible alternatives, which can aid the presentation of the success to the public at a later stage in order to clearly show the benefits, or to have the evidence when trying to transfer the policy to other areas. On the contrary, a lack of air quality and noise pollution analysis (including identification of hotspots) and a lack of a reference to a business-as-usual scenario, can lead to a dilemma whether the measure in question will actually bring the necessary improvements.

### 4 - Common vision

Performed	Not performed	
	The policy scenario/measure contains long-term vision of air quality related measures.	
	The long-term vision of air quality related measures has been developed in cooperation with a representative group of key stakeholders.	
	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.	
	Stakeholders and citizens have been informed about the vision building proced and have been given the opportunity provide feedback.	
	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.	

## **SCORE:** 0/5

The process of adopting of a common vision in terms air quality is poor for this measure. Namely, no steps, that would insure a long term dedication have been performed. This may prove problematic further down the process when the implementation of district heating system is underway – a lack of "ownership" of the measure may occur and this could have a negative effect on the feasibility, primarily in terms of reluctance to connect to the district heating system, but this is expected in a very low extent which will not affect the feasibility of implementation. In terms of fuel replacement,



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this may result in a stronger opposition only if new less pollution technologies become available, but this is unlikely to happen during the lifetime of this measure.

## 5 - Priorities and targets

Performed		Not performed	
<b>51</b>	The policy scenario/measure clearly sets out overall objectives.	52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes ( stakeholders, citizens).
54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.		The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.

## **SCORE**: 2/4

The policy scenario/measure clearly sets out overall objectives, along with the description of a set of SMART targets, however, these have not been assessed through public participation and involvement processes (stakeholders) and the feedback from the public has not been obtained, which could result in lesser compliance with the proposed interventions.

### 6 - Measures

Performed		Not performed	
61	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?	<mark>62</mark>	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).
		<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.
		<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.



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## **SCORE:** 1/4

The policy scenario/measure includes the description on how it will contribute to the achievement of the agreed vision, objectives and targets, but on the other hand it lacks the identification and selection of policy scenarios/measures, that have been done through public participation, involvement and partnership processes (stakeholders, citizens, authorities...). Since this is "soft" type of measure, the absence of stakeholder/citizen engagement should not have any significant impact on the feasibility.

## 7 - Responsibilities & funding

Performed		Not performed	
71	Responsibilities for the implementation of measures have been allocated.	72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.
		<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.
		<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.
		<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.
		<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.

### **SCORE:** 1/6

The funding has not been given attention within the preparation phase of this measure, apart from the allocation of allocation of responsibilities – this can lead to serious issues in feasibility of this measure from a financial and organisational perspective.

### 8 - Monitoring & assessment

Performed	Not performed



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	<mark>81</mark>	A data collection strategy has been developed.
	<mark>82</mark>	A monitoring and evaluation plan has been developed. (Including process evaluation)
	83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.
	84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.
	<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.

# **SCORE:** 0/5

Monitoring and assessment was not a part of the planning, which may present difficulties in determining if in fact the measure has contributed to actual air pollution improvement – i.e. no data collection or monitoring plan was developed which would have been crucial in this regard.

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# Thessaloniki

City	No	Scenario name	Scenario description
Thessaloniki (region)	2	M2	Promotion of cycling/walking, green vehicles and public transport
Thessaloniki (region)	4	M4	Energy efficiency in the cement industry: Use of refuse derived fuels

City: Policy s	City: Policy scenario/measure		Description		
Thessaloniki (region)	2	M2	Promotion of cycling/walking, green vehicles and public transport		

# 1 - Potential for success

	Performed		Not performed
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	4	A peer-review methodology for analysing the strengths and weaknesses has been used.
2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.	5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.
3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.	8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.
6	The sources for funding the process of developing the policy scenario/measure has been assessed		
7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).		



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	capaci	ty; vu	Inerable	gro	oups),	their	impact
9	and	role	early	on	in	the	policy
	scenar	rio/me	asure pro	ера	ration	proce	ss have
	haan i	dontifi	ρd				

**SCORE**: 6/9

The strong point for this measure lies in the fact that the responsible planning authority has in fact made a formal commitment to make sustainability principles the underlying basis for the intervention. Also a revision of the existing European, national and regional level has been included in the process of policy preparation as well as the reflection on the strengths and weaknesses of the local planning practices, along with the allocation of resources for implementation and confirmation of the timeframe for planning/implementation of the measure. An important element is also that the relevant stakeholders, their impact and role have been identified and included in the policy scenario/measure development process. On the other hand, no peer-review methodology for analysing the strengths and weaknesses has been used, no gap analysis of qualifications and skills within the planning authority has been undertaken, which, considering the nature of the measure, could be considered as a potential major drawback in terms of feasibility of implementation.

## 2 - Development process, scope

	Performed	Not performed		
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	<mark>21</mark>	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.	
24	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.		Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.	
		25	An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have been drafted.	

### **SCORE: 2/5**

During the policy scenario/measure development process and determining the scope of intervention, a reference to policies and plans which already exist or are being developed on the local level has been made. The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use...) have been regularly involved during that phase. However, the roles, responsibilities and timing for measure development have not been agreed in that regard, nor has a cooperation process with all neighbouring authorities on the spatial coverage of the policy



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scenario/measure been established. An internal work plan for the planning process, indicating steps to be taken, responsibilities and milestones have also not been drafted, which may present certain issues in organisation aspect of measure implementation, resulting mainly in possible delays in implementation, with only a minor effect on the overall feasibility.

#### 3 - Situation and scenarios

	Performed		Not performed
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	35	A reference to a business-as-usual scenario has been described.
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.	36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.
37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?	38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?

### **SCORE:** 4/8

A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy...) has been conducted during the preparation of policy scenario/measure together with an analysis of air quality and noise pollution, including identification of hotspots, which, combined with a set of suitable indicators to describe the air pollution, presents an important leverage for successful implementation and operation of the measure not only for the area in question, but also considering the transferability and /or up-scaling to other areas. A qualitative analysis technique (e.g. through expert judgement) have also been used to support policy scenario/measure development and appraisal which can help in acquiring the critical mass for measure implementation.

On the other hand, a lack of a reference business-as-usual scenario and absence of possible alternatives can lead to a dilemma whether the measure in question will actually bring the necessary improvements. This can result in the lowered public/stakeholder acceptance rate in future.



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### 4 - Common vision

Performed			Not performed			
41	The policy scenario/measure contains a long-term vision of urban mobility.	43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.			
42	The long-term vision of urban mobility has been developed in cooperation with a representative group of key stakeholders.					
44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.					
45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.					

## **SCORE:** 4/5

The policy scenario/measure does contain a long-term vision of urban mobility, which has been developed with an in-depth cooperation with a representative group of key stakeholders and can therefore be characterised as strong in terms of potential success in this regard. The process of creating a common vision with active involvement of stakeholders may prove to be quite encouraging further down the process when the implementation of the policy scenario/measure is underway. The only downside is, that the policy scenario/measure does not explain how it serves the city vision in the most efficient and effective way and why – this could potentially result in a lack of acceptance of the measure and this could have a negative effect on the feasibility.

# **5 - Priorities and targets**

	Performed		Not performed
<b>51</b>	The policy scenario/measure clearly sets out overall objectives.	54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.
52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and		



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	involvement processes ( stakeholders, citizens).	
53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.	

### **SCORE**: 3/4

In regard to setting priorities and targets, the policy scenario/measure clearly sets out overall objectives, however these are not described as a set of SMART targets, which otherwise could help to steer the implementation in the right direction, once the complexity of the measure becomes evident. Setting priorities and targets has also been made through an in-depth public participation and involvement processes (stakeholders, citizens...). This makes for a strongpoint in terms of ownership of the measure and public acceptance, which serves as an important aspect of feasibility.

#### 6 - Measures

	Performed		Not performed
<mark>62</mark>	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).		The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?
<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.	<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.

### **SCORE: 2/4**

The identification and selection of policy scenarios/measure has been done through process of public participation and involvement (stakeholders, citizens...), which can benefit the success of the implementation. Another strong point lies in the fact that it incorporates cross-boundary interventions in partnership with neighbouring authorities.

On the negative side, the measure does not make it clear how it will contribute to the achievement of the agreed vision, objectives and targets in terms of air pollution, which can undermine its acceptance by the public. The fact, that elected representatives and decision makers have not been taken to visit other cities with the proposed policy scenario/measure in place does not play a significant role here, since this is a soft measure with advantages already known, however, the benefits of learning best practices may help in terms of contribution to more efficient implementation.



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# 7 - Responsibilities & funding

	Performed		Not performed
<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.	71	Responsibilities for the implementation of measures have been allocated.
		72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.
		<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.
		<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.
		<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.

## **SCORE:** 1/6

The funding has not been given attention within the preparation phase of this measure, apart from the preparation of a budget plan along with funding requirements and sources, without any formal agreements, action plans or the CBA as a guide for the detailed decision making. This could lead to serious issues in feasibility of this measure from a financial and organisational perspective.

## 8 - Monitoring & assessment

	Performed		Not performed
<mark>81</mark>	A data collection strategy has been developed.	83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.
82	A monitoring and evaluation plan has been developed. (Including process evaluation)	84	The policy scenario/measure explains how stakeholders and citizens will be kept



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	informed about the implementation, monitoring and evaluation.
<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.

### SCORE: 2/5

Monitoring and assessment was a part of the measure development only to the point where a data collection strategy and monitoring/evaluation have been developed. No activities involving stakeholders have been included, which may present difficulties in determining, if in fact the monitoring/evaluation is actually "fit-for-purpose".

City: Policy scenario/measure		rio/measure	Description
Thessaloniki (region)	4	M4	Energy efficiency in the cement industry: Use of refuse derived fuels

## 1 - Potential for success

	Performed	Not performed
1	The responsible planning authority has made a formal commitment to make sustainability principles the underlying basis for the policy scenario/measure.	,
2	Relevant regulations and plans from the European, national and regional level that have implications for the policy scenario/measure have been reviewed.	t
3	A reflection on the strengths and weaknesses of your existing local planning practices with regard to developing the policy scenario/measure has been made.	
4	A peer-review methodology for analysing the strengths and weaknesses has been used.	



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5	A gap analysis of qualifications and skills within the planning authority in order to identify capacity building needs has been undertaken.	
6	The sources for funding the process of developing the policy scenario/measure has been assessed	
7	The policy scenario/measure preparation timeframe has been examined if it could be aligned with the development and implementation of other existing policies and strategies (e.g. the land use plan).	
8	A timeframe for the preparation and implementation of the policy scenario/measure has been defined.	
9	Relevant stakeholders (objectives, power, capacity; vulnerable groups), their impact and role early on in the policy scenario/measure preparation process have been identified.	

## **SCORE:** 9/9

The measure exhibits excellence in terms of potential for success. All of the elements for assuring a swift and efficient implementations have been considered.

# 2 - Development process, scope

	Performed	Not performed
21	A cooperation process been established with all neighbouring authorities on the spatial coverage of the policy scenario/measure.	
22	Roles, responsibilities and timing for measure development have been agreed on with neighbouring authorities.	
23	The policy scenario/measure refers to policies and plans which already exist or are being developed on the local level.	
24	The institutions representing the relevant policy areas closely related to air quality (e.g. environment, health, land-use) have been regularly involved during the policy scenario/measure development process.	



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SCORE: 5/5

The measure exhibits excellence in terms of measure development process and defining the scope.

# 3 - Situation and scenarios

	Performed	Not performed
31	A diagnosis of the main problems related to air pollution sources (urban transport and mobility, industry, energy) has been conducted.	
32	A set of suitable indicators to describe the air pollution situation in the spatial area covered by the policy scenario/measure and to reflect the pre-set objectives has been selected.	
33	The availability and quality of existing data, relevant for example for policy scenario/measure development has been assessed.	
34	An analysis of air quality and noise pollution, including identification of hotspots has been conducted.	
35	A reference to a business-as-usual scenario has been described.	
36	The policy scenario/measure explores alternatives to understand the likely effects of different combinations of air pollution related interventions.	
37	A qualitative analysis techniques (e.g. through expert judgement) have been used to support policy scenario/measure development and appraisal?	
38	Policy scenario/measures and their impacts have been discussed with the group of key stakeholders?	



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# **SCORE:** 8/8

The measure exhibits excellence in terms of measure development for the field of assessing the current situation and development of scenarios.

## 4 - Common vision

	Performed	Not performed
41	The policy scenario/measure contains a long-term vision of air quality related measures.	
42	The long-term vision of air quality related measures has been developed in cooperation with a representative group of key stakeholders.	
43	The policy scenario/measure clearly explain how it serves the city vision in the most efficient and effective way and why.	
44	Stakeholders and citizens have been informed about the vision building process and have been given the opportunity to provide feedback.	
45	The stakeholders and citizens have been enabled to get actively involved in the development of the vision.	

## **SCORE:** 5/5

The measure exhibits excellence in terms of measure development for this field.

# 5 - Priorities and targets

Performed Not performed
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<b>51</b>	The policy scenario/measure clearly sets out overall objectives.	
52	The overall objectives/targets of the policy scenario/measure have been assessed through public participation and involvement processes ( stakeholders, citizens).	
53	The stakeholders and citizens have been informed about the overall objectives of the measure and were invited to provide feedback.	
54	The policy scenario/measure describes and is based on a set of SMART (Specific Measurable Achievable Realistic Time-Bound) targets.	

# **SCORE:** 4/4

The measure exhibits excellence in terms of measure development for setting priorities and targers.

## 6 - Measures

	Performed	Not performed
<mark>61</mark>	The policy scenario/measure makes clear how it will contribute to the achievement of the agreed vision, objectives and targets?	
<mark>62</mark>	The identification and selection of policy scenarios/measures through has been done through public participation and involvement processes ( stakeholders, citizens).	
<mark>63</mark>	Elected representatives and decision makers have been taken to visit other cities with the proposed policy scenario/measure in place.	
<mark>64</mark>	The policy scenario/measure incorporates cross-boundary interventions to be implemented in partnership with neighbouring authorities.	

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# SCORE: 4/4

The measure exhibits excellence in terms of measure development for the development and selection of measures.

# 7 - Responsibilities & funding

	Performed	Not performed		
71	Responsibilities for the implementation of measures have been allocated.			
72	An action plan, outlining e.g. implementation priorities, schedules, risks and contingency actions has been prepared.			
<mark>73</mark>	A budget plan, setting out funding requirements and sources has been prepared.			
<mark>74</mark>	A formal agreement has been reached by decision makers and key stakeholders on the action and budget plan.			
<mark>75</mark>	The proposed policy scenario/measure has been appraised for their costs and related benefits - CBA analysis during the measure planning process.			
<mark>76</mark>	The CBA has been used as a basis for decision making regarding the policy scenario/measure implementation.			

# **SCORE:** 6/6

The measure exhibits excellence in terms of measure development for allocating responsibilities and funding.

# 8 - Monitoring & assessment

	Performed	Not performed
<mark>81</mark>	A data collection strategy has been developed.	



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82	A monitoring and evaluation plan has been developed. (Including process evaluation)	
83	Arrangements for policy scenario/measure monitoring and evaluation have been discussed with a group of key stakeholders.	
84	The policy scenario/measure explains how stakeholders and citizens will be kept informed about the implementation, monitoring and evaluation.	
<mark>85</mark>	Mechanisms for the interactive engagement of stakeholders and citizens during policy scenario/measure monitoring and evaluation have been foreseen.	

**SCORE:** 5/5

The measure exhibits excellence in terms of measure development for the field of monitoring and assessment.