JASPERS Appraisal Guidance (Transport)

Preparation of Urban Mobility Plans in Romania

A Guide for Contracting Authorities

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Jaspers
Joint Assistance to Support Projects in European Regions

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JASPERS aims are to improve the preparation of major projects to be co-financed by the Cohesion Fund and the European Regional Development Fund (ERDF) in the new Member States. JASPERS is involved in some of the IPA Countries under the regulations of the EU IPA Fund, supporting the candidate countries through gradual improvements in the practice and processes required for absorptions of the EU Funds.

In order to support these activities, JASPERS has produced a series of Guidance Notes which set out generic advice and recommendations with regard to specific areas of strategy or project preparation. This advice is intended to provide an early understanding of the requirements and expectations of JASPERS key experts.

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1. Introduction

1.1. Transport White Paper

In 2011, the European Commission adopted the Transport White Paper[1]. The document outlines a roadmap of 40 concrete initiatives over the period to 2020 that will increase mobility, remove major barriers in key areas and fuel growth and employment. At the same time, the proposals are intended to reduce Europe's dependence on imported oil and cut carbon emissions in transport by 60% by 2050. The main targets to be achieved by 2050 include:

- no more conventionally-fuelled cars in cities;
- 40% use of sustainable low carbon fuels in aviation; at least 40% cut in shipping emissions;
- a 50% shift of medium distance intercity passenger and freight journeys from road to rail and waterborne transport; and
- all of which will contribute to a 60% cut in transport carbon emissions.

In the urban context, the White Paper sets out a mixed strategy involving land-use planning, pricing schemes, efficient public transport services and infrastructure for non-motorised modes. The document recommends that cities above a certain size develop Urban Mobility Plans, which are fully aligned with Integrated Urban Development Plans. Under the heading of 'Integrated Urban Mobility', the White Paper sets out the following objective:

> *"Establish procedures and financial support mechanisms at European level for preparing Urban Mobility Audits, as well as Urban Mobility Plans, and set up a European Urban Mobility Scoreboard based on common targets. Examine the possibility of a mandatory approach for cities of a certain size, according to national standards based on EU guidelines".*

The objective recognises the influence of Urban Transport on insuring transport sustainability at a national level, and this ensures a strong link from the Transport White paper into the preparation of Urban Mobility Plans.

1.2. Guidelines on Sustainable Urban Mobility Plans (SUMP)

The Guidelines on Developing and Implementing a Sustainable Urban Mobility Plan[2] were published in January 2014 by the European Commission. They are intended to provide support and guidance to parties involved in the development and implementation of a Sustainable Urban Mobility Plan.

The Guidelines define a Sustainable Urban Mobility Plan as a strategic plan designed to satisfy the mobility needs of people and businesses in cities and their surroundings for a better quality of life. They highlight that a SUMP builds on existing planning practices and takes consideration of integration, participation, and evaluation principles. The Guidelines suggest that a SUMP should consider the following key objectives:

- ensure citizens are offered transport options to enable access to key destinations and services;

[1] *Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system: European Commission, 2011*
[2] *Developing and Implementing a Sustainable Urban Mobility Plan: European Commission: Jan 2014*

- improve safety and security;
- reduce air and noise pollution, greenhouse gas emissions and energy consumption;
- improve efficiency and cost-effectiveness of the transportation of persons and goods; and
- contribute to enhancing the attractiveness and quality of the urban environment and urban design for the benefits of citizens, the economy and society as a whole.

1.3. National Requirements

The requirement for Urban Mobility Plans is set out in Article 461 of the Planning Law and states that a General Urban Plan (PUG) should include:

a) prospective diagnosis, based on analysis of historical development and economic and demographic forecasts, specifying the needs identified in the economic, social and cultural, spatial, environmental, housing, transportation, public facilities and equipment services;
b) spatial development strategy of the city;
c) local urban planning regulations associated with it;
d) action plan for implementation and public investment program; and
e) an Urban Mobility Plan.

Annex 2 to the Law defines an Urban Mobility Plan as a Territorial strategic planning tool that correlate the spatial development of the localities in the suburbs / metropolitan mobility and transport needs of people, goods and commodities. This reflects the definition outlined in the EU Guidance document.

1.4. Correlation with National Requirements

A notable feature of Urban Mobility Plans is their impact on influencing planning and development activity in the city or town. A truly integrated plan will seek to focus on those areas where future growth in residential, commercial or other activity will occur and will seek to provide sustainable transport solutions for those areas. Likewise, it is the intention that future planning will be undertaken in a way that will align with the provision of transport in order to achieve an integrated solution.

For larger cities and towns, this alignment between planning and transport is expected to be strongest. As such, it is necessary to have a close relationship between the UMP and the General Urban Plan (PUG). For smaller towns and cities, the level of planning activity will be lower, and hence transport is likely to be more focused on supporting existing demographic and economic activity (although not in all cases).

2. Definition of 'Levels' for Urban Areas

2.1. The Basis for Categorization

The scope and content of an Urban Mobility Plan will ultimately depend on the context of the city that is being presented. Cities which are larger will general have more complex transport systems with multiple travel modes, and modifications to the system in one area can have notable impacts across the full system. For smaller towns, the network may be much simpler, public transport may be limited, and the effects of any investments may be more localised.

The current Guidance is envisaged as a basis for addressing the requirements across all locations where it is necessary to develop a Mobility Plan. Whilst the basic approach and structure of the Plan will be consistent for all locations, it is appropriate to create some distinction such that a proportional level of detail can be applied to relevant locations.

2.2. Categorization Method

The table below outlines some concepts that will allow the classification of towns and cities into three categories, as a function of their size, complexity and the nature of the transport system. In some cases, a town or city will fall easily into one of these categories. Where a town or city overlaps two different categories, this will rely on the skill and judgment of the local authorities and their advisors to decide on an appropriate Level for that area.

Table 2-1: Levels of Towns/Cities for Functional Regional Analyses

Level 1	Level 2	Level 3
Population >100,000 persons	**Population** 40,000 to 100,000 persons	**Population** <40,000 persons
Public Transport Complex network with intersecting routes and multiple modes (tram, bus, trolleybus, maxi-taxi)	**Public Transport** Moderate network of public transport services that may include multiple modes and some interchange opportunities	**Public Transport** Very few public transport routes, or no services
Road Network Dense road network with a large urban area, numerous routing options for many trips, and with traffic congestion appearing during periods of the typical day.	**Road Network** Compact urban centre fed by a number of defined approach roads, and with different routing options for traffic travelling into/through the urban area.	**Road Network** Simple road network comprising a small number of main roads passing through the area, and with limited opportunities for choosing different routes

In addition to the above categories, one can also define 'Other Functional Regions' which describe rural areas or semi-urban areas that might comprise multiple urban settlements. The requirements for those regions will vary and should therefore be the subject of a specific scoping exercise before embarking on any analysis.

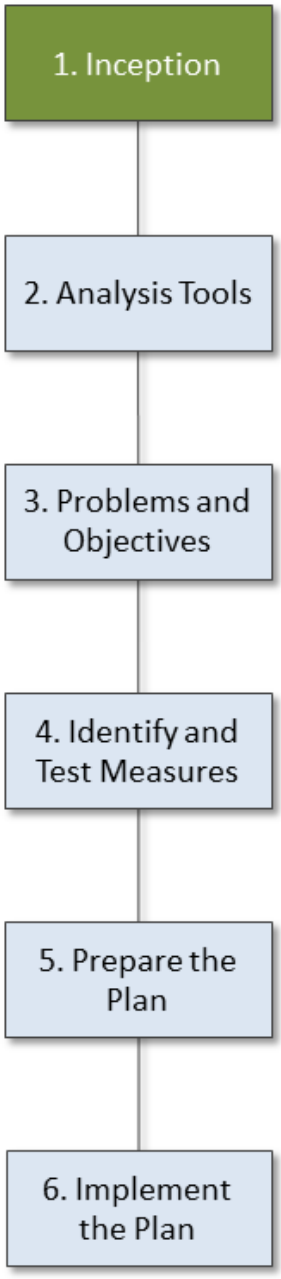
3. Procedure for Preparing an Urban Mobility Plan

3.1. Overview

The preparation of an Urban Mobility Plan follows a sequence of stages that describe the overall process. Each stage describes an activity that contributes to the overall Plan, and is an important component in its development. It is crucial that each stage in the process is undertaken fully and the results of that stage taken forward to the next stage in the process. This section of the Guidance outlines the procedure to be followed in developing the Plan, and should take into account the more detailed guidance set out in the other sections of this Guide.

3.2. Methodology

The methodology is based on good international practice in the preparation of Transport Plans, and is consistent with the EU Guidance in this area. The stages to be undertaken by the Technical Team when preparing the Plan are as follows:



Stage 1: Inception

This stage describes the beginning of the process and is focused on establishing the main structures that will be necessary to prepare the Mobility Plan. The key activities are as follows:

1.1 Establish the **Technical Team** that will prepare the Mobility Plan. The Technical Team may be formed by a consultancy team, by in-house experts where these may be available, or by a combination of both. The Technical Team will be responsible for the day to day activities in the preparation of the Urban Mobility Plan, and will report to the Steering Group. If a consultant is to be procured for the Technical Team, this process should begin immediately.

1.2 Identify a **Project Manager** to manage the communication between the Contracting Authority and the Technical Team. The Project Manager should be familiar with Transport and Urban Mobility Plans and should be able to engage positively with the Technical Team.

1.3 Define the **Steering Group**, who will provide assistance to the Technical team. The Steering Group should comprise representatives from the main Beneficiaries of the Plan, including the Contracting Authority, the Planning Authority, and major transport operators.

1.4 Establish the list of **Stakeholders** that should be consulted during the preparation of the Plan. This might include residents groups, business groups, NGO's, and transport user groups. Ultimately, the stakeholder groups should be identified to allow the full range of opinions to be collected during the preparation of the Plan.

It is important to note that a properly considered Inception Stage will support the efficient development of a good quality Mobility Plan.

Stage 2: Prepare Analysis Tools

The analysis tools are generally necessary to assist in the following tasks:

- to help understand existing conditions and current problems (see Stage 3); and
- to understand how transport demand will grow and change over the period of the Mobility Plan

The complexity and scope of a Transport Model will depend ultimately on the complexity of the transport network that is being assessed, and also on the nature of the measures that will be considered in the Urban Mobility Plan. More comprehensive guidance on Transport Modelling is provided with a separate JASPERS Guidance document3. The main actions are as follows:

2.1 Undertake a **Scoping** exercise to define the Study Area, the level of detail within the model, how travel demand is represented, and what years the model is intended to represent. The scoping requires some thought on what solutions will be considered such that their impacts can be assessed in the model that is being developed. The input of a specialist will normally be required to assist in the scoping exercise.

2.2 Undertake the **Data Collection** that is defined in the scoping stage. This can include collection of information on traffic flows, public transport demand, the layout and condition of the transport network and existing transport models where they are available. This data can also include population and economic forecasts for the area.

2.3 Construct and Calibrate the **Base Year Transport Models** as appropriate. This uses the data collected to provide a holistic picture of the current conditions on the transport network and is therefore an input to the Problems and Objectives Stage (Stage 3).

2.4 Prepare the **Future Year Transport Model** by applying the population and economic forecasts that have been generated for the Study Area. This will allow future transport problems to be identified by the Transport Models.

It is important that the appropriate specialists are contracted to provide assistance in the development of the Analysis Tools, to ensure that the final product is suited to its purpose, and that unnecessary over-elaboration of the transport models can be avoided.

Stage 3: Problems and Objectives

The Problem and Objectives Stage is intended to set the scene for the Urban Mobility Plan by defining what the Plan is required to achieve. It is common to spend a significant portion of the project on the analysis of problems and the definition of objectives, as this will ensure that the Plan is properly focused on those areas that require investment.

It is essential that the Problem Definition is based on good quality data and analysis. It is for this reason that data collection is a necessary part of the preparation of the Plan. Furthermore, a traffic model can be a useful input to this stage of the analysis, as it can help understand problems that will arise in the future, either as a result of growth in transport demand, or the influence of new transport infrastructure that has not yet been fully completed.

The main actions are as follows:

[3] *The Use of Transport Models in Transport Planning and Project Appraisal: JASPERS: 2014 (www.jaspersnetwork.org)*

3.1 The Problem and Objectives Stage should begin with **Information Gathering**. This information should consider all relevant knowledge, reports and data on the organization, operations and infrastructure of each transport system. The actual data to be collected shall complement that collected for the purpose of the transport model, and can be identified through an early assessment of relevant information.

3.2 **Data Analysis** shall be undertaken for different topics relevant to the Urban Mobility Plan. Examples include organisational analysis, demand analysis, accessibility analysis, infrastructure quality assessment, capacity assessment, transport integration, planning assessment, operational constraints analysis, delay analysis, accident black spot analysis, and environment. The analysis will require processing the data into a format which allows a full representation of the transport system. This can be undertaken in the form of transport models, and other macro-level representation of data that will allow the transport problems to be identified.

3.3 The data analysis should also include a review of **Future Conditions** that will arise during the horizon period for the Plan. This will require an analysis of forecast population and economic changes on transport demand, along with any other projects or transport policies that are already committed or highly likely to progress.

3.4 Using the output from the Data Analysis, a series of **Problems or Weaknesses** are identified. This can include problems related to transport efficiency, safety, environmental, accessibility or transport integration. The definition of Problems should clearly describe the nature of the problem, where the problem occurs, and its consequences.

3.5 These Problems are then converted into a series of **Objectives** which set the requirements of the Urban Mobility Plan. Objectives could be related to accessibility, connectivity, efficiency etc. and should be quantified as far as possible, given the state of knowledge and the nature of the objective. Any quantified objectives might be revised later as solutions are developed in more detail based on considerations of feasibility, cost-effectiveness etc.

Stage 4: Identify and Test Measures

The identification and testing of measures looks to define the optimum set of solutions for the objectives that were identified in Stage 3. For each objective, a series of possible solutions are considered and tested using the analysis tools, or other indicators as appropriate. Measures should be considered under the following categories:

- **infrastructure**, which usually requires capital investment in physical works;
- **operational measures**, which describe those actions to improve the operation of transport, such as travel information, monitoring, scheduling improvements, ticketing, traffic management or other intelligent transport systems; and
- **organisational measures**, which involve changes to the structures that oversee the implementation of transport solutions, and may be implemented at institutional level or within specific authorities/agencies.

The testing of measures has the ultimate aim is to derive the most cost efficient set of solutions to address the full range of objectives. A number of points are worth highlighting here:

- begin with a long list of measures that can be considered. These can be screened through an initial process to remove those measures that do not support the objectives, or those that conflict strongly with some objectives. This reduces the level of work required to analyse the project list;

- effort should be made to identify individual measures that can address numerous objectives, as these are likely to be the most cost efficient solutions and are therefore more likely to be adopted in the final Plan; and
- the identification of measures should consider all possible interventions, and should not exclude low cost solutions. In addition, it should acknowledge that urban transport systems are complex and the location of the problem does not always align with that location where the problems are observed;

The general approach to the identification and testing of measures is outlined below.

4.1 Identify a **Long List** of project ideas, comprising infrastructure solutions, organizational measures and operational measures. Each measure should be understood in terms of what it will achieve and the most likely impacts.

4.2 Undertake a **Screening** where each measure in the Long List is compared against the Objectives. Where a measure does not support objectives, or where it conflicts strongly with some objectives then it can be removed from the list.

4.3 Undertake a **Preliminary Appraisal**. In this, the remaining measures are elaborated in further detail to understand their costs and impacts. Costs can be estimated through the application of unit rates or market knowledge. Benefits of the project can be assessed through empirical research or through the traffic model. This is converted into a Cost Benefit Analysis and supporting Multi-Criteria Analysis. On the basis of the Preliminary Appraisal, further measures are removed from the list where they are considered to have a weak case for inclusion.

4.4 Define the **Final List** of measures that are taken forward to the preparation of the Plan. Where relevant, it may also be useful to prepare a number of alternative final lists which can be assessed in aggregate to find the optimum solution. This therefore requires a further round of assessment to identify the optimum set of measures to be included in the final Plan.

4.5 Begin the **SEA** process, where a first draft of the set of final proposals is issued to the SEA team for assessment.

The final list of measures is derived based on the above approach, and forms the basis for the development of the final Plan.

Stage 5: Prepare the Plan

Using the final list of measures identified in Stage 4, a number of alternative scenarios can be defined which are formed from packages of the final list of measures. These packages of measures should then be evaluated in aggregate to understand the net impact of the scenario. This assessment could be undertaken as follows:

5.1 **Include** any modifications arising from the SEA process.

5.2 **Assess Measures against Objectives**, to understand how the scenario supports the objectives that were defined in Stage 3. Any gaps in objectives being address should be addressed through additional measures or through modification of the scope of measures. Likewise, any conflicts should be mitigated through modification of the scope of measures.

5.3 Prepare the **Cost Benefit Analysis** and/or **Multi Criteria Analysis** to understand the net benefit of the scenario.

5.4 Develop a **Phasing Plan** to outline how measures should be further assessed and implemented over the period of the Plan.

5.5 Prepare a **Funding Strategy** to demonstrate how the various measures can be funded, and identify the funding sources (EU funds, national or local funds, loans or private finance).

The Final Report should outline in detail the development of the Plan and the final proposals contained within it. This should also set out how the objectives were defined, how alternatives were selected and how the resulting proposals are prioritised. The Report of the Urban Mobility Plan is set out in Article 16 of the Norms on Urban Mobility Plans. The Final Report should deal with the following:

Part 1: Understanding the Context

1.1 Introduction

Present the context for the Mobility Plan, setting out information on the various policies and documents that the Mobility Plan is expected to reflect, and expected to inform. This should include a description on all relevant documents and policies at national, regional and local level, and covering all relevant sectors.

1.2 Analysis of Current Situation

This section should present a thorough and clear discussion of the existing situation across all themes relating to Urban Mobility. The discussion should examine infrastructure, organisation and operation of urban transport, planning, policy making and regulation. The discussion should show how data sources have been used to help elaborate the discussion, and should present the analysis and findings. This should include a discussion on how consultation has taken place and the main findings emerging from it. The analysis should always seek to find the root causes of problems instead of the symptoms, and can be presented under a series of headings that define the different sectors. This discussion should also look to the future using forecasts of growth to understand how the existing situation will change into the future – this will form the baseline of the Urban Mobility Plan and the associated measures.

1.3 Impact Assessment of Current Mobility

The Impact Assessment looks specifically at the side effects of mobility problems. This includes environmental, social, economic, accessibility and integration difficulties. The assessment should use observed data to describe these issues, with supporting analysis where this is necessary to fully describe any relevant issue.

1.4 Transport Model

Describe the development of the transport model, including specification, data collection, model building, calibration, and future year forecasting. This section should also set out the outputs of the baseline model scenarios, describing network indicators (average speed, mode share, network journey times and distances travelled) for the current year and the future year. The model should also be used to support a discussion on any network problems that may arise in the future year as a result of expected growth.

Part 2: Defining the Measures

2.1 Objectives and Actions

Set the objectives based on the results of Part 1 to define the main needs of the study area over the period of the Urban Mobility Plan. These needs should be based on the hard evidence presented in Part A and should cover transport, environmental and social needs.

The conversion of these needs into a series of Operational Objectives should then be presented.

Part 3: Implementing the Plan

3.1 Action Plan

In this section, the assessment framework should be presented. The discussion should then show the Long List, the Screening, and the Preliminary Appraisal. This should be presented for each grouping of Operational Objectives (e.g Traffic Management, Public Transport, Planning and Policy, Freight, Intermodality).

3.2 Implementation

The measures that are proposed to carry through the implementation stages of the Mobility Plan should be presented. This should include monitoring activities, new institutional structures, and follow-up legal actions.

The Table of Contents for the Final Report as set out in the Draft amendment to Romanian Law 350 is included as **Annex 1** of this Guidance Note.

Stage 6: Implement the Plan

The implementation of the Urban Mobility Plan takes place over a prolonged period of about 5 to 6 years. Successful implementation is strengthened by a well-prepared plan which clearly communicates the main objectives and the timing of measures. Implementation is also dependent on necessary organizational and operational measures that are required to support the project delivery activities.

A summary of all 6 stages in preparing the Urban Mobility Plan, and the activities in each stage is shown in Figure 3-1.

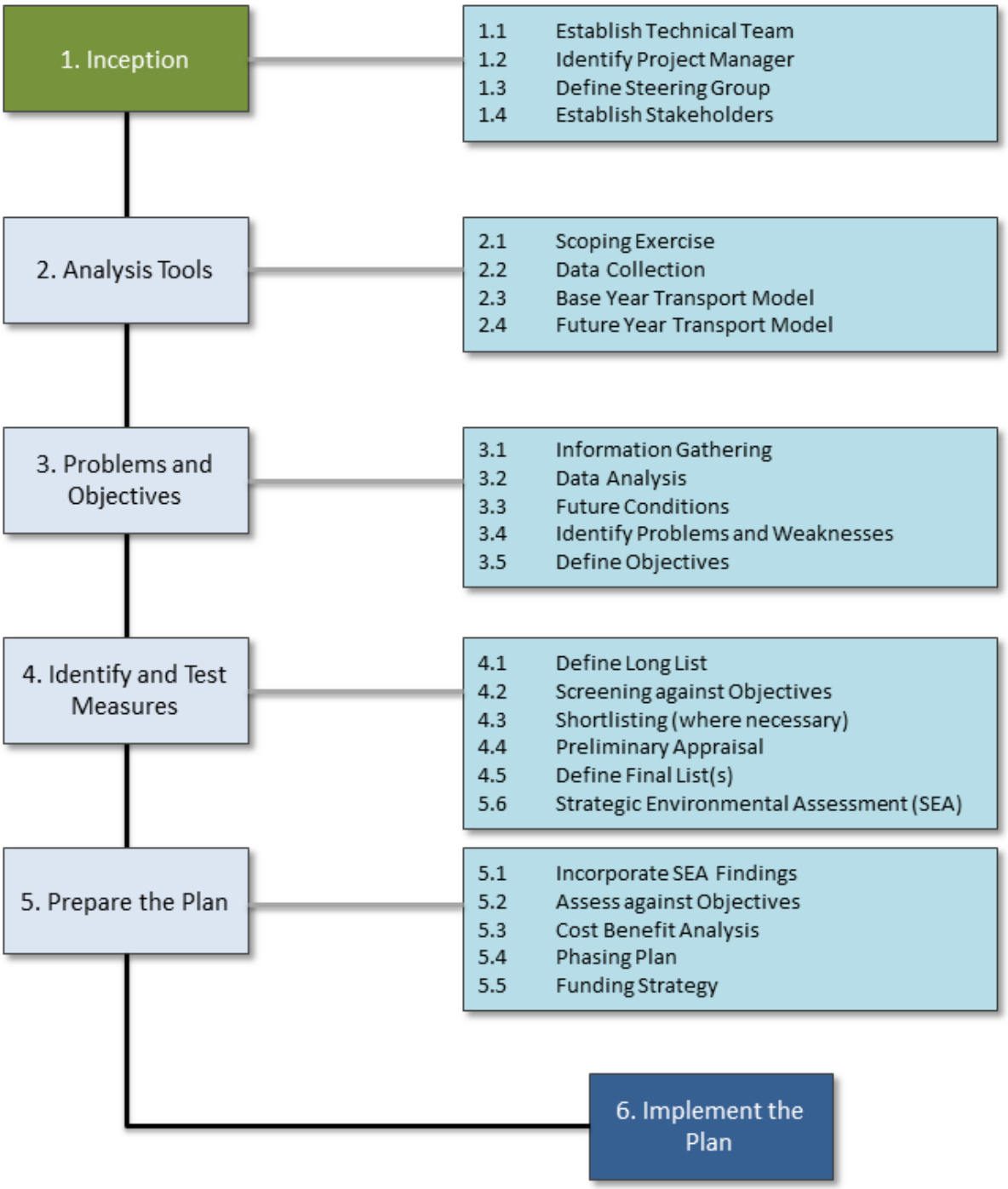


Figure 3-1: Stages in Preparing an Urban Mobility Plan

4. Key Components to be Considered

4.1. Overview

Within the procedure outlined in Section 3, there is nonetheless a requirement to address various items in more detail as the Plan is being developed. This Section of the Guidance Note sets out more detailed discussion on a number of key topics that should be addressed in the Mobility Plan and which should be considered from the outset. Indicative guidance is also presented below on how each issue should be considered at different levels of detail for the three different Categories of Urban Area as presented in Section 2 of this Guidance.

4.2. Transport Model

Detailed guidance on the preparation of Transport Models is provided in the JASPERS Guidance on Transport Modelling and sets out the various issues to be considered when scoping and developing a transport model. As already noted, the strength of a Transport Model is dependent on the quality of the scoping exercise as well as the model construction itself.

The main objective is to develop an Analysis Tool that is suited to the function that is required of it. This requires it to be developed using appropriate quality and quantity of data, and also to have the ability to assess the expected impacts of the transport and planning interventions.

Referring to the JASPERS Guidance on Transport Modelling, the expectations with regard to transport modelling for the different Categories of Urban Area are outlined below. This is a basic outline of typical requirements – these should be fully elaborated through a Scoping Exercise.

Table 4-1: Transport Model Functionality for Urban Areas

Level 1	Level 2	Level 3
Variable Demand Model Includes: ROAD NETWORK PUBLIC TRANSPORT NETWORK TRANSPORT SERVICES TRIP GENERATION MODEL DEMAND MATRICES ASSIGNMENT MODEL MODE SHARE MODEL	Assignment Model Includes: ROAD NETWORK TRIP GENERATION MODEL DEMAND MATRICES ASSIGNMENT MODELLING SIMPLE MODE SHARE MODEL	Simple Model Includes: PRIVATE TRANSPORT NETWORK LINK FLOWS ON ROADS JUNCTION MODELS SIMPLE MODE SHARE MODEL

4.3. Public Service Contracts

When Public Transport Services are provided within any area that is subject to a Mobility Plan, it is a requirement that the relationship between the Transport Authority and the Operator(s) is defined in a Public Service Contract (PSC).

The PSC, irrespective of its legal form and nature, defines the scope of the service, the required quality and its control measures, the level of payments for services, as well as the allocation of rights, obligations and risks between the parties. The PSC ensures a long-term stability and predictability of the municipal transport service. A PSC is essential for ensuring a proper use of movable and unmovable assets co-financed with the EU funds, therefore a key requirement for EU financing.

The provisions of the public service contracts should comply with national law as well as Community law (in particular the Regulation 1370/2007), as well as comply with national tax and accounting standards.

The award of a PSC and granting exclusive rights under the public service obligation should follow the rules defined in the Regulation 1370/2007 (in particular art. 5), essentially stating that:

- in the case of “internal operators” (as defined in the Regulation), the PSC may be awarded directly, without competitive tendering; however, even the directly awarded PSC are subject to greater transparency;
- in case of third parties other than an internal operator, the award of PSC shall be subject to open competitive tendering;
- the duration of PSC shall be normally limited at maximum 10 years for coach and bus and 15 years for rail or other track-based modes;

The mandatory content of the PSC (as defined in art. 4 of 1370/2007) includes:

- nature and geographical scope of the public service obligation;
- Transparent definition of the parameters of compensation and any exclusive rights granted that will not result in overcompensation of the Operator;
- definition of the rules for identification of costs related to the public service obligation;
- rules for allocation of tariff revenues;
- duration of the contract; and
- definition of service quality standards;

In addition, good international practice requires a number of further elements that are important for PSC stability. The key areas that are recommended by JASPERS to be addressed include:

- measures to eliminate the risk of overcompensation, such as clearly defined formulas for compensation calculation, regular audits of the level of compensation, and procedures for reducing excessive compensation;
- measures to limit the risk of insufficient compensation such as ensuring the ability to adjust the compensation where appropriate e.g. in case of unexpected growth of costs, where penalties for underperformance would place the operator in financial distress (the level of penalties should however remain at a level that motivates the Operator), etc;
- control of the variation in the volume of transportation work (vehicle-kilometres) during the year and between years of the contract;
- indicative declaration on the changes in the scope and volume of the transport services in result of the implementation of an EU-funded project (where applicable);
- clear correspondence between the performance standards defined and the compensation/penalty system applied in order to ensure an efficient control of the service performance (quality requirements that, if not met, do not result in any sanctions for the Operator are not actually effective); and
- detailed rules for allocation of the costs, revenues and other financial flows to the public service activity.

The establishment of compliant Public Service Contracts is a precondition for EU financing of Public Transport Investments, and therefore this should be considered as a central and prioritised measure within the Urban Mobility Plan where such a contract does not currently exist.

*Table 4-2: Requirements of Public Service Contracts for Urban Areas**

Level 1	Level 2	Level 3
Public Service Contracts Required	Public Service Contracts Required	Public Service Contracts Required only if Public Transport is Provided and supported from public funds

** REFER TO EU REGULATION 1370/2007*

4.4. Administrative Issues

It is equally important that the administrative issues are properly dealt with under the identification of measures within the UMP. Administrative issues fall under the 'Organisational' category within non-infrastructure measures are considered.

Administrative issues are particularly relevant in the case of public transport provision. The operations in the field of public transport are subject to Community law, in particular with respect to the Regulation (EC) No 1370/2007[4] of the European Parliament and of the Council on Public Passenger Transport Services. In order to ensure that a project submitted for EU-funding contributes to these goals, the institutional and contractual framework has to be sound and transparent by the stage of the financing decision.

Key points are as follows:

- The first key action in the establishment of the institutional framework is to clearly identify the body acting as a Transport Authority. This body should be responsible for the implementation of the city transport policy (often it is the municipality itself through a dedicated unit) and for planning and organisation of an efficient public transport.
- Another body, an Operator, is responsible for the actual provision of the transport service (every-day operations of trams, busses, metro, etc.). There may be more than one operator in the city.
- Irrespective of the legal form and status of the bodies providing the functions of Transport Authority and Operator it is generally recommended to create an environment of institutional separation of these two roles, in order to implement a transparent transport management system.

Where now measures are proposed that require a new form of administrative input (e.g. dynamic traffic management, passenger information systems or fiscal measures) the administrative requirements should be fully considered in the UMP and included within the prescribed measure.

[4] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:315:0001:0013:EN:PDF

Table 4-3: Administrative Requirements for Urban Areas

Level 1	Level 2	Level 3
Separate Transport Authority covering Multiple Municipal Boundaries if necessary.	Separate Transport Authority may be warranted	Transport Authority function (if relevant) may be undertaken within Municipality
Administrative requirements to be considered for any new organizational or operational measures that are proposed within the UMP	Administrative requirements to be considered for any new organizational or operational measures that are proposed within the UMP	Administrative requirements to be considered for any new organizational or operational measures that are proposed within the UMP

4.5. State Aid

It is a requirement when submitting applications for EU funding that State Aid issues are fully understood. It is therefore appropriate at the level of the Urban Mobility Plan that the potential for funding to fall under State Aid is considered throughout the process. Funding is normally considered to be State Aid where it fulfils one the following criteria:

- Aid must be granted by a Member State or through state resources;
- This aid must confer an economic advantage to an undertaking;
- The advantage must favour certain (selected) undertakings or economic activities; and
- Aid must distort competition in the common market and affect trade between Member States.

Not all State aid is incompatible with the Internal Market. However, it is recognised that State aid may in certain circumstances be necessary for a well-functioning and fairly-run economy: there are therefore a number of recognised exemptions from the prohibition. The support of an expert in this field is recommended throughout the identification and testing of measures.

Table 4-4: State Aid Requirements for Urban Areas

Level 1	Level 2	Level 3
Seek input throughout the identification and testing of measures		

4.6. Mobility Impaired

One of the main features of Urban Mobility Plans is the need to provide and protect public spaces for the inhabitants of a city or town. In discharging this requirement, the specific needs of Persons of Reduced Mobility (PRM) are a particular requirement. Providing for PRM fulfils the objective of the UMP in providing a sustainable solution for all the inhabitants of a city, providing social inclusion in the activities of a city.

PRM covers a relatively wide range of the population, including those with sensory impairments (hearing/sight), physical impairments, and those for whom mobility is reduced due to the carrying of luggage or being accompanied by children.

The Council of Europe Disability Action Plan 2006-2015 suggests that the principles of Universal Design are vital to the implementation of the listed actions. Specifically, member states are

recommended to implement Universal Design principles into new developments in ICT, transport, the built environment and product research.

Table 4-5: PRM Requirements for Urban Areas

Level 1	Level 2	Level 3
Rolling Stock Bus/Tram Stops Metro/Rail Stations Footways and Crossings Accessible Travel Information	Rolling Stock Bus/Tram Stops Footways and Crossings Accessible Travel Information	Rolling Stock (if appropriate) Bus Stops Footways and Crossings Accessible Travel Information

4.7. Consultation

There can typically be a large number of stakeholders involved in the preparation of an Urban Mobility Plan. Consultation is best achieved through a well-considered public consultation and engagement plan that recognises the contribution of different stakeholders and the likely issues arising. A good consultation plan will seek to integrate views on existing issues, leading to a better understanding of current problems, allowing unknown issues to be highlighted, and feeding into the assessment of future problems. Consultation methods include:

- Open forums, where all persons are invited to submit views either by letter/email, or through information sessions (open days) or exhibitions;
- Workshops that engage with representatives from, for examples) residents groups, commercial entities, schools, transport operators and other relevant non-governmental organisations; and
- Smaller meetings with representatives of individual stakeholders where key issues arise.

For larger cities and towns, the number of consultees is likely to be much larger and hence a more detailed consultation plan is required. Regardless of the size of the study area, consultation with stakeholders is generally recommended at key stages of the Plan, as follows:

- Broad consultation to inform the Problem Definition and Objectives (Stage 2);
- Focused consultation during the identification and testing of measures (Stage 4); and
- Broad consultation upon completion of a Draft Urban Mobility Plan (Stage 5)

Table 4-6: Requirements for Consultation for Urban Areas

Level 1	Level 2	Level 3
Consultation to include all relevant stakeholders at defined stages during the Plan, with the method and management of consultation set out in a Consultation Plan		

4.8. Cost Benefit Analysis

During Stage 4 of the UMP (Identify and Test Measures), it is necessary to develop some means of measuring potential measures such that the optimum set of solutions can be found and incorporated into the Plan. For projects which are relatively mature, good information on costs and benefits may already be available at a detailed level. For newly defined measures, some means of estimating these indicators and hence the relative project value is necessary.

Estimating costs and benefits must keep in mind that the accuracy should be proportional to the stage of analysis. It has already been outlined in Stages 4.1 – 4.3 that a sequential analysis is appropriate where there is a need to consolidate many options into a final Plan.

This staged process is outlined below, and is summarised as follows:

- An initial Screening Stage where measures are compared against the Objectives of the UMP to understand if the anticipated impacts support the objectives at reasonable cost. Where costs are unknown, a range of costs should be used to allow an understanding of the level of uncertainty. Where measures do not support objectives, or where the provide limited support at high cost where other lower cost options achieve the same (or more), then these measures might be eliminated at this stage;
- For larger cities and towns, an interim Shortlisting Stage might be necessary. This might arise where there are two competing measures addressing the same specific Objective, with each delivering a different scale of benefits at a different cost. In this case, some more in-depth analysis may be required of the competing proposals to understand which performs best against objectives and as measured by the Cost Benefit Analysis and supporting Multi-Criteria Analysis. Where measures can be further shortlisted using this approach, it is a useful method for arriving at a final list of measures for inclusion in the Plan;
- The final stage is the Preliminary Appraisal, where the costs and benefits are calculated with regard to the likely project design, and with impacts assessed through the traffic models or other tool as appropriate. This produces the final appraisal of each measure and informs the final selection of measures to be included in the Plan.

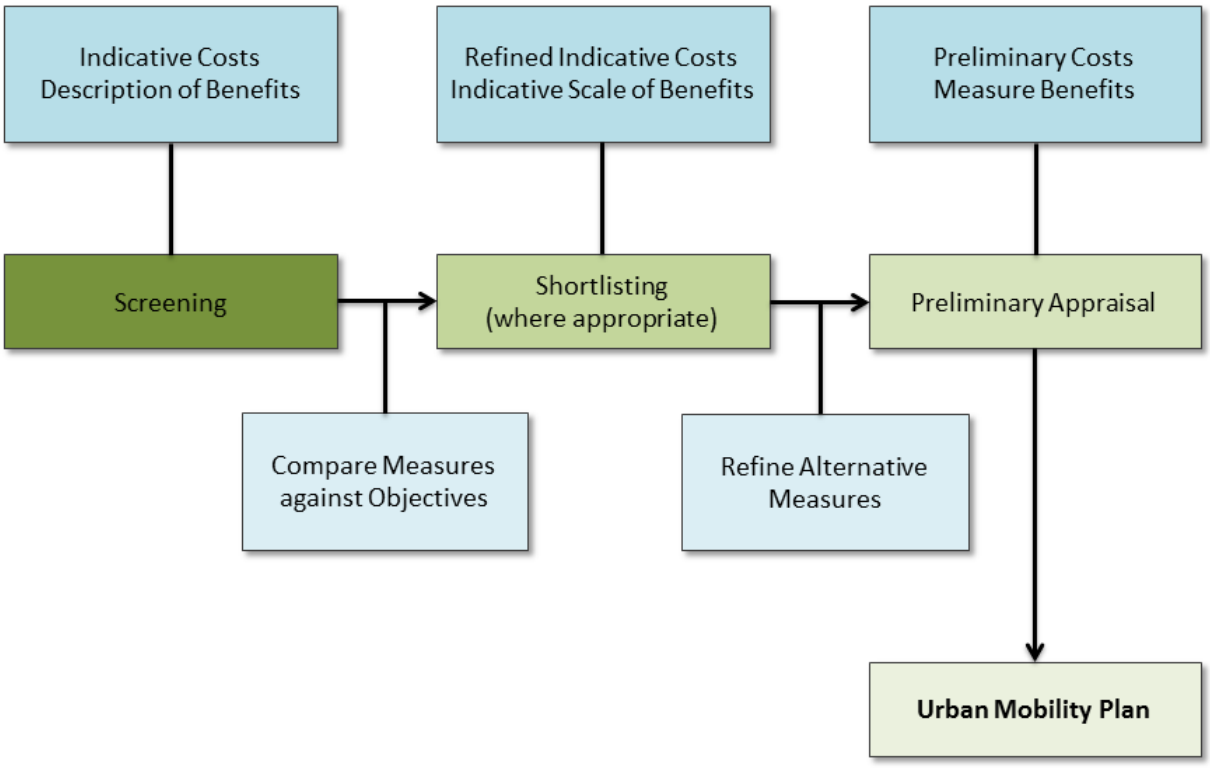


Figure 4-1: Stages in Appraisal for an Urban Mobility Plan

The technical requirements for Cost Benefit Analysis are set out in the EC Guidance on Cost Benefit Analysis[5] and in the Romanian CBA Guidelines[6]. These documents specify the procedure to be adopted in the appraisal of projects and the parameter values to be used. The application of a consistent approach is mandatory for all projects to ensure a level playing field for the comparison of results from different travel modes and study areas.

Table 4-7: Requirements for CBA for Urban Areas

Level 1	Level 2	Level 3
Screening, Shortlisting and Preliminary Appraisal	Screening and Preliminary Appraisal	Screening and Preliminary Appraisal
Typically expect 3 different final aggregate scenarios to be appraised when defining the final UMP	Typically expect a single final aggregate scenario to be appraised when defining the final UMP	Typically expect a single final aggregate scenario to be appraised when defining the final UMP

4.9. Risk Assessment of the Plan

When preparing the final list of measures to be included in the UMP, it is necessary to consider the Plan-related risks that may impact on the ability to implement the Plan. Plan-level risks represent risks that may emerge during the implementation that may threaten the viability of the overall Plan and could include:

- **Where many of the measures in the Plan are tied to one central measure:** In this case, where the central measure cannot be delivered (due to a shortfall in funding, organizational barriers, or planning challenges) this will limit the ability of the supporting measures to be implemented. It is therefore important to ensure that there is some redundancy built into the Plan in the case that some measures cannot be delivered in the short term;
- **Where individual measures have not been fully understood in the preparation of the Plan:** This may substantially increase the time required to deliver measures. Such might include lack of understanding of costs, benefits or social/environmental impacts of measures;
- **Where the Plan has not been built up based on sufficient consultation:** This may lead to downstream obstacles when projects are taken to implementation stage.

A Risk Assessment is an important element of every UMP, regardless of the Level of Urban Area. The complexity of the Risk Assessment will, however, increase as more Measures are to be considered and the list of Stakeholders becomes larger.

4.10. Environmental Assessment (SEA)

According to General Directive 1076/2004 (which transposed Directive 2001/42/CE on the assessment of the effects of certain plans and programs on the environment) an Urban Mobility Plan shall be subject to an SEA procedure. This SEA process runs through the full period of preparing the UMP and starts when the first draft of the plan is available during Stage 4.

[5] *Guide to Cost Benefit Analysis of Investment Projects: European Commission: January 2015*
[6] *National Guide for Transport Project Evaluation: Guidance Economic and Financial Cost Benefit Analysis and Risk Analysis (Draft): AECOM: 2014*

The environmental report identifies, describes and assesses the likely significant environmental effects of implementing UMP, as well as any reasonable alternatives of the UMP, taking into account its objectives and geographical area. The report also includes information related to appropriate assessment, and to transboundary impact if relevant. The climate change issue is also addressed in the SEA report focusing on existing climate change objectives, and the targets that need to be integrated into the UMP. The report also considers the impact that predicted changes in the climate will have on the proposed UMP.

According with the legal requirements the environmental report should be prepared by a natural or legal person who should comply with the provisions of article 1 or article 10(2) of the Ministerial Order 1026/2009 issued by the Ministry of Environment on the conditions for carrying out the environmental protection studies.

5. Guide to Procurement of Urban Mobility Plans

5.1. Overview

The Procurement of the Technical Team is covered under Stage 1.1 in Section 2 of this Guidance Note. In establishing the Technical Team, a number of points should be considered:

- The Technical Team is generally contracted to external consultants who will have the necessary technical expertise to discharge the duties of the Technical Team. Nevertheless, one should seek to include staff from the Contracting Authority within the Technical Team to ensure the skills transfer can occur. This can often be achieved by allocating staff the Technical Team, who become the responsibility of the Consultant for a defined period;
- The contracting of the Technical Team can take some time for the procurement processes to be fully completed. It is expected that a period of 6 months to 12 months can often be required to put the Technical team in place.
- The Technical Team requires significant support from the Steering Group and the client Project Manager. Without adequate direction from the Steering Group and constructive feedback to outputs, it is unlikely that the Technical Team will succeed in the development of a robust UMP.

5.2. Terms of Reference

The scope of the UMP is elaborated in the Terms of Reference. The Terms of Reference should set out the following information:

- Background of the study, and the origins of the need for the Urban Mobility Plan;
- Relevant Guidance and Standards to be following in undertaking the work;
- All existing information/studies that are available and will be provided;
- The required duties of the Technical Team;
- The duties that will be undertaken by the Steering Group and the client Project Manager;
- Requirements for public consultation to be managed by the Technical Team;
- Reporting schedules and approval procedures for deliverables;
- An outline timescale, showing start and end dates for the contract; and
- Tender Instructions

A sample Terms of Reference is included in **Annex 2** of this Guidance Note. This Terms of Reference should be modified as appropriate by the Contracting Authority to reflect the specific needs of the Study Area. Technical Assistance should be sought where necessary to ensure that the Terms of Reference can communicate clear requirements that allow the tenderers to properly understand the volume and scope of work that is necessary.

Vague or open-ended terms should be avoided as they pass excessive risk to tenderers and can be difficult to price – this can lead to undervalued tenders which can increase the risk of incomplete assignments or low quality outputs.

5.3. Tendering Methods

For larger towns or cities, it is more common to assign a single study area to a Technical Team. For smaller study areas, multiple towns can be included within a single contract. This can be a

relatively successful method, particular for towns/cities with a close relationship and it can improve consistency and efficiencies. Nevertheless, it requires careful consideration of tenders to ensure that teams are adequately resourced and skilled.

When tendering, two approaches are available:

- An Open Procedure, where the Terms of Reference are issued to any organisation who wishes to submit a tender. The award for an Open Procedure is normally based on a combination of Price and Quality; or
- A Restricted Procedure. With this procedure, an initial call for tenderers is issued and submissions are made that set out basic company information. This information is used to shortlist the tenderers to those who fulfill the minimum criteria and hence are deemed to have the correct skill and resource levels (the Restricted List). The Terms of Reference are then issued to this Restricted List of tenderers. For the Restricted Procedure, the award is often made on the basis of the lowest cost tender as all are deemed to meet the skill and resource requirements.

The Open Procedure requires a shorter overall period for tendering. Nevertheless, it is extremely important that an Open Procedure is not awarded on the basis of lowest cost. Planning Studies can be difficult to articulate in a Terms of Reference and Tender document, and hence it is often necessary to rely heavily on the skill and experience of the consultant. A lowest price award is often likely to lead to substandard work delivered by substandard experts.

In the case of Restricted Procedures where an award is made to compliant tenderers on the basis of cost, this requires a very carefully elaborated Terms of Reference to ensure that the full scope of the work can be understood and adequately priced by the tenderers.

In both cases, it is recommended that the tendering process requires a resource plan showing the breakdown of days spent on each task by the consultant, and how daily rates have been used to generate the final lump sum. In this way, any misunderstandings by the tenderer (e.g. 2 days may be allocated to a task where a total of 20 days might normally be expected) can be identified. Likewise, this can allow any abnormally low prices to be identified which may also raise issues regarding to the likely quality of the submission.

The Terms of Reference contained in **Annex 2** of this Guidance relate to an Open Tender Procedure. The Terms set out minimum criteria that should be met by Key Experts and by the organisations submitting the tender. Where these minimum criteria are met, the award is then on the basis of a Price/Quality rating.

It is noted that the evaluation of tenders using this Price/Quality rating can be more difficult. As such, it is sometimes the case that the Contracting Authority can seek external support in evaluating tenders. This support can be drawn from other Authorities/Ministries or from external consultants who are not involved in the tender process. Such additional effort is well invested and can greatly improve the subsequent work during the contract.

Annex 1

Table of Contents for Urban Mobility Plan (Refer to Romanian Law 350)

P.M.U.D. este structurat dupa cum urmează:

Partea 1

1. Introducere
- 1.1. Scopul şi rolul documentaţiei;
- 1.2. Încadrarea în prevederile documentelor de planificare spațială;
- 1.3. Încadrarea în prevederile documentelor strategice sectoriale;
- 1.4. Preluarea prevederilor privind dezvoltarea economică, socială şi de cadru natural din documentele de planificare ale UAT

2. Analiza situaţiei existente
- 2.1. Contextul socio-economic cu identificarea densităţilor de populaţie şi a activităţilor economice
- 2.2. Rețeaua majoră de circulaţii
- 2.3. Transport public
- 2.4. Transport de marfă
- 2.5. Mijloace alternative de mobilitate (deplasări cu bicicleta, mersul pe jos şi persoane cu mobilitate redusă)
- 2.6. Managementul traficului (staționarea, siguranța în trafic, sisteme inteligente de transport, signalistică)
- 2.7. Identificarea zonelor cu nivel ridicat de complexitate (zone centrale protejate, zone logistice,poli ocazionali de atractie/generare de trafic, zone intermodale-gări, aerogări, etc)

3. Evaluarea impactului actual al mobilităţii
- 3.1. Impactul asupra elementelor de mediu
- 3.2. Siguranţa în trafic şi impactul asupra cadrului social
- 3.3. Nivel de accesibilitate si tendinţe de dezvoltare
- 3.4. Capacitate de transport

4. Dezvoltarea si calibrarea modelului de transport urban multimodal
- 4.1 Generare şi atragere deplasări
- 4.2 Distribuţie între zone
- 4.3 Distribuţie între modurile de transport
- 4.4 Afectare pe reţea

Partea 2

5. Obiective si directii de actiune
- 5.1. La scara periurbană/metropolitană
- 5.2. La scara localitaților
- 5.3. La nivelul cartierelor /zonelor cu nivel ridicat de complexitate

6. Scenarii de mobilitate pe baza modelului de trafic
- 6.1. Scenariu de mobilitate la scara periurbană/metropolitană
- 6.2. Scenariu de mobilitate la scara localității
- 6.3. Scenariu de mobilitate la nivelul cartierelor /ariilor cu nivel ridicat de complexitate

Partea 3

7. Planul de actiune

7.1. Interventii majore asupra infrastructurii de circulații
7.2. Transport public
7.3. Transport de marfă
7.4. Mijloace alternative de mobilitate (deplasări cu bicicleta, mersul pe jos si persoane cu mobilitate redusă)
7.5. Managementul traficului (staționarea, siguranța în trafic, sisteme inteligente de transport, signalistică)
7.6. Zonele cu nivel ridicat de complexitate (zone centrale protejate, zone logistice,poli ocazionali de atractie/generare de trafic, zone intermodale-gări, aerogări, etc)
7.7. Structura intermodală si operațiuni urbanistice necesare

8. Monitorizarea implemenentării Planului de Mobilitate Urbană Durabilă

Annex 2

Sample Terms of Reference for Urban Mobility Plan

Sustainable Urban Mobility Plan
[location]

Terms of Reference

1. General Information

[to be completed]

2. Relevant Guidance and Standards

[to be completed]

3. Information that will be Provided

[to be completed]

4. Technical Scope of Contract

[to be completed]

5. Duties of the Steering Group and Contracting Authority

[to be completed]

6. Public Consultation Requirements

[to be completed]

7. Reporting and Approval Procedures

[to be completed]

8. Timescale

[to be completed]

9. Tender Instructions

[to be completed]