

## **D1.3 User Needs Assessment**

October 2020

Document Identification: D 1.3 User Needs Assessment			
Status	Final	Due Date	20.11.2020
Version	2.1	Submission Date	

Deliverable Number	D 1.3
Deliverable name	User Needs Assessment
Work Package number	1
Delivery due date	31.10.2020
Actual date of submission	20.11.2020
Dissemination level	Public
Lead beneficiary	DLR
Responsible scientist/administrator	Mirko Goletz, Daniel Krajzewicz, DLR
Internal reviewer	VTT, TNO, UEMI

This document is issued within the frame and for the purpose of the SOLUTIONSPLUS project. This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 875041. The opinions expressed and arguments employed herein do not necessarily reflect the official views of the European Commission.

The dissemination of this document reflects only the author's view and the European Commission is not responsible for any use that may be made of the information it contains.

This document and its content are the property of the SOLUTIONSPLUS Consortium. The content of all or parts of this document can be used and distributed provided that the SOLUTIONSPLUS project and the document are properly referenced.

Each SOLUTIONSPLUS Partner may use this document in conformity with the SOLUTIONSPLUS Consortium Grant Agreement provisions.

(\*) Dissemination level: **PU**: Public, fully open, e.g. web; **CO**: Confidential, restricted under conditions set out in Model Grant Agreement; **CI**: Classified, **Int** = Internal Working Document, information as referred to in Commission Decision 2001/844/EC.

**Table of content**

**1 Introduction ..... 4**

1.1 The SOLUTIONSplus project ..... 4

1.2 Goals of the user needs assessment ..... 4

1.3 Content of Deliverable ..... 5

**2 User Needs Assessment: General Purpose and in SOLUTIONSPUS ..... 5**

2.1 General Purpose of a User Needs Assessment ..... 5

2.2 Structure of the assessment framework..... 7

**3 User Needs Assessment Implementation..... 8**

3.1 Steps of the User Needs Assessment framework ..... 8

3.2 Stakeholder identification..... 9

3.3 Data collection ..... 10

3.3.1 Online Survey ..... 10

3.3.2 Stakeholder Interviews ..... 11

3.4 Reporting ..... 11

**4 Annex..... 12**

4.1 Reference ..... 12

4.2 Online survey outline ..... 13

4.3 Stakeholder interview guideline ..... 23

# 1 Introduction

This Deliverable is released as part of the Horizon2020 funded project SOLUTIONSPLUS. It presents the methodology of the user needs assessment that is part of the overall assessment framework of the SOLUTIONSPLUS project. This work took place in the first 10 month of the SOLUTIONSPLUS project, starting in January 2020.

The user needs assessment in the SOLUTIONSPLUS project was developed under Task 1.2 (Evaluation Framework) of Work Package 1 (Toolbox and evaluation). It is a component in the overall assessment framework of the project and was developed to be applied in each of the demo cities of the project. The execution of the user needs assessment is carried out as part of Work Package 4 (Demo Cities).

## 1.1 The SOLUTIONSplus project

The SOLUTIONSplus project aims to enable transformational change towards sustainable urban mobility through innovative and integrated electric mobility solutions. To deliver this objective the project will boost the availability of electric vehicles, foster the efficiency of operations and support the integration of different types of e-mobility in large urban areas and addressing user needs and local conditions in Europe, Asia, Africa and Latin America.

The project SOLUTIONSplus sets up a global platform for shared, public and commercial e-mobility solutions, and to kick start the transition towards low carbon urban mobility. The project encompasses city level demonstrations to test different types of innovative and integrated e-mobility solutions, complemented by a comprehensive toolbox, capacity development and replication activities.

SOLUTIONSplus brings together highly committed cities, industry, research, implementing organisations and finance partners. Through numerous synergistic projects, networks and a strong technical experience, the project will be able to deliver its highly ambitious goals. Direct co-funding contributions will be provided by partner cities and SOLUTIONSplus works closely with UN Environment and the International Energy Agency (IEA) on a joint global urban e-mobility programme that will significantly boost replication and impact of this Innovation Action.

Through the regional platforms, a global programme and local teams, the project aims to develop highly effective and innovative approaches to urban e-mobility ensuring that mobility systems and interventions from this project deliver on the Paris Agreement, meet the Sustainable Development Goals and address the New Urban Agenda.

## 1.2 Goals of the user needs assessment

The goal of the user needs assessment is to support the implementation of the e-mobility solutions. It is carried out before (ex-ante) the implementation of the project takes place. The assessment takes place in each of the nine demo cities (Dar es Salaam, Kigali, Hamburg, Madrid, Hanoi, Pasig, Kathmandu, Quito and Montevideo) and will be carried out by the research partners of the respective cities.

The user needs assessment takes place in the first year of SOLUTIONSPLUS (2020). It provides guidance in determining the overall suitability of the e-mobility solutions that will be implemented in the project, and delivers a first approach related to fine-tuning the solutions. It also delivers an overview about the stakeholders involved and where necessary identifies important interrelations (stakeholder mapping).

### 1.3 Content of Deliverable

This deliverable covers the methodology of the user needs assessment. The results will be part of the Deliverable D1.6 (Impact Assessment Results (Part A): Ex-ante assessment of Impacts). In addition, for each city, extended user needs assessment reports will be made available online

The remainder of this document is as follows: the introduction is followed by a chapter that presents the assessment framework within SOLUTIONSPLUS. Thereafter, the user needs assessment approach is outlined by showing the different steps and components of it. Subsequently, a section covers the current state of the user needs assessment that has just started when this deliverable was written, thereby delivering an overview of the extent of the results that will be produced.

As the stakeholder interviews are carried out simultaneously with KPI development and rating for practical purposes, results will be presented in the Deliverable D1.6. In this deliverable D1.3 the approach of the different components of the user needs assessment is outlined.

## 2 User Needs Assessment: General Purpose and in SOLUTIONSPLUS

User needs assessment is a common methodology and frequently used in multiple stages of project development and implementation. This section presents the purpose and the structure of activities undertaken under the user needs assessment domain as part of the overall assessment framework of the SOLUTIONSPLUS project.

### 2.1 General Purpose of a User Needs Assessment

User needs assessment contributes to both, the development of a project as well as its evaluation. It is a standard process in the *ex-ante* planning of projects. Furthermore, it can serve as input for an *ex-post* assessment (evaluation), that can be carried out after the project has been implemented.

In the *ex-ante* phase, one of the main purposes of a user needs assessment is *“to inform decisions within the context of larger projects [...] In all cases, the needs assessment offers a careful process for assessing gaps between current results and desired results (that is, needs) and then for applying that information to identify the available options so that decisions can be made.”* (Worldbank 2012, p. 3).

*Figure 1* depicts the process for identifying these gaps between currently achievable and desired results (needs) *ex-ante*, based on the following steps: First, an identification of the current status or situation; second the determination of the status or situation that should be

reached (i.e. that is required or desired); third the identification of the “gap” that lies between the current and the desired/required status (which can also be referred to as the “need”); and fourth the planning of the process that can lead from the current to the desired/required status.

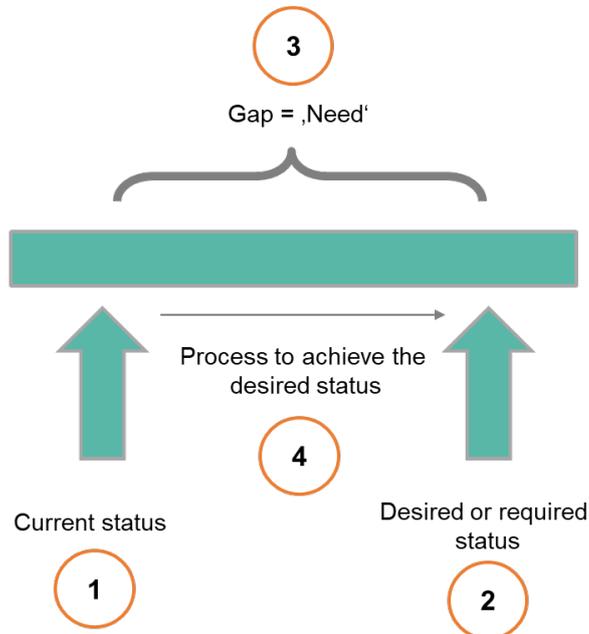


Figure 1: User needs assessment is about identifying gaps (Worldbank 2012).

An exemplary case is provided in the following. When planning an urban mobility project with the aim to reduce the CO<sub>2</sub>-emissions from the transport sector in a city, the following steps would be applied to identify existing gaps: 1) an analysis of the current mobility situation and the resulting CO<sub>2</sub> emissions (X); 2) definition of a status that shall be reached, for instance a targeted amount of CO<sub>2</sub> emissions (Y); 3) the gap between steps 1) and 2), i.e. the difference between current and targeted emissions; and 4) a suitable process to reach this goal, for instance the introduction of a share of Z carbon free vehicles in public transport that would make the city reach its goal.

During the ex-post phase, the results of the user needs assessment can be used to evaluate whether a project has been successful in meeting its goals by meeting the desired status. Such an evaluation is usually based on the information that were previously gathered during the ex-ante phase.

An important step of any user needs assessment is the identification and inclusion of users (also to be called stakeholders) who are expected to be affected by the implementation of the demonstration project. Such a stakeholder identification (also: stakeholder mapping) should be done at an early stage of the user needs assessment planning phase. The users to be included should cover a wide range of people affected by the project, to gain multiple perspectives on the challenges and expectations associated with the project. Including multiple stakeholders and perspectives will improve the quality of the user needs assessment and may thereby may contribute to the success of the project itself. Furthermore, the input data for the user needs assessment should be collected from several stakeholders and this

data collection process should involve several persons from the project side to share the workload and to avoid selection and question bias.

User needs assessment relies on qualitative and/or quantitative input data that usually needs to be collected. This can include various sources, depending on the scope of the demonstration project, the resources that are available to carry out the assessment, the capabilities of the assessment team, the communication possibilities between the assessment team and the involved stakeholders. Typically, the wider set of methods from empirical social sciences is used, ranging for example from interviews, focus groups, and online surveys to world cafés or Delphi surveys (see World Bank 2012, Part 3a for an overview).

## 2.2 Structure of the assessment framework

In the SOLUTIONSPPLUS project, the user needs assessment is embedded in the wider assessment framework. In line with what has been described in the previous chapter, the user needs assessment delivers input for the ex-ante assessment as well as for the ex-post evaluation. **Error! Reference source not found.** graphically shows the assessment framework and the role of the user needs assessment in it. Ex-ante, the user needs assessment delivers own results about the needs as well as input for selecting the project's key performance indicators (KPIs). Ex-post, the results from user needs assessment are used in the impact assessment.

The assessment framework is a structured guideline for the practical steps of impact assessment. Its purpose is to ensure that the impact assessment process is carried out in a coherent, harmonised way across the cities and to ensure that the objectives of the WP can be fulfilled. The process includes defining objectives and key performance indicators as well as methodologies for data collection and evaluation of the KPIs. (However, as the project includes real-life demonstrations of different mobility services, flexibility is ensured with an interactive approach ...).

Assessment framework is a supporting structure or system around the tools, the toolbox, and the evaluation tools. The assessment framework provides a structured guideline for the practical steps throughout the impact assessment process. Its objective is to ensure that the impact assessment process is carried out in a coherent, harmonised way across the cities and to ensure that the objectives of the related work packages (e.g. WP1 and WP4) can be fulfilled.

The process includes analysing high-level user needs, identifying relevant Key Performance Indicators (KPI), as well as methodologies for data collection and actual KPIs evaluation. This chapter presents the overview architecture, the main steps with their accompanied supporting tools of the developed assessment framework.

The architecture of the developed assessment framework is outlined in more detail in D1.2 Evaluation Framework (to be published in December 2020). The framework includes two V-cycles. The inner V-cycle defines the main steps when performing the assessment. These main steps will be described in more detailed in section 2.3. The outer V-cycle denotes all the supporting tools required by the main steps in the inner V-cycle namely user need survey, reference KPI list, evaluation tool, SOLUTIONSPPLUS toolbox and data repository.

### 3 User Needs Assessment Implementation

#### 3.1 Steps of the User Needs Assessment framework

User needs assessment in SOLUTIONSPLUS will follow the steps as depicted in Figure 2: Steps supporting the user needs assessment in the SOLUTIONSPLUS Project.. These steps include:

- i) stakeholder identification to identify the relevant stakeholder groups, institutions that belong to these groups as well persons out of these institutions,
- ii) Data collection: Online survey as well as pre-structured expert interview guidelines,
- iii) Needs identification: the collected data are analysed and a synthesis of the findings is done with the goal to identify the user needs, and
- iv) reporting the results for each city.

Each of the steps are described more detailed in the following sub-chapters. Each user needs assessment is operationalized by city teams, that include partners from the SOLUTIONSPLUS project work package 1 team (responsible to develop the overall assessment and user needs assessment approach) as well as partners who are based in each of the respective cities.

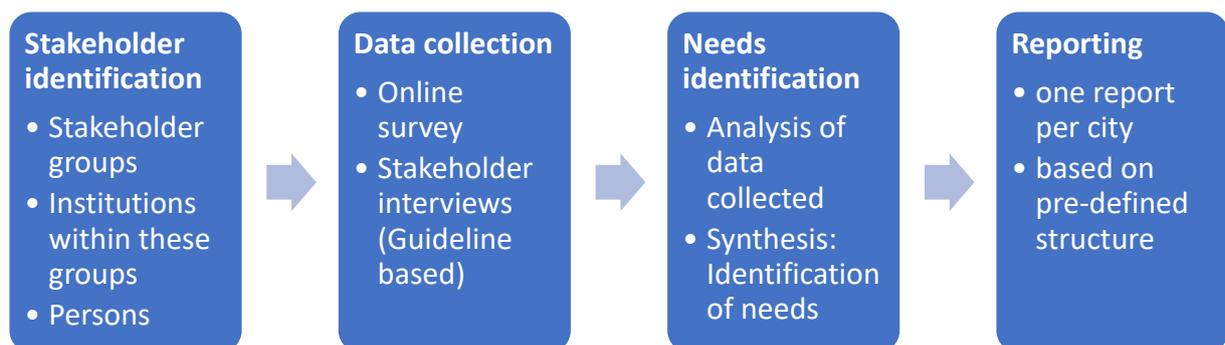


Figure 2: Steps supporting the user needs assessment in the SOLUTIONSPLUS Project.

To structure the user needs assessment, the assessment planning team developed a list of core topics to be covered in all demonstration cities. This list defines a set of minimum question blocks. If needed, this list can be expanded with additional topics by the city research teams. This set of topics was defined keeping in mind the project scope related to the implementation and testing of e-mobility solutions from an economic, regulatory and planning perspective, the economic and capacity development of an e-mobility scene in the cities and their impact on sustainability. This resulted in the following list of core topics:

- Expectations and Needs of Stakeholders
- Regulation
- Obstacles, Limitations, Barriers
- Sustainability of the E-Mobility-Solution to be implemented
- Impact on Business Models
- Implications for Planning and Urban Development

Two pre-structured methods were selected for the user needs assessment: online-survey and stakeholder interviews. To support the city teams with the implementation of both methods,

the consortium produced detailed instructions and guidance for the application of such methodologies.

### 3.2 Stakeholder identification

Identifying the stakeholders is an initial step to be carried out in each user needs assessment. Therefore, the work of each city team should start with identifying the relevant stakeholders for their demonstration project. The identification should include at least the following list of stakeholder groups:

- Public Transport Companies
- National / Regional / Local Authorities
- OEMs (i.e. vehicle companies, maintenance)
- Service providers (Private and small-scale operators (also informal), energy companies)
- Academia / Research
- NGOs and environmental organisations

For flexibility reasons, further groups may be added during the project. The stakeholder identification ideally brings up a “map” of stakeholders. An example is shown for the Dar Es Salaam demonstration in Figure 3, other cities will have a different set of stakeholders.



Figure 3. „Map“ of stakeholders from city of Dar Es Salaam.

To ensure including a wide set of stakeholders for covering multiple perspectives, a recommended minimum set of stakeholders to be consulted per city is requested. A recommendation is set to two per stakeholder group. Not all stakeholder groups may be applicable in all cities.

### 3.3 Data collection

#### 3.3.1 Online Survey

An online survey was planned as one data collection method for the user needs assessment since it is an instrument that can easily be distributed to a wider set of participants. It also does not necessarily require any direct interaction between the person carrying out the survey and the survey participant. A guided answering is however possible and explicitly permitted. Furthermore, the online survey allows for an easier inter-city comparison of results through its (partial) quantitative output, thereby also delivering input to the impact assessment within the project.

The online survey is identical in its form and available to all city teams. It was developed in English and then translated into six additional languages which are: Spanish, Filipino, French, Swahili, Vietnamese, and Nepalese.

The structure of the online survey and its main questions are presented in Table 1. In total, the survey covers 26 questions (some have multiple sub-questions) and is expected to take about 20 to 30 minutes. Questions are closed questions with answers on a Likert scale as well as open questions. The Annex of this document includes a printout of the complete online survey.

*Table 1: Questions of the Online survey.*

Topic	Sub-topics
City aims	<ul style="list-style-type: none"> <li>- Usage and user acceptance of e-vehicles</li> <li>- Mobility patterns</li> <li>- Emissions and transport development</li> <li>- Quality of life in the city</li> </ul>
Implementation Intended use of e-vehicles and area of use	<ul style="list-style-type: none"> <li>- Which are the targeted use cases for e-vehicles in your city?</li> <li>- In which areas of the city/region the e-vehicles are going to be used?</li> </ul>
Intended user group	<ul style="list-style-type: none"> <li>- In transport of people, which are the targeted user groups of the e-vehicles in your city?</li> <li>- Please indicate the type of the trips you think people in your city will make with the e-vehicles</li> <li>- In transport of goods, whom do you expect to use the e-vehicles?</li> <li>- Which will be the main service operator of the e-vehicles?</li> <li>- Please specify the e-vehicle operators (open question)</li> </ul>
Obstacles, limitations and barriers	<ul style="list-style-type: none"> <li>- Which points do you see as most challenging in relation to a successful implementation?</li> <li>- Are there regulatory barriers that currently hinder the implementation? Please give a description.</li> <li>- Which other barriers exist, for instance institutionally, that can hinder the implementation?</li> </ul>
Background questions	<ul style="list-style-type: none"> <li>- Which is the institution you work for?</li> <li>- What is your role in the institution?</li> <li>- What is your role in the project?</li> </ul>

### 3.3.2 Stakeholder Interviews

In addition to the online survey, stakeholder interviews are carried out in the UNA. Interviews cover the core topics (c.f. Section 3.1) included in the user needs assessment. A guideline is provided to the city research teams as input to develop and tailor interview outlines for each stakeholder group. The guideline is therefore broad and may include questions that are not relevant for all stakeholders in all cities. We expect interviews to take between 45 and 50 minutes.

The stakeholder interviews are, in contrast to the online survey, meant to be applied whenever a deeper discussion with stakeholders is seen useful and when direct interaction is expected to bring better results. The stakeholder interviews aim to be focused to key stakeholders of particular importance for the project.

Another part that the stakeholder interviews in SOLUTIONSPLUS cover is the weighting of KPIs, which is carried out together with stakeholder interviews for interest of time and resources. This means that during each stakeholder interview, the interview partners should also be included in this step. A further introduction of the KPIs, their development and further relevance is given in the SOLUTIONSPLUS Deliverable D1.2.

### 3.4 Reporting

Each city team is asked to report its findings. These city reports will be made available through the SOLUTIONSPLUS website ([www.solutionsplus.eu](http://www.solutionsplus.eu)) at the end of the year 2020.

The structure of the city reports should include the following sections:

#### 1 Approach

Description of the user needs assessment approach for the city reported. Focus on answering the following question (not extensive)

- Assessment team: Who carried out which steps?
- When were the assessment steps carried out?
- Who was surveyed? Please list Stakeholders and, if ok with assessment participants, names and affiliation.

#### 2 Results – Survey

The results from the online survey are presented here in forms of descriptive statistics and the replies to open questions. Responses in other languages will be translated into English by the city teams.

#### 3 Results – Stakeholder Interviews

The findings from the stakeholder interviews are presented here. Interviews should have been carried out based on the interview guideline. Reporting should be on a per-topic structure (not: per interviewee!), if possible indicating differing opinions, strong common views.

## 4 Annex

### 4.1 Reference

Worldbank (2012): A Guide to Assessing Needs: Essential Tools for Collecting Information, Making Decisions, and Achieving Development Results. p. 20, based on Kaufman, Oakley-Brown, Watkins, and Leigh (2003) and Watkins (2007)

DTU, “D1.6 Impact assessment results (Part A): Baseline scenario & ex-ante assessment,” Deliverable as part of the SOLUTIONSPLUS project, [www.solutionsplus.eu](http://www.solutionsplus.eu), 2020.

TNO, “D 1.2 Evaluation Framework”, Deliverable as part of the SOLUTIONSPLUS project, [www.solutionsplus.eu](http://www.solutionsplus.eu), 2020.

## 4.2 Online survey outline

# SOLUTIONSPLUS demo and user needs survey

Welcome to the SOLUTIONSPLUS demo city and user needs survey. Your answers will help us in forming the evaluation work to make sure that your city's point of view is included.

### 1) Demo City

- Santiago de Chile
- Quito
- Montevideo
- Hanoi
- Pasig
- Kathmandu
- Dar Es Salaam
- Kigali
- Hamburg
- Madrid
- Other, please specify:



## City aims

In the following, you will find lists of aims or goals that could be set and assessed in the SOLUTIONSplus project.

**Please indicate the importance of the following goals for your city, in relation to the implementation of e-vehicle services in SOLUTIONSPLUS.**

-

Please use effectively the scale from -2 (not at all important) to +2 (very important).

### 4) Usage and user acceptance of e-vehicles

	-2	-1	0	1	2
To increase the share of trips made with e-vehicles	<input type="radio"/>				
To increase the share of e-vehicles in transport of goods	<input type="radio"/>				
To increase the share of trips made with public transport	<input type="radio"/>				
To increase awareness among citizens by showcasing e-vehicles	<input type="radio"/>				
To study the acceptance and perception of e-vehicle services	<input type="radio"/>				
To receive information on users' concerns related to use of e-vehicles	<input type="radio"/>				
To identify preferred user groups and usage patterns	<input type="radio"/>				
To decrease costs of the public transport provider	<input type="radio"/>				
To analyse costs related to the implementation of e-vehicles	<input type="radio"/>				
To receive information on affordability of e-vehicles for cities	<input type="radio"/>				

**5) If there are other important aims regarding usage and user acceptance, please specify below:**

**Which are the most important objectives for the project from your perspective?**

*Please indicate your opinion by rating the importance of the goals. Please use effectively the scale from -2 (not at all important) to +2 (very important).*

**6) Mobility patterns**

	-2	-1	0	1	2
To study impacts of e-vehicle services on the amount of travelling (number of trips and/or kilometers travelled)	<input type="radio"/>				
To study impacts of e-vehicle services on choice of travel mode	<input type="radio"/>				
To improve quality of travelling	<input type="radio"/>				
To support multimodal travel chains	<input type="radio"/>				
To improve precision of estimated travel time	<input type="radio"/>				
To offer a more stable transport service	<input type="radio"/>				

**7) If there are other important aims related to mobility patterns, please specify below:**

**Which are the most important objectives for the project from your perspective?**

*Please indicate your opinion by rating the importance of the goals. Please use effectively the scale from -2 (not at all important) to +2 (very important).*

### 8) City environment

	-2	-1	0	1	2
To reduce CO2 emissions	<input type="radio"/>				
To reduce energy use	<input type="radio"/>				
To reduce pollution (NOX, CO, PM10, PM2.5, VOC)	<input type="radio"/>				
To reduce noise in road transport and living areas	<input type="radio"/>				
To develop road infrastructure for e-vehicles	<input type="radio"/>				

**9) If there are other important aims related to city environment, please specify below:**

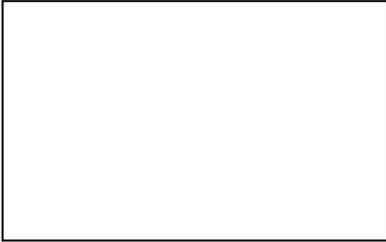
**Which are the most important objectives for the project from your perspective?**

*Please indicate your opinion by rating the importance of the goals. Please use effectively the scale from -2 (not at all important) to +2 (very important).*

### 10) Quality of life in the city

	-2	-1	0	1	2
To improve livability of the city in general	<input type="radio"/>				
To improve possibilities to travel (accessibility)	<input type="radio"/>				
To increase equity of citizens regarding their mobility options	<input type="radio"/>				
To improve public health in general, esp. by reducing exposure of citizens to air pollution	<input type="radio"/>				
To improve access to public transport	<input type="radio"/>				
To enhance economic growth of transport service sector	<input type="radio"/>				
To enhance job creation and new established businesses	<input type="radio"/>				

**11) If there are other important aims related to quality of life in the city, please specify below:**

A simple, empty rectangular box with a thin black border, intended for the user to provide their answer to the question above.



## Implementation

### Intended use of e-vehicles and area of use

#### 12) Which are the targeted use cases for e-vehicles in your city?

- Transport of people
- Transport of goods, long trips
- Last/First mile delivery
- Other, please specify:

#### 13) In which areas of the city/region the e-vehicles are going to be used?

- Transport of people / delivery of goods in city centre
- Transport of people / delivery of goods in suburban area
- Transport of people / delivery of goods in rural area
- No specific focus, all areas
- Other, please specify:

### Intended user group

#### 14) In transport of people, which are the targeted user groups of the e-vehicles in your city?

- All citizens
- Commuters
- Students
- Senior citizens
- People with disabilities
- Younger people
- Other, please specify:

#### 15) Please indicate the type of the trips you think people in your city will make with the e-vehicles:

- Commuting
- Other job-related trips
- School trips
- Shopping
- Leisure
- Other, please specify:

#### 16) In transport of goods, whom do you expect to use the e-vehicles?

- City
- Other public actor

- Private companies, large
- Private companies, medium or small size
- Shops
- Other entrepreneurs
- Other, please specify:

**17) Who should be the main service operator of the e-vehicles?**

- City
- Other public service operator (please specify below)
- Private service operator (please specify below)

**18) Please specify the e-vehicle operators:**



## Obstacles, limitations and barriers

*Questions addressed in this section: What are potential obstacles to project implementation? What can be done to make sure that these are addressed as early as possible in the project cycle?*

### 19) Which points do you see as most challenging in relation to a successful implementation?

- Lack of money / financial resources
- Lack of e-vehicles or components
- Organizational issues
- Lack of maintenance services
- Lack of service operators / people to operate the e-vehicle service
- Investments in the infrastructure needed
- Missing guidance or best practices
- Low acceptance of e-vehicles among stakeholders/users (service operators, drivers, authorities and institutions)
- Low acceptance of e-vehicles among passengers
- Lack of enabling policies
- Other, please specify:

### 20) Are there regulatory barriers that currently hinder the implementation? Please give a description.

### 21) Which other barriers exist, for instance institutionally, that can hinder the implementation?



Background questions

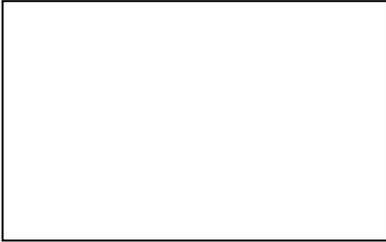
**22) Which is the institution you work for?**

**23) What is your role in the institution?**

**24) What is your role in the project?**

**25) Which year were you born? (voluntary)**

**26) Do you have any other comments, suggestions or concerns towards the project?**

A simple, empty rectangular box with a thin black border, intended for the user to provide their comments, suggestions, or concerns.

### 4.3 Stakeholder interview guideline

Table 2: Stakeholder Interview Guideline.

Interview partner(s)	
Interview partner institution	
Interview carried out by	
Date	

#### Interview Guideline, Draft

Topic	Aims of the city and Expectations of Stakeholders
Included in online survey	<b>yes</b>
Stakeholders to be interviewed (suggestion)	<ul style="list-style-type: none"> <li>● Public Transport Companies</li> <li>● National/Regional/Local Authorities</li> <li>● E-Vehicle OEMs (i.e. vehicle manufacturing companies, maintenance, ...)</li> <li>● Private and small-scale Transport companies, also informal</li> <li>● Electricity and charging infrastructure companies</li> </ul>
Questions	<p>What are the expectations and needs of local stakeholders regarding e-mobility in this city?</p> <p>a) In relation to the demo project</p> <p>b) In relation to a scaled-up project (scaled-up = the demo-approach is widely implemented)</p>
	Who will be using the e-mobility solutions in the future?
	Where and how will they be used?
Topic	Regulation
Included in online survey	<b>yes</b>
Stakeholders to be interviewed (suggestion)	<ul style="list-style-type: none"> <li>● Public Transport Companies</li> <li>● National/Regional/Local Authorities</li> <li>● Electricity and charging infrastructure companies</li> </ul>
Questions	<p>Existing regulatory framework: Will it allow for e-Mobility as planned?</p> <ul style="list-style-type: none"> <li>- <i>Transport companies and authorities: Especially emphasize on questions related to transport</i></li> <li>- <i>Electricity companies: Especially emphasize on questions related to energy provision and charging infrastructure set-up</i></li> </ul>
	Need for amendment of existing regulations: Are e-mobility solutions already covered by existing regulations? If not, in how far/in respect of which regulatory aspects are amendments needed?

Topic	Obstacles, limitations, barriers
-------	----------------------------------

Included in online survey	<b>yes</b>
Stakeholders to be interviewed (suggestion)	<ul style="list-style-type: none"> <li>● Public Transport Companies</li> <li>● National/Regional/Local Authorities</li> <li>● E-Vehicle OEMs (i.e. vehicle manufacturing companies, maintenance, ...)</li> <li>● Private and small-scale Transport companies, also informal</li> <li>● Electricity and charging infrastructure companies</li> </ul>
Questions	<p>What are potential obstacles to project implementation?</p> <p>a) In relation to the demo project</p> <p>b) In relation to a scaled-up project (scaled-up = the demo-approach is widely implemented)</p>
	What can be done to make sure that these are addressed as early as possible in the project?

<b>Topic</b>	<b>Sustainability</b>
Included in online survey	<b>no</b>
Stakeholders to be interviewed (suggestion)	National/Regional/Local Authorities
Questions	Are the planned e-mobility solutions useful to improve urban mobility?
	Are the planned E-mobility solutions useful to achieve sustainable mobility, especially in the <ul style="list-style-type: none"> <li>a) ecological sense (co2 and air quality emissions) and the</li> <li>b) social sense (accessibility, safety, equity)?</li> </ul>
	Regarding the planned e-mobility solutions: Do they contribute to fulfill public and official sustainability plans or schemes?

<b>Topic</b>	<b>Impact on existing business models</b>
Included in online survey	<b>no</b>
Stakeholders to be interviewed (suggestion)	<ul style="list-style-type: none"> <li>- Public Transport Companies</li> <li>- OEMs</li> <li>- Private and small-scale Transport companies, also informal</li> </ul>
Questions	Are existing business models / jobs / services affected by the e-Mobility-solutions to be introduced?
	What can be done to dampen possible impacts on existing business models? How can currently active workers be included?

<b>Topic</b>	<b>Planning and Urban Development for a scaled-up project</b>
Included in online survey	<b>No</b>

Stakeholders to be interviewed (suggestion)	<ul style="list-style-type: none"> <li>- Public Transport Companies</li> <li>- National/Regional/Local Authorities</li> </ul>
Questions	What are planning implications (externalities) for <u>urban development</u> ?
	What are planning implications (externalities) for <u>the transport system</u> ?
	What are planning implications (externalities) for <u>the energy network</u> ?