This user guide
1) explains what the toolkit is and who can use it,
2) describes what preparatory steps are needed before using the toolkit and
3) guides you through the different steps of the sustainability assessment and the evaluation of stakeholder preferences in the NISTO Evaluation Toolkit.

1 WHAT IS THE NISTO TOOLKIT AND WHO IS IT FOR?
The aim of the NISTO evaluation toolkit is to provide an easy-to-use set of tools for practitioners to evaluate small-scale mobility projects. The toolkit consists of two online evaluation tools for the assessment of sustainability and stakeholder preferences. In addition to them, guidance documents are provided on the use of these tools, target monitoring and converting data collected by smartphones or other sensors into indicators that can be used for the evaluation. The online evaluation tools and the documentation are accessible on the website www.nistotoolkit.eu.

The NISTO toolkit has been designed for transport planners, local and regional authorities, researchers and non-governmental organisations who want to appraise different options to solve a mobility-related problem in the urban or regional context. It is particularly suited for the early assessment of alternatives when detailed data is not yet available about the impacts of the interventions.

The evaluation tools provide a ranking of the alternative solutions based on a set of sustainability criteria and the stakeholders’ preferences using the PROMETHEE\(^1\) method. These rankings can guide decision-makers when taking a decision for one of the options. The tools therefore do not take over the responsibility of taking the decision itself. The rankings suggested are not ultimate, since considerations that are not covered by this toolkit (e.g. politics, duration of the implementation, synergies with other projects or plans) may also be relevant for the decision-makers.

\(^1\) For more information on the PROMETHEE method see http://www.promethee-gaia.net/methods.html
2 BEFORE USING THE TOOLKIT

You need to collect some information before you can actually use the evaluation tools. Usually the following information is needed:

2.1 IDENTIFY THE PROBLEM

The problem for which a solution needs to be found has to be identified by examining policy documents, previous studies and interviewing relevant stakeholders (e.g. local decision makers, residents, civil organisations). The clear identification of the problem is important in order to identify the goals, objectives and stakeholders of the project.

2.2 IDENTIFY STAKEHOLDERS

Urban mobility planning at the policy, strategy and project level should involve stakeholders and the public in general. The main reason is to increase public support of a project and increase the potential to benefit a wide cross-section of society. Stakeholders are defined as individuals or groups who are affected by or who can affect the implementation of the objectives of a project (Freeman, 1984). Stakeholder participation is thus recommended in each stage of the project implementation. Therefore, stakeholders have to be identified early, during the preparation phase of the project. Stakeholders are consulted to identify project goals, alternatives, stakeholders’ objectives and their preferences.

Typical stakeholders of urban and regional mobility projects are shown in Table 1. To ease the evaluation process, these groups will be predefined in the assessment of stakeholder preferences in the online evaluation tool.

<table>
<thead>
<tr>
<th>Stakeholder group</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>Local, regional and national government; usually responsible for the funding, construction and operation of transport infrastructure and services</td>
</tr>
<tr>
<td>Citizens/Public</td>
<td>Citizens living in the area affected by the project</td>
</tr>
<tr>
<td>Transport operators</td>
<td>Public and private operators of transport services (buses, trains, taxis, car sharing, bike sharing, parking operators etc.) and infrastructure</td>
</tr>
<tr>
<td>Business</td>
<td>Business organisations that carry out their activities in the area affected by the project (shopkeepers, offices, factories, employers in general)</td>
</tr>
</tbody>
</table>

Table 1 Typical stakeholders in urban and regional mobility (Source: VUB-MOBI)
2.3 DEFINE GOALS AND OBJECTIVES

Urban mobility measures and projects can only be evaluated if there are concrete goals and objectives that the project aims to reach. The whole evaluation cycle is linked to these goals and objectives. The evaluation criteria used in multi-criteria analysis and multi-actor multi-criteria analysis are defined based on the project and stakeholder objectives. The evaluation of the outputs and outcomes are also determined by these objectives.

A goal is a general statement of what needs to be achieved. It is usually derived from the general long-term strategy of the city (sustainable urban mobility plan, integrated development strategy, etc.) and often relates to regional, national and European strategies (e.g. the White Paper on Transport [European Commission, 2011]). ‘Improvement of the liveability of the city centre’ is a good example for a goal of an urban mobility project. It is the decision-makers, the steering group of the project or the initiator of the measure who suggest the general goals.

Objectives are derived from the goals. They are more short-term actions to be taken in order to achieve long-term goals (Dziekan et al., 2013). Therefore objectives need to be closely related to the expected output and outcome of the project. They should be clear, concise and achievable (Kaparias and Bell, 2011). While objectives had traditionally been defined by the project steering team, transport planners, decision makers or politicians, recently, the involvement of stakeholders in the definition of objectives has become important.

Stakeholders can be approached through interviews, focus groups or questionnaires to collect their objectives. A general agreement on objectives is needed before planning can continue to the next step.

2.4 DEFINE ALTERNATIVES

In the evaluation process, it is necessary to compare the performance of the planned project or measure with the business as usual alternative in order to show if the project will be beneficial and better than continuing with the current way of working. This means that at least two alternatives need to be evaluated. Usually, however, more alternatives are appraised.

In case of an ex-ante appraisal (before the implementation), the future effects of the different alternatives are modelled or estimated based on historic data, while in ex-post evaluation the actual indicator values can usually be measured. The same criteria and indicators are used to assess all alternatives in order to ensure that the assessment is comparable. Stakeholder involvement is important when drawing up the alternatives since they can easily identify and characterize the local aspects (McKinley et al., 2012).

Once the goals, objectives, stakeholders and alternatives have been defined, you can start working with the online evaluation tools for sustainability assessment and stakeholder preferences.
3 USING THE ONLINE EVALUATION TOOLS

3.1 GENERAL INFORMATION
The toolkit can be accessed through the www.nistotoolkit.eu website.

Use the Help button throughout the software to get context-specific help.

All data entered into the evaluation is saved online and it is later accessible for the holder of the account.

3.2 REGISTRATION AND LOGIN
In order to use the toolkit you need to create an account by entering your name, e-mail address and a password. Your email address will be used as your login. An e-mail will be sent to your e-mail address confirming your registration.

Click on View Profile to view or change your login details.

4 SUSTAINABILITY ASSESSMENT (MCA)
The online sustainability assessment follows the following sequence:

4.1 CREATE A PROJECT
In order to start an evaluation, you need to create a project by clicking on Create a Project. Add the project name (short name to easily identify the project), project description and project goal.

Select a project to work on by clicking on its name or click on Enter Project Workspace.

You can view and modify the Project name, Project description and Project goal for existing projects goal by clicking on the icon next to the projects.

Click on to delete a project. Please note that all data will be lost.

Click on to duplicate a project with all of its attributes.

You can return to this page any time by clicking on My projects in the upper right-hand corner. Mouse over the names of the projects to view the project description and goal.
4.2 ADD ALTERNATIVES

**Alternatives** are different ways of solving a problem. They can be different technological solutions or policy measures.

Add alternatives that you would like to evaluate. The alternative ‘Business as Usual’ is added by default. The impact of the other alternatives are compared to this baseline alternative, which assumes no intervention. The maximum number of alternatives is four.

Click on 📝 to change the name of an existing alternative.

Click on 🗑️ to delete an alternative. All data linked to the alternative will be lost.

4.3 VIEW EVALUATION CRITERIA AND WEIGHTS

A **criterion** is a standard by which you judge the alternatives.

This page gives an overview of the evaluation criteria used for the sustainability assessment. The criteria are fixed. They have been derived from the general objectives of urban mobility projects. The criteria reflect the most important impacts of urban mobility projects in the domains of economy, environment and society. In case a criterion is not relevant for your evaluation, you can indicate a ‘neutral’ impact in the ‘Evaluation’ step. You can find an explanation of this criteria in Appendix 2.

4.4 WEIGHT THE CRITERIA

**Weights** indicate the importance of criteria. The default weights were identified through a survey of government representatives from Belgium, France, the UK, the Netherlands and Germany. You can either use the default weights or adapt them to the local preferences in three ways:

**Pairwise comparison:** The pairwise comparison helps you to quickly and easily identify weights for the criteria by simply comparing them in an interactive survey. The survey presents all possible pairs of combinations of the criteria. You can indicate which criterion you find the more important by adjusting the slider. This option works best if you can ask the stakeholder(s) to carry out the pairwise comparison herself/himself during a workshop or a meeting. If you want several stakeholders to weight the criteria and then aggregate the weights, you can use the BPMSG AHP Online system developed by Klaus D. Goepel (http://bpmsg.com/academic/ahp.php). The outcomes of the group weighting session should then be entered manually in the software (see next step).

**Enter Weights Manually:** You can collect the weights for the criteria by a survey in which stakeholders distribute 100 points among the criteria. In this case, the weights can be directly entered using this option. As stated above, you can also enter the aggregated weights of the stakeholders this way. For both cases, the total weight should be equal to 100%, for each domain (economy, environment and society). If it is not the case, an error message is displayed and the weights are computed using their ratios.
**Equalize Weights** sets all weights equal. All previously entered weights will be lost. Use this option only if it is not possible to collect weights from the stakeholders or you want to erase the weights that you previously entered.

### 4.5 EVALUATE THE ALTERNATIVES

This page lets you evaluate the impact of each alternative on the sustainability criteria. The impact of the alternatives is compared to the ‘Business as Usual’. Leave the evaluation for the Business as Usual neutral if the current situation is not expected to change without the interventions. Choose the appropriate qualitative evaluation from the dropdown lists for each alternative and criterion to compare their impact to the Business as Usual.

Indicate what impact the alternative would have on a specific criterion (e.g. ask the question what impact a new bicycle path would have on traffic safety compared to the current situation.)

Alternatively, you can ask an expert panel to fill in a paper based evaluation form. The experts should come to an agreement about the evaluation of the impacts and you can enter the results yourself in the toolkit. Click on **Download Evaluation Table** to create a pdf version of the evaluation table for printing.

Press ‘**Save and Validate**’ if you have completed the evaluation. Click on **Next** to proceed to the Analysis.

The available evaluation labels are as follows:

- **Very negative**: The implementation of the alternative would have a very negative impact on the criterion (e.g. a new road would significantly increase air pollution).
- **Negative**: The implementation of the alternative would have a negative impact on the criterion.
- **Slightly negative**: The implementation of the alternative would have a slightly negative impact on the criterion.
- **Neutral**: The implementation of the alternative would have no impact on the criteria. Choose this option also if a criterion is not relevant for your evaluation.
- **Slightly positive**: The implementation of the alternative would have a slightly positive impact on the criterion.
- **Positive**: The implementation of the alternative would have a positive impact on the criterion.
- **Very positive**: The implementation of the alternative would have a very positive impact on the criterion.
4.6 ANALYSE AND SAVE RESULTS

This page gives you different visualisation options to view the results of the evaluation. Click on the labels under the chart to toggle the display of alternatives. Mouse over the points on the chart to see the individual evaluation scores for each alternative and criterion.

- **Project Evaluation and Weight Chart**: It shows the performance of the alternatives on each criterion, the overall performance and ranking. The Business as Usual alternative has an evaluation score of zero. All other alternatives are compared to the Business as Usual. The overall evaluation scores and rankings are shown on the right-hand side of the graph, where the coloured lines overstep the dashed line. The criteria weights are shown for each criteria with grey bars.

- **Weight bar chart**: It shows the distribution of weights among the 16 NISTO core criteria.

- **Criteria Evaluation Radar Chart**: It shows the contribution of each criterion to the overall performance of the alternatives. The Business as Usual alternative has an evaluation score of zero. All other alternatives are compared to the Business as Usual.

- **Criteria Group Evaluation Radar Chart**: It shows how alternatives perform on the aggregated criteria under each pillar of sustainability (economy, environment, society). The Business as Usual alternative has an evaluation score of zero. All other alternatives are compared to the Business as Usual.

- **Criteria Group Evaluation Chart**: It shows how alternatives perform on the aggregated criteria under each pillar of sustainability (economy, environment, society). The bars in the chart indicate the differences in the performance of the alternatives for each of the sustainability categories. This way, it is easy to detect and rank the performance of the alternatives on the pillars of sustainability.

You can **download and save a pdf report** with all relevant data and charts from the evaluation.

The individual charts can be exported and saved as images by clicking on the Download button in the upper right-hand side corner of each chart in **jpg, png, pdf and svg** formats. For the best quality, use the **svg** vector format. The report displays the evaluation graphs for all alternatives simultaneously. If you only want to save the evaluation results of selected alternatives (e.g. for better visibility on the radar chart) you can do so by exporting the groups individually after selecting the desired alternatives under the graph.

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2 If the performance score and consequently the ranking of an alternative are the same as another one the lines representing those alternatives overlap and only one of them can be seen.
5 ASSESSMENT OF STAKEHOLDER PREFERENCES (MAMCA)

The online evaluation of stakeholder preferences follows the following steps:

5.1 CREATE A PROJECT

In order to start an evaluation, you need to create a project by clicking on Create a Project. Add the project name (short name to easily identify the project), project description and project goal.

Select a project to work on by clicking on its name or click on Enter Project Workspace.

You can view and modify the Project name, Project description and Project goal for existing projects goal by clicking on the icon next to the projects.

Click on to delete a project. Please note that all data will be lost.

Click on to duplicate a project with all of its attributes. You can return to this page any time by clicking on My projects in the upper right-hand corner. Mouse over the names of the projects to view the project description and goal.

5.2 ADD ALTERNATIVES

Alternatives are different ways of solving a problem. They can be different technological solutions or policy measures. The alternative ‘Business as Usual’ is added by default. The impact of the other alternatives are compared to this baseline alternative, which assumes no intervention.

Add the alternatives that you would like to evaluate. The maximum number of alternatives is four. Click on to change the name of an existing alternative.

Click on to delete an alternative. All data linked to the alternative will be lost.

5.3 VIEW STAKEHOLDERS

Stakeholders are persons or organisations that are involved in or affected by the project you are evaluating. Typical stakeholder groups for the evaluation of small scale urban and regional mobility projects have been predefined: government, citizens/public, transport operators, businesses:

Government

Local or regional government; usually responsible for the funding, construction and operation of transport infrastructure and services

Citizens/Public

Citizens living in the area affected by the project and visitors or tourists
Transport operator
Public and private operators of transport services (buses, trains, taxis, car sharing, bike sharing, parking operators etc.) and infrastructure

Businesses
Business organisations that carry out their activities in the area affected by the project (shopkeepers, offices, factories, employers in general)

Click on ❌ to delete a stakeholder group. All data linked to that stakeholder will be lost. You can recover the deleted stakeholder group by reloading the stakeholder list by clicking on 🔄.

5.4 VIEW STAKEHOLDERS’ CRITERIA
A criterion is a standard by which you judge the alternatives. Criteria are based on the objectives of the stakeholders.

The criteria of the stakeholder groups have been predefined (see the list of predefined criteria in Appendix 1).

Click on ❌ to delete a criterion. All data linked to that criterion will be lost.

If you have deleted a stakeholder group in the previous step and you reconsidered this stakeholder group in the evaluation, you should click on 🔄 to reload the criteria for this stakeholder group.

5.5 ENTER STAKEHOLDERS’ WEIGHTS
Weights indicate the importance of criteria for each stakeholder group.

You need to set the weights for each stakeholder group separately by clicking on the names of the stakeholder groups. You can enter weights in three ways:

Pairwise comparison: The pairwise comparison helps you to quickly and easily identify weights for stakeholders’ criteria by simply comparing them in an interactive survey. The survey presents all possible pairs of combinations of the criteria. You can indicate which criterion you find the more important by adjusting the slider. This option works best if you can ask the stakeholder(s) to carry out the pairwise comparison herself/himself during a workshop or a meeting. If you want several members of a single stakeholder group to weight the criteria and aggregate the weights, you can use the BPMSG AHP Online system developed by Klaus D. Goepel (http://bpmsg.com/academic/ahp.php). The outcomes of the group weighting session should then be entered manually in the software (see next step).

Enter Weights Manually: You can collect the weights from the stakeholders by a survey in which they distribute 100 points among the criteria. In this case, the weights can be directly entered using this option. As stated above, you can also enter the aggregated results of the stakeholders this way. For both examples, the total weight should be equal to 100%. If it is not the case, an error message is displayed and the weights are computed using their ratios.
Equalize Weights sets all weights equal. All previously entered weights will be lost. Use this option only if it is not possible to collect weights from the stakeholders or you want to erase the weights that you previously entered.

The Stakeholders’ Progress Check on the left side of the screen indicates which stakeholder groups have the weights added.

5.6 EVALUATE THE ALTERNATIVES

This page lets you evaluate the impact of each alternative on the criteria of each stakeholder group. The impact of the alternatives is compared to the ‘Business as Usual’. Choose the appropriate qualitative evaluation from the dropdown lists for each alternative and criterion.

Indicate what impact the alternative would have on a specific criterion (e.g. ask the question what impact a new bicycle path would have on traffic safety compared the business as usual).

Alternatively, you can ask experts or stakeholder representatives to fill in a paper based evaluation form and you can enter the results yourself. Click on Download Evaluation Table to create a pdf version of the evaluation table for printing.

Press ‘Save and Validate’ if you have completed the evaluation to display the calculated preference scores for each alternative.

The available evaluation labels are as follows:

- Very negative: The implementation of the alternative would have a very negative impact on the criterion (e.g. a new road would significantly increase air pollution).
- Negative: The implementation of the alternative would have a negative impact on the criterion.
- Slightly negative: The implementation of the alternative would have a slightly negative impact on the criterion.
- Neutral: The implementation of the alternative would have no impact on the criteria. Choose this option also if a criterion is not relevant for your evaluation.
- Slightly positive: The implementation of the alternative would have a slightly positive impact on the criterion.
- Positive: The implementation of the alternative would have a positive impact on the criterion.

Very positive: The implementation of the alternative would have a very positive impact on the criterion.

The Stakeholders’ Progress Check on the left side of the screen indicates which stakeholder groups have the evaluation completed.
5.7 ANALYSE AND SAVE RESULTS
This page gives you different visualisation options to view the results of the evaluation. Click on the
labels under the charts to toggle the display of alternatives. Mouse over the points on the chart to see
the individual evaluation scores for each alternatives and criterion.

Multi-Actor Chart: This chart shows the aggregated preferences of the stakeholder groups for all
alternatives. The horizontal axis shows the stakeholder groups, the vertical axis the preference scores,
while the different alternatives are indicated by the coloured lines. The higher the preference score
for an alternative is, the higher it is ranked by that particular stakeholder group. The graph lets you
identify synergies and conflicts between the rankings of the stakeholder groups. The Business as Usual
always has a score of zero since all other alternatives are compared to it.

Charts for each stakeholder group:
• Evaluation and Weight Chart: It shows the weights of the criteria and the performance of the
alternatives on each criterion. You can identify for each stakeholder group which criteria have
the largest impact on the final ranking. The Business as Usual always has a score of zero since
all other alternatives are compared to it.
• Criteria Evaluation Radar Chart: It shows the contribution of each criterion to the overall
performance of the alternatives.

Download Report: You can download and save a pdf report with all relevant data and charts from the
evaluation for all stakeholders (Download Project Report) or for each stakeholder group separately
(Download Report).

The individual charts can be exported and saved as images by clicking on the Download button in the
upper right-hand side corner of each chart in jpg, png, pdf and svg formats. For the best quality, use
the svg vector format. The report displays the evaluation graphs for all alternatives simultaneously. If
you only want to save the evaluation results of selected alternatives (e.g. for better visibility on the
radar chart) you can do so by exporting the groups individually after selecting the desired alternatives
under the graph.
6 REFERENCES


McKinley, D.C., Briggs, R.D., Bartuska, A.M., 2012. When peer-reviewed publications are not enough! Delivering science for natural resource management. For. Policy Econ. 21, 1–11. doi:10.1016/j.forpol.2012.03.007
## APPENDIX 1: OVERVIEW OF ACTORS AND THEIR EVALUATION CRITERIA (MAMCA)

<table>
<thead>
<tr>
<th>Government</th>
<th>Local or regional government; usually responsible for the funding, construction and operation of transport infrastructure and services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public funding of transport</td>
<td>The level of public subsidies provided for transport investments and operations</td>
</tr>
<tr>
<td>Air quality</td>
<td>Concentration of particulate matter, NOx, NMVOC and SO$_2$</td>
</tr>
<tr>
<td>Accessibility</td>
<td>The ability for people to reach schools, shops, work places, leisure facilities, hospitals etc.</td>
</tr>
<tr>
<td>Socio-political acceptance</td>
<td>Citizens’ satisfaction with the mobility policy or project</td>
</tr>
<tr>
<td>Citizens/Public</td>
<td>Citizens living in the area affected by the project and visitors or tourists</td>
</tr>
<tr>
<td>Cost of mobility</td>
<td>The cost for a person to travel</td>
</tr>
<tr>
<td>Air quality</td>
<td>Concentration of particulate matter, NOx, NMVOC and SO$_2$</td>
</tr>
<tr>
<td>Noise</td>
<td>The exposure to noise nuisance from transport</td>
</tr>
<tr>
<td>Safety</td>
<td>The risk of a person using the transport network being killed or injured</td>
</tr>
<tr>
<td>Transport operator</td>
<td>Public and private operators of transport services (buses, trains, taxis, car sharing, bike sharing, parking operators etc.) and infrastructure</td>
</tr>
<tr>
<td>Cost effectiveness of operations</td>
<td>The overall balance of costs and revenues for operating the transport service</td>
</tr>
<tr>
<td>Public funding for transport investments</td>
<td>The level of public subsidies provided for transport investments</td>
</tr>
<tr>
<td>Accessibility of stops and stations</td>
<td>The ease of access to stops and stations of public transport, bike sharing, Car sharing, taxis etc.</td>
</tr>
<tr>
<td>Image of the company</td>
<td>How do transport users and citizens feel or think about the operating company</td>
</tr>
<tr>
<td>Businesses</td>
<td>Business organisations that carry out their activities in the area affected by the project (shopkeepers, offices, factories, employers in general)</td>
</tr>
<tr>
<td>Economic activity</td>
<td>Economic (and business) change due to the realisation of the project; such as employment opportunities, shop and hotel occupancy in the city</td>
</tr>
<tr>
<td>Reliability and travel time</td>
<td>Impact on the punctualities and costs of goods deliveries; impact on the travel time of business travellers</td>
</tr>
<tr>
<td>Accessibility</td>
<td>The ease for business travellers, clients and suppliers to reach the businesses (freight and persons)</td>
</tr>
<tr>
<td>Liveability</td>
<td>How well citizens and visitors feel in the public areas of the city, based on the quality of urban space, walkability and pedestrian friendliness</td>
</tr>
</tbody>
</table>
APPENDIX 2: OVERVIEW OF NISTO CORE CRITERIA (MCA)

In the NISTO toolkit, the assessment of sustainability is carried out using a pre-defined set of criteria and weights. The NISTO core evaluation criteria used for the assessment of sustainability have been derived from the general objectives of urban mobility projects. The criteria reflect the most important impacts of urban mobility projects in the domains of economy, environment and society. This document gives an overview of the criteria, their weights and explains the meaning of the indicators that can be used to measure these criteria.

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>EXPLANATION</th>
<th>INDICATORS</th>
<th>EXPLANATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECONOMY</td>
<td>The 3 pillars (Economy, Environment and Society) are equally important.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic activity</td>
<td>Economic (and business) change due to the realisation of the project</td>
<td>Shop occupancy in the city</td>
<td>The proportion of occupied shops is used as a simple way of determining how the local economy is performing.</td>
</tr>
<tr>
<td>(0.21)</td>
<td></td>
<td>Hotel occupancy in the city</td>
<td>The actual occupancy of hotel rooms (monthly average) is an indicator of economic activity in the city.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employment opportunities</td>
<td>How many new full time equivalent (permanent) jobs will be created by the project internally (within the implementing organisation) and externally.</td>
</tr>
</tbody>
</table>
### Cost effectiveness (0.24)

<table>
<thead>
<tr>
<th>Cost effectiveness</th>
<th>The overall balance of costs and revenues of investments and operations</th>
</tr>
</thead>
</table>

#### Investment costs

These are the public and private costs for the initial set up of the scheme or project that is monitored. They can include for example construction costs, purchase of rolling stock, back office and website design etc.

#### Operating costs

These are the public and private costs for maintenance and running the scheme, including for example repairs, staffing costs, fuel and other consumables.

#### Revenues

These are the revenues for both public and private parties, generated by the project, e.g. by ticket sales, membership, user fees, subsidies, advertising.

### Reliability and travel time (0.31)

<table>
<thead>
<tr>
<th>Reliability and travel time</th>
<th>Impact on the costs and punctualities of goods deliveries; impact on the travel time of business travellers</th>
</tr>
</thead>
</table>

#### Cost of deliveries and pickups

The average amount of money paid by the shipper for shipping a product or service unit or entity to the receiver in the city.

#### Punctuality of deliveries and pickups

Punctuality is defined as the percentage of pick-up and/or delivery times that are within an acceptable time slot or time window.

#### Travel time of business travellers

Average travel time of travellers travelling for business purposes
<table>
<thead>
<tr>
<th>Public funding of transport (0.24)</th>
<th>The level of public subsidies provided for transport investment and operation</th>
<th>Level of transport subsidies for investments</th>
<th>Percentage of public funding for investments, related to the project.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Level of transport subsidies for operating costs</td>
<td>Percentage of public funding for operational costs related to the project.</td>
</tr>
<tr>
<td>ENVIRONMENT</td>
<td>The 3 pillars (Economy, Environment and Society) are equally important.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land consumption (0.20)</td>
<td>The proportion of land which is occupied by transport infrastructure contributing to the loss of green areas, habitats and causing visual impact</td>
<td>Extent of land consumption by project implementation</td>
<td>The proportion of land, which is occupied by transport infrastructure.</td>
</tr>
<tr>
<td>Greenhouse gas emissions (0.21)</td>
<td>Level of CO₂ emissions</td>
<td>CO₂ emissions</td>
<td>What are the Carbon Dioxide (CO₂) emissions for the project, also including any indirect effect like change due to modal shift from/to cars?</td>
</tr>
<tr>
<td>Air quality (0.22)</td>
<td>Concentration of particulate matter and NOₓ</td>
<td>PM2.5 emissions</td>
<td>What are the particulates (PM2.5) emissions for the project?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NOₓ emissions</td>
<td>What are the nitrogen oxides (NOx) emissions for the project?</td>
</tr>
<tr>
<td>Resource use</td>
<td>Energy efficiency of transport vehicles</td>
<td>Energy efficiency of vehicles</td>
<td>What is the energy consumption of vehicles that are used in or affected by the project?</td>
</tr>
</tbody>
</table>
### Proportion of alternative energy sources used
What percentage of the fuel/energy used in the project comes from alternative sources (biofuel, electricity, hydrogen, non-fossil methane, natural gas)?

### Noise
#### Exposure to transport noise
What is the perception of residents of transport related noise levels in their local area?

#### Exposure to transport noise
Percentage of population exposed to traffic noise levels affecting well-being (greater than 40dBA)

#### Produced noise
The overall noise produced by transport related to the project.

### Society
The 3 pillars (Economy, Environment and Society) are equally important.

### Safety
#### The risk of a person using the transport network being killed or seriously injured
Total number of accidents per year per 100 km travelled for each transport mode (including walking and cycling)

#### Perception of safety
How do transport users perceive safety when participating in traffic? (qualitative evaluation)
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security</td>
<td>Crimes committed against transport users or transported goods</td>
<td>Perception of crime and security</td>
<td>What is the perception of crime per mode, including public transport, personal transport, walking and cycling?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reported crime</td>
<td>Reported crimes or incidents relating to public transport, car and bicycle theft and pedestrians</td>
</tr>
<tr>
<td>Health of citizens</td>
<td>Physical and mental wellbeing of citizens</td>
<td>Level of health of citizens</td>
<td>The percentage of walking and cycling trips for travelling compared to the total amount of trips by all modes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Walkability and pedestrian friendliness</td>
<td>Total length of pedestrian areas (walking paths, pavements) in % of the length of the whole transport network (roads)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quality of urban space</td>
<td>What are people's perception of the urban realm or character of the town? (qualitative evaluation)</td>
</tr>
<tr>
<td>Liveability</td>
<td>How well citizens and visitors feel in the public areas of the city</td>
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<tr>
<td>Equity</td>
<td>Provision of access to jobs and basic services for affected population groups, over which the projects’ effects are distributed (like citizens and visitors), irrespective of social and economic background</td>
<td>Accessibility of employment</td>
<td>The working age people living within 30 minutes travel time to nearest employment centre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accessibility of healthcare</td>
<td>The percentage of people living within 30 minutes travel time to nearest doctors and hospital</td>
</tr>
<tr>
<td>Accessibility of services</td>
<td>The percentage of people living within 30 minutes travel time to nearest town centre or shopping centre</td>
<td></td>
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<td>---------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessibility of public transport stops and stations</td>
<td>Percentage of people living within 5 minutes walking to public transport stop or station</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of service from the nearest public transport stop or station</td>
<td>How frequent is the daytime service from the nearest station or stop (number of services per hour during regular service)?</td>
<td></td>
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</tr>
<tr>
<td>Cost of mobility</td>
<td>The percentage of a person’s income that is spent on transport. Calculated on a monthly basis.</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Socio-political acceptance (0.09)</th>
<th>Citizens’ satisfaction with the mobility policy or project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citizen’s approval of satisfaction with the mobility policy or project</td>
<td>Overall level of satisfaction with mobility policy or the project by the citizens (qualitative evaluation).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessibility for people with special needs (0.13)</th>
<th>Accessibility for people with special needs (disabled, elderly and people with small children)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of fully accessible services</td>
<td>Proportion of fully accessible services/stops/stations</td>
</tr>
</tbody>
</table>