



DELIVERABLE D.T1.3.5

Transnational Tool. Focus on Info-Mobility

Version 1.0
032018



3. Basic features of the tool

The transnational tool on info-mobility is structured as an “adaptive” or “dichotomy” survey; according to the approach provided by the parallel specific tools regarding Connectivity and Tariff and Ticketing. More in detail, users address customized flows of questions, which are progressively proposed according to the previous answers provided. The info-mobility transnational tool [D.T1.3.5] is organized in **five main clusters** of questions, as specifically described in the sections 3.3 of this document. These five clusters are held together thanks a **common flowchart** (Annex I) Questions forecast only “single choice” answers, which are all “mandatory”, and classifiable in three categories: yes/no; choice between two options; and quantitative assessment in a scale of four steps (none, a few, many, all/almost). After answering all the questions, a table of **customized feedbacks** based on the survey will be proposed to the user (Annex II). The aim of this last phase is to provide general suggestions for the development of info-mobility in cross-border and peripheral areas. The approach is not technical, but rather general, so as to offer a complete framework regarding the themes that may need and enhancement.

3.1. Defining the tool

As regards Info-mobility, the structure proposed for the tool is consistent with the approach adopted in the previous transnational study [D.T1.2.15]. After some territorial questions useful to diversify the related suggestions (STEP 1, section 3.3) and some questions regarding the identification of the system to analyse in the tool (STEP 2, section 3.3), the three main fields (pre-trip component, on-trip component, and ticketing) are addressed (STEPS 3, 4 and 5, section 3.3). These main phases, which constitute the info-mobility tool, are explained in the subsequent sections.

3.2. Using the tool. STEP 1: territorial classification

In this section, some territorial questions are proposed. They deal with the scale (local or regional/inter-regional), the territorial configuration (rural or urban), and the target user (citizen or tourist). According to the answers provided, eight territorial typologies are possible, tailored on the specific territorial feature resulted (Figure 1). These questions are identified by the violet colour in the flowchart (Figure 2). Moreover, for this step:

- The type of answer possible is **multiple choice**.
- The outputs provided are **territorial filters for the final suggestions and remarks**.

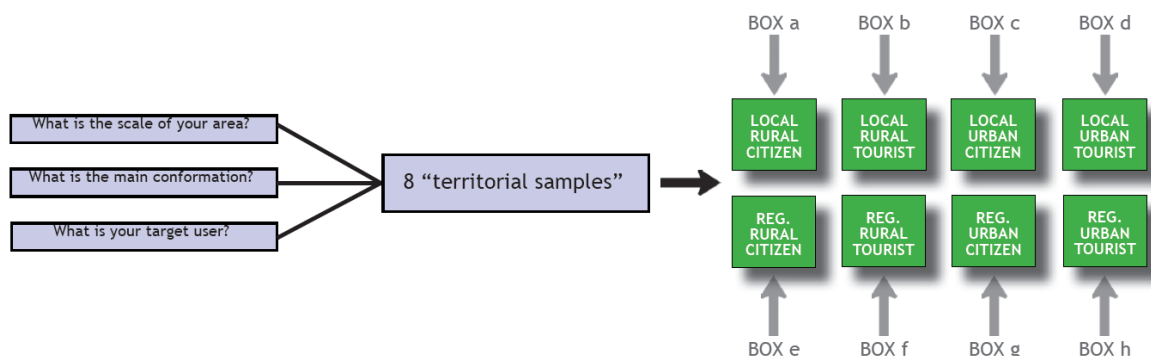


Figure 1. The eight territorial typologies and the corresponding suggestion boxes (a-h)

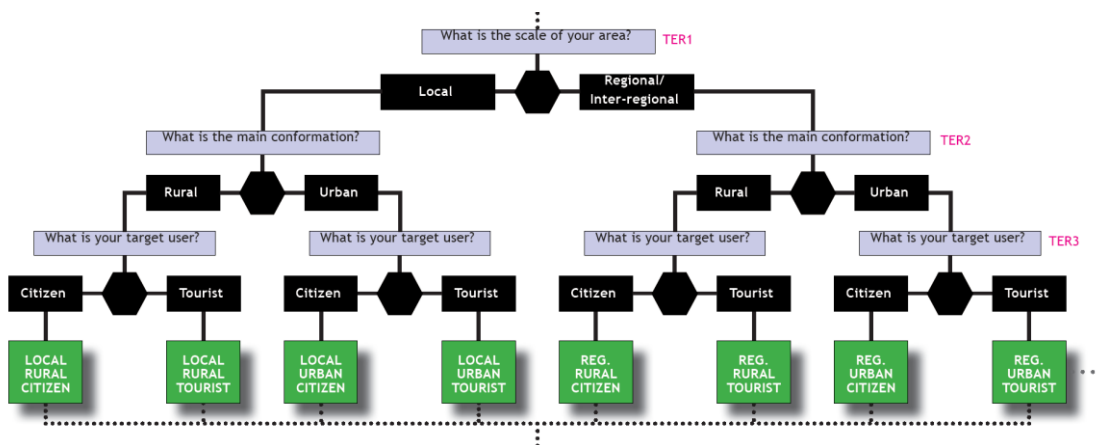


Figure 2. The territorial question flowchart with the eight resulting territorial typologies

3.2. Using the tool. STEP 2: Identification of the Mobility Information System (MIS/IMIS) to analyse

The aim of this phase is to identify the MIS/IMIS object of the analysis. In this respect, users are asked to choose just one system (the main one of their areas), excluding all the others. This choice is crucial, since including in the analysis all the systems available is not a proper method to obtain reliable results. Indeed, a wide range of skills may be covered either by just one MIS or by several ones, and this difference is crucial in terms of usability and user-friendliness. More in detail, users have two main possibilities (Figure 3): either considering the IMIS (Integrated Mobility Info-System) of their area, regardless it is also the main system available; or else (if none IMIS exists), considering the main MIS among the ones available in their area. These questions are identified by the light-blue colour in the flowchart (Figure 4). Moreover, for this step:

- The types of answer possible are either **multiple choice** or **Yes/No**.
- The output of this step is the **identification of the MIS/IMIS to analyse subsequently**.

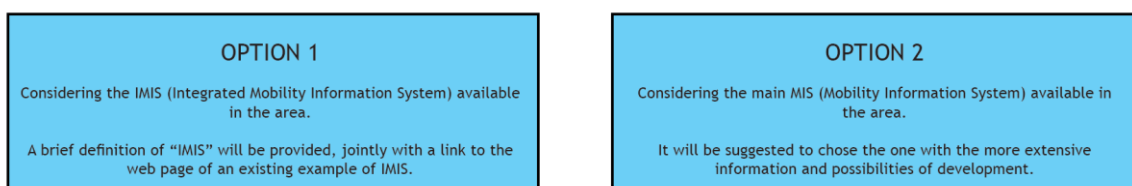


Figure 3. The MIS identification and the two possible resulting typologies (MIS/IMIS)

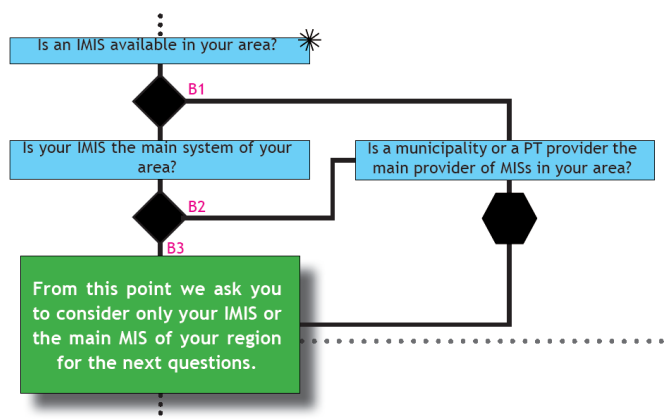


Figure 4. The MIS identification flowchart and the two resulting typologies (MIS/IMIS)



3.2. Using the tool. STEP 3-4-5: Pre-trip, on-trip component, ticketing analysis

This third phase deals with pre-trip and on-trip information, as well as ticketing services, in order to verify the effectiveness of the selected system. By asking if each type of information is actually available for the MIS considered, three themes are investigated: multimodality, transnational coverage, and customization (as for pre-trip); reliability, types of on-trip information, and off-line information (as for on-trip); and the extent of the service, payment methods, and types of available tickets (as for ticketing). For each of them, the efficiency of the MIS in these fields is weighted. These questions are identified by the yellow, brown and orange colours in the flowchart (Figure 7). Moreover, for this step:

- The type of answer possible is **multiple choice**.
- The outputs of this step are the **assessments of the MIS/IMIS pre-trip and on-trip, as well as ticketing coverage**.

This assessment, together with the previous two steps (STEP 1 and STEP 2), leads to a “**box of suggestions**” and to a “**table of examples**”. The former consists of a group of standard suggestions and remarks, customized depending on the identified territorial typology, out of the eight ones possible (Figure 5). The latter is an additional tool (Figure 6), which aims to provide a table of best cases with different characteristics. With this table, e.g. users can search for the best case closest to their current state of art, or for the one that represents their future plan of development. For each case, a web link to its own web page is proposed.

example
BOX d

		BOX a	BOX b	BOX c	BOX d	BOX e	BOX f	BOX g	BOX h
	Standard Version	Local Rural Citizens	Local Rural Tourists	Local Urban Citizens	Local Urban Tourists	Regional Rural Citizens	Regional Rural Tourists	Regional Urban Citizens	Regional Urban Tourists
Suggestions	1	1a	1b	1c	1d	1e	1f	1g	1h
	2	2a	2b	2c	2d	2e	2f	2g	2h
	3	3a	3b	3c	3d	3e	3f	3g	3h
	4	4a	4b	4c	4d	4e	4f	4g	4h
	N	Na	Nb	Nc	Nd	Ne	Nf	Ng	Nh

Figure 5. The “box of suggestions” organized according to the eight possible territorial typologies

	MIS (Mobility Information System)						IMIS (Integrated Mobility Information System)							
	MIS a (link)	MIS b (link)	MIS c (link)	MIS d (link)	MIS e (link)	MIS f (link)	MIS g (link)	IMIS a (link)	IMIS b (link)	IMIS c (link)	IMIS d (link)	IMIS e (link)	IMIS f (link)	IMIS g (link)
Pre-trip component	V	X	X	V	X	V	V	V	X	X	V	X	V	V
On-trip component	X	V	X	V	V	X	V	X	V	X	V	V	X	V
Ticketing	X	X	V	X	V	V	V	X	X	V	X	V	V	V

● Click on the MIS/IMIS you prefer to see an
 ● example of best practice

Figure 6. The “table of examples” organized according to the main features proposed by the tool

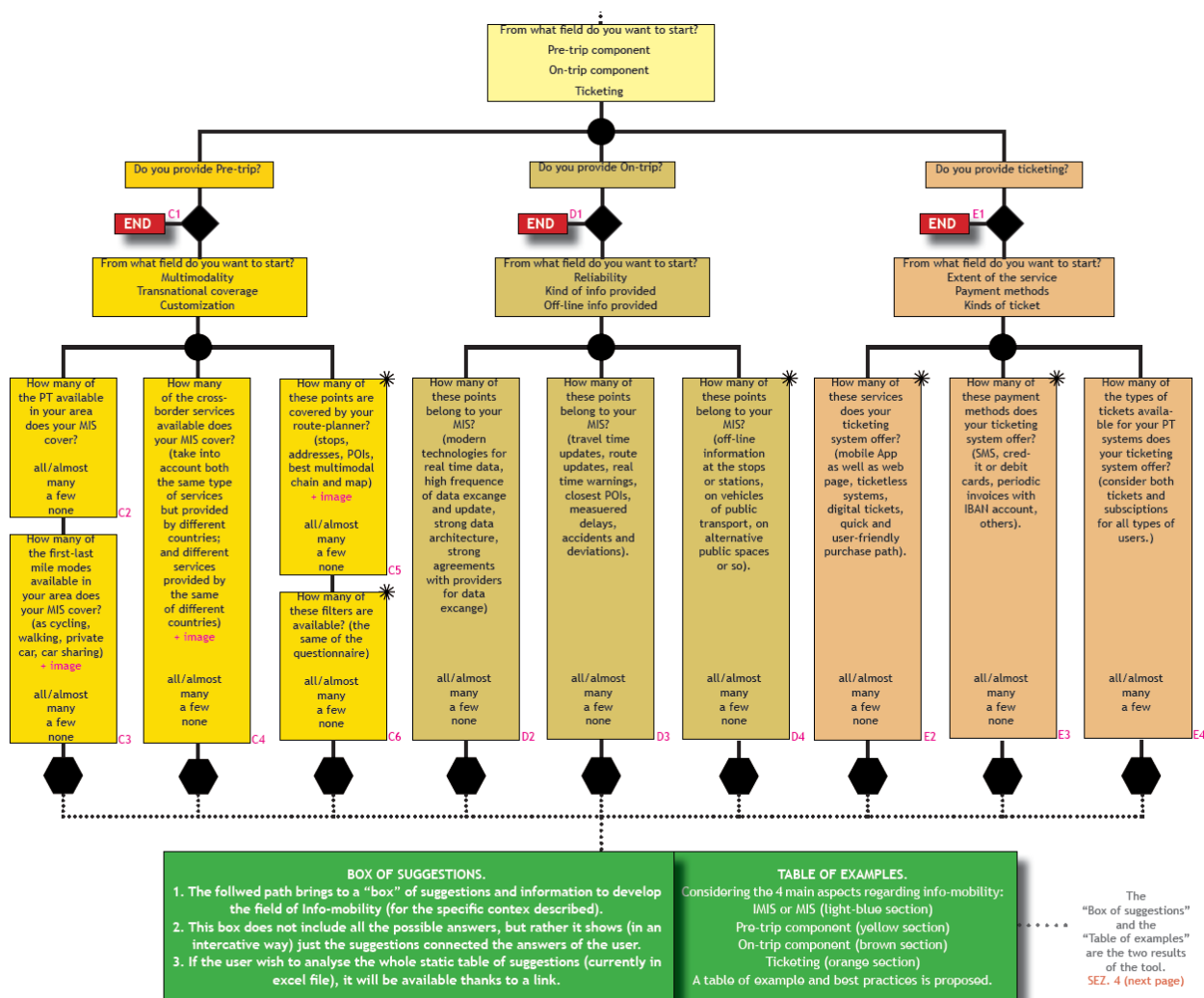


Figure 7. The pre-trip, on-trip and ticketing flow chart, and the two main output

3.3. Interpreting results

The transnational tool on info-mobility built is the logical consequence of the transnational study [D.T1.2.15]. Furthermore, it tries to offer a preliminary support for the implementation of the pilot actions [WP T2]. With the flowchart described, each user can have a framework of the crucial features and themes that affect info-mobility in cross-border and peripheral contexts; at the same time, they can understand the main lacks to be addressed. In this sense, the tool provides a decisional support for the identification of issues, rather than a technical manual of solutions for already identified challenges. It is expected to play a complementary role with the tool-box foreseen by the WP T3, which will provide more technical suggestions based also on the expertise acquired during the period of Pilot action implementation.

Finally, in the annexes 1 and 2, the overall flowchart of the info-mobility transnational tool is displayed (Figure 8), followed by the corresponding table of standard suggestions (Figure 9), and by the image of the final output provided by the web-based tool "EU-Survey" (Figure 10).



Annex I - Questionnaire & Instructions. The overall flowchart

Below, the overall flowchart of the tool is displayed. In the different colours are represented the five clusters of questions, while the symbols identify the typologies of answer available. This logical structure is translate in EU-Survey, according to the possibilities and rules belonging to this web-based support.

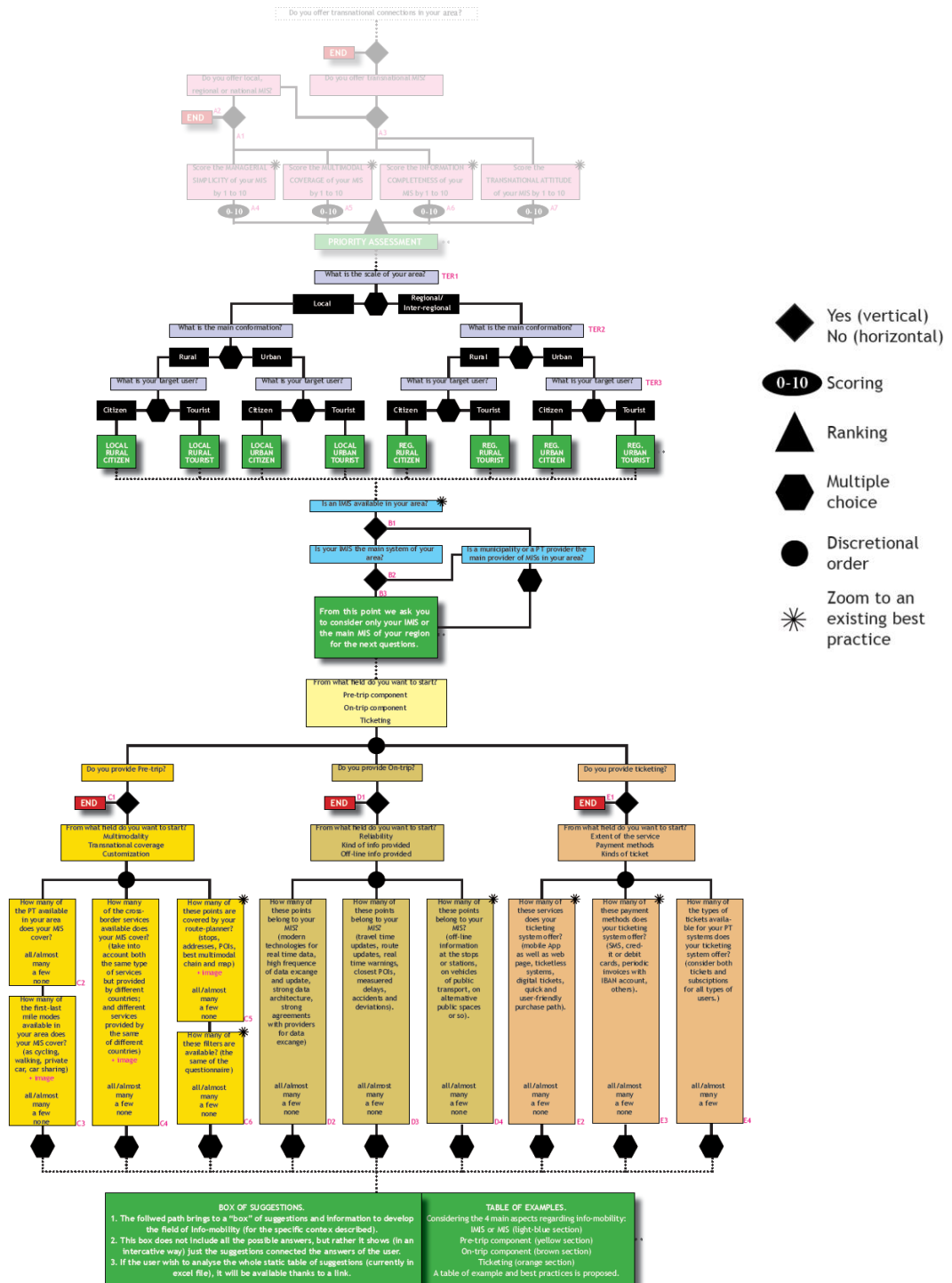


Figure 8. The overall info-mobility flow chart

Legend: STEP 1 (violet colour), STEP 2 (light-blue colour), STEP 3 (yellow colour), STEP 4 (brown colour), STEP 5 (orange colour). In green all the outputs



Annex I - Questionnaire & Instructions. The table of standard suggestions

Below, the final table of suggestions (standard version) is proposed. The subdivision in five clusters and corresponding colour is maintained to make it more understandable. All these standard suggestions have also eight customized variations, according to the eight possible territorial configurations.

Implementation of info mobility systems		
of the territorial questions (TER). Moreover, the first group (pink color) refers to general questions. Finally: with "*" are indicated the questions where best practices are used or proposed.		
SPECIFIC QUESTIONS PROPOSED D.T1.3.5	PROPOSED ANSWERS	STANDARD SUGGESTION/OBSERVATION
1 TER1	Local Regional/Inter-regional	The answer is conserved to define the "territorial filter" for the final suggestions/observations.
2 TER2	Rural Urban	The answer is conserved to define the "territorial filter" for the final suggestions/observations.
3 TER3	Citizen Tourist	The answer is conserved to define the "territorial filter" for the final suggestions/observations. (with B1-B2-B3, 8 different territorial combinations are possible considering the 3 multiple choices)
4 B1*	No	It is suggested the implementation of an IMIS if possible. It can: - Merge data from many different authorities and/or transport provider. - Often can offer both pre-trip and on-trip information, as well as ticketing service. - It is the best way to provide users a friendly and easy tool for several needs. Pay attention: it requires a high effort (political and technical coordination in particular).
5 B2	Yes No	If you already had an IMIS but it is not your principal system, you should invest on its development. This because an IMIS is very flexible. It can be extended in future, if new services or new areas of interest arise. Such a flexibility is hardly available for MISs referred to municipalities (because of geographical limits) or providers (because of service limits).
6 B3	Yes Yes	This is a very positive feature of your system. Indeed, our study highlight that the best cases diffused in Europe base their systems on this kind of tool. We suggest you to go-on developing this solution.
7	Pre-trip component On-trip component Ticketing	This is only a preference to express for the order of the questions. Here the order proposed is: pre-trip, on trip, ticketing.
8 C1	No	If you do not provide pre-trip/on-trip/ticketing you should consider these are complementary and synergic tools, the absence of one of them can even make less powerful the other already available. In this case: Missing pre-trip discourage to consider PT as an option to evaluate before travelling, therefore other kind of info become useless. On the other hand, the presence of these three qualities together is synergic (their value together is higher than the sum of their single values; because a plus value given by their joint presence is produced).
9	Yes Multimodality Transnational coverage Customization	This is only a preference to express for the order of the questions. Here the order proposed is: multimodality, transnational coverage, customization.
10 C2	all/almost many a few none	All/Almost. The coverage of your MIS as for PT services is very positive. It can guarantee an extensive multimodal overview in your area. Many. We suggest you to develop your multimodal coverage. Especially considering that peripheral services are often leaved aside, even if a high number of citizens live in the outskirts. A few. We highly suggest you to improve your multimodal coverage. If a few services are currently available, users hardly can plan a door-to-door route. None. Obviously if your system do not provide information about your PT service, this is a crucial lack to fix.
11 C3	all/almost many a few none	All/Almost. The coverage of your MIS is very positive. It can guarantee an extensive multimodal overview, and encourage door-to-door solutions. Many. We suggest you to develop your multimodal coverage. This is crucial to provide citizens a door-to-door alternative to car. A few. We highly suggest you to improve your multimodal coverage. This is crucial to provide to citizens a door-to-door alternative to car. None. It is a crucial lack to fix, since these modes are essential both to cover door-to-door trip, and to provide connections
12 C4	all/almost many a few none	All/Almost. The coverage of your MIS as cross-border services is very positive. It can guarantee an extensive overview of all the types of services managed both by your country and by the bordering one/s. Many. We suggest you to develop your cross-border coverage. Merging information about services provided by boarding countries may enforce the PT supply. A few. We highly suggest you to improve your cross-border coverage. Merging information about services provided by boarding countries may enforce the PT supply. None. It is an important lack to fix, since this information is crucial first for the daily life of cross-border commuters, and second for tourists. A lack in this field may distort the perception of the overall quality of cross-border connections.
13 C5*	all/almost many a few none	All/Almost. The coverage of your MIS as for route-planning options is very positive. It can guarantee users to plan their journey with a high level of accuracy. Many. We suggest you to develop your route-planner. With an extensive planner, users can better know the offered services, can verify their route in different ways, and have a better control on their journey (as usually happened with private vehicles). A few. We highly suggest you to improve your route-planner. With an extensive planner, users can better know the offered services, can verify their route in different ways, and have a better control on their journey (as usually happened with private vehicles). None. It is an important lack to fix. A very limited route planner leaves users a little aware about the features of the journey they have to address.
14 C6*	all/almost many a few none	All/Almost. The coverage of your MIS as for route filters is very positive. It can guarantee users to plan their journey in a tailored way including their specific needs. Many. We suggest you to develop your route filters for users. A high level of customization is very important to compete with car. A few. We highly suggest you to improve your route filters for users. A high level of customization is very important to compete with car. None. It is an important lack to fix. Without filters, users may consider the current transport supply not proper for their needs.



15	D1	Do you provide On-trip information?	No	If you do not provide pre-trip/on-trip/ticketing you should consider these are complementary and synergic tools, the absence of one of them can even make less powerful the other already available. In this case: Missing on-trip gets worse the travel experience and can affect the feeling of control users wish to own. It might discourage the use of PT in the next travel, making useless the presence of pre-trip information. On the other hand, the presence of these three qualities together is synergic (their value together is higher than the sum of their single values; because a plus value given by their joint presence is produced).
16		Do you provide On-trip information? + From what field do you want to start?	Yes Reliability Kind of info provided Off-line info provided	This is only a preference to express for the order of the questions. Here the order proposed is: Reliability, Kind of info provided, Off-line info provided.
17	D2	RELIABILITY How many of these points belong to your MIS? (modern technologies for real time data, high frequency of data exchange and update, strong data architecture, strong agreements with providers for data exchange)	all/almost many a few none	All/Almost. The reliability of your MIS is very positive. It is a crucial point as regards on-trip information, since a not very reliable info may easily affect the level of satisfaction of users. Many. We suggest you to improve the reliability of your system. Users consider natural having exacted information. By contrary, not reliable information highly affects the users' level of satisfaction. A few. We highly suggest you to improve the reliability of your system. Users consider natural having exacted information. By contrary, not reliable information highly affects the users' level of satisfaction. None. It is an important lack to fix. Often some issues can constitute a barrier, as the high cost for the proper technologies for real time data, or the political agreement needed to obtain an extent exchange of data. Nevertheless, reliability is a decisive quality for users.
18	D3	KIND OF INFORMATION PROVIDED How many of these points belong to your MIS? (travel time updates, route updates, real time warnings, closest POIs, measured delays, accidents and deviations).	all/almost many a few none	All/Almost. The coverage of your MIS as for the types of information provided is very positive. Users can have a good control in general on the service. This contributes to make MIS more user-oriented. Many. We suggest you to extend the types of information available for your system. This information contributes to make MIS more user-oriented, and to increase the capacity of users to address changes, and be aware about their surroundings. A few. We highly suggest you to extend the types of information available for your system. This information contributes to make MIS more user-oriented, and to increase the capacity of users to address changes, and be aware about their surroundings. None. It is an important lack to fix. Offering a competitive range of information contributes to make users more confident with the service.
19	D4*	OFF-LINE INFORMATION PROVIDED How many of these points belong to your MIS? (off-line information at the stops or stations, on vehicles of public transport, on alternative public spaces or so).	all/almost many a few none	All/Almost. The coverage of your MIS as for off-line information is very positive. This information are not just useful, since they can even influence the behaviour of user (as in the case of London where a chart of the pick hours in the subway has stimulated a spontaneous more balanced distribution of passengers). Many. We suggest you to extend the off-line information available for your system. Effective off-line information may even influence users' behaviour. A few. We highly suggest you to extend the off-line information available for your system. Effective off-line information may even influence users' behaviour. None. It is an important lack to fix. The absence of these services might by very negative especially for those cases where online information are hardly reachable.
20	E1	Do you provide Ticketing service?	No	If you do not provide pre-trip/on-trip/ticketing you should consider these are complementary and synergic tools, the absence of one of them can even make less powerful the other already available. In this case: Missing ticketing information and payment options affect both tourist (especially in foreign ones that might find more comfortable to buy tickets via App in their own language, and for commuters that often need to save their time, and an App can guarantee this need better than classic purchasing systems. On the other hand, the presence of these three qualities together is synergic (their value together is higher than the sum of their single values; because a plus value given by their joint presence is produced).
21		Do you provide Ticketing service? + From what field do you want to start?	Yes Extent of the service Payment methods Kinds of ticket	This is only a preference to express for the order of the questions. Here the order proposed is: Extent of the service, Payment methods, Kinds of ticket.
22	E2*	EXTENT OF THE SERVICE How many of these services does your ticketing system offer? (mobile App as well as web page, ticketless systems, digital tickets, quick and user-friendly purchase path).	all/almost many a few none	All/Almost. The extent of your ticketing service is very positive. This aspect is very important to develop, in order to offer a user-oriented service. Many. We suggest you to extend the supply of your ticketing system. An effective service need to be user-friendly and to propose an easy and quick purchase path. From this side, the mobile App developed by SBB1 might be considered. A few. We highly suggest you to extend the supply of your ticketing system. An effective service need user-friendly and to propose an easy and quick purchase path. From this side, the mobile App developed by SBB1 might be considered. None. It is an important lack to fix. An ineffective ticketing service may discourage users to buy tickets via web and in some case discourage the use of some PTs as well.
23	E3*	PAYMENT METHODS How many of these payment methods does your ticketing system offer? (SMS, credit or debit cards, periodic invoices with IBAN account, others).	all/almost many a few none	All/Almost. The payment method supply of your ticketing service is very positive. Offering a wide range of methods helps to attract users. Many. We suggest you to develop the payment method supply of your ticketing system. Offer a wide range of methods helps to attract users. In particular, some new methods that try to combine safety and simplicity are spreading. An interesting example is the monthly invoicing promoted by SBB1. A few. We highly suggest you to develop the payment method supply of your ticketing system. Offer a wide range of methods helps to attract users. In particular, some new methods that try to combine safety and simplicity are spreading. An interesting example is the monthly invoicing promoted by SBB1. None. It is an important lack to fix. A limited number of payment method makes the service not very user-friendly, while the main aim of this component is actually simplifying the process. In particular, some new methods that try to combine safety and simplicity are spreading. An interesting example is the monthly invoicing promoted by SBB1.
24	E4	KINDS OF TICKETS How many of the types of tickets available for your PT systems does your ticketing system offer? (consider both tickets and subscriptions for all types of users).	all/almost many a few none	All/Almost. The number of types of ticket available for your service is a positive feature. It allows different kinds of user to find the most proper solution to their necessity. Many. The types of ticket available for your service need to be developed. This important feature allows different kind of users to find the most proper solution to their necessity, covering both tickets and subscriptions. Otherwise, some types of users might be discouraged. A few. The types of ticket available for your service need to be highly developed. This important feature allows different kind of users to find the most proper solution to their necessity, covering both tickets and subscriptions. Otherwise, some types of users might be discouraged.

Figure 9. The overall table of standard info-mobility suggestions

Legend: STEP 1 (violet colour), STEP 2 (light-blue colour), STEP 3 (yellow colour), STEP 4 (brown colour), STEP 5 (orange colour)



Annex II - Pilot tips. The output of the web-based tool EU-Survey

A few
 None

*
PAYMENT METHODS
 How many of these payment methods does your ticketing system offer?
 [SMS, credit or debit cards, periodic invoices with IBAN account, others]
 Best practice example as for the available payment methods: [SBB Mobile - "Tips and Tricks"](#)

All/Almost
 Many
 A few
 None

* **TYPES OF TICKET:**
 How many of the types of ticket available for your PT systems does your ticketing system offer?
 Consider both tickets and subscriptions for all types of user.

All/Almost
 Many
 A few

INTERNATIONAL INFO-MOBILITY TOOL IS NOW READY FOR YOUR REVIEW:

INFO-MOBILITY TOOL
For a Local-Rural-Inhabitant focused area

1. GENERAL FEATURES

The development of your IMIS is highly suggested, in order to make it your main system.
 An IMIS is very flexible, since it can be extended in different moments, including new services and areas of interest. Such a flexibility is hardly available for standard MISs, since these are usually strictly referred to specific municipalities or providers.

2. PRE-TRIP COMPONENT

2.1 Multi-modal coverage

We suggest you to develop your multi-modal coverage. Especially considering that peripheral services are often leaved aside, even if a high number of citizens live in the outskirts.

The coverage of your IMIS/MIS is very positive. It can guarantee an extensive multi-modal overview, and encourage door-to-door PT solutions.

2.2 Transnational coverage

10

Figure 10. The EU Survey output of the transnational tool