



# DELIVERABLE D.T1.3.3

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Transnational Tool. Focus on PSO and  
timetable harmonisation

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Version 1.0  
032018



## 1. Introduction: aim & objective

Being the last deliverable of the WPT1 and the main output of the same work package, transnational tools' main aim is to enhance public transport (PT) planning capacities among the stakeholders and decision-makers.

Based on the vast information gathered from Project Partners (PPs) through the Territorial Needs Assessment (TNA) (Deliverables D.T1.2.2 - D.T1.2.11), three different transnational studies (D.T1.2.13-D.T1.2.15) have been elaborated in order to synthesize the regional results and to achieve a transnational added value.

As a conclusion of WPT1, CONNECT2CE project has implemented a decision support tool for all the 3 thematic areas (Public Service Obligation/Timetable harmonisation, Multimodal Integrated Ticketing and Tariff Systems, Passenger Information Systems). In other words it can be summarized that the public service contract for operating cross-border services is the main "hardware" while timetable harmonisation is the energy to let the hardware running and the ticketing system and passenger information system are the key software of the efficient passenger transport.

As understood from the previous transnational studies, CONNECT2CE's project **partner's** belong to a rather **heterogeneous group of regions** from many different geographical, social-economic and sectoral areas (e.g. transport network development and organisation). Thus in order to elaborate an equally usable decision support for any interested partner and virtually any interested professional from the area, a special care has been given when designing the logic frameworks to properly select questions as to provide recommendations for enhancing the different thematic areas mentioned above.

Managing public transport in an efficient way always needs a special attention to different possible options to choose depending on the characteristic of the survey area and of course on the financial resources. There are several EU directives regulating the area as well as local regulations, social discounts and technical standards to just mention a few of them. Harmonising all of these aspects can be a very challenging task for related authorities, who are usually overload with other tasks and daily operational problems to be tackled. What is even more a benefit of this Interreg Central Europe transnational territorial cooperation programme is the **support towards the cross-border traffic**, which has no historical precedent in the most of the cases. Consequently, it raised only limited or no attention when defining national regulations and technical interoperability standards. The current thematic tool deliverables are **aiming to guide decision makers** in this area whit more than normal difficulties for running and setting-up public transport services.

To do so, the transnational tool starts with a common set of general questions in order to properly identify the most problematic theme for the user and therefore addressing the following in depth analysis in one or more of the following thematic questionnaires. Thus, in a web-based user-friendly platform (Eusurvey) each user should find the potential solution (based on best practices) in **how to set-up, run and efficiently operate** an attractive and competitive **cross-border public transport system**.

## 2. Thematic framework

Due to growing congestion levels and environmental consciousness, setting-up and developing cross-border public transport links is a growing priority area on EU level. In several border regions there is an increasing demand for cross-border mobility between member states. Today the modal split in all cross-border relations is significantly poorer for public transport comparing with the connecting national services within the same border regions. The main reason could be identified in the lack of coordination, even if also the legal and financial background (for compensating loss-making services) is definitively not yet adequate for the new cross-border services as they are mostly focused on national public service obligation. Thus, it is not surprising that in case of a limited services offer (1. PSO-timetable harmonisation) with unattractive



ticketing system (2. thematic area) and non-existing or non-interoperable passenger information system (3. infomobility thematic area) is generating in many cases only a limited demand of cross-border services. The EU has been aware of this issue when set up directives for the area 1073/2009 EC and 1370/2007 EC but the implementation in the local/regional//national legal systems was weak as the overall cross-border traffic accounts for about 2 % of the domestic regional or long-distance traffic. The EU is aware of this challenge and in 2017 has set up a so-called Border Focal point in order to remove the obstacles of cross-border cooperation ( <https://ec.europa.eu/futurium/en/border-regions> ).

Among others, European Commission's Regional Policy in 2015 has launched a 2 year long project called "Easing legal and administrative obstacles in EU border regions" which identified "3 general categories of border obstacles emerging from local, regional national or EU legislation as well as from different administrative practices."<sup>1</sup>

1. Legal obstacles caused by an absence of EU legislation in policy fields;
2. Legal obstacles caused by incoherent or inconsistent domestic laws of EU-Member States in policy fields where no or only a partial EU competence does exist;
3. Administrative obstacles caused by inadequate procedural and adverse behavioural aspects at the local, regional or national levels"

15 case studies have been created of which two are dealing partly with this thematic areas issues. One is from German-Polish infrastructure perspective and the other one is German-French ticketing perspective but both of them has a regulation side.

As an example, an explicative and useful "inventory of obstacles" coming from this experience <sup>2</sup>is reported as to highlight how from the total 239 cases from 8 different thematic areas there are 10 cases at the transport topic which are relevant to the PSO/timetable harmonisation thematic area. 5 cases are related partly to new member states and only one is related directly to Hungary.

Hungary-Slovakia	Inadequate EU legislation hampers registration of public bus transport service	I. Legal Obstacle EU-related
Croatia-Slovenia	Poor development/ non-existing public transport across borders	III. Administrative Obstacle
Germany-Poland (esp. Saxony-Poland)	Difficult joint tendering of cross-border railway services increase ticket pricing	II. Legal Obstacle MS-related
Belgium-Germany-France-Luxembourg (Grande Region), esp. Germany-France	New French legislation threatens viability of the Saarbahn light rail	II. Legal Obstacle MS-related
Belgium-Germany-France-Luxembourg (Grande Region), esp. at the Germany-Luxembourg & Germany-France borders of the Land Rhineland-Palatinat	Cooperation asymmetry hinders efficient public transport services	III. Administrative Obstacle
Belgium-Germany-France-Luxembourg (Grande Region), esp. Luxembourg-France	Lack of coordination and integration of border mobility in the Greater Region	III. Administrative Obstacle
Belgium-France (except the small border segment Lille-Kortrijk-Tournai)	Hindrances for public transport across the French-Belgian border	III. Administrative Obstacle
Upper Rhine Area Germany-France-Switzerland	Different regional / local	III. Administrative

<sup>1</sup> Source: [http://ec.europa.eu/regional\\_policy/en/information/publications/studies/2017/easing-legal-and-administrative-obstacles-in-eu-border-regions](http://ec.europa.eu/regional_policy/en/information/publications/studies/2017/easing-legal-and-administrative-obstacles-in-eu-border-regions)

<sup>2</sup> Source [http://ec.europa.eu/regional\\_policy/sources/policy/cooperation/european-territorial/cross-border/factsheets/list.cfm](http://ec.europa.eu/regional_policy/sources/policy/cooperation/european-territorial/cross-border/factsheets/list.cfm)



(esp. Germany/France)	systems for public transport by rail	Obstacle
all internal EU borders	General lack of public transport at EU borders due to inadequate national legal provisions	I. Legal Obstacle EU-related
Estonia-Latvia	Inadequate national subsidizing systems for public transport	II. Legal Obstacle MS-related

The outcomes of the core problem statement and the potential solutions in the most of the above mentioned cases require local authorities intervention to launch a joint service tendering or to form a joint corporation to overcome the legal and financial difficulties of the cross-border public benefit services. In 3 more cases cross-border tariff obstacles (administrative & member state legal related) are assessed on the German-French and German-Polish borders as well between France and Belgium. All in all there are only 2 EU-related legal-obstacles from the relevant cases. Further information can be gained from the best practices of the deliverable D.1.2.13.

## 2.1. Status report - Public Service Obligation (PSO) and Timetable harmonisation

Reviewing the decision-making processes of the services of public transport management in the CONNECT2CE regions as well as the roles and responsibilities of the stakeholders and key players involved, it can be said that those regions are very heterogeneous, especially considering their public service ordering. On the one hand are represented decentralized structures like in the federal Member States, Member States with more than one system of law or Member States having autonomous territorial units (e.g. Berlin, Autonomous Province of Bolzano/Südtirol, Friuli Venezia Giulia Region). In these cases, the authority of the region or the federal unit is the responsible for the suburban and regional public transport.

On the other hand, centralized government structures can be found in the regions of the former socialist Eastern-European countries (e.g. Slovenia, Croatia, Hungary, Czech Republic).

Those different structures are paired in the neighboring CONNECT2CE countries like Hungary-Austria, Italy-Slovenia, Germany-Czech Republic, thus representing a committing administrative barrier to the design of an effective and integrated cross-border public transport.

Despite the above mentioned problems, all the PP's border-regions of the Central European countries can be regarded as a booming area concerning cross-border commuting. Therefore, developing the conditions of public transportation is essential in every pilot region in order to help the overall implementation of the Europe 2020 Strategy.

In fact, the different thematic questionnaires and assessments showed how there is still much to do on all thematic areas in order to boost the attractiveness and efficiency of cross-border services.

Further information about the PSO and timetable harmonization can be read in Chapter 3 of the current document (D.T1.3.3).

## 2.2. Status report - Tariff & Ticketing Systems

### 2.2.1.1. Tariff models

Multimodal integration may bring in parallel operation transport modes that link origin and destination of a journey by routes which substantially differ in their length. In this case tariff is difficult to harmonise. The problem can be reduced or overcome by transition from a detailed distance based tariff model to a



tariff model where tariff classes are bigger, or increasing with the distance, capping the longer distance, applying a combined zoned-distance based systems or transit into a full zone system where zone. The bigger the zones the easier the integration. As described, the integrated tariff models converge to flat rate models where the same rate is applied on large areas. The more diverse (multimodal) transport system entails a need for bigger changes to the distance based tariff models. Another problem is finding the reference distance to use for price calculation. Integrated transport providers use various definition of optimal distance. All regions apply some sort of price per km digression.

#### 2.2.1.2. Tariff products

Integration of tariff systems should pursue a simplification of tariff products scheme in terms of personal entitlement as it highly impacts complexity of ticket revenue determination and distribution, especially in the systems without electronic ticketing. Due to lesser variation of entitlement products the ticket prices should be correspondingly low. The simplification of products scheme should encourage use of periodic travel passes - monthly, semi-annual or annual travel passes - on the account of use of single and return ticket. Single and return tickets should better be replaced with daily tickets because by using predominantly flat rate tariff models in multimodal transport systems giving multiple location-wise options of travel it is difficult to determine direction of travel. Tariff product should also promote use of new ticket sale channels and new (electronic) ticket mediums. Integrated tariff should also simplify migration between urban and inter-urban transport by issuing combined products, if possible on a single ticketing medium (easier to use) and lower price.

#### 2.2.1.3. Ticket medium

Integrated ticketing brings a lot of coordination and balancing among the operators and other stakeholders of the system in all phases of ticketing system to ensure eligible and justified revenue. The coordination and balancing is easier if sufficient data are available. Data can completely be provided only by automatic data generation and collection systems which are inherently electronic ticketing systems. Although bringing reduction of workload on the post-processing side the electronic ticketing systems can be quite expensive to implement on one hand. On the other hand they need to be interoperable in order for already implemented systems in use by the operators to be able to communicate and share data. Ticketing systems technology is strongly related to the applied ticket mediums. Therefore, paper ticket and if possible bar coded paper ticket medium seems to be a good fundament of integration. E-ticketing and mobile ticketing need a well-defined interoperability and security standard to be adopted and followed by the stakeholders in integrated transport operations in order to ensure secure and correct data interchange. Nevertheless, any type of e-ticketing or mobile ticketing implementation is important for bringing experience and basic infrastructure that is needed for the integration.

#### 2.2.1.4. Ticket sale

Integration of ticketing systems should bring either reduction of stationary ticket sale network (over-the counter) by consolidation of parallel ticket sale systems governed by separated transport operators or expansion of the offer by increasing the number of points-of-sale. In the integrated network a passenger purchasing a ticket should be able to buy it at a ticket office/ticket counter that is run or commissioned by any of the transport operators included in the ticketing integration. The same is true for other sale channels. Even though an on-line or mobile sale is provided by several transport operator systems, all systems (web sale or mobile app) are required to distribute integrated tickets that are recognised and can be validated at any transport operator in the integrated ticketing system regardless the ticket medium (paper, smart card ticket or mobile ticket). An integrated ticketing therefore implies to unique sale network interface to the end-customer. As in CE area all ticket sale is information supported, it should be adapted or unified in order to be able to issue unique integrated tickets.



#### 2.2.1.5. Access to stations

Access to stations can define use of the ticket in the system. In open access systems passengers are usually asked to check-in whenever they interchange from one to another vehicle. In closed, i.e. gated, systems passengers need to check-on entry in and check-out on exit of the system; use of transport system can be determined on the basis of calculation of the most probable or convenient route between check-in and check-out point. Use of transport system is important for the systems where ticket revenue is shared on actual ridership of the passengers with a particular transport operator. Finding the actual occupancy of the system is also very important for transport planning and control. Closed systems are more suitable for *back-office based ticketing systems* where tickets are replaced by token (ID card, bank card, e-purse) and the actual fare is recalculated in the back-office allowing the best price per travel or on a timely basis (weekly, monthly, yearly). Back-office ticketing systems represent evolution of the ticket-based systems. New technologies (e.g. BLE) allow back-office processing without physical gates (i.e. Be-in, Be-out systems) which are expensive to maintain.

#### 2.2.1.6. Ticket validation

Passengers need to validate their tickets in order to check if their tickets are eligible for use of a particular transport service and to register their ride. Ticket validation is even more important in intermodal and multi-operator integrated ticketing systems where the same ticket can be used at different service providers. Furthermore, the same ticket can be provided for use at the operator only for a part of the complete service. Correct ticket validation is therefore crucial in the systems where ticket revenue is based or related to the actual ticket use at the single operator but also for monitoring of passenger ridership for purpose of better transport planning and control. In terms of gross financing of transport operator service where all revenue belongs to the integrated transport authority that remunerates transport operators for their service regardless of ridership, regular validation is less important but still needs to be examined.

#### 2.2.1.7. Ticket control

Ticket control is performed sporadically by ticket inspectors. Ticket inspectors control if the passengers have duly validated their tickets in order to register the right for transport service. In the environment where conductors validate tickets the inspectors also control the conductors if they regularly control the passengers. Ticket validation and consequently ticket control are very important to assure the rightful revenue from the tickets to transport operators or to the integrated public transport authority (IPTA). In the net financing model of integrated public passenger transport where the operators are fully commercially responsible and strive for ticket revenue, the ticket inspectors are affiliated to the operators. If the gross financing model of integrated public transport has been applied to integrated public transport the ticket inspectors are affiliated to IPTA - IPTA is entitled to all ticket revenue to fill up the funds for full financing of the transport operators' service. As the gross financing model is easier to apply, without requiring complex ticket revenue sharing procedures, it may be a good option for inception phases of ticketing systems integration. Gross financing model usually also entails integrated transport authority as issuer of the integrated ticket.

Ticket controllers - inspectors should use ticket control devices ready to efficiently read the ticket content to confirm their validity.

Further information can be read in the connecting Deliverable D.T1.3.4



## 2.3. Status report - Mobility and Information Systems

Without the claim of comprehensiveness, the analysis carried out in this deliverable outlines a transnational framework concerning info-mobility in peripheral areas of central European countries. The SWOT analysis and the best practices contribute to feed this framework, giving an overview of the main opportunities and issues to be addressed in CONNECT2CE.

The SWOT analysis shows that technical aspects of MISs are important, but not sufficient to provide a good quality of the information. Indeed, MISs are highly influenced by several external themes, as the level of political collaboration, the technical feasibility, the availability of services, the organization of transport providers, the presence of integrated tariffs, the complexity of integrative tariff schemes, the specific needs of transboundary commuters, etc. These issues, which are part of the project, contribute to determinate a better quality of the MISs and confirms how the three aspects covered by the project cannot be considered separately. Furthermore, these specificities highlight the strong heterogeneity of the areas, and as consequence the need of proposing tailored solution responding to each context in a different ways.

Several aspects contribute to generate these differences, as already mentioned in the deliverable. The size of the areas is a crucial one. Indeed, most of the information collected and proposed in the SWOT analysis has a strong link with this aspect. Multimodal MISs are sometimes available at a higher level, but mostly at the local one; on-trip information is a weak point especially in those areas with widespread settlements rather than dense and metropolitan areas. Furthermore, political and managerial difficulties raise in those medium or small-size areas, where all municipalities offer their own systems without a public body that collects them at a higher level. In this framework, also some trans-regional or transnational aspects cannot be left aside. IMISs are a clear example: they are able to collect data either from several transport or MIS providers and unify information under a unique tool. This operation can be used at regional, national and potentially even transnational levels. Establishing a political collaboration, and reaching an agreement among transport providers, are essential preconditions, in order to design a clear geographical and multimodal coverage.

At the transnational level, these two last features are probably one of the most challenging aspects. A leading role can be played by EGCTs as visible in the best practices presented in section 1.3. of DT1.2.15. Finally, findings of this deliverable together with TNAs and questionnaires constitute the basis for the construction of a transnational tool (D.T.1.3.5), which should allow policy makers understanding which are the most appropriate solutions to be introduced in a specific territory, according to its demographic, economic, geographic and mobility-related characteristics.

Further information can be read in the connecting Deliverable D.T1.3.5.

## 3. Basic features of the tools

Following the thematic structure of the transnational studies (D.T1.2.13, D.T1.2.14, D.T1.2.13) the proposed tools have been organized in a “general section” and 3 specific sections dedicated to each one of CONNECT2CE main themes (*Connectivity, Tariff and ticketing and Multimodal Information System (MIS)*).

The general section of the tool contains 3 sets of general questions allowing users to identify and understand their current situation and also providing a self-assessment method where the main thematic area of the improvement will be determined.

After the prioritization of the areas the users are required to proceed in the most relevant specific section, where they can acquire useful information on the selected cross border public transport issues. This knowledge - gaining from the results of the previous deliverables of the CONNECT2CE project - covers



academia, industry experiences and best practices. Once the questionnaire is completed, users can restart the survey and assess the other 2 specific sections.

Once completed the survey, users will receive the results from the general and the selected thematic area both in html and in pdf format (by using the '*get a pdf*' option).

When completing the different specific sections, different types of feedback are reflected in different approaches of the thematic areas. More in particular, when answering to Connectivity specific section (Public Service Obligations (PSOs)/Public Service Contracts (PSCs) and harmonizing the multimodal timetables) the tool is focusing on practical 'step by step' advices from the view of the public authority. On the other hand, the 'Tariff and ticketing' tool gives a detailed and broad picture where the examined integrated solutions of tariff model, tariff product, ticket medium, ticket distribution and ticket validation and control system can be operated under the selected circumstances. Finally, the MIS specific tool shares best practices on the implementation of the related IT technologies showing the potentials of the multimodal info-mobility systems in the transnational public transport.

Therefore, in the case of the **Connectivity**, the concept of the tool is based on 3 factors:

- concentrate the tool on a 'simple questions - simple answers' approach;
- two decisions from decision makers are expected on the intention to finance a new or existing cross-border service and on the determination of the target groups of the service;
- the necessary service level (service frequency) depends on the travel motivations of target groups only.

By going through the binomial (yes or no) questions of the cross-border Public Service Obligations (PSOs)/Public Service Contracts (PSCs) and harmonizing the multimodal timetables transnational tool, the user (presumably regional public transport authority, operator in some cases or regional decision maker) can get answer to his/her problems in case the general questions scored the PSO/timetable harmonisation part the most problematic. The main aim is to contribute to the enhancement of planning capacities by spreading knowledge and possible solutions for defining new cross-border public transport service links.

At the same time, **Tariff and ticketing** tool was designed to provide a decision support instrument available for public authorities and public passenger transport operators on the possibility to implement integrated tariff and ticketing schemes. Therefore, this tool is focused on facilitation of conception and planning phases for interventions and actions in CE regions and cross-border connectivity as well as on other EU public transport networks. The tool is based on the expert knowledge gained through the analysis of the existing tariff and ticketing systems in CE regions, with particular focus on cross-border public transport services, and also on the lessons learned from identified EU best practices on successful EU cross-border implementations as well as cases where state of the art of tariff and ticketing solutions have been applied.

Finally, the **Multimodal Information System (MIS)** transnational tool is organized in five main clusters of questions, as specifically described in the [D.T1.3.5] document. After answering all the questions, a table of customized feedbacks based on the survey will be proposed to the user. As regards Info-mobility, the structure proposed for the tool is consistent with the approach adopted in the previous thematic transnational study.





## 4. Basic features of the PSO and timetable harmonisation transnational tool [D.T1.3.3]

The PSO/timetable harmonisation tool contains answers and binomial (yes or no) questions for all potential planners and decision maker's situation. It deals with the different organisational and responsibility levels on the different side of the border also takes into account the different willingness for ordering and financing services. It **divides** the potential services into **touristic/shopping, student, worker-commuter, general transport link**, all in. These **market/service segments require different service level** (both territorial and temporal/service frequency) and they can be implemented with the **combination of different financing schemes**. The ordering and finance of the services can be partly or fully co-financed from private or public funds and integrated or running separately to the existing services on either side of the border. It takes into account the set-up of partnerships under the scheme of European Grouping for Territorial Cooperation (EGTC), which is a good practice of transnational cooperation for transport duties as well.

### 4.1. Defining the tool

The PSO/timetable harmonisation thematic decision support tool provides information related to several legal and organisational issues to be resolved in the background which is not necessarily related to the competences of the public transport organiser or planner. Therefore, a binomial set of questions have been elaborated and uploaded into the public Eusurvey by taking into consideration two main challenges:

1. peripheral/cross-border areas not linked efficiently to urban areas, i.e. to TEN-T networks and main transport nodes.
2. no integration of different public transport modes in peripheral/cross-border areas

The construction of such set of questions is based on the expertise and information gained so far thanks to the work done in the analysis described in the related transnational study (D.T1.2.13). Additionally, considering that decision makers and planners needs answers that are in many cases are somehow interrelated with other thematic areas, some in depth evaluations are possible by developing also the other questionnaires related with the other themes.

### 4.2. Using the tool

The feedbacks of the **Connectivity** tool help to depict the consequences of the decisions made by the decision makers. The tool contains only binomial (mostly yes or no) questions for all potential planners and decision maker's situation. It deals with the different organisational and responsibility levels on the different side of the border also takes into account the different willingness for ordering and financing services. It divides the potential target groups into **touristic/shopping, student, worker-commuter, general transport and all in segments**. These **market/service segments require different service level** (both territorial and temporal/service frequency) and they can be implemented with the combination of different financing schemes. The ordering and finance of the services can be partly or fully co-financed from private or public funds and integrated or running separately to the existing services on either side of the border. It takes into account the set-up of partnerships under the scheme of European Grouping for Territorial Cooperation (EGTC), which is a good practice of transnational cooperation for transport duties as well.

Going through the different steps of the PSO transnational tool questionnaire, a clear definition of what are the options and requirements as well as possible consequences of the choices before arriving to the decision point is delivered. Therefore, depending on the answers given, the user fine-tunes the definition of its own necessities for PSO thematic area, receiving at the end of the survey some interesting hints,



recommendations and proposals that will be available to drive the future solutions to be adopted in elaborating the cross-border Public Service Obligations (PSOs)/Public Service Contracts (PSCs) and in harmonizing the multimodal timetables and regional/cross-border rail services.

### 4.3. Interpreting results

Step by step, following the previous answers of the user, the subsequent questions are integrated with the answers or recommendations given to the previous ones. However, it is important to underline that solutions and recommendations proposed for Public Service Contracts cannot replace chronic underfinance with instable service contracts or the non-existing or inadequate transport infrastructure from either vehicle, tracks or road related. In fact, the scope of the tools do not cover the infrastructure development aspects which are also not a key priority for the present Interreg Central Europe territorial cooperation programme.



## Annex I - Questionnaire & Instructions

The flowchart (logic structure) and the questions/answers can be found below (you can also check the pdf version for the full picture):

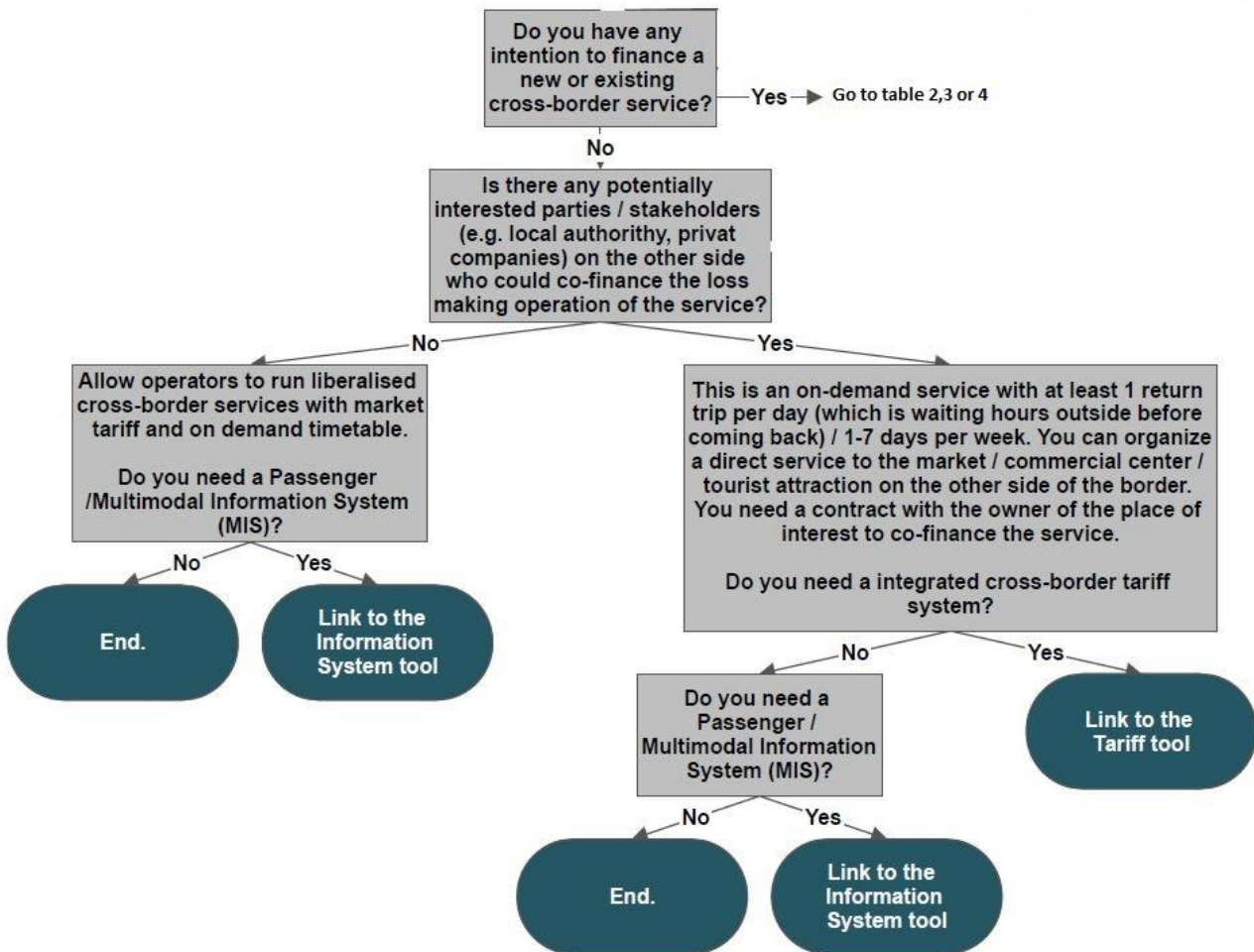


Table 1. If the stakeholder has not any intention to finance a new or existing cross-border service:

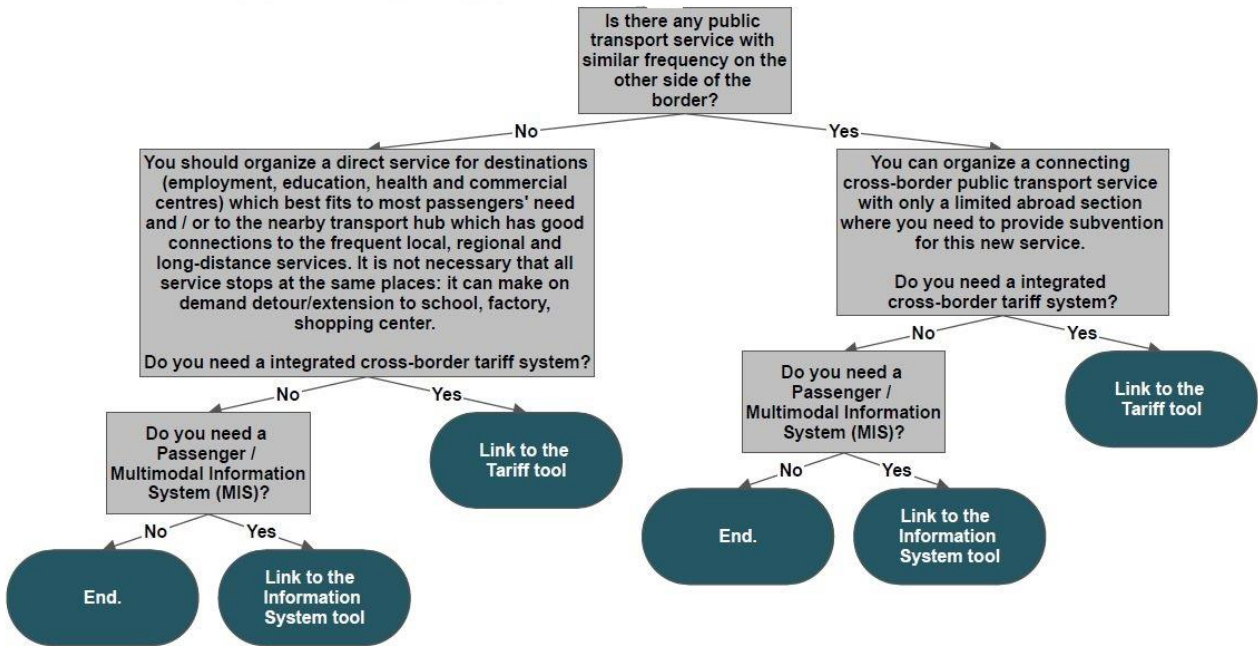


Table 2. If the stakeholder has intention to finance a full day regular (up to 1-2 hourly interval) service on 6-7 days per week:

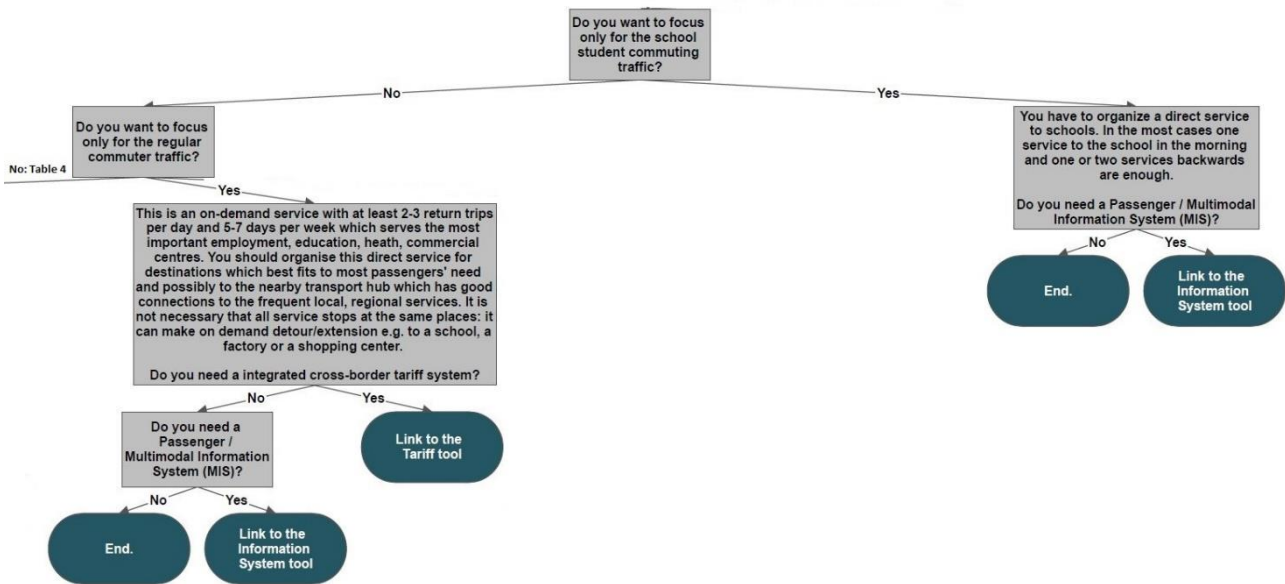


Table 3. If the stakeholder has intention to finance a new or existing cross-border service for students or regular commuters:

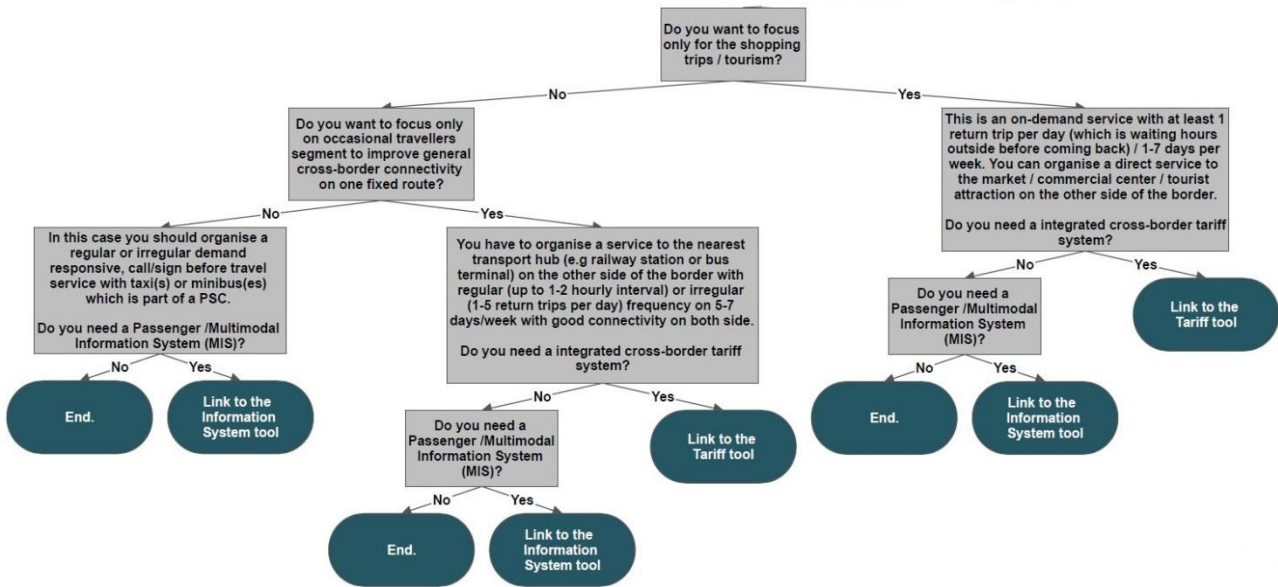


Table 4: If the stakeholder has intention to finance a new or existing cross-border service for tourists, shopping trips or occasional travellers only

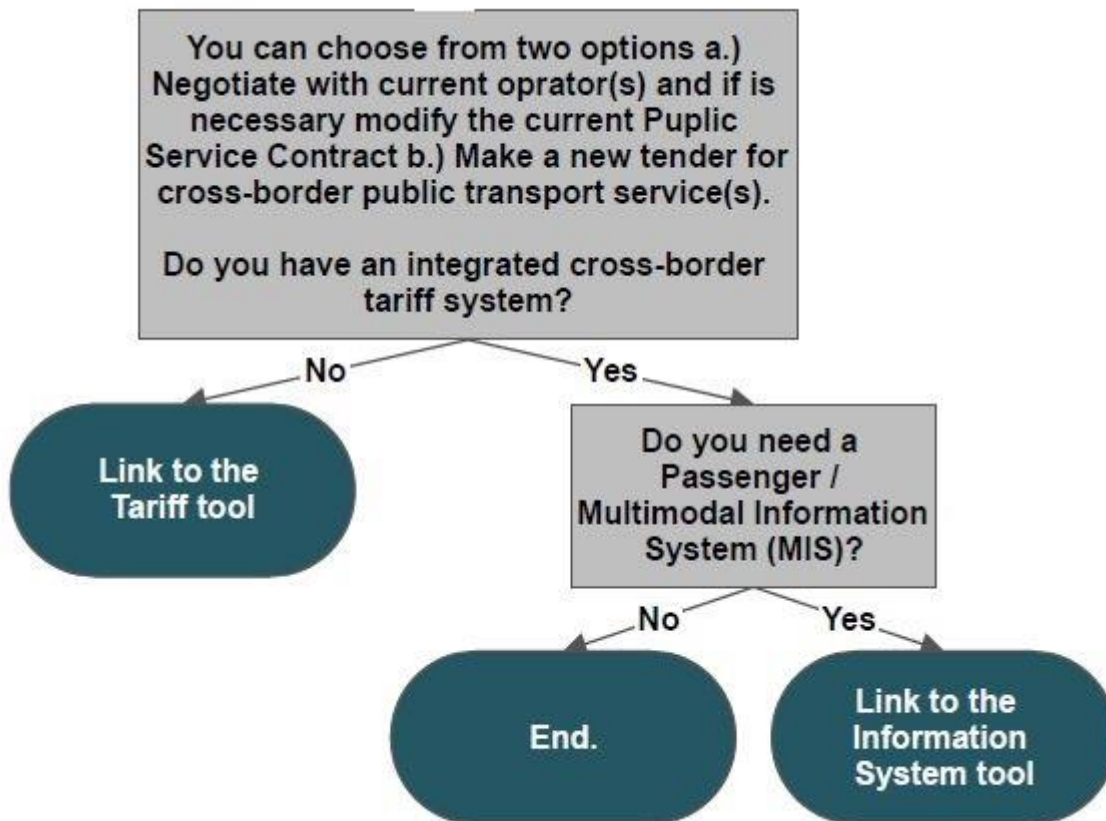


Table 5. If the stakeholder has a Public Service Contract with the operator and only want to modify it for better services:



	QUESTIONS	ANSWERS	Acts
6	Is there any cross-border public transport in the service area?	Yes/No	Yes: 7 No: 13
7	Is it covered by Public Service Contract (PSC)?	Yes/No	Yes: 8 No: 13
8	Are you satisfied with the frequency (timetable), the service level, the relation (route)?	Yes/No	Yes: 9 No: 11
9	Are you satisfied with the cross-border tariff system?	Yes/No	Yes: 10 No: Link to the Tariff tool
10	Are you satisfied with the cross-border Passenger /Multimodal Information System (MIS)?	Yes/No	Yes: 11 No: Link to the Information System Tool
11	Do you want to establish a new rail or bus cross-border service or just modify the existing one?	New one/Modify	New: 13 Modify: 12
12	You can choose from two options a.) Negotiate with current operator(s) and if is necessary modifying the current Public Service Contract b.) Make a new tender for cross-border public transport service(s). Do not forget to coordinate with your partner(s) from the other side of the border. Do you have an integrated cross-border tariff system?	Yes/No	Yes: 18 No: LINK to Tariff tool
13	Do you have any intention to finance a new or existing cross-border service?	Yes/No	Yes: 15 No: 14
14	Is there any potentially interested parties / stakeholders (e.g. local authority, private companies) on the other side who could co-finance the loss making operation of the service?	Yes/No	Yes: 25 No: 27
15	Service level is proportional with costs (with the subventions too) in most of the cases subventions can be up to 60-85 % of the operational cost. The most expensive kind of public transport is the full day regular (up to 1-2 hourly interval) service on 6-7 days per week. Would you like this kind of full service?	Yes/No	Yes: 16 No: 20
16	Is there any public transport service with similar frequency on the other side of the border?	Yes/No	Yes: 17 No: 19
17	You can organise a connecting cross-border public transport service with only a limited abroad section where you need to provide subvention for this new service. Recommendations: If you can integrate the cross-border services to your national PSC it can be cheaper to order it together with other domestic passenger services. If your new cross-border service can be extension of an existing domestic or cross-border service it needs a lower amount of increase for subvention. If it is possible to integrate your new cross-border service into the other side's PSC it can be a more efficient service with longer direct service route(s) without unnecessary changes to the most important places of interest. In this case it is necessary the cooperation between the public bodies and it is advisable to set up a joint transnational cooperation body which can be part of the regional European Grouping of Territorial Cooperation (EGTC). You might need to get permission from the local	Yes/No	Yes: LINK to Tariff tool No: 18



	public body to use the stops. Do you need a integrated cross-border tariff system?		
18	Do you need a Passenger /Multimodal Information System (MIS)?	Yes/No	Yes: Link to Information System Tool No: END
19	You should organise a direct service for destinations (employment, education, health and commercial centres) which best fits to most passengers' need and / or to the nearby transport hub that has good connections to the frequent local, regional and long-distance services. It is not necessary that all service stop at the same places: it can make on demand detour/extension to school, factory, shopping centre. Recommendations: If you can integrate this cross-border service to your national PSO it can be cheaper to order it together with other domestic passenger services. If your new cross-border service can be an extension of an existing domestic or cross-border service, it needs a lower amount of increase for subvention. If it is possible to integrate the cross-border service into the other side's PSC it can be a more efficient service with less subvention need and longer direct service route(s) without unnecessary changes to the most important places of interest. In this case it is necessary the cooperation between the public bodies and it is advisable to set up a joint transnational cooperation body which can be part of the regional European Grouping of Territorial Cooperation (EGTC). You might need to get permission from the local public body to use the stops. Do you need a integrated cross-border tariff system?	Yes/No	Yes: LINK to Tariff tool No: 18
20	Do you want to focus only for the school student commuting traffic?	Yes/No	Yes: 21 No: 22
21	You have to organise a direct service to schools. In this case you can use your own tariff policy. In the most cases this one service to the school in the morning and one or two services backwards. You have to find alternative tasks for the vehicle and driver between the two services to ensure efficient operation. Recommendations: If you can integrate this service cross-border service to your national PSO it can be cheaper to order it together with other domestic passenger services. If your new cross-border service can be an extension of an existing domestic or cross-border service it needs a lower amount of increase for subvention. Do you need a Passenger / Multimodal Information System (MIS)?	Yes/No	Yes: Link to Information System Tool No: END
22	Do you want to focus only for the regular commuter traffic?	Yes/No	Yes: 23 No: 24
23	This is an on-demand service with at least 2-3 return trips per day and 5-7 days per week that serves the most important employment, education, heath, commercial centres. You should organise this direct service for destinations, which best fits to most passengers' need and possibly, to the nearby transport hub, which has good connections to the frequent local, regional services. It is not necessary that all service stops at the same places: it can make on demand detour/extension e.g. to a school, a factory or a shopping centre. In this case you can use your own tariff policy. Recommendations: If you can integrate the cross-border services to your national PSC it can be cheaper to order it together with other domestic passenger services. If your new cross-border service can be an extension of an existing domestic or cross-	Yes/No	Yes: LINK to Tariff tool No: 18



	border service it needs a lower amount of increase for subvention. If it is possible to integrate your new cross-border service into the other side's PSC it can be a more efficient service with longer direct service route(s) without unnecessary changes to the most important places of interest. In this case it is necessary the cooperation between the public bodies and it is advisable to set up a joint transnational cooperation body which can be part of the regional European Grouping of Territorial Cooperation (EGTC). It is possible that the employment and the commercial centres could co-finance this service. You might need to get permission from the local public body to use the stops. Do you need an integrated cross-border tariff system?		
24	Do you want to focus only for the shopping trips/tourism?	Yes/No	Yes: 25 No: 26
25	This is an on-demand service with at least 1 return trip per day (which is waiting hours outside before coming back) / 1-7 days per week. You can organise a direct service to the market / commercial centre / tourist attraction on the other side of the border. In this case you use an own tariff policy. You need a contract with the owner of the place of interest to co-finance the service. Recommendations: Try to get a permission from the local public body (responsible for public transport and/or operator of the stops) to get rights for boarding and alighting on the other side of the border (where it will be a domestic service). Do you need a integrated cross-border tariff system?	Yes/No	Yes: LINK to Tariff tool No: 18
26	Do you want to focus only on occasional travellers segment to improve general cross-border connectivity on one fixed route?	Yes/No	Yes: 28 No: 29
27	Allow operators to run liberalised cross-border services with market tariff and on demand timetable. Recommendation: allow for domestic usage of the service even part of your existing PSO. Do you need a Passenger /Multimodal Information System (MIS)?	Yes/No	Yes: Link to Information System Tool No: END
28	You have to organise a service to the nearest transport hub (e.g railway station or bus terminal) on the other side of the border with regular (up to 1-2 hourly interval) or irregular (1-5 return trips per day) frequency on 5-7 days/week with good connectivity on both side. Recommendations: If you can integrate the cross-border services to your national PSC it can be cheaper to order it together with other domestic passenger services. If your new cross-border service can be an extension of an existing domestic or cross-border service, it needs a lower amount of increase for subvention. If it is possible to integrate your new cross-border service into the other side's PSC it can be a more efficient service with longer direct service route(s) without unnecessary changes to the most important places of interest. In this case it is necessary the cooperation between the public bodies and it is advisable to set up a joint transnational cooperation body which can be part of the regional European Grouping of Territorial Cooperation (EGTC). It is possible that the employment and the commercial centres could co-finance this service. You might need to get permission from the local public body to use the stops. Do you need a integrated cross-border tariff system?	Yes/No	Yes: LINK to Tariff tool No: 18
29	In this case you should organise a regular or irregular demand responsive, call/sign before travel service with taxi(s) or minibus(es)	Yes/No	Yes: Link to Information





<p>which is part of a PSC. You can use your own tariff policy. You need at least one operator who organise the service. It is strongly recommended to inform the abroad local public body about the planned service and you might need to get their permission to use the stops and terminals. Do you need a Passenger /Multimodal Information System (MIS)?</p>		<p>System Tool No: END</p>
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## Annex II - Pilot tips

**Examples from the output of the web-based Connectivity tool (EU-Survey)**

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**D.T1.3.3 - Transnational tool for the improvement of regional/cross-border railway and PT connections**

Score for this Section: 0/16

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**Is there any cross-border public transport in the service area?**

Your answer: Yes 0 out of 1 points

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**Is it covered by Public Service Contract (PSC)?**

Your answer: Yes 0 out of 1 points

**Are you satisfied with the frequency (timetable), the service level, relation (route)?**

Your answer: Yes 0 out of 1 points

**Are you satisfied with the cross-border tariff system?**

Your answer: Yes   
 A reasonable tariff system is necessary for a sufficient service. 0 out of 1 points

**Are you satisfied with the cross-border Passenger /Multimodal Information System (MIS)?**

Your answer: Yes   
 A reliable, simple to configure and easy to operate MIS is necessary for a modern public service. 0 out of 1 points

**Do you want to establish a new rail or bus cross-border service or just modify the existing one?**

Your answer: Modify   
 You can choose from two options a.) Negotiate with current operator(s) and if is necessary modify the current Puplic Service Contract b.) Make a new tender for cross-border public transport service(s). 0 out of 1 points

**Do you need a integrated cross-border tariff system?**

Your answer: No   
 A reasonable tariff system is necessary for a sufficient service. 0 out of 1 points

**Do you need a Passenger /Multimodal Information System (MIS)?**

Your answer: Yes   
 A reliable, simple to configure and easy to operate MIS is necessary for a modern public service. 0 out of 1 points

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**D.T1.3.3 - Transnational tool for the improvement of regional/cross-border railway and PT connections**

Score for this Section: 0/16

**Is there any cross-border public transport in the service area?**

Your answer No

0 out of 1 points

**Do you have any intention to finance a new or existing cross-border service?**

Your answer No

Service level is proportional with costs. In most of the cases subventions can be up to 60-85 % of the operational cost!

0 out of 1 points

**Is there any potentially interested parties/stakeholders on the other side who could co-finance the loss making operation of the service?**

Your answer No

Allow operators to run liberalised cross-border services with market tariff and on demand timetable. Recommendation: allow for domestic usage of the service even part of your existing PSO.

0 out of 1 points

**Do you need a Passenger /Multimodal Information System (MIS)?**

Your answer No

A reliable, simple to configure and easy to operate MIS is necessary for a modern public service.

0 out of 1 points

## Annex III - Glossary, abbreviations and cross-references

**Competent authority** is the regional or municipal public body that is responsible for ordering public transport services in the area of research.

**Public Service Obligation/Public Service Contract (PSO/PSC)** is the European financial and compensation scheme based on 1370/2007 EC and several local and national (sub)regulations to order and finance loss-making but public benefit services on a transparent, comparative and competitive way. It has various types and subtype by region or by city, by timeframe, compensation, service level incentive methods.

**Public transport (PT) planning capacity** is the amount of colleagues/experts and the know-how collected by them to plan and coordinate (cross-border) public transport services taking into account the fragmented legal background, the different financial mechanism and different interests and political/policy aims for timetable harmonisation. They should know about the latest ticketing and ITS-infomobility schemes as and their different technical standards as well.

### Tariff system

- **tariff model** (based on distance, zone, combined),
- **tariff products** (type of tickets, dedicated users entitlements, ticket media discounts),



**Ticket mediums** (registered paper, smart card ticket, smart card wallet, debit/credit card, print@home, mobile, ID-based-contract,)

**Sale** (types of sale - ATC, ticket counter,..., in relation to a location and ticket type or medium; payment means),

**Access to the station platform** (gated, open),

**Validation** (method of validation in relation to ticket type or medium - automatic, conductor, on the platform in the vehicle; system of validation: CI, CICO...),

**Control** (method of ticket control in relation to ticket type or medium - manual, automated)

**Info-mobility** can be defined as “the use and distribution of dynamic and selected multi-modal information to users, both pre-trip and, more importantly, on-trip, in pursuit of attaining higher traffic and transport efficiency as well as higher quality levels in travel experience by the users” (Ambrosino et al., 2010). As respect to the trip technical issues (pre- and on-trip information, ticketing issues, and integration of systems) and the geographical scale (with a focus on transnational implications) are mainly addressed in the deliverables of CONNECT2CE project.



## References

### Easing legal and administrative obstacles in EU border regions

Final Report Service Request Nr 2015CE160AT013 Competitive Multiple Framework Service Contracts for the provision of Studies related to the future development of Cohesion Policy and the ESI Funds (Lot 3)

Contract holder:

Metis GmbH, Panteia BV, AEIDL -Association Européenne pour l'Information sur le Développement Local, CASE Center for Social and Economic Research

Report authors: J. Pucher, T. Stumm, P. Schneidewind

March 2017

Directorate-General for Regional and Urban Policy

[http://ec.europa.eu/regional\\_policy/en/information/publications/studies/2017/easing-legal-and-administrative-obstacles-in-eu-border-regions](http://ec.europa.eu/regional_policy/en/information/publications/studies/2017/easing-legal-and-administrative-obstacles-in-eu-border-regions)

#### Inventory of obstacles:

[http://ec.europa.eu/regional\\_policy/sources/policy/cooperation/european-territorial/cross-border/factsheets/list.cfm](http://ec.europa.eu/regional_policy/sources/policy/cooperation/european-territorial/cross-border/factsheets/list.cfm)

Easing legal and administrative obstacles in EU border regions Case Study No. 13

Urban transport Non-harmonised ticket pricing systems (Germany -France)

[http://ec.europa.eu/regional\\_policy/sources/docgener/studies/pdf/obstacle\\_border/13\\_urban\\_transport\\_de-fr.pdf](http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/obstacle_border/13_urban_transport_de-fr.pdf)

#### Euro district Basel:

<http://www.eurodistrictbasel.eu/fr/projets/portail-de-mobilite-etb.html>

#### EU Border Focal Pont

<https://ec.europa.eu/futurium/en/border-regions>

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