



LAST MILE

Interreg Europe



European Union
European Regional
Development Fund



National and regional framework conditions and barriers of flexible transport

Synopsis

Editor

Regional Management East Tyrol
July 2017



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Summary

LAST MILE aims to find sustainable flexible solutions for regional mobility systems. It will make sure that visitors travel the 'last mile' in their travel chain sustainably and provide alternatives to car use for residents and their daily trips as well.

In the context of the joint analysis within the phase 1 of the LAST MILE project, a detailed analysis of framework conditions and barriers of the implementation of flexible transport systems (FTS) and the state-of-the-art analysis has been elaborated by each project partner participating in the LAST MILE project.

The analysis of framework conditions and barriers (activity 1-A.1) has identified aspects and viewpoints of challenges in the implementation and operation of FTS. The results of the detailed regional analysis are pivotal for the subsequent regional action plan development. Furthermore, the need for action is highlighted in order to improve the feasibility and implementation of FTS.

The six partner regions of the LAST MILE project (Catalonia/Spain, Nature Park Upper Sûre/Luxembourg, East Tyrol/Austria, Košice/Slovakia, the Szczecin Metropolitan Area/Poland and Varna/Bulgaria) have heterogeneous local situations. Each has analysed its regional framework conditions and ascertained existing barriers within the implementation of FTS.

Primarily, the analysis of framework conditions and barriers was based on a survey questionnaire with quantitative and qualitative questions, where legal, institutional, economic and other aspects were under investigation.

With regard to the **regulatory framework conditions and barriers** the insufficient or partially missing legal framework for FTS complicates the implementation and operation of FTS and regulates neither the functioning, the organization nor the financing. Provisions about sustainable mobility in approved regional strategies are mainly general recommendations and have no binding character. The municipalities have little decisive power in the implementation of FTS, in particular for cross-border services or projects on a larger scale.

The **institutional framework conditions and barriers** point out that a major obstacle is the absence of an integrated transport organizer, which is helpful in the overall coordination, organization, data collection and financial contribution to provide FTS. The integration of FTS into the public transport information service is also not broadly available for the public. Opposition to FTS is noticeable, due to political barriers, competition or lack of profitability. It is necessary to satisfy the mobility needs for locals as well as tourists. The municipalities may have difficulties to provide FTS due to the lack of expertise in this sector, participation in payment or intensive workloads.

Studies of the **economic framework conditions and barriers** in some regional situations show that a sustainable financing is also not always available. Service operators have to struggle with low and partially missing subsidies or coherent financing models for the implementation of FTS. The long-term financing is still a major challenge. This is why municipalities with very limited budgets are not motivated to take the initiative in this regard.

Other framework conditions and barriers cover aspects concerning technical, organisational, management, awareness raising, information dissemination and other facts of feasibility that may intervene or hinder the realization of FTS. Information dissemination of FTS is not really efficient to reach the target groups. The lack of public education for

sustainable transport for decision-makers, operators as well as users may be linked to the insufficient awareness of the importance of sustainable transport. The lack of sufficiently attractive alternatives for public transport is one of the reasons why these habits are difficult to address.

The regional framework conditions and barriers of the project partner regions can be summarized as following:

Region of East Tyrol in Austria:

The national legislation of Austria mentions only call/dial and seasonal/temporary systems. Strategies for sustainable mobility points out the importance of sustainable transport systems in rural areas, but they have no binding character. The planning practice has shown that national as well as regional politics grant a subsidy for the establishment of FTS through national funding schemes. Insufficient communication between relevant players are also a cause of difficulties in the implementation. In general, awareness for sustainable transport is increasing.

Region of Varna in Bulgaria:

The region in Bulgaria has to struggle with a tense political situation which is a challenge for the implementation of FTS. The national law does not cover flexible transport systems at all; only seasonal and occasional transport systems are legally defined, however without regulations for operation. The government does not accept carsharing systems which are considered to be in competition with private taxi operators. Also, private service providers have considerable influences on questions of public mobility. In general, the acceptance of use by people is classified as low. This can possibly be attributed to a lack of education for sustainable mobility.

Region of Catalonia in Spain:

Catalonia has no specific national or regional legislation for FTS. A Passengers Transport Plan guarantees minimum standards of public transport for municipalities with less than 5.000 inhabitants. Funding schemes are not adequate to fund investment costs for the implementation and long-term operation. Regional transport associations are involved in financing and in the operational management. Bus operators have little interest in transforming conventional bus lines into FTS due to difficulties in management and the uncertainty of income.

Region of Nature Park Upper Sûre in Luxembourg:

National legislation in Luxembourg is not designed for FTS, only temporary and seasonal systems appear in current legislation. Municipalities can only implement systems without agreement of the ministry, when they operate inside their borders. However, the strategy for sustainable mobility guarantees the national funding for all types of FTS. Financial hurdles are identified in the long-term operation of FTS due to high staff costs. The low population density is a challenge to the operation of FTS. Through the influx of visitors, the critical mass needed on the long run for a FTS is relatively low.

Region of Szczecin Metropolitan Area in Poland:

The lack of adequate legislation for FTS has been identified and also the resistance to existing sharing and pooling systems is clearly noticeable, which can pose a threat to the profitability of taxi transport, mainly through increased competition. The absence of transport associations is identified as a barrier. There is also no systematic integration of entities involved in the transport policy. Activities addressed to different age groups have been

started for awareness raising and information dissemination concerning the use of public transport and bike education.

Region of Košice in Slovakia:

An obstacle is the missing and deficient national or regional legislation for sustainable transport, only occasional transport systems is legally defined. Flexible modes of transport cannot be financed from public funds due to problematic integration into public transport systems. Service on demand is often not economically attractive for the operators if there is no synergy with other entrepreneurs. A further barrier in the implementation is the absence of information platform services.

A need for action can be derived from the results of the analysis of framework conditions and barriers. First recommendations can be given for the steps necessary to bring about change.

Recommendations for changing the framework conditions and barriers for the implementation of FTS

With reference to the main results, it can be concluded that a clear and sufficient legal framework needs to be designed to facilitate the implementation and long-term operation of FTS. Binding decrees or edicts and definitions in regional strategy policies which go beyond more regulation, clear slogans or recommendations would ensure the implementation of on-demand services. The implementation of new types of FTS such as carpooling and carsharing needs to be intensified. Exchange and discussions with the governments need to be stimulated in order to work on removing the legal barriers for the development of FTS.

The aim is to integrate elements of flexible transport into a coordinated transport system providing complex transport services. This goes hand in hand with the set-up of transport authorities, who assume operational management, organisation, communication, information dissemination, contracting and contributions to payment for the implementation and long-run operation of FTS. To promote an adequate political commitment, it is necessary to develop a mixed decision-making approach (vision-led and plan-led), to ensure consensus by promoting public participation in the transport planning and decision-making process.

Structural funds programs or policy instruments are obligated to support all measures to provide an adequate mobility offer for rural areas and ensure a financial contribution not only for the implementation, but also for the long-term operation of FTS. Concrete regional financing models and strategies for FTS facilitate the implementation and overcome economic barriers.

To strengthen the acceptance of use of FTS, the service should be designed not only for touristic purposes, but also for local residents. Changing attitudes and social perceptions are prerequisites for changing mobility behavior. Promotion and publicity are central aspects to address the respective target group and raise awareness about the importance of sustainable transport among the public.

It is also essential to provide educational activities and platforms for information and exchange for decision-makers, operators, municipalities and potential users to overcome the general lack of knowledge about the existence of sustainable transport systems, their advantages and disadvantages and the general principles of their functioning.

The consolidated findings of the synopsis of framework conditions and barriers will finally flow into the general synthesis report at the end of phase 1.

1. Introduction

LAST MILE aims to find innovative, flexible solutions for sustainable regional mobility systems. It will make sure that visitors travel the 'last mile' of their travel chain sustainably, and provide alternatives to car use for residents and their daily trips.

In the beginning, the six LAST MILE project partners will deal with the last mile topic in joint analyses, which build the backbone of the interregional exchange. The analyses prepared by each region will be consolidated and summarized in the synopses of the analysis of institutional frameworks and barriers and analysis of the technical state-of-the-art. This is also the point of departure in order to present in this document the main findings and conclusions of the analysis of framework conditions and barriers.

1.1 Sustainable mobility for the last mile in tourism regions

The LAST MILE project is based on the capitalization processes of foregoing transnational or interregional sustainable mobility projects like FLIPPER, Alps Mobility I and II, FAMS, TRANSDANUBE, AlpInfoNet, ACCESS2MOUNTAIN, INTERREGIO-RAIL, MOVE ON GREEN etc. and it shall inherently take into account all the lessons learned so far. All these projects were dealing with sustainable mobility in tourism develop sustainable mobility solutions in tourism regions in different landscapes (mountains, river basin, etc.).

In this particular regard more developed regions often face similar problems as less developed areas as hindering factors like unfavorable topography, disperse settlement structure or varying demand due to seasons.

The LAST MILE project sets a concrete focus on the problematic accessibility of the last link of the travel chain from origin to destination (the so called "last mile") and collects and analyses solutions to cover this bottleneck with sustainable modes of transport. The environmental benefit and resource- and cost-efficiency in the long run shall be considered.

While various operational models of intermediate services have been created and tested in several foregoing projects, operators are still confronted with institutional, legal and regulatory barriers and sustained financing in the long run. The LAST MILE project should, among others, point out how a sound institutional framework to facilitate the implementation of especially demand-responsive transport (public, sharing, pooling) must look like and furthermore encourage regional stakeholders to try new approaches which work well in other regions in Europe. Regions shall profit from an interregionally focused experience exchange on flexible and demand-responsive mobility solutions and last but not least transfer best practice but also innovative approaches to their regional policies.

In the first phase of the project, action plans will be developed which, in a second phase, will be implemented in the regions and monitored. Conclusions drawn will contribute to policy learning.

Overall objectives of the LAST MILE project

Taking into account the INTERREG EUROPE programme's overall objective, the LAST MILE aims to improve the implementation of regional development policies and programmes, in particular programmes for Investment for Growth and Jobs and, where relevant, ETC programmes, addressing the transition to a low-carbon economy.

Improving regional policies and creating clear framework conditions for sustainable, flexible transport forms in the last mile of the travel chain will ultimately change the mode choice towards more sustainable transport modes in tourism and recreational related traffic from car to sustainable transport modes by 5% by 2020 (based on 2015). This is in line with the long term goal towards a competitive low carbon economy in Europe.

The social and territorial cohesion will be improved through equal transport opportunities and better accessibility for tourists and for residents of remote areas and hinterlands: Catchment area in public transport, Upper Sûre from the capital of the region in travel time, to be enlarged through the implementation of new flexible transport systems by 10% by 2020.

The project makes a contribution to the Growth & Jobs goal through creating “green jobs” by implementing new mobility offers and services in less dense populated areas, thus helping to reduce the unemployment rate in less favoured regions. 100 new “green jobs” are to be created by 2020.

Further objectives of the LAST MILE project are

- Integration of the last mile issue in regional policy instruments
- Capitalizing on the interregional policy exchange and making use of previous results / lessons learned, 'not reinventing the wheel'
- Actual implementation of energy-efficient integrated 'last mile' solutions (going beyond pilot actions)
- Pushing learning and policy development at EU level – in regard to the support of 'last mile' systems

Outputs of the project are the analysis of framework conditions and barriers of flexible transport, analysis of the technical state-of-the-art of sustainable transport, evaluation of existing practices in regional flexible transport policies and finally the synthesis and policy recommendations. The overall outputs are action plans for each region which define Upper Sûre for the implementation of Flexible Transport Services.

Financed under INTERREG EUROPE, LAST MILE is a European wide interregional project, led by the Environment Agency Austria, with 7 partners from 6 countries comprising a group of about 50 stakeholders.

The investigated partner regions are:

- Region of Varna District in Bulgaria, elaborated by CSDCS
- Region of Nature Park Upper Sûre in Luxembourg, elaborated by Upper Sûre Nature Park
- Region of East Tyrol in Austria, elaborated by Regional Management East Tyrol
- Region of Košice in Slovakia, elaborated by Agency for the Support of Regional Development Košice
- Region of Szczecin Metropolitan Area (Westpomeranian Voivodeship) in Poland, elaborated by Regional Office for Spatial Planning of Westpomeranian Voivodeship
- Region of Catalonia, elaborated by the Ministry of Territory & Sustainability (DTS) of the Catalan Government

For the following, the term “flexible transport services” is abbreviated FTS.

1.2 Framework conditions and barriers

Already the European-wide CIVITAS initiative, which redefines transport measures and policies in order to create cleaner, better transport in cities, has pointed out the importance of flexible transport systems. These flexible transport systems may overcome the two diverging classic systems of either relatively low cost with rigid timetables and routes (traditional local public transport) or high cost, high quality and high comfort alternatives (taxi and private car). Essentially there is no service between the two. This is one of the main restrictions of the current local mobility system. (Picco n. d.)

This project is not dealing with transport systems and transport means in urban areas but foremost with those in rural areas. In this regard, manifold positive transport solutions and projects have already been realized, in various contexts and settings. Viewing the wide range of foregoing projects and other initiatives on sustainable mobility or flexible transport in particular. The objective of this project is to think of concrete transport solutions but not to reinvent the wheel. Aim of the study is to consider the concrete and situation related hurdles and barriers in their institutional, legal and economic context in order to implement FTS in a region.

Within the context of FTS as an offer of transport for tourists and as a transport service for local residents, a detailed analysis of the framework conditions and barriers and the state-of-the-art in the regions under investigation is pivotal. This was also the point of departure in order to design a questionnaire building the basis for the analysis of the barriers that allows quantification on the one hand but requires further qualitative details on the other hand. The focus of the analysis has always been on regional setting and consequently on the regional framing conditions.

The analysis of framework conditions and barriers studied the national legal, institutional frameworks and economic aspects related to sustainable demand-responsive/flexible transport systems. This synopsis highlights the main barriers hindering the implementation of flexible transport, especially small-scale systems in rural areas. Barriers may include institutional frameworks such as policy and regulation, economic issues of funding and fares, operational issues of fleet and vehicles as well as operator and community attitudes, information and education.

It must be pointed out that the synopsis of framework conditions and barriers reveal the core message whereby the need for action can be derived and flows further into the action plan development. The interregional exchange learning events have also shown the variety of individual conditions and barriers that the regions have to deal with while implementing FTS. This synopsis is a generalized result of existing overall framework conditions and barriers in all partner regions within the LAST MILE topic with addressed conclusions and first policy recommendations.

1.3 Flexible Transport Services – Definition

Since the project partners are dealing here with an international context and thus very different regional settings regarding forms and approaches of flexible transport, it is important to have a common understanding of the term "Flexible Transport Services" and what it comprises. It also ensures the completeness of the comprehension of the synopsis for framework conditions and barriers.

In this project, Flexible Transport Services are defined as services that only operate on demand. Operation on demand in this context includes call/dial systems (i.e. hailed shared taxi), seasonal/temporary systems (i.e. event bus/train) and other forms of on-demand transport such as sharing and pooling systems. Therefore it can comprise services that can be summarized as enhanced public transport services (also flexible public transport services) like a hailed shared taxi service and also other Flexible Transport Services such as car- and bikesharing or carpooling which are not part of public transport in the narrower sense.

The main characteristic within the definition of FTS in the LAST MILE project is that the service operates only on demand.

For this definition, we also took into account different sources of literature. Often, flexible transport is regarded as a special form of public transport, like in the definition of Penelope bacchus (n. d.):

Flexible Transport Services or demand responsive services (also termed as flexible transport solutions or flexible transport systems further on) are defined as "an advanced, user-oriented form of public transport characterized by flexible routing scheduling of small/medium vehicles operating in shared/ride mode between pick-up and drop-off locations according to passenger's needs" (Penelope bacchus, n. d.).

Against this background, we distinguished the following categories of flexible modes of transport, which can be differentiated by further attributes.

- Call/Dial Systems (operates only after calling)
 - following the regular route/schedule of the bus line (only after calling)
 - fixed start and end stop, deviation from the regular route to serve additional request stops within a defined corridor
 - fixed stops, flexible routing to individual destination
- Shuttle seasonal/temporary (operates only seasonally or at specific occasions) with fixed route and stops, mostly small distances
 - seasonal
 - events
- Sharing
- Pooling

1.4 Overview of Flexible Transport Services

The following table includes concrete services they are identified after the analysis of framework condition and barrier in each partner region. The services are assigned to the above described categories.

Operating System	Means of transport / name of the service					
	train	bus	car	bike	boat	others
Regular public transport with request stops	train with request stops	bus with request stops				
Call/Dial Systems (operates only after calling)						
- following the regular route/schedule of the bus line (only after calling)		dial-a-bus				
- fixed start and end stop, deviation from the regular route to serve additional request stops within a defined corridor		dial-a-bus				
- fixed stops, flexible routing to individual destination		hailed-shared-taxi	hailed-shared-taxi			
Shuttle seasonal/temporary (operates only seasonally or at specific occasions) fixed route and stops, mostly small distances						
- seasonal	seasonal train / beach train	hiking/skiing bus, beach bus			boat ferry in summer	
- events	Event train	festival shuttle				
Sharing			Carsharing	Bikesharing/-rental		
Pooling			Carpooling			
others		company bus excursions				coaches

Table 1: Overview of Flexible Transport Services

Additionally national regulations for specialized or occasional transport were identified in three of the partner regions in Bulgaria, Slovakia and Poland. The definitions of those types of flexible transport are categorized as “**other flexible means of transport**”.

Definition of specialized and occasional transport in **Bulgaria**:

The specialized transport includes the school buses and the company buses for transportation of workers to their work places. They are used to travel regularly on the work days. The occasional transport includes coaches rented for excursions inside or outside the country. (Row Transport Act (RTA), Art. 23 and 24.)

Definition of occasional transport in **Slovakia**:

Occasional transport does not fall under the definition of the regular transport and should not count as “temporary transport”. It includes special regular transport whose main characteristics are that it transports a group of passengers created under the customer’s initiative or the initiative of the transport operator itself.

The occasional transport is carried out under the agreement concluded with the customer as single contractual transport services provided for an agreed group of passengers. The services take place along the agreed route with stated stops. The occasional transport operator is obliged to fulfil his transport obligations only in relation to the agreed group of passengers; he does not have any operational or tariff duties. Buses have to be marked with “Excursion” sign. (Law on road transport Act No. 56/2012 Coll.)

Definition of occasional transport in **Poland**:

Occasional transport is a type of transport which is neither a regular transport, nor a special regular transport nor a shuttle transport; As in Slovakia, it transports a group of passengers created under the customer’s initiative or the initiative of the transport operator itself, operator is obliged to fulfil his transport obligations only in relation to the agreed group of passengers and he does not have any operational or tariff duties. Occasional transportation is carried out by a motor vehicle designed for carrying of more than 9 people including the driver. Vehicles with a seating capacity of up to 9 are required to carry special license for needs of national passenger transport, but for international occasional passenger transportation with that type of vehicles (e.g in cross-border zone) such license is no longer required. (Act on road transport, 6 September 2001, chapter 4 Act 18.)

2 Methodology

This chapter provides information about the methodical procedure and approach of regional analysis of framework condition and barriers and methodical approach of the synopsis of the results.

The results of the synopsis of regional/national framework conditions and barriers will flow into the synthesis and will be the basis of the regional action plans and further approaches of the establishment for solutions to link the LAST MILE.

2.1 Survey assessment

The survey of framework conditions and barriers was split into four different categories of possible barriers and related questions, namely legal, institutional, economic and other barriers. All questions (and the corresponding answers) referred to the regional situation/setting, although questions on regulatory issues may be related to the national legislation. To better quantify and process the data, different assessment categories were chosen. The possible responses related to the various means of transport could be answered with yes, no, partially or don't know. Almost all questions however also required further specifications and more detailed answers which are supplementary to each question. These supplementary questions related to expected barriers when implementing Flexible Transport Services and should investigate and extract specific information about the various regions. Hence, the partners provided further details, whereby a better interpretation and assessment of the answers was possible.

The assessment of the survey was carried out statistically (simple excel-based statistics). The aggregated quantifiable answers allowed conclusions for identifying common denominators on potential barriers. The qualified detail-answers gave further information and concretize certain aspects on barriers. These answers could however not be statistically assessed. In a second step, arguments and notions were, of course, debated and assessed commonly at the end. Results are illustrated through graphs and diagrams.

The main topics and issues of the questionnaire of the analysis of framework conditions and barriers for the implementation of FTS are provided in the appendix.

The total questionnaire as well as the individual results of the questionnaire from each partner can be downloaded on the projects website: www.interregeurope.eu/lastmile/

2.2 Methodology of synopsis

On the basis of the categories of questions/issues (legal -, institutional -, economic - and other barriers) of the questionnaire, the results of the regional analysis were summarized and interpreted. The results of each category of regional framework condition and barriers are usually shown for all project partners (mentioned by country or region of the partner).

However, not all issues of the questionnaire are interpreted. Those results were highlighted where there are peculiarities for further achievement of the overall project objective. Less meaningful results from partners were not documented or additionally mentioned. Whether an answer or an argument of each partner is integrated in the synopsis or not was decided according to criteria such as general significance, coherence and detail of information (if notion or an argument was not laid down with a certain comprehensible depth, it could not be adequately considered). Also citations and arguments from the analysis of regional partners are integrated into the interpretation of the results.

Graphs and figures illustrate the statistical assessment of the results but more significance is attributed to the qualitative results of each partner.

Each category of framework conditions and barriers was resumed with main results of framework conditions and barriers of all regions. The need for action is derived from the interpretations of the results and first approaches in the field of LAST MILE topic are shown which are linked to the results of foregoing projects like Access2Mountain or Transdanube.

2.3 Definition of framework conditions and barriers

For the analysis of framework conditions and barriers, four major categories of barriers were chosen:

a) Regulatory barriers

Legal foresights can play an essential role when it comes to the implementation of Flexible Transport Services and therefore also define the frame if and how transport services can be established. Often there are minor legal aspects that may facilitate or complicate the implementation and operation of flexible transport solutions.

Example: Legislation restrains the aerial/spatial use of a flexible transport solution, it can only be used within the municipality boundaries.

b) Institutional barriers

Institutional aspects can also be central hurdles for the implementation and operation of flexible transport solutions, whereby the term institution(al) has to be interpreted quite broadly. Institution in this context can therefore range from political to private to associational etc. institutions. All these institutions and the related stakeholders are important when planning, implementing and operating flexible transport solutions. Moreover, not only stakeholder involvement but also active contribution, know-how about the transport services and responsibility distribution are required for successful management. However, stakeholders being human, there is also quite a potential for conflicts, resistance and opposition due to conflicting interests and viewpoints involved. In the end, it's the people who are responsible for the transformation process as well as presenting most barriers.

Example: An interest group like the political opposition or a local taxi entrepreneur may agitate against the planning of flexible transport solutions.

c) Economic barriers

Independent of the before-mentioned aspects, the economic and financial side has shown to be the decisive criterion either for success or failure of a project (in this instance the implementation and operation of a Flexible Transport Service). Hardly any project can be realized without the necessary financial means. This particularly challenges smaller municipalities and structurally weak areas. One aspect, among others, is the sustainable financing without or with low subsidies in the long run.

Example: Initial costs for the implementation of flexible transport are covered by funds but there is no financing for the long term operation. Operational costs are not covered by the revenues.

d) Other barriers

Apart from the above-mentioned categories, there can also be obstacles and difficulties concerning technical, organizational, structural, topographic, demographic, marketing, information dissemination and other feasibility aspects that may intervene or hinder the realization of flexible transport solutions.

In this section there are some predefined questions which cover a few more aspects that have not been addressed within the above categories. However, these questions are not conclusive and further aspects can be addressed in the summary part following the survey.

Example: A very challenging settlement structure (i.e. low population density in a valley), which requires, even for Flexible Transport Services, a sound organisation and routing concept.

3 Regulatory framework conditions and barriers

Despite a wide range of foregoing projects and operating best practices dealing with flexible transport, there is still a lack of a clear legal and regulatory framework for the proper realization and long-term operation. The category “regulatory barriers” within the questionnaire addresses issues around national and territorial legislation, regulatory standards, liability, cross-border traffic, conditions for pricing, scheduling etc. The analysis investigated the status-quo of the legal framework regarding the different types of FTS and points out deficiencies and barriers which hinder the implementation and operation of FTS.

3.1 National legislation

The status-quo of the legal situation of the FTS is to be shown with an analysis of the existing national legislation of each partner region. The results of the analyzed partner regions point out that **NATIONAL LEGISLATION** is not yet designed for different types of flexible transport services. Especially pooling and sharing systems are not defined by law at all.

The regions of Szczecin Metropolitan Area, Catalonia, Varna, Košice and the Nature Park Upper Sûre have a legal definition for the most common FTS, namely temporary and seasonal systems (i.e. ski, school, summer and shuttle bus) or occasional transport services like company busses.

The Luxembourg national law considered temporary/occasional transport services as public transport with no regular characteristic. They are provided for public use when the offer of the regular transport services is not sufficient to answer the public demand.

Read more:
Luxembourg: Road Transport Act Loi Transports Publics §3.1;§4, 2004

Actually, in Slovakia three FTS are identified (bike sharing, event train and seasonal buses), but flexible transport is only mentioned as taxi service and occasional transport in the law of road transport. The Slovakian legislation defines the transport services in the public interest as services for providing transport to schools, healthcare facilities, and offices and places of employment. The self-governing region has to ensure such transportation services by law from its budget. The 2 of the existing FTS are commercial (bike sharing and event train) and can get support from sponsors. The seasonal buses are part of the public transport system.

Read more:
Slovakia: Zákon č. 56/2012 Z. z. o cestnej doprave v znení neskorších predpisov
EN: Law on road transport, Act No. 56/2012 Coll

The Road Transport Act of Poland specifically defines shuttle transport service as “a transport of organized groups of people, back and forth, between the same place of origin and the same destination, with the joint fulfillment of the following conditions: Either each group of people transported to the destination point has to be taken back to the starting location or the place of departure and destination are, respectively, the starting point of the transport service and the place of the transport service, including in each case surrounding towns lying within a radius of 50 kilometers”.

Read more:

Poland: Ustawa z dnia 6 września 2001 r. o transporcie drogowym, Dz.U. 2001 nr 125 poz. 1371
EN: Act on Road Transport, 6 September 2001

In Austria call/dial systems are defined by the national Road Transport Act.

Call/dial buses are services with licensed routing and defined stops, circulating only after call to the requested destination or circulating without call according to fixed time schedules and on a fixed route. When a call comes the dial-on bus may deviate from the route and may also drive to the 'requested stop' and afterwards return to the original route.

Hailed shared taxis circulate after call with a fixed time-schedule and for a fixed price to a requested destination within a certain operation area. The taxis and stops need to be labeled as a hailed shared taxi (or hailed shared stop).

Read more:

Austria: Gesamte Rechtsvorschrift für Kraftfahrlineiengesetz - § 38 – Rufbusse und Anrufsammeltaxis, 2016
EN: Act on Road Transport 2016, § 38 – call/dial bus and hailed shared taxis

NONE OF THE ANALYSED REGIONS HAS A LEGAL DEFINITION FOR CARSHARING OR CARPOOLING.

In Poland carsharing and bike sharing are defined only in the Transport Development Strategy until 2020, but this strategy is not bindingly regulated.

The following definitions are:

Carsharing - a system of joint use of passenger cars. Cars are available for a fee to users, provided by operators of the vehicle fleet; which are different companies, public agencies, cooperatives, associations or natural persons group. The use of this system increases the intensity of vehicle use during the day, which leads to inhibition of growth of the registered private cars.

Bike-sharing - self-service system using the public bikes in urban areas (bike rentals). It is promoted in large urban areas for short distance moving in order to reduce congestion in car traffic, reduce emissions and improve the health of residents. It eliminates the major disadvantages of private bikes, such as: the difficulty in parking, exposure to theft and the high cost of purchase and use.

Read more:

Poland: strategia Rozwoju Transportu do 2020 roku (z perspektywą do 2030 roku), Ministerstwo Transportu, Budownictwa i Gospodarki Morskiej, Warszawa 22 stycznia 2013 r.
EN: Transport Development Strategy until 2020 (with perspective until 2030), Ministry of Transport, Construction and Maritime Economy, Warsaw January 22, 2013

In Bulgaria seasonal/temporary transport is regulated by the Road Transport Act where both types of transport are defined.

The specialized transport includes the school buses and the company buses for transportation of workers to their work places. They are used to travel regularly on work days. The occasional transport includes coaches rented for excursions inside or outside the country.

In Spain are no legal definitions or regulations for FTS identified.

Furthermore, the existing laws allow a wide interpretation and cause many regulatory gaps. The following table (table 1) points out the lack of legislation for FTS. In practice, individual arrangements and regulations are made for the previous implementation of FTS.

AVAILABILITY OF NATIONAL LEGISLATION FOR FLEXIBLE TRANSPORT SYSTEMS

Country/Region	Means of transport / name of the service				
	Call/Dial systems	seasonal/temporary systems	Sharing	Pooling	others
Luxembourg		x			
Spain					
Austria	x				
Slovakia		x			x
Poland		x			
Bulgaria					x

Table 2: Availability of national legislation for flexible transport systems

	Available
	Not available
	Partially available
x	Definiton of FTS

Precise determinations for operating or rights are usually not defined by law. The existing laws usually regulate the functioning, organization and financing for public transport within the framework of general transport laws, compulsory liability insurances and general principles but there are still many gaps.

3.2 Territorial legislation

TERRITORIAL LEGISLATION in form of binding decrees or edicts (such as a regional program) have so far not been prescribed in any region.

The partners of Poland, Luxembourg, Spain and Austria refer to partially national or regional strategies and concepts for sustainable mobility however they have no binding character. The implementation of the strategies is only partly consciously implemented by those regions. All documents mention the necessity of „flexibility” and the “sustainability” in the transport systems, indicating only some types of transport but often only as a slogan or a recommendation. In Poland and Austria the strategies are not included in a structural and processed way.

An exception is Luxembourg, where the global strategy for sustainable mobility for residents and commuters published by the Ministry of sustainable Development and the Interior

(Ministry of sustainable Development and the Interior (MDDI) 2012). In this paper four objectives are announced concerning the modal split in Luxembourg. It is a better articulation of spatial development and transport to make public transport more attractive. The policy has committed itself to this strategy and tries to implement its contents.

More details about the national/regional strategies concerning FTS can be found in the state-of-the-art synopsis.

Poland: Strategia Rozwoju Transportu do 2020 roku (z perspektywą do 2030 roku) - Transport Strategy until 2020

Luxembourg: MODU 2012 (stratégie globale pour une mobilité durable) – strategic plan for sustainable mobility

Spain: Pla de transports de viatgers de Catalunya 2020 - Passenger Transport Plan of Catalonia 2020

Austria: Mobilitätsprogramm Tirol 2013 – 2020 – mobility program of Tyrol 2013 – 2020

3.3 Liability

The survey shows, that the **LIABILITY** (= who is liable in case of an accident with/without passenger) is not an identified obstacle for the implementation of FTS. All partner regions assure that the operator of the service and the driver must have liability insurance and a compulsory insurance for the vehicle. Users apply to general civil liability.

Legal regulations concerning both the transport and insurance apply always to vehicle types and not to transportation systems. It is even difficult to create such a division - the safety and possible passenger's claims are realized within the liability insurance of the operator or each vehicle insurance, who was involved in an accident and responsibilities of the operator, refers to provision / organization of the public transport.

3.4 Regulatory minimum standards

REGULATORY MINIMUM STANDARDS concerning the provision of public transport for settlement areas are defined in the region of Szczecin Metropolitan Area, Varna and Košice.

In Poland municipalities are obliged to ensure the transport of pre-school and pre-primary education and educational institutions, in case the necessary access from the house to the facility exceeds the indicated distance (between 3 to 4 km and without restrictions for people with disabilities)

Read more:

Poland: Ustawa o systemie oświaty z dnia 7 września 1991 r., art. 14 i art.17 ustawy.

EN: Education System Act, 7 September 1991, No. 14 and 17

Slovakia defines regular transport services in terms of transport serviceability of the area as urban, suburban and intercity transport services. Urban transport can be operated together with urban tram and urban trolley transportation as become a single urban transport system of coherent and interconnected lines and schedule connections is based on a single transport regulation with a single system for tickets sale

Read more:

Slovakia: Zákon č. 56/2012 Z. z. o cestnej doprave v znení neskorších predpisov

EN: Act on Road Transport No. 56/2012 Coll

All other regions (Spain, Bulgaria, Austria) have partially covered the issue of minimum standards but not in form of a national law (more in regional strategies).

For instance, Spain has a national law that regulates the basis of Local Governments. In accordance to that law, cities with more than 50.000 inhabitants are obliged to offer urban public transport (Law 7/1985, Law 2/2003 from the Catalan government, that regulates local governments in Catalonia).

Moreover, the Passengers Transport Plan in Catalonia, horizon 2020, stipulates:

- all the neighbouring county capitals must be connected by public transport with a minimum frequency of an hour and at high commercial speed.
- that cities over 5.000 population and county capitals have, on working days, at minimum one public transport expedition to connect with their county capital and another one to return to their homes.
- guarantees that citizens from cities with less than 5.000 inhabitants can get to their county capital and return once every working day by public transport, either regular or on demand.
- guarantees that citizens from cities with more than 5.000 inhabitants or from county capitals are able to travel daily to Barcelona and return by public transport on the same day.

Read more:

Spain: Pla de transports de viatgers de Catalunya 2020

EN: Passenger Transport Plan in Catalonia horizon 2020, approved by the Catalan government

3.5 Cross-border transport

CROSS-BORDER TRANSPORT could cause more chances for economy as well as for the tourism (cross-border commuting, traveling). However, cross-border traffic is not regulated in five of the regions.

An exception is the region of Catalonia where cross-border transport services are liberalized for sharing and pooling systems. Public cross-border services are not regulated, making it difficult to coordinate services; but in general they are possible.

Poland (Act on road transport, Art. 18) and Bulgaria (Bulgarian Road Transport Act, Section II) have legislation for cross-border movements for seasonal or occasional taxis.

3.6 Pricing, scheduling and pulsing specifications

No national legislation of the partner regions regulates **PRICING**. If flexible transport is declared as public transport, it has to fulfil requirements and the price needs to be coordinated with regular public transport (especially in Poland for all types of FTS, in Luxembourg for call/dial and seasonal systems). If the FTS is spatially and legally restricted to one municipality, then pricing is free.

In Poland if FTS is declared as public transport adequate administration can set level of maximum prices on FTS operating area.

In the region of Catalonia there must be an administrative resolution from the administration that owns the service recording pricing.

In Bulgaria pricing for seasonal or occasional services is regulated and coordinated by the municipality and carrier, but there are no minimum prices (the decision is approved by the municipal council).

SCHEDULING AND PULSING SPECIFICATIONS ARE NOT REGULATED IN TERMS.

In Poland if the transport service operates as public transport the schedule must be approved by proper administration (FTS operational area) but national regulations do not force special pulsing specifications.

In Bulgaria only the municipal council approves the schedule and the itineraries and everything related to public transport.

In Spain the scheduling must be approved by the administration that owns the service.

3.7 Decision-making power of municipalities

Another considerable barrier of the category of regulatory barriers is the low decision-making power of municipalities or regions. The competences of the planning levels for the implementation of sustainable mobility are not assigned by law or are not officially regulated. It is a challenge to coordinate the implementation of FTS between the planning levels (municipalities and regional level, or regional level and national level).

In some cases the Polish municipalities often need an agreement of higher planning levels (i.e. ministry), particularly when a municipality provides a cross-border service or projects on a larger scale.

As already defined above, a municipality in Luxembourg can only implement systems without agreement of the Ministry, when they operate inside their borders.

Read more:
Luxembourg: Art.2; Mémorial A – N.107; 2004

3.8 Conclusion of regulatory framework conditions and barriers

To sum up the central findings of the barrier category “regulatory framework conditions and barriers”, the main issue that significantly influences the implementation of sustainable transport services is the **INSUFFICIENT OR PARTLY MISSING NATIONAL OR REGIONAL LEGISLATION** for different types of FTS. None national legislation defines carpooling or carsharing. Most of the existing regulations concerning only public transport and the principles regarding the operators. In this context, laws do not regulates the functioning, organization and financing of flexible transport. Private transport is carried out within the framework of general transport laws, compulsory liability insurances and general principles. Operation of existing systems is regulated by individually developed rules of use of the services implemented by the service provider / operator of a system.

Provisions about sustainable mobility in the **REGIONAL STRATEGIES ARE MAINLY IN THE CHARACTER OF GENERAL RECOMMENDATIONS**. The national/regional government should commit itself to the existing strategies and recommendations and needs to support the implementation of their contents.

MINIMUM STANDARD REGULATIONS FOR THE PROVISION OF PUBLIC TRANSPORT IN SETTLEMENT AREAS are also insufficiently defined in regional laws and strategies. Such minimum standards as in Spain for flexible and public transport should be set out in general in order to improve mobility offers in rural areas.

Moreover, it was also found that it is necessary to refer to each time to the specifics of the local government and the local conditions. Even though flexible transport services are not yet anchored in the national and regional legislation, the **GAPS IN THE LEGISLATION ALSO CREATE OPPURTUNITIES**: the framework for implementation can be created individually. On the other hand, the gaps also provoke challenges such as opposition and competition between actors due to unclear frames and criteria for the implementation of FTS.

4 Institutional framework conditions and barriers

The institutional framework conditions and barriers in this context examine the political, private, and associational etc. institutions. The collaboration between institutions and the related stakeholders is important when planning, implementing and operating flexible transport solutions. However, the nature of human beings harbours quite a potential for conflicts, resistance and opposition due to conflicting interests and viewpoints. Issues around this aspect of framework conditions and potential barriers are analyzed in this category.

4.1 Embedment in transport association

The identified answers to the question “Is flexible transport organizationally, institutionally or administratively covered/embedded by the national or provincial transport association for the single means of transport?” reveals that **THE ABSENCE OF AN INTEGRATED TRANSPORT ORGANIZER IS AN OBSTACLE**. A national or provincial transport association would help in overall coordination for the implementation of flexible modes of transport and would be pivotal for the information policy of flexible transport offers. Partners figured out that it is necessary to have a coordinator, especially in terms of data collection, information dissemination and also in the securing of finances.

In three of the analyzed partner regions (Szczecin Metropolitan Area, Košice and Varna) there is no regional or national transport association that embed flexible transport systems or which would be responsible for overall planning, organization and management of public transport.

In Austria call/dial and temporary systems such as ski busses or hiking busses are embedded into the regional or national transport association, if the service is defined as public transport.

In Luxembourg call/dial systems are covered by the regional transport association, but no other types of FTS are integrated.

In the region of Catalonia sharing as well as pooling systems are fully involved in the regional transport association, call/dial and seasonal systems are partially involved in the aspect of financing and in the operational management (for example taking telephone calls asking for service).

In Bulgaria there are more than ten private transport associations available, but no one deals with flexible transport.

The following table (table 3) gives an overview of the embedment in transport associations in the partner regions.

EMBEDMENT IN TRANSPORT ASSOCIATION IN THE PARTNER REGIONS

Country/Region	Means of transport / name of the service				
	Call/Dial systems	seasonal/temporary systems	Sharing	Pooling	others
Luxembourg					
Spain					
Austria					
Slovakia					
Poland					
Bulgaria					

Table 3: Embedment in transport association in partner regions

	Available
	Not available
	Partially available

4.2 Opposition to Flexible Transport Systems

OPPOSITION TO FTS BY OTHER SERVICE PROVIDERS IS EXPECTED by the partner regions, especially among private carriers (i.e. between taxi companies, provincial transport associations, private transport service providers etc.). Taxi companies could see flexible transport services as competition in the field of short-haul journeys. The opposition may be stronger in smaller regions (competitiveness, smaller number of users).

The Polish partner points out that “the resistance to existing pooling systems (eg. carpooling) is now clearly noticeable”. These systems, particularly in urban areas, can pose a threat to the profitability of taxi transport, mainly through increased competition. One of the important issues in that matter is the significant opposition of the union of taxi drivers, demanding, among others, to prohibit the authorization of transport services within this type of system. Another type of resistance (mainly caused by the attitude) is the drivers’ resistance against the increasing number of cyclists using the same street lanes.

In Bulgaria the state (Ministry of Transport) and the regional taxi companies are against carpooling and carsharing systems. Politics represents the opinion that FTS are an unfair competition to the public transport and taxi services, taking passengers for the same prices as the public transport tickets. FTS are seen as providing an illegal transport service of low quality and safety. In Bulgaria, the opposition to FTS is very strong because they are considered a part of the “shadow economy”.

The Spanish partner sees opposition in that especially bus operators are not interested in transforming conventional bus lines into flexible transport services, because of the difficulties for managing those kind of lines.

The East Tyrolian partner found that when the implementation of a new FTS is an opposition offer to the provided service of a private operator, then the collaboration between the service providers might be difficult.

OPPOSITION ON THE PART OF LOCAL RESIDENTS ARE NOT EXPECTED. The implemented transport systems on demand also take into account the possibility of their use also as public transport, which could benefit the residents. The acceptance of use for touristic

purposes can decrease if local residents have limited access to the service which is not able to meet their daily needs. It can be concluded that it is important that the offers of FTS should be also designed in such a way that the offers are also suitable for local residents and are not only for the touristic purpose. A mixture of satisfaction of needs for locals as well as tourists needs to be reached.

4.3 Integration into public transport information service

The integration (timetables and possible connections) of the flexible transport services into public transport information services (i.e. journey planners, route planner for public transport) of national/provincial transport associations was classified as insufficient by all regional project partners. Most of the existing public information platforms related to trip planning often take into account only public/regular transport services. However, most information services do not integrate flexible systems. Sharing and pooling systems are still fully excluded from integrated information systems.

In Spain and Austria public call/dial and seasonal systems are integrated into public transport information platforms.

In Luxembourg extraordinary transport services for specific occasions are also integrated in the national transport information service.

The following table (table 4) points out the insufficiency of transport information service by each type of flexible transport and illustrates the missing integration into public transport information service of each type of FTS.

INTEGRATION INTO PUBLIC TRANSPORT INFORMATION SERVICE

Country/Region	Means of transport / name of the service				
	Call/Dial systems	seasonal/temporary systems	Sharing	Pooling	others
Luxembourg					
Spain					
Austria					
Slovakia					
Poland					
Bulgaria					

Table 4: Integration into public transport information service

	Yes
	No

4.4 Political barriers

POLITICAL BARRIERS and decisions (= political opposition in the municipal committee) for the implementation of FTS **ARE NOT EXPECTED** in the partner regions of Slovakia, Luxembourg, Spain and Austria.

“Almost every municipality in East Tyrol has the political willingness to implement flexible mobility solutions”, is an identified answer of the East Tyrolean partner.

In Poland, it is difficult to point out a specific political risk on the implementation of flexible transport systems, because of the need to refer each time to the specifics of the particular local government and the local conditions.

In Bulgaria, the political situation is taut, also private public transport companies have a strong influence on municipalities and city councils. They estimate that the FTS will decrease their market share. Additional barriers are perceived by the Bulgarian partner due to lack of knowledge and experience among decision-makers about mobility, flexible transport modes and sustainability of transportation in general.

It can be assumed, that it is difficult to point out a specific political risk on the implementation of flexible transport systems in advance, because of the need to refer to the specifics of the particular local government and the local conditions.

4.5 Municipal management of mobility service

All project partners expect (Bulgaria, Slovakia, Luxembourg, Poland) or partially expect (Austria, Spain) **DIFFICULTIES** (regarding payment, administration or workloads etc.) when municipalities have **TO MANAGE DIFFERENT MOBILITY SERVICES** like cable cars, shuttle services and ordinary bus lines, ski buses, hailed shared taxis and so on. The main reason is the lack of experience in providing FTS. The potentially new duties associated with taking over the responsibility for the management, organization and coordination of the new (flexible) transport systems, especially in the context of their coordination with other transport systems, may be a big hurdle for municipalities.

Luxembourg comments that most of the municipalities in the partner regions are small so they often have only a few employees depending on the system, the workload could be too heavy.

Another challenge is seen with participation for payment in the implementation and long-term operation for FTS. It is recommended that flexible mobility services should be managed together with tourism associations and providers to share investment costs.

4.6 Professional management

DIFFICULTIES IN PROFESSIONAL MANAGEMENT (professional management from the 'birth' to the actual operation of the Flexible Transport Service –embracing administration, marketing & PR, operation, financial management etc.) are expected by the Bulgarian partner because of lack of regulations by law as well as lack of experience. The Polish and Spanish partner expect problems with professional management, public relation and professional marketing especially for seasonal, sharing and pooling systems but these factors also depend on local conditions and the scale of the implemented systems.

4.7 Collaboration between local stakeholder groups

Four partners identified (Poland, Bulgaria) or partially identified (Spain and Austria) **RISKS IN THE COLLABORATION BETWEEN LOCAL STAKEHOLDER GROUPS** who are involved in the planning, implementation and operation phase due to deficient communication, risks evolving through conflicts and so on.

The partner of the region of Szczecin Metropolitan Area pointed out that the method and the scope of the service must be based on well-diagnosed transportation needs. When organizing the system, the emphasis should be put on cooperation with other transport systems operators to coordinate schedules and to mutually inform each other of the complementary offer. Faulty cooperation between the user and the organizer (e.g. in the designation of specific sites for the infrastructure, determining the action plan, determining the amount of fees and tariffs or the method of communication) can cause reluctance of users to use the system.

All other regional partners identified risks in the coordination and communication especially between municipalities, transport operators and taxi drivers. The lack of cooperation between important stakeholders often caused no win-win situation for all parties. One significant reason is the ongoing personnel changes in decision positions as well as changes in governments/regional politics. This often leads to unfair competition and conflicts between stakeholders in transport providing municipal services. Risks in the collaboration of stakeholders are seen especially for sharing and pooling systems. Local private operators (taxi companies) may see competition for their own business and therefore resist collaboration.

4.8 Conclusion of institutional framework conditions and barriers

To summarize the institutional framework conditions and barriers, this analysis shows that a **TRANSPORT ASSOCIATION** would be helpful for the implementation and long-term operation of FTS regarding coordination, organization, information dissemination, data collection and the securing of finances. The results pointed out the importance of an overall organizer who overtakes the management for public and flexible transport.

OPPOSITION TO FTS BETWEEN SERVICE PROVIDERS IS EXPECTED and is especially noticeable for sharing and pooling systems. The involvement of all stakeholders as early as possible is very important for a successful project in order to reach accordance for new

transport projects and to overcome distrust among the parties involved. Also, **MANAGEMENT BY MUNICIPALITIES IS ESTABLISHED AS A HURDLE** for the implementation of FTS. Problems like participation on payment, extensive workload, and lack of experience in providing FTS are identified by our partners as hurdles hindering municipalities from providing mobility services.

A barrier in the implementation of FTS is also the **LACK OF COLLABORATION BETWEEN LOCAL STAKEHOLDERS** to achieve a win-win situation for all involved parties.

5 Economic framework conditions and barriers

Operators are still confronted with problems concerning the financial management of the implementation of FTS and a sustained financing in the long run. The analysis, among others, points out how the economic framework should facilitate the implementation of demand-responsive transport (public, sharing, pooling), especially from the municipalities' point of view.

5.1 Investment costs

HIGH INVESTMENT COSTS FOR MUNICIPALITIES and the **INSUFFICIENT FINANCIAL SUPPORT OR SUBSIDIES** from other involved parties/government is a big challenge that the municipalities cannot overcome in the implementation of FTS.

For the regions of Košice, Szczecin Metropolitan Area, Varna and Catalonia it is rather difficult for local/regional stakeholders (i.e. regional institutions, municipalities etc.) who are involved in establishing flexible transport to gain the needed investment costs for implementing/purchasing/ installing FTS.

The following graph (figure 1) shows that the region of Nature Park Upper Sûre in Luxembourg and East Tyrol in Austria partially estimate that it is easy to gain investment costs for the implementation. All other regions have **DIFFICULTIES TO GET A SECURED ACCESS TO FINANCIAL SUPPORT**. Fewer subsidies are granted from national level or financial support by transport associations/county government in general.

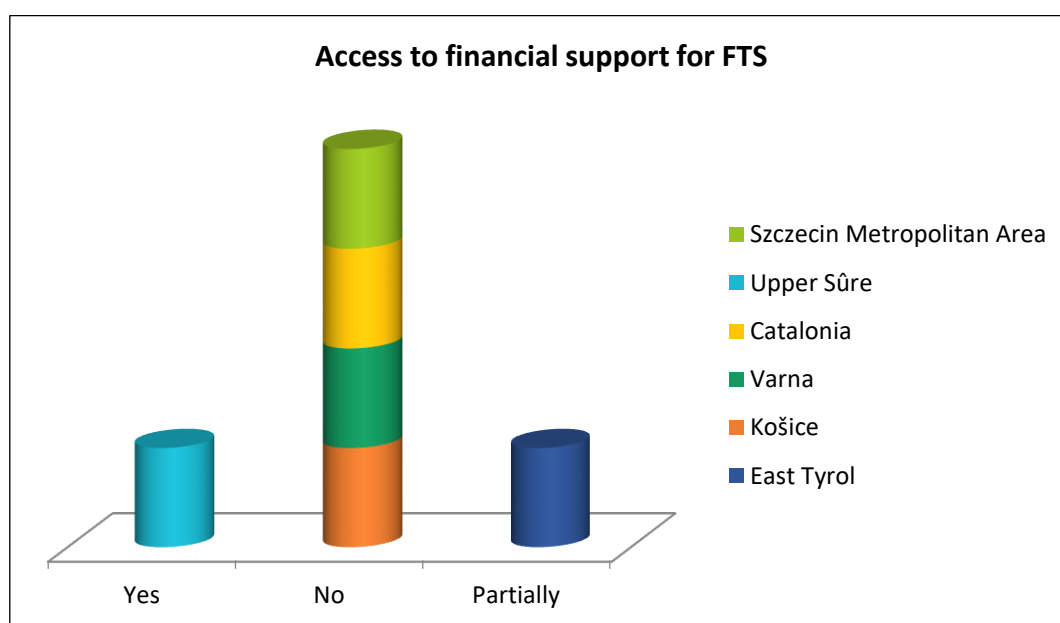


Figure 1: Access to financial support for investment costs for FTS

In Poland and Austria, there is the possibility to apply independently or through commonly established partnerships for external funds, among others, within the framework of existing

programs and financial instruments. The financial support of those programs is often not enough to secure the implementation as well as the long-term financing of the operation.

As an example, in Austria there are national funding programs for sustainable mobility available ("klimaaktiv mobil" – The National Action Programme for Mobility Management; Climate- and energy fund for micro public transport). These national funding programmes support potential project implementers for specific mobility measures which contribute to a reduction of CO₂ emissions and micro public transport systems in rural areas. It must be pointed out, that these kinds of funding programs support operators at least for 3 years but are not designed for long-term financing.

The financial support from the national or regional levels also depend on whether the issue has been anchored in national or regional strategies.

The Ministry of Transport in Luxembourg has supported the project LAST MILE from the beginning. As their objective is to improve public transport services, they also financially support projects to reduce individual motorized traffic. It is part of their strategy promoting the modal split (MDDI, 2012). That's why it is rather easy for stakeholders to gain investment costs from the national level.

A BIG CHALLENGE IS THE LONG-TERM FINANCING OF FTS IN THE MUNICIPALITY AREA. Therefore, an appropriate model for financing the services in the long run is missing for all regions.

The Polish partner assumed that if the service is to be financially profitable for the service provider (no additional subsidized funds by the municipalities, for example), the service must be carried out on a profitable transport line. In this case, strong competition from other operators competing for customers can be a barrier. In case of subsidies for such services, there will be a clear resistance from the private sector, along with allegations of unfair competition." Also, the information policy should be taken into account. The lack of an adequate explanation of the rules of the system and the benefits associated with its use may become a barrier that would limit the number of potential users and decrease the profitability of the offer.

Another obstacle was identified due to the fact that the duty (obligation) of organizing and financing of public transport is the responsibility of the local government (municipality), with a very limited budget, the municipalities are not motivated to take the initiative in this regard. The available financial instruments for public transport are mainly aimed at financing the purchase of transport fleet or investing in the infrastructure.

In this context it could be pointed out, that **INSUFFICIENT NATIONAL FUNDING SCHEMES OR FINANCIAL STRATEGIES** for flexible transport services are a big challenge for regions to gain investment costs for the implementation as well as the long-term operation of FTS.

Slovakia, Poland, Bulgaria or Spain do not have any appropriate national funding scheme. At present, actions can be implemented, among others, also in the framework of European funding programmes (European Regional Development Fund, European Social Fund, Operational Programme Infrastructure and Environment 2014-2020).

With regard to the application for funding schemes, municipalities have to fulfil a wide range of special requirements to gain money from funding schemes. In addition, fundraising takes place mostly on the competition basis. This involves the necessary commitment, both personal and financial, on behalf of the organizer (preparation of the application). With proper

and well-prepared application the entity has a chance of getting the funding, however it is not guaranteed (competition from other applicants).

5.2 Financial support by transport association

Additional **FINANCIAL SUPPORT FROM THE TRANSPORT ASSOCIATION** is only provided in Luxembourg, Austria and Spain, but only if a FTS is embedded into the transport association (timetable, management it is partially financed by this association).

In Austria one third of the running operation costs will be ensured. The rest of the sum needs to be provided by the municipalities or tourism associations.

5.3 Extra costs

EXTRA COSTS FOR THE IMPLEMENTATION OF FTS are expected due to professional marketing and management and, in particular, on information policy or costs of a well-prepared communication strategy or to increase their own involvement (i.e. the need for self-service calls, operating of mobile applications etc.). Additional staff costs for management duties are also expected.

One of additional expenses will also be the preparation of up-to-date technology systems that support transport systems (reservations, timetables, payments).

A positive argument to reduce extra costs is when FTS can replace inefficient regular public transport services by on demand services.

5.4 Cooperation of private-private and private-public-partnership

The partners of Luxembourg, Austria, Spain and Poland are **OPTIMISTIC** (figure 2), **THAT PRIVATE ENTREPRENEURS** (i.e. a taxi company) will **COOPERATE WITH I.E. THE PUBLIC TRANSPORT ASSOCIATION** or possibly also with other **COMPETITIVE PRIVATE ENTREPRENEURS** in order to offer FTS.

The Bulgarian partner region says that the cooperation is keen due to the current political situation.

The regional partner of Košice mentions that “there exists a relationship between self-governing region (regional government) and transport providers but it doesn’t have a character of public-private-partnership.” A contractual relationship exists under which the transport providers offer services under the requirements of the customer (regional government) in the required quality and at a fixed fare. The existing FTS (bike sharing and event train) are implemented commercially and get support from sponsors.

The Polish partner identified barriers for public-private-partnerships, due to fear (from the side of municipalities) of lack of transparency and the risk of lack of sustainability of such a partnership.

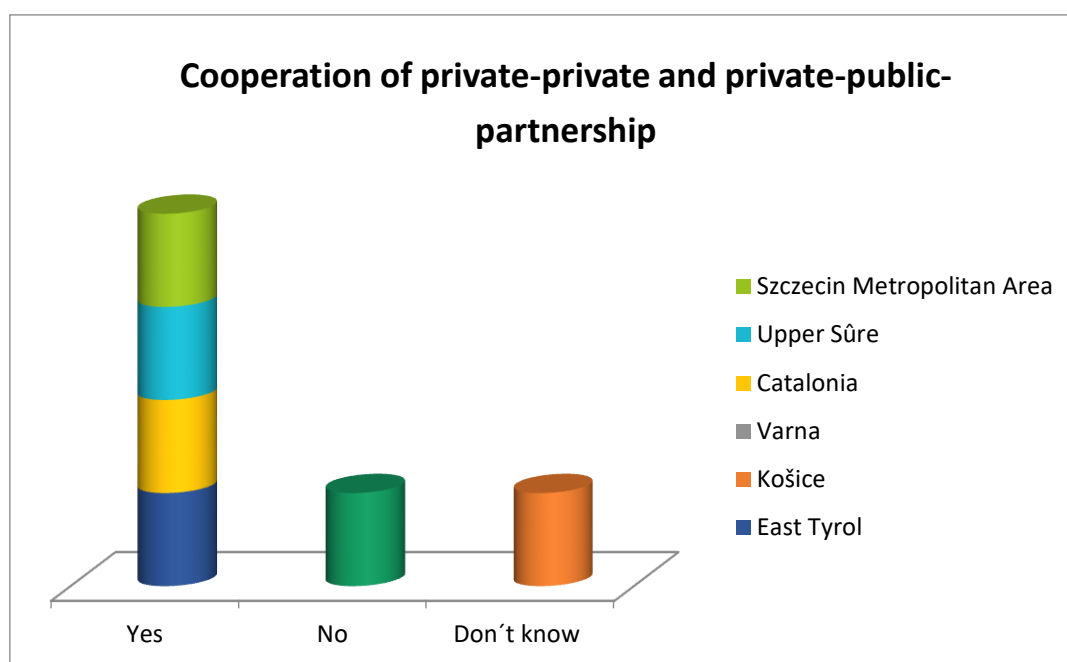


Figure 2: Cooperation between private and public partnerships

5.5 Municipalities as providers and operators

Most of the regions (Upper Sûre, Szczecin Metropolitan Area, Varna, Catalonia, East Tyrol) expect that **MUNICIPALITIES ARE CAPABLE OF DELIVERING FTS** in the same quality and professionalism as private entrepreneurs (i.e. taxi companies, specialist firms etc.) do.

Difficulties arise if the municipality recruits additional employees, for want of expertise in this sector. An insufficient focus on profitability (burden to municipal budget) and a lack of profit targeted attitude may result in competition with the private entities operating on market principles.

An advantage could be that municipalities will bridge times of little success better than private entrepreneurs or that they have the possibility of obtaining a subsidy from external resources.

The quality and degree of professionalism will depend on the commitment and the will to assume the special, often new commitments.

5.6 Conclusion of economic framework conditions and barriers

The main barriers of economic framework conditions and barriers are **THE MISSING OR INSUFFICIENT FINANCIAL SUPPORT** from the national level as well as regional stakeholders (i.e. transport and tourist associations). Obstacles are also missing financial models for the implementation and the operation. Challenges with respect to the economic framework conditions are the **LONG-TERM FINANCING OF FTS** in the municipality area, which is often not considered; although financial support has been secured for the implementation, it may not apply to the long-term financing. This is why many operators do not see any profitability in providing FTS.

EXTRA COSTS FOR the implementation of FTS are identified due to **MARKETING, MANAGEMENT OR INFORMATION POLICY** or **ADDITIONAL STAFF COSTS**.

The analysis has shown that the **COLLABORATION BETWEEN PRIVATE – PRIVATE AND PRIVATE PUBLIC PARTNERSHIP IS REALISTIC** and already in progress. **MUNICIPALITIES ARE CAPABLE OF MANAGING FTS**, although the lack of experience in this field is problematic. An advantage could be that municipalities will bridge times of little success better/easier than private entrepreneurs. Another barrier could be the relatively low capacity of staff in the municipalities so they need to recruit additional staff.

Government must seek answers to the far-reaching question **WHAT IS THE VALUE OF RURAL AREA** to governments? Mobility is also seen as a location factor and is considered as safeguarding of rural areas to avoid, for example, emigration.

In rural areas, affordable mobility offers for the operators as well as the customers should be a prerequisite to meet the needs of residents and tourists. This prerequisite should be guaranteed by the national or regional governments. Therefore, sustainable and on demand mobility should definitely have a greater priority for governments to **PROVIDE A FINANCIAL SECURITY/SUPPORT** for the implementation as well as for the ongoing operation of FTS in rural areas.

6 Other framework conditions and barriers

In this category of framework conditions and barriers several further aspects that have not been addressed within the above categories must be covered. Obstacles should be identified concerning technical, organizational, structural, topographic, demographic, marketing, information dissemination and other feasibility aspects that may intervene or hinder the realization of flexible transport solutions.

This chapter for “other” framework conditions and barriers can be structured in technical barriers, management barriers and barriers of awareness raising, information dissemination and education.

6.1 Technical barriers

Technical barriers comprise **TICKETING, BOOKING AND PAYMENT MODALITIES**. They arise from a lack of regulations and a lack of experience, especially for the regional partners from Spain and Bulgaria.

Spain mentioned that in areas with an integrated fare system it is difficult to allow the use of integrated transport tickets because validating machines would be too expensive to install on taxis or vans.

Poland partially identified barriers because if the ambition of the operator is to connect the new system to an already functioning one and combine it, for example in the system of one ticket, then both formal and system complications may occur. Other challenges include indicating the unit responsible for managing the supplementary sales system, pricing settlements, the question of profitability and subsidy measures for transport systems, the question of handling a wide variety (including mobile) of forms of payment. Such problems can occur regardless of the transport system.

The survey also shows that **ONLINE BOOKING** is partially available, depending of course, on the mode of transport. For example, in the region of Szczecin Metropolitan Area, seasonal, sharing and pooling systems are bookable via online applications. If the service is embedded into a transport association, online booking is available in Austria, Spain and Luxembourg. For private operators or municipalities such a system is too troublesome (maintenance, accounting etc.).

6.2 Management barriers

Management barriers are **RISKS IN THE ANCHORING OF RESPONSIBILITIES IN MUNICIPALITIES** (i.e. when anchoring responsibilities concerning the accounting, the operation, the administration, the maintenance, the project management and the organization) in realizing FTS. These are not expected by the regional partners of Catalonia and Austria.

The Bulgarian and Slovakian project partners cannot assess this question due to a lack of experience.

The partner region of Poland sees risks in the anchoring of responsibilities in all types of FTS. They are associated essentially with the possible (unspecified at the stage of implementation of services) new scope of duties and the areas of responsibility of the individual entities. In the early stages of cooperation, the introduction of flexible systems may meet with a lack of experience of implementing them, especially in the fields for which the level of anchoring responsibilities have not been clearly established. They can be related to e.g. legal liability and financial rules, but also supervision or control of the quality of the service.

Luxembourg partially sees risks when tasks are related to an increased work force, because most of the regional municipalities are small and don't have much capacity of staff.

6.3 Barriers in awareness raising, information dissemination and education

INFORMATION ABOUT OFFERS FOR FLEXIBLE TRANSPORT is (=in different media for different target groups and in a certain order of magnitude) available for the general public in the region of the Nature Park Upper Sûre, East Tyrol and Catalonia and partially in Poland and Košice. The information is (partially) broadly available via online platforms, local media, transportation platforms, tourist and municipal offices, word-of-mouth recommendation, local providers of tourism services etc. if the service is defined as flexible public transport.

The Government of Catalonia offers a journey planner for public transport service, with reference to available information about offers of FTS, managed by the Transports and Mobility Directorate.

In Luxembourg there is a national platform for all public transport services, where all temporary as well as seasonal systems are integrated. Other offers like call/dial systems are promoted by the service provider.

Additional barriers are identified due to the **ABSENCE OF A CENTRAL INFORMATION PLATFORM** or also due to lack of **INSUFFICIENT COOPERATION BETWEEN TOURISM AND TRANSPORT PROVIDERS**. Good collaboration between involved parties is necessary to circulate information about existing FTS.

The **ACCEPTANCE OF USE** of FTS by the people presents no problem, as all partners agree. A barrier for call/dial systems may cause resistance to the necessity of individual service calls or remembering to call in advance. Especially for sharing and pooling systems barriers are expected due to the rental procedure and uncompetitive fees or lack of infrastructure.

A general hurdle of acceptance is that people are used to the car. It will be difficult to change habits, even if the offered service is good. Private carpooling exists in all regions sporadically so acceptance will, be possibly easier for this kind of mobility solution.

All regions agreed that a main and significant barrier of the survey in the issue of LAST MILE project is the **MISSING OR INSUFFICIENT EDUCATION FOR SUSTAINABLE TRANSPORT** in school or out-of-school education. In Spain, Austria, Poland and Luxembourg general transport is a topic in the education system but there is no or just a little sensibilisation for "sustainable transport". A real obstacle to the introduction of flexible

transport systems is the general lack of knowledge of the existence of such systems, their advantages and disadvantages and the general principles of their functioning. The first step should be education, first of all for decision-makers, operators and potential users.

Initiatives for **AWARENESS RAISING AND INFORMATION DISSEMINATION FOR EDUCATION ON SUSTAINABLE TRANSPORT AND FLEXIBLE TRANSPORT SOLUTIONS** in the framework of educational activities, organizes educational and training meetings for different user groups on the subject of the use of public transport have already started in Bulgaria, Poland and Austria.

Also within the frame of the LAST MILE project, awareness raising has been initiated by each regional partner, especially for regional stakeholders like municipalities, transport or tourism associations.

The national organization of transport in Luxembourg started an initiative to promote the use of bicycles and to stipulate the development of a bicycle-friendlier infrastructure on the roads.

All in all, it must be stated that there **IS A LACK OF AWARENESS OF THE IMPORTANCE OF SUSTAINABLE TRANSPORT** and particularly of flexible transport among the general public and also among local stakeholders and decision makers.

Despite the fact that most people are aware of the environmental problems caused by climate change, they will hardly change from individual car use to public/shared transport.

6.4 Conclusion of other framework conditions and barriers

In conclusion for “other” framework conditions and barriers it can be said, that the **DISSEMINATION OF INFORMATION ABOUT THE FTS IS NOT EFFICIENT ENOUGH** to reach the target groups. The dissemination of information is often tailored to tourists via tourism offices, but unified regional information platforms via internet can enable access for all users, residents as well as tourists. Broad information dissemination is often provided if the service is defined as public transport.

The **RISKS IN THE ANCHORING OF RESPONSIBILITIES BY MUNICIPALITIES** is variously judged by partners, but is, in general, no insurmountable obstacle for partners. Potential barriers are the lack of experience in managing the operation of FTS, the new scope of duties, legal liability and financial rules, but also supervision or control of the service quality.

The **LACK OF EDUCATION IN SCHOOLS** as well as **OUT-OF SCHOOL EDUCATION** for sustainable transport may be linked to the insufficient awareness of the importance of sustainable transport.

However it can be said that if an adequate sustainable mobility offer satisfies most mobility needs of locals and tourists, the awareness will rise immediately because people take sustainable transport solutions for granted and see it as a quality of life in rural area.

Mobility should be seen as a **QUALITY OF LOCATION FOR RURAL MUNICIPALITIES**. Not only affordable mobility for residents should be highlighted, but also social aspects such as childcare and jobs should be taken into account to strengthen the rural area. When decision-makers recognize how important an adequate sustainable transport offer is, awareness will also increase. Therefore, policymakers should recognize sustainable transport as a priority.

However, the **LEVEL OF KNOWLEDGE ABOUT SUSTAINABLE TRANSPORTATION IS GROWING**. In all partner regions the social awareness of the effects of the development of individual transport is noticeable. Unfortunately it does not go hand in hand with the change of habits. The main reasons could be the lack of sufficiently attractive alternatives in public transport. Nevertheless, recent years show an increase in the interest in mobility and flexible mobility systems.

7 Conclusion

This section provides a conclusion of the main results of the analysis of framework conditions and barriers and shows the need for further action plan development. The findings of the analysis point out, for example, what a sound framework to facilitate the implementation especially of on demand transport (public, sharing, pooling) must look like. Furthermore, the findings encourage regional stakeholders to try new approaches to implement sustainable transport systems.

In spite of a wide range of foregoing projects and operating best practices dealing with flexible transport, there is still a lack of a clear legal, institutional and regulatory framework for the proper realization and long-term operation, including the sustainable financing or low subsidies in the long run.

The report can act as an aid for the successful implementation of flexible transport systems in rural touristic areas for future implementers, as lessons, were learned from the framework conditions and barriers and recommendations.

7.1 Cross-regional results of framework conditions and barriers

The following table (table 5) highlights the main barriers which were identified for flexible transport systems. The table shows holistically for all regions, which framework conditions and barriers exist in the LAST MILE context. The barriers address the need for action to find solutions for regional mobility systems to cover the LAST MILE for visitors, tourists and local residents.

Framework conditions and barriers MAIN FINDINGS	
Regulatory	Institutional
<ul style="list-style-type: none"> • Lack of adequate legislation to facilitate the implementation of FTS. • Legislative gaps for terms such as: on demand transport, carpooling, school and kindergarten transport etc. • No binding decrees or edicts for sustainable mobility • Low decision-making power of municipalities/regions • Minor regulation/accordance for pricing, accessibility, scheduling and pulsing specification • Minor regulations for cross-border offers 	<ul style="list-style-type: none"> • Absence of integrated transport organizer / no regional transport association • Insufficient public transport information service of FTS • Political barriers and decisions influence implementation of FTS • Difficulties in professional management of FTS by municipalities due to lack of experience • Risks in/lack of collaboration between local stakeholder – no win-win situation for those involved • opposition to FTS by other service providers due to competition
Economic	Other
<ul style="list-style-type: none"> • Insufficient (missing) financial support from national/regional level for implementation and operation of FTS • Few or no (national/regional) funding schemes for FTS • No coherent financing model for FTS for regions • Cooperation between public-private partnership is expandable • Extra costs for implementing FTS are new challenges for municipalities 	<ul style="list-style-type: none"> • Lack of information about offers of FTS • Risks in acceptance of use by users • Insufficient awareness about sustainable mobility and particularly flexible transport systems • Missing education for sustainable transport, missing sustainable transport culture

Table 5: Overview of main findings of framework conditions and barriers

To wrap up more details of the main results of the analysis of framework conditions and barriers and to point out the core messages for further action plan development, a short review per category, separated into regulatory, institutional, economic and other framework conditions and barriers is given below.

7.1.1 Regulatory framework conditions and barriers

A main result in the category of regulatory framework conditions and barriers is the **INSUFFICIENT, PARTIALLY MISSING LEGAL FRAMEWORK FOR FTS**. Definitions for different types of flexible transport are available, but the current legislative solutions do not adequately regulate e.g. issues related to the implementation, usage, rules of operation, financial contribution etc.

Regional players need to find **INDIVIDUAL REGULATIONS TO IMPLEMENT FTS** to bridge gaps in legislation. The issue of sustainable mobility is also not anchored through regional or national decrees or edicts that bindingly regulate the implementation of flexible transport. Four regional partners (Spain, Luxembourg, Austria and Poland) have approved strategies to support sustainable mobility but they are more or less general recommendations and give no specific regulations at all. Luxembourg consequently follows the resolutions in the national strategy for sustainable mobility which is strongly supported by the government. Minimum standards for settlement areas are (partially) defined but not in a concrete dimension.

PRICING, SCHEDULING AND PULSING SPECIFICATIONS are also **NOT REGULATED BY LAW** but if the service is accessible for the general public there is only little coordination with the regular public transport. Another barrier is the **MINOR DECISION-MAKING POWER OF MUNICIPALITIES**. Competence (which planning level) for the implementation of sustainable mobility is not assigned by law. It is a big challenge to coordinate the implementation of FTS between the planning levels.

7.1.2 Institutional framework conditions and barriers

Regarding the institutional barriers the **ABSENCE OF INTEGRATED TRANSPORT PROVIDERS** is a challenge for the implementation of FTS. In Slovakia, Bulgaria, Poland (partially) there is no regional or national transport association available to overtake coordination or organization of (already running) FTS. It has been observed, that a coordinating transport association is crucial for the implementation and the running operation of FTS – which also affects the financial contribution or information policy.

Especially in Bulgaria, but also in Poland or partially in Spain, **OPPOSITION IS EXPECTED TO FTS BY SERVICE PROVIDERS**. It could be observed that the **RESISTANCE TO SHARING AND POOLING SYSTEMS** on the part of politics is clearly noticeable. Governments consider FTS an unfair competition to private transport providers. The involvement of possible partners as early as possible is very important for a successful project.

Also **MANAGEMENT OF FTS BY MUNICIPALITIES** is seen as a challenge for the implementation of FTS. Problems like financial contribution, intensive workload, and a lack of experience in providing FTS are identified as obstacles from partners.

A barrier in restricting the implementation of FTS is also the **LACK OF COLLABORATION AMONG LOCAL STAKEHOLDERS** to achieve a win-win situation for all involved parties.

7.1.3 Economic framework conditions and barriers

The main economic obstacle for the implementation and the operation of FTS is the insufficient or partly **MISSING FINANCIAL SUPPORT FROM THE NATIONAL/REGIONAL LEVEL**. Coherent funding schemes from the national level are barely available for the implementation and operation of FTS. Exceptions are Austria and Luxembourg, these states gain funding from the national budget. **FINANCIAL CONTRIBUTION IS ALSO ASSURED BY THE TRANSPORT ASSOCIATION** for the implementation as well as for the operation of FTS if the service is considered as public transport. Coherent financing models for FTS are not available. A big challenge is not only the financing of the implementation of FTS for service providers, but also the **LONG-TERM FINANCING OF FTS**, which is often not economical enough.

Partners from Luxembourg, Austria, Slovakia and Poland consider the **COOPERATION BETWEEN PRIVATE – PRIVATE AND PRIVATE PUBLIC PARTNERSHIP REALISTIC**. In general, extra costs from municipalities are expected due to marketing and information dissemination or for additional staff costs. A further barrier for the implementation of flexible transport service is that **SERVICES ON DEMAND ARE OFTEN ECONOMICALLY NOT ATTRACTIVE FOR THE OPERATORS** (especially for private operators) if there is no synergy with some other entrepreneur activities.

Generally, the regional partners mention that, in principle, **MUNICIPALITIES ARE CAPABLE AS PROVIDERS AND OPERATORS OF FTS** if they are able to recruit employees and to bring up necessary budget for this aim.

Sustainable transport solutions should be seen as a location factor and are considered a safeguarding of rural areas to avoid emigration. Governments must seek answers to the far-reaching question: **WHAT IS THE VALUE OF RURAL AREAS TO THE GOVERNMENT?** Therefore, sustainable and, of course, flexible mobility should have greater priority for governments to **PROVIDE A FINANCIAL SECURITY/SUPPORT** for the implementation as well as for the ongoing operation of FTS in rural areas.

7.1.4 Other framework conditions and barriers

Main obstacle identified in the category “other framework conditions and barriers” is the **LACK OF USER AWARENESS ABOUT OFFERS OF FTS**.

If the service is provided as public transport, **FTS ARE INTEGRATED IN INFORMATION PLATFORMS**, as in the partner region of Luxembourg, Spain and partially in Poland and Slovakia. In East Tyrol existing call/dial systems are integrated in a national information platform.

DIFFICULTIES IN THE PROFESSIONAL MANAGEMENT OF FTS BY MUNICIPALITIES ARE EXPECTED by all partners; reasons are lack of experience or regulations per law. Also the low staff capacity in small rural municipalities was mentioned as a challenge or the additional workload providing a FTS.

The **ACCEPTANCE OF USE** is not identified as a barrier for the implementation of FTS, but it is **DIFFICULT TO CHANGE HABIT** of using the private car. One reason is the lack of sufficiently attractive alternatives of public transport. All partners agreed that the **LACK OF EDUCATION AND LACK OF AWARENESS RAISING** is a challenge to reach acceptance of use for sustainable mobility by people.

Mobility should be seen as a **QUALITY OF LOCATION FOR RURAL MUNICIPALITIES** therefore policy should recognize sustainable transport as a priority in order to strengthen rural areas. When decision-makers recognize the importance of sustainable transport, awareness as well as acceptance of use will also increase.

7.2 Regional-specific framework conditions and barriers

To sum up the individual regional results of framework conditions and barriers by regional project partners, the main findings of framework conditions and barriers will be summarized by each partner region.

7.2.1 Region of East Tyrol in Austria

National legislation doesn't cover flexible transport systems such as carsharing, carpooling, seasonal/temporary systems. Just call/dial systems are generally defined by law. There are many gaps in the legislation for the implementation. Strategies which also address sustainable transport are not bindingly regulated and act as general recommendations.

In practice the legal basis needs to be defined individually by each project. Due to the insufficient legislation, individual contracting for each service is necessary, which entails a long start-up phase for establishing FTS. A further barrier for the long-term operation of FTS is that services on demand are often economically not attractive for the operators. The relatively low population density causes low occupancy rates of such systems and especially municipalities are not able to finance the provision of private service providers. In addition, private taxi operators don't have the capacity to take on an additional flexible transport service during the seasons particularly when occupancy rates are very low.

Meanwhile, the regional transport association recognizes the importance of the connectivity to the overall public transport routes and tries to implement FTS to provide connections for the last mile. The municipalities usually get financial support for seasonal transport offers from tourism associations or the federal state government. In most cases every involved institution/association has to cover one third of costs for sustainable public services. The implementation of a service is also usually supported by national funding programmes, but this financial support is not applicable to the long-term financing.

The insufficient communication between relevant players is also a reason for difficulties during the implementation of a FTS. Political willingness is necessary for the implementation of FTS but municipalities often don't see the importance of providing flexible mobility offers. The awareness of sustainable transport service is not high enough. Information dissemination is often inefficient to raise awareness by institutions as well as locals and tourists/visitors to reduce the usage of their private cars.

7.2.2 Region of Varna in Bulgaria

The national legislation in Bulgaria does not cover FTS; only special and occasional transportations (excursions, company busses, coaches) are generally defined by law. In Bulgaria the Ministry of Transport claims that carsharing and carpooling are illegal therefore they want to close all corresponding websites. The decision-maker for FTS is not centralized, each municipality decides by itself about the type and prices of the transport service.

Usually municipalities or stakeholders do not get any support from politics in the implementation of new sustainable transport systems. The main challenge in the implementation of FTS is the opposition from the state because they consider FTS a part of the "shadow economy".

In addition, the lack of cooperation between tourism associations and public transport providers aggravated the implementation of FTS. Each party has its supporters within different companies at the municipal level. Usually their collaboration is not effective and often the governing party has its circle of companies winning the public procurements at the local level. Contracts and individual agreements for transport issues change when a new government is elected. Unfair competitions and conflicts between the stakeholders often prevent municipal transport services.

Financial barriers are very strong because municipalities often can't afford to support either the implementation or the running operation of FTS due to the lack of funding schemes.

Another aspect that significantly influences the implementation of FTS is the lack of knowledge and experience among decision-makers about mobility, FTS and the sustainability of transportation in general. Political barriers are caused by the strong influence on the municipal councils by big private transport companies so the councilors comply with their interests.

The Bulgarian partner notes, that if there is a good legal regulation, the municipalities would be the better operators of FTS, instead of private transport providers. It should be authorized by the law to control flexible transport systems, to have the possibility to exchange experiences and to gain state funding or financial participation through projects.

7.2.3 Region of Catalonia in Spain

In Catalonia there is no specific legislation at the national or regional level for FTS. Minimum standards for public transport services are regulated by law in cities with more than 50.000 inhabitants. A regional Passenger Transport Plan, horizon 2020, approved by the Catalan government, guarantees that citizens from cities with less than 5.000 inhabitants can get to their county capital and return once every working day by public transport, either regular or on demand.

With reference to spatial limitations in call/dial systems and seasonal/temporary systems, intercity road public transport services in Catalonia have spatial limitations because of interurban administrative concessions of bus lines given to private operators, awarded by the Government of Catalonia through public tender. In the case of sharing and pooling systems there are no regulations, but the rights of taxi drivers with licenses that allow them to provide services within a certain area must be respected.

Regulations for cross-border services are not defined, so it is difficult to coordinate public services between different countries but individual regulations make it possible.

It is necessary to adapt public transport regulations from the existing concessional public transport system in Catalonia to the new mobility needs of current society in order to be able to provide transport services in an economically and environmentally sustainable way in rural areas. Public transport services are currently provided on demand by taxi drivers.

The existing funding schemes (national, regional or institutional) are often not adequate to fund investment costs for FTS. But in addition to this, regional transport associations are involved in financing and the operational management of FTS (for example taking telephone calls asking for services). Long-term financing is identified as a big hurdle.

In fact, there are difficulties expected for ticketing, booking and payment in areas with an integrated fare system.

With regard to opposition to the implementation of flexible transport solutions, bus operators have low interest in transforming conventional bus lines into FTS due to difficulties in management and the uncertainty of income. The challenge is to achieve a deal where taxi drivers and bus operators feel comfortable so they don't perceive FTS as a threat.

Basically, municipalities would be capable of managing the implementation and operation of FTS if they are able to raise economic means and recruit employees for the service.

7.2.4 Region of Nature Park Upper Sûre in Luxembourg

National legislation in Luxembourg is not yet designed for flexible transport services. The only FTS appearing in the legislation are temporary and seasonal systems. Due to the current legal situation, the implementation of FTS is possible. Municipalities can only implement systems without agreement of the Ministry, when they operate inside their borders.

Referring to the national "Strategy for sustainable mobility" (approved by the Ministry for sustainable development and the Interior) the government is highly interested in reducing the individual motorized traffic. Following this strategy, national funding is possible for all types of flexible transport systems; conditions are a coordinated scheduling and implementing FTS-offers in areas/at times where regular public transport services are not appropriate.

Concerning the implementation and use of flexible transport solutions in Luxembourg there is a close collaboration with the national Department of Transport. Obstacles are identified in the "flexible" part of the project because manpower is very expensive especially when people are in "reserve", waiting for a run.

A challenge or barrier for a flexible transport service in the Upper-Sûre Nature Park is the low population density (65 inh/km² in the natur park). Additionally, the local supply is more and more centralised on different centres within the region. The transport services have to be adapted to these quite different and widespread needs. Due to seasonal variations of influx of visitors (mainly during summer season), the critical mass needed on the long run for a flexible transport system is relatively low. Points of interest are widespread and lots of tourists visit the whole region, not only small parts of it, so that systems with a focus on tourists have to be designed not only locally.

7.2.5 Region of Szczecin Metropolitan Area in Poland

A barrier in Poland is the lack of adequate legislation to facilitate the implementation of flexible services. The legal solutions also make it more difficult to implement on-demand transport solutions. The challenge is that new emerging types of FTS must match the existing general requirements of laws and technical conditions for public transport.

The necessity of „flexibility" in the transport system is mentioned in the strategies at the regional level, indicating only some types of transport but only as a slogan, they are not included in a structural and processed way. Considerable resistance has been observed on the part of taxi corporations to carpooling systems, which can be direct competition on the market of short-haul transportation as well as to the increasing number of cyclists using the same street lanes.

Another difficulty in implementing the flexible transport systems on an over municipal level is the lack of existing transport associations and entities that would systematically and comprehensively manage the process of planning, coordinating and organizing public

transport. The regional partner also noted that there is no system integration of entities involved in transport policy (no associations of private operators, the lack of a platform for regular cooperation, lack of constant contacts, eg. with the tourist industry).

Concerning the financial part of the implementation of FTS, there is a lack of resources and programs to support the long-term financing of public transport services in the municipality area (or any other - specified by the legislature - organizer of public transport services).

Activities have already started for awareness raising and information dissemination concerning the use of public transport and bike education, addressed to different age groups.

7.2.6 Region of Košice in Slovakia

In the region of Košice the main hurdles are legislative barriers because flexible modes of transport cannot be financed from the public funds. Reasons are the problematic integration into public transport - no service contract can be concluded for long distance transport and commercial local recreation and tourist transport services. The operation of passenger transport through vehicles with a capacity of maximally nine persons including the driver (8 + 1) means operation of taxi services. A legal basis definition is available for taxi services and occasional transports. The present legislation enables the performance of flexible transport as taxi services and occasional transport. Further obstacles are the absence of an integrated transport organizer. The existence of FTS can be implemented only on a commercial basis or it might be financed on the level of the tourist organizations.

A further barrier for the implementation of flexible transport service is that services on demand are economically not attractive for the operators if there is no synergy with some other entrepreneur activities. It is impossible to finance the service from the public resources (problematic integration of the system into the public transport) except the seasonal buses. It is a difficult process to get the necessary permission for operating public transport services. The absence of information platforms was also mentioned as a barrier in the implementation of FTS.

8 Key recommendations

The following need for action can be derived from the results of the analysis and what necessary steps need to be taken for the change of the current framework conditions and barriers for the implementation and the operation of FTS.

While various operational models of intermediate services have been created and tested in several foregoing projects, the analysis has shown that operators are still confronted with many institutional/legal/regulatory barriers as well as barriers to sustained financing in the long run. Furthermore, this analysis is the basis, forming a model of a sound institutional framework to facilitate the implementation especially of demand-responsive transport (public, sharing, pooling). Additionally it encourages regional stakeholders to try new approaches which work well in different regions throughout Europe.

In accordance with previous results and “lessons learned” of foregoing projects with the topic of sustainable mobility solutions in remote territories (FLIPPER, Access2Mountain, Transdanube etc.), the results of these analyses of regional framework conditions and barriers are still partly congruent.

The problems or the lack of flexible transport which were identified in advance of the LAST MILE project are for the most part reconfirmed with the main findings of the analysis of framework conditions and barriers. Therefore the statements that FTS are not resource and cost-efficient enough, not financeable without or with low subsidies or unclear (legal) framework conditions can be roughly confirmed.

One of the expected main results should be that more tourists arrive by public transport in the region and use public transport for their on-site trips, thanks to the improved accessibility through public transport and additional services on the final leg (last mile) within the region as well as the availability of alternatives to car use for residents and their daily trips as well.

8.1 Recommendations for changing the legal framework conditions and barriers

The legal framework for the implementation of FTS is the basis for the implementation of FTS in order to avoid long lasting procedures and political challenges.

Clear legal framework

The analysis of the regulatory framework and barriers emphasize, that a clear institutional framework for flexible transport is necessary for the implementation and operation of FTS. Adaptations to facilitate the implementation of especially small-scale systems need to be considered and consistently discussed. A clear legal framework could decrease many challenges, such as political barriers, collaboration between stakeholders or in the implementation or the operation of FTS.

EU programmes are drivers for innovation and the transfer of Good Practice, but legislation and policy is often a barrier to their effective transfer. There is a need to harmonise legislation further within the EU as well as at the national level - at least for those aspects that contribute to setting up a coherent legal framework for flexible transport systems. But the approach to harmonisation must not be exclusively top-down. A bottom-up process rooted in a lively exchange of experiences and collaborative problem-solving is necessary to make regulations relevant for real needs and contexts. (Interreg IVC Analysis report 2014, p. 37)

Binding decrees for sustainable transport

As many strategies and concepts are available in the regions and more are seen as recommendations and slogans, these strategies need to be bindingly regulated and agreed to by all stakeholders or decision makers.

Integrating land use planning and sustainable transport planning is crucial for the sustainable development of rural areas and regions. Indeed, combining land use and sustainable transport planning significantly enhances regional policy-making capacities. It should lead to a more rational geographic distribution of activities and, therefore, effective flexible mobility associated with quantitatively reduced transport needs. (Interreg IVC Analysis report 2014, p. 19)

Binding minimum standards in terms of density and inclusivity need to be defined.

Clear thresholds for transport emissions (such as NO_x, particles, Ozone) need to be defined and obligatory measures need to be taken if thresholds are exceeded within a region.

Mobility Management actions must not be neglected within sustainable mobility strategies. Traditionally, regional transport plans or strategies for sustainable mobility focus on infrastructures, large-scale services, and long-term planning. However, all strategies should consider actions that support citizens' behavioral changes. Also the link to ongoing mobility projects (e.g. EPOMM) needs to be ensured, which defines Mobility Management as a 'concept to promote sustainable transport and manage the demand for car use by changing traveler's attitudes and behavior. (Interreg IVC Analysis report 2014, p. 23)

Strengthening new types of FTS

In general, the implementation of pooling and sharing systems needs to be intensified. It is a new type of flexible transport and the lack of experience with these systems as well as the development of the legal framework is limiting its implementation.

Discussions at the governmental level

It is necessary to stimulate a discussion with the government and work on removing the legal barriers for development of FTS.

A regional law could help to define the characteristics and the mandates of relevant joint planning bodies or to formalise the integrated tasks for a specific joint inter-regional body for the last mile topic. Models of informal and participative governance between local authorities could be set up in order to manage the dialogue amongst decision-makers, with a view to achieve a common vision and to cooperate on all issues related to land use and sustainable transport planning. (Interreg IVC Analysis report 2014, p. 20)

8.2 Recommendations for changing the institutional framework conditions and barriers

The institutional framework conditions have program to be very important for the establishment and long-term operation of FTS. Therefore, the integration of FTS into public transport services and the overall management of transport associations need to be maintained. A strong collaboration between actors is crucial.

Integration of FTS into public transport

The aim is to integrate elements of the flexible transport into a coordinated transport system providing complex transport services that will ensure the economical use of public resources, and in the best case scenario it will also provide a unified and integrated tariff and information system.

The analysis shows that the embedment of FTS into public transport is quite low. FTS need to be recognized as having a valuable role to play in the overall public transport network and should not be seen as stand-alone solutions. The answer how to attract as many passengers as possible to use these services lies in the integration of modes to simplify the travel experience. Due to the analyses the problems associated with the last mile of any journey are well recognized. This is how the authorities can attract local people, commuters as well as tourists to use public (or on demand) transport instead of their private cars. The ability to have multi-modal ticketing covering both FTS and public transport provides passengers with an attractive mobility package. Not only LAST MILE partners, also foregoing projects have recognized the importance of designing FTS solutions to be part of the public transport network, where FTS can act as feeder services to main line public transport services and provide an integrated solution. (Wright 2011, p. 13)

Set-up transport authorities / associations

Regional or national transport associations play an essential role for the operational management of the implementation and long-run operation of FTS. Regional transport authorities could act as managers of many aspects of a regional transport system: strategy, regulation, contracting, financing. Regional transport authorities can improve the operational and financial effectiveness of the transport system and ensure better service quality for the passengers. (Interreg IVC Analysis report 2014, p. 21)

Also the integration (timetables and possible interconnections) of FTS with the conventional public transport information services needs to be ensured by the transport association to provide a broad dissemination of information, thus reaching various target groups.

Transport authorities should design not only traditional public transport solutions in their plans, but also develop a long-term strategy for integrating non-conventional modes of transport such as active modes (cycling and walking) and flexible modes (carsharing, carpooling, bikesharing, on-demand services, etc.)

At least the collaboration between the transport association and the (private) operator of FTS need to be strengthened to achieve a win-win situation for all participating parties.

Public transport information dissemination

A barrier is the insufficient public transport information service of FTS. Experience from foregoing projects also demonstrates the important role of technologies while recognizing that they need to be introduced within a coherent economic framework. Marketing of FTS needs to be essential in promoting new offers of FTS. (Wright 2011, p. 19) Thus, the integration in national wide information systems or in regional/national transport associations (if there are any) would be easier. Need for action is especially given in collaboration between operators of FTS and transport associations to integrate FTS into public information services. Especially sharing and pooling systems are fully excluded from this kind of information dissemination.

The possibilities of intermodal trip planners (door-to-door trip information) are remarkable for the direct contribution to transport systems. They also contribute to improving the capacities of regional and local administrations in regard to these FTS and help to integrate the concept of intermodality in everyday planning practices. (Interreg IVC Analysis report 2014, p. 22)

Public transport and flexible transport offers have to meet the demand of the people; they must be in accordance with current and potential passengers, also at peak times. They ought to be planned for various target groups that means both tourists and inhabitants – kids, adults and seniors alike. Projects have a higher acceptance level and are tentatively more viable outside the peak season if addressed to a larger audience. (Euroac research n.d., p. 14)

Strengthening collaboration between regional actors

Concerning the implementation and use of flexible transport solutions, a close collaboration with the national level (government) is consequently very important for the establishment and implementation of FTS. The coordination, cooperation and communication between stakeholders, private operators and public associations need to be strengthened and maintained. Ideally, projects base on a shared vision, joint efforts, stable collaboration and financing (Eurac research n.d., p. 8). Good collaboration between stakeholders helps to reduce barriers, such as aspects of implementation, financing, operation etc.

A new instrument that will encourage cooperation will also be the developed Action Plan indicating, among others, potential funding sources and the legal basis for the new transport systems.

Reduce political barriers

To promote an adequate political commitment, it is necessary to develop a mixed decision-making approach (vision-led and plan-led), to ensure consensus by promoting public participation in the transport planning and decision-making process. Politics also need to ensure that overall transport-related decisions are efficient and economically sustainable, related to measures in binding decrees or edicts for sustainable transport. Setting-up comprehensive performance targets and periodically evaluating their impact is also important. (Interreg IVC Analysis report 2014, p. 19)

8.3 Recommendations for changing the economic framework conditions and barriers

Derived from the analysis on framework conditions and barriers, sound operational models (incl. financing structure) for FTS are not available and need to be developed, not only at the national, but also at the regional and the local planning level.

Support for FTS from structural funds programs

The structural funds programs or policy instruments need to support all measures for flexible mobility solutions that contribute to flexible transport solutions in rural areas. Above all, a financial guarantee for pilot actions needs to be achieved.

Providing a financial contribution, not only for the implementation, but also for the long-term operation of FTS will strengthen rural areas.

In general, funding grants for LAST MILE measures at regional and national planning levels need to be developed through the regional action plans. The importance of sustainable transport and the financial contribution to all essential FTS must be recognized by governments to provide sustainable and affordable mobility offers as a standard quality in rural areas.

Regional financing models for FTS

The overall legislative framework for public transport in the EU is normally defined by national governments. Nonetheless, regional governments play a decisive role in the definition and implementation of public transport financing schemes.

Regional stakeholders (transport authorities, local authorities, government, etc.) help to improve the financial effectiveness of the FTS. In contrast, private developers aim to maximise their short term profits and often neglect transportation issues, which they expect the public authorities to deal with. The cooperation between stakeholders from the early stages of the planning process optimises the design of newly developed sustainable transport networks. As a result, long-term benefits are maximised and expenditures are lessened for all parties involved, i.e., developers, public authorities and residents. (Interreg IVC Analysis report 2014, p. 20)

Financing model need to be designed, not only for 'hard measures (implementation of new flexible systems) but also for 'soft' measures like mobility management which includes aspects such as information and communication, organizing services and the coordination of activities of different partners. Mobility Management measures – in contrast to hard measures – do not necessarily require large financial resources and may result in favorable cost/benefit ratios. (Interreg IVC Analysis report 2014, p. 23) Therefore, the creation of long-term solutions with a secured financial structure is very important as well as the adaption of cost structure to the target group and the offered service.

Concrete financial strategies for FTS

The implementation of a tax as the financial basis for FTS services at the local level needs to be considered. This could be e.g. a trip generator tax to be paid by organisations and companies profiting from good access to their facilities (e.g. amusement parks, hotels, thermal spas, shopping centres).

Another option is to use pricing schemes for car use or parking or a developer contribution for the infrastructure, which includes the last mile in public transport as well.

Another funding option could be a mobility and tourist ticket, which is automatically provided to tourists for the time of their stay or an entrance fee to national parks or otherwise protected areas.

Reduce Cost of Operations

The costs of providing FTS are often regarded as very high and requiring significant subsidies. A conceptual solution might be the application of the elements of the flexible transport services within the system of the regular transport performed in public interest after some mild modification of the present laws. Designating certain seldomly used regular bus connections as „dial-a-bus“ would enable more economical transport services.

Foregoing projects set about looking at new ways of providing mobility solutions by maximising the use of existing resources to meet demand. One obvious sector is to explore if Taxis or existing bus lines can be used to provide FTS. The vehicles and staff already exist, costs can be reduced, the use of existing resources can be maximised and the level of service for residents can be improved (Wright 2011, p. 7). However an adequate legal basis needs to be provided.

The regional planning level should focus on the problem of external costs. The internalisation of external costs should be a functional element of the flexible transport project design, not only traditional approaches as a means of fund raising. A 'Handbook on the estimation of external costs in the implementation and operation of flexible transport systems', and 'guidelines for transferability' can help to estimate additional costs. (Interreg IVC Analysis report 2014, p. 20)

Monitoring and evaluation

Consistent approaches to data collection enable cross site evaluation such as occupancy rates and cost-benefit calculations. Correspondingly, operators can react to problems with the operation of FTS and measure its impact. The evaluation and monitoring of the services is also of importance for the integration of flexible services in the overall public transport system. Providing exact data is a valuable contribution to the sufficient mobility offer in a region. Regular meetings of the stakeholders and (yearly) evaluations also allow the assessment of the project statistics/results to adapt the offered services and improve management costs.

8.4 Recommendations for changing other framework conditions and barriers

Information dissemination, marketing and awareness raising for offers of FTS are important aspects to reach acceptance of use and raise the usage of sustainable mobility offers.

Increase acceptance of use

The overall acceptance of FTS can be strengthened, if the service is not only designed for the use for touristic purposes. If local residents also have an attractive access to the FTS services to meet their daily needs, demand figures could be further increased. It can be concluded that it is important that the offers of FTS should be also designed in such a way that they are also suitable for local residents in order to improve micro transportation systems.

A mixture of satisfaction of needs for locals as well as tourists needs to be reached.

To achieve an effective, inclusive and more sustainable use of flexible and public transport, raising awareness and inspiring new attitudes is one of the most important things.

It is also important to include citizens in the development of new projects and plans. In particular the inclusion of the younger and the older generations in the policy making process can contribute to the dynamic and long-term success of the process. A constructive dialogue between citizens, organised stakeholders and decision-makers from the beginning of the planning process can ensure public support for innovative and challenging projects. (Interreg IVC Analysis report 2014, p. 19, 39)

Changing attitudes and social perceptions are prerequisites for changing mobility behaviors. Public authorities and officials have an important function as role models. They should act as 'trend setters' and not limit themselves to 'preaching' new behaviour.

Promotion and publicity

Big challenges are information dissemination for offers of FTS for the general public. A barrier is still the inability to promote FTS services successfully and to the general public (for tourists as well as residents). The services need to be address the respective target groups. The offers need to link with each region a clear and attractive marketing, in order to attract the attention of all local communities and to increase the knowledge and awareness of FTS among the public. (Wright 2011, p. 15)

Joint marketing strategies of operators/service providers at the regional level can be a success factor in many regions, based on a high awareness of the strengths of regions and knowledge about the addressed target groups. (Eurac research n.d., p. 17) But generally speaking, public transport must prioritize the improvement of its current service levels, service quality and user friendliness. (Interreg IVC Analysis report 2014, p. 39)

New **applications of technologies** (Information and communication Technologies (ICT)) like door-to-door trip planners aim to facilitate and promote multi-modal public transport services. The spread of smart phones and other portable smart devices in recent years offers the opportunity to provide a whole range of innovative (interactive, real time, multi-operator and multi-modal) information services capable of changing profoundly the interaction between service providers and users. Regions need to fully understand the role

that these new systems can play in enhancing their transportation needs and priorities and analyses the cost/benefit ratio. Therefore, a well-structured methodology needs to be developed. (Interreg IVC Analysis report 2014, p. 25)

Good service quality is a prerequisite for “pulling” more travelers from the car. Users considerably rely on the correctness and up-to-dateness of information materials provided. (Eurac research n.d., p. 10)

A basic requirement is that in hotels, besides the tourism office, sufficient information material on tourist packages, timetables, and economical tickets is available. Pre-trip information is an important contribution to successful marketing of public transport and regional railways. Likewise, real-time/on-trip information is important to inform passengers about alternative connections and routes in case of delay. It is useful to offer information in commonly used languages, at least basic information in English. (Eurac research n.d., p. 20)

Relating the support of the use of flexible public transport, a subsidy to employees for buying public transport tickets (developed also by government) could increase the modal share of public transport. (Interreg IVC Analysis report 2014, p. 22)

Education and Training

One of the real obstacles to the introduction of flexible transport systems is the general lack of knowledge of the existence of such systems, their advantages and disadvantages and the general principles of their functioning. The first step to implement them should be education, the decision-makers, operators and potential users. Therefore, it is necessary to provide educational and promotional activities and platforms, close and direct cooperation and obtaining a broad expert support.

The analysis shows that education on sustainable transport in schools, as well as out of school, is insufficient and may be linked to the insufficient awareness on the importance of sustainable transport. Training on how to use public or flexible transport systems needs to be a fixed component in lesson plans and out of school education also needs to be adapted to this topic. However, a successful implementation is dependent on services meeting user expectations and needs. So trainings for staff also ensure that they are aware of the user's needs. The needs of users also have to be considered in the training process. Operators of FTS meet with users' needs to highlight training requirements for both, users and staff (Wright 2011, p. 15).

Another barrier for the flexible services is also a lack of experience of municipalities in implementing FTS. If a municipality is the operator of FTS, it will be necessary to educate the staff on how to manage the running operation of FTS in general. In many cases, the organizers will have to build from scratch a system of implementation (the proper team of employees, training, development of the accounting system, adequate promotion, creating a platform of communication with other stakeholders).

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Annex

In the annex the main topics and questions of the questionnaires will be provided in structural form on the following page.

The original questionnaire as well as the full regional analysis of framework conditions and barriers of each partner can be downloaded at the LAST MILE homepage.

As an example, the following box introduces the structure of the questionnaire.

a) Regulatory barriers	Yes	No	Partially	Don't know
National legislation for Flexible Transport Services (FTS)				
Is there a national legislation that regulates Flexible Transport Services like				
Call/Dial systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seasonal/Temporary systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sharing systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pooling systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other flexible transport: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, where are they regulated (in which juridic acts / law books) and how are these Flexible Transport Services defined (please give a brief definition here)?				

- a) Regulatory framework conditions and barriers
 - 1. National legislation for FTS
 - 2. Territorial legislation and regional programmes
 - 3. Regulatory minimum standard
 - 4. Liability
 - 5. Spatial limitations
 - 6. Pricing
 - 7. Scheduling and pulsing specifications
 - 8. Accessibility
 - 9. Cross-border traffic
 - 10. FTS for different purposes

- b) Institutional framework conditions and barriers
 - 1. Embedment in the transport association
 - 2. Opposition to FTS
 - 3. Integration into public transport
 - 4. Political barriers
 - 5. Municipal management of several mobility services
 - 6. Risks in collaboration between stakeholders
 - 7. Acceptance of FTS for touristic purposes by locals

- c) Economic framework conditions and barriers
 - 1. Investment costs
 - 2. Financial support by transport association
 - 3. Extra costs
 - 4. Cooperation between private – private and private-public-partnership
 - 5. Municipalities as providers and operators of FTS

- d) Other framework conditions and barriers
 - 1. Available information
 - 2. Risks in the anchoring of responsibilities
 - 3. Acceptance of use
 - 4. Personnel resources for managing a FTS
 - 5. Ticketing, booking and payment modalities
 - 6. Online booking and online payment
 - 7. Professional management
 - 8. Sustainable transport within education
 - 9. Awareness rising and information dissemination
 - 10. Existing awareness

Glossary

Terminology

Public transport: Public transport is the provision of a shared passenger transport service which is available for the general public, as distinct from modes such as taxicab, carpooling or hired buses which are not shared by strangers without private arrangement (Glover, 2011).

Micro-Public Transport service (Micro-PT service): Micro-PT systems are an important part of Flexible Transport Services with the goal to promote local traffic solutions through a public provider (the financing of the micro-PT service is done by public institutions – i.e. municipalities - whereby the operation of the micro-PT service can be offered by a licensed private operator) (Wolf-Eberl et. al., 2011).

Flexible Transport Services: Flexible Transport Services or demand responsive services (also termed flexible transport solutions or flexible transport systems further on) are defined as “an advanced, user-oriented form of public transport characterized by flexible routing scheduling of small/medium vehicles operating in shared/ride mode between pick-up and drop-off locations according to passenger’s needs” (Penelope bacchus, n. d.).

Last mile transport: The last mile - or last kilometer transport describes particularly the last kilometers of a multi-modal travel chain based on public transport (mostly from a transportation hub –i.e. at the train station) for either passengers or goods (Wang H. and Odoni A., n. d.).

Touristic transport services: Touristic transport services is a quite broad term and specifies neither a certain means of transport nor whether the transport service is provided as flexible or standard transport. It can thus comprise any kind of the before mentioned transport services. The goal is to enable touristic transport aside from individual motorized traffic in order to access touristic destinations.

Commonly used Flexible Transport Services

- **On-demand bus**

is a bus service that operates in contrast to regular scheduled bus lines only after prior calling (call, differing from operator to operator, has to be made some time upfront) of the bus-operator. On-demand buses also deviate from the routing compared to an ordinary bus line service (Austrian Federal Chancellery – Kraftfahrlniengesetz § 38, 2016).

- **Hailed shared taxi service**

is a taxi service that operates in contrast to a regular taxi with fixed stops but with a flexible routing choice. The taxi also has to be called upfront (Austrian Federal Chancellery - Kraftfahrlniengesetz § 38, 2016).

- **Shuttle service**

Shuttle bus (or coach) is a bus service which transports passengers primarily between two fixed points. Shuttle services often fulfill the function as passenger interconnections and shuttle people mostly from transport hubs (i.e. train station) to different destinations (i.e. hotel, a specific touristic destination etc.). Seasonally it is also often used as a supplementary transport offer such as skiing bus or hiking bus (Austrian Federal Chancellery – Gelegenheitsverkehrsgesetz § 2ff, 2016 and The government of Western Australia – Department of Transport, n. d.).

- **Carsharing**

is the organized collective use of one or more cars for time limited periods (mostly hours). Carsharing is particularly attractive to users who occasionally need a car. The organization of the renting of the cars may be organised as a commercial business or the users may be organized as a company, public agency or cooperative (Bundesverband CarSharing, n. d.). Carsharing may also be attractive from a touristic viewpoint and could potentially substitute the use of private cars.

- **Carpooling**

is the sharing of car journeys so that more than one person travels in a car. A popular carpooling variant is the joint commute to the work place. Another possibility of carpooling is the use of open platforms where registered members can book car journeys (Association for commuter transport, n. d.).

- **Bikesharing**

Is the use of publically available bicycles which can be rented for a short time-span and usually within a bigger rental network (several rental stations). The rental functions on the basis of self-service. One important characteristic is that the bicycles don't have to be brought back to the original rental point but may also be returned to any other rental station within the rental service. The technical access via card, key, mobile phone or password at a terminal as well as the parking mode of the bicycles can deviate from system (provider) to system (provider) (Forum bikesharing Schweiz, n. d.).

- **Inland passenger water-way transport**

is the transport of passengers via boat or ferry (trip boats, hotel boats, water taxis etc.) between defined 'destinations' either within a city or also as extra-urban transport. People can board or exit the boats at the defined destinations. This transport service can be interesting for both – residents and tourists (UK Government, 2012).

- **Other Flexible Transport Service**

There are many solutions and concepts on transport services and particularly Flexible Transport Services. The foregoing are the most commonly used ones and are thus briefly addressed. Since this enumeration is not conclusive it is possible to present and describe here further flexible transport concepts. Also the questions in the survey are related to this/these other Flexible Transport Services.