



Analysis of national/regional framework conditions and barriers of flexible transport

Varna District

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Summary

In the frame of the activity 1-A.1 within the LAST MILE project, the main framework conditions were analysed and obstacles in establishing and operating Flexible Transport Services (FTS) were identified. Therefore, a survey has been drafted where potential main issues hindering the implementation of FTS were raised. This work was the basis for the individual analysis of barriers for Flexible Transport Services of the partner regions within the LAST MILE project. The consolidated findings of this joint analysis will finally flow into the general synthesis report at the end of phase 1 with overall conclusions and policy recommendations.

1. Introduction

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 schemes with rigid timetables and routes (traditional local public transport) or high cost, high quality and high comfort alternatives (taxi and private car).

This discussion is not only about transport systems and transport means in the urban area but foremost about rural areas. In this regard, manifold positive transport solutions and projects have already been realized, in various contexts and settings. Thus, in this study it is not necessary to think of concrete transport solutions and to reinvent the wheel but to think about the concrete and situation-wise hurdles and barriers (institutional/legal/economical/other) for a region to implement flexible transport solutions. Since we are talking here about Flexible Transport Services that shall be elaborated as touristic transport offers and as transport service for local citizens, a detailed analysis of the framework conditions, the 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 *regional setting* and consequently the *regional framing conditions* are always in the focus of the analysis.

2. Flexible Transport Services – Definition

2.1 Definition

Since we are dealing with an international context and thus very different regional settings regarding forms and approaches to flexible transport, it is important to have a common understanding of the term "Flexible Transport Services" and what it comprises.

In this study, we define Flexible Transport Services 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 summarised 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 bike-sharing or carpooling which are not part of public transport in the narrower sense.

For this definition, we also took different sources of literature into account. 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 (subsequently also termed as flexible transport solutions or flexible transport systems) 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.).

In the LAST MILE project, however, also other flexible forms of transport like sharing and pooling shall also be included in the term.

The main characteristic within the definition of FTS in the LAST MILE project is that the service operates only on demand. Thereby empty trips can be avoided.

Against this background, we differentiate the following categories, which can be divided 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

2.2 Overview of Flexible Transport Services

The following table includes possible concrete services within the above described categories, however, without intending to be exhaustive. After the detailed analysis of framework conditions, the fields may be completed.

Operating System	Means of transport / name of the service						Practice Example
	Train	Bus	Car	Bike	Boat	Others	
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 on specific occasions) fixed route and stops, mostly small distances							
- Seasonal	Seasonal	Hiking/skiing			Boat ferry in		

	train	bus			summer		
- Events	Event train	Festival shuttle					
Sharing			Car sharing	Bikesharing/- rental			
Pooling			Carpooling				
Others							

Table 1: Overview of Flexible Transport Services

3. Survey on national/legal framework conditions and barriers for flexible transport

3.1. General information

The survey is split into four different categories of possible barriers and related questions, namely institutional -, economical -, legal - and other barriers. All questions (and the corresponding answers) are referred to the regional situation/setting, although questions on regulatory issues may be related to the national legislation. For the better quantification and the further processing of the data, different assessment categories were chosen. Almost all questions however also require further specifications and more detailed answers which are supplementary to each question (always straight below to each question). These supplementary questions relate to expected barriers when implementing Flexible Transport Services and shall investigate and extract specific information about the various regions. Hence, they provide us with further details and allow a better interpretation and assessment of the answers.

Subsequently, in order to better understand the meaning of the question, most details and explanations are always written in brackets (=).

3.2. Barrier categories

Specifications on categories of framework conditions and barriers:

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

a) Regulatory barriers

Legal foresights can play an essential role when it comes to the implementation of Flexible Transport Services and thus 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 so that it can i.e. 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 thus 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 of the transport services and responsibility distribution are required for successful management. However, human nature itself presents quite a potential for conflicts, resistance and opposition due to conflicting interests and viewpoints involved. Essentially, most barriers lie with the people who are responsible for the transformation process.

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

c) Economical 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 thereon is among others 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.

4. Survey

4.1. Survey questions

A) Regulatory Barriers

1. National legislation for Flexible Transport Services (FTS)	Yes	No	Partially	Don't know
1. Is there a national legislation that regulates Flexible Transport Services like				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><i>In Bulgaria, there is no official definition of FTS. In the laws concerning the transport of passengers only specialized transport is mentioned (like school buses) and occasional transport (excursions). The mayors are controlling this type of transport and drawing the itineraries.</i></p> <p><i>Seasonal/temporary transport is regulated by the Row Transport Act (RTA), Art.23 and 24.,</i></p>				

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 use to travel regularly during the work days.

The occasional transport includes coaches rented for excursions inside or outside the country

Car sharing systems are not legal in Bulgaria because the Min. of Transport (MT) estimates they are competitors of the Public transport (PT). Recently the MT proposed to close all internet sites for car sharing.

2. Territorial legislation and regional programmes	Yes	No	Partially	Don't know
2. Is there apart from the national legislation also a regional legislation like a decree or an edict (such as a regional program is) that bindingly regulates flexible transport solutions?				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, where are they regulated (in which legal act / regional program etc.)?				

3. Regulatory minimum standard	Yes	No	Partially	Don't know
<p>3. Is there a regulatory minimum standard or recommendations concerning the provision of public transport for settlement areas in your country/region?</p> <p>If yes, please briefly describe how that minimum standard looks like?</p>	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><i>They are defined in the MT Ordinance N33 for automobile transport and in the Ordinance N2 for transport of passengers and require:</i></p> <ul style="list-style-type: none"> ✓ <i>Registration of the carrier in the MT</i> ✓ <i>Proficiency of the drivers (exams in the Agency of Automobile Administration)</i> ✓ <i>Financial stability of the carrier</i> ✓ <i>License (issued for 5 years from MT)</i> ✓ <i>Agreement with the municipality for temporary transport with itinerary and time-table approved by the city council.</i> 				

4. Liability	Yes	No	Partially	Don't know
4. Is the Flexible Transport Service regulated in terms of <u>liability</u> (= who is liable in case an accident happens with/without passenger happens)?				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how the different services a) – f) (where the yes applies) are regulated:				
<i>Both the carrier and the municipality are liable, according to the Ordinance №2 of terms and conditions for the carriage of passengers.</i>				

5. Spatial limitations	Yes	No	Partially	Don't know
5. Is the Flexible Transport Service regulated in terms of aerial/spatial limitations (= can the transport service be used/offered without spatial limitations)?				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how the different services a) – f) (where the yes applies) are regulated:				
<p><i>Note: The private transport special requirements are regulated by the Ministry of RDPW Ordinance N2 (for planning and design of transport and communication systems in urban territories). No FTS are mentioned.</i></p>				

6. Pricing	Yes	No	Partially	Don't know
6. Is the Flexible Transport Service regulated in terms of <u>pricing</u> (= is there a minimum/maximum price/service; is the pricing open etc.)?				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how the different services a) – f) (where the yes applies) are regulated:				
<p><i>The Specialized and occasional transport prices are regulated and coordinated by the municipality because the mayor signs a contract with the carrier. In each case it is different, there are no minimum prices. The decision is approved by the Municipal Council</i></p>				

7. Scheduling and pulsing specifications - 1	Yes	No	Partially	Don't know
7. Is				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e) Other flexible transport: Specialized and occasional transport _____ regulated in terms of <u>scheduling/pulsing specifications</u> (=is the schedule free or does it have to be coordinated with other means of transport)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how the different services a) – f) (where the yes applies) are regulated:				
<i>The schedule is approved by the municipality.</i>				

8. Scheduling and pulsing specifications - 2	Yes	No	Partially	Don't know
8. Is				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport _____ regulated in terms of <u>stipulations of the national road traffic act</u> (=does the road traffic act apply to all of these flexible mobility services)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how the different services a) – f) (where the yes applies) are regulated:				
<i>Road Transport Act applies in general for all PT-types. No any specific regulations for FTS are designed. In Ordinance 33 of Ministry of Transport there is a special requirement only for transport of school children – the travel should be only during daylight hours).</i>				

9. Accessibility	Yes	No	Partially	Don't know
9. Is the Flexible Transport Service regulated in terms of <u>accessibility</u> (= does everyone have access to this service)?				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how the different services a) – f) (where the yes applies) are regulated:				
<i>Some issues concerning the accessibility to PT of disabled people in general are mentioned in MT Ordinance N33, Art. 54.</i>				

10. Transboundary traffic	Yes	No	Partially	Don't know
10. Is the Flexible Transport Service regulated in terms of <u>trans-boundary traffic</u> (= is it principally possible to use the specific service also trans-boundary)?				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Excursions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how the different services a) – f) (where the yes applies) are regulated:				
<p><i>The Road Transport Act, Section II regulates the trans-boundary PT-transport.</i></p> <p><i>EU license and permits from the MT are necessary. There are no some special requirements to FTS.</i></p>				

11. FTS for different purposes	Yes	No	Partially	Don't know
11. Is the Flexible Transport Service regulated in terms of limitations with regard to certain purposes (i.e. a school bus –which is rather categorized as public transport service – is often only allowed to transport school children but no other citizens)?				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: School buses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how the different services a) – f) (where the yes applies) are regulated:				
Only the buses for school children are regulated in terms of limitation by the Ordinance N2 mentioned above.				

B) Institutional Barriers

1. Embedment in the transport association	Yes	No	Partially	Don't know
1. Is flexible transport organizationally, institutionally or administratively covered/embedded by the national or provincial transport association for				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how the different services a) – f) (where the yes applies) are embedded/covered:				
<p><i>We don't have one national Transport Association. Instead, we have more than 10 different transport associations but no one deals with FTS.</i></p> <p><i>These associations are registered as NGOs and have different scopes. Most of them are oriented to freight transport and are related to some logistics companies. No one has any influence on the decision making on PT.</i></p>				

2. Opposition to FTS	Yes	No	Partially	Don't know
2. Do you expect (or already experience) opposition to Flexible Transport Services such as				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport _____ by other transport service providers (i.e. taxi companies, provincial transport associations, private transport service providers etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how this opposition for the different services a) – f) (where the yes applies) looks like/might look like:				
<p><i>The state (Ministry of Transport) and the taxi companies are against carpooling and sharing systems. Their opinion is they represent an unfair competition to the PT and taxi services taking passengers for the same prices as the PT-tickets and providing an illegal transport service of low quality and safety.</i></p>				

3. Integration into public transport	Yes	No	Partially	Don't know
3. Are any of the transport services (incl. timetables) and possible connections integrated and listed at the transport information services (i.e. journey planners, route planner for public transport) of national/provincial transport associations				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how the different services a) – f) (where the yes applies) are integrated at the online platforms:				

4. Political barriers	Yes	No	Partially	Don't know
4. Do you expect great political barriers (= political opposition in the municipal committee) for implementing				
a) Call/Dial systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief what kind of political barriers you'd expect for the different services a) – f) (where the yes applies):				
<i>Yes, because the influence of big private PT-companies is very strong to municipalities and city councils. They estimate that the FTS will decrease their market share.</i>				

5. Municipal management of mobility services	Yes	No	Partially	Don't know
5. Do you expect difficulties (regarding payment, administration, workloads etc.) when municipalities have to manage different mobility services like cable cars, shuttle services, ordinary bus lines, ski buses, hailed shared taxis and so on?	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe (also with regard to your personal experience hereon) in brief what kind of difficulties you would expect:				
<p><i>Yes for 2 reasons:</i></p> <ol style="list-style-type: none"> <i>1. Total lack of experience in providing FTS</i> <i>2. No any control from the part of the municipality</i> 				

6. Risks in collaboration between stakeholders	Yes	No	Partially	Don't know
6. Do you see any risks (= risks due to deficient communication, risks evolving through conflicts, etc.) in the collaboration between local stakeholder groups who are involved in the planning, implementation and operation phase for				
a) Call/Dial systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief of what you would expect on how the realization of the different services a) – f) (where the yes applies) might be affected by a collaboration within the establishment of flexible mobility services in your region:				
<p><i>Yes, because they are from different political parties.</i></p> <p><i>Each party has its supporters in the face of different companies at municipal level. Usually their collaboration is not effective and often the governing party has its circle of companies winning the public procurements at local level. When the government changes, the contracts are dissolved and new procurements take place. This leads to unfair competition and conflicts between the stakeholders in transport providing municipal services.</i></p>				

7. Acceptance of FTS for touristic purposes by locals	Yes	No	Partially	Don't know
7. Do you see opposition from the side of local residents when developing Flexible Transport Services such as				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Which are in its origins designed as touristic mobility offers? If yes, please describe in brief how this opposition could look like for the different services a) – f) (where the yes applies):				

C. Economic barriers

1. Investment costs - 1	Yes	No	Partially	Don't know
1. Do you expect that it is rather easy 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				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief what kind of financing at the implementation phase you'd expect for the different services a) – f) (where the yes applies):				

2. Investment costs - 2	Yes	No	Partially	Don't know
2. Are there specific (national, regional, institutional or other) funding schemes for flexible transport solutions for				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief the funding schemes and the connected conditions for the different services a) – f) (where the yes applies):				

3. Financial support by transport association	Yes	No	Partially	Don't know
3. Does the national/regional transport association financially support flexible transport solutions like				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief from which level and how they are supported for the different services a) – f) (where the yes applies):				

4. Extra costs	Yes	No	Partially	Don't know
4. Do you see extra costs (especially with regard to marketing and information dissemination) for Flexible Transport Services compared to regular transport solutions for				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>If yes, please describe in brief what kind of extra-costs you would expect and in which magnitude (low - moderate – high extra-costs) for the different services a) – f) (where the yes applies):</p> <p>For seasonal/temporary services advertising (promotion and information about the itinerary and time-tables) is necessary in several languages (BG,RU,EN, D) – moderate</p> <p>For the specialized and occasional transport tour-operators use to bring these costs. - low</p>				

5. Cooperation between private – private and private-public-partnership	Yes	No	Partially	Don't know
5. Do you see it realistic that private entrepreneurs (i.e. a taxi company) cooperate with i.e. the public transport association or possibly also with other competitive private entrepreneurs in order to offer Flexible Transport Services?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief where you would expect the biggest challenges within the cooperation and which obstacles may possibly hinder such cooperation?				
<i>In Bulgaria FTS should be defined legally and the private sector should be motivated to launch such services.</i>				

6. Municipalities as providers and operators of FTS	Yes	No	Partially	Don't know
6. Do you think that municipalities are capable of delivering Flexible Transport Services in the same quality and professionalism as private entrepreneurs (i.e. taxi companies, specialist firms etc.) do (think of / consider here also concession, professional background and expertise, personnel resources etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief where could be the advantage of having the municipality as operator vs. where would you expect the biggest disadvantages and obstacles in contrast to a private entrepreneur?				
<i>If there is a good legal regulation, the municipality would be better owner of FTS. It should be authorized by the law to control this type of transport, to have some state funding 9or through projects) and to have the possibility top exchange experience.</i>				

D. Other Barriers

1. Available information	Yes	No	Partially	Don't know
1. Is information about offers for flexible transport (whenever there is already an existing offer/solution in your region) broadly (=in different media for different target groups and in a certain order of magnitude) available for the general public for				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe in brief how information about the different services a) – f) (where the yes applies) and to which extent it is available:				

2. Risks in the anchoring of responsibilities	Yes	No	Partially	Don't know
2. Do you see any risks when anchoring responsibilities (i.e. when anchoring responsibilities concerning the accounting, the operation, the administration, the maintenance, the project management and the organization) in realizing				
a) Call/Dial systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Sharing systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Pooling systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
If yes, please describe in brief where you'd see the risks and what kind of risks you'd see for the different services a) – f) (where the yes applies):				

3. Acceptance of use	Yes	No	Partially	Don't know
3. Do you expect barriers in the acceptance of use (of people) of flexible mobility solutions for				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe briefly how pronounced you'd expect people in your region to have 'difficulties' in accepting such flexible mobility solutions for a) – f) (where the yes applies):				

4. Personnel resources for managing a FTS	Yes	No	Partially	Don't know
4. Would you expect the provider of a FTS - apart from financial resources – to also invest in personnel resources (= to employ people) in order to manage a Flexible Transport Service such as				
a) Call/Dial systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Sharing systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Pooling systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
If yes, please allude briefly how many working hours/work you would expect for managing the different services a) – f) (where the yes applies) on an operational basis (= does not include the implementation and planning phase) given that a single unit of a certain Flexible Transport Service is offered:				

5. Ticketing, booking and payment modalities	Yes	No	Partially	Don't know
5. Do you expect difficulties with the ticketing, booking and/or payment modalities for				
a) Call/Dial systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe briefly what kind of difficulties and problems in relation to ticketing, booking and/or payment you'd see for the flexible transport solutions for a) – f) (where the yes applies):				
<i>Yes, because of lack of regulations by law and lack of experience.</i>				

6. Online booking and online payment	Yes	No	Partially	Don't know
6. Does an already existing flexible transport solution in your region (if you have one/several) like				
a) Call/Dial systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
offer online-booking and/or online payment via app or webpage?				

7. Professional management	Yes	No	Partially	Don't know
7. Do you expect difficulties concerning the professional management (= professional management from the 'birth' to the actual operation of the Flexible Transport Service – embracing administration, marketing & PR, operation, financial management etc.) for				
a) Call/Dial systems	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Seasonal/Temporary systems	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Sharing systems	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pooling systems	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other flexible transport: Specialized and occasional transport	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe briefly what kind of difficulties and problems in relation to the professional management you'd see for the flexible transport solutions for a) – f) (where the yes applies):				
<i>Yes, because of lack of regulations by law and lack of experience</i>				

8. Sustainable transport within education	Yes	No	Partially	Don't know
8. Is transport and thereby more specifically >>sustainable transport<< with all its facets an integral part of education in schools in your region?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe briefly what you know/think is taught in schools about sustainable transport:				

9. Awareness rising and information dissemination	Yes	No	Partially	Don't know
9. Are there also other (out-of-school) institutions that provide education on sustainable transport and flexible transport solutions in your region?	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe briefly what you know/think is taught about sustainable transport in these institutions and how important are they in the region:				
<i>Yes, our organization CSDCS in the frames of EU-projects and as a national Coordinator on Mobility and SUMP.</i>				

10. Existing awareness	Yes	No	Partially	Don't know
10. Do you think there is sufficient awareness (= most people are aware that the motorized individual traffic causes environmental problems) on the importance of sustainable transport and particularly flexible transport within the general public and also within local stakeholders and decision makers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please describe briefly what are people aware of in relation to sustainable transport and why do you think there is still a discrepancy between environmental ideals and effective transport habits:				

5. Summary of barriers

The main barriers for implementation of flexible transport in Bulgaria stem from the legal frame, the transport government in the educational situation.

Regulatory barriers are:

- The National legislation does not cover flexible transport systems such as call/dial systems, car-sharing, carpooling, seasonal/temporary systems. Just other FTS are generally defined by law – special and occasional transportations. There are many gaps in legislation – FTS are not defined.
- No FTS are mentioned in any space regulations (Reg.N2 of MRDPW from 29.06.2004)
- The decision-maker for FTS is not centralized, each municipality decides by itself about the type and prices of this service /if any/.
- The Ministry of Transport claims that car-sharing and car-pooling are illegal and wants to close the corresponding websites.

Institutional barriers are:

- The opposition to FTS from the state is strong because they are considered as a part of the “shadow economy”
- There are more than 10 different transport associations and no one deals with FTS
- Missing cooperation between tourism and municipalities, no illustrated win-win situation for both
- Missing cooperation between tourism and PT-providers, no any information in existing timetables about possible connections to FTS.
- Lack of knowledge and experience among decision-makers about mobility, FTS and sustainability of transportation in general

Others:

- The influence on the municipal councils of big private transport companies is very strong and the councilors use to comply with their interests.

- Financial barriers are very important and often the municipalities in Bulgaria can't afford to support FTS

What is necessary that the implementation will be successful:

- LAST MILE is the FIRST project initiative targeting FTS and we hope to open a large discussion about the legal frame of these services.
- It is necessary to introduce the FTS in the legal frame, their definition to be enlarged encompassing all types of flexible transport
- It is necessary to motivate the private sector to provide FTS by the law
- It is very difficult to find in Bulgaria well running FTS. In our target region Varna there are some examples for seasonal buses to the resort areas but there are a lot to be improved in their itinerary, time-tables, etc.

General education and training in mobility and FTS of decision makers at municipal level is necessary.

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Annex

Annex

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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 (further on partly also as flexible transport solutions or flexible transport systems termed) 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 does neither specify 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 works in contrast to regular scheduled bus lines only after prior calling (call, depending from operator to operator, has to be done 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 – Kraftfahrlineengesetz § 38, 2016).

- **Hailed shared taxi service**

is a taxi service that works 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 - Kraftfahrlineengesetz § 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 supplementary transport offer like 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 timely 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 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 common commuting 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 works as 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 available. The foregoing were the most commonly used ones and were 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 then related to this/these other Flexible Transport Services.