

EUROPEAN UNION



Committee of the Regions

Mobility in demographically and geographically challenged regions

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List of Abbreviations

BOT	Build-operate-transfer
CoR	Committee of the Regions
CPR	Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common and general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund (“Common Provisions Regulation”)
EC	European Commission
ERDF	European Regional Development Fund
ESIF	European Structural and Investment Funds
EU	European Union
EP	European Parliament
ICT	Information and Communication Technology
IP	Investment Priority
LCC	Low cost carrier
LRA	Local and regional authorities
MLG	Multi-level governance
MS	Member State
PAX	Persons approximately
PPP	Public-private partnership
PSC	Public Service Contract
PSO	Public Service Obligation
RCE	Regional Competitiveness and Employment
RDTI	Research, Development, Technology, Innovation
SGEI	Services of General Economic Interest
SME	Small and Medium Sized Enterprise
TEN-T	Transeuropean Network - Transport
TFEU	Treaty on the Functioning of the European Union

Summary

The study is structured according to the following methodological approach: A first chapter identifies specific mobility problems of demographically and geographically challenged regions. The second part describes the legal framework for LRA in public transport and then systematically analyses five European best practice examples and assesses their transferability. The third part lists and assesses the essential funding possibilities. The fourth part describes the recommendations of the Consultant for action at EU level.

Mobility problems in challenged regions

Marked features of challenged regions are that settlements and towns are small, distances are either comparatively long or otherwise difficult to cover (e.g. steep gradients), be it within the regions or to European markets. Moreover such regions tend to have been neglected in the historical development of transport networks. In the past decades these regions have been marked by constant outmigration with a multitude of adverse consequences like small markets, high transportation costs, fragile economic structures. LRAs in these regions are confronted with rising cost per capita in order to maintain fair levels of services for most public amenities while at the same time facing increasing budgetary constraints.

Mobility purposes and patterns in such regions have undergone corresponding changes tending towards a so-called vicious cycle: with decreasing workforce and ageing population public transport is increasingly required to cover daily needs such as health and elderly care of a shrinking and ageing population. At the same time transport operators have to face a decrease of traditional customers, i.e. pupils and labour force. Subsequent decreasing levels of service in public transport make the use of cars more attractive or even a necessity when it comes to the working population. Thus demand for public transport and revenues from ticket sales will be subject to further decrease in turn increasing the need for subsidies to cover the financing gap.

The key element of legislation: Public Service Obligations (PSOs)

According to EU legislation, key legal instrument for public transport services are the so-called public service obligations (PSO). PSO are regulated on Community level by the instrument of Regulations directly applicable in all Member States. PSO is defined as “a requirement defined or determined by a Competent Authority in order to ensure public passenger transport services in the general interest that an operator, if it were considering its own commercial

interests, would not assume or would not assume to the same extent or under the same conditions without reward”. The competent authority is obliged to conclude a public service contract with the operator to which it grants an exclusive right and/or compensation in exchange for discharging PSO. Under certain circumstances defined in the Regulations, a public tendering procedure is obligatory.

The intent of PSOs is evident: to allow for public subsidies in order to ensure provision of services that from an economic perspective would not be provided due to lack of revenues. However, the approach has its inherent risks:

1. firstly the mechanism of incentives: if share of ticket revenues is low compared to PSO payments, an economically rational operator has the strong incentive of focusing on his most important customer, the LRA, and not on the requirements of the users, who are more difficult to address and moreover are – so to say – irrelevant for the economic success of the operator;
2. secondly the current market structure in public transport in most MS: a long tradition of public intervention has led to monopolies in many MS; which in turn endangers cost-efficiency and tends towards continuous political lobbying for raises in subsidies instead of striving for higher productivity.

Examples

The examples seek to cover all modes of transport: bus transport in Finland and Sweden, Austrian micro public transport systems, revitalisation of an Italian regional railway line, Norwegian ferry PSO and air PSO on the Spanish Canary Islands. Especially the examples from the land transport modes road and rail clearly show LRA as the driving forces. The water and air transport examples show a more crucial role of authorities at the national level.

Recommendations

In general the recommendations are based on two overarching assumptions related to public transport in Challenged Regions:

- the prevalent requirements are linked to legislation and organisation of public transport; legislation determines the frame of action of LRAs and the organisation model determines the cost structure; infrastructure and technology have an important role but cannot be considered as the key elements to economically viable solutions;
- cost-efficiency and cost-effectiveness are the key points to be considered given the fact that public budgets are increasingly tight at national level across the EU – this affects in particular LRAs in challenged regions.

1. Fostering transparent markets and transparent financing in public transport:

The main policy lever of the EU is to support more transparent markets and more transparent accounting in public transport via the regulation and legislation related to PSOs. There is evidence that the current approach to subsidies for public transport in many MS reveals deficiencies with regard to cost-efficiency and cost-effectiveness.

2. Use of new approaches and solutions in operation:

Especially bus transport reveals a wide variety of approaches across the EU and it is the predominant mode of transport in challenged regions: a compilation of good practices under different regulatory frameworks could be a worthy exercise to stimulate the exchange of ideas. It is also the mode of transport where LRAs do have a key role in initiating but also guiding the development of systems. With a view to these solutions one might reflect the option to provide more incentives for additional directions in research. As the review on current approach to transport in the European Research framework Horizon 2020 has shown the prime focus is on advanced vehicle technology in order to make transport more resource-efficient. Achievements in this sense will provide only limited contributions to improved public transport in challenged regions: for such regions viable, flexible and cost-efficient solutions are the prime concern.

3. Comprehensive Policy Guidance and Capacity Building for LRAs:

Comprehensive policy guidance for cost-efficient and customer-oriented transport organisation and infrastructure in challenged regions would be an initiative of interest at EU level.

4. ESIF 2014-2020: The major option is the financing of transport infrastructure and rolling stock from ERDF. However, the projects have to avoid competitive distortion. The key recommendation related to public transport in Challenged Regions is to encourage to the extent possible a thorough and independent project assessment prior to approval: customer orientation, cost efficiency and cost effectiveness should be key criteria.

5. New approaches to funding: New approaches to funding could include subject funding, tax exemptions for transport providers or transport cooperations.

1 Mobility problems in Challenged Regions

Challenge in infrastructure and organisation development

Currently stakeholders of European transport policy focus on a core network of multi-modal corridors and resource efficient transport: for these areas policy frameworks have been established, targets have been defined and roadmaps have been developed. The inherent focus is on financing large-scale infrastructure investment and technology development thus most probably strengthening the core of Europe and its dense network of major cities and agglomeration areas. Regions located at the fringes of Europe will not draw immediate benefit from these developments.

The provision of transport services for regions at risk by the demographic, geographic and economic point of view is not yet perceived as a European challenge. Generally speaking transport in the regions under concern is a multi-faceted challenge: development of infrastructure and technology plays an important role but legislation and organisation development is at least as important as the first two aspects.

Challenged regions across Europe

Areas with severe natural and demographic handicaps do have a specific position in European Structural and Regional Policy. Many areas are explicitly mentioned and have become subject of key policy documents such as the outermost regions of France or the sparsely populated areas in Finland and Sweden. Not all of them encounter the same mobility problems, since e.g. areas affected by industrial transition are usually well-connected to the transport networks. However, there are areas in many Member States (MS) which do encounter similar challenges but are so to say less prominently anchored on the European map. The following table is an exemplary (and by no means an exhaustive) overview on such regions in order to understand the scope of the underlying challenges:

Member State	Regions	Comment
<i>Challenged Regions anchored in key policy documents at EU level</i>		
FR	French Guiana, Guadeloupe, Martinique, Mayotte, Réunion	Outermost regions according to Article 349 TFEU
PT	Azores and Madeira	ibidem
ES	Canary islands	ibidem
ES	Ceuta, Melilla	Annex 7 of CPR
FI	Lapland, Oulu Region, Kainuu, North Karelia, South Karelia, North Savo, South Savo	Regions with extremely low population density in Finland and Sweden according to article 6 of the 1994 Act of Accession – average population density in these regions in SE and FI is 4.4 inhabitants per square km.
SE	Norrbotten, Västerbotten, Jämtland, Västenorrland	ibidem
<i>Examples of other challenged regions across Europe with significant impact on transportation</i>		
AT	Mountainous regions such as the more peripheral parts of the Länder Tyrol, Carinthia or Styria	Small and disperse settlement areas, significant cost for public sector to maintain and expand road infrastructure
DE	Rural parts of the Länder Mecklenburg-Vorpommern, Saxony-Anhalt, Saxony, Brandenburg, Thuringia	Regions facing significant demographic challenges thus challenge to maintain fair levels of service in public transport
GR	Islands	Fragile island economies; strong dependence on tourism in summer season
PL	Regions in Eastern Poland such as Podlaskie, Lubelskie, Podkarpackie and Świętokrzyskie	Peripheral rural parts bordering Belarus and Ukraine; development efforts under ESIF focussed on the expansion of the road network
UK	Hebrides (inner and outer) Orkney and Shetland islands Western Isles, Tiree (Scotland)	fragile island economies

Challenges for transportation in such areas

From a more general perspective marked features of such regions are that settlements and towns are small, distances are either comparatively long¹ or otherwise difficult to cover (e.g. steep gradients), be it within the regions or to whole Europe. Moreover such regions tend to have been neglected in the historical development of transport networks – a development which was mainly driven by industrialisation and urbanisation; the only exceptions from these general patterns are regions where significant raw materials have been

¹ Albeit there are marked differences depending on the character of the regions at risk: distances in northernmost regions in FI and SE are much longer than e.g. compared to regions in AT or DE.

discovered. In the past decades these regions have been marked by constant outmigration with a multitude of adverse consequences. Obvious ones are small markets with high transportation costs and fragile economic structures. LRAs in these regions are confronted with rising cost per capita in order to maintain fair levels of services for most public amenities. At the same time policy-making for such LRAs is marked by prevailing financial constraints.

Mobility purposes and patterns in such regions have undergone corresponding changes tending towards a so-called vicious circle: with decreasing workforce and ageing population public transport is increasingly required to cover daily needs such as health and elderly care of a shrinking and ageing population. At the same time transport operators have to face a decrease of traditional customers, i.e. pupils and labour force. Decreasing levels of service in public transport - i.e. low frequency or barriers to access - make the use of cars more attractive or even a necessity when it comes to the working population. Thus demand for public transport and revenues from ticket sales will be subject to further decrease in turn increasing the need for subsidies to cover the financing gap.

Cost and financing of public transport

In general the discussion on cost in public transport is marked by the debate whether a high degree of state intervention is needed or liberalisation and competition should be encouraged in order to cut cost for the public respectively the tax payer. Positions and approaches in MS differ to a huge extent: the first MS to venture into liberalisation and procurement of transport services have been UK, SE, DK and DE.

For the available budgets of LRAs in the challenged regions the structure of the political and administrative system plays a decisive role since it determines the financing capacity. With the obvious exception of larger cities the operation and financing of public transport is mostly a task of the regional and national levels, even when the competent authority for concluding public service contracts is at a regional level. Regional budgets, competencies and actual tasks in public transport differ depending on the degree of decentralisation in the MS. A second major point is to which extent balancing mechanisms exist which help to bridge the gaps in financial capacity between economically strong regions and the regions facing demographical and geographical challenges.

Examples of very sophisticated systems for redistribution of tax revenues and public transport funding involving national and regional level exist in DE and AT. Tax revenues for public transport are either part of the general budget or

stem from earmarked taxes. All levels can be involved such as the national level in FR or local level such as taxes for the underground in cities such as in AT².

² Which is a tax paid by the employer.

2 Legal competences overview and best practices

2.1 Legal and organisational framework

Primary Law

The provisions for rail and road (and inland waterways) transport form a kind of *lex specialis* within the TFEU (Art. 90-100). Art. 93 states that: “Aids shall be compatible with the Treaties if they meet the needs of coordination of transport or if they represent reimbursement for the discharge of certain obligations inherent in the concept of a public service.” The legislative bodies may also set up respective provisions for air and sea transport (Art. 100).

Otherwise, the “Rules on Competition” (Art. 101-109, especially Art.107-109 on state aid) would apply. Art. 107 states that basically: “Save as otherwise provided in the Treaties, any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market.”

Art. 106.2 leaves the possibility for support of SGEI in air and maritime transport: “Undertakings entrusted with the operation of services of general economic interest or having the character of a revenue-producing monopoly shall be subject to the rules contained in the Treaties, in particular to the rules on competition, in so far as the application of such rules does not obstruct the performance, in law or in fact, of the particular tasks assigned to them. The development of trade must not be affected to such an extent as would be contrary to the interests of the Union.”

The key element of legislation: Public Service Obligations (PSOs)

According to EU legislation, key legal instrument for public transport services are the so-called public service obligations (PSO). PSO are regulated on Community level by the instrument of Regulations directly applicable in all Member States.

The legal basis for PSO in road and rail transport is Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road. In Art. 2 (e) PSO is

defined as “a requirement defined or determined by a competent authority in order to ensure public passenger transport services in the general interest that an operator, if it were considering its own commercial interests, would not assume or would not assume to the same extent or under the same conditions without reward”.

Regulation 1370/2007 applies to regular and non-limited access, national and international public passenger transport services by rail and other track-based modes and by road. It regulates Public Service Contracts (PSC) (Art. 3-4), award of PSC (Art. 5) and public service compensation (Art. 6). The competent authority is obliged to conclude a public service contract with the operator to which it grants an exclusive right and/or compensation in exchange for discharging PSO. Unless prohibited by national law, any competent LRA may decide to provide public passenger transport services itself or to award PSC directly to a legally distinct entity over which the LRA exercises control similar to that exercised over its own departments. The obligation to instigate competitive procedures does not apply to low level contracts, emergency measures, and regional or long distance rail transport.

The duration of public service contracts is limited and must not exceed ten years for bus and coach services, and fifteen years for passenger transport services by rail or other track-based modes. This period may be extended by up to 50 % under certain conditions. The transition period of the Regulation lasts until 2019.³

As part of the so-called “Fourth Railway Package”, the Proposal of the European Commission COM(2013) 28 final of 30.01.2013 foresees an amendment (Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 1370/2007 concerning the opening of the market for domestic passenger transport services by rail) with important changes for LRA in respect to financing of PSO, competition, tendering, and protection of existing PSC (mostly of the incumbents).

An amendment of the definition of competent local authority (Article 2, point c) specifies that a ‘competent local authority’ covers urban agglomerations or rural districts, not large parts of the national territory. The original definition of PSO is complemented by the clarification: “The scope of public service obligations shall exclude all public transport services that go beyond of what is necessary to reap local, regional or sub-national network effects” (Art. 2(e)). Competent authorities are obliged to establish public transport plans defining the objectives

³ http://europa.eu/legislation_summaries/competition/specific_sectors/transport/124488_en.htm

of public passenger transport policy and supply and performance patterns for public passenger transport (Art. 2a). Further major changes include mandatory competitive award of rail contracts (Art. 5(6) and Art. 4) and an obligation on Member States to ensure effective and non-discriminatory access to suitable rail rolling stock for operators wishing to provide public passenger services by rail (Art. 5a and 9a).

The proposed changes towards market opening have been heavily opposed, especially by the lobbying organisations of the incumbent public transport operators.⁴ The CoR in its Opinion of 09.10.2013 also proposes to keep the possibility of direct awarding, however, subject to time limits and quality monitoring.⁵

The European Parliament has adopted several amendments in the First Reading on 26.02.2014, among others allowing direct awards under certain quality requirements.⁶

Concerning ferry transport, the legal basis for PSO is the Council Regulation (EEC) No 3577/92 of 7 December 1992 applying the principle of freedom to provide services to maritime transport within Member States (maritime cabotage). Art. 4 states: “A Member State may conclude public service contracts with or impose public service obligations as a condition for the provision of cabotage services, on shipping companies participating in regular services to, from and between islands.” The principle is non-discrimination in respect of all Community ship-owners.

Also applicable are the provisions laid down in the so-called SGEI Decision 2012/21 (Commission Decision of 20 December 2011 on the application of Article 106(2) of the Treaty on the Functioning of the European Union to State aid in the form of public service compensation granted to certain undertakings entrusted with the operation of services of general economic interest) allow coverage of “the net cost incurred in discharging the public service obligations, including a reasonable profit” as compensation for the provision of SGEI for maritime links and ports with less than 300,000 PAX p.a..⁷

⁴ E.g. CER (Community of European Railway and Infrastructure Companies), Position Paper – Domestic Passenger Market Opening in the Context of the 4RP, Brussels 18.09.2012 where exactly the abolishment of in-house and direct awarding as well as the obligatory provision of rolling stock are criticised.

⁵ Committee of the Regions, Opinion – The Fourth Railway Package, 103rd plenary session (COTER-V-036), 7-9 October 2013.

⁶ <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P7-TA-2014-0148>

⁷ http://ec.europa.eu/competition/state_aid/legislation/sgei_report_en.pdf

For PSO in air transport, the legal basis is Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24 September 2008 on common rules for the operation of air services in the Community (Recast). Art. 16.1 stipulates: “A Member State [...] may impose a public service obligation in respect of scheduled air services between an airport in the Community and an airport serving a peripheral or development region in its territory or on a thin route to any airport on its territory any such route being considered vital for the economic and social development of the region which the airport serves.” In case no air carrier is interested in operating the route on which the obligations have been imposed, the Member State concerned may restrict the access to the route to a single air carrier and compensate its operational losses resulting from the PSO. The selection of the operator must be made by public tender at Community level. In the assessment of the necessity of an envisaged PSO, the Member State has to check “the possibility of having recourse to other modes of transport and the ability of such modes to meet the transport needs under consideration, in particular when existing rail services serve the envisaged route with a travel time of less than three hours and with sufficient frequencies, connections and suitable timings” (Art. 16.3 (b)). Above a threshold value of 10,000 PAX p.a., air PSO must be notified to the EC and announced in the Official Journal of the European Union (Art. 16.4) and can be subjected to review by the EC (Art. 18).

In February 2014, the EC adopted new guidelines on state aid to airports and airlines (Aviation Guidelines). Airlines departing from airports with fewer than 3 million passengers per year can receive start-up aid for up to three years for increasing the connectivity of a region by launching a new route. The aid may cover maximum 50% of the airport charges and should be allocated on a non-discriminatory basis. The criteria for granting start-up aid for routes from remote and poorly accessible regions are more flexible. Concerning airport infrastructure investment, small airports with an average traffic below 1 million passengers per annum may receive a maximum aid intensity of 75%. Irrespective of the size of the airport, investment aid for airports located in remote regions may be increased by up to 20 percent. Operating aid to regional airports is permitted for a transitional period of 10 years, however, different provisions apply in the case of SGEI (see below). Public financing of very small airports that do not affect trade between Member States (e.g. airports with no regular services) would not be considered as state aid at all.⁸

⁸ http://europa.eu/rapid/press-release_MEMO-14-121_en.htm
[http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0404\(01\)&rid=1](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0404(01)&rid=1)

The SGEI Decision 2012/21 (Commission Decision of 20 December 2011 on the application of Article 106(2) of the Treaty on the Functioning of the European Union to State aid in the form of public service compensation granted to certain undertakings entrusted with the operation of services of general economic interest) allow coverage of “the net cost incurred in discharging the public service obligations, including a reasonable profit” as compensation for the provision of SGEI for air links with less than 300,000 PAX p.a. and airports with not more than 200,000 PAX p.a..⁹

Assessment of PSO

The intent of PSOs is evident: to allow for public subsidies in order to ensure provision of services that from an economic perspective would not be provided due to lack of revenues. However, the approach has its inherent risks:

1. firstly the mechanism of incentives: if share of ticket revenues is low compared to PSO payments, an economically rational operator has the strong incentive of focusing on his most important customer, the LRA, and not on the requirements of the users, who are more difficult to address and moreover are – so to say – irrelevant for the economic success of the operator
2. secondly the current market structure in public transport in most MS: a long tradition of public intervention has led to large operators in many MS; this is evident in rail but also is the case in many countries with e.g. bus transport – a tradition of exclusive rights for a limited number of operators tends to create monopolies which in turn endangers cost-efficiency and tends towards continuous political lobbying for raises in subsidies instead of striving for higher productivity

2.2 Examples

The following range of examples seeks to cover all modes of transport and concentrates on the regions which have been presented in Chapter 1. In the descriptions due emphasis has been placed upon the aspects of organisation and the role of LRAs.

Road - bus transport

In a significant number of the challenged regions bus transport is the dominant mode of public transport. In former times state-run bus services or even services

⁹ http://ec.europa.eu/competition/state_aid/legislation/sgei_report_en.pdf

paid by larger employers (often in primary sector) have run a fairly dense network of bus lines but shrinking population numbers necessitated downsizing of networks, lines and thinning of schedules. At present LRAs in such regions have to focus on cost-efficiency and thus explore options in developing and optimising services on demand instead of services based on a fixed timetable. Generally speaking bus transport is due to the comparatively low investment cost for vehicles and equipment respectively the rather easy availability of private service providers the most viable option for LRAs. The specific point in bus transport is that the key infrastructure – i.e. the road – is built and maintained for general purpose and the cost for additional mode-specific infrastructure such as stations, stops, garages and IT is significantly lower than for all other modes.

The following examples seek to provide an overview on the recent trends – de facto numerous examples exist across the EU. The project Rural Transport Systems (RTS)¹⁰ is based on the cooperation of northern and northernmost regions in FI, SE, Iceland and Scotland. Main challenges are that regular services are run for school children whereas for commuters the number of connections is quite low and for errands the time intervals between travels are often considered as being too long. During summer and over weekends service quality is particularly poor. Thus rural population using public transport for errands has to rely on services provided by the municipalities.

In the inception phase of RTS the key levers for good practice have been defined by the Project group. The most relevant are:

- ICT application;
- Through-Ticketing – Smart card solutions, different price models according to user groups;
- Collection of direct feedback from potential customers;
- Procurement cooperation.

In SE and FI public transport is a multi-level governance (MLG) task¹¹ – national, regional and local administration is involved in policy delivery. Public sector has a role in planning and financing, services are provided by private companies. Key features of the systems are:

- FI: funding and support is based on direct purchases of transport services, the compensation for deficits of contract fares and fare revenues; as a supplementary pillar an extensive transport cost reimbursement for special

¹⁰ See Pielinen Karelia Development Centre Ltd et al, 2010.

¹¹ See Pielinen Karelia Development Centre Ltd et al, 2010a, pp. 5-7.

user groups exists; organisation and finance is in hands of firstly Centers for Economic Development, Transport and the Environment (15) and, secondly the 342 municipalities;

- SE: The National Traffic Authority (Rijkstrafiken) procures all forms of common public transport (all modes) in part in cooperation with regional Traffic Authorities (Länstrafiken which exist in all 21 counties and are jointly owned by the county council and the municipalities).

Example	Public transport systems in sparsely populated areas of Finland and Sweden
Key features	
Member State (MS), region	Finland (FI), Sweden (SE)
Transport mode	Micro-bus and taxi
Mobility purpose(s) served	In general local services supplement the regular bus system in FI. The organisation models differ. The particular example is a locally-based service centre which targets primarily services for socially disadvantaged and disabled groups.
Short description	<u>Transport Combination Centre:</u> A service center which receives customer calls and plans routes during business times on work days. During evenings, night and weekends calls are directed to a taxi on duty. The center ensures the smooth flow of transport services primarily established for persons who receive transport subsidies according to relevant acts. The key point is to combine transports in order to save costs – all services are door-to-door; customers might use the services of a personal assistant.
Annotation on legal framework for infrastructure and operation	The FI example of the Transport Combination Centre is run by the municipality, services are provided by private companies; bids have been requested from potential service providers; There are similar examples of dispatch centres in SE which are operated by regional traffic companies combining the transport needs of specific target groups.
Role of LRA	FI Transport Combination Centre is run by the City of Joensuu, the Swedish example is run by the regional traffic company (Din Tur)
Assessment	
SWOT in technical terms	Simple approach, staff could also serve other purposes; requires cooperation with health care and social welfare centres which in most cases might have been established at local level
Cost	Due the evt. multiple function of the persons working in the centre the model can be initiated at comparatively low cost; depending on the success rate (i.e. the higher rate of utilisation and thus the cost reduction achieved) the actual impact can be evaluated quite easily
Transferability	Given the local level does receive support from regional and national level or has the option to generate tax revenues the model might be transferred quite easily; in FI national law guarantees a certain number of monthly trips for elderly persons (aged 65+ and having low income)

Austria is confronted with a marked challenge in its alpine areas such as in Tyrol and Styria. LRAs face increasing budget constraints owing to the fact that next to the demographic challenges in remote alpine areas the cost for certain public amenities are particularly high in alpine surroundings (e.g. maintenance of local roads but also measures to protect settlement areas etc.). But also other rural parts (such as Southern Burgenland or the border areas of Upper Austria) face increasing challenges to provide public amenities increasingly cost-effective. Thus in the past decade new approaches have been developed in close cooperation between the local and regional levels under the label of so-called Micro-Public Transport. Many of the projects have been co-funded by national research and development or environment protection programmes. They can include technologically innovative aspects like e-mobility or IT-platforms.

Example	Micro public transport systems in Austria
Key features	
Member State (MS), region	Austria (AT); a collection of examples from the regions (Länder): Burgenland, Tyrol (East Tyrol), Styria, Upper Austria, Lower Austria and Vorarlberg
Transport mode	Bus transport - minibuses (mostly 9 seated); cars E-cars in the frame of non-commercial car sharing systems
Mobility purpose(s) served	<ul style="list-style-type: none"> ▪ Mobility needs of all population segments especially within communities with small and disperse settlement areas; mainly in order to reach local amenities. Either the regular public transport does not serve this purpose or the distance between existing bus stops is too large ▪ Regional interconnection of various smaller communities and tributary function to central public transport stops and stations which provide a connection to regional or supra-regional centres
Short description	<p>Usually micro –transport systems operate with minibuses as transport mode and provide service on-demand for the local population in some cases with additional added value for tourism in the region (which is in all mentioned cases not the main driver for the initiative though).</p> <ul style="list-style-type: none"> ▪ Most communities which offer micro-public transport in Burgenland provide an on-call bus which has to be called a certain time in advance, stops at any given place, i.e. goes directly to the house and goes at any given time during a time frame.¹² ▪ Another example in East Tyrol¹³ is an on-call bus which stops at official stops along a defined route throughout a remote tributary valley. Passengers have to call one hour in advance. A similar model (call 30 min in advances) is known from Styria.¹⁴

¹² A good-practice example is a community bus in village in Burgenland which has been operated since the year 2000 and transports yearly 30.000 persons (2.900 inhabitants), Community Pötttsching in Burgenland <http://www.poettsching.at/system/web/zusatzseite.aspx?detailonr=220134323>

¹³ Call-on bus „defMobil“: <http://www.deferegental.eu/index.php?PageId=3350&CurrentId=1&LangId=1> covering an entire tributary valley in East Tyrol with three communities.

¹⁴ “Gmeinbus” (community bus) Trofaiach: <http://www.trofaiach.at/gmeinbus.html>

Example	Micro public transport systems in Austria
	<ul style="list-style-type: none"> ▪ A third, rather not so frequent option is on-call transport services in small communities operated by volunteers with one or more cars.¹⁵ ▪ Non-commercial e-car sharing systems are a fourth option which is increasingly implemented in smaller communities. A group of persons, the community itself and local associations share an electric car which is in some cases even powered by locally produced renewable energy (wind, sun, bio-gas). As simple online booking system¹⁶ and platform was developed in the frame of a technology project funded within a national research programme which is used by all examined communities.¹⁷
Annotation on legal framework for infrastructure and operation	<p>Communities usually go for one of the two following possible options:</p> <ul style="list-style-type: none"> ▪ One or more participating communities form association which is entitled to carry out specific commercial activities. Passengers pay a ticket price varying from EUR 1,00 to EUR 3,-¹⁸ for a single ticket or can profit from proportionally cheaper monthly or yearly tickets. ▪ A non-profit oriented association is founded. The local population has the possibility to join the association. With a yearly membership fee to be paid the fees for all rides are covered. Drivers work on a voluntary basis. ▪ In the case of the e-car-sharing systems the community either buys or leases the e-car. The e-car systems are usually not commercially exploited and are at the disposal for all community inhabitants upon registration and payment of a yearly contribution and a rather low payment per kilometre and maybe hour (different models).
Role of LRA	<p>Local authorities: Communities themselves and their mayors are the driving force for the implementation of such systems meeting specific mobility needs of population segments which do not have the possibility to go by a private car (elderly, young people + children etc..) or do not have an own car.</p> <p>In Austria there are funding options foreseen for the elaboration of micro-public systems on national (Klimafonds, http://www.klimafonds.gv.at/) and on regional level (Länder). EU funding for investment might be another likely option though national sources are usually preferred</p> <p>Regional Authorities at Länder level do have a pro-active role as catalyst in the creation of micro-public transport system. A good example is Burgenland: In addition to the disbursement of funds for the elaboration of micro-transport systems also “technical” guidance and support for communities for the setting-up of micro-transport systems is offered and a</p>

¹⁵ Example from community Virgen in East Tyrol: <http://www.virgen.at/umwelt-energie/virgen-mobil/das-virger-mobil>. Approx. 15 persons daily are transported.

¹⁶ <https://carusocarsharing.com/> funded by FFG and the Federal Ministry of Transport and Infrastructure via the initiative “ways2go” <http://www2.ffg.at/verkehr/projekte.php?id=849&lang=de&browse=programm>

¹⁷ See the example of community Gaubitsch in the brochure <http://www.ebridge-project.eu/images/ebridge/docs/caruso-peer-to-peer-car-sharing-brochure-de.pdf>, p. 7.

¹⁸ <http://www.deferegental.eu/index.php?PageId=3351&CurrentId=1&LangId=1>

Example	Micro public transport systems in Austria
	<p>guideline with a clear outline of requirements for micro-public transport concepts is made publicly available.¹⁹</p> <p>The regions of Vorarlberg and meanwhile also Lower Austria stimulate the use of e-car sharing-systems in rural areas and also provide funding (alongside the national “Klima-aktiv” initiative) and consultancy for the implementation of these.²⁰ It is regarded as an option to cope with the thinning of public transport in the last years.²¹</p>
Assessment	
SWOT in technical terms	<p>Microbuses are technically uncomplicated. On-call buses which pick-up passengers at arbitrary places are likely to get more passengers due to their higher flexibility. This model is the most interesting in micro-public transport areas which cover a single community.</p> <p>In the case of the mentioned tributary valley in Eastern Tyrol with an approx. length of 25 km pre-defined stops is the better and more efficient option. In the tourist season the microbus is also used as a combining element to e.g. the regular ski bus.</p> <p>The e-cars require special equipment for the on-board IT and a service station for electric energy or bio gas. An easily to handle booking web/smart phone -booking-system is already existing and in use. Via this system also the battery status of the cars can be checked. Booking is possible at any time.</p>
Cost	<p>Example “DefMobil” (East Tyrol):</p> <p>The costs amount to approx. 100.000 EUR /per year, the initiative is financed by the three participating communities, the national Klimafonds and the initiative Klima:aktiv and the Land Tyrol</p> <p>For the investment and the business plan development the local level will be supported from the national and/or regional funds mentioned above. Operation cost, i.e. the longer-term financial burden for the local level is sought to be kept to a minimum – sometimes drivers are volunteers working on a rotation principle. The inception phase is marked in all cases by intense marketing activities at local level.</p> <p>Financing can be secured through:</p> <ul style="list-style-type: none"> ▪ Tickets ▪ Sponsoring, advertisements ▪ subsidies from local, regional or national level <p>E-car sharing: Commercial car sharing providers are rarely active in smaller rural communities, furthermore they are expensive. Communities hence have to initiate such a system on their own and can either buy or lease an e-car. Too guarantee a basic use of the car the community also needs to use it for own purposes. Apart from this up to 30 persons can register to use one car and pay their contribution (yearly contribution and mileage allowance in order to cover the costs.) The use of the online-</p>

¹⁹ under <http://www.b-mobil.info/projekte/dorfbus-projekte> - see above

²⁰ e.g. e-mobil initiative in Lower Austria <http://www.ecoplus.at/de/ecoplus/cluster-niederoesterreich/e-mobil/ueber-die-initiative>.

²¹ See article under <https://carusocarsharing.com/about/presse/> on Lower Austrian information seminar on e-car sharing for communities (“Großes Interesse an E-car-sharing-Modell für Gemeinden”)

Example	Micro public transport systems in Austria
	<p>booking system is free.</p> <p>Funding for the investment into equipment can be obtained.</p> <p>First experiences from communities show that this model, if smartly applied, is well-demanded by the local population and economic efficient²².</p>
Transferability	<p>Could be recommended for comparable communities with low frequency in regular public transport; pre-requirements are that the initiative has to be based on a clear concept and needs-assessment, the tributary function to bus or train stops of regional importance is a key requirement. Connectivity to regular public transport (schedules!) has to be safeguarded and integration into a regional transport concept has to be foreseen.</p> <p>A viable financing concept has to be elaborated including funding options from national or EU programmes.</p> <p>E-car sharing: Can be applied everywhere under the auspices and at the initiative of communities.</p>

Since bus transport is by far the most wide spread mode of transport in Challenged Regions some key aspects deserve a closer look. As a rule of thumb about 70% of cost in bus transport is cost for employees' wages and benefits, the remainder for fuel, insurances and overheads. Vehicles equipped with diesel engines are significantly cheaper than any alternatives such as natural gas (+10% up to +20%) or hybrid busses (+80%): thus as long as there are no explicit legal requirements or specific provisions in case of tendering for services the currently dominant diesel-powered vehicles will continue to prevail.

ICT has become a crucial technology in public transport. For obvious reasons the main markets for technology providers is transport in agglomeration areas. But as examples like in the project RTS show also solutions tailored to the needs of other regions exist.

The table below gives an overview on the principle options for the use of ICT in public transport. However, all options should be considered under the aspect of cost-effectiveness.

²² Example of community Gaubitsch (appr. 900 inhabitants), 20.000 km per anno, see above <http://www.ebridge-project.eu/images/ebridge/docs/caruso-peer-to-peer-car-sharing-brochure-de.pdf>, p. 7.

Element	Possible functions	Cost efficiency
Booking and scheduling programmes ²³ preferably in a dedicated contact centre	<ul style="list-style-type: none"> ▪ service offers and online booking (one off, regular) ▪ information on schedule, overview for potential clients ▪ calculation of travel time (allows also to present arrival resp. pick up times e.g. to health centres) ▪ information on specific requirements for vehicle provider (e.g. wheelchair) ▪ mapping function 	<ul style="list-style-type: none"> ▪ saves time and thus administrative cost
Mobile data terminals (MDT)	<ul style="list-style-type: none"> ▪ device serves as the communication hub between vehicle and the control center, i.e. the key requirement for demand responsive transport (DRT) – in general short written message instead of voice-led systems, functioning through traditional radio or mobile phone networks 	<ul style="list-style-type: none"> ▪ saves time through efficient communication
GPS vehicle tracking	<ul style="list-style-type: none"> ▪ real time tracking in order to optimise information for clients such as arrival forecasts which can be provided in various forms (via app on mobile phone but also as Automated Voice Information System (AVIS)) 	<ul style="list-style-type: none"> ▪ could contribute to consumer satisfaction and thus to increased use but needs of elderly and disadvantaged people have to be taken into account
Public information displays	<ul style="list-style-type: none"> ▪ option for real time information at major stops 	<ul style="list-style-type: none"> ▪ will definitely contribute to consumer satisfaction for all age groups
Automated passenger counter	<ul style="list-style-type: none"> ▪ next to passengers als any specific requirements might be recorded (bike or wheelchair transport) 	<ul style="list-style-type: none"> ▪ Optimisation of vehicle use and vehicle capacity plans
Video monitoring system	<ul style="list-style-type: none"> ▪ video surveillance of vehicle and/or stops 	<ul style="list-style-type: none"> ▪ could contribute to consumer satisfaction in terms of increased feeling of safety though rather an issue for urban public transport
Fare technology	<ul style="list-style-type: none"> ▪ E.g. smart cards (tapping a sensor) or tariff optimisation calculations for costumers etc. 	<ul style="list-style-type: none"> ▪ consumer comfort and satisfaction

²³ Most features taken from the example of Wigtownshire Community Transport in Pielinen Karelia Development Centre Ltd et al, 2010a, p. 23.

Water – ferry boats

In general ferry services in Challenged Regions are perceived by the authorities as a significant financial burden. The situation is particularly challenging in regions where tourism does not play significant role such as in northernmost regions. In the framework of the project RTS for SE as well as Iceland the significant cost of the ferry services have been highlighted.²⁴ The case of the ferry in East Iceland shows the need for multi-purpose traffic in areas with lowest population densities: the ferry essentially ships the goods needed and in turn the waste produced; next to these the ferry transports also passengers.

Other examples hint at the important effect of tourism. A pilot scheme to explore the impact of lower ferry fares on island communities was launched in Scotland in 2007.²⁵ It was launched as a support measure for the fragile island communities (Western Isle, Coll and Tiree). The price was set as an equivalent for the price of road transport over a similar distance which meant a reduction of 50% (Road Equivalent Tariff –RET). The main target groups have been tourists and local island economies. The pilot was run over a period from 2008 to 2012. An impact assessment done in 2011²⁶ concluded that, apart from tourism, demand for ferry services is inelastic: demand rose but not sufficiently to offset the tariff reduction. Demand rose markedly with an impact for local tourism business but mostly in peak months and tending towards low-value tourism. Haulage sector did not pass on the price reduction but absorbed it and there is also limited evidence that some island firms had expanded their activities to the mainland economies.

A 2011 study analysed and compared the framework for PSO ferry transports in four different countries, Denmark, Greece, Sweden and Norway. The authors concluded that the Norwegian system has proved the most efficient in terms of cost efficiency, encouragement of private investment and improvement of service quality.²⁷

²⁴ See Pielinen Karelia Development Centre Ltd et al, 2010a, p. 6 referring to the fact that in SE the ferry to Gotland in 2009 consumed more than half of all subsidies for public transport provided by the national traffic authority; in East Iceland the study refers to the ferry between Mjofjordur and Nordfjordur with 21 passengers on average in 2008.

²⁵ See EPRC, 2011, p. 37.

²⁶ See EPRC, p. 67.

²⁷ Baird, A. J. - Wilmsmeier, G., Public tendering of ferry services in Europe. European Transport \ Trasporti Europei n. 49 (2011): 90-111.

Example	Ferry PSO, Norway
Key features	
Member State (MS), region	Norway (EFTA Member)
Transport mode	Coastal ferries
Mobility purpose(s) served	<ul style="list-style-type: none"> ▪ Connection of trunk roads ▪ Connection of outlying areas with regional centres²⁸
Short description	PSO-based ferry links connecting the Norwegian trunk road system. Ca. 300 ferries, mostly owned and operated by private firms, subsidised via tender competitions for monopoly franchises on single routes or small bundles of ferry routes. The subsidies are paid ex ante (and not on a cost-plus basis as before 1990) in order to encourage cost efficiency. Tender evaluation uses weights cost with not more than 40% and includes non-monetary criteria like environmental impact, safety, quality/functionality, capacity, age of vessels and option of services. Duration of contracts 5-8 years. Frequency premium: operators able to offer higher frequency are rewarded in the evaluation. ²⁹
Annotation on legal framework for infrastructure and operation	Similar to PSO system in the EU based on Council Regulation (EEC) No 3577/92.
Role of LRA	Major trunk road ferry connections are tendered from the national level, local and regional ferry services connecting outlying areas with regional centres by local authorities resp. local transport agencies. ³⁰ From 01.01.2010, the responsibility of substantial parts of the “trunk road ferries” were transferred to the regions thus increasing the influence of LRA. The measure was part of a reform of public administration trying to cope with the problem that LRA have an incentive to ask for more budget resources from the central government for PSO before using local means and instruments. ³¹
Assessment	
SWOT in technical terms	Considerable cost savings for the public sector compared to the status quo ante, probably helped by the principle of ex-ante payment instead of ex-post cost coverage. Considerable investment in new vessels was made by private concessionaires since vessel age is one of the award criteria; however, it may be questioned if it should be the only assessment criteria for vessel quality. The frequency premium for additional services encourages operators to provide more than just the basic services required

²⁸ Baird, A. J. - Wilmsmeier, G., Public tendering of ferry services in Europe. European Transport \ Trasporti Europei n. 49 (2011): 90-111.

²⁹ Baird, A. J. - Wilmsmeier, G., Public tendering of ferry services in Europe. European Transport \ Trasporti Europei n. 49 (2011): 90-111.

³⁰ Baird, A. J. - Wilmsmeier, G., Public tendering of ferry services in Europe. European Transport \ Trasporti Europei n. 49 (2011): 90-111.

³¹ http://www.regjeringen.no/upload/SD/Vedlegg/EU/eu_groennbok_12032008.pdf

Example	Ferry PSO, Norway
	by the PSC. In general, the relatively low weight of the price criteria compared to quality criteria seems to have resulted in actual quality improvements. ³²
Cost	PSO subsidies: EUR 73.8 Mio. (2000) Investment in eight new ferries by private operators (ca. 90 MEUR)
Transferability	Since Norwegian PSO legislation closely resembles EU legislation, the Norwegian solutions are basically transferable to EU countries. However, the transferability of some aspects of the model (especially the low weighting of price criteria for concession award) to economically less powerful countries remains to be questioned.

Rail – Regional lines

Best practice in regional rail transport does not necessarily rely on the expensive construction of new railway lines, which would rarely be justifiable for peripheral regions with the respective low passenger volumes. There are examples for regional initiatives regarding the preservation or even revitalisation of existing secondary lines, usually abandoned or shut down by the large incumbent rail infrastructure manager and passenger railway undertaking that is focusing on main national and international railway corridors. The most notable example is the Vinschgaubahn in Northern Italy (Ferrovia della Val Venosta) where, based on an integrated transport concept and with strong support of the LRA, a railway line was successfully reopened ten years after shutdown.

Geographically, the model could be interesting either for alpine valleys or in de-industrialised regions with demographic challenges (e.g. some regions in Germany, regions in former COMECON countries).

Example	Takeover of secondary lines by LRA, Italy
Key features	
Member State (MS), region	Italy, Autonomous Province Bozen
Transport mode	Rail
Mobility purpose(s) served	<ul style="list-style-type: none"> ▪ Regional railway services in alpine area, combined with seasonal tourist traffic
Short description	Reopening of regional railway line Vinschgaubahn 2005 after line closure by the incumbent state railway Ferrovie dello Stato (FS) in 1990. The Vinschgaubahn was commissioned in 1906 and taken over by the incumbent state railway Ferrovie dello Stato (FS) in 1918. Closed down in 1990 as part of the FS policy of shutting down deficit-making peripheral infrastructure after the train services had been replaced by buses in the late

³² Baird, A. J. - Wilmsmeier, G., Public tendering of ferry services in Europe. European Transport \ Trasporti Europei n. 49 (2011): 90-111.

Example	Takeover of secondary lines by LRA, Italy
	1980s. 1999 taken over by the region South Tyrol (first concession to the regional railway had already been granted to for nine years in 1994), refurbished in the years 2000-2004 and reopened in 2005. Has been considered a success story since then because of increasing passenger numbers from 400,000 p.a. in 2005 to 2 Mio. ³³
Annotation on legal framework for infrastructure and operation	Infrastructure Manager: Südtiroler Transportstrukturen AG/Strutture Trasporto Alto Adige S.p.A. (STA), 100 % owned by the Autonomous Province Bozen Railway undertaking: Südtiroler Automobildienst (SAD) Nahverkehr AG/Servizio Autobus Dolomiti (SAD) Trasporto Locale spa, 11,02 % co-owned by STA. ³⁴
Role of LRA	The Department for Mobility of South Tyrol has taken over, refurbished and reopened the Vinschgaubahn as infrastructure manager via its concessioned subsidiary STA (former Südtiroler Bahnanlagen GmbH (SBA)).
Assessment	
SWOT in technical terms	Proves the feasibility of revitalisation of a regional railway line even 10 years after shutdown and confirms the theory that secondary lines might sometimes be more efficiently managed on a regional level than by a large nation-wide acting infrastructure operator with an intrinsic tendency of focusing on main corridors. A far-reaching consensus at regional level and an integrated multimodal transport concept is required for the success.
Cost	Investment 116 MEUR for revitalisation of 60 km non-electrified railway line (three tunnels, four bridges in mountainous area with gradients up to 29 0/00 and curve radii of 200 m), 18 railway stations and 8 DMU GTW 2/6 (Stadler-Rail); operational cost ca. 7 MEUR p.a.; cost coverage ca. 30-40 % ³⁵
Transferability	The following preconditions were necessary for the feasibility of the project: <ul style="list-style-type: none"> ▪ Acceptance with local mayors and local population ▪ Existence of railway infrastructure. After the shutdown, the tracks, station buildings and installations were not demolished and real estate was not sold. ▪ The political and legal status of the region that made the take-over legally possible ▪ Operational concept for the railway integrated into an overall regional mobility concept including bus services, other railway services and biking with special focus on pupils and commuters

³³ <http://www.vinschgauerbahn.it/de/news.asp>; <http://de.wikipedia.org/wiki/Vinschgaubahn>

Legambiente, Rapporto Pendolaria 2013 (www.altreconomia.it/site/download.php?allegato=phpcbdjke8189.pdf)

³⁴ <http://www.vinschger.com/vinschgerzug%201992%20bis%202005.htm>;

http://www.provinz.bz.it/de/downloads/PAB_partecipazioni_dirette_e_indirette_attuale1.pdf

³⁵ <http://www.vinschgerbahn.it/de/streckenfuhrung.asp>;

http://www.regionale-schienen.at/0_thema_200802.asp?mid=23;

<http://www.vinschger.com/vinschgerzug%20heute.htm>

Air – PSO transports

Currently, PSO for aerial transport have been notified for Czech Republic, Finland, France, Germany, Greece, Ireland, Italy, Portugal, Spain, Sweden and the United Kingdom (as well as for the EFTA countries Iceland and Norway)³⁶. About 8 % of all flight routes and 5 % of all seat capacity of intra-European traffic are PSO transports. PSO transports can be based on either open access with specified service levels, on restricted access with public tender, with or without financial compensation.³⁷

However, the concept of PSO in air transport has been under criticism for several reasons. The application of the rather general criteria given in Regulation (EC) No. 1008/2008 (vital air connection, no commercial flights, no alternative transport modes) by the competent authorities in the Member States differs. As with all systems based on exclusive concessioning, certain PSO models bear an intrinsic risk of hampering competition (e.g. by LCC) and of creating monopolies. New air carriers have not been particularly successful in the competitive tenders³⁸.

The below example highlights Spanish experience with the connection of the Canary Islands based on open access and without financial compensation by the public.

Example	Flight PSO, Spain
Key features	
Member State (MS), region	Spain Canary Islands: Gran Canaria - El Hierro Gran Canaria - Fuerteventura Gran Canaria - La Gomera Gran Canaria - Lanzarote Gran Canaria - Santa Cruz de la Palma Gran Canaria - Tenerife Nord Gran Canaria - Tenerife Sud According to the list of Public Service Obligations as of 25/02/2013 published under http://ec.europa.eu/transport/modes/air/internal_market/doc/psa_-

³⁶ http://ec.europa.eu/transport/modes/air/internal_market/doc/psa_- eu and eea - feb 2013.pdf

³⁷ Yilmaz, Hacer, Public Service Obligations and EU Cohesion Policy (Presentation at GARS Workshop Vrije Universiteit Amsterdam, 02.07.2010).

³⁸ Yilmaz, Hacer, Public Service Obligations and EU Cohesion Policy (Presentation at GARS Workshop Vrije Universiteit Amsterdam, 02.07.2010).

Williams, G. - Pagliari, R., A comparative analysis of the application and use of public service obligations in air transport within the EU. Transport Policy, Volume 11, Issue 1, January 2004, Pages 55-66.

Example	Flight PSO, Spain
	eu and eea - feb 2013.pdf
Transport mode	Airplane
Mobility purpose(s) served	<p>The PSO are aimed at routes which are vital for the economic development of the region they serve and enhance the mobility of the population in remote and peripheral areas such as the Canary Islands belonging to Spain. The continuity, frequency, capacity, quality and affordability of the services are to be guaranteed.³⁹</p> <p>Currently an invitation to tender in respect of the operation of scheduled air services for the routes Gran Canaria–Tenerife South, Gran Canaria–El Hierro, Tenerife North–La Gomera, Gran Canaria–La Gomera is published in the Official Journal of the EU (2014/C 53/07)⁴⁰</p>
Short description	<p>All PSOs in the Canaries were originally established in 1998. Resolution 13558/2006 of Government of Spain confirmed 13 routes between the island of the Canary Islands to be served as PSO; i.e. operation on the routes is only possible when observing certain timetable requirements, frequency floors, minimum seating capacity and price caps⁴¹</p> <p>The Spanish Government has established various measures to promote the mobility of the population such as the introduction of a resident discount scheme (Real Decreto 1340/2007), subsidies of airport fees and the public service obligation for the mentioned 13 flight routes. On intra-Canary flight routes lower prices are being charged to residents, a practice which is considered as compatible with EU law.⁴²</p> <p>Since 2003 over 3 million passengers were on average transported per year by two competing private airport carriers.⁴³</p> <p>In Spain PSO routes are not granted to only one airline; however, they are usually dominated by one operator.</p> <p>In the Canary Island there are currently two air carriers, a well established one operating since 1989 first as regional subsidiary of Iberia Air and since 1999 fully privatised (Binter Canarias) and a second airway one which entered the market after the bankruptcy and vanish of the concurrent (Islas Airway, privately owned) in 2012, Fly Canarias (Canary Fly).</p> <p>An important feature referring to the Spanish PSO is that “airlines don’t receive any public subsidy for offering these PSOs”⁴⁴</p>
Annotation on legal	National Spanish legislation (Resolution 13558/2006 of Government of Spain, Real Decreto 1340/2007). Since 2008, Art. 16-18 of Regulation (EC)

³⁹ Calzada, Joan/Fagedaz, Xavier (2011): Discounts and Public Service Obligations in the Airline Market: Lessons from Spain, p. 5;

https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=JEI2011&paper_id=48

⁴⁰ See <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2014:053:0028:0028:EN:PDF>

⁴¹ Calzada, Joan/Fagedaz, Xavier (2011) see above:, p. 5

⁴² European Parliament (2013): Notice to Members, Subject: Petition 1090/2012 by Wolfram Schumacher (German), on price discrimination between residents and non-residents by the airline Binter (Canary Islands), CM932028EN.doc.

⁴³ Campos, Javier/Jiménez, Juan Luis/Perdiguero, Jordi (2014): Public awareness about prices and rivalry in air transport markets: a case study in the Canary Islands, p.2 <http://www.alde.es/encuentros/trabajos/c/pdf/76.pdf>

⁴⁴ Calzada/Fagedaz (2011), see above, p.6.

Example	Flight PSO, Spain
framework for infrastructure and operation	1008/2008 have regulated PSO payments in the EU.
Role of LRA	The competent authority tendering out the PSO services is the national Ministry of Transport (Ministerio de Fomento). The ticket subsidies for resident are also in the competence of the Ministry of Transport. ⁴⁵
Assessment	
SWOT in technical terms	There have been two significant effects on the market: Prices are higher on routes with island residents discounts than on the rest of domestic routes. There is a high probability that part of the benefits of price discounts has been transferred to the airlines via price increases (indirect subsidies for airlines). Intra-island routes regulated with price caps and frequency floors have lower prices and higher frequencies than unregulated routes of similar characteristics which seems to put the whole system of flight PSO into question. ⁴⁶
Cost	Ticket-subsidies for residents of ca. 18 MEUR p.a. ⁴⁷
Transferability	The Spanish experiences highlight pars pro toto the main challenges and benefits of PSO in air transport and are therefore transferable to other regions in the EU.

The organisational role of LRAs in public transport

The examples from the land transport modes (bus transport in Finland and Sweden, Austrian micro public transport systems, revitalisation of an Italian regional railway line) clearly show LRA as the driving forces. The water and air transport examples show a much more crucial role of authorities at the national level; however, in Norway, additional competences for ferry PSO have been transferred to LRA recently. The examples might also reflect traditionally different roles of the LRA in Central and Northern Europe as compared with the more centralist approach in many Southern European Member States.

One can expect that from the perspective of LRAs in Challenged Regions the financing of investment is the easier step given the fact that a broader range of options exist, starting from national funds over ESIF to financing options. The more difficult part is the subsequent longer-term obligation to subsidise operation given the rather adverse outlook across public budgets in the EU in the coming decade. The following tables summarise the key points related to the role of LRAs.

⁴⁵ <http://www.islandconnections.eu/1000003/1000003/0/38065/canary-islands-article.html>

⁴⁶ Calzada/Fagedaz (2011), see above, p. 25-26.

⁴⁷ Calzada/Fagedaz (2011), see above, p. 15.

Table 1. Potential Role of LRAs in infrastructure provision according to transport modes

Transport mode	Role of LRAs	Policy lever	Key for cost optimisation
INFRASTRUCTURE			
Road infrastructure (including bus stations, stops)	Tendency that building and maintenance of roads is in hands of LRAs but depending on MS; Bus stations and stops mostly financed from LRAs	Mainly lobbying on the national level but also e.g. applicants for investment projects in ESIF and/or national funds Participation in special purpose vehicles of PPP	Main challenge is the discrepancy between financial means raised and provided by national level, whereas detailed knowledge is rather on the regional and local level
Rail infrastructure	In most MS the LRAs own rather small or no parts of the network; in general low probability of expansion in particular in the regions under concern; LRAs might take over secondary lines from the incumbent infrastructure manager in order to avoid shutdown	Ownership of railway infrastructure managers: right of capital owner to decide on basic strategy of the company Protection/acquisition of real estate necessary for railway infrastructure	Take-over of secondary lines by smaller local infrastructure managers from of the large national incumbent with its marketing focus on main corridors and often inefficient cost structure Acceptance by local population Integration into a comprehensive multimodal transport concept ensuring the required network effects
Port infrastructure	LRAs act as port authority; port landlord model	Investment in port infrastructure Renting/leasing out of real estate Participation in special purpose vehicles of PPP	Including local private undertakings into PPP structures
Airports	LRAs might act as airport operator or part-owner of airports	Investment in airport infrastructure Participation in special purpose vehicles of PPP	Including local private undertakings into PPP structures

Table 2. Potential Role of LRAs in operation according to transport modes

Transport mode	Role of LRAs	Key policy lever
TRANSPORT OPERATION		
Road	Part-owner or owner of transport company; PSO transports (buses); support of non-profit organisations providing mobility on a voluntary basis; vehicle pools for PSO transport or non-profit organisations; operation of web-based mobility platforms for demand-based route planning	Ownership of operators: right of capital owner to decide on basic strategy of the company Purchaser of PSO services: drafting of terms of reference (including e.g. safety or quality requirements), monitoring of PSO implementation, setting-up a vehicle pool thus using eventually better financing conditions Licensing and franchising models Acting as an advisor and catalyst for innovative micro-public transport solutions
Rail	PSO transports; rolling stock pools for PSO transports; owner of railway undertakings	Ownership of railway undertakings: right of capital owner to decide on basic strategy of the company Purchaser of PSO services: drafting of terms of reference, monitoring of PSO implementation Owner of rolling stock pools: drafting of terms of reference for procurement
Air	PSO transports; owner of regional airlines	Ownership of regional airlines: right of capital owner to decide on basic strategy of the company Purchaser of PSO services: drafting of terms of reference, monitoring of PSO implementation Non-exclusive PSO structures allowing for LCC competition and avoiding competitive distortion
Ferry	PSO transports; owner of regional ferry companies; ownership of vessels	Ownership of ferry companies: right of capital owner to decide on basic strategy of the company Purchaser of PSO services: drafting of terms of reference, monitoring of PSO implementation; evt. frequency premium in PSC Owner of vessels: drafting of terms of reference for procurement PSO tenders encouraging private investment in vessels

3 Analysis of funding possibilities

It is important to make a clear distinction between the cost for the operation of public transport (including the cost for investment in vehicles) and the cost for infrastructure investment (and maintenance). Whereas transport infrastructure is usually considered a so-called natural monopoly, public funding of transport operations is often limited by strict rules in order to avoid illegal competitive distortion in case of open access markets.

Funding for the operation of transport, if the system is not fully liberalised and left to the market competition, is basically limited to the following options:

- ‘In house’ services owned and run directly by LRAs: an option the EC tries to largely abolish with the proposed Recast of Regulation (EC) 1370/2007;
- Public subsidies to the operator (governed by the regulations on PSOs); subsidies stem from tax revenues (either transferred from the general budget to the responsible tier of administration or earmarked taxes such as e.g. in large cities);
- Exclusive or limited concessions (also governed by the rules on PSOs) as a form of indirect support as long as no abuse of market power (Art. 102 TFEU);
- Provision of vehicle pools (as mentioned in the proposed Amendment of Regulation (EC) 1370/2007): on the one hand side, the range of potential bidders for PSO tenders can be enlarged since the main investment risk is taken over by the competent authority, on the other hand side the usually state-owned incumbent does not have the intrinsic advantage of low interest rates due to state guarantees potentially offsetting any productivity advantages of the private competitors;
- Subject funding: Art. 107.2 TFEU explicitly allows for “aid having a social character, granted to individual consumers, provided that such aid is granted without discrimination related to the origin of the products concerned”;
- PPPs in operation like e.g. BOT, often based on concession models (see above).

Funding for public transport infrastructure:

- Public financing of infrastructure including funds from local, regional or national funds (depending on the MS) and funding from EU (in particular CEF/TEN-T, and ESIF in some circumstances) or loans from EIB. However nearly all TEN-T funds focused on ‘core network’ not benefiting remote regions;
- PPPs, in particular with the participation of SMEs and regional banks in the special purpose vehicle (SPV) – the role of the LRA in the PPPs is in most cases the financing of infrastructure and generally speaking the provision of

real estate (in particular the landlord model in case of ports); however one has to consider that this option might be in general less interesting in challenged regions due to comparatively small markets and unstable demand (in particular when considering demographic decline).

Funding opportunities for public transport in ESIF 2014

When assessing the potential role of ESIF for the development of public transport in challenged regions it is important to be aware of the fact that these are investment funds which cannot be used to support operation of transport services.

Main source of funding for public transport in the European Structural and Investment Funds (ESIF) is the ERDF. The new ERDF Regulation⁴⁸ - as in previous periods – foresees investment in transport infrastructure though investment into airports is restricted now.⁴⁹ However, the possibility to fund transport in ESIF is an option Member States have to include in their Partnership agreement and Operational programmes; otherwise LRAs cannot follow up on it. The Investment Priorities⁵⁰ (IP) which govern the use of ERDF for the period 2014-2020 do foresee investment in transport under quite specific conditions, in particular with a view to challenged regions:

- with a view to infrastructure investment, the connection of secondary or tertiary nodes to TEN-T networks is an option of principle interest; which could be a restrictive provision - according to current statements of DG Regio road investment in other cases might be possible under other IPs, in particular with a view to accessibility of labour markets;
- developing low-carbon and environmentally friendly transport systems – covering all modes – in order to promote sustainable local and regional mobility⁵¹; however, the point of cost-efficiency has to be considered since currently cost for low-carbon transport systems are definitely higher than for standard systems;
- developing high-quality interoperable railway system; one has to consider that an expansion of the railways system in the regions under concern will be rather the exception; however, LRA could be interested in the operation of secondary lines including investment needs (in order to avoid shutdown).

⁴⁸ Regulation (EU) 1301/2013 on the European Regional Development Fund and on specific provisions concerning the Investment for growth and jobs.

⁴⁹ Regulation (EU) 1301/2013, Article 3: unless related to environmental protection.

⁵⁰ Regulation (EU) 1301/2013, Article 5, Investment Priority 7.

⁵¹ According to Regulation (EU) 1300/2013 on the Cohesion Fund also the Cohesion Fund may contribute to this IP, same applies to the next point.

A major strategic shift with potential implications for the investment in transport is the thematic concentration of interventions which – based on the overarching objectives of EU 2020 - has become a guiding principle in ESIF in the period 2014-2020. The principle of thematic concentration for ERDF⁵² foresees the concentration on four IPs, i.e. 1 (RDTI), 2 (ICT), 3 (SME competitiveness) and 4 (Low-carbon economy): depending on the development status of regions the ERDF Regulation foresees minimum shares of these IPs at a national level: in more developed regions 80% [these are mostly regions under the current objective of Regional Competitiveness and Employment (RCE)], in transition regions 60% (by and large regions phasing out the Convergence objective) and 50% in less developed regions (current and new Convergence regions, i.e. those accounting for the highest support rate from Structural Funds in 2007-2013). The fact that transport is not among the ‘leading’ four IPs in the period 2014-2020 could be interpreted as a potential restriction. However, most probably the actual impact on transport will be low: data for Cohesion Policy in the 2007-2013 period show that investment into transport infrastructure in Convergence regions has accounted for 27.5% of the total Community funding⁵³, in RCE regions for 6.0%.⁵⁴ Looking at the figures one has to consider that in RCE regions the overwhelming share of transport infrastructure is financed by national funds.

Challenged regions do have a specific position in the regulations governing ESIF. The CPR do foresee the option for higher co-financing rates⁵⁵ for outermost and northernmost regions. The ERDF regulation stipulates the following specific conditions:

- Article 10 of the ERDF Regulation refers to areas with severe and permanent natural and demographical handicaps;
- Article 11 to the northernmost regions; the specific additional allocation for these regions is exempt from the principle of thematic concentration which governs the implementation of ESIF;
- Article 12 to the outermost regions – programmes are also exempt from the principle of thematic concentration and additionally start-up aid for transport services can be granted.

⁵² According to Reg. 1301/2013 (ERDF Regulation), Art. 4.

⁵³ I.e. ERDF, Cohesion Fund, ESF.

⁵⁴ Based on European Commission (2007), *EU Cohesion Policy – The Thematic Pages*, available at: http://ec.europa.eu/regional_policy/archive/themes/index_en.htm, own calculations – data are based on intervention categories as presented in the programme submitted to the EC in 2007.

⁵⁵ CPR, Article 121.

In the period 2007-2013 – a modulation of the co-financing rates is foreseen according to Article 52 of the General Regulation 1083/2006 also for (f) ” (...) areas with a geographical or natural handicap.”

Examples of the period 2007-2013 from the French “outre-mer” Operational Programmes Guadeloupe, Guyana, Martinique and Réunion⁵⁶ and the Spanish Canary Islands show that co-financing rates are often modulated according to the specific needs. However they are mostly remaining below the maximum limit of 85% ERDF contribution (plus 50% additional funding for outermost regions according to §20 Annex 2 and Annex 3 of Regulation 1083/2006) with the exception of the Canary Islands. Like most geographically challenged regions the latter do have transport and energy as a priority axis aiming at an improvement of links between the Canary Islands and the outside world.⁵⁷ In their ERDF and ESF OP draft of March 2014 the Azores foresee co-funding rates between 73% (for competitiveness of regional companies) and 85% (for the rest including priority axis “Sustainable transport and principal infrastructure networks”) for the programming period 2014-2020.⁵⁸

Ex-ante conditionalities for the ESIF period 2014-2020 do foresee the existence of comprehensive transport plan(s) or framework(s) which - next to a clear approach to TEN-T investment - should also cover secondary connectivity; however such plans tend to focus on large –scale infrastructure investment and thus will be of limited added-value for the question under concern.

A point of strategic importance is that ESIF may be used to support Public-Private-Partnership (PPP) operations.

In addition investment in (public) transport infrastructure might necessitate considering the aspect of net revenue generation and state aid rules. The provisions for handling of net revenue generating projects are laid down in the CPR⁵⁹ - one potentially relevant point is that e.g. operating cost savings due to ESIF investment shall be handled as net revenue unless these are offset by an equal reduction of operating subsidies. Due to difficulties in comparability of

⁵⁶ See Operational Programmes under <http://www.europe-en-france.gouv.fr/Des-programmes-pour-qui-pour-quoi/Trouver-une-aide/Programmes-regionaux-pluri-regionaux-et-nationaux>;

⁵⁷ See programme summary under http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=ES&gv_reg=ALL&gv_PGM=1064&LAN=7&gv_PER=2&gv_defL=7 and Programa Operativa de Canarias http://www3.gobiernodecanarias.org/hacienda/media/dgplani/Programa%20%2B%20Decisi%C3%B3n%20R_tc_m56-16202.pdf

⁵⁸ See draft OP Açores 2014-2020, p. 207 under <http://www.proconvergencia.azores.gov.pt>

⁵⁹ CPR, Article 61.

calculation methods⁶⁰ applied in the period 2007-2013 in the new period for projects in certain sectors a flat rate might be applied: the flat rate for rail and public transport projects amounts to 20%.⁶¹

In practice financing of such projects in the framework of ERDF programmes necessitates sound guidance and assessment routines. Programme authorities (such as Managing Authorities or Intermediate Bodies being in charge of specific measures) should invest front-of-pipe in sound guidance documents and expert pools. Key issues to be considered are:

- The need for clear demarcation lines in funding public transport solutions between sectorial Operational Programmes (OPs) for Transport and Regional OPs – the latter usually offer a broad range of possible intervention areas;
- Clear guidance for applicants and programme managers on handling of state aid and revenue generation (e.g. the specific position of transport under de-minimis support);
- In particular in case of regional OPs (where programme management cannot be experienced in all fields of intervention): request for a sound business plan as mandatory element of any application as well as on the part of the programme management having a pool of project assessors with the specific economic expertise since any successful project receiving support for infrastructure investment entails the need to subsidise operation in the long run – thus also certain guarantees from the applicant could be asked.

Horizon 2020

Horizon 2020 – as the European framework to support RDTI - is a substantial funding source targeting inter alia resource efficient transport; however the focus is on technology development for aviation, rail and road transport; urban transport is considered as a separate policy strand. For the regions under concern such technologies are of interest in the longer run in order to improve cost-efficiency due to the expectable rise of fuel prices. However, the key challenge here is a different one: to either provide or maintain basic or fair levels of service in public transport. An interesting aspect could be the new programme focus on SME which might be particularly useful for the development of innovative micro-public transport solutions.

⁶⁰ In the period 2007-2013 the need to provide discounted net revenues for relevant reference periods according to sectors and the obligations to continue monitoring of revenues after completion has led to many discussions.

⁶¹ CPR, Annex 7.

ERA Net

The objective of the ERA-NET scheme was to foster the cooperation and coordination of research activities carried out at national or regional level in the Member States and Associated States through the networking of research activities conducted at national or regional level, and the mutual opening of national and regional research programmes.⁶² Under Horizon 2020, the ERA-NET instrument merges the former ERA-NET and ERA-NET Plus into a single instrument with the central and compulsory element of implementing one substantial call with top-up funding from the Commission. The focus of ERA-NET is therefore shifting from the funding of networks to the top-up funding of single joint calls for transnational research and innovation in selected areas with high European added value and relevance for Horizon 2020.⁶³ Coordinated RTD efforts of countries with challenged regions might be an interesting option for developing innovative mobility solutions.

Connecting Europe Facility (CEF)

The Connecting Europe Facility is also an instrument to foster the infrastructure investment for a selected number of multimodal corridors of European significance; these corridors might open new perspectives for some groups of Challenged Regions across Europe but e.g. will not have an impact on the accessibility of northernmost regions. Next to the CEF also other instruments supporting substantial large infrastructure such as the Marguerite Funds (with participation of EIB) exist. The 2020 European Fund for Energy, Climate Change and Infrastructure (“Marguerite”) was established with the backing of six major European financial institutions to make capital-intensive infrastructure investments exclusively in the 28 EU countries. Transport is one of the core sectors, focusing on Trans-European transport networks (TEN-T; see below).⁶⁴

European Investment Bank (EIB)

The EIB has longstanding experience in financing projects in urban public transport from infrastructure investment to rolling stock for all modes such as metro, tramway lines, trolley busses (which, however, might increasingly pose problems in terms of competitive distortion with the opening of the regional transport markets). The EIB offers long-term loans and guarantees and has also expertise in PPP projects since the bank runs the European PPP Expertise Centre

⁶² <http://cordis.europa.eu/coordination/era-net.htm>

⁶³ http://ec.europa.eu/research/era/era-net-in-horizon-2020_en.html

⁶⁴ <http://www.margueritefund.eu/>

(EPEC). To use the expertise and know-how of EIB might not be an offer for isolated local or regional projects but it might be of interest in case a wider solution for several regions should be developed.

One potential point of conflict could be that EIB seems to request high standards in terms of resource-efficiency which might run counter to cost-efficiency in a mid-term perspective.

Trans-European Transport Networks (TEN-T)

Regulation No. (EU) No 1315/2013 explicitly mentions improving „links to the most vulnerable and isolated parts of the Union, in particular outermost, island, remote and mountain regions“. However, with the exception of regional port and airport infrastructure projects, TEN-T funding does not seem a realistic option for most challenged regions for two reasons: On the one hand side, regions located along the TEN-T road and rail corridor network usually do not fall under the notion of challenged regions as understood in the previous chapters; on the other hand side, it concentrates on the challenge of connection with the large centres of the EU but not the challenge of everyday short-to-medium distance transport within the regions. TEN-T, even with its differentiation between core and comprehensive network, focuses on expanding high-grade infrastructure resulting in a relatively loosely woven network, especially for the most important transport mode, road transport.⁶⁵ The notion of “peripheral” has to be considered at different scales, e.g. in Central Europe regions which are about 120 km from the next major city without any motorway or main railway connection do reveal the characteristics of Challenged Regions.

⁶⁵ Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU.

4 Recommendations for action at EU level

In general the following recommendations are based on two overarching assumptions related to public transport in Challenged Regions:

- the prevalent requirements are linked to legislation and organisation of public transport; legislation determines the frame of action and guides the role of LRAs and the organisation model determines the cost structure; infrastructure and technology have an important role but cannot be considered as the key elements to economically viable solutions;
- cost-efficiency and cost-effectiveness are the key points to be considered given the fact that public budgets are increasingly tight at national level across the EU – this affects in particular LRAs in Challenged Regions which are facing serious problems to provide and maintain fair levels of service across all kinds of SGEI.

1. Fostering transparent markets and transparent financing in public transport

The main policy lever of the EU is to support more transparent markets and more transparent accounting in public transport. There is evidence that the current approach to subsidies for public transport in many MS reveals deficiencies with regard to cost-efficiency and cost-effectiveness.

The key policy lever is the regulation and legislation related to PSOs. The proposed new legislative package is an attempt to support the development of markets; sub-national markets could help to create opportunities for new players. The underlying policy rationale is that competent LRA at the sub-national level should procure the services needed thereby fostering more competitive approaches in public transport. This should contribute to higher cost-efficiency from the part of the operators. An evident challenge is to set-up functional policy frameworks at national level since a far-reaching fragmentation of the market might lead to isolated fragmented approaches with low probability of longer-term viability.

Another point is the transparent approach to subsidies in the MS which could be labelled as transparent accounting in public transport. The approach to subsidies and thus the actual incentives for operators differ to a large extent across the EU. At EU level a shift towards an open debate - and thus more transparency - might be the definition of key requirements when establishing the national and sub-national frameworks for the procurement of services: e.g. the quality of transport plans and performance patterns developed by LRAs in order to provide transparent and usable information on the market.

One example of the potentially adverse effect of incentives for challenged regions is the current focus on educational transport in subsidy systems for public transport (such as e.g. in Germany and Austria) which is an obvious disadvantage for demographically challenged regions.

2. Use of new approaches and solutions in operation

Bus transport reveals a wide variety of approaches across the EU and it is the predominant mode of transport in Challenged Regions: a compilation of good practices under different regulatory frameworks could be a worthy exercise to stimulate the exchange of ideas, to share experiences and to initiate a more detailed discussion of different approaches. It is also the mode of transport where LRAs do have a key role in initiating but also guiding the development of systems. Good practice starts with thorough needs assessment and might end with the coordination of tailored services across several municipalities.

The potential economic effect of cooperation among municipalities in developing and maintaining public transport is quite evident: in particular tendering and purchase or leasing of larger vehicle pools should result in lower unit costs and vehicles meeting specific requirements of small user groups (e.g. using wheelchairs) can be used more efficiently. In case of tendering for services a more strategic perspective should be taken: for large providers one or several municipalities will not be a key market whereas for small providers such markets are definitely the major opportunity. These strategic decisions at sub-regional level are decisive in order to minimise the financing burden for LRAs.

In case that LRAs intend to become owner of vehicles an incentive for the use of more environmentally-friendly vehicles in bus transport could be an emphasis on the approach of green procurement: green procurement - as important practical step towards increased environmental sustainability - essentially focuses on the life-cycle-cost of products. This change of perspective might make alternatives such as hybrid bussed economically viable.

The benchmark from the user's perspective is the private car. Modern IT could make possible the replacement of timetable- and route-based public transport solutions by demand-and order-based systems. In this way, public transport can "mimic" private cars. In order to combine higher frequency with higher occupancy rate, small transport units become necessary in the future: similar developments can be seen in freight transport where the size of individual consignments is constantly shrinking. The higher operating costs resulting from smaller units can partly be offset by modern IT-based transport optimisation such as demand-based individual route planning, matching of back loads. Such

options could even be expanded to combinations of passenger and parcel transport.

In any case, an efficient modern public transport system should focus on multimodal solutions and avoid the ever so present thinking in terms of private car vs. bus vs. rail vs. plane. The offer should provide integrated door-to-door transport chains. In this way, solutions developed for multimodal container transport in its competition with lorry-only transport could be used as inspiration for passenger transport, too.

With a view to these solutions one might reflect the option to provide more incentives for additional directions in research. As the review on current approach to transport in the European Research framework Horizon 2020 has shown the prime focus is on advanced vehicle technology in order to make transport more resource-efficient. Achievements in this sense will provide only limited contributions to improved public transport in challenged regions: for such regions viable, flexible and cost-efficient solutions are the prime concern. But even more generally speaking, the severe constraints in public budgets would deserve a new emphasis on cost-efficiency of transport services which as such also has obvious beneficial effects on resource-efficiency. The Consultant proposes a focus of European transport research and development initiatives not only on technical issues, but also on organisational, financial and legal innovations.

3. Comprehensive Policy Guidance and Capacity Building for LRAs

Comprehensive policy guidance for cost-efficient transport organisation and infrastructure in Challenged Regions would be an initiative of interest at level of the EU. The current focus of the debate on technology, cost-efficiency, modelling of transport flows is on urban areas which is understandable since these are the major markets and the hubs in public transport. However, Challenged Regions account for large surface areas across the EU and LRAs in such regions do encounter multiple challenges. A knowledge network for Challenged Regions could be an approach for institutions such as the CoR (considering that public transport is just one of the areas – the challenge is across all SGEIs).

The inherent objective of knowledge management and fostering the exchange among Challenged Regions is the empowerment and capacity-building of LRAs in order to strengthen their position in negotiations on public transport at national level. This might be another policy lever in order to lobby in favour of more transparent markets and accounting in public transport.

LRAs have multiple roles in public transport though the roles vary strongly across the MS: the range starts from significant roles in deciding on the use of tax revenues and the legislation over ownership of transport companies and infrastructure to procurement of services to tariffing. Targeted information and training offers developed with support from CoR, the Commission and other interest groupings could contribute to a more transparent debate at national level. The actions could be taken at EU institutions-wide level involving the European Commission as primary actor in cohesion policy to give these actions visibility and "moral-suasion".

4. ESIF 2014-2020

When discussing ESIF 2014-2020 in practice the major option is the financing of transport infrastructure and rolling stock from ERDF. However, the projects have to avoid competitive distortion; one solution could be vehicle pools as proposed by the EC draft for the Recast of Regulation (EC) 1370/2007. The key recommendation related to public transport in Challenged Regions is to encourage to the extent possible a thorough and independent project assessment prior to approval: cost efficiency and cost effectiveness should be key criteria.

The new option to handle revenue-generation in ERDF-projects as flat rate can be welcomed as simplification approach but on the other hand it might lead to less thorough examination of projects by the Managing Authorities and other programme management bodies in charge of project assessment prior to approval.

Thus guidance documents related to the economic aspects of such projects should be developed and made accessible to the networks of ERDF programme actors.

5. New approaches to funding

The basic political approach behind Primary EU Law, the social market economy, favours solutions which combine the desired effect, i.e. raising accessibility of peripheral regions, with minimal market distortion. One obvious means for this end would be a personal transport budget: persons receive certain amounts of funding for satisfying their transport requirements, but are free to choose for which transport services they spend the money (e.g. a "mobility cheque"). Traditionally, this approach has been rarely used in public transport mostly due to the monopolistic structure of the offer.. It remains an open question if this has to do with reasons of intrinsic impracticability of the solution or if this has also been caused by a historical blurring of uses of public transport funding: partly providing an actual mobility offer, partly supporting large

incumbent public enterprises, partly using transport enterprises for easing unemployment via keeping up jobs that could not be justified on purely microeconomic reasons. However, at least in sparsely populated regions where public transport is largely based on car-sharing, taxi and microbus offers, subject funding might be an interesting option.

Another possibility could be indirect support for transport providers via temporary or permanent tax incentives, e.g. exemption from local taxes, in this way relieving public budgets while at the same time providing financial incentives. The solution does not need the costly public tendering procedures of PSO funding and avoids creating the monopolies of concessioning and franchise models. Such models exist in the transport sector; well-known (if controversial) examples are the exemption of flight kerosene from fuel tax or lower fuel taxes for diesel (used predominantly by lorries) than for regular petrol (more used by private cars).

Transport cooperations with capital participation of the consumers, eventually combined with tax incentives, are another innovative option.

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