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developing the concept of ‘smart rural transport areas’ [SMARTA]
Nº MOVE/B4/2017/473

Report on rural Good Practices
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www.ruralsharedmobility.eu

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November 2019
The SMARTA Project

The SMARTA project – Sustainable shared mobility interconnected with public transport in European rural areas - is one of the most interesting initiatives set up by the EU for rural mobility. SMARTA is managed by the Directorate-General for Mobility and Transport (DG-MOVE) of the European Commission with support of the European Parliament. SMARTA seeks to understand the role, relevance and potential of demand-responsive and shared mobility services, integrated with public transport, in European rural areas. Started in May 2018, the Project is carried out by a Consortium of five partners from different countries: MemEx Srl (lead partner), The University Court of the University of Aberdeen, Vectos, Transport & Mobility Leuven NV and European Integrated Projects SRL.

SMARTA AMBITION

SMARTA aims to give reliable guidance to policy makers, local authorities and practitioners to develop suitable policies and efficient operational solutions for rural mobility. This would better enable them to

- develop a new vision for rural mobility at national, regional and local levels
- define specific and measurable targets for rural mobility
- work in a dedicated evaluation framework for rural mobility
- assign dedicated responsibilities and obligations for achievement of the identified rural mobility targets

The SMARTA Consortium

The University Court of the University of Aberdeen

The University of Aberdeen has established multidisciplinary research centres and institutes that bring together experts at the cutting-edge of their fields to work with colleagues across the UK and beyond on the big issues of today.

Vectos

Vectos is a transport planning consultancy, with offices in the UK, Germany and Italy. Vectos specialises in providing smart transport policy and planning advice to local authorities, EU institutions, infrastructure providers, property developers, landowners, retailers and mobility operators.

MemEx SrL

MemEx is an independent engineering consultancy company based in Livorno, Italy. It has been operating for more than two decades in the field of Intelligent Transport Systems (ITS), Urban and rural mobility, Public Transport, Ports and City Logistics.

Transport & Mobility Leuven

Transport & Mobility Leuven NV (TML) is based in Belgium and conducts applied research to support policy decisions. Its research fields are traffic, passenger and freight transport in urban and rural settings, combined with assessment of related economic and environmental issues and impacts.

European Integrated Projects

EIP is a consultancy company based in Romania. Its primary fields of work are in awareness-raising, communications and marketing on sustainability issues, stakeholder engagement, securing funding and project support within European transport initiatives.

What specific problem is the project addressing?

The SMARTA project is focused on rural mobility and, in particular, on rural shared mobility. We can observe the many programs, projects developed and great outcomes achieved over the last 20 years with respect to urban mobility, but nothing similar happened to European rural areas. On the contrary, in several countries we have seen rural mobility services (and other services such as health, social, etc.) decreasing rapidly due to a combination of factors including austerity measures. As a result, people in rural areas have mostly no alternatives for moving around but using the private car.
The SMARTA approach

**RESEARCH**
In 2018 and 2019, the SMARTA Project has profiled for each of the EU-28 (plus selected other countries) the framework (institutional, regulatory, organisational, financial, etc.) within which shared mobility services in rural areas sit and related policies (at national, regional level). It has produced a set of Insight Papers (IPs) that are available on the SMARTA website. Based on these IPs, the Consortium focused on the characteristics of the frameworks, and in particular where and how they vary across Europe. This sets out a factual mapping of the current situation, which had not been done before. In parallel, the Consortium made a comprehensive overview of Good Practices in rural shared mobility in Europe and beyond. More than 30 Good practice cases have been collected and uploaded on the SMARTA website, covering both the mobility services “on the ground” and the supporting tools (e.g. user information, payment systems, etc.)

**PILOT**
Pilot activities provide the opportunity to examine the effectiveness, efficiency, impacts and future prospects for something new, improved or extended. Starting from Q4 2019, the SMARTA demonstration activities will be put in place. SMARTA will engage with a number of pilot sites implementing rural shared mobility solutions. The aim is to gain a deep understanding about the key findings, lessons learnt and transferability issues of different mobility solutions. The evaluation of different pilot experiences through a dedicated evaluation framework developed as part of the project will help to generate general conclusions on a higher level than the individual sites. These will be based on elements from good practice cases and pilot sites, and on a wider societal, governance and sector/industry level investigation of the change processes that enable innovative and sustainable shared mobility solutions and business models.

**ENGAGEMENT**
Building the SMARTA network is a fundamental step for ensuring the validation of the SMARTA activities, for achieving widespread uptake of the SMARTA findings and for raising awareness about the rural mobility issues. From the beginning of the project, one of the key activities of SMARTA consisted of engagement with relevant stakeholders active in the field of rural mobility. The first SMARTA workshop held in Brussels on the 30-31st January 2019 has been a great opportunity for sharing the activities carried out so far and to start building the SMARTA network. Positive links have been developed with other projects related to rural mobility and accessibility (MAMBA, Hi-Reach, Rumo-bil, Inclusion, etc.) as well as with ENRD Smart Villages Thematic Group and with the European Rural Parliament. All these initiatives confirm that it is time for action. Stakeholders, at different level, need to join together to redesign and rethink rural mobility.

The aim of this report
This report presents the key findings from the SMARTA analysis of Good Practices (GPs) in rural mobility. It highlights the key features, lessons learnt and transferability issues of the GPs, as well as the success factors and the weaknesses. The report opens with an introduction to the topic, describing the main categories of GPs that have been analysed. Afterwards, a dedicated focus is provided to i) community-based solutions, particularly relevant for rural mobility, ii) funding and implementation challenges of rural good practices and iii) innovation aspects.
The report aims to be an interesting reference for Authorities, Mobility and Public transport operators, Local administrations and other stakeholders that would like to understand the possible transport solutions for improving rural mobility in specific contexts, their implementation challenges and the success factors and possible barriers.
Talking about rural mobility frameworks means understanding the policy, governance, regulation and financial structures within which mobility services are currently planned and delivered. What are the role and relevant layers of governments and responsible institutions and agencies for mobility? What policies are implemented, if any? How are mobility services planned, organised, funded and regulated?

The framework within which rural shared mobility is implemented affects and impacts substantially on the life of rural people. In relation to the management of rural mobility, the planning and the organisation of the transport services, and the way in which resources are allocated, the framework in each country has evolved responding to different pressures and priorities (although not always answering appropriately and in an integrated manner to the needs of the rural population).

Frameworks determine the obligation and motivation of public agencies to provide rural mobility together with the possibility to involve the private sector in mobility services provision. Comprehensive frameworks lead to good mobility services, while weak, incomplete or fragmented frameworks pose barriers for the development or sustainability of rural mobility services.

The SMARTA Project made an overview of Good Practices in rural mobility from Europe and beyond, with cases covering 25 different countries.

MAMBA Interreg project developed an online database with the aim to comprise best practice examples from eleven countries in Europe. The database is available on the MAMBA website.

EUROMONTANA – Move on Green identified 51 successful initiatives in greening or improving mobility in rural areas. More info available on EUROMONTANA website.

INTERREG Peripheral Access collected 39 good practice cases clustered in the topics of i) intermodality, ii) ICT&ITS and iii) Smart Governance and joint marketing. The good practice cases report is available here.
In 2015, the European Commission commissioned a study focused on the European coach industry. The study, which analysed all the 28 EU Member States, described the legislation and administrative practices defining the regulatory framework for the sector and key elements of its structure and operation.

**Last-Mile Interreg Project** analysed national and regional Framework conditions for identifying issues and challenges for the implementation and operation of Flexible Transport Services. The summary Report is available on the Last-Mile Project [website](#).

**SMARTA** analysed the frameworks within which rural shared mobility sits, for each of the EU-28 Member States plus selected third countries, producing a set of ‘Insight Papers’, available on the SMARTA [website](#).

Good practices in rural shared mobility embrace successful initiatives both at ‘top down’ (coordinated by national/regional agencies of rural municipalities, such as initiatives of good governance addressing the organisational aspects, as well as local planning and implementation) and at ‘bottom up’ (developed at the level of the local communities) levels.

“Shared mobility” good practices generally refer to modes and services that are additional to the conventional route-based public transport operated by buses, such as car-pooling, shared-taxis, car-sharing and e-hitchhiking. The “shared mobility services” include both the mobility services themselves and the supporting IT-services including traveller information, reservations, payment and operations management (through APP and/or web).

Good practice examples inspire rural mobility stakeholders and avoid “reinventing the wheel”. Rural communities have limited resources which should not be wasted on developing from scratch what they could easily learn from others taking into account the context peculiarities. Very importantly, sharing of the results from successful initiatives can be the key to overcoming scepticism, gaining political backing and unlocking funding.

**MIND-SETS EU** project took a step back from current professional analysis of mobility and travel patterns, to more fully understand how mobility is placed in the everyday lives of people; using an approach which embraces a wide range of intelligence from many disciplines.
The SMARTA Good Practices

The SMARTA Consortium set out to identify two broad categories of Good Practices (GPs): i) Transport and mobility services in rural areas – providing examples of successful and innovative public and shared modes of transport, and ii) Good Governance Enabling Sustainable Rural Mobility – addressing the organisational aspects that inform our consideration of national and regional frameworks, as well as local planning and implementation. A common template was defined and used for identifying and collecting the main information for each case, covering a wide range of aspects such as the mobility solutions themselves; how they may be targeted to specific/vulnerable user groups; intermodal coordination; etc. More than thirty Good Practices have been identified to date, covering different countries, as shown in the figure below. The GPs have been thematically clustered under four main common aspects: Rural Mobility Programmes, DRT, Shared Mobility and Public Transport Network. Four Good Practices have been considered hybrid cases.

### Rural Mobility Programmes [MP]
- Rural Transport Programme, IE, [MP1]
- ITNAmerica, USA, [MP2]
- CT Program, Ontario, Canada, [MP3]
- Fare-free buses, EE, [MP4]
- National MaaS Framework, FI, [MP5]

### Hybrid cases [HYB]
- ArrivaClick On-Demand PT Service, UK [HYB1]
- Badenoch&Strathspey Community Transport Company, UK [HYB2]
- Texelhopper, NL [HYB3]
- Go-Mobil, AU [HYB4]
Rural shared mobility solutions

Is public transport by bus the only way to offer transport solutions to rural people? Flexible transport services with mini bus, door to door DRT with “virtual” stops, shared taxis and carpooling are only some of the solutions that can improve mobility experience of people in rural areas. And, in this landscape of mobility solutions, it is quite interesting to see how, in several countries, local communities tried to solve rural mobility issues organising some kind of shared mobility solutions by themselves. The Figure below offers a synopsis of the main forms of flexible transport, ride-sharing and asset sharing services that could be implemented in rural areas.

**Flexible transport services**
Include a range of services that act as an additional layer between conventional (fixed route and schedule based) transport and personal transport (car or taxi)

- **Ride sharing services**
  Allows aggregation of the mobility demand for sharing a ride in the same vehicle (e.g. carpooling); and/or to use the same service (e.g. taxi) together with other persons

- **Asset sharing services**
  Allows the traveller to utilise/pick-up a specific means of transport (bike, car, e-scooter, etc.) without any property issue; users must be registered.

Increases the penetration and coverage area by permitting routes to deviate to predefined stops where there is demand; allows effective accessibility to be increased without large increase in resources. Usually also the time scheduled can be modified as well.

Can be a useful means of transport for distances up to 5-10 Km; usually, it is used for getting to the main public transport network and hubs such as train stations or bus stops. Registration is needed. Currently is not widespread.

Usually diffused in large urban areas and medium and small towns. In rural areas, since commercial operators don’t find it profitable, they are usually organised by the community themselves. It is often a form of short-term rental, even by the hour, following a ‘return to base’ scheme

Organised form of shared mobility, which can be implemented at very little cost and needing no assets. The technology helps to get over safety issues. It is ideal for communities where people are known to each other.

It’s a basic form of shared transport, where drivers offer a ride for free or for small reimbursement to other users. It is mostly diffused in rural and remote areas where people know each other. In towns and suburbs, this practice has fallen out of fashion.

Provides highest level of coverage and usability by basing the routes around real-time demand. Can provide “door-to-door” or “near-to- near” options. If using smaller vehicles, can access rural areas with poorer road access.

High level of flexibility with no timetables; it usually follows a predefined path; It is mostly implemented in developing countries in Africa and Asia. It may stop anywhere to pick up or drop off the passengers. Vehicles used span from four-seat cars to minibuses

Consists in the sharing of the journey with other people in the same car at the same time. Many car pools are based on people who know each other, such as friends, familiars and co-workers. Distances can be very varied.
Clustering the SMARTA Good Practice cases

More than 30 Good Practices have been identified and analysed during the first year of the SMARTA project, covering different aspects of the shared mobility solutions shown in the previous figure. A mobility service usually consists of the “physical” service plus the provision of “virtual” services which ease access to them. The physical services can be classified using the mobility modes: Conventional public transport; Flexible collective transport; ride sharing, asset sharing and Individual transport. The virtual services might include platforms for the booking and reservation, travel service info, ticketing (B2C Services) and back-office service such as monitoring, planning, tracking and tracing, etc.

It is apparent that the integration of rural mobility services, and the way these are planned and presented to the population as a package of mobility options, must be further developed.

In urban areas, we have seen the rise of private sector investment in collective and shared mobility, from Uber-pool through to the more recent roll-out of shared e-scooters. Integrated journey planners and payment systems are emerging to help users find the most efficient way from A to B, although even in the largest cities these systems are still under development. Especially in large urban areas, bus and trams usually operate with high frequencies, micro mobility solutions such as e-scooter, e-bikes are available at cheaper prices; and passengers can choose to use different journey planners.

In comparison to urban multi-modal systems, integration of rural services could be seen as lagging behind. However, the more limited range of options may make integration seem a less pressing issue than having adequate mobility services in the first place that could then be integrated. Nevertheless, leveraging what is available can enable intermodal mobility for both residents and visitors by showing all relevant public, community and shared transport options. This could become a higher priority than it has been to date. By improving the visibility of shared mobility services, as well as convenience of use, these could help improve passenger numbers.
RURAL MOBILITY PROGRAMMES

Today, mobility choices in rural areas are very limited compared to those in urban areas. For too many rural places, it is the car or nothing. Over the past 20 years we have seen a ‘revolution’ in urban transport with strong policy, deep investment and a wide range of quality mobility services, all of which encourage mobility without a car. Nothing similar has happened to rural areas. On the contrary, in several countries we have seen a reduction in mobility services (along with other essential services such as health, social, educational, etc.) due to a combination of factors including austerity measures and, in the meantime, very few (or not at all) efforts for improving rural mobility. It is therefore surprising to find that virtually all European Countries lack any explicit policy on rural mobility that combines a vision with obligations on mobility services provision, specified targets/objectives, assignment of responsibility or the role that local actors can play. The excellent efforts on the promotion of sustainable mobility solutions for urban and metropolitan areas have not been matched by any such effort for rural mobility, although more than a quarter of Europe’s population lives in rural areas. On one hand, competent authorities such as Transport Agencies and Regional Authorities have not been obliged to develop rural mobility in their areas, and have generally only made very limited efforts. On the other, there is no clear framework in which local actors can self-organise comprehensive mobility that meets the full needs of their communities, neither on a social or a commercial basis. Looking ahead, any future mobility policy should aim to reach a number of specific goals and act as enabler/promoter of target strategies for achieving them. Strong efforts should be spent from stakeholders, at different level, for improving shared mobility and reduce the high level of car-dependency that currently affects rural people.

Policy Goals of rural shared mobility initiatives

- Strengthen the economic base of rural areas
- Increase technical base and synergies (“Smart Villages”)
- Combat depopulation
- Retain/attract young people and families
- Improve quality of life
- Combat social exclusion
- Parity of access to opportunities and services
- Reduce the need for multiple cars in rural households
- Reduce GHG and other emissions associated with transport in rural areas
- Reduce traffic and parking stress in urban areas from rural-generated traffic

In the following, a number of successful and promising initiatives in the field of rural shared mobility policies are briefly presented. These are two SMARTA GP examples of practices successfully developed and implemented in Ireland and Finland. An interesting case implemented in Canada is also reported.
PRACTICES IN THE SPOTLIGHT

National Mobility as a Service (MaaS) Framework, Finland

The National MaaS (Mobility as a Service) Framework in Finland grew out of the national government’s aims to promote the use of digitalization in the transport sector. The Framework is built around the ‘Transport Code’ (TC) which is designed to encourage new digitally-led business models as a precursor to MaaS-type services, and a new public procurement law requiring the use of electronic channels. MaaS Global is one high profile example of a Finnish company promoting the MaaS concept. The Ministry of Agriculture and Forestry of Finland led the Rural MaaS project (2016–2017) aimed at creating a national vision for MaaS in rural and sparsely populated areas.

More info on this GP available here.

Community Transportation Program - Ontario, Canada

In November 2014, Ontario Ministry of Transportation (OMT) launched the Community Transportation Pilot Grant Program (CT Program) to provide financial assistance to municipalities that partner with community organizations to optimise existing resources allocated for transportation services. 22 pilots received grant funding, which have been mostly used to provide new services or to enhance existing transport services. The type of services provided ranged from DRT (deployed in 15 out of 22 pilots), flexible route services (deployed in 7 out of 22 pilots), fixed route-fixed schedule services and shuttle services.

More info on this GP available here.

Rural Transport Program, Ireland

The Rural Transport Programme was piloted in Ireland in 2002 to enable (and sustain) local communities to provide targeted mobility services in rural areas, and made permanent since 2005. Seventeen Transport Coordination Units branded as “LocalLink” offices are currently operating throughout Ireland, with a high level of voluntary participation, providing a mix of services, including Demand Responsive Transport for general use, scheduled fixed routes and special services for vulnerable users (e.g. to daycare facilities).

A feature is the local governance structures. In 2017, the services carried 1.9 million passengers on 150,000 services trips, operating 11.9 million kms. Services are operated through a mix of in-house operation and contracted local private operators. All vehicles are wheelchair-accessible.

More info on this GP available here.
Demand Responsive Transport (DRT) are services scheduled to pick up and drop off people in accordance with the actual needs of the passengers. The service is adapted to accommodate or better answer to customers’ requests. DRT is best viewed as a range of intermediate transport solutions that span the wide space between taxi and public transport. Over the last two decades, there have been many implementations of DRTs in rural areas, of different types and in different contexts. This indicates that DRT could be the primary model for rural shared mobility, especially if it is well coordinated with the regular public transport network serving towns and inter-urban corridors.

The potential of DRT has been already demonstrated by previous studies. Since the late-1990s, collaborative European projects (e.g. SAMPO, SAMPLUS, FAMS, CONNECT, SUNRISE and FLIPPER) gained much understanding of all aspects of DRT. This was done by structured evaluation of pilots implemented in rural areas, sharing the results from different countries. Over this period, the ability of DRT to provide efficient and affordable transport services has been greatly enhanced by the use of technology. For example, routes can be fully dynamic and adjusted in real time, based on traffic and demand, thanks to advanced algorithms of the software that ensure the maximum punctuality on every ride. Services are also more attractive, especially for young people, thanks to the possibility to book a trip via mobile app. And reservation can be made up to 10 or 15 minutes in advance. New organisational structures and business models have evolved for better delivery of these services.

What therefore limits the more widespread deployment of these kinds of solution, why are they not everywhere in Europe? It is argued that DRT is expensive per passenger carried and that it needs subsidy. It is indeed true that there are not examples of commercially viable DRT, but the same can be said about all forms of urban public transport. The need for subsidy should not alone be an obstacle to DRT, as in rural areas conventional public transport services are typically much more expensive. The evidence to date presents a picture that DRT is able to both increase user numbers and reduce operational costs in rural areas, when compared to conventional fixed-route public transport.

### Potential of Demand Responsive Transport services

<table>
<thead>
<tr>
<th>GOAL</th>
<th>EFFICIENCY &amp; CONGESTION</th>
<th>ENVIRONMENT SUSTAINABILITY</th>
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<tbody>
<tr>
<td>TRANSPORT JUSTICE</td>
<td>Reducing cars on street and related transport emissions</td>
<td>More use of different forms of collective transport</td>
</tr>
<tr>
<td>Ensuring equal transport opportunities for all</td>
<td></td>
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<tr>
<td>TARGET MARKET</td>
<td>Car dependent</td>
<td>People who would like to shift to more sustainable transport</td>
</tr>
<tr>
<td>Poor /no service areas</td>
<td>Traffic jam users</td>
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<tr>
<td>Vulnerable users</td>
<td>Isolated population</td>
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In most countries, the most common type of DRT are the services dedicated to vulnerable users such as elderly and disabled people. These services follow social objectives, in particular to combat social exclusion, and are highly appreciated by their user base. However, they function as a “safety net” rather than seeking to provide comprehensive mobility for all of the population in the rural areas.

Why is this? In European countries, one of the brakes on DRT is the framework itself. Research conducted by the LAST-MILE Interreg Project show that in several countries there are regulatory, institutional and economic framework barriers that can slow or halt the development of this solution. Common barriers are, for example, the lack of definition of DRT in the legislation, absence of an integrated transport organiser, with specific skills and competencies, and low or missing subsidies. Most of all, though, as SMARTA project has identified, is the lack of policy, targets, obligations or accountability to provide comprehensive mobility in rural areas.

Quite simply, it is no-one’s job to ensure that mobility needs of rural areas are sufficiently met, so the full range of solutions is not used.

Should we continue to see DRTs as exceptional cases, fragmented across small areas? It would certainly be much better if DRT and other shared mobility solutions could be treated as an integral part of the public transport offer.

The SMARTA Good Practices represent a spectrum of primary objectives and an evolution of DRT services, including cases where a transport authority or operator has worked in partnership with another public department (social services, health, education) in order to help meet fundamental mobility needs, pool funding resources and exploit additional marketing channels. **Bummelbus** (LU) is operated by a not-for-profit organisation, with the Ministry of Labour, Employment and Social Economy providing 70% of funding. In **RegioTaxi** (NL) GP, the National law provides the framework for the Social Support Act (WMO) transport pass that can be used for RegioTaxi and is provided to people with disabilities and medical grounds for mobility support. Services in Ireland (e.g. **Local Link** and **Ring-a-Link**), born in the framework of the Rural Transport Program, are increasingly being integrated with the National Transport Authority’s multimodal traveller information and integrated ticketing systems.

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**Ring a Link, Ireland**

Established in 2001 as a grassroots organisation of local transport services, with focus on combatting social exclusion, it currently operates daily and regular DRT and scheduled services; it has expanded its coverage area. It has now developed into a comprehensive transport coordination unit with operations in five Irish counties.

All services are for general use. DRT requires to be pre-booked. Total annual ridership across all services in 2017 was 143,000 passengers.

GP info [here](#).

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**Prontobus, Italy**

Prontobus aims to integrate urban and extra-urban public transport services with the neighbouring villages and rural areas in the Province of Modena. Within the framework of the RUMOBL EU Project, a new software has been developed with the aim of improving the quality of information of the service. With the new software, in 2017 the Prontobus service has been used by 12926 travellers, with 1853 more passengers in respect to the year before (+16.7%).

GP info [here](#).
RegioTaxi, The Netherlands
RegioTaxi is essentially a regional taxi service that operates in several regions in The Netherlands. The service is essentially a door-to-door service with no fixed stops or routes. Other travellers may also be picked up during the route, which means, for the passengers, lower prices than conventional taxi competitors. Although, since 2010, ridership has been falling due to stricter regulations, in 2013 total passengers were 1.49 mln. GP info here.

Bummelbus, Luxembourg
The Bummelbus is an on-demand transport service which complements public and private transportation. It is organised in the framework of professional driver training for people that are long term unemployed. The Ministry of Labour is the main funding source. The service is extended also towards schoolchildren for their afterschool activities (60% of riders are children). From the social point of view, in 2016, 40 employees were reintegrated into the job market. GP info here.

Suffolk Links DRT, UK
Suffolk Links DRT provides connections to bus and trains links in rural areas in Suffolk County. The service operates Monday to Saturday 7am until 7pm and the journeys is charged as a bus fare. Journeys are booked up to 7 days in advance. The service is currently run by Coastal Accessible Transport Service (CATS), which is a provider of community transport services including Connecting Community Bus Service, Door to Door Service and Community Car Schemes. GP info here.

Transporte a Pedido, Portugal
This DRT service is operated by taxis and integrated with the conventional PT services to serve dispersed demand in the peripheral / rural area and small villages in the region of Middle Tejo. The relevance of the Good Practice consists in the management of different services schemes/served areas through a common (centralized) Booking Centre as a solution to optimize operational costs. The Good Practice is also inspiring for the adopted step-by-step implementation process. GP info here.
RAIL AND BUS PUBLIC TRANSPORT NETWORK

The conventional (fixed route and timetable) bus and rail public transport network plays an important role in rural areas. It provides the “backbone” of the mobility offer, being a structuring network that connects towns, cities and regions. However, it does not reach everywhere. Many villages and rural areas are only served if they are fortunate enough to lie on routes that pass through. However, this becomes less likely as interurban routes prefer major roads and bypasses, with limited-stop for better journey times. Transport services oriented to villages and rural areas are usually unprofitable. They have been gradually reduced over time, both in response to reduced activity in rural areas and again as part of the recent austerity measures. It seems unlikely that the rural public transport network will ever be restored to what prevailed in the 20th century. The pragmatic response is to instead improve the connectivity from villages and rural areas to the public transport hubs. Shared mobility service can play a “dual role”: first, to meet the local mobility needs; and second, to provide the “first mile/last mile” connections to the public transport hubs and stops (in rural areas the “last mile” can be a long distance).

Connection points should be designated and publicised; timetables should be coordinated (or shared mobility services timed to connect); facilities at designated stops should be improved (safe and sheltered waiting place, timetable information, map); parking facilities for car or bike near main stops and hubs should be available. In remote rural areas, it may be that some villages and settlements are far from the public transport network. Other forms of shared mobility, such as carpooling or organised hitchhiking, could offer good long-distance connections to bus stops (rail stations).

The deterioration in public transport over many years means it might not be easy to increase ridership. Whenever there is a service improvement to the public transport or to connecting services and led to a 7% increase of PT use.

In some European areas, public bus services are often the main or only option of transport for people, but they are vulnerable to budget cuts. A number of SMARTA GPs have demonstrated that where services have been redesigned based on the assessment of the evolving needs of citizens, a spiral of decline can be halted and reversed. “Smart Move” in the peripherical Area of Alba Iulia (RO) aimed at ensuring better rural – urban connection, through a public transport service with an integrated information service, ticketing scheme and coordinated transport timetable. The project used a new approach for transport planning, taking responsibilities from individual county authorities and delegating them to an association of local authorities. Rationalisation of previously disjointed rural and urban networks, alongside investment in new vehicles, resulted in a 43% increase in trips made. More info available here.

A total redesign of the Muldenthal (DE) bus network comprising 34 lines, including improved service frequencies and 66 new bus stops, resulted in 10% increase of PT users in just six months. In this GP, the long process of ensuring the new transport plan was successful thanks to a patient but very determined and convinced project team representing the different project partners at key positions. Special attention has been paid to connection with the other regional buslines and local trains to Leipzig, Dresden, Chemnitz. More info available here.
Assessing KPI of Public Transport services

The assessment (service validation) of bus service Key Performances Indicators (KPI), is becoming more and more relevant. Regularity (headway) and reliability (trips completed according to schedule) are especially important for rural areas, where few services are operated on a daily basis or with very short interval. KPIs are also important for contract monitoring and payments. Automatic Vehicle Monitoring (AVM) is the main Intelligent Transport System (ITS) for collecting data on bus operated service (independently by the service scheme) and thus reporting KPI. CELSO is Low Cost AVM solution based on mobile APP for PT service monitoring and data collection. It allows a PT operator company to be AVM-equipped in a short time and done easily. It is particularly relevant for PT companies which operate in rural areas and, consequently for the areas themselves, thanks to the reduction in investment, installation, operation and maintenance costs and implementation time. More info available here.

Local Link Donegal is a Good Practice implemented in County Donegal, Ireland. Local Link provides a combination of fixed route and DRT services for general use, community health services for access to daycare facilities, and non-acute emergency transport for access to dialysis services, patient discharge and private ambulance transfer to major hospitals. Partnership working by the Irish National Transport Authority (NTA) and Health Service Executive (HSE) means that multi-purpose services and greater vehicle and staff utilisation is achieved. More info on this GP available here.

In recent years, besides the ‘virtual’ integration among different transport services, including common payment systems, journey planners, info mobility portals, etc., the ‘physical’ integration has been further enhanced into the concept of mobility hub. The ‘hub’ philosophy consists in increasing the number of transport nodes of the transport network through the development of physical environment where different transport facilities and connections are offered to passengers. In rural areas, the hubs may coincide with the railway stations, although there are cases where dedicated hubs have been set up from scratch. Hubs show the best benefits in the cases where high frequency services, by bus, tram or rail, are offered to passengers.
A **MOBILITY HUB** is a physical environment where different services are offered to passengers. Bus or tram connections, car parking spaces, electric charge facilities, bicycle storage and lockers can be found in mobility hub. Usually other comfort tools can be offered as well, including wi-fi connection, pick-up points, etc. They are currently wide spreading in Belgium and Denmark.

The Public Transport Authority of **GRONINGEN DRENTHE** is adopting planning strategy based on network of hubs. At the moment, 55 mobility hubs are operating in the two provinces. This network of hubs is accessible within a range of 15 Km from all users. Frequent and reliable bus services are offered in the hubs. More info available [here](https://www.taxistop.be).

More than one time the potential for autonomous shuttles to replace some forms of conventional transport services has been discussed. Indeed, the first successful tests of AV have been carried out in recent years right in rural areas, where the roads are less populated.

In Bad Birnbach, a small municipality with around 5700 inhabitants in the district of Rottal-Inn (Germany), an autonomous shuttle service is currently in operation. The service was started as a pilot project in October 2017 with one electric minibus EZ10 of the French start-up EasyMile on a 700-meter-long route from the local market square to the spa (Rottal Terme).

The project was developed as cooperation of Deutsche Bahn and DB Regio Bus Ostbayern with the district of Rottal-Inn and the municipality of Bad Birnbach. After the first year, the service was extended with the addition of another stop and another EZ10 electric vehicle. The service currently connects the market square with Badstraße, a street close to the rail station, within a 1.4 Km long route; the duration of the trip is around 12 minutes each way. Four stops are served between 8am and 6pm every day.

The EZ10 vehicles, each with a maximum capacity of 12 passengers (6 seats and 6 standing), are equipped with mini ramps and thus are fully accessible for people with reduced mobility. The shuttle service is now under the responsibility of the new DB business unit named “ioki” and is operated by the DB subsidiary DB Regio Bus Ostbayern. More info on this GP available [here](https://ioki.com/en/).
Shared mobility solutions

As introduced earlier, ‘Shared Mobility’ services include both “Ride Sharing” (e.g. carpooling and e-hitchhiking) and “Asset Sharing” (e.g. bike or carsharing) services. Shared mobility can be an essential part of the solution set to deal with mobility issues in rural environments, where conventional public transport struggles to meet the actual needs of passengers, and where people are highly dependent from the private car.

It can combine travellers for more efficient travel, while improving the mobility options for people. It may enable households to reduce the number of cars they own, thus improving conditions for low- and medium-income households.

There is also a broader aspect to consider, important from the global perspective: “Shared-mobility” is essential to ensure sustainable mobility.

When talking about Shared Mobility (both Ride and Asset Sharing), an important distinguishing feature between types of Good Practices is whether the vehicle is collectively owned (by the municipality, local company or community group) or whether it depends on some form of peer to peer vehicle or lift sharing.

Among the SMARTA Good Practices, the collectively owned group includes the Kolsrille Village Bus (SE) and Talybont Car Sharing (UK) services. For public authorities that have very constrained budgets, fostering peer-to-peer forms of shared mobility can be an opportune way to improve the range of mobility possibilities for people in rural areas, supplementing existing public transport networks.

Good Practices involving use of privately-owned vehicles include Sopotniki (SLO) car journeys for older age groups and Northern Commute carpooling (IE).

Appraisal of peer-to-peer sharing Good Practices shows how informal networks and community goodwill can lead to steady expansion of schemes that have started at a very small scale. Success stories include Sopotniki (SLO) which had 31 volunteers in 2017, which had risen to 47 active volunteer drivers in 2018, providing trips for 350 users. RezoPouce (FR) expanded rapidly from 80 participating municipalities in 2013, to a predicted 2,000 municipalities by the end of 2020, covering 20% of rural France. Such ‘bottom up’ initiatives are well-suited to a handbook for local self-organisation.

Planning sustainable rural mobility in a more comprehensive way may also consider alternative fuel options for shared and individual transport, as well as re-visiting links between passenger and delivery services. At present, there are limited examples of how these dimensions are addressed by the Good Practices.

For the car-sharing scheme in Talybont (UK), the decision was taken to purchase two vehicles (one electric car and one bio-fuel (vegetable oils) car). In terms of combining passenger and parcel/postal deliveries, AlpinBus (CH) makes some use of postal vehicles. Post-buses were quite common in the past, but have been phased out in most places. Perhaps with the rise in e-commerce and its attractiveness for rural communities located further from shopping centres, the potential of such combined services could be revisited.
Tourism and leisure continue to be an important economic sector in rural areas, either as primary destinations or as day excursions for visitors staying in cities. The latter is suited to “tourism without my car”. Leveraging what is available can enable intermodal mobility for both residents and visitors by showing all relevant public, community and shared transport options. This could become a higher priority than it has been to date.

“Integrating” measures doesn’t mean only providing physical interchanges and hubs: ICT intermodal services should be integrated as well.

The Shared Use Mobility Agency (SUMA) platform being developed through the CIVITAS DESTINATIONS project on the island of Elba (IT) provides a good example of single point of access for public and shared mobility.

**Sopotniki, SI**
The “Sopotniki” provides car transport for the elderly in rural areas. The service is provided by volunteers and is free of charge for elders, who communicate in advance their mobility needs. This practice of intergenerational solidarity is an innovative approach towards the mobility of elders in rural areas in Slovenia, where public transport options are lacking.
More info [here](https://www.delo.si).

**Alpine Bus, CH**
Alpine Bus is operated in 16 areas, all consisting of rural mountains areas where mobility demand is not financially viable for conventional transport offer. Alpine Bus is organized as an association combining public Authorities and Private Companies with a national Managing Board and a number of regional partnerships.
More info [here](https://busalpin.ch).

**Talybont Energy, GB**
Talybont Energy is a not-for-profit limited company that aims to reduce the Talybont community’s energy consumption and to maximise the conversion of the community’s energy consumption to renewable sources. Talybont Energy has sponsored a community car sharing project since 2010, starting initially with two vehicles.
More info [here](https://talybontonusk.com/)

**Shared Use Mobility Agency: the MaaS approach implemented in Elba island**
The Shared Use Mobility Agency (SUMA) is currently being implemented on Elba Island (IT) as one of the key measures of the CIVITAS-DESTINATIONS project (2016-2020). Elba Island, located in the Mediterranean Sea around 10 km away from the Tuscany coast and relevant tourist destinations, is characterised by high seasonal mobility demand, dispersed origins and few concentrated destinations. The mobility offer is fragmented in terms of ticketing, information, marketing, accessibility and cooperation. There are many web portals and app masters dedicated to tourist services. SUMA reconciles the two parallel axes of mobility services on Elba (collective transport and rental services specially targeted to tourists) enhancing them with the management of ridesharing services. SUMA offer integrated access (by APP or web portal) to several “on demand and shared” individual and collective services. It centralises information and services related to the mobility on the island through a technology-enabled platform, an organisational framework (managing resources and procedures) and business model concept. The SUMA technological platform provides different functionalities, such as i) Acquisition/integration of data sources related to a wide range of mobility services/systems (e.g. public transport, traffic, parking, electrical recharging points, etc.); ii) Provision of aggregated multimodal infomobility services, such as a journey planner and in-application payment; iii) Networking of rental operators and services, which are made accessible through a single, unique “access point”; iv) Management of the ridesharing services, through a notice board on which passengers and drivers can publish their trip share requests and offers.
More info on this GP available [here](https://talybontonusk.com/).
Together for a better mobility

From the SMARTA overview of Good Practices, it emerged that in several countries local communities have taken the initiative themselves to solve rural mobility issues by organising some kind of shared mobility solutions. In these situations, the social context/dimensions play a pivotal role. Indeed, mobility solutions organised at the local level depends, in most cases, on the community spirit and the level of engagement on the local level.

For volunteer-based bus services and local ride hailing, to make the service work is not so much a technical question; rather, it is a cultural and social one, i.e. to convince people to use it. Nevertheless, there is still much to be done for having these solutions widespread and recognised at the national level. Local actors will invariably need to form some type of partnership within which they can develop, implement and sustain a scheme.

The form of partnership will need to become more formal if they are applying for funding, if they are taking on public liability, or must qualify as license-holders/operators of mobility services. Local actors also have a key role to play in governance of schemes, even in top-down initiatives.

Bürgenbus, Germany

Bürgenbus is a community-based transport service operating in different regions of Germany, including three of the larger federal states. Volunteers are involved in the service operation (driver, back office, etc.). The service complements the conventional public transport services in rural and semi-rural areas.

Thanks to the voluntary participation of the citizens, the personnel costs, which usually account for at least 60% of the operating expenses, are largely reduced.

More info here.

Go-Mobil, Austria

Go-Mobil is a door-to-door flexible transport service that operates in 36 peripheral and rural areas in Carinthia, providing residents access to groceries, doctors, post offices and bus stops; the service complements conventional public transport systems.

It offers meaningful employment (as drivers) to the inhabitants of villages while helping vulnerable population groups (especially physically impaired people) to escape social isolation.

More info here.
Key benefits of community-based solutions

Community-based solutions can be considered as mobility services (and/or related supporting services) where the local communities play an active role and/or are engaged on a voluntary basis. They can bring 4 substantial benefits:

- **Less costs**: they allow substantial savings thanks to the use of volunteers as drivers or for other tasks related to the transport service.
- **Less social exclusion**: vulnerable users such as elderly or mobility impaired people living in rural areas risk to be excluded by the society. These solutions can be essential for them, especially where there is no PT provision.
- **More flexibility**: community-based solutions can include different transport services and schemes: conventional bus dedicated for vulnerable user groups, general purpose service by bus or car, carsharing, etc.
- **More rides**: in sparse and remote villages where PT services no longer exist, community-based solutions with volunteer drivers could be a sustainable and money-saving solution, offering shared means of transport.

**Badenoch & Strathspey Community Transport Company (BSCTC), UK**

The BSCTC operates one of the most successful Community Transport Schemes in Scotland, with the assistance of volunteer drivers and telephonists. BSCTC operates:

i) Registered door to door bus routes, (reservation for social activities,

ii) Group hire, which includes minibus hire with a volunteer driver for social outings and

iii) mobility scooter and wheelchair loan service.


**Rezopouce, France**

RezoPouce is an organised hitch-hiking service which started in 2009 and is now deployed in around 2,000 municipalities across France covering about 20% of rural areas. It shows the potential of local communities in helping each other through a simple and well-organised hitch-hiking service, supported by the RezoPouce Association. RezoPouce is used for all kinds of trips including commuting for work or education. Average waiting time: 6 min; 50% less than 5 min, 90% less than 10 min.

More info [here](http://www.parc-gatinais-francais.fr/rezo-pouces-ca-roule/).
FUNDING AND IMPLEMENTATION CHALLENGES

The flexibility of the operational schemes of DRTs, Shared Mobility and Community Based solutions, at different levels, should be guaranteed not only by the ICT infrastructures/tools/platforms, but also by an efficient organizational structure and well-defined business model.

The DRT is usually not designed and operated as part of the overall public transport offer and/or not integrated with the general mobility policy and related sustainable mobility plan (SUMP).

Rail and Bus PT Network

PT Networks are usually not well adapted to users’ needs. There may be an insufficient number of stops, low-grade stops (absence of safe and sheltered waiting place, timetable information, map).

Weak or absent targeted promotion campaigns and marketing initiatives for raising users awareness and for promoting public transportation; inability to develop positive image and/or grow the ridership.

Public financial support for PT services is based on what budget could be allocated rather than on the actual mobility needs of rural areas. This limits the scale of implementation, critical mass not achieved.

The service is planned in target areas without taking into account the integration with other types of service like DRT, shared mobility, micromobility.

Lack of coordination of different operators, services and resources.

Specific and clear role of shared mobility and DRTs should be assigned in the overall Public Transport services procurement/contracting.

For social and innovation projects, difficulty to sustain permanent funding beyond the project phase, even if they achieve their original goals.

Demand Responsive Transport

The insufficient or partially missing legal framework for DRTs complicates the implementation and operation of DRTs and thus fails to regulate functioning, organisation and financing.

Organisation and management of DRT services requires specific skills and competencies; local governments in rural areas usually do not have the adequate scale, structure and specialised resources.

DRT (and other forms of shared mobility) are viewed as ‘exceptional’ cases, are often fragmented and not treated as an integral part of the public transport offer.

There is scepticism of many policymakers about DRT, frequently considering it as a “last resort” and “secondary” service. The consequence is insufficient political and financial commitment.

Unclear definition of mobility targets, specific performance indicators and lack of strategic investments and subsidies on ICT for DRTs.

Definition of “customised” fare policies in relation to the DRT operation modalities, user demand, service quality and environment benefits is missing.

The operation model of DRTs is based on trip-by-trip, with a certain level of flexibility, on three dimensions (routing, timing of the service, vehicle used). Attention should be paid to cost/organization impacts.
FUNDING AND IMPLEMENTATION CHALLENGES

### Shared Mobility

- Absence of an integrated transport organiser/coordination agency who can provide overall coordination, organisation, data collection and financing of shared mobility services and DRTs.
- Extent to which vulnerable users have personal devices and skills to use digital services associated to shared mobility. Consider also people who may be unwilling to install apps or location-tracking functions.
- Poor mobile coverage / access to fast broadband or lack of support 4G/5G for an efficient utilization of ICT tools related to shared mobility.
- Absence of local initiatives for promoting and developing local services and business models.
- To define the regulatory framework for the service provider (also for service data provision) and the related quality indicators in service provision.
- Overcome the “holistic way” in operating shared mobility solutions by increasing the Cooperation among the different transport operators.
- (Re)Establishing willingness to share trips with others, especially in smaller vehicles.

### Community-based solutions

- Difficulties in finding a good balance between the need for locally “owned” and developed schemes and the traditions and requirements of planning and administrations.
- Difficulties in carrying out efficient awareness raising campaigns for promoting and publicizing community-based transport services.
- Lack of expertise/knowledge from rural municipalities of this kind of transport solution.
- Lack of regulatory framework recognizing this solution as “transport service” and supporting this also from the financing point of view as made for conventional services or traditional as school bus.
- Lack of tools for monitoring and evaluation the services KPI.
- Maintaining commitment and skills on a permanent basis in a scheme that is dependent on volunteering and goodwill, among a numerically limited pool of people.
- Cost and effort of compliance with ever-evolving regulations and standards, including governance, vetting of staff, training/skill obligations, health & safety, insurance, etc.

Possible source of funding for shared mobility services could come from annual fee, annual contribution from renting operators, contribution from interested commercial operators (to be included in the solution), support from local administration under the demonstration of saving negative impacts and solving some transport problems.

Community Based solutions, at different levels, should be guaranteed efficient organizational structure and well-defined business model.
Despite rural mobility challenges, things are possible!

The SMARTA analysis of Good Practices shows that it’s possible to do something in rural mobility. Some common success factors can be identified, embracing innovative approaches and tools concerning service schemes, organisational aspects, business models, technological solutions and funding instruments. The intention of the following “tips & suggestions” is to provide inspiration from what has been done elsewhere in rural mobility.
services. Although good practice which is successful in one context cannot be assumed to be automatically replicable in another context, it is certainly useful to learn how things were done and what strategies were developed in certain cases in order to see how to transfer success factors in specific areas of interest.

OM SMARTA GOOD PRACTICES

**Donegal Local Link, IE [PT5]**
Set up individual local offices, managed by a community-led group with high level of voluntary participation in collaboration with health, education and other agencies. Enable the community to plan and prioritise services.

**Rezo Pouce, FR [SM5]**
Use a clear branding, high quality website, app and network of prominent collection point signposts that conveys messages of professionalism, permanency and scale of operation. Build a picture of a safe and affordable service.

**Texelhopper, NL [HYB3]**
Leverage advanced ICT solutions offering performant algorithm for calculating best routes to propose based on the past, journey reservation, e-ticketing, real time monitoring, etc. Maximise service efficiency.

**DRT in the region of Middle Tejo, PT [DRT3]**
Cluster of metropolitan and local authorities commonly pool their resources. Possibility to join human resources for launching a new service and set up a DRT call centre.

**Shotl Platform, Spain [DRT4]**
Provide accurate pick-up time and estimated time of arrival, as well as information about walking directions towards a pick-up point and from the drop-off point to their final destination. Improve service usability.

**Prontobus, Modena Province, IT [DRT2]**
Providing the option to book via a number of means of communication (telephone, SMS, email, website and app). Ensure inclusivity and usability of the service.

**Regiotaxi, NL [DRT6]**
Clarify your core objective and consequently adopt the most suitable service scheme (door to door, point to point, many to many, etc.). Maximise the potential of the transport service

**Bürgerbus, Baden-Württemberg, [SM9]**
Complement conventional PT services with community-based services thanks to volunteers driving the vehicles (minibus or large passenger cars) and undertaking other support tasks related to the service. Improve the overall transport offer.

**Shared Use Mobility Agency in Elba, IT [SM1]**
Integration of ride sharing solutions with the overall mobility and PT services through a technology-enabled platform, efficient organisational framework and new business model concept. Provision of unique point of access to all information.

https://ruralsharedmobility.eu/good-practices/
GET INVOLVED
Join our Stakeholders Network!

The SMARTA consortium would like to invite you to nominate a representative of your Organization or Project interested in rural mobility to join the Stakeholders Network. If you are interested in the project activities and results, being part of the network will give you access to the knowledge gathered, the results and recommendations arising from the main project activities, keep you informed about workshops and events organised for the scope of the project and give you the opportunity to interact with stakeholders in the field of rural mobility. It is also an opportunity for us to hear from you and to incorporate your views and findings into our work.

LET’S KEEP IN TOUCH!

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