

Regional and low volume bus services – what are the ‘new mobility’ solutions?

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Chair in Public Transport

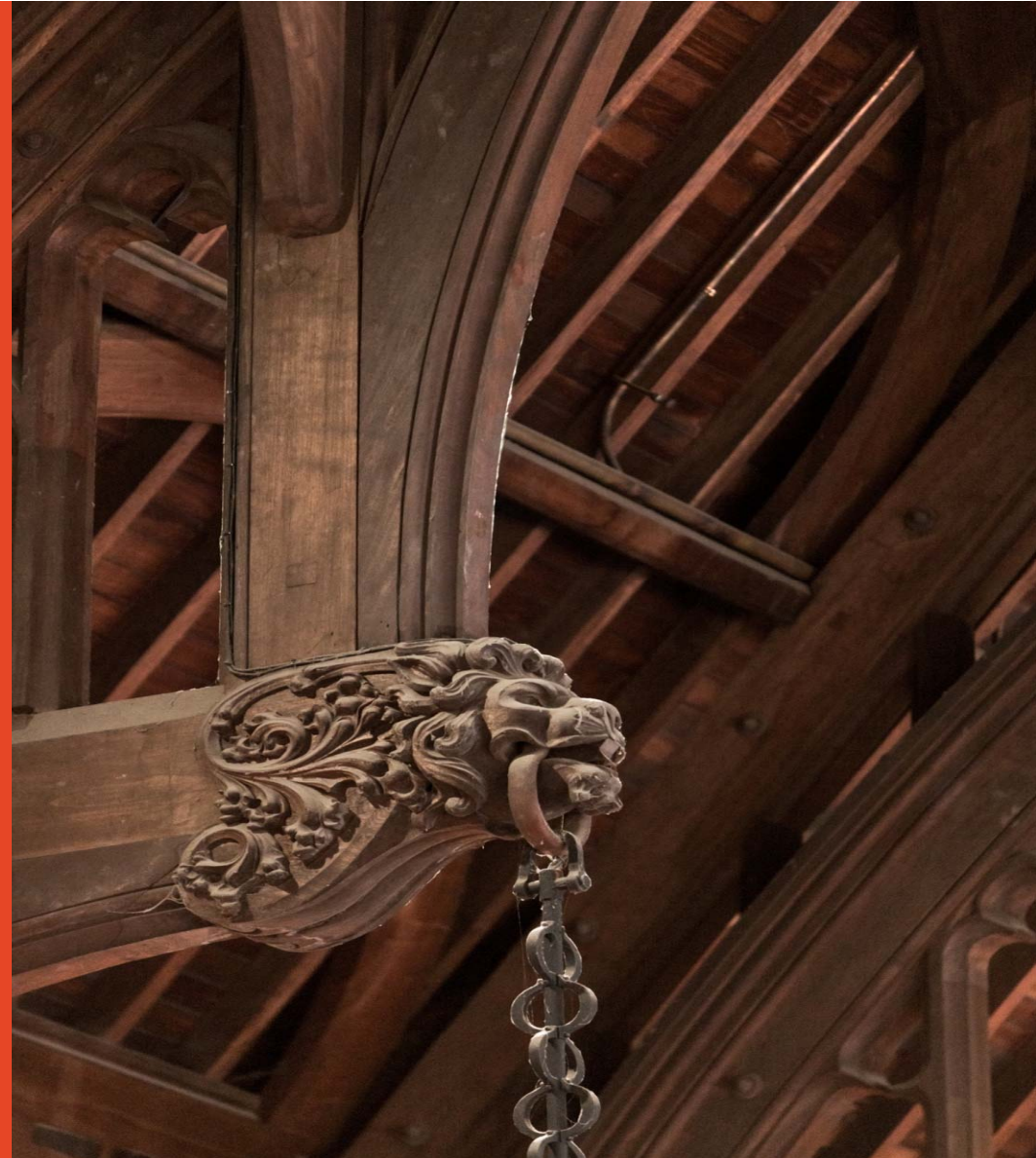
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- Established 1991
- Australian Key Centre in Transport Management
- Global partners: ITS (Monash), ITLS (Africa)
- *“Where government and industry look first for expert advice on transport and logistics”*



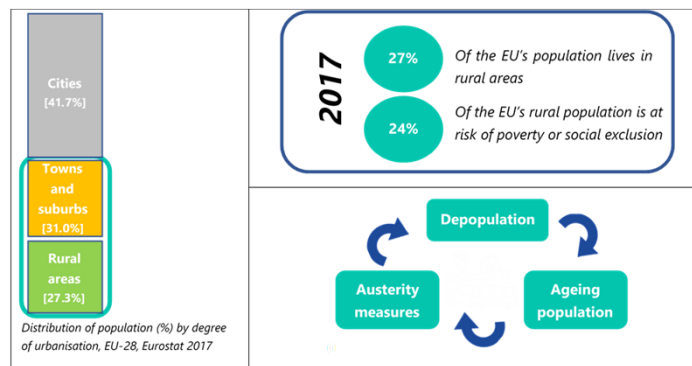
Outline

- Rethinking Rural Mobility: The SMARTA project
- Good practice cases
 - Characteristics and success factors
- Concluding observations



The EU SMARTA project

- The overarching aim of SMARTA is to explore ways to ensure sustainable mobility by improving shared/public transport services across different European rural areas
- The ambition of SMARTA is 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
 - assign dedicated responsibilities and obligations for achievement of the identified rural mobility targets



<https://ruralsharedmobility.eu/>

Good practice in rural mobility

- SMARTA has looked at forms of transport services providing solutions to a lack of rural mobility which are examples of 'good practice'
- 36 Good Practices have been identified and analysed to date

1. Overview	2. Detailed description	3. Innovation aspects	4. Assessment
<ul style="list-style-type: none">- Short description of Good Practice (GP)- Main aspect/issue addressed by GP- Main objectives of GP- Description of the area- Target user groups and needs	<ul style="list-style-type: none">- Timeframe- Bodies involved- Mobility services provided/addressed- Legal Framework- Cost and Financing sources- Organizational set-up	<ul style="list-style-type: none">- Organisational responsibilities and working arrangements- Level of public sector financial support- Interconnections between shared and public transport services- ICT connections and impacts	<ul style="list-style-type: none">- Ridership and other key metrics/results- Good Governance- Success factors/strengths- Difficulties encountered/weaknesses- Features that are considered to be Good Practice (Lesson learnt)- References for further details- Author's note

Good Practice
Template approach

SMARTA Good Practices



SMARTA Good Practices

National Programme	DRT	Shared Mobility	Integrated PT
Rural Transport Programme, Ireland [NP1]	Ring a link, Kilkenny, Ireland [DRT1]	Community Transportation Programme – Ontario, Canada [SM1]	Langadas case study (SmartMove project), Greece [IPT 1]
ITNAmerica – Community Based Rural & Town Transportation, USA [NP2]	Prontobus, Modena Province, Italy [DRT2]	Shared Use Mobility Agency, Elba Island, Italy [SM2]	Krakow Metropolitan Transport, Poland [IPT2]
CT Programme, Canada [NP3]	DRT in the region of Middle Tejo, Portugal [DRT3]	SOPOTNIKI –free transport for elders in rural areas, Slovenia [SM3]	Smart Move in the Metropolitan Area of Alba Iulia, Romania [IPT3]
Fare-free buses, Estonia [NP4]	Shotl Platform, Spain [DRT4]	Alpine Bus –Bus service in tourist area, Switzerland [SM4]	Muldental in Fahrt, Germany [IPT4]
National MaaS Framework, Finland [NP5]	The Village Bus in Kolsillre, Sweden [DRT5]	Talybont Energy –community car sharing, Wales [SM5]	Donegal Local Link, Ireland [IPT5]
	RegioTaxi, The Netherlands [DRT6]	Rezo Pouce, France [SM6]	
	Flexible solution in 8 rural municipalities (Flexi Tec), Belgium [DRT7]	EcoVolis community bike-sharing, Albania [SM7]	
	Bummelbus (DRT), Luxembourg [DRT8]	Northern Commute, Limerick, Ireland [SM8]	
	Western Region DRT Pilot Stage 1 – New South Wales, Australia [DRT9]	Autonomous shuttle in Bad Birnbach, Germany [SM9]	
	Suffolk Links DRT, UK [DRT10]	Bürgerbuses, North Rhine-Westphalia, Germany [SM10]	
	Fast seasonal bus line from Varna to the resort area, Bulgaria [DRT11]		
	Demand Responsive Transport in rural areas of Castilla y Leon [DRT12]		
	ArrivaClick On-Demand Public Transport Service, UK [HYB1*]		
	Badenoch and Strathspey Community Transport Company, Scotland [HYB2]		
	Go-Mobil, Austria [HYB3]		
	Texelhopper-Flexible solution on Dutch Isle, The Netherlands [HYB4]		

* = Hybrid

SMARTA Good Practices

For Arriva Click, operation via an App is strongly associated with customer satisfaction, particularly in relation to convenience and cash-less payment.

ArrivaClick – On-Demand Public Transport Service

Country: England

Overview

ArrivaClick is an intelligent, on-demand and flexible minibus service that takes multiple passengers heading in the same direction and books them into a shared vehicle.

It was developed in partnership with the US transportation solutions firm, Via, which provides dynamic ride-sharing services in New York, Chicago and Washington. ArrivaClick, works via an app with users selecting pick up and drop off points and being guaranteed a seat. The vehicles have a maximum capacity of 12 passengers, are equipped with leather seats, Wi-Fi and charging points, and are wheelchair accessible.

The service currently operates on Monday to Saturday from 06:00 to 22:00 in Sittingbourne and in Liverpool Monday to Saturday from 06:00 to 22:00.

Users are able to pay using their phone (with the amount debited from their credit card) and fares are based on journey distance and time of travel. Prices may also vary depending on day of travel, and other factors. As an additional incentive stimulating passengers to using the service, ArrivaClick offers the opportunity to receive a 40% discount to passengers travelling with their friends, as well as a weekly commuter pass (i.e. a couple of rides per day) and weekly unlimited passes.

Main objectives of the good practice

- Enable mobility while providing an alternative to households owning a vehicle.
- Alleviate congestion and improve air quality also in urban areas thanks to integration with bus and train networks

Success factors/strengths

According to customer feedback, ArrivaClick strengths are: comfort, reliability, friendly drivers and cash-less payment system.



Source:

- <https://busesmag.keypublishing.com/2018/06/26/liverpool-is-next-for-arriva-click-drt/>

Key features of the good practice

- Arriva's intention is for ArrivaClick to appeal to people who would not normally consider travelling by bus by offering them a new service that is frequent, reliable and personalised, with the feel of an executive shuttle.
- The on-demand travel service is already in place in Sittingbourne in Kent, where ArrivaClick launched in April 2017. During the pilot, more than 50% of customers surveyed switched from using private cars to ArrivaClick, with 61% of users using the service a few times a week or more.

SMARTA Good Practices

The Bad Birnbach autonomous shuttle represents a very early example of autonomous bus operation in public traffic.

Autonomous shuttle in Bad Birnbach

Germany

Overview

The service was started as a pilot project in October 2017 with one EasyMile electric minibus EZ10 on a 700-meter-long route from the local market square to the spa. 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 have a maximum capacity of 12 passengers (6 seats and 6 standing), and are equipped with mini ramps making them fully accessible for people with reduced mobility. The shuttle service is operated by the DB subsidiary DB Regio Bus Ostbayern.



The EZ10 autonomous shuttle in Bad Birnbach. Source: Deutsche Bahn

Main objectives of the good practice

The practical objective of the good practice is to offer a safe, affordable and innovative transport service between the railway station, the thermal baths and the local market square. The high-level objective consists in testing the potential of an autonomous shuttle service for the first/last mile operation in a small rural area. In particular, the GP aim is to gain experience in the operation of autonomous minibuses, to get to know the technology even better and to test the acceptance by the customers.

Key features of the good practice

The GP is particularly relevant in the fact that it shows an interesting solution for dealing with last mile solution. In particular, it is a pioneer in the field of autonomous transportation, and it could constitute a new business case for solving the last mile solution in low demand or sparsely populated areas.

Success factors/strengths

1. This is one of the first driverless electric buses that travels on public highway in Germany. It is one of the first cases in Europe which investigates the possibility of replacing conventional PT services in a rural area with low demand with AVs. Passengers feel comfortable with the service, and feedback is positive with respect to perceived safety, travel comfort and waiting time at stops.
2. As the first pilot in the field of autonomous mobility in public transport it acts as a benchmark for operational and approval processes in the sector.

SMARTA Good Practices

National Programmes are particularly effective when they offer access to technology and resources such as training, software, communications and administration, such as the National MaaS Framework, Finland.

National MaaS Framework

Finland

Overview

Finland has long been characterised by high levels of digital connectivity throughout the country. Digitalization is helping the transport sector to find new solutions and bring greater efficiency and transparency to the transport system. The Finnish national government aims to promote the use of digitalization in the transport sector, including via the development of an ambitious National MaaS (Mobility as a Service) Framework which is built around the 'Transport Code' introduced under The Act on Transport Services (2018) 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.

The Rural MaaS communication project

Source: <https://www.vtt.fi/sites/maasdigiboksi/en>



Main objectives of the good practice

Finland is adopting a unique country level approach to the development of MaaS. The key aims of the National MaaS Framework are:

- 1) To create a national vision for MaaS and embed it within national transport policy.
- 2) In pursuit of 1) to develop and enact legislation covering the 'Transport Code' and public procurement via electronic channels.
- 3) To develop exportable mobility innovations.

Key features of the good practice

1. The MaaS concept has strong origins in Finland and already plays a key role in the national transport policy.
2. Finland is adopting a unique country level approach to the development of MaaS.
3. The development of the Transport Code has helped to place Finland at the forefront of MaaS.
4. Finland is home to the world's first Rural MaaS project.

Success factors/strengths

- MaaS is seen as a new transport paradigm that can enable growth within ICT and streamline public spending.
- Communications and transport are governed by the same ministry.
- The development of the Transport Code has been closely coupled to MaaS developments.
- "MaaS champions". These are actors positioned in many of the most influential roles within key public and private organizations.



Success factors identified

Mobility service	Factor that contributed to success	Example GP case
Demand Responsive Transport	Close working between municipalities, service providers and public transport operators	Flexitec – Belgium, DRT Tejo – Portugal, Regiotaxi – The Netherlands, Flexible mobility services – Bulgaria and DRT Castilla y Leon – Spain
	Technology	Village Bus – Sweden, Prontobus – Italy and On-demand pooling services – Spain
	Addressing social exclusion	Suffolk Links – UK, WRDT – Australia, Regiotaxi – The Netherlands
	Close attention to local needs	Bummelbus in Luxemburg, Village Bus in Sweden, DRT Castilla y Leon – Spain
Shared Mobility	Partnership working	Rezopouce-France, CTP Ontario – Canada, Alpine Bus – Switzerland, Sopotniki – Slovenia and SUMA – Italy
	Technological innovation	Autoshuttle – Germany and Rezopouce – France
	Communications, marketing and associated brand recognition	Rezopouce – France Alpine Bus – Switzerland, SUMA – Italy, Ecovolis – Albania, Talybont car sharing – Wales
	Addressing social exclusion	CTP Ontario – Canada, Ecovolis – Albania, Talybont Car sharing – Wales and Sopotniki – Slovenia – ITN America – Fare-Free buses Estonia – RTP Ireland
	Strong community engagement	Ecovolis – Albania, CTP Ontario – Canada, Talybont Car sharing – Wales and Sopotniki – Slovenia
	Utilization of technology	Arriva Click – England, Texelhopper – The Netherlands and Badenoch & Strathspey CTC – Scotland

Success factors identified

Mobility service	Factor that contributed to success	Example GP case
Integrated Public Transport	Direct engagement with end users	Langadas- Greece, Muldentail – Germany and Smart Move – Romania
Hybrids	Partnerships between public, private and third sector organizations	Badenoch & Strathspey CTC – Scotland, GoMobil – Austria and Arriva Click – England
	Stakeholder engagement	Badenoch & Strathspey CTC – Scotland, Texelhopper – The Netherlands
	Utilization of technology	Arriva Click – England, Texelhopper – The Netherlands and Badenoch & Strathspey CTC – Scotland
National Programmes	Community-based solutions	ITN America, RTP Ireland and CTP Canada
	Access to technology and resources	National MaaS Framework, Finland
	Addressing social exclusion	ITN America, Fare-Free buses Estonia, RTP Ireland

Findings from Good Practice

“The collaborative working between municipalities and the engagement of local operators to provide the service ensures better access and social inclusion by people who might otherwise have significantly reduced involvement in society”. Regiotaxi – The Netherlands (DRT)

“Through the new software, the quality of information provided to the users, to the call centres operators and to the bus drivers has strongly improved, and this resulted in the increase of the passengers using the Prontobus service”. Prontobus – Italy (DRT)

“The “brand” logo which encompasses different local initiatives. This gives a national perspective to the initiative making it more recognizable to the users. This is an important success factor considering that the target group of the services is tourists, who are likely to experience different regions/areas during their visits”. Alpine Bus – Switzerland (Shared Mobility)

“The service introduces car sharing to households in an area which is likely to have been overlooked by a conventional, commercial car sharing operator”. Talybont Car sharing – Wales (Shared Mobility)

Findings from Good Practice

“A “face-to-face” marketing campaign of PT based on a mix of “pro-active” actions aiming at establishing a closer link with potential users and customers can achieve a two-fold result: a) to improve the awareness of the available services in rural areas, b) assess users’ needs in order to improve the service planning to align it more closely to the real need of users”. Langadas – Greece (Integrated Public Transport)

“ICT plays a crucial role in the Texelhopper case. It determines the best routes based on past routes. In that way the minibuses can combine 5 trips on average per bus trip”.
Texelhopper – The Netherlands (“Hybrid”)

“A good example of how a centralised collaborative working approach among Federal government, local authorities and local community organisations can deliver better community transportation services for rural areas”. CTP Canada (National Programme)

Good Practices as elements in an integrated rural mobility system

[illegible]

Concluding observations on good practice in rural mobility & implications for better service delivery

- Mobility and public-transport practice is deeply influenced by the reference context (e.g. the actors involved and their interactions, regulation, etc.) and by local needs.
- It is possible to identify enabling success factors which have been shown to be influential and appear to transcend local conditions.
 - Commit to partnership working
 - Prioritize community engagement
 - Appreciate local needs
 - Pay close attention to communications, marketing and brand recognition
 - Emphasise social benefits
 - Utilize technology in a 'smart' manner
- However, a solution which is proven successful in one context should not be assumed to be replicable in another (different) context with the same level of performance.
- Ultimately, it is better to think about 'best fit' rather than a literal transfer of solutions, and to focus on adapting solutions to different local contexts.

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UNDERSTANDING MOBILITY AS A SERVICE (MaaS): Past, Present and Future

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