



Sustainable Rural
Mobility for Resilience
in Support of
Ecotourism

Supported by the



Catalogue of Rural Shared Mobility solutions



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Mobility for Resilience
in Support of
Ecotourism

Catalogue of Rural Shared Mobility Solutions

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Cover pictures

Background image: B rgerbus in Dreisam Stromer, Germany - *Source:* taken by the author of this report

Upper circle: Sopotniki on-demand service in Slovenia - *Source:* <https://www.facebook.com/Sopotniki>

Lower left circle: Bike sharing in Gran Canaria - *Source:* Sitycleta

Lower right circle: Ring a Link transport service, Kilkenny, Ireland - *Source:* <https://twitter.com/locallinkckw/status/1395732090654691332>

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zona di manovra



Introduction

Introduction

SMARTA-NET project - “Sustainable rural mobility for resilience in support of ecotourism” is an initiative on rural mobility, supported by DG-MOVE in association with DG-AGRI. SMARTA-NET is led by MemEx of Italy, partnering with TIS (Portugal), E40 (Hungary), NIT (Germany) and Panteia (Netherlands).

SMARTA-NET aims to promote sustainable and resilient mobility connections between rural areas, within remote areas such as islands, and between remote rural areas (including isolated regions) and urban areas, taking into account the need to support ecotourism.

The SMARTA-NET initiative has three main strands:

- Establish a **European Rural Mobility Network** (ERMN), to provide a forum and a voice for those working on rural mobility.

- Develop **Guidance** documents on a number of topics, including (i) good practice in rural mobility; (ii) mobility supporting rural tourism; (iii) extending SUMP to incorporate aspects of rural mobility; and (iv) financing structures for rural mobility.
- Implement **training** on the Guidance in each of the member countries, in own language, for the ERMN members and other interested stakeholders.

The ERMN includes rural municipalities and other local authorities, networks and associations of rural local authorities, and rural development agencies from across Europe.

We aim for the ERMN to have a future beyond the project, to be shaped by the Members themselves during 2024.



The purpose of this Catalogue

SMARTA-NET aims to support rural municipalities and practitioners in the delivery of a blend of formal and informal forms of mobility services. Sustainable and Shared Mobility and Transport Good Practices are currently operated in different rural EU contexts. These can be inspirational for other territories in Europe in which accessibility and connectivity are major issues. Rural communities typically have limited resources, so knowledge of good practices can support stakeholders in choosing the most appropriate, suitable solutions, avoiding starting from scratch and thereby saving precious resources.

The rural mobility schemes analysed in the Catalogue include on-demand services, carpooling platforms, car sharing – among other - and their integration with the

conventional public transport. The practical knowledge of these solutions can provide some hints to target users aiming to implement a similar service in their region.

Lessons learned, barriers and drivers, and transferability considerations are included for each of the solutions identified. These can provide hints and suggestion on the mobilisation phase of a new mobility service – in terms of identifying need, building the consensus for action, bringing stakeholders together, developing the strategy, getting finance, etc.; and the operational phase - dealing with service design, IT platforms, technical approach, outreach, marketing, building up the business, etc. Users can then be guided to identify what works and how to sustain it over the long-term.



This Catalogue is a structured reference set of case studies. It is not a report and it does not attempt to do any analysis across the set or to draw any conclusions - this has been done in our “**Guidance on Rural Shared Mobility Solutions**”, to which the catalogue is a companion resource. The Catalogue aims to provide information and share the experiences and key insights from target rural mobility schemes implemented across Europe.

How to read me

Rural shared mobility solutions offer a range of distinctive features that cater specifically to the needs of rural communities. Long-lasting durability, community engagement, innovative technology, are key elements that make or break these initiatives.

By leveraging these features, rural shared mobility solutions have the potential to enhance accessibility, connectivity, and overall quality of life for residents in rural areas.

Whether stakeholders wish to improve the mobility situation in their territory, or they are interested in the distinctive features of rural mobility solutions, or they might be in a position to influence certain components of the transport system, they could find in this catalogue the solution(s) with the highest potential to give them some inspiration.



Good practice distinctive features



ORGANISATIONAL STRENGTHS

Community-based



User-centred
planning



Responsive to
vulnerable users



SERVICE STRENGTHS

Good territorial
coverage



Integration with
Public Transport



Innovative
technology



GOOD OUTCOMES

Sustained
ridership growth



Long-term
durability



Established
brand



Mobility solutions and services

Fixed-route bus and rail

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.



Bürgerbus in Dreisam Stromer, Germany
Source: taken by the author of this report



Flexible Transport Services (DRTs)

DRTs are services scheduled to pick up and drop off people in accordance with the actual needs of the passengers.

DRT is best viewed as a range of intermediate transport solutions that span the wide space between taxi and public transport.

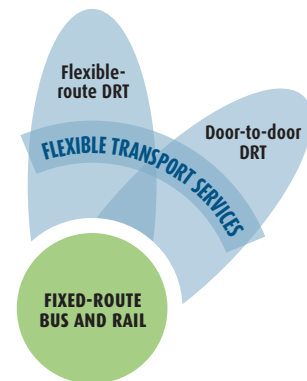
Since the late-1990s, the ability of DRT to provide efficient and affordable transport services has been greatly enhanced by the use of technology.

For example, services are also more attractive, especially for young peo-

ple, thanks to the possibility to book a trip via mobile app. And reservation can be made up to 10 or 15 minutes in advance.



Ring a Link transport service, Kilkenny, Ireland
Source: <https://twitter.com/localinkckw/status/1395732090654691332>

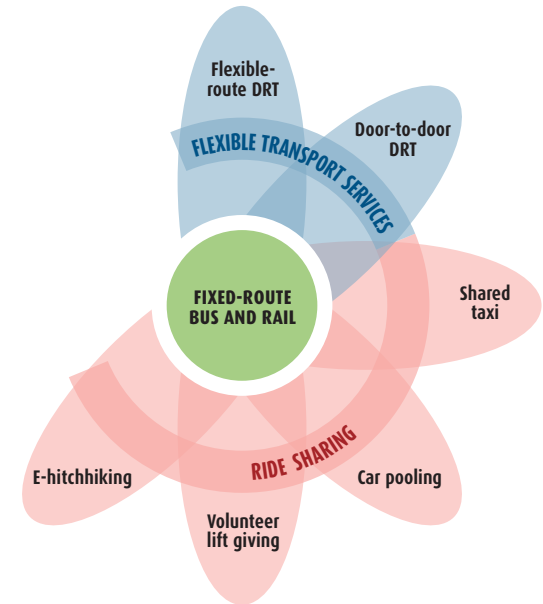


Ride sharing services

Ride sharing services include a range of services that allows the 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.



NaboGO service in Vejle, Denmark
Source: <https://nabogo.com/en/about-us>



Asset sharing services

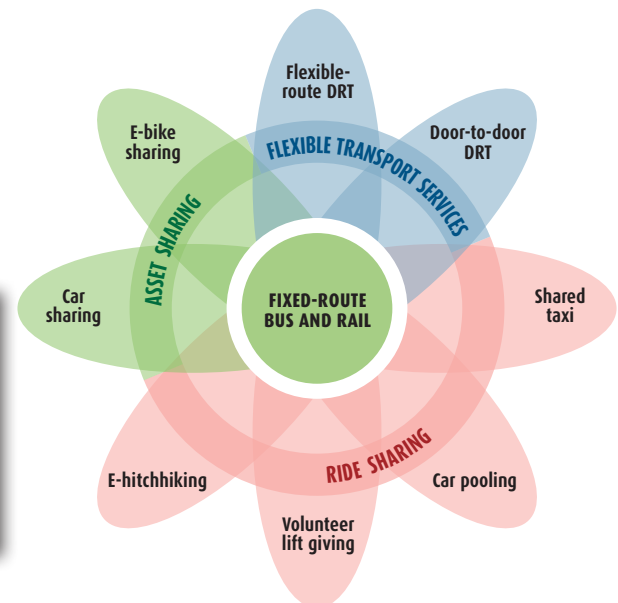
This kind of services allows the traveller to utilise/pick-up a specific means of transport (bike, car, e-scooter, etc.) without any property issue; users must be registered to common platforms.

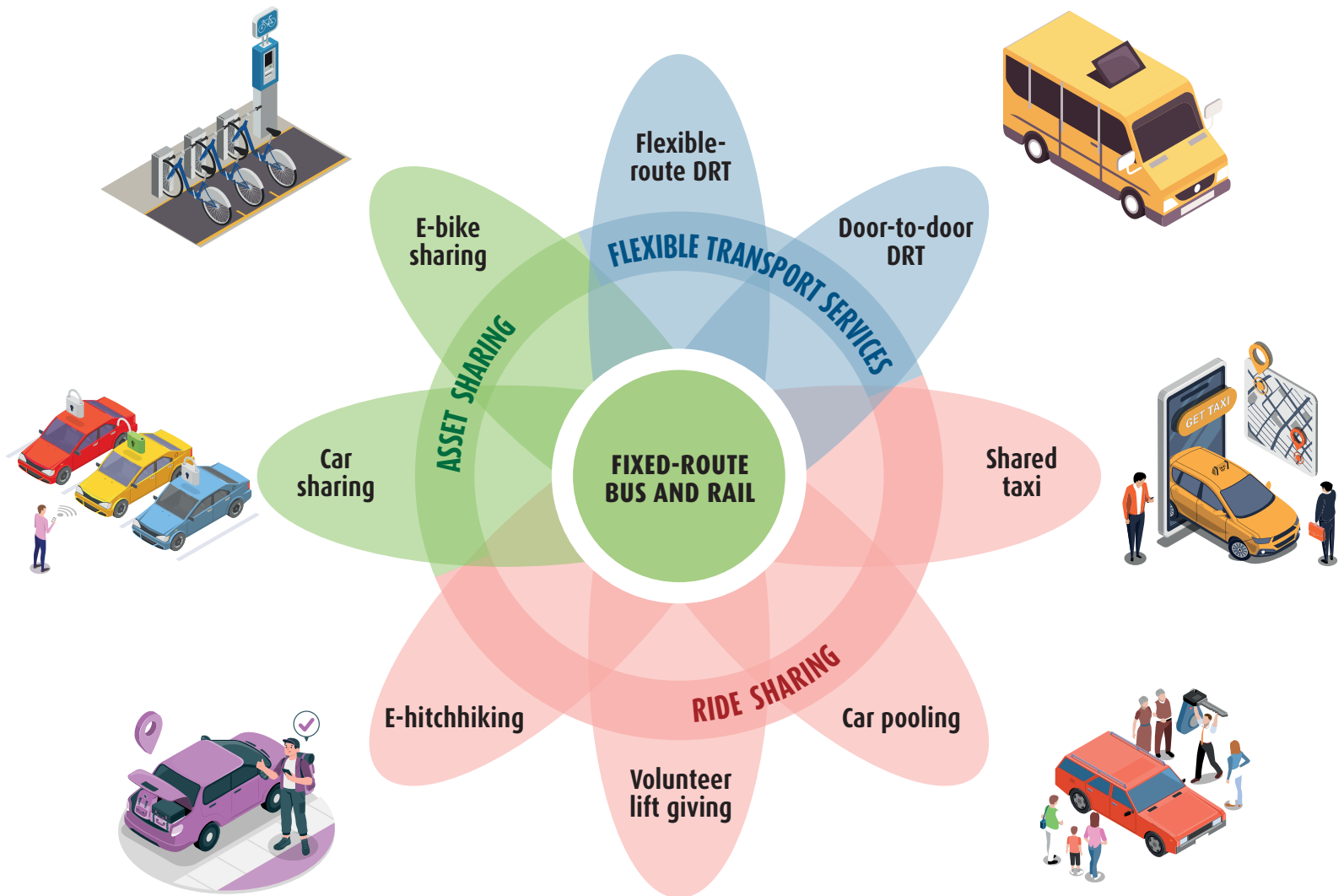
Car sharing services in rural areas, since commercial operators don't find it profitable, are usually organised by the community themselves, often in a form of short-term rental, even by the hour, following a 'return to base' scheme.

Bike sharing services can be a useful means of transport for distances up to 5-10 Km; usually, it is used for getting to main public transport network and hubs.



Flugs e-car sharing in East Tyrol, Austria - © E. Bachmann
Source: <https://www.osttirol.com/it/mobilita/mobilita-in-osttirol/flugs-e-carsharing/>





DIGITAL-ICT enabler

The 'shared mobility services' include both the mobility services themselves

and the supporting services including:

- traveler information
- reservation
- booking
- payment
- operation,
- management
- ...

Map of rural mobility good practices

1 Flexible Transport Services

- 1.1 Ring a Link (IE)
- 1.2 Bürgerbus Oberes (DE)
- 1.3 Narni Chiamabus (IT)
- 1.4 Sopotniki (SL)
- 1.5 Bürgerbus Dreisam (DE)
- 1.6 Castilla y Leon (ES)
- 1.7 Vallibus (ES)
- 1.8 Bummelbus (LU)
- 1.9 ToD Bielsko-Baila (PL)
- 1.10 Go-Mobil (AT)
- 1.11 Texelhopper (NL)
- 1.12 Medio Tejo, (PT)
- 1.13 Alpine Bus (AT)
- 1.14 Pronto Bus (IT)
- 1.15 ToD Vidzeme Region (LV)

2 Ride Sharing Services

- 2.1 RegioTaxi (NL)
- 2.2 NaboGO (DK)
- 2.3 Brasov (RO)
- 2.4 Ummadum (AT)
- 2.5 RezoPouce (FR)

3 Asset Sharing Services

- 3.1 Flugs (AT)
- 3.2 BarShare (DE)
- 3.3 Be Agueda (PT)
- 3.4 Cairngorm (UK)
- 3.5 Talybont-on-Usk (UK)

4 Other Mobility Solutions

- 4.1 Mobility Hubs (NL)
- 4.2 School bus service (IT)
- 4.3 Bad Birnbach (DE)
- 4.4 Trikala Platform (GR)
- 4.5 SUMA Elba (IT)
- 4.6 Local Link Donegal (IE)
- 4.7 Mobipoints (BE)





1890 42 41 41

Ring a Link
1890 42 41 41

Ring a Link

local link



WY 48 2329

Flexible Transport Services



The SMARTA-NET solutions 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.
- Ring- a-Link (IE), born in the framework of the Rural Transport Program, is increasingly being integrated with the National Transport Authority's multimodal traveller information and integrated ticketing systems.
- Bürgerbus (DE), developed within the framework of financial support at the State level, is operated in more than 900 areas in Rhineland Palatinate, Baden-Württemberg, and North-Reine Westphalia.

Flexible Transport Services



	Community-based	User-centred planning	Responsive to vulnerable users	Good territorial coverage	Integration with Public Transport	Innovative technology	Sustained ridership growth	Long-term durability	Established brand
Ring a Link (IE)	✓			✓	✓			✓	
Bürgerbus Oberes (DE)	✓		✓	✓					
Narni Chiamabus (IT)				✓	✓				✓
Sopotniki (SL)	✓		✓						✓
Bürgerbus Dreisam (DE)	✓	✓	✓	✓	✓				
Castilla y Leon (ES)	✓	✓		✓		✓			
Vallibus (ES)					✓	✓			✓
Bummelbus (LU)			✓	✓				✓	
ToD Bielsko-Baila (PL)				✓	✓	✓			
Go-Mobil (AT)	✓	✓	✓	✓	✓				
Texelhopper (NL)			✓		✓				✓
Medio Tejo (PT)				✓			✓	✓	
Alpine Bus (AT)				✓				✓	✓
ProntoBus (IT)	✓	✓	✓	✓	✓	✓			
ToD Vidzeme Region (LV)	✓	✓		✓					

Ring a Link • Ireland

Community-based



Good territorial coverage



Integration with Public Transport



Established brand



<p>Mobility Solution typology (MS)</p>	<p>Demand-responsive Transport (DRT) service.</p>
<p>Description</p>	<ul style="list-style-type: none"> • Functions as a Transport Coordination Unit linked to the National Transport Authority. • Actives in 3 counties in the southeast of Ireland: Kilkenny, Carlow and Wicklow. • Fleet of 23 minibuses in house + about 10 minibuses daily contracted.
<p>Population and area covered</p>	<p>5.000 km² ; 139.000 (rural) (297.000 less 158.000 in the towns).</p>
<p>Why is this MS considered a good practice?</p>	<p>Starting from scratch as a grassroots organisation and leveraging various funding opportunities, Ring a Link established a range of community and social mobility services and the enabling booking and reservation capacity. It has subsequently developed daily and regular DRT and scheduled services, expanded its coverage area, and developed into a comprehensive transport coordination unit with operations in three counties.</p>



Ring a Link • Ireland

Organisers/Entity responsible for the implementation	<p>'Ring a Link' is the designated Transport Coordination Units for the area, managing the booking and dispatch centre, and directly operating about two thirds of its services and contracts in the remainder from local private operators. The service is also supported by LEADER Partnership and, more recently, by Kilkenny County Council.</p>																			
Sponsors or funding options	<p>Ring a Link is mainly funded by:</p> <ul style="list-style-type: none"> • The National Transport Authority (NTA), which provides public financial support for scheduled and DRT services; • The Department of Social Protection, providing funds as partial compensation for participation in the Free Travel Scheme, channelled through NTA; • Other sources for specific services, such as from Kilkenny County Council for the interim urban routes in Kilkenny City. 																			
Impacts	<ul style="list-style-type: none"> • In 2022, the demand reached 200k single journey trip • In 2023: <ul style="list-style-type: none"> • 21 DRT routes, mostly available on one day per week, in a few cases on two days per week. An exceptional route is operated 5 times per day and connects with the intercity bus services; • Evening services at weekends to combat drink-driving; • Six routes' Schools Transport; • 40 weekly services, with 100 "travel options": linkages, connections, etc. 	<table border="1"> <caption>Annual Ridership (Millions)</caption> <thead> <tr> <th>Year</th> <th>Ridership (Millions)</th> </tr> </thead> <tbody> <tr><td>2009</td><td>50</td></tr> <tr><td>2016</td><td>140</td></tr> <tr><td>2017</td><td>145</td></tr> <tr><td>2018</td><td>165</td></tr> <tr><td>2019</td><td>180</td></tr> <tr><td>2020</td><td>95</td></tr> <tr><td>2021</td><td>110</td></tr> <tr><td>2022</td><td>200</td></tr> </tbody> </table>	Year	Ridership (Millions)	2009	50	2016	140	2017	145	2018	165	2019	180	2020	95	2021	110	2022	200
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2016	140																			
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2018	165																			
2019	180																			
2020	95																			
2021	110																			
2022	200																			
Costs	<p>Bus Company Running cost:</p> <ul style="list-style-type: none"> • Overheads: 4.5% • Driver wages: 54% • Other staff wages: 9.5% • Bus operating costs: 32%, of which: <ul style="list-style-type: none"> • Fuel: 54% • Maintenance: 31% • Insurance: 13% • Motor tax, etc.: 2% <p style="text-align: right;">The cost for a standard return trip is equal to 4€</p>																			

Ring a Link • Ireland

<p>Revenues</p>	<p>Turnover of €2 million in 2022. Income is derived from four main sources:</p> <ul style="list-style-type: none"> • Customer receipts on the scheduled and DRT routes; • NTA provides public financial support for scheduled and DRT services; • Allocation of funds from the Department of Social Protection as partial compensation for participation in the Free Travel Scheme, channelled through NTA; • Other sources for specific services, such as from Kilkenny County Council for the interim urban routes in Kilkenny City.
<p>Main barriers identified in the implementation process</p>	<ul style="list-style-type: none"> • Lack of a national rural mobility policy in Ireland. This means there is not a clear vision of what needs to be done, nor a defined authorisation for Ring a Link (or any other TCU) to take initiatives to develop rural mobility. • Absence of a mandate for public transport in local governments in Ireland. This means that the measures or support for rural mobility they can commit in their development plans or budgets is limited.
<p>Lessons learnt</p>	<p>Local initiators consider the mobility services a success. Main lessons can be drawn from the guidance below about implementation.</p>
<p>What is necessary to implement the MS?</p>	<ul style="list-style-type: none"> • Developing durable structures; • Developing a professional team and a good IT platform; • Establishing a known and trusted brand; • Maintaining close relationship to the communities; • Building relationships with entities such as the LEADER program and the County Council; • Gradual but sustained development of services; • Ongoing adaptation of operating practices.
<p>Success, Durability and Expansion</p>	<p>All of Ireland is covered by the 15 Transport Coordination Units - TCUs (originally 18), of which Ring a Link is one, which operate under the generic brand "Local Link". Ring a Link continues to operate and has a good degree of stability. The expectations are that Ring a Link and its services will continue for many years.</p>

Ring a Link • Ireland

Funding and financing

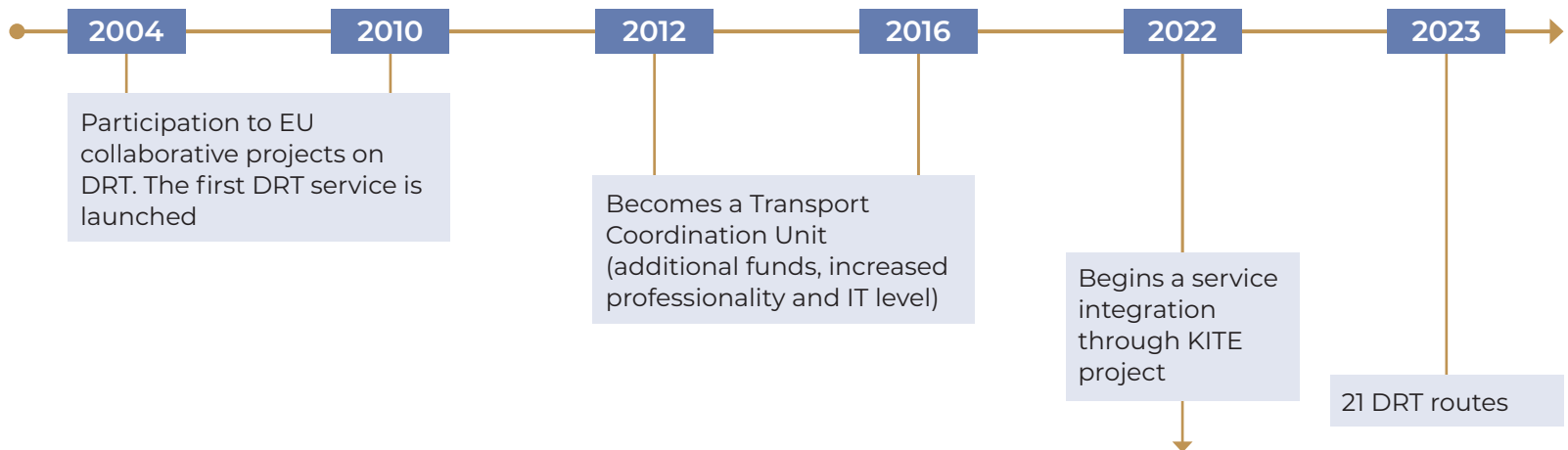
The service is unable to cover Opex from fares paid by customers. Fares are at socially-affordable levels, are a flat €3 per one-way trip for adults, €2 for under-16s, children under 5 travel free. Currently the fares are not aligned with or integrated with the general fare structure for PT.

Incomes are derived from four main sources:

- Customer receipts on the scheduled and DRT routes;
- NTA provides public financial support for scheduled/DRT services which could not otherwise be sustained;
- Allocation of funds from the Department of Social Protection.

Other sources for specific services, such as from Kilkenny County Council for the interim urban routes in Kilkenny City.

Main milestones



WHAT: Pilot project, aiming to link the conventional licenced fixed route bus services with the flexible DRT services

HOW: Investment in real time passenger information (RTPI) technology: hardware and software, and equipment and structures: 'Smart Stop' bus shelters with display units and communications buttons

Bürgerbus • Germany (focus on Bürgerbus Oberes Glantal)

Community-based



Responsive to
vulnerable users









Good territorial
coverage



<p>Mobility Solution typology (MS)</p>	<p>Volunteer-based community transport service - on demand or fixed route, usually operated with mini van (8 seats).</p>
<p>Description</p>	<ul style="list-style-type: none"> • Operating in different areas of Germany, mostly diffused in Baden-Württemberg, Lower Saxony and North-Reine Westphalia. • Volunteer drivers do not need to have bus driver licenses. • Financially combination of public and private funding as well as membership fees.
<p>Population and area covered</p>	<ul style="list-style-type: none"> • About 30.000 inhabitants spread over 23 villages, in an area of 155,95 km² (focus on the Bürgerbus Oberes Glantal practice in Rheinland Palatinate).
<p>Description of the specific practice</p>	<ul style="list-style-type: none"> • The mobility service is provided via two small buses with a maximum capacity of 8 passengers. • The service is free of charge and is operative every Tuesday and Thursday from 8:00 am to 6:00 pm. • To access the Bürgerbus service, users must pre-order a ride by phone or email.



Bürgerbus • Germany (focus on Bürgerbus Oberes Glantal)

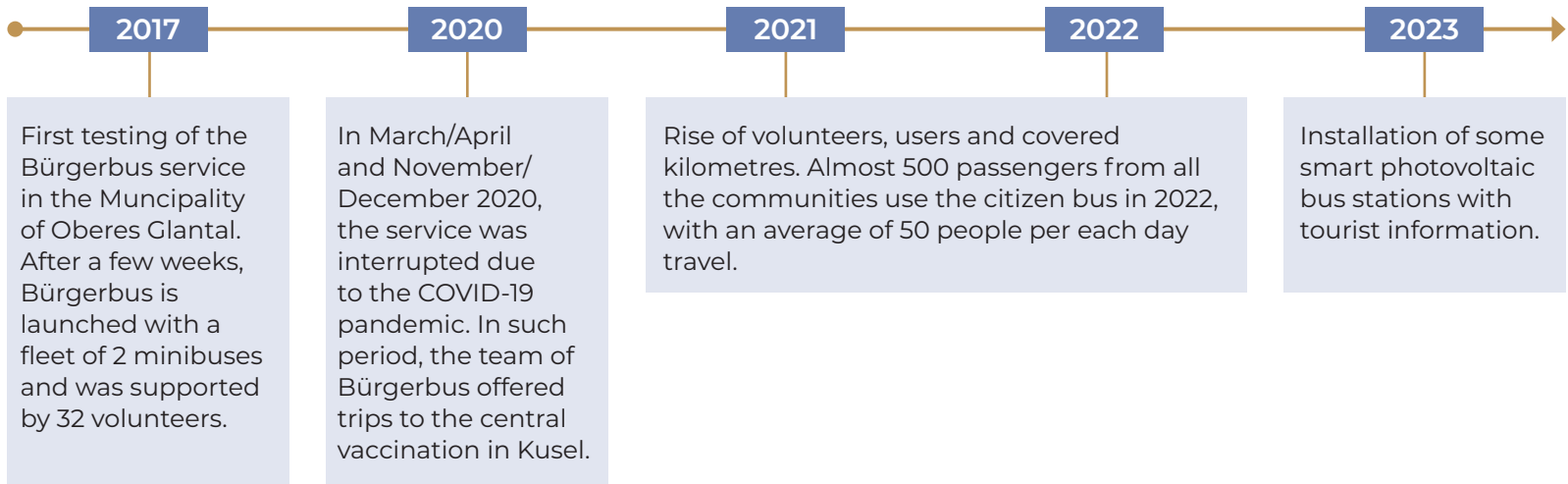
<p>Why is this MS considered a good practice?</p>	<p>Bürgerbus initiative provides efficient and cost-effective transport services in rural and peripheral areas where the conventional public transport services are not or poorly operated. The creation of a national brand, the financial support provided by the state of Rhineland-Palatinate and the direct involvement of local communities in the organisation and development of the transport service are the key features of the practice.</p>																
<p>Organisers/Entity responsible for the implementation</p>	<p>As a reaction on the relatively poor public transport situation, volunteers initiated Bürgerbus OberesGlantal in 2017. From 2016 until 2019, the service was supported by Agentur Landmobil, an Agency specialized in the setup and implementation of the Bürgerbus service in Germany.</p>																
<p>Sponsors or funding options</p>	<p>Bürgerbuses are financially sustained by a combination of state and private funding. Among the others, sources of funding include direct subsidies from municipalities, revenue from advertising, sponsorship contributions from local business and resources given by foundations.</p>																
<p>Impacts</p>	<table border="1"> <thead> <tr> <th></th> <th>2017</th> <th>2022</th> </tr> </thead> <tbody> <tr> <td>No. of volunteers</td> <td>40</td> <td>50</td> </tr> <tr> <td>No. of registered users</td> <td>250</td> <td>500</td> </tr> <tr> <td>Ridership</td> <td>30 users per day, up to 50 in some periods</td> <td>Average of 50 users per day, up to 80 passengers in some periods</td> </tr> <tr> <td>Km covered/year</td> <td>44,000</td> <td>40,000</td> </tr> </tbody> </table>			2017	2022	No. of volunteers	40	50	No. of registered users	250	500	Ridership	30 users per day, up to 50 in some periods	Average of 50 users per day, up to 80 passengers in some periods	Km covered/year	44,000	40,000
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<p>Costs</p>	<p>The total cost of Bürgerbus service is about 15,000.00 € - 20,000.00 € per year. This cost includes all type of costs per 2 minibuses per year.</p> <table border="1"> <thead> <tr> <th>Capital costs</th> <th>Operating costs</th> </tr> </thead> <tbody> <tr> <td data-bbox="409 1204 1021 1460"> <p>Leasing costs: 200€ -250€ per minibus per month</p>  </td> <td data-bbox="1021 1204 1681 1460"> <p>Software cost: 1,000.00€ per year</p> <p>Insurance costs: 4,000.00€ per minibus per year</p>  </td> </tr> </tbody> </table>		Capital costs	Operating costs	<p>Leasing costs: 200€ -250€ per minibus per month</p> 	<p>Software cost: 1,000.00€ per year</p> <p>Insurance costs: 4,000.00€ per minibus per year</p> 											
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Bürgerbus • Germany (focus on Bürgerbus Oberes Glantal)

<p>Revenues</p>	<p>At the beginning, the Ministry for Climate Protection, Environment, Energy and Mobility of the State of Rhineland-Palatinate financed the launch and development of the service with 8.000€ per year. The amount of Ministry funding decreased over years, and today the funding amount is equal to 2.500€ per year. Moreover, Bürgerbus receives fundings from the Municipality of Oberes Glantal per 12.000€ per year and from private sponsors per 6.000 € per year (3.000€ by local bank “Kreissparkasse Kusel” and 3.000 € by a local university). The total amount of fundings is equal to 20.500€ per year.</p>
<p>Main barriers identified in the implementation process</p>	<ul style="list-style-type: none"> • Bürgerbus needs long-lasting financial support from public and private entities. Even if the personnel costs are largely reduced thanks to the volunteer drivers, the expenses are relevant. • Another challenge is the planning of the routes at the dispatch center by the volunteers, which currently do not have any supporting digital tool. • The integration with the conventional public transport is still weak and the service operates only on a limited number of days per week.
<p>Lessons learnt</p>	<p>Bürgerbus is a success for the local initiators due to the continue increase of ridership every year, and the positive feedback received from the population and the volunteers.</p> <p>The service has a simple organisational structure based on collaborative approach.</p> <p>All the members of the team participate to the discussions of every issue to obtain a collective decision.</p> <p>This kind of organization recognises the value of each person and allows a better involvement of the population in the service.</p>
<p>What is necessary to implement the MS?</p>	<ul style="list-style-type: none"> • Involve local inhabitants into the development of the service, from the beginning; • Ensure a strong level of engagement at the local level; to make the service work, is usually not so much a technical question, rather a cultural and social one. Thus, the importance of taking care of developing an accurate and strong promotional campaign; • Choose comfortable and accessible buses for a better get in and out of vulnerable users; • Cooperate with the local Public Transport operator to integrate the service with the standard public transport to reduce the feeling of social exclusion of inhabitants.

Bürgerbus • Germany (focus on Bürgerbus Oberes Glantal)

Main milestones



Ponds near Buntentock south of Clausthal-Zellerfeld, Lower Saxony

Narni Chiamabus • Italy



<p>Mobility Solution typology (MS)</p>	<p>Narni Chiamabus is an on-demand bus service in the Municipality of Narni, Umbria Region.</p>
<p>Description</p>	<p>The main objective of the Mobility Solution is the connection of sparsely hamlets within the municipality of Narni with the neighbouring urban centres. The dispersion of the 21 districts within the Municipality of Narni and the low population density represent the main issues for the mobility sector. The challenge for residents of the smaller towns, villages and rural areas is the connection both for the main station/ hub and for intra-district trips.</p>
<p>Population and area covered</p>	<p>17.914 inhabitants ; 197,99 Km²</p>
<p>Why is this MS considered a good practice?</p>	<p>The service connects sparsely districts with the city centre, and/ or with the main axes of the transport network. This connection allows the rural population to access to work and education places, to health structures and to be involved in social events; fighting at the same time the isolation and the social exclusion of rural population. Another important feature of this service is the cooperation of the Municipality with a national public transport service operator.</p>



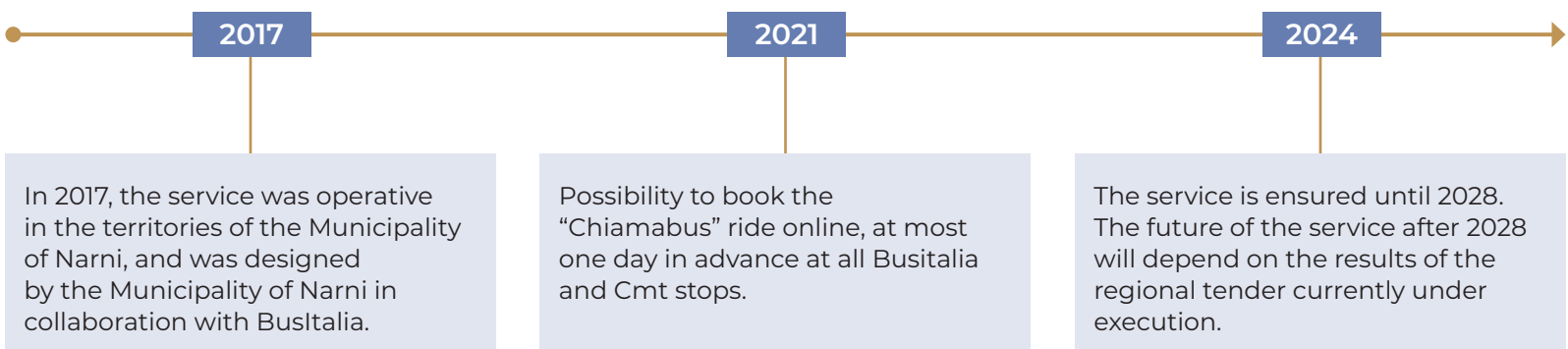
Narni Chiamabus • Italy

Organisers/Entity responsible for the implementation	<p>Narni Chiamabus was born in 2017 thanks to the cooperation between the Municipality of Narni, and Busitalia, the Public Transport Operator which operates the local transport services in the Umbria Region.</p>
Sponsors or funding options	<p>The service is financed for the 68% by the Municipality and for the 32% by the Region through the Regional Transport Fund.</p>
Impacts	<p>The Chiamabus service connects the peripheral areas of the territory to the most important interchange points of urban and extra-urban services and the centre of the Municipality of Narni. The main trip motivations are access to work, hospital, school centres and main production facilities of the nearest city centre. The service is usable by all types of users, including mobility-impaired people.</p> <p>The subscription process is well defined in the website of the service, and in the one of the Municipality of Narni. Thanks to the connection offered by Chiamabus and the good quality of service, there is a continuous increase of users year by year.</p> <p>The number of users was 5,900 in 2020 due to COVID-19 pandemic.</p>
Costs	<p>Capital cost corresponds to a Capex of € 49,000.00. The software, consisting of a web part and mobile apps for users and drivers, costed € 14,500.00 for 3 years. The operating costs include personnel costs for around € 10,000.00 per year and opex fiscal year of € 250,000.00.</p> <p>The service is financed for the 68% by the Municipality and for the 32% by the Region through the Regional Transport Fund.</p>
Revenues	<p>The service is financed for the 68% by the Municipality and for the 32% by the Region through the Regional Transport Fund</p> <p>The price of the service corresponds to an urban travel ticket or ordinary or school subscription for TPL services. The basis price of Narni Chiamabus service is € 1,30. The ticket or the subscription for the Chiamabus service can be purchased both on the app, website and to the ticket offices.</p>

Narni Chiamabus • Italy

<p>Main barriers identified in the implementation process</p>	<p>One of the major problems is the economic sustainability of the cost of operating the service which concerns the costs relating to transport buses and booking center staff.</p>
<p>Lessons learnt</p>	<p>Local initiators consider the mobility services a success. The main lessons would be:</p> <ul style="list-style-type: none"> • improving software for a better efficiency of the service; • integrating the service with the standard public transport (urban and extra-urban); • involving rural population into the development of the service.
<p>What is necessary to implement the MS?</p>	<p>The expansion of the service is very dependent on citizens' demand and this can be stimulated by advertising the service as an optimal means of transport compared to using one's own car.</p>

Main milestones





Alley in Narni, Italy

Sopotniki • Slovenia

Community-based



Responsive to
vulnerable users



Established
brand



<p>Mobility Solution typology (MS)</p>	<p>Community bases door to door lift service.</p>
<p>Description</p>	<ul style="list-style-type: none"> • The service provides car rides to elderly people in 16 Municipalities in Slovenia, at no costs for the users. • The free transport service enables elders to access healthcare facilities, attend cultural events, visit friends, go to the doctor, go shopping, etc. • The Service is coordinated by the Sopotniki NGO.
<p>Population and area covered</p>	<p>127.500; 16 municipalities (2.432,70 km)</p>
<p>Why is this MS considered a good practice?</p>	<p>Sopotniki provides a valuable mobility service in rural areas catering to the social needs of the elderly, such as social inclusion, more accessible access to healthcare, and other public services. It has a reliable and efficient management, coordination, and organisation structure, which enables the provision of a transport service across different regions in the country and an efficient management of resources. Over the years, it gained great popularity and managed to involve an ever-increasing number of volunteers.</p>



Sopotniki • Slovenia

Organisers/Entity responsible for the implementation

The Sopotniki NGO Institute is the coordinator of the service. The structure consists of i) a central management team at the headquarters (4 people), responsible for strategic planning, regulatory compliance, fundraising, and coordination with municipalities. This team also oversees the recruitment, training, and support of volunteer drivers (almost 270 people with almost 19000 hours year offered); and ii) local units (13 people engaged as local coordinators), managing the day-to-day operations. Their responsibilities include scheduling rides, coordinating with drivers, and ensuring the safety and satisfaction of the elderly individuals we serve.

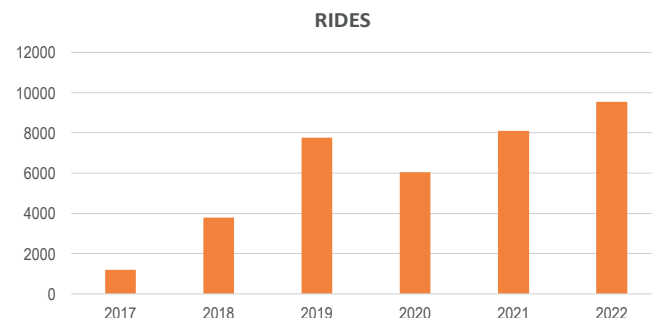
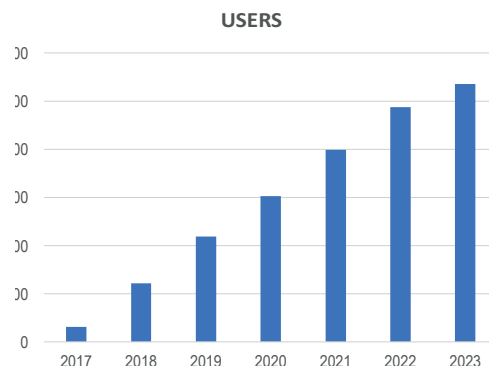
Sponsors or funding options

There are 3 main financing sources: donations from users, Public funds, i.e. grants from municipalities, Donations from private companies and sponsorships. Public funds from municipalities currently represent 80 % of financing. Municipalities in which the NGO operates usually provide a car, co-finance the work of coordinators and the activities of the NGO.

Impacts

The number of users and trip have been increasing since the starting date in 2017. At the beginning, it started with 312 users and in 2022 this number reached 5350. The number of rides also raised from 1187 in 2017 to 9552 in 2022. The main origin destinations are shops, health centers, public administration and other essential activities. The main trip motivations are access to essential commodities, leisure, health. The access to touristic point of interest is marginal in the overall trip distribution. 66% of the users use the service to go to the doctor and 25% use Sopotniki to reach basic services like groceries, courier, and hairdresser.

The number of users transported in a month goes from a minimum of 3671 to a maximum of 4458. The average length of the ride is 31 Km with a average distance from the nearest city of 7 km. The total travelled distance in 2023 was 414.633 km. The service is operated with 20 vehicles.



Sopotniki • Slovenia

<p>Costs</p>	<p>In 2023, the yearly cost of coordination of Sopotniki service is about 6.000 € per municipality. It includes:</p> <ul style="list-style-type: none"> • Personnel: Sopotniki staff, local unit staff who manage daily operations; • IT infrastructure: software, hardware, and support costs for IT system for operations, reporting, and remote monitoring; • Raising awareness: involving campaigns, advertising, and PR efforts - engaging communities is essential for attracting volunteers and users; • Administration/overhead: Office space, utilities, supplies, travels.
<p>Revenues</p>	<p>Government funding covers almost 90% of the service: grants/subsidies from various government levels. – These are provided by municipalities, local governments, and organizations in social welfare/ community development. - Revenues from goods/services and private donations provide additional support and flexibility (10%).</p>
<p>Main barriers identified in the implementation process</p>	<ol style="list-style-type: none"> 1. Dependency on Volunteer Availability: Sopotniki heavily depends on the availability of volunteers. A decline in volunteer participation or high turnover could disrupt the service. Also, volunteers might not always be available when needed, leading to inconsistencies in the service. 2. Financial Sustainability: Sopotniki's service is free for the elderly, meaning its operation heavily relies on funding from municipalities and private sponsors. Economic downturns, changes in sponsorship, or changes in local government budgets could disrupt funding and jeopardize the sustainability of the service.
<p>Lessons learnt</p>	<p>The organisational framework with local coordinators that are a focal point between elderly users and volunteers is an example of good practice and social innovation. Furthermore, the internal organisation of the Sopotniki, i.e. coordination of routes, timetables, user information, is also part of a good governance. Sopotniki operates on a flexible schedule, with volunteers contributing as their time allows. This flexible model may be a critical factor in attracting and retaining volunteers, and could be a useful approach for similar initiatives.</p>
<p>What is necessary to implement the MS?</p>	<ol style="list-style-type: none"> 1. Campaigns to recruit and maintain an active volunteer base. 2. Building up skills and Training; Development or acquisition of a suitable software platform. 3. Allocate Resources to fund the startup and operation of the service. 4. Identify a fleet of suitable vehicles; Cooperation with Municipalities: build trust. 5. Legal and Regulatory Compliance. 6. Public Awareness and Acceptance campaign.

Sopotniki • Slovenia

Main milestones

2014

In 2014, the institute SOPOTNIKI started with the aim to connect people in the rural and more disperse areas. The cars were put at the disposal of the volunteer drivers to move elderly.

First contact of the municipality of SEVENICA.

First employee hired with a specific profile to be sensitive to the peculiarity of the service.

2015

2017

2018:
professionalisation - recruitment of 2 persons (programme coordination; coordination of sponsorships and donations).

2018

2019

2018 - 2020:
period of rapid growth - 9 new units.

2020:
expansion of the service - creation of "plug-in" and "add-on" services: vouchers; "On the Road to 1000 wishes", ToyotaGO initiatives.

2020



Maribor, Slovenia

Bürgerbus Dreisam-Stromer Germany

User-centred
planning



Community-based



Responsive to
vulnerable users



Integration with
Public Transport









Good territorial
coverage



<p>Mobility Solution typology (MS)</p>	<p>Volunteer-based community transport service - on demand or fixed route, usually operated with mini van (8 seats).</p>
<p>Description</p>	<ul style="list-style-type: none"> • Operating in Kirchzarten, Baden-Württemberg region (Germany southwestern). • Volunteer drivers do not need to have bus driver licenses. • Financially combination of public and private funding as well as membership fees.
<p>Population and area covered</p>	<p>About 10.252 inhabitants, in an area of 21,16 km².</p>
<p>Description of the specific practice</p>	<ul style="list-style-type: none"> • The mobility service is provided via small buses and large passenger cars with a maximum capacity of 8 passengers. • The service is free and runs daily, except on Friday and Saturday afternoons and on Sundays and public holidays.



Bürgerbus Dreisam-Stromer • Germany

<p>Why is this MS considered a good practice?</p>	<p>Bürgerbus initiatives developed a lot in the state of Baden-Württemberg over the last twenty years. The involvement of the local citizens in the lead of a transport service allows a better understanding of communities needs and the possibility to develop a transport service really tailored to meet these needs.</p>					
<p>Organisers/Entity responsible for the implementation</p>	<p>The idea of developing community-based transport services, which in Germany was born in 1985, has successfully led to the development of 350 Bürgerbus services currently in operation. The Competence Centre for New Public Transport at NVBW (the mobility agency for the German federal state of Baden-Württemberg) supports municipalities and communities in developing community-based service.</p>					
<p>Sponsors or funding options</p>	<p>Bürgerbus is financially sustained by a combination of state and private funding. The state of Baden-Württemberg has been supporting Bürgerbus projects since 2013 with various measures.</p>					
<p>Impacts</p>	<p>According to a national study from 2016, a Bürgerbus scheme should serve a population of at least 3.000 persons (inhabitants in catchment area). Passenger numbers in most cases are between 300 and 2000 trips per month. All users benefit from a service that runs four times a day. There are no particular ICT or software requirements. Bürgerbus can work as a low-tech solution that based its success on the use of volunteer drivers and in the active participation of the local communities.</p>					
<p>Costs</p>	<table border="1"> <thead> <tr> <th data-bbox="409 1182 1021 1235">Capital costs</th> </tr> </thead> <tbody> <tr> <td data-bbox="409 1235 1021 1474"> <p>Investment costs: 30K€ - 40K€ per purchase of standard minibus. With extra equipment, the costs can be substantially higher</p>  </td> </tr> </tbody> </table>	Capital costs	<p>Investment costs: 30K€ - 40K€ per purchase of standard minibus. With extra equipment, the costs can be substantially higher</p> 	<table border="1"> <thead> <tr> <th data-bbox="1044 1182 1685 1235">Operating costs</th> </tr> </thead> <tbody> <tr> <td data-bbox="1044 1235 1685 1474"> <p>Fuel costs, vehicle insurance, main inspection (TÜV), maintenance of the vehicles, advertising and marketing</p>  </td> </tr> </tbody> </table>	Operating costs	<p>Fuel costs, vehicle insurance, main inspection (TÜV), maintenance of the vehicles, advertising and marketing</p> 
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Bürgerbus Dreisam-Stromer • Germany

Revenues	The service is free for all the citizen.
Main barriers identified in the implementation process	<ul style="list-style-type: none"> • It is not always so easy to find a balance between the need for locally “owned” and developed schemes and the traditions and requirements of planning and administrations. • In some cases, it could be not so easy to find an adequate number of volunteer drivers for covering most of the week days.
Lessons learnt	To develop such services, it depends mainly on community spirit, and the level of engagement on the local level. Indeed, to make the service work is usually not so much a technical question, rather a cultural and social one, i.e. convince people to use it. Thus, the importance of taking care of developing an accurate and strong promotional campaign.
Success, Durability and Expansion	<p>Efficient and attractive public transport is at the heart of a successful transition in the transport sector. The state government has therefore set itself the ambitious goal of doubling the demand for public transport by 2030 compared to 2010. The fact that this goal can be achieved with a joint effort of all stakeholders is demonstrated by the study Public Transport Report of Baden-Württemberg presented by the Ministry of Transport in 2020..</p> <p>The success and the durability of this service is highlighted by the number of Bürgerbus initiatives developed in the state of Baden-Württemberg over the last twenty years. A couple of initiatives were developed at early 2000; around a dozen in 2010; and more than 80 Bürgerbus are currently in operation.</p>
Funding and financing	Bürgerbus is financially sustained by a combination of state and private funding. The state of Baden-Württemberg has been supporting Bürgerbus projects since 2013 with various measures.
Service future outlook	Efficient and attractive public transport is at the heart of a successful transition in the transport sector. The state government has therefore set itself the ambitious goal of doubling the demand for public transport by 2030 compared to 2010. The fact that this goal can be achieved with a joint effort of all stakeholders is demonstrated by the study Public Transport Report of Baden-Württemberg presented by the Ministry of Transport in 2020.

Bürgerbus Dreisam-Stromer • Germany

Main milestones

1986

The first citizens' bus of Baden-Württemberg (BW) went into operation in 1986 in the rural municipality of Schlier, in the district Ravensburg, with a service dedicated to school children.

2003

The Bürgerbus idea was also developed in Salach, in the district Göppingen; after about two years the Salacher Bürgerbus took off with an eight-passengers minibus.

2011-2014

The Bürgerbus concept was officially recognized in the general traffic plan of BW from the year 2010. From 2010 to 2014, Bürgerbus spread from 12 to 40 municipalities. In 2014, the Association pro Bürgerbus BW was founded on state level, with the aim of coordinating and supporting the development of citizens' buses.

2023

The Competence Centre for New Public Transport at NVBW (the mobility agency for the German federal state of BW) has been established for supporting municipalities and communities in developing community-based service.



Castilla y Leon Demand Responsive Transport in Rural Areas • Spain

Integration with
Public Transport



Innovative
technology



User-centred
planning



Community-based



<p>Mobility Solution typology (MS)</p>	<p>On-demand, door-to-door transport service.</p>
<p>Description</p>	<p>Demand responsive transport services in Castilla y Leon in Spain serving low demand areas consisting of small and isolated villages (five residents upwards) and scattered settlements outside the main transport connections. The DRT service has currently about 800 routes operated in 105 areas belonging to 9 provinces of the region.</p>
<p>Population and area covered</p>	<p>1.226.462 inhabitants, 94.226 km² (North-west region of Spain).</p>
<p>Why is this MS considered a good practice?</p>	<p>For its innovative aspects of the service such as:</p> <ul style="list-style-type: none"> • the organizational responsibilities and partnership working arrangements, as the Regional Administration is managing the operation of the centralized dispatch center for the entire catchment area; • the level of interconnections between shared and public transport services, as DRT services connect the main towns/ villages with dispersed settlements allowing people to reach the main interchange points; • the ICT connections and impacts of the technological solutions implemented.



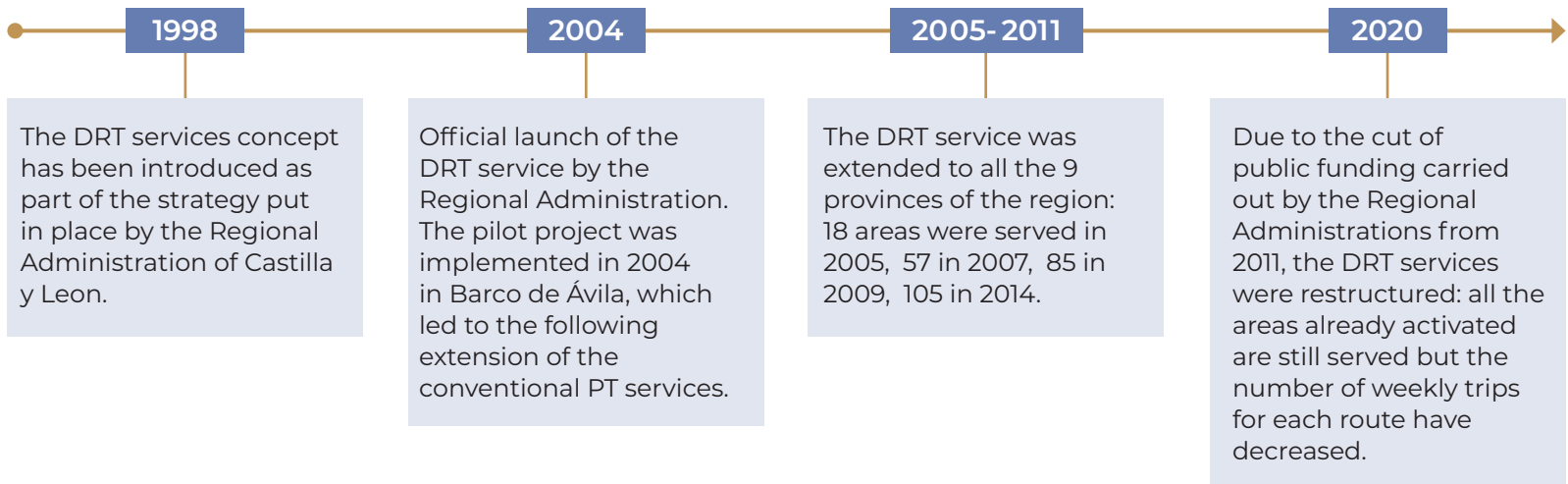
Castilla y Leon Demand Responsive Transport in Rural Areas • Spain

Organisers/Entity responsible for the implementation	<p>The Development Department of the Regional Government of Castile and Leon is the promoter of the initiative and financing body, it is also responsible for the contract for the implementation and maintenance of the IT system and responsible for the management of a centralized dispatching center and the service evaluation.</p>
Sponsors or funding options	<p>Castilla y Leon Regional Administration.</p>
Impacts	<ul style="list-style-type: none"> • In 2011 about 85.000 trips were operated. The yearly number of trips decreased after 2012 due to the service reduction carried out because of public funding cuts. Nevertheless, in 2017 the number of users increased again compared to the previous year by 7%. • The total number of citizens within the service catchment area is of 1.226.462 if one does not include the province capital and 2.239.643 if these major hubs are included. Overall, the DRT has transported 4.522.745 since its launch in 2004 until December 2022. The user profile consists of 66,7% women and 63,7% over 65 years old. Users give a score of 4,75 out of 5 when asked to assess the “Transport on Demand” service in general, along with 4,79 for vehicle comfort. • Figures of the overall ridership also show that there is a high seasonality effect, with requests increasing in the summer compared to the winter as a lot of people return to the region from their workplaces.
Costs	<p>The investment costs (IT system including the platform supporting the dispatch centre and the “on-board” equipment) sustained by the Regional Administration cost about 8 ML Euros. The annual subsidies for operating costs (financed by the Regional Administration) cost about € 6.200.000 [2021]. In addition to the above, the amount required to cover the deficit required to provide free fares amount to 600.000 €/year.</p>
Revenues	<p>From July 2021, the regional administration started to offer the DRT service for free. To make use of the service, users need to register in the system and use either a ticket which costs 5€ or the mobile app of the DRT that can be downloaded for free on Google Play or Apple Store.</p>

Castilla y Leon Demand Responsive Transport in Rural Areas • Spain

<p>Main barriers identified in the implementation process</p>	<p>The capacity to financially support a PT service offered in such a wide area is certainly a major challenge.</p> <p>Another apparent limitation of the service is that requests for trips need to be delivered well in advance (e.g. if you wish to travel on Monday morning the dispatch center is not open over the weekend); no relevant engagement practices have apparently been pursued.</p>
<p>Lessons learnt</p>	<p>The success of the service requires to have a regional administration willing to organize it, fund it and act as dispatch Centre.</p>
<p>What is necessary to implement the MS?</p>	<p>The service had a period of expansion until 2011. Since this date, the network coverage has remained essentially unchanged. However, the intensity of service offered has declined. The need to register limits the possibility of occasional users of the service such as the numerous tourists. A possible resolution of this limit could generate an increase in the use of the service.</p>

Main milestones





New Cathedral, Salamanca • Region of Castile and Leon, Spain • Photo: Santiagova
(https://it.wikipedia.org/wiki/Castiglia_e_Le%C3%B3n#/media/File:Reflejos_de_la_Catedrales_de_Salamanca.jpg)

Vallibus • Spain

Integration with
Public Transport



Innovative
technology



Established
brand



<p>Mobility Solution typology (MS)</p>	<p>DRT service on a pre-defined stops.</p>
<p>Description</p>	<ul style="list-style-type: none"> • DRT solution implemented in the lower density areas of the Vallirana municipality (Barcelona Metropolitan Area - Spain), where the public transport was experiencing low demand levels. • Operated as a mixed scheme, consisting of on-demand and scheduled bus transport services. • A IT platform has been implemented, consisting of a management module and different interfaces (for passengers, drivers, operator, and the Authorities).
<p>Population and area covered</p>	<p>15.658 inhabitants; 23,88 Km²</p>
<p>Why is this MS considered a good practice?</p>	<p>Limited mobility options were provided in the lower density areas of the Vallirana municipality. The GP designed and introduced a demand responsive service, without pre-defined timetables. The route is planned in real time upon a user request via the service user friendly App or website. Shorter waiting and travel times are now experienced by the users, comparing to the former solution (regular PT solution).</p>



Vallibus • Spain

Organisers/Entity responsible for the implementation	<ul style="list-style-type: none"> • Ajuntament de Vallirana (city council), which is the transport authority, responsible for the regulation, funding and contracting of the transport services. • Soler-i-Sauret, the Vallirana transport services provider, which is responsible for the transportation service and for managing the Shotl platform. • Shotl, the technology provider for the pooling/on-demand platform.
Sponsors or funding options	<p>The service is mostly funded by the Municipality of Vallirana.</p>
Impacts	<p>The DRT service started its operation just before the Covid 19 pandemics. The ridership increased 64% from Aug 2018 – Nov 2019.</p> <p>In 2019 (pre-COVID-19 period), the demand on the DRT services was 14 499 passengers, with an average demand of 52 users on working days and 22 users on Saturdays. In 2022, the demand was around 15,5 thousand passengers.</p> <p>Due to the Vallirana orography, most of the trips has origin in the city centre (down the hill) and destination in the residential areas (up the hill), since passengers are more likely to walk from their homes to the centre, then on their way back.</p> <p>The target user groups are the residents of peripheral areas. Given the fact that the on-demand service has been implemented in the off-peak period, the most suitable targets are the non-employed population, such as the young and elder people.</p>
Costs	<p>Given the fact that the service was operated in a regular basis, the investment on the on-demand service was very low. The municipality already had the vehicles, and no further investment was required.</p> <p>The Vallibús operating costs were around 370 thousand € in 2022, which includes the regular transport service as well.</p> <p>The cost of the platform is 13 thousand €/ year. The services are outsourced to a private company Soler-i-Sauret (PT Operator that was the concession holder of the former lines that have been replaced by the on-demand service). The business model is a concession, in which the operator is compensated by the municipality for the service provided, plus the income from the ticketing revenues</p> <p>The ticketing system is integrated with the system operated for the conventional service.</p>

Vallibus • Spain

<p>Revenues</p>	<p>The operating costs of the DRT service are covered as follows:</p> <ul style="list-style-type: none"> • 15 % from the ticketing revenues; • 5% from external funds; • 80 % from the municipality budget.
<p>Main barriers identified in the implementation process</p>	<p>The main barrier faced before the implementation, was related to the acceptance of the new service scheme by the current PT service users, and the feeling of uncertainty in the operator who needed reassurance that none of the existing customers would be lost.</p> <p>The municipality aims to expand the service but it hasn't been able to purchase an additional vehicle.</p> <p>Therefore, the municipality is planning to incorporate taxi services in order to expand the routes, to serve more stops and to give a better service to persons with reduced mobility.</p>
<p>Lessons learnt</p>	<ul style="list-style-type: none"> • The replacement of an ineffective conventional PT services by flexible services in low-demand periods, which provides a more tailored and sustainable service. • The flexibility of the service is a key factor for its success. • The implementation of technological solutions (platform) that provides added value for all stakeholder through dedicated interfaces.
<p>What is necessary to implement the MS?</p>	<ul style="list-style-type: none"> • Carry out a feasibility study to identify the rides/lines transporting few passengers per day and identify the most suitable solution. • Estimate service requirements, in particular for what concern the number of drivers and buses necessary to satisfy the transport demand in different periods of the day. • Carry on market research to identify possible IT platform with good functionalities for the end users and the back office. • Promote the services with efficient marketing and promotion campaigns.

Vallibus • Spain

Main milestones

2000

Four fixed-routes lines were operated in Vallirana by Soler-i-Sauret transport operator with few passenger trips per day.

2017

2018

June: A pilot testing is conducted for 2 months
September: The DRT service is officially launched.

2022

The municipality is planning to incorporate taxi services in order to expand the routes, to serve more stops and to give a better service to persons with reduced mobility.

2023



Vallirana, Spain

Bummelbus • Luxembourg

Responsive to
vulnerable users



Good territorial
coverage



Long-term
durability



<p>Mobility Solution typology (MS)</p>	<p>On-demand, door-to-door transport service.</p>
<p>Description</p>	<ul style="list-style-type: none"> • DRT service in Luxembourg at flat rates depending on the distance. • Fleet of 48 minibuses and 91 drivers • It complements public and private transport and is currently present in the northern region of the country, serving 45 municipalities. • An activity of the “Forum pour l’emploi” (social insertion of people), a professional association for reintegration that supports long-term job seekers.
<p>Population and area covered</p>	<ul style="list-style-type: none"> • 110.000 inhabitants, 1.164 km² (Northern region of Luxembourg)
<p>Why is this MS considered a good practice?</p>	<p>Bummelbus provides increased mobility for vulnerable users, especially children and elderly people, in sparsely populated areas. It strengthens inter-municipal cooperation in the field of mobility and maintains and promotes the attractiveness of the rural territories. It is organised in the framework of professional driver training for people that are long term unemployed. It builds on the cross-sectoral partnership between different public department.</p>



Bummelbus • Luxembourg

Organisers/Entity responsible for the implementation	<p>The service is offered by the “Forum pour l’emploi” in collaboration with the municipalities. The “Forum for Social Services” (Forum pour l’Emploi a.s.b.l, equivalent to a “non-profit association”) has been entrusted by the municipalities with the management of the project. 44 municipalities in the north of Luxembourg are currently involved in the Bummelbus.</p>
Sponsors or funding options	<p>The main financing source (70%) is the Ministry of Labour. Municipalities are also co-financing it (30%).</p> <p>The service can be extended to tourist activities in cooperation with local tourist businesses or associations, especially in summer period.</p>
Impacts	<ul style="list-style-type: none"> • There are 600 passengers per day, on Tuesdays and Thursdays there are 700 guests. • An average of 120.000 to 140.000 passengers are transported each year by a fleet of 48 minibuses and 91 drivers. • 60% of passengers are children, 40% are adults, mainly elderly people. • 20% of the trips are for sporting activities, 12% for school transport, 13% for day care. <ul style="list-style-type: none"> • From the social point of view, the service enables the long-term unemployed to get trained and qualified for jobs in the transport sector. In 2016, 40 employees reintegrated into the job marketing. • The trips are mostly under 10 km.
Costs	<p>Costs are incurred for the leasing of the vehicles, the Call Centre, insurance, fuel and the costs for permanent employees.</p> <p>Tariffs vary between 2 EUR (up to 10 km) and 7 EUR (25- 35 km) depending on the distance for adults and between 1.50 EUR and 6 EUR for children.</p>

Bummelbus • Luxembourg

Revenues	<p>Altogether there are 140 employees and 1.7 million euros are earned annually through ticket revenue.</p>
Main barriers identified in the implementation process	<ul style="list-style-type: none"> • The project relies on the cooperation of the “Forum pour l’emploi” and its organisation, as the drivers are long-term unemployed people who are hired for the project. • One difficulty could be the limited range of 35 km and that the reservation has to be made one day before. • Another difficulty is that at a certain moment in time, the service was seen as a competitor by the regular transport companies. This is a difficulty as the service should train people for the regular transport companies.
Lessons learnt	<p>The project is seen as a success, as a large number of municipalities have already joined. In addition, some long-term unemployed people have found their way back into the job market.</p> <p>With the help of the software that calculates routes that cover the travel wishes of as many people as possible with one and the same trip, the offer becomes more environmentally friendly.</p>
What is necessary to implement the MS?	<ul style="list-style-type: none"> • Select a small number of villages/communities to develop a pilot project. • Assess the needs of vulnerable user groups and the current transport provision. • Identify an entity similar to the “ Forum pour l’emploi” (social insertion of people) who is already offering services like garden maintenance often for elderly people. • Collaborate with a high level entity at the Regional or National level which could provide comprehensive and durable financing, in line with other existing policy goals (e.g., tool for economic integration of the long-term unemployed).

Bummelbus • Luxembourg

Main milestones

2001

The good practice started in 3 villages, mainly targeting elderly within the framework of national funds provided by the Ministry of Labour, Employment and the Social and Solidarity Economy.

2002

Continuous expansion to include more municipalities - 80 towns – 255 villages. Also, the target group of people was expanded to the whole population, but mainly youngsters for their activities after school.

2015

2016

Integration into activities of the Interreg Europe project “Last Mile”.

2020



Alscheid (Luxembourg) seen from Consthum

Transport on-demand service in Bielsko-Biala • Poland



<p>Mobility Solution typology (MS)</p>	<p>On-demand transport (ToD) service and mobility center for residents of remote rural areas implemented in Bielsko-Biala, Poland.</p>
<p>Description</p>	<p>An on-demand transport (ToD) service was implemented in the village of Wilkowice and was operated from December 2019 to March 2020. Along with this service, a complementary mobility center for residents of remote rural areas was also implemented in main city of Bielsko-Biala. This Mobility Center (MC) represented a “one-stop shop” where residents could get information on all types of mobility options, e.g. public transport, taxis, bike sharing, ride-sharing and car rental.</p>
<p>Population and area covered</p>	<ul style="list-style-type: none"> • 168.319 inhabitants, 124,51 km² (South)
<p>Why is this MS considered a good practice?</p>	<p>A positive long-term result was achieved with the implementation of the ToD service as the local government agreed to fund the extension of a conventional bus service to the pilot area. In this regard, the pilot was clearly fundamental in raising the profile of rural mobility needs and in highlight the importance of acting. As the ToD concept was innovative in the context of Poland, the pilot attracted a great deal of interest and new avenues of cooperation. The local authorities and institutions involved are cooperating better as a result of the experience of delivering the ToD service.</p>



Transport on-demand service in Bielsko-Biala • Poland

<p>Organisers/Entity responsible for the implementation</p>	<ul style="list-style-type: none"> • The lead partners involved in establishing the ToD pilot, i.e. Bielsko-Biala Regional Development Agency and Bielsko County. These organizations were partners of the MAMBA INTERREG project and responsible for managing the scheme and undertaking the promotional work. • Bielsko District Head Office in Bielsko-Biała in cooperation with the Wilkowice Municipality conducted the pilot activities in the field of implementation and testing of “Transport on Demand” and was responsible for the coordination and handling of the submitted orders. • Private and public entities operating transport services in the district, such as taxi companies, car rentals, bike rentals, car sharing, in cooperation with the Regional Development Agency in Bielsko-Biała, in particular to provide data for the Mobility Centre website.
<p>Sponsors or funding options</p>	<p>The pilot project was co-financed by the INTERREG MAMBA Project and trips with the ToD service were offered free of charge.</p>
<p>Impacts</p>	<p>The Transport on-demand service was active in the area of Bielsko-Biala. The pilot, mostly active within the Wilkowice commune, was implemented on the Wilkowice - Granica-Stalowik to Bielsko-Biala and Stalownik Bielsko-Biala to Wilkowice Granica axis. Residents from the pilot area were able to call the Mobility Centre or visit the website (at least 24 hours in advance) in order to book a journey with the ToD service. The most effective form to request/book transportation was the online service www.cmpb.pl/, the internet platform created as part of the INTERREG MAMBA project, where the service was always accessible (24 hours for 7 days). Residents could use the transport free of charge from Monday to Friday from 7.00 am to 3.00 pm. In total, between September and December 2019, 148 trips were made, serving almost 180 people. The number of users increased steadily during the pilot phase and people expressed the interest for the service to continue after the MAMBA project.</p>
<p>Costs</p>	<p>The service benefited from the possibility of providing free travel thanks to the funds made available by the MAMBA project. Defining what level of charges would be acceptable for the users in the long term, would be an important area of further study. In particular this would be very useful for attracting other user groups such as commuters, as well as providing a subsidized service, with a strong social function. The estimated cost of the ToD service is € 2.500 - € 3.000/month.</p>

Transport on-demand service in Bielsko-Biala • Poland

Revenues	<p>The service was free for the users.</p>
Main barriers identified in the implementation process	<p>The cutting of government funds for rural mobility has become a political issue in Poland; village councils were concerned about taking on financial commitments.</p> <p>This led to a reticence from other villages to be involved in a pilot, as funding a permanent ToD service could be a problem.</p> <p>The lack of transport services or initiatives for people in rural areas, in particular for the most vulnerable groups such as elderly people without a car, led public authorities to implement a ToD service, as a response to a recognised problem.</p>
Lessons learnt	<p>This was a small-scale pilot for a limited time period, but the significant work undertaken to implement and promote an innovative scheme in the Polish context has paid off.</p> <p>Residents of the pilot area were initially skeptical, but later they supported the continuation of the Transport on Demand service.</p> <p>Similarly, the Bielsko pilot has raised considerable interest from other public authorities and service advocates are now promoting for a change in the legal definitions of public transport to enable ToD schemes to be introduced more widely.</p>
What is necessary to implement the MS?	<p>Given the specific situation in Poland, where ToD services are not recognised by the legislation and therefore cannot be financed with public funds, it was not possible to continue with the service.</p>

Transport on-demand service in Bielsko-Biala • Poland

Main milestones

2019 / December-March 2020

Implementation of a pilot of an on demand transport (ToD) service in the village of Wilkowice.

2020 March

The encouraging results obtained during the pilot in terms on numbers of rides, number of users and users' feedback about the service were analysed and presented to the district authorities and Wilkowice Municipality.

2020 March

Despite the positive results, the local authorities decided not to pursue with the ToD service, as it would have been necessary that Wilkowice Municipality finance the whole service.



Panorama of the center of Wilkowice, Poland

Go-Mobil Door-to-door DRT Austria

Community-based



Responsive to
vulnerable users



User-centred
planning



Integration with
Public Transport



Good territorial
coverage



<p>Mobility Solution typology (MS)</p>	<p>Go-Mobil is a door-to-door flexible transport service that operates in 36 peripheral and rural areas in the region of Carinthia, in Austria.</p>
<p>Description</p>	<p>Go-Mobil is the largest and multiple award-winning non-profit mobility model in Austria for municipalities with insufficient public transport access. The service complements conventional public transport systems and provides residents access to groceries, doctors, post offices and bus stops. Go-Mobil is offered every day of the week. The service is accessible on working days (8.00-24.00), on Saturday (9.00- 24.00) and Sunday (9.00-22.00).</p>
<p>Population and area covered</p>	<p>560.939 inhabitants; 9,536 km²</p>
<p>Why is this MS considered a good practice?</p>	<p>Go-Mobil has become essential in the many municipalities of Carinthia as well as largely improving the public transport offer. The local economy benefits with about 1500 member companies from the fact that the purchasing power remains in the rural municipalities. In addition, Go-Mobil supports the sense of belonging, provides everyday security and enables a self-determined life. For many seniors, Go-Mobil offers a new quality of life. For parents, it is helpful because they know their children are independently and safely mobile.</p>



Go-Mobil Door-to-door DRT • Austria

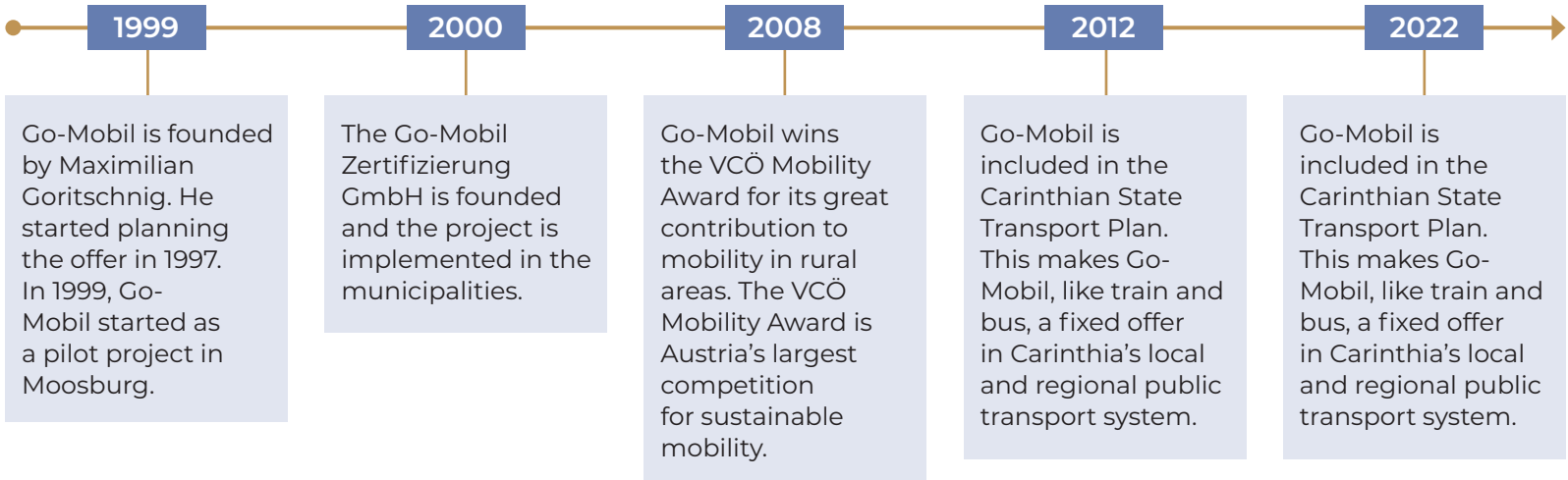
Organisers/Entity responsible for the implementation	<p>The Go-Mobil Zertifizierung GmbH (GMZ) is the holding company which supports the organisation of the Go-Mobil services in rural municipalities.</p> <p>Go-Mobil is organized by 20 private non-profit local associations belonging to GMZ. The decentralised tasks, in the foreground of course the operation, are the responsibility of the local Go-Mobil associations in the municipalities. 12 of the 21 non-profit Go-Mobil associations work across municipalities.</p>
Sponsors or funding options	<p>The initiative is supported and co-financed by the Carinthian state government.</p> <p>Go-Mobil cooperates with ÖBB, the national railway company of Austria, and buses.</p>
Impacts	<p>The approximately 160.000 passengers per year make an additional value-added contribution of 1,5 to 2 million euros annually in the Carinthian municipalities. In addition, out-migration and unemployment are lower in Go-Mobil municipalities.</p> <p>The use of public funds in relation to the scope and quality of service is most efficient in Go-Mobil compared to other micro-public transport systems across Europe.</p> <p>Integration with existing mobility services such as bus and rail are very feasible with Go-Mobil. This is proven not least by the fact that Go-Mobil has been integrated into the Carinthian state transport plan.</p> <p>Municipalities with Go-Mobil have significantly lower commuter rates (-20%) than structurally similar municipalities without such a service.</p> <p>This service is particularly well suited to counteracting the trend toward second and third cars, which is especially widespread in rural regions. Since this system allows a similar freedom as the second car.</p>
Costs	<p>The operating costs are covered by the municipalities and the state of Carinthia and the federal government.</p> <p>The annual financial resources provided by the municipalities for the Go-Mobil service are between 3.500 and 7.500 euros depending on the number of vehicles and the area covered.</p> <p>The drivers are volunteers, but they are reimbursed for sustained expenses.</p>

Go-Mobil Door-to-door DRT • Austria

<p>Revenues</p>	<p>Go-Mobil is funded mostly (between 70% and 100%) through ticket revenues and annual membership fees from national and local companies and organisations, e.g. the Austrian Federal Railways (ÖBB), the Transport Association of Carinthia, Kärntner Linien.</p> <p>A ticket costs 3,80 euros in advance at a member company and 5,20 euros in the vehicle. Children under six years of age can travel free of charge with a person with parental authority.</p> <p>For the journey to or from a member company, one ticket must be purchased. For all other journeys, two tickets are charged.</p>
<p>Main barriers identified in the implementation process</p>	<p>The Go-Mobil organisation structure is based on 20 private non-profit local associations belonging to the holding company GMZ. One difficulty could be that the model relies on volunteer drivers.</p> <p>There is no information on tourist use or seasonal variations.</p>
<p>Lessons learnt</p>	<p>For the initiators, the project is a success. Thanks to the service, out-migration, commuter rates and unemployment are lower in the affected municipalities than structurally similar municipalities without such a service.</p> <p>This service is also particularly well suited to counteracting the trend toward second and third cars in rural areas.</p> <p>Go-Mobil has led to an interweaving of different stakeholder interests at the community level, which is a prerequisite for a sense of community cohesion and local problem awareness.</p>
<p>What is necessary to implement the MS?</p>	<p>Go-Mobil is like a taxi that is especially suited for the short distances in the municipalities.</p> <p>In order to set up the service, a superior organization is needed, such as the GMZ, which supports the organization of the service.</p> <p>In addition to the vehicles, drivers are needed who do their job on a voluntary basis.</p>

Go-Mobil Door-to-door DRT • Austria

Main milestones



View at Moosburg, Carinthia (Austria)

Texelhopper • The Netherlands

Responsive to
vulnerable users



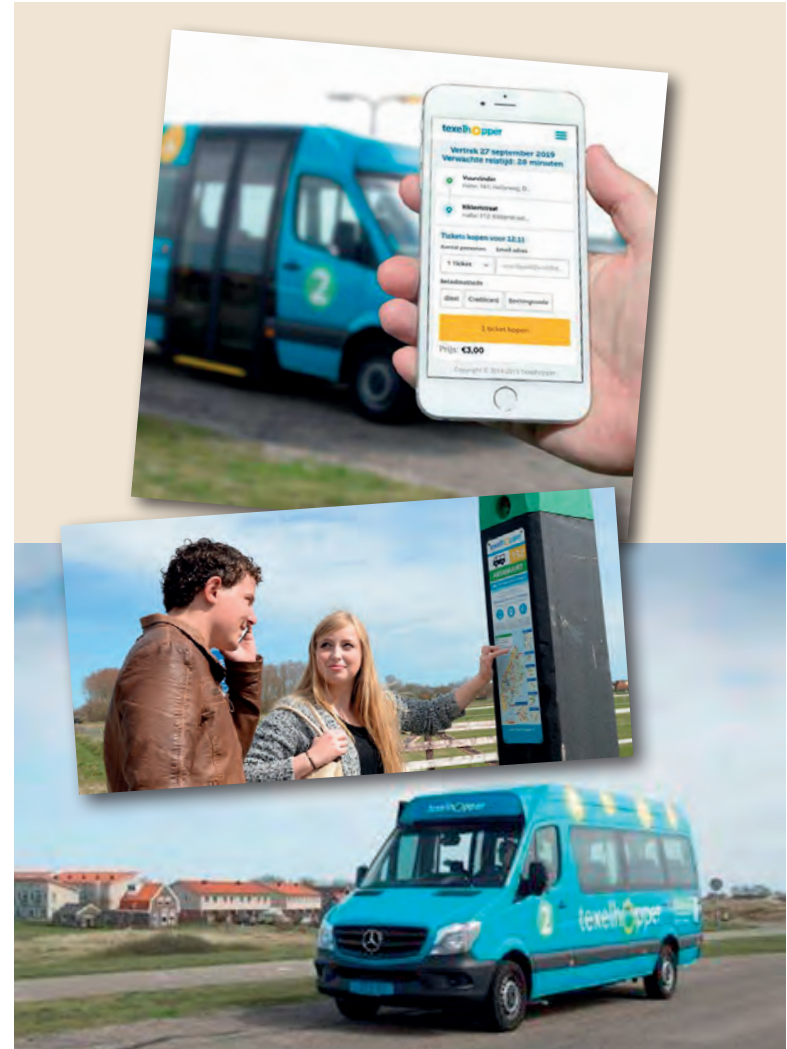
Integration with
Public Transport



Established
brand



<p>Mobility Solution typology (MS)</p>	<p>Demand-influenced stop-to-stop flexible transport service on the Isle of Texel.</p>
<p>Description</p>	<ul style="list-style-type: none"> • Combination of a regular bus line and the flexible use of smaller busses. • It enhances intermodal coordination between ferry, train, and bus. • All services are provided by the local taxi operator as a subcontractor of the public transport operator.
<p>Population and area covered</p>	<p>Nearly 14 000 of which half in the town of Den Burg; 162.0 km²</p>
<p>Why is this MS considered a good practice?</p>	<p>Starting from a pilot, Texelhopper succeeded increasing the use of a rural transport system, without increasing the public money invested, by reorganising all existing transport services. A good partnership between the public transport operator and the five local taxi companies has been put in place for the operation of the service.</p>



Texelhopper • The Netherlands

<p>Why is this MS considered a good practice?</p>	<p>During the pilot phase, the Municipality of Texel was the main actor who organised the transport system and had the regie of the Texelhopper; the province only financed the service.</p> <p>The operation was shared between the PT operator, Connexion-Transdev, for the standard bus line and the taxi operator for the demand influenced service.</p> <p>Now, since July 2018, the service is completely subcontracted to the local taxi company by the PT operator (Connexion-Transdev, which still remains the organizer).</p>
<p>Sponsors or funding options</p>	<p>The main funding source is the province.</p>
<p>Impacts</p>	<p>The use of PT has increased since the introduction of the Texelhopper, especially in the touristic summer months with lots of tourists.</p> <ul style="list-style-type: none"> • From 11 000 in Aug 2015 to 16 000 in Aug 2017 (+45%). • From 6000 in Dec 2015 to 6400 in Dec 2017 (+7%). <p>As indicated by the increase in users of the service, people are satisfied. Initially, surveys among locals showed a less positive view; while tourists have a much more positive opinion.</p>
<p>Costs</p>	<p>For the start of the pilot, there was a one-time funding of EUR 1.7M to set up everything.</p> <p>At the beginning, a budget of EUR 300 000 was foreseen to supplement EUR 3/journey; therefore, 100 000 journeys were necessary to consume the whole subsidy budget.</p> <p>Above that sum, demand was calculated to be sufficient for the operator to cover the costs.</p> <p>The usage of the Texelhopper costs € 3,05 per ride. Combination ticket with the ferry used to costs € 3,25. Some membership fees are applied.</p>

Texelhopper • The Netherlands

Revenues	<p>The main funding source is the province subsidy and revenue from ticket sales (approx. 50%/50%).</p>
Main barriers identified in the implementation process	<ul style="list-style-type: none"> • Initially, there was an opposition by local citizens; therefore, budget for communication was spent in engaging with this group. • Furthermore, there needed to be a revision of the legislative framework to enable the organisation of the pilot. • Lastly, the involvement of the province led to some side effects such as overshooting of problems and consumerisms within the stakeholder groups and original initiators.
Lessons learnt	<p>The GP finds its origin in a rethinking of the previous PT system with only two “traditional” buslines and lots of small services for target groups among those workers in the tourist sector.</p> <p>One traditional bus line and the scattered small services were combined into a demand influenced service.</p> <p>This resulted in the increase of PT ridership by 7 to 45% over 2 years depending on the month.</p> <p>ICT algorithm allows to propose the best timetable based on previous experience; in that way the minibuses can combine 5 trips on average per bus trip.</p>
What is necessary to implement the MS?	<p>Good Preparation & communication with local people to overcome fear for change.</p> <p>A modification in the legislative framework (a taxi company provides the transport services while normally a PT company should do).</p> <p>Rethinking the whole system, and not just bringing some changes at the margin of the existing system.</p> <p>The environment with a lot of tourists facilitated the pilot success.</p>

Texelhopper • The Netherlands

Main milestones

2014

The Texelhopper was first implemented as a pilot from December 2014 for 2 years.

2016

2018

In July 2018, it became part of the new concession. Since 2018 it is also possible to pay with the national transport card (OV-chipkaart). This was a strong wish from users since the beginning of the Texelhopper.

2021

2022

In 2022 Transdev announced to discontinue numerous lines in the region of North-Holland. Transdev estimated that certain lines would never be break-even. The Texelhopper was not discontinued.



Stokrozen, Den Burg, Texel (The Netherlands)

Medio Tejo • Portugal

Good territorial
coverage



Sustained
ridership growth



Long-term
durability



<p>Mobility Solution typology (MS)</p>	<p>On-demand services with predefined routes schemes and pre-defined stops.</p>
<p>Description</p>	<ul style="list-style-type: none"> • Operated by taxis (connections between dispersed villages) and mini-vans (connections between the 6 medium-sized cities). • Coordinated management of various services/ schemes through a centralised booking/ dispatch centre, managed by the Comunidade Intermunicipal Medio Tejo (CIMT), an association of Local Municipalities and Public Authorities and operated by a pool of about 30 taxi operators and 3 mini-vans.
<p>Population and area covered</p>	<ul style="list-style-type: none"> • 247,331 inhabitants; The 6 bigger cities in the region aggregate 30% of the population. Sixty percent of the population lives in small villages of less than 2,500 residents. • Area of 3,344 km²



Medio Tejo • Portugal

<p>Why is this MS considered a good practice?</p>	<p>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 expiring for the adopted step-by-step implementation process based on the initial introduction of a pilot service (well representative of the target area) and the following extensions to other schemes/areas (managed by the same booking Centre). The cooperation with taxi operators is a second success factor.</p> <p>The ongoing reduction of deficits in the operational costs and the improved percentage of coverage of service costs guaranteed by the revenues (from 2013 to 2016) demonstrate the high potential in terms of costs optimization and the effectiveness of the monitoring//tuning process establish by the Good Practice.</p>																														
<p>Organisers/Entity responsible for the implementation</p>	<p>The services are managed by CIMT - Comunidade Intermunicipal Medio Tejo which design them in accordance with the needs expressed by the Local Municipalities. The CIMT manages the centralised booking centre to reserve trips for all the served areas. On the other hand, Local Authorities are in charge of contacting taxi operators to operate the services.</p>																														
<p>Sponsors or funding options</p>	<p>The funding of the services is sustained and managed by the Municipalities through the coordination of the CIMT. Tickets are also funded by a national programme that finances the reduction of public transport tickets nation-wide.</p>																														
<p>Impacts</p>	<p>The progressive extension of the DRT services from the pilot implementation to the actual coverage helps to demonstrate the success encountered among the target population. Since its launch as pilot initiative in Mação, passengers increased from less than 1,000 (in 2013) to 3,000 (2016).</p> <p>Main KPI of the service are summarized in the table below.</p> <table border="1" data-bbox="409 1185 1681 1449"> <thead> <tr> <th>Year</th> <th>Km performed</th> <th>Passengers transported</th> <th>Fare revenues</th> <th>Operational costs</th> <th>Revenues / Costs</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td>164 222</td> <td>13 655</td> <td>20 636 €</td> <td>106 788 €</td> <td>19%</td> </tr> <tr> <td>2020</td> <td>265 190</td> <td>15 871</td> <td>21 018 €</td> <td>197 646 €</td> <td>11%</td> </tr> <tr> <td>2021</td> <td>386 243</td> <td>22 200</td> <td>36 221 €</td> <td>248 378 €</td> <td>15%</td> </tr> <tr> <td>2022</td> <td>551 351</td> <td>32 682</td> <td>55 689 €</td> <td>343 543 €</td> <td>16%</td> </tr> </tbody> </table>	Year	Km performed	Passengers transported	Fare revenues	Operational costs	Revenues / Costs	2019	164 222	13 655	20 636 €	106 788 €	19%	2020	265 190	15 871	21 018 €	197 646 €	11%	2021	386 243	22 200	36 221 €	248 378 €	15%	2022	551 351	32 682	55 689 €	343 543 €	16%
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Medio Tejo • Portugal

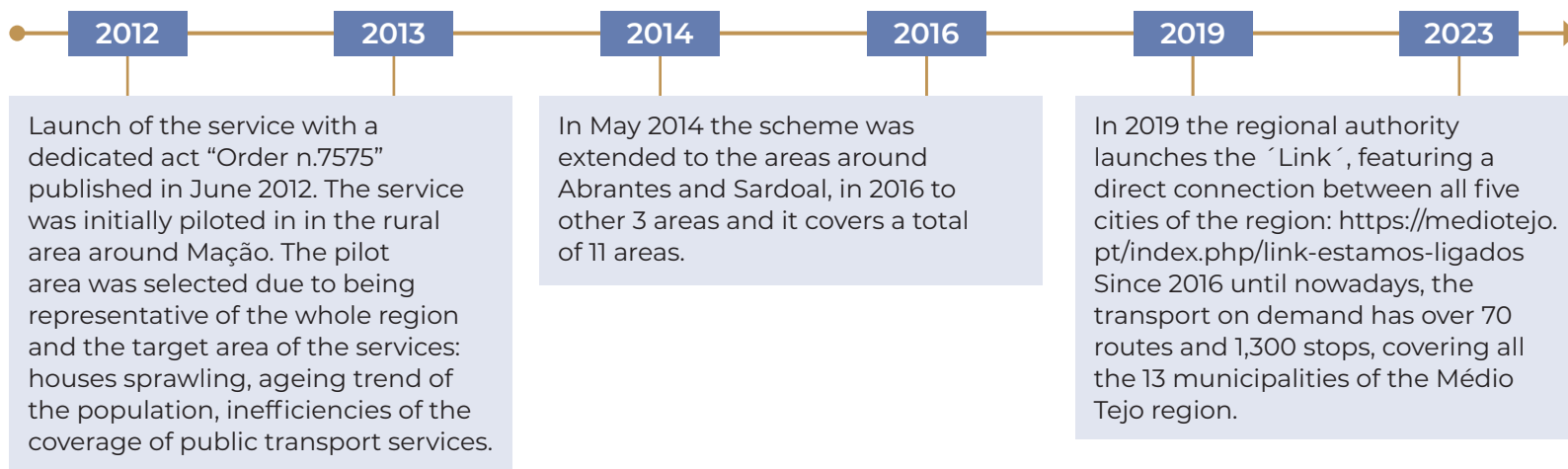
<p>Costs</p>	<p>Operational costs sum up to €343,543.00 in 2022.</p> <p>The overall investment cost in the SW for collection of trip requests and the service planning was around 120,000€, 85% of which was cofounded by the national operational program. Running costs account to about 12,000€/year and are embedded in the overall operational costs of the system.</p> <p>There are currently contracts with 30 different Taxi operators. Typical contracts with Taxi operators include a fixed monthly payment of 50€ per vehicle and a flexible payment assigned to the number of concrete km performed, normally around 0.80€/km (but multiple contracts exist so there is no standard contract).</p>
<p>Revenues</p>	<p>From the launch of pilot implementation (2013) to 2016 the operational deficit has been reduced from 3.5 Euro/ travelled Km to 0.34€/km.</p> <p>In 2022 the tariff revenues covered 16% of the operation costs of the services. The operational deficit in 2022 is of €0.52 /travelled Km.</p>
<p>Main barriers identified in the implementation process</p>	<p>The main barrier encountered by the service promoters lied on the cooperation with taxi operators which required to present them the flexible services as an opportunity to increase revenues, rather than the opposite.</p> <p>After overcoming this first barrier, a formula to establish the level of contribution of the service must be defined taking account the needs of Public Authorities to save money compared to the operation of the service with conventional bus services.</p> <p>Finally, a change in the working procedure was required in order to make available the scheduled timetable of the flexible (DRT) service (planned by the Booking Centre) to the various zones covered by taxis.</p>
<p>Lessons learnt</p> <p>What is necessary to implement the MS?</p>	<p>The adoption of a common (centralised) Booking Centre has proved to be a good solution to optimise operational costs. Moreover, the cooperation with taxi operators is a second success factor.</p> <p>The step-by-step implementation process adopted by the service promoter (CIMT) is also very inspiring: the service was firstly launched as a pilot in a demo area which is well representative of the target area and was progressively extended based on the conjoint feasibility analysis of local Municipalities and CIMT and analysis of service performance.</p>

Medio Tejo • Portugal

What is necessary to implement the MS?

- Assess the regulatory framework for the provision of flexible transport service.
- Allocate responsibilities to an inter-municipal entity (e.g., an association of municipalities) that can take the leadership of the service.
- Engage existing taxi and small local operators through a collaborative framework .
- Start with a pilot area, to be extended over time.

Main milestones



Convent of Christ, Tomar - Portugal

Photo: Vitor Oliveira - [https://commons.wikimedia.org/wiki/File:Convento_de_Cristo_-_Tomar_-_Portugal_\(33008466760\).jpg](https://commons.wikimedia.org/wiki/File:Convento_de_Cristo_-_Tomar_-_Portugal_(33008466760).jpg)



Alpine Bus • Austria

Good territorial
coverage



Established
brand



Long-term
durability



<p>Mobility Solution typology (MS)</p>	<p>Fixed routes & on-demand transport service.</p>
<p>Description</p>	<ul style="list-style-type: none"> • Transport service connecting small villages under 100 inhabitants (where the conventional Public Transport services is not provided) with the main tourist destinations. • Various kind of service schemes and vehicles: bus, taxis and post carriers. • Organized as an association combining public Authorities and Private Companies with a national Managing Board and several regional partnerships.
<p>Population and area covered</p>	<p>Operated in 19 areas/regions (29.000 Km²); About 2 million inh.</p>
<p>Why is this MS considered a good practice?</p>	<p>The “brand” of the national initiative networking different local services is a key factor for making them recognizable by the users. The role of the National Association (Secretariat + Managing Body) supporting the local partnerships can foster the proper start up of the new services and the extension of the initiatives. Thanks to this networking role, the local partners can learn from each other and the sharing of good practice contributes to improve the service operation and to adapt the design to the evolving needs.</p>



Alpine Bus • Austria

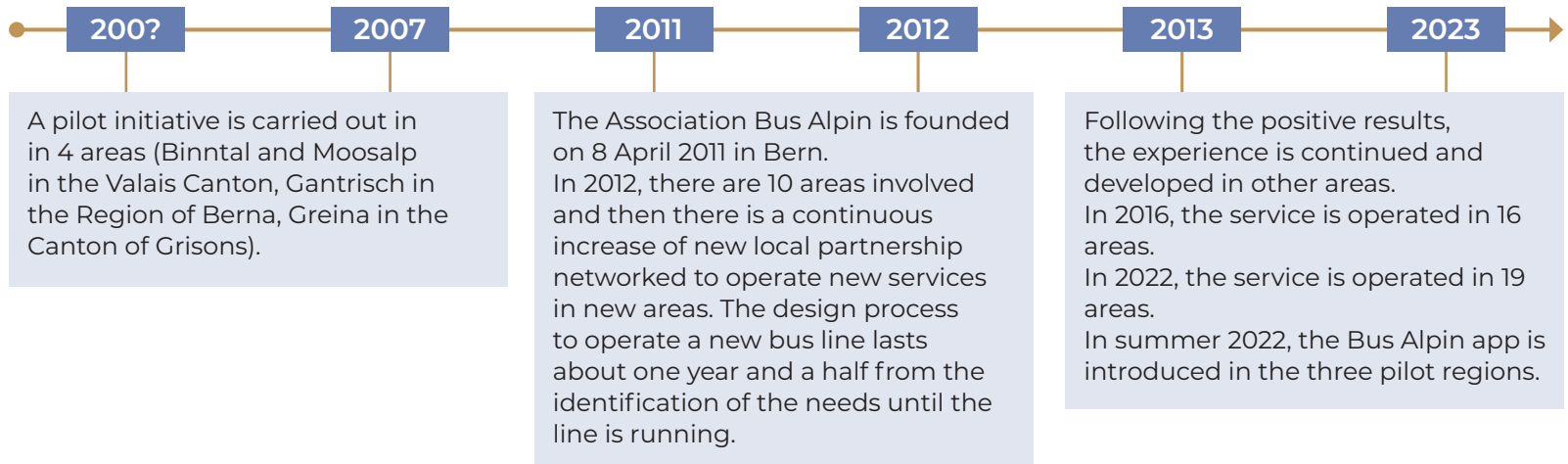
<p>Organisers/Entity responsible for the implementation</p>	<p>Bus Alpin consists of a national and a local/regional partnership.</p> <p>The National Association is jointed by the following bodies: SAB – National Association of Mountain Regions, ATE – National Association for Transport and Environment, UTP – National Association of Public Transport Operators, CAS – Swiss Alpine Club and CarPostal Suisse S.A., national postal operator. The national association is chaired by a Managing Committee supported by a Technical Secretariat.</p> <p>The composition of the regional partnership is variable: it always includes Local Authorities. Other local partners can be tourism offices and agencies, regional parks, local enterprises (e.g. restaurants, hotels) can be included as local sponsors.</p>
<p>Sponsors or funding options</p>	<p>Each participating region provides a target budget to support the activities at national level. Other funding for the association comes from national sponsors. Other funding are provided by Local Authorities, regional members and local sponsors (private enterprises).</p>
<p>Impacts</p>	<p>The objective of the Bus Alpin association is to promote the regional tourist destinations offering a sustainable way to visit them: where people used to take their private car, they now have the possibility to use common transport instead.</p> <p>This strengthens nature-oriented tourism in the mountain areas and creates alternatives for guests to do without their own car when arriving. Guest surveys have shown that Bus Alpin creates millions of euros in added value by addressing new guest segments. Every year, more than 100,000 passengers are transported in the Bus Alpine regions, who spend money locally. Because a considerable proportion of these new customers switch from cars to public transport when they arrive, they can even benefit the environment and the climate.</p> <p>A total of around 132,000 passengers used the Bus Alpin offers in winter 2021/22 or summer 2022, which corresponds to an increase of 16.3 % compared to last year and a minus of 5.9 % compared to the pre Covid-19 record result (2019). The Covid-19 effects are now less noticeable, the preCovid-19 level of demand has almost been reached again. The best results were achieved in the regions of Chasseral, Lenk-Simmmental, Thal, Valde-Charmey and Züri Oberland (each in summer – Val-de-Charmey also in winter).</p>

Alpine Bus • Austria

<p>Costs</p>	<p>Concerning the business model, the biggest challenge is and remains the financing of local bus companies. In contrast to conventional public transport services, Bus Alpin services generally do not benefit from public compensation. For this reason, ticket prices in some regions are significantly higher than normal ticket prices and season tickets (GA travelcard, Half-Fare travelcard, etc.) are not accepted.</p> <p>About financial data, the annual budget for the national office is currently around CHF 60,000. The services are financed exclusively by membership fees.</p> <p>The bus companies in the regions are financed separately. They cost over CHF 1,000,000 per year. In each region: the costs to run the buses depend on the areas (number of lines, length of the lines, frequency). They are comprised between 20.000 CHF and 70.000 CHF. These costs are borne by ticket revenues, regional sponsors, sponsors and, in individual cases, by the cantons.</p>
<p>Revenues</p>	<p>The fare cover between 30 to 95% of the costs (depending on the service/area).</p>
<p>Main barriers identified in the implementation process</p>	<p>The Local Members find difficulties in engaging local sponsors, in particular when a new local partnership is established and a new service operated.</p> <p>Some of the regions involved in the initiative face a poor level of private funding also several years after the launch of the partnership.</p>
<p>Lessons learnt</p>	<p>The “umbrella” role of the national initiative facilitates the growing of new services, providing support and networking. The partnership among public bodies and private companies can be a transferable model even the experience of Bus Alpin demonstrates that it is difficult to get a good level of private contribution to operate the service.</p>
<p>What is necessary to implement the MS?</p>	<ul style="list-style-type: none"> • Identify the low demand and underserved areas where to operate the new service. • Assess the needs of the residents and the potential to take advantage of the tourist demand to co-finance the service. • Analyse the framework conditions and the national level to orchestrate the service, ensuring the presence of the organisational and communication links between the national and regional level. • Identify/call for a specific transport operator which could be the main responsible for the service.

Alpine Bus • Austria

Main milestones



Nünenefflue and Gantrisch (Switzerland)

Prontobus • Italy

Good territorial coverage



Integration with Public Transport



Innovative technology



Community-based



User-centred planning



Responsive to vulnerable users



<p>Mobility Solution typology (MS)</p>	<p>ProntoBus is an on-demand bus service operated in the Province of Modena, Emilia Romagna Region (Italy).</p>
<p>Description</p>	<p>The service operates in the Province of Modena, Emilia Romagna Region (Italy). It connects low demand areas and sparsely hamlets with the relevant centres and/or with the main axes of the transport network. It was tested in the Municipality of Pavullo nel Frignano in 2003, and it was activated in the Municipality of Castelfranco Emilia, from 2006. The positive results of the first implementation led to the implementation of the service also in the Municipality of Maranello, Mirandola, Carpi and in the South and North quadrants of Modena in 2008.</p>
<p>Population and area covered</p>	<p>136.882 inhabitants; 410,68 Km²</p>
<p>Why is this MS considered a good practice?</p>	<p>The good results obtained by ProntoBus allow to keep operative and active the service and to receive funding from private and public entities. Local initiators consider the mobility services a success. This is caused by the increase of the ridership every year, and the rise in the download of the mobile app and in the registration to the service website.</p>



Prontous • Italy

Organisers/Entity responsible for the implementation

ProntoBus service is operated by SETA, the public transport operator of the Province of Modena, and is managed and planned by the Agency for mobility and local public transport Modena S.p.A. – “aMo”. Moreover, aMo and the Municipality of Castelfranco Emilia, and subsequently the others Municipalities, dealt with the development of the new software system used by passengers for booking rides. , regional parks, local enterprises (e.g. restaurants, hotels) can be included as local sponsors.

Sponsors or funding options

The Emilia Romagna Region provides the economic resources.

Impacts

The service is carried out by natural gas vehicles with a capacity of 9 or 12 seats. Thanks to the connection offered by ProntoBus and the good quality of service, a continuous increase in number of users has been detected between 2017-2019. Indeed, the annual number of users of ProntoBus service was 73.085 in 2017. In particular, in Castelfranco Area, the number of users was 12.926.

The table below represents the trend of the ridership along the years:

	2017	2018	2019	2020	2021	2022
CARPI	4.906	6.451	11.257	6.377	8.642	10.047
CASTELFRANCO	12.926	13.865	12.940	8.479	9.389	9.589
MARANELLO	771	901	830	336	393	449
MIRANDOLA	19.549	22.355	20.756	11.395	15.995	7.240
MODENA	18.900	20.935	21.032	13.636	14.971	12.707
PAVULLO	16.033	16.452	16.946	10.490	12.412	15.107
TOTAL	73.085	80.959	83.761	50.713	61.802	55.139

Prontous • Italy

<p>Costs</p>	<p>According to the Italian legislation, the provided public transport services can have a revenue fare coverage equal to 35% of the total cost of the services performed. The remaining 65% is paid by the entities (Regions, Municipalities) which commission the service.</p> <p>There are no particular business models. The DRT services are 50% co-financed by the Municipalities that request them.</p> <p>The Municipality of Modena contributes for 40.000,00€ per semester to implement and keep operative the Prontobus service.</p>
<p>Revenues</p>	<p>The service's income derives from the sale of tickets and subscriptions to the users. Fares are the same of the urban service of the Province of Modena, and depend from the number of areas crossed. The basis price of Prontobus service is € 1,30.</p>
<p>Main barriers identified in the implementation process</p>	<p>Financing for rural mobility is always a challenge, but current sources have been reasonably secure and consistent.</p> <p>The beginning costs were high due to the creation of an on-demand service with its support structure (call centre).</p> <p>Another initial difficulty was the booking process active only by phone call. The development of a new software allows a better and smooth sharing of information between the call centre and the drivers of the buses.</p>
<p>Lessons learnt</p>	<p>The main lessons would be:</p> <ul style="list-style-type: none"> • improving software for a better efficiency of the service; • integrating the service with the standard public transport (urban and extra-urban); • involving rural population into the development of the service.
<p>What is necessary to implement the MS?</p>	<p>The most articulated part for the operation of Prontobus services is related to the management of reservations. It is therefore important that there is either a reservation call center or even better a software for managing reservations from mobile devices. Apart from this aspect, no particular organizational levels are necessary to implement the service.</p>

Prontous • Italy

Main milestones

2003

In 2003, the first testing of the ProntoBus service in the Municipality of Pavullo nel Frignano, Province of Modena, took place. This was launched with a fleet of 8 minibuses.

2008-2017

The good service and the positive impacts on the rural population in terms of increased transport opportunities, resulted in the expansion of the ProntoBus service in some Municipalities of Modena area as Carpi, Maranello and in the South and North areas of Modena.

2017

In September 2017, the new software (web based) provided by aMo was launched, within the framework of the RUMOBIL European Project.

2018

In June 2018, the software also started to be implemented in the Municipality of Mirandola, based on the previous experience of Castelfranco Emilia. Moreover, in the same year, the ProntoBus app for users was launched.



Montecuccolo Castle, Pavullo nel Frignano, Modena (Italy)

Transport on demand service in Vidzeme Region • Latvia

Good territorial
coverage



User-centred
planning



Community-based



<p>Mobility Solution typology (MS)</p>	<p>Pilot project of a Transport on demand (ToD) service implemented in rural areas in Vidzeme region in Latvia.</p>
<p>Description</p>	<p>The service was implemented as pilot within the MAMBA project of the Interreg Baltic Sea Region program. The transport on demand service was provided by two subcontracted transport companies with three different types of vehicles, 4+1, 8+1 and 16 seats.</p>
<p>Population and area covered</p>	<p>276.037 inhabitants; 19.809 km²</p>
<p>Why is this MS considered a good practice?</p>	<p>ToD as a service was perceived as a supplement to the public transport system and an alternative solution to uneconomic public transport management in remote and sparsely populated areas. One of the purposes of use is to get to the nearest bus stop to continue the trip by public bus.</p>



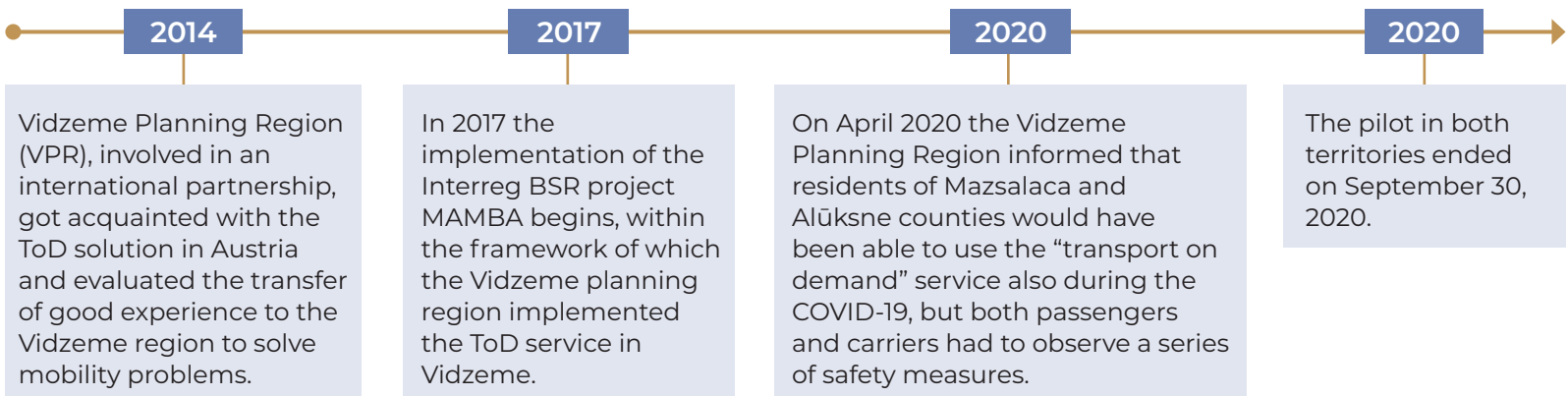
Transport on demand service in Vidzeme Region • Latvia

Organisers/Entity responsible for the implementation	<p>The leading body was Vidzeme Planning Region in articulation with the public transport operator. The pilot was led by Vidzeme Planning Region (under the Interreg Baltic Sea Region MAMBA project activities). The coordination included the routes organization, calling clients back, claim management, phone operation, etc.</p>
Sponsors or funding options	<p>The EU financed the pilot service.</p>
Impacts	<p>The total number of cars involved were 3. In total, during the pilot (October 2019 - September 2020), 2.777 passengers were carried, 1.277 trips were made, and 24.821 kilometres were travelled.</p> <p>According to statistics, during the entire pilot, around 300 service users were registered in both implemented areas, of which around 30 were people going to work, 9 were students or children of kindergarten age, 15 used the service for tourism purposes, and the remaining were senior citizens.</p> <p>In Mazsalaca county (the service was available throughout the county), an average of 98 flights were performed per month, an average of 1.9 passengers per flight, an average of 12 km per trip.</p> <p>In the Alūksne county (the service was on specific days in specific places), 26 trips were performed per month, an average of 3.2 passengers per trip, the average length of one trip was 25 km.</p> <p>The passengers were 85% women and the average age of passengers was 60 years. Other passengers - employees, school and kindergarten children, housewives, unemployed, disabled persons. Altogether in both pilot sites, the vehicles made nearly 25.000 (24 821 km) km in 11 months.</p>
Costs	<p>The investment and capital costs for the implementation of ToD service and Mobility Centre solutions were of € 155.000.</p> <p>The operating costs were represented by:</p> <ul style="list-style-type: none"> • Software for ensuring the operation of the ToD mobility center – 13 854, 00 €; • Transport company (procurement) – Mazsalaca County 66 600,00 € ; Alūksne County 41 100,00 €, incl. A) monthly fee for providing 3 cars of different capacities on site (Mazsalaca county - 699,00 € (VAT not incl.); Aluksne county - 250,00 € (VAT not incl.) and B) fee for 1 km traveled (Mazsalaca county –2,99 € (VAT not incl.) Alūksne county – 3,50 € (VAT not incl.); • Call center equipment (e.g. computer) – 4.200,00 €; • Mobility center coordinator (11 months) – 7.500,00 €; • Communication activities (stickers for the buses, printed materials, etc.) – 1.000,00 €.

Transport on demand service in Vidzeme Region • Latvia

Revenues	The EU financed the pilot service.
Main barriers identified in the implementation process	<p>It is necessary to allocate a separate and sufficient budget for marketing activities, as well as for raising awareness of the target audience to overcome psychological barriers.</p> <p>The service, which performs a social function, cannot be financially supported with passenger tickets alone but it is necessary to seek further financial sources.</p> <p>The service had limited touristic purpose, only 15 residents used the service for touristic reason. Non-residents needed to register in advance and use the service.</p>
Lessons learnt	<ul style="list-style-type: none"> • It is important to involve the users in the design of the service. It is necessary to conduct a marketing campaign in time, explaining how to receive the service (even before the service has started). • Cooperation between citizens, municipalities and state institutions is important. • Flexible transport services, together with modern IT solutions, allow achieve a good balance between population demand and efficient transport service.
What is necessary to implement the MS?	<ol style="list-style-type: none"> 1. Campaigns to recruit and maintain an active volunteer base. 2. Allocate Resources to fund the startup and operation of the service.

Main milestones





Ride Sharing Services



- **Carpooling services:** Consists in the sharing of the journey with other people in the same car at the same time, such as, Nabogo (DK) and Ummadum (AT). Many car pools are based on people who know each other, such as friends, familiars and co-workers. Distances can be very varied.














- **Shared taxi:** High level of flexibility with no timetables, such as, Regiotaxi (NL); 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;



- **E-hitchhiking:** 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. The RezoPouce initiative in France is one of the most relevant examples of this.

Ride Sharing Services

	 ORGANISATIONAL STRENGTHS			 SERVICE STRENGTHS			 GOOD OUTCOMES		
	Community-based 	User-centred planning 	Responsive to vulnerable users 	Good territorial coverage 	Integration with Public Transport 	Innovative technology 	Sustained ridership growth 	Long-term durability 	Established brand 
Regio Taxi (NL)			✓	✓				✓	
NaboGO (DK)					✓	✓			✓
Brasov carpooling (RO)					✓	✓			
Ummadum Car-pooling (AT)	✓	✓		✓		✓			
RezoPouce (FR)	✓			✓					✓

RegioTaxi • The Netherlands

Responsive to
vulnerable users



Good territorial
coverage



Long-term
durability



<p>Mobility Solution typology (MS)</p>	<p>Regional taxi service with shared rides.</p>
<p>Description</p>	<ul style="list-style-type: none"> • Demand-based type of transportation, in the form of a regional taxi service. • It operates like a traditional taxi service, since it takes users from their origin point to their destination, with the only difference being that it can pick up other users along the way; therefore, being able to charge lower prices • Disabled people may travel for free if they qualify for the Social Support Act transport pass.
<p>Population and area covered</p>	<p>17.530.000; 41.850 km² (342 municipalities).</p>
<p>Why is this MS considered a good practice?</p>	<p>The practice is showing a collaborative approach between municipalities and also with operators which contributed to the continued operation of this service over years and enabled a seamless and spread transport connections in rural areas across the whole region where the public transport is absent or weak.</p>



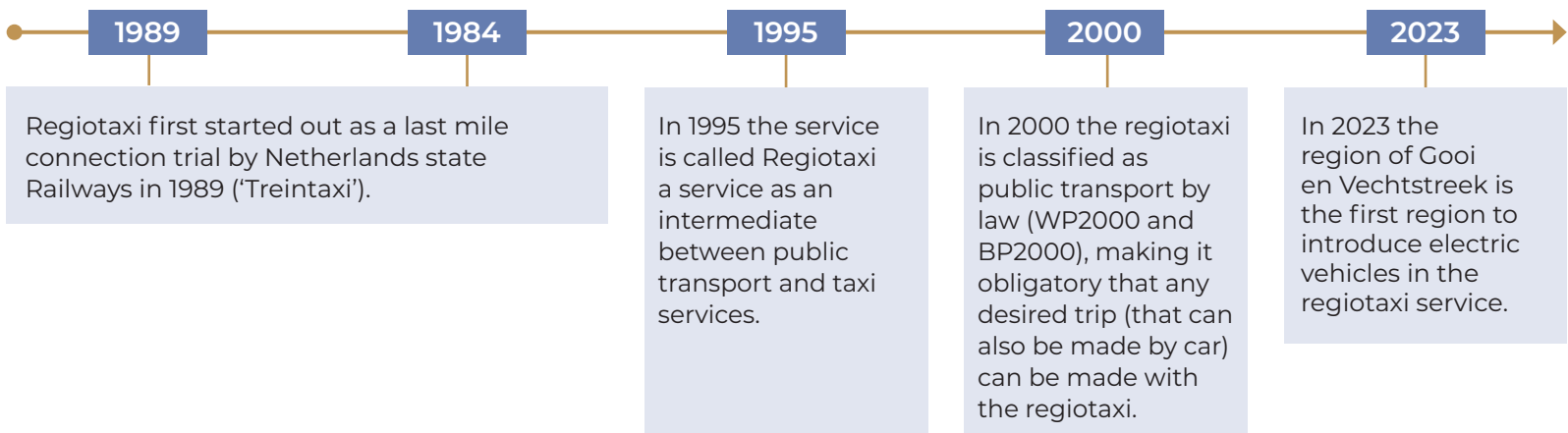
RegioTaxi • The Netherlands

Organisers/Entity responsible for the implementation	<p>Municipalities are responsible for offering the regiotaxi services. Commonly, municipalities have joined forces in tendering the regiotaxi service. The service is outsourced to commercial (taxi) operators.</p>
Sponsors or funding options	<p>The public transport authorities' subsidise the operation of the regiotaxi services. Municipalities pay the usage of the service for people with a disability indication. Other users have to pay for the service, like with a normal taxi.</p>
Impacts	<p>The regiotaxi has 340.000-380.000 users per year .</p> <p>The regiotaxi is mostly used for socio-recreative purposes; for example: visiting friends and family, and medical appointments. The average distance of travels with the regiotaxi is 8 kilometres. 78% of regiotaxi rides has no public transport alternative.</p> <p>52% of users would not have made their travel if there was no regiotaxi available. The regiotaxi includes a large share of vulnerable road users .</p> <p>Users generally appreciate the regiotaxi. 29% of users says the service is outstanding and 48% appraises the service as good.</p>
Costs	<p>Regiotaxi is a service provided by the public transport authorities who subsidise the operation of the services. Municipalities pay the usage of the service for people with a disability indication. Other users have to pay for the service, like with a normal taxi.</p>
Revenues	<p>Revenues are made of customer receipts.</p> <p>This MS appears to be cheaper than normal taxi service because of the possibility of sharing the cost with other users on the same ride. The average price in 2019 was € 0,20 per kilometre and € 0,80 as a starting tariff. Passengers with the Social Support Act (Wet Maatschappelijke Ondersteuning, WMO) transport pass travel for free and the cost is subsidised by the municipality.</p>

RegioTaxi • The Netherlands

<p>Main barriers identified in the implementation process</p>	<p>It is understood that Regiotaxi's integration with regular public transport has been difficult. The 'advantages were limited, while the organization of this integration turned out to be complex as provinces are responsible for public transport while municipalities are responsible for Regiotaxi'. The provision of Regiotaxi is an expensive form of transport. It has been said that one passenger kilometer by Regiotaxi costs the government approximately seven times the amount of a public transport passenger kilometer.</p>
<p>Lessons learnt</p>	<p>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.</p>
<p>What is necessary to implement the MS?</p>	<ol style="list-style-type: none"> 1. Set up of a task force of municipalities representatives and public transport authorities to work together to identify mobility demand and needs. 2. Put out to tender specific contracts to deliver services in the target areas. 3. Fix the regulatory and financial framework to ensure vulnerable users (especially, people with disabilities) can benefit from increased access to the service.

Main milestones





The Old Rhine between Leiderdorp and Zoeterwoude-Rijndijk, province of South Holland, Netherlands

NaboGO • Denmark



<p>Mobility Solution typology (MS)</p>	<p>App-based Carpooling service.</p>
<p>Description</p>	<ul style="list-style-type: none"> • Carpooling service organised through the NaboGO app, aiming to encourage people to share car trips when travelling from rural areas to nearby cities • Implemented in 30 Danish municipalities as well as in regions in the Netherlands, Sweden and Norway. • Nabogo has three offices in Denmark, one in the Netherlands – and 8 employees plus 7 student assistants.
<p>Population and area covered</p>	<p>113,720 (2017); 144 km² (Vejle municipality).</p>
<p>Why is this MS considered a good practice?</p>	<p>The Vejle pilot demonstrates well how a ridesharing/carpooling platform can be put in place, in a very cost-effective way, in order to broaden the mobility options available to the residents of rural settlements. Proper integration with the public transport offer, in terms of presenting both ride-share and bus services in digital journey planners, is being put forward to give greater choice to service users.</p>



NaboGO • Denmark

<p>Organisers/Entity responsible for the implementation</p>	<p>The solution was led by the Municipality of Vejle, in cooperation with the app developer Nabogo, which owns the intellectual property rights to the solution.</p> <p>The Public Transport Company of Southern Denmark is an associated partner. Smidstrup-Skærup Municipal Council also played a major role in implementing and promoting the app in the region. Various local businesses were contacted and asked to spread information about the service.</p>
<p>Sponsors or funding options</p>	<p>The project was funded by the European Interreg MAMBA project (Maximised Mobility and Accessibility of Services in Regions Affected by Demographic Change, October 2017 - September 2020).</p> <p>The project focused on maximising mobility and accessibility of services in rural regions. As part of the project, the ridesharing app was successfully introduced and has now been adopted by other municipalities.</p>
<p>Impacts</p>	<p>Nabogo is used by 15.000 users. 90% are Danish citizens. The main users are residents of the area. The biggest user group are young people going to high school (40%). Those are 16 or 17-year olds without a driver license. For Nabogo this is a core group to engage to not buy an own car once they turn 18.</p> <p>Another user group are young professionals who are starting a career, changing jobs, have no kids yet, have low salaries and have lived in cities, therefore they have experience with carpooling, sustainability, navigation and being a passenger.</p> <p>The third user group are women between 40 and 60 who have no kids or kids in school age, have flexibility in their lives, are frustrated about gas prices and are mostly the owner of the second car in households.</p> <p>The trip motivations are access to education, jobs and leisure trips, to get from one village to another, and culture and shopping to cities.</p>

NaboGO • Denmark

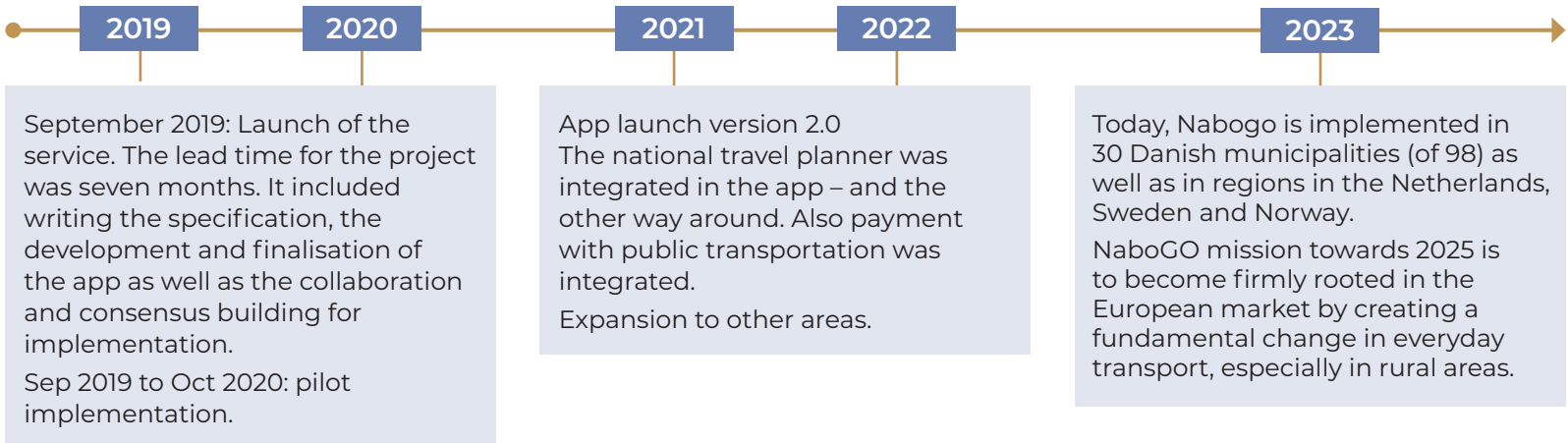
<p>Costs</p>	<p>Capital costs result from finalising the app, analysing the local geography, putting in the digital meeting points and mobilising partners like schools and companies. The MAMBA pilot project has co-financed the development of the Nabogo app, as Vejle has received funding for the project. MAMBA contributed € 89.499 to the development cost of the digital platform and app. This figure equates to approximately one third of the development cost of the digital service, providing match-funding alongside Nabogo's own investment and support provided through national funding. A smaller budget of € 5.000 made available through MAMBA supported implementation and marketing of the service in the local area, such as the face-to-face promotion at the supermarket.</p> <p>The ridesharing service has been based on a business model where the municipality supports the ongoing financial costs of operating the digital platform. This represents a good value approach to providing a mobility solution, as much of the investment was made during the development of the digital platform and operating costs are limited.</p>
<p>Revenues</p>	<p>The business model from NaboGO is that they make a financial agreement with the municipality. The payment is based on how many inhabitants there are in the municipality, and when this agreement is made ALL inhabitants, companies and education facilities can use the solution for free (passenger pay only part of the trip costs between 0.13/km for distance under 10 km and 0.7 EUR/km for distance above 20 km).</p>
<p>Main barriers identified in the implementation process</p>	<p>At the time of the pilot implementation, the Latvian legal framework was not flexible enough to categorize Transport on Demand under the public transport system on national level, so there was plenty of time needed to find out how to organize the procurement and under which legal conditions the services would run.</p> <p>The Municipalities are not familiar with and therefore often not yet ready to invest their own funds in alternative transport solutions. This is why the pilot was funded from European money.</p> <p>Moreover, the organisation of public transport is so far essentially a state function. One of the intentions of the pilots is to show that there is a strong benefit for Municipalities co-funding Transport on Demand.</p>
<p>Lessons learnt</p>	<p>For the local initiators, the project is a success, because it has been very well received in Vejle and they have already expanded it to several regions. In general, it is important that Nabogo handles the operations from A-Z; app development, customer service, local partnerships, campaigns, evaluations and press.</p>

NaboGO • Denmark

What is necessary to implement the MS?

- Assess the regulatory framework for the provision of flexible transport service.
- Allocate responsibilities to an inter-municipal entity (e.g., an association of municipalities) that can take the leadership of the service.
- Engage existing taxi and small local operators through a collaborative framework.
- Start with a pilot area, to be extended over time.

Main milestones



Brasov carpooling – Romania



<p>Mobility Solution typology (MS)</p>	<p>Organised carpooling via online platform.</p>
<p>Description</p>	<ul style="list-style-type: none"> • Carpooling service enabled by a new platform developed in the framework of the SMARTA 2 project; • Implemented in three communities in the Brasov Metropolitan Area • Operated only for a couple of months, then withdrawal.
<p>Population and area covered</p>	<p>Municipalities of Cristian (4300 inhab.), Bod (4173 inhab.), and Prejmer (8876 inhab.); Total: 17349 inhabitants.</p>
<p>Why is this MS considered a good practice?</p>	<p>Within the SMARTA 2 Project, the Brasov Metropolitan Agency for Sustainable Development mobilized an initiative to promote a carpooling experience for rural dwellers, encouraging residents to share their trips and reducing the individual daily trips made with a private car. It was the first of its kind initiative in the area which aimed to reduce the traffic generated from rural areas to the city center, which was delivered in conjunction with an awareness-raising campaign on sustainable mobility and public transport.</p>

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rurală. Numărul proiectului: M05/16/2016/06/2016

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Brasov carpooling • Romania

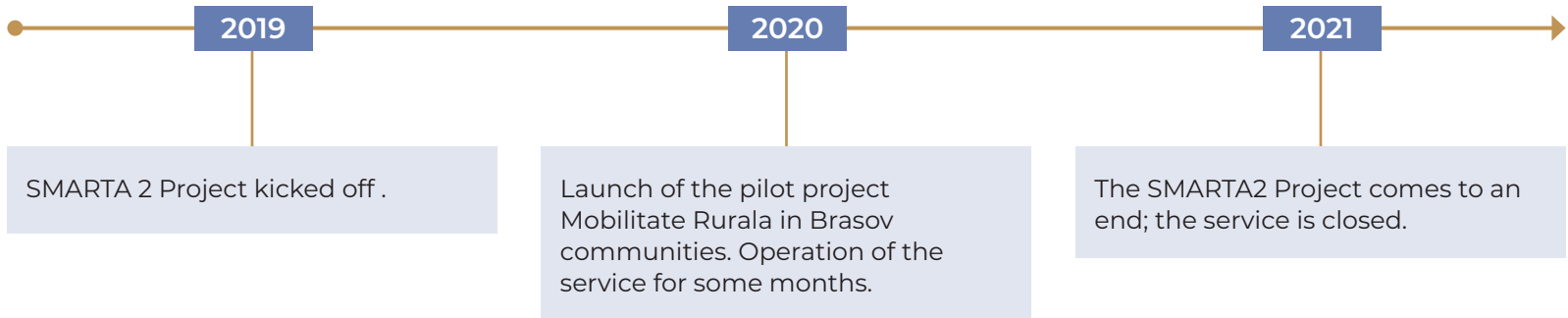
Organisers/Entity responsible for the implementation	<ul style="list-style-type: none"> • Brasov Metropolitan Agency for Sustainable Development, an association of public bodies supporting local administration in the local development process. Project leader in the region and coordinator of the project; • Cristian Municipality; • Bod Municipality; • Prejmer Municipality • RATBV SA, Brasov Municipality, Brasov Metropolitan Association for the Sustainable Development of Public Transport, Local businesses - Support the pilots by getting involved in in the incentive scheme Promoting the pilot. 																																																								
Sponsors or funding options	<p>An amount of € 8.500 were invested in the development and maintenance of the IT platform, but there was no budget for the coordination centre.</p>																																																								
Impacts	<p>The platform had a very low rate of usage. As a result, only a few people experienced the carpooling service. The Covid-19 pandemic affected the solution very hard, as social distancing rules have made it almost impossible to develop a carpooling community, to bring people together into community-building events or to allow relative strangers to become carpoolers. As a result, the level of involvement and outcome has dropped significantly from the initial expectations.</p> <p style="text-align: right;">End of 2020 – beginning of 2021</p> <table border="1" data-bbox="409 1102 1681 1433"> <thead> <tr> <th></th> <th>M13</th> <th>M14</th> <th>M15</th> <th>M16</th> <th>M17</th> <th>M18</th> <th>M19</th> </tr> </thead> <tbody> <tr> <td>Number of users in the platform</td> <td>0</td> <td>0</td> <td>0</td> <td>20</td> <td>26</td> <td>4</td> <td>2</td> </tr> <tr> <td>Number of drivers</td> <td>0</td> <td>0</td> <td>0</td> <td>12</td> <td>12</td> <td>2</td> <td>1</td> </tr> <tr> <td>Number of passengers</td> <td>0</td> <td>0</td> <td>0</td> <td>8</td> <td>11</td> <td>16</td> <td>22</td> </tr> <tr> <td>N° of Car-pooling trips</td> <td>0</td> <td>0</td> <td>0</td> <td>15</td> <td>22</td> <td>32</td> <td>40</td> </tr> <tr> <td>Bus tickets distributed</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>3</td> <td>2</td> <td>1</td> </tr> <tr> <td>Bus trips using free bus tickets</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>19</td> <td>34</td> <td>44</td> </tr> </tbody> </table>		M13	M14	M15	M16	M17	M18	M19	Number of users in the platform	0	0	0	20	26	4	2	Number of drivers	0	0	0	12	12	2	1	Number of passengers	0	0	0	8	11	16	22	N° of Car-pooling trips	0	0	0	15	22	32	40	Bus tickets distributed	0	0	0	0	3	2	1	Bus trips using free bus tickets	0	0	0	0	19	34	44
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Brasov carpooling • Romania

Costs	<p>An amount of € 8.500 were invested in the development and maintenance of the IT platform, but there was no budget for the coordination centre.</p>
Revenues	<p>A business model for the service has never been defined. The solution did not produce any revenues.</p>
Main barriers identified in the implementation process	<ul style="list-style-type: none"> • The launch of the service clashed with the COVID_19 pandemic; as a result, people felt uncomfortable in practicing with carpooling. Moreover, a proper dissemination and awareness raising campaign was not possible. • A proper business model has not been defined.
Lessons learnt	<p>The implementation of a carpooling service using a new digital platform needs to be anchored to a well-defined business model and a proper communication and dissemination campaign. Local sponsors need to be engaged to implement an incentive scheme, especially at the launch of the service.</p>
What is necessary to implement the MS?	<ul style="list-style-type: none"> • Organise a focus group with local communities to assess mobility needs and co-create shared mobility solutions; • Identify possible source of funding for the development of the web and app carpooling platform, or, eventually, assess the conditions to make use of existing one; • Design and plan a proper awareness raising campaign focused on sustainable and shared mobility options; • Identify a proper business model to finance the solution in the short, medium, and long term.

Brasov carpooling • Romania

Main milestones

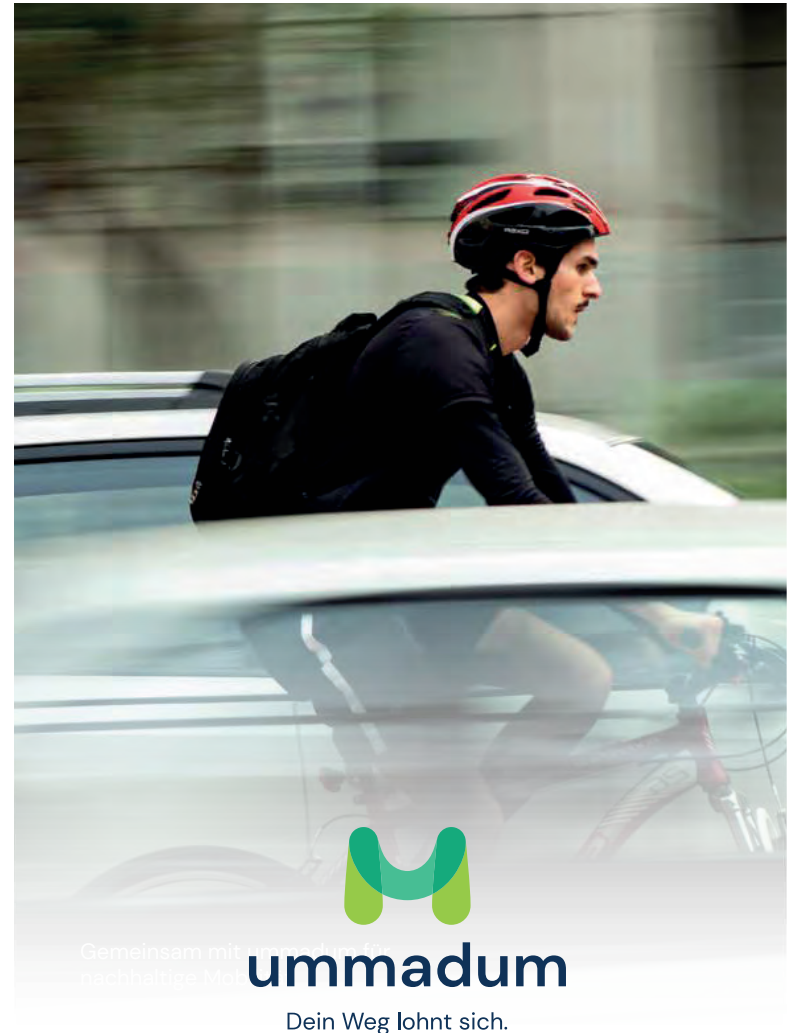


Braşov, Romania,
Town square with the cathedral

Ummadum Car-pooling • Austria



Mobility Solution typology (MS)	Ummadum is an Austrian carpooling app that was developed in 2017.
Description	Ummadum is an Austrian carpooling app that works on a reward model and involve companies and municipalities. A points system motivates users to take passengers with them on their journey. The points can be purchased by the users at Ummadum or earned by using the service. After the trip, the points serve as shopping vouchers at local companies. To create incentives, municipalities as well as companies can buy and distribute points.
Population and area covered	7,415 inhabitants, 312,85 Km ²
Why is this MS considered a good practice?	At the time when the Ummadum idea was conceived regular ridesharing struggled to find a stable customer base. The idea was born to connect it to an incentive-system while simultaneously strengthening the regional economy. Starting from this idea connecting industries became the focus of Ummadum, developing a business model that enables partners to create incentives for their stakeholders to nudge them to change their behavior, leading to more sustainable mobility, regional value-added and fewer travel costs.



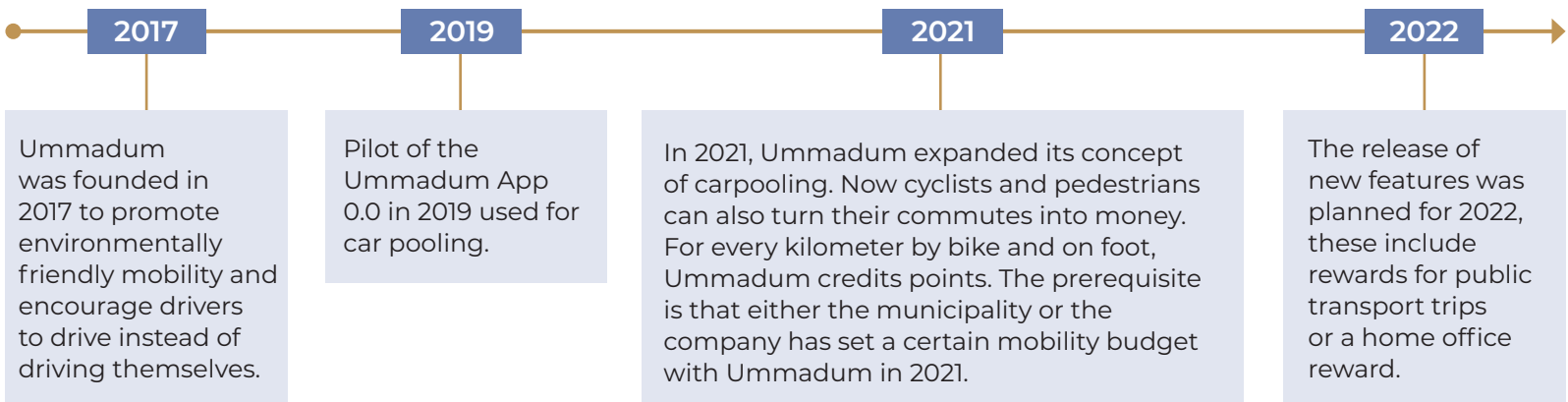
Ummadum Car-pooling • Austria

Organisers/Entity responsible for the implementation	<p>Ummadum Service GmbH, is the operator of a mobility platform (hereinafter also referred to as the "Ummadum platform"), which can be used via the website (https://www.Ummadum.com) or the mobile iOS and Android application</p> <p>The use of Ummadum is based on a combination of Google Maps and Open Street Map, which is pleasantly designed.</p>
Sponsors or funding options	<p>An amount of € 8.500 were invested in the development and maintenance of the IT platform, but there was no budget for the coordination centre.</p>
Impacts	<p>The use of the Ummadum app is free of charge for users. Each Ummadum user has their own profile with a points account. Ummadum points are purchased by municipalities and companies and made available to citizens. As passengers, they can compensate the drivers for the shared kilometers with points. After the trip, drivers can use the points they receive for further trips or redeem them in the regional economy.</p> <p>Private individuals can also buy points directly in the app. Users earn 10 Ummadum points (equivalent to 10 cents) per kilometer traveled, which are credited to the drivers' accounts. These points can be redeemed at local businesses.</p> <p>The app works on a on the reward principle. Each user of the car sharing app, whether they are a passenger or a driver on a shared ride, receives points to be used in partner shops. For each 17g of CO2 saved, users get 1 point. Considering that for a 60km journey, the distance between Arzl im Pitztal and Innsbruck, the estimated emissions amount at 11.8 kgCO₂e, users could collect around 69 points for a single shared journey.</p>
Costs	<p>The business model is similar to other applications available in rural areas. The Ummadum team makes the application available for free to individual users, municipalities, and companies.</p>
Revenues	<p>Municipalities and companies interested in being part of the scheme become partners and finance the operation of the model. By allocating a monthly budget to their community of users, they finance the Ummadum points that carpoolers can then collect and exchange in local shops.</p>

Ummadum Car-pooling • Austria

<p>Main barriers identified in the implementation process</p>	<p>Regular carsharing struggles to find users. COVID-19 crises are tough challenges for ridesharing platforms. In this time Ummadum added new services to the app, because people were not so motivated to use rideshares..</p>
<p>Lessons learnt</p>	<p>The combination of a ride-sharing system with a direct possibility of using these shared kilometres for retail benefits is currently unique not only in Austria, but worldwide. The resulting incentive system goes far beyond direct remuneration. Ummadum users become part of a regional cooperation system.</p>
<p>What is necessary to implement the MS?</p>	<p>The Ummadum approach is intended to combine the advantages of the various mobility concepts and offer a win-win situation for drivers (reduced costs), passengers (better mobility services, especially in rural areas, increased transparency of the actual offer, solution to the last-mile problem) and road traffic (less traffic, exhaust fumes, noise, due to higher utilization of individual cars).</p>

Main milestones





RezoPouce • France

(focus on the federation of municipalities of Grand Pic St Loup and CC Cévennes Gangoises et Suménoise)



<p>Mobility Solution typology (MS)</p>	<p>Organised hitch-hiking service.</p>
<p>Description</p>	<ul style="list-style-type: none"> • IT platform for subscription avoiding subjective feeling of unsafety and uncertainty. • Service organised by the municipality with the support of the RezoPouce association. • Spot" every 400 m in villages; focus on short distances (75% less than 10 km). • Currently active in more than 1800 French municipalities.
<p>Population and area covered</p>	<p>About 47000 in Grand Pic St Loup; 13000 in Cévennes Gangoises et Suménoise.</p>
<p>Description of the specific practice</p>	<p>Pilot action planned to be developed in 2020. Put on hold due to the COVID-19 pandemic. Main planned actions:</p> <ul style="list-style-type: none"> • Implementing the hitch hike stops; choose the appropriate locations and put the signs • Setting up registration and information info point in the municipalities where citizens can subscribe the service or get the necessary information • Promoting the service via targeted communication campaigns by transition agents (i.e., people trained by RezoPouce) and local and departmental authorities.



RezoPouce • France (Grand Pic St Loup and CC Cévennes Gangoises et Suménoise pilot)

<p>Why is this MS considered a good practice?</p>	<p>The pilot is well integrated in a broader vision of sustainable mobility as well at local as at departmental level. The aim of the broader vision is to reduce individual car use for different types of trips. Setting up the RezoPouce service wants to reduce car use on the short distances and for the trips to Montpellier. It also wants to contribute to greater cohesion in the local communities and provide mobility solutions to people that have no mobility solution now.</p>
<p>Organisers / Entity responsible for the implementation</p>	<ul style="list-style-type: none"> • Hérault department, initiator, financier and manager of the project. • RezoPouce organisation, providing hitch hike know how. • Federations of municipalities, Cerema, public study agency accompanying the project evaluation.
<p>Sponsors or funding options</p>	<p>Hérault department; France Mobility https://www.francemobilites.fr, Public Private partnership to promote sustainable mobility cofinancing the project.</p>
<p>Impacts</p>	<p>Due to the COVID-19 pandemic, no quantified impacts about the pilot project are available. The impacts provided below are estimates or expectations, based on experience from other RezoPouce projects.</p> <ul style="list-style-type: none"> • Awareness and acceptance: 20% of the population is aware of the system after 1 year, 5% accepts the idea of hitch hiking after 1 year. • Penetration rate: 1 to 2 % of municipalities inhabitants subscribe first year, 1% each subsequent year (with sustained communication). • Number of trips: Registered active users make 2 to 4 trips a week, or between 100 and 200/year. • Subscriber profile: <ul style="list-style-type: none"> • 25% of subscribers are exclusive drivers - 25% of subscribers are exclusive passengers - 50% are drivers and passengers; • Man/women: 50/50; • Majority has age between 30 and 60 (possible from age 14 with parental authorisation). • Social cohesion - Community feeling: among users, the feeling of being part of the community is reinforced.

RezoPouce • France (Grand Pic St Loup and CC Cévennes Gangoises et Suménoise pilot)

<p>Costs</p>	<p>The RezoPouce service is cheap for the municipalities:</p> <ul style="list-style-type: none"> • The direct cost for the municipality or federation of municipalities is a onetime membership fee and a yearly contribution, between 2500 and 10 000 Eur. (say 5000 EUR/year). • The first year, there is the need to put the RezoPouce signs too. The cost is 500 EUR/ sign. Signposting can often be much cheaper. • Besides this, the municipality needs to design one of its civil servants as the RezoPouce reference person. This means that he takes care of registration and promotion of RezoPouce. (1 equivalent persons for the whole area, say 50 000 EUR/year). • To launch the RezoPouce service, it can be good to put extra efforts in targeted communication by recruiting a transition agent, that is trained and coached by RezoPouce, about 50 000 EUR for first year. • Gadgets and flyers: +- 2000 EUR/year.
<p>Revenues</p>	<p>No revenue are foreseen.</p>
<p>Main barriers identified in the implementation process</p>	<p>The main barrier is due to the difficulties in the acceptance from the users, for the following reason:</p> <ul style="list-style-type: none"> • The unknown organised hitchhiking is unknown among potential users, as are the people you will get in your car; • The waiting time and the delays - afraid to be late; • The image of hitchhiker while hitchhiking; • The image of hitchhiking, i.e., a rather old-fashioned practice for some people.
<p>Lessons learnt</p>	<p>The pilot was well integrated in a broader vision of sustainable mobility as well at local as at departmental level. The aim of the broader vision is to reduce individual car use for different types of trips. Setting up the RezoPouce service wants to reduce car use on the short distances and for the trips to the main city (i.e., Montpellier). It also wants to contribute to greater cohesion in the local communities and provide mobility solutions to people that have no mobility solution.</p>

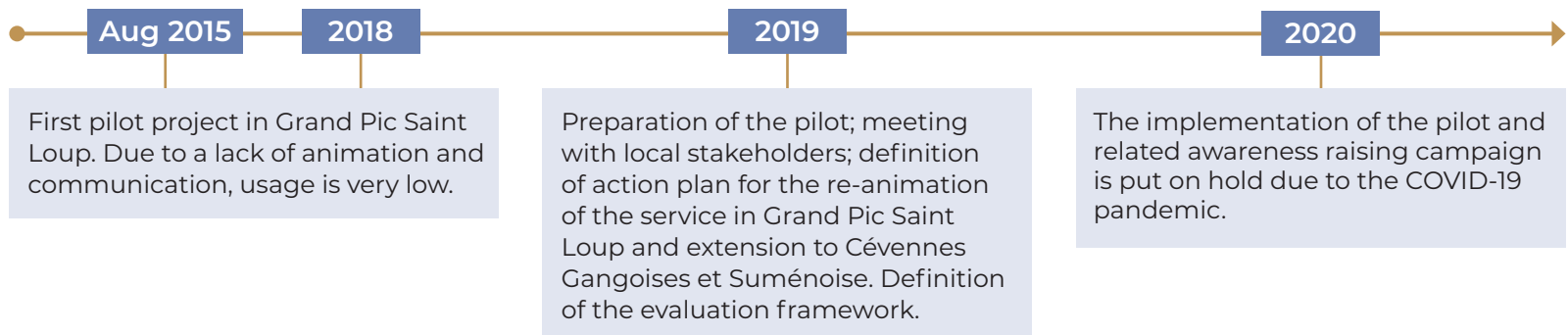
RezoPouce • France (Grand Pic St Loup and CC Cévennes Gangoises et pilot)

What is necessary to implement the MS?

Organized hitch hiking can be transferred as long as certain conditions are met:

- A sustained targeted communication campaign. Sustained is important and means that just launching and a few word in local media is not enough. Communication and animation needs to be done in the long term.
- Convinced local authorities: it is important that local authorities belief in the system and are ready to invest and promote the system to support it.
- Local communities well tied together or with the potential to be tied together.

Main milestones



In the background the Pic Saint-Loup.
Saint-Mathieu-de-Trévières, Hérault, France



Asset Sharing Services















When talking about bike and car sharing services, 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 sharing.



Among the SMARTA-NET mobility solutions, the collectively owned group includes the beAgueda Bike sharing (PT), the Halden bike and car sharing services (NO), 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 Flugs e-carsharing (AT) and Cairngorm National Park e-bike sharing.

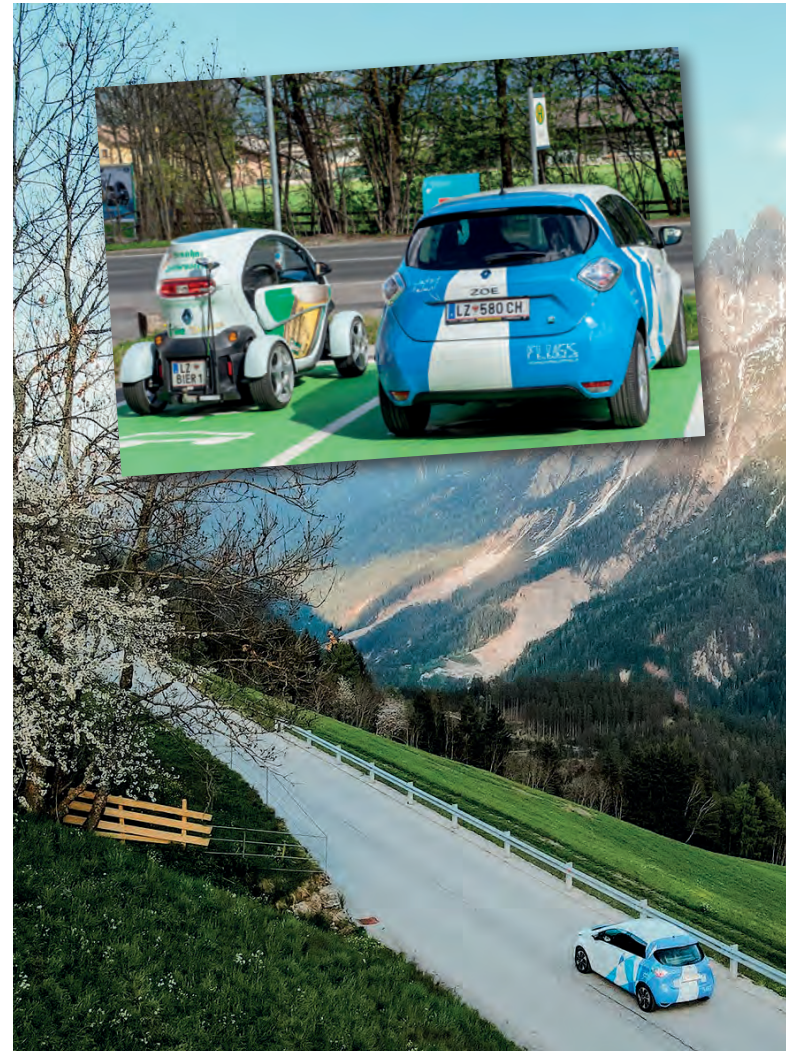
Asset Sharing Services

	 ORGANISATIONAL STRENGTHS			 SERVICE STRENGTHS			 GOOD OUTCOMES		
	Community-based 	User-centred planning 	Responsive to vulnerable users 	Good territorial coverage 	Integration with Public Transport 	Innovative technology 	Sustained ridership growth 	Long-term durability 	Established brand 
Flugs (AT)				✓	✓				✓
BarShare (DE)				✓					✓
Be Agueda (PT)				✓			✓	✓	
Cairngorm (UK)		✓			✓				
Talybont-on-Usk (UK)	✓			✓	✓				

Flugs • Austria



<p>Mobility Solution typology (MS)</p>	<p>Electric car-sharing station-based system.</p>
<p>Description</p>	<ul style="list-style-type: none"> • 13 electric vehicles (RENAULT ZOE, BMW I3, VW Golf) available to individual users (with valid driver license) for hire and located in thirteen different areas, with one vehicle in each. • The vehicles can be booked via the carsharing app. Each FLUGS must be brought back to the respective location and connected to the charging station for subsequent use by others.
<p>Population and area covered</p>	<p>48,833 inhabitants; 2,020 Km².</p>
<p>Why is this MS considered a good practice?</p>	<p>Flugs is providing a flexible and affordable mobility solution for residents and tourists in different rural; this contributes to increase the awareness for sustainable mobility, changing the mobility behaviour of the citizens away from private cars, reducing the costs for private mobility; it also tries to reduce the need for the second and third car per household. The service is also integrated with the public transport information system.</p>



Flugs • Austria

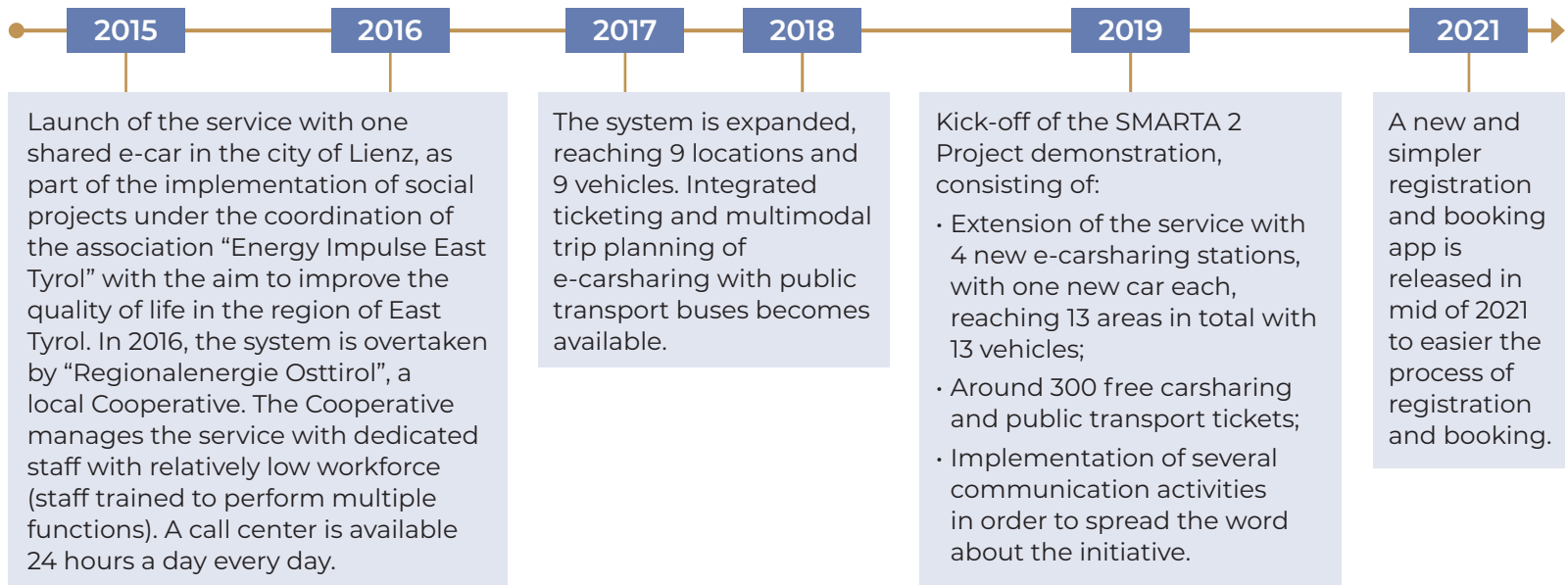
Organisers/Entity responsible for the implementation	<ul style="list-style-type: none"> • Regional Management East Tyrol (RMO): the Regional Development Agency with competencies on sustainable mobility project, initiatives and strategies. Local coordinator of the SMARTA2 Project, RMO has been promoting and coordinating the service with the support of the local administrations and the collaboration with businesses and private stakeholders (e.g. the banks); • Regionalenergie East Tyrol, the e-car sharing provider in East Tyrol, responsible for the operation and maintenance of the service; • Verkehrsverbund Tirol (VVT), local public transport operator; • Municipalities of Lienz, Oberlienz, Obertilliach, Sillian, local public authorities engaged for the installation of the additional e-car sharing station within the SMARTA2 Project.
Sponsors or funding options	<p>The only sponsor is RMO, that deals with promotion and dissemination activities.</p>
Impacts	<p>A specific survey was developed during April and May 2021 targeting local inhabitants in East Tyrol pilot area. The survey received 371 answers in total. Key results can be summarised as follows:</p> <ul style="list-style-type: none"> • Awareness and acceptance: <ul style="list-style-type: none"> • 135 respondents (36.39%) have ever heard about the service in their area; • Out of the 135 respondents aware of the service, only 42 had used it before (11.32% of the total); • In terms of satisfaction level, 33% of the 42 respondents are very satisfied, 36% are satisfied and 21% are very dissatisfied. • Disabling factors (i.e., aspects to be improved): <ul style="list-style-type: none"> • (poor) coverage of the service (make the service available at more places); • Availability/frequency of the service (make the service available more frequently); • Cost of the service (make it cheaper).
Costs	<p>The monthly total operational cost is around €530 per car corresponding to 6.360€ per car/year not including the working hour of the employee managing the service 20h/week; the capital costs (including the establishment costs for initial phase (car stickers for branding, installation of the carsharing system, prepayment of the leasing for the e-car) is around € 6.300)).</p> <p>Concerning the business model, it has to be noted that at the moment the car-sharing company is developing the pilot mainly for commercial reason (i.e., be present in the area as energy provider) and not for the carsharing business.</p>

Flugs • Austria

<p>Revenues</p>	<p>The revenues (provisional data 2.000,00 €/month) are able to cover partially the fixed costs of the fleet.</p>
<p>Main barriers identified in the implementation process</p>	<p>Difficulty in actively engaging a car sharing provider. Rural areas are not so attractive to build a business case for investment. In rural areas, there are less users, so they need other motivations for being involved.</p> <p>Finding suitable locations for the e-car sharing stations. There are structural issues surrounding planning restrictions in the design and construction of infrastructure to support space for things such as car-sharing in the East Tyrol area.</p>
<p>Lessons learnt</p>	<p>The service provides a means of shared mobility with relatively low workforce (staff trained to perform multiple functions).</p> <p>Working with businesses and private stakeholders (e.g. the banks) is easier compared to dealing with the citizens, as they have specific “behavioural objectives” to achieve, such as changing the mobility behaviour of their employees toward sustainable transportation.</p> <p>They mostly have two or more cars in their business. It may suit them to provide infrastructure for car-sharing vehicle(s) and/or the recharging point.</p> <p>Free testing phases are very important, so clients can make first experiences with the system and register themselves.</p>
<p>What is necessary to implement the MS?</p>	<ul style="list-style-type: none"> • Stakeholders engagement to identify potential managing organisations, sponsors, etc. • User needs’ analysis to identify locations where to put the car-sharing stations; • Fix the key features of the service (i.e., service scheme, no. of vehicles, and stations, etc.); • Plan and implement proper awareness raising campaign.

Flugs • Austria

Main milestones



Lienz, Austria

BarShare • Germany



<p>Mobility Solution typology (MS)</p>	<p>Corporate e-car and e-bike sharing service.</p>
<p>Description</p>	<ul style="list-style-type: none"> • Vehicle fleet consisting of 43 e-cars and six e-bikes. • Service made available to Barnim administrations, companies and institutions, but also to citizens outside office hours. • Web-based and BARshare app booking platform can be used to book and open/close BARshare vehicles.
<p>Population and area covered</p>	<p>Locations of Ahrensfelde, Bernau, Biesenthal, Blumberg, Britz, Eberswalde, Melchow, Oderberg, Panketal, Wandlitz and Werneuchen 182,760 inhabitants; 1.494 Km²</p>
<p>Why is this MS considered a good practice?</p>	<p>BARshare was introduced with the goal of the Barnim district to replace Barnimer company fleets with a climate-friendly sharing fleet. The co-user approach and related additional revenue generated by private users makes some sites economically viable at present. The sharing of the experience and knowledge about the service through specific workshops (one per year) "BARshare erfahr:BAR" facilitates the implementation of a similar solution from other institutions.</p>

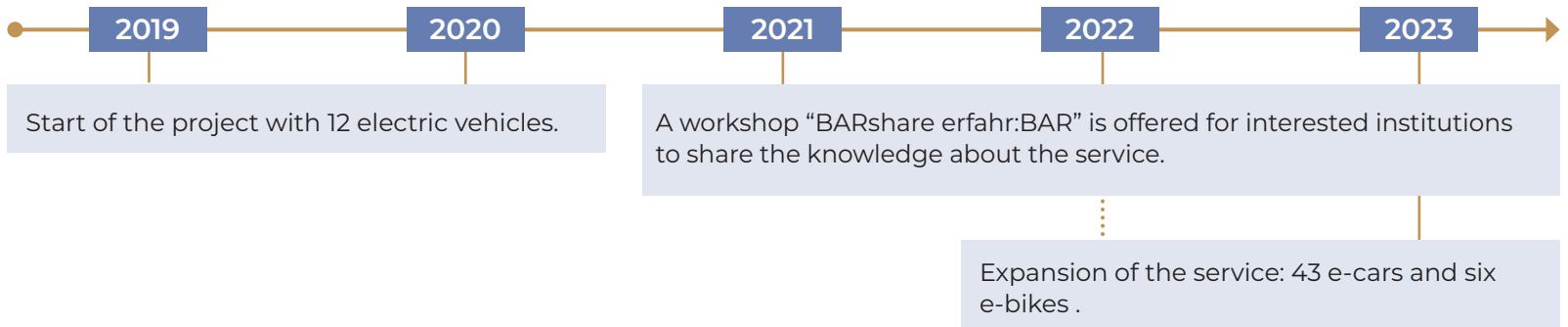


BarShare • Germany

Organisers/Entity responsible for the implementation	<p><i>Barnimer Energiebeteiligungsgesellschaft mbH</i> as a subsidiary of <i>Kreiswerke Barnim GmbH</i> is the operator and responsible for the implementation. Services provided internally are planning, procurement, marketing, customer service and accounting. Services contracted externally are cleaning and maintenance, as well as the app and carsharing hardware.</p>
Sponsors or funding options	<p>The zero-emissions strategy of the district as well as the regional commitment to improved value creation and establishment of closed material and energy cycles provide a suitable political framework in the Barnim district.</p>
Impacts	<p>There are a total of 800 corporate users and 2,300 private users. 400 are active users, meaning they have already taken at least one ride in 2023.</p> <p>The trips are very different: the main users mostly travel from their company to the region, while among the co-users there are various travel occasions such as leisure trips or relocations.</p> <p>In some cases, the service is also used by the rescue service, for example to take laundry to the laundry service.</p> <p>In part, the offer can convince locals to get rid of their own car.</p>
Costs	<p>Capital costs:</p> <p>The launch of BARshare and the creation of the necessary infrastructure in 2019 is thanks to extensive funding, without which the project could not have been initiated and established in its size. The European Union provided € 23,750 in funding for the concept of implementing climate-friendly e-carsharing as a service in the Barnim district to reduce CO₂ emissions, as well as € 98,400 for 22 electric vehicles with associated charging infrastructure. The overall share of funding was around 40%.</p> <p>Operating costs</p> <p>Operating costs include costs for personnel, maintenance, cleaning, etc. Monthly costs of € 600 to € 700 per vehicle can be expected. Services provided internally are planning, procurement, marketing, customer service and accounting. Services contracted externally are cleaning and maintenance, as well as the app and carsharing hardware.</p>

BarShare • Germany

Revenues	<p>Revenues are drawn from the main users and private users, who pay a monthly amount.</p> <p>The majority of BARshare locations are in the immediate vicinity of an institution that uses the vehicles located on site as part of a main user group, thus ensuring the basic utilization of these and covering a share of the operating costs for the respective location.</p> <p>The additional revenue generated by private users even makes some sites economically viable at present</p>
Main barriers identified in the implementation process	<p>Challenges during the establishment were:</p> <ul style="list-style-type: none"> • At the time of the introduction there was no comparable example of e-car sharing in rural areas in Brandenburg or the new federal states of Germany; • Presence of prejudices of the citizens towards e-mobility and sharing concepts; • The personnel and financial costs should also not be underestimated, as many resources had to be made available for ongoing operations.
Lessons learnt	<p>All BARshare vehicles are powered 100% electrically with green electricity from the Barnimer energy supplier Stadtwerke Bernau.</p> <p>The partnership between Stadtwerke Bernau and Kreiswerke Barnim, which also cooperate with the regional brand BARNIM ENERGIE and the public emobility charging network Barnim with two other regional offers in the field of energy supply, offers the possibility to let regionally generated electricity flow into the operation of the charging infrastructure necessary for BARshare and thus also to pay attention to regional cycles in the drive technology.</p>
What is necessary to implement the MS?	<ul style="list-style-type: none"> • Assess the public and private companies which are co-located and related potential users for the service. • Identify a company who can take the leadership of the service, (e.g., a company already present in the area working on the energy sectors. • Design and develop a web and app platofmrs to book the service and secure funding for its implementation.

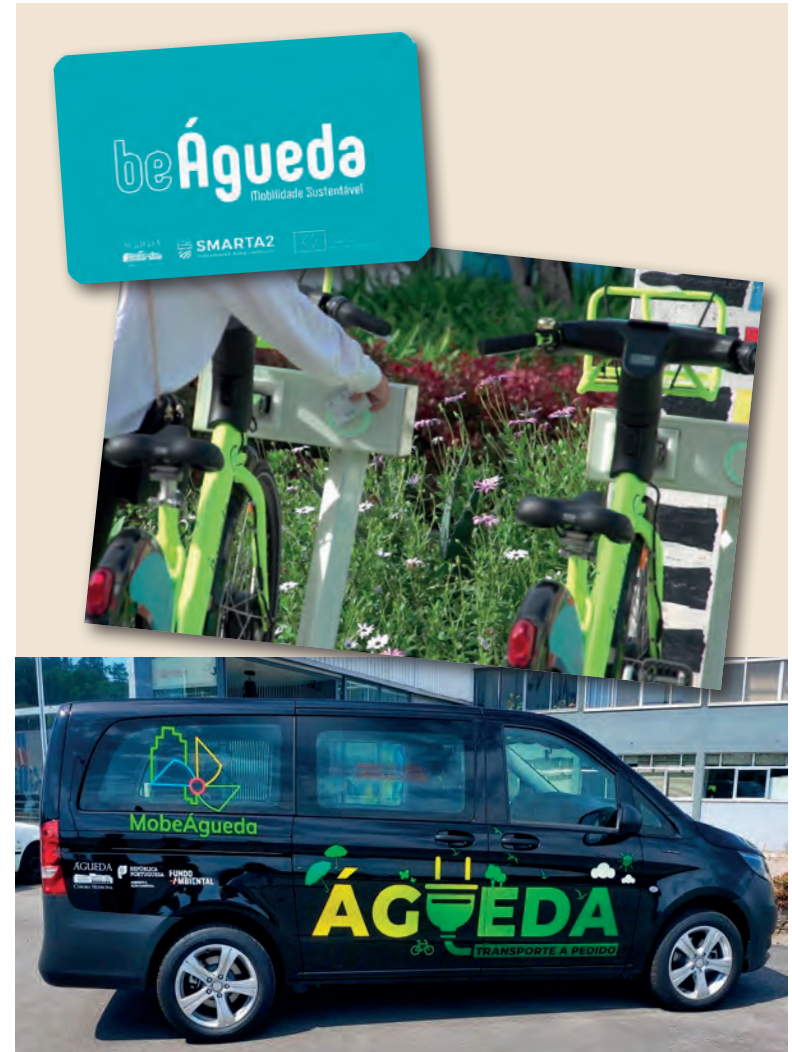
BarShare • Germany**Main milestones**

View over the village of Achdorf in Blumberg,
Baden-Württemberg, Germany

Be Agueda • Portugal



<p>Mobility Solution typology (MS)</p>	<p>Bike sharing service.</p>
<p>Description</p>	<ul style="list-style-type: none"> • 16 bike-sharing stations and 45 bicycles situated in the city of Agueda and in 9 other villages along the Vouga river. • The stations are situated in central places within the city of Agueda and in the rural parishes (tourist office, parish and municipal council, among others).
<p>Population and area covered</p>	<ul style="list-style-type: none"> • 46.131 inhabitants of which around 13.000 living in Agueda and the other in the nearby rural parishes and villages; 335,27 km² covered area. • 63.690 Overnight stays (visitors/year 2022).
<p>Why is this MS considered a good practice?</p>	<p>The service is still ongoing and has been constantly expanded and upgraded since its creation in 2011. It connects the rural parishes/area with the city centre of Águeda, allowing the integration with the railway service. It provides a suitable transport mode to students living in rural areas to easily reach schools in Agueda, encouraging the practice of healthier and more environmentally sustainable behaviors, reducing CO2 emissions (≈138 g/km), contributing to a city that is more friendly to the citizen and the environment. Furthermore, the strategic locations of the BS stations situated in central places within the city of Agueda and in the rural parishes is an added value.</p>



Be Agueda • Portugal

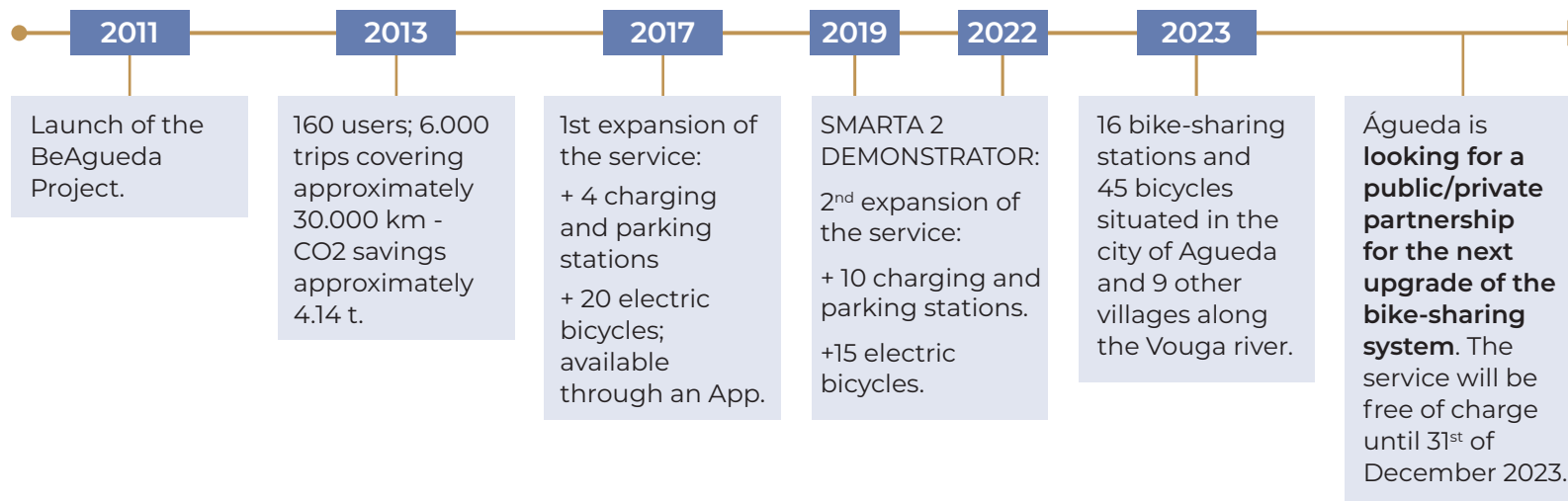
Organisers/Entity responsible for the implementation	<p>The service implementation was promoted by the municipality and financed by Mais Centro (National Strategic Reference Framework -QREN - 2007/2013, European Union).</p>
Sponsors or funding options	<p>IT services are outsourced to a private company. Until now, all beÁgueda implementations have been funded by European or National funds. The Municipality Águeda is looking for a public /private partnership for the next upgrade (from 2024 on) of the bike-sharing system.</p>
Impacts	<p>At first, the system was implemented only in city of Agueda, but it has been continuously upgraded and expanded over time: from 1 parking station with 10 electric bikes in 2011, the system has reached 16 parking stations and 45 electric bikes in 2023.</p> <p>The service has registered:</p> <ul style="list-style-type: none"> • an increased number of users and rides • an interest and demand from other target users and other areas surrounding the city centre, in particular workers of the industrial parks around the Agueda city centre (not yet served by BeÁgueda) • Increased involvement of surrounding parishes and municipalities <p>The success of the service has inspired other municipalities especially in Portugal, but also in Galicia (Spain), to do the same. The Municipality of Águeda has been contacted by several municipalities to provide their expertise on the bike-sharing system, and know-how on specific issues.</p> <p>However, no customer satisfaction surveys or focus groups with users' categories and associations have been conducted by the municipality.</p>
Costs	<p>Capital costs:</p> <ul style="list-style-type: none"> • Initial investment (89% co-financed): 15,749.49 €; • Last expansion of the service in 2022 costed a total of €59,990.00, of which 49.4% co-financed by the Environmental Fund; • Operating and maintenance costs: there is a person full-time allocated to maintenance and operational activities, which represents around 30.000€ of annual budget. <p>Maintenance and operating costs are covered by the municipality.</p>

Be Agueda • Portugal

<p>Revenues</p>	<p>There are no revenues.</p>
<p>Main barriers identified in the implementation process</p>	<ul style="list-style-type: none"> • Possible difficulties about the users registration. A registration is required before using the service. Online registration is a possibility, but it may be necessary to travel to the competent services of Águeda Municipality to validate the user data and make the payment. • Financial difficulties encountered in maintaining active the service. All operating and maintenance costs are in fact sustained by the Municipality. • High dependence on external funds for further expansions.
<p>Lessons learnt</p>	<ul style="list-style-type: none"> • The support of private sponsors could guarantee the upkeep of the service and become a new funding model. • Large-scale information and awareness campaign are necessary to promote the uptake of sharing mobility modes.
<p>What is necessary to implement the MS?</p>	<ul style="list-style-type: none"> • Bike sharing solutions should be considered as a key element of the overall mobility in a city by relevant authorities, in order to be prioritised and integrated – thus, not in competition – with other PT services. • Detailed definition of the support conditions and organisation aspects (PPP collaboration, competition or collaboration with PT services and PT operators). • Need to have a detailed feasibility study defining the business model in terms of “real” cost for the authority for the implementation of the bike sharing service(s)/scheme(s).

Be Agueda • Portugal

Main milestones

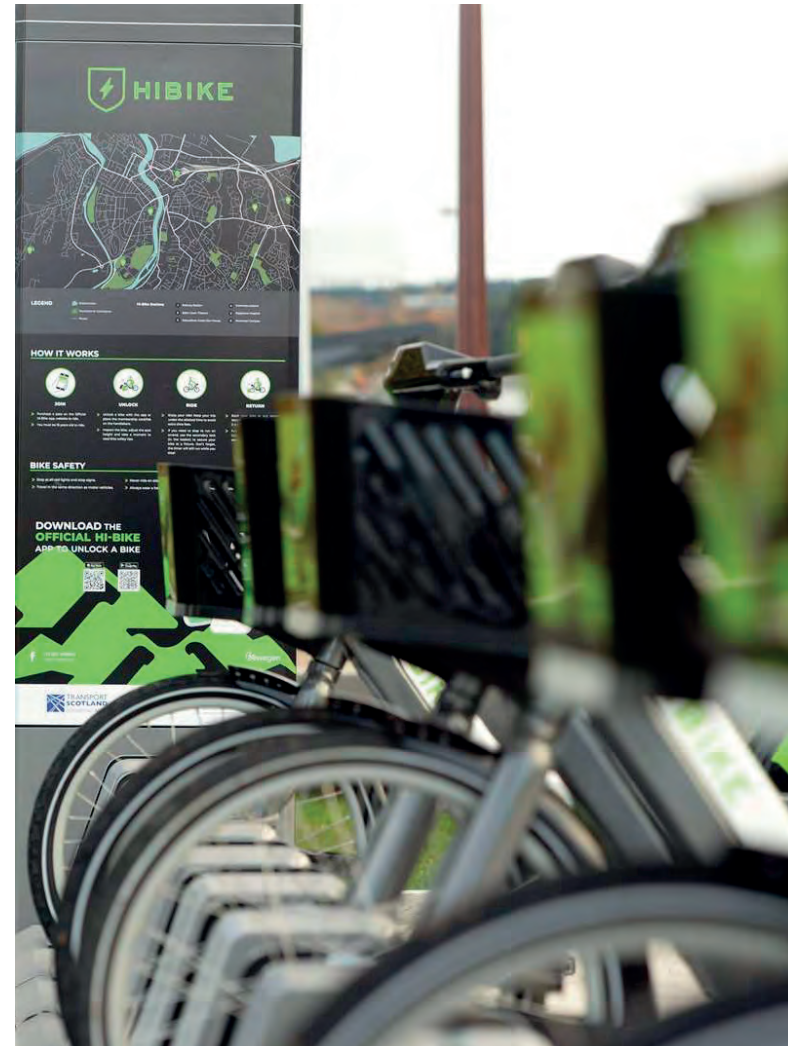


E-bike sharing in Cairngorm National Park (CNP) • UK (Scotland)



The service has been operating for a short period of time. It is not operated anymore.

Mobility Solution typology (MS)	E-bike sharing service
Description	<ul style="list-style-type: none"> • Public Private Partnership to provide e-bike sharing service in the CNP • 3 small scale e-bikes hubs in key gateways towns/transport interchanges for the national park • 16 electric-assist bicycles, 25 standard dock bicycles, 16 recharging docking points
Population and area covered	18 000; 2000 km ² ; 1,92 M visitors
Why is this MS considered a good practice?	<p>The solution was a first attempt in a remote rural area affected by huge seasonal touristic variation to provide bike sharing service through PPP, with the authority (Hitrans) providing the financial support to purchase the bikes, and the local shops engaged to operate and maintain the service. The project was intended to facilitate the use of an ebike for 1st/last mile of journeys made by public transport, and to provide a sustainable means of transport for shorter journeys.</p>



E-bike sharing in Cairngorm National Park (CNP) • UK (Scotland)

Organisers/Entity responsible for the implementation	<p>HITRANS – Public Sector regional transport authority; Local Bike shops located in the main towns of Aviemore, Grantown-on-Spey and Fort William; The University of Aberdeen, project partner in the H2020 Inclusion Project, responsible for the evaluation of the pilot project.</p>
Sponsors or funding options	<p>Horizon 2020 INCLUSION project.</p>
Impacts	<p>Over the project period there have been 382 users:</p> <ul style="list-style-type: none"> • 105 users in Aviemore • 236 users in Grantown on Spey • 41 users in Fort William <p>The scheme was launched in January 2020 and at the end of March the country went to lockdown. According to Hitrans, the project was adapted to make ebikes available to key workers during lockdown, and then more widely to those wishing to try an ebike once the restrictions were eased in the summer.</p> <p>In Fort William, the 6 bikes were put out on long-term loan to key workers in the NHS, Care Workers and a teacher, from April to August.</p> <p>In Aviemore and Grantown on Spey, the bikes were used by people wanting to try out an ebike either for leisure (health, wellbeing, keeping up with family/friends on a ride) or to test whether an ebike would be a feasible alternative to a car for utility trips.</p>
Costs	<p>The capital costs of the bikes were £ 38,558.</p> <p>The operating and maintenance costs were covered by the bike shops as the project partners.</p> <p>For the public sector to set up and manage an e-bike sharing service in the rural CNP area would require on-going day to day operational input and additional premises or infrastructure to establish hubs for hosting the service, needing significant additional budgets and staffing.</p> <p>The solution that was delivered for CNP was to establish a public-private-partnership with existing local bike shops in the main towns of the CNP area. Through this partnership the public-sector partner (HITRANS) provided the financial support to purchase the e-bikes and then partnered with local bike shops that own suitable premises and employ office/ admin/maintenance staff who can host and operate the service.</p>

E-bike sharing in Cairngorm National Park (CNP) • UK (Scotland)

<p>Revenues</p>	<p>Loans and trials were free.</p>
<p>Main barriers identified in the implementation process</p>	<p>The scheme was launched in January 2020 and at the end of March the country went to lockdown. This made practically impossible to make and promotion or dissemination campaign, and the service remain closed for some months.</p>
<p>Lessons learnt</p>	<p>Public-private partnership with local bike shops can be a successful and cost effective mechanism for delivering e-bike sharing schemes in rural areas.</p> <p>Generating revenue from tourist use provides an opportunity to cross-subsidise discounted local hires but there may be conflicting demand between tourists and residents for e-bike hire during summer/ tourist high season.</p> <p>Setting aside a small number of e-bikes for local only use shall being considered.</p>
<p>What is necessary to implement the MS?</p>	<ul style="list-style-type: none"> • Identify a possible sponsoring organisation to purchase the e-bikes and bikes • Engage some local bike shops (or similar businesses) for the operation and maintenance of the service. • Develop a dissemination campaign to promote the service to residents and tourists • Draft a tariff scheme which can take into account the different spending power of residents and visitors.

E-bike sharing in Cairngorm National Park (CNP) • UK (Scotland)

Main milestones

2017

The H2020 INCLUSION Project kicked off. The pilot is designed, and the funding for the purchase of the bikes is secured.

2019

2020

The e-bike scheme is launched in January 2020. The scheme had to be adapted due to Covid lockdown, and during the lockdown period, the bikes were used for long term loans, mainly by healthcare workers who used them to get to/from work.

2021

2022

The project ended in early 2022 and the e-bikes were transferred to community organisations in the Cairngorms and Lochaber, to continue being loaned out for trials.



Crofters Cottage and Sheep, Cairngorms National Park, Scotland

Talybont-on-Usk Energy Car sharing • UK

Community-based



Good territorial
coverage



Integration with
Public Transport



<p>Mobility Solution typology (MS)</p>	<p>E-car sharing service in Talybont-on-Usk village.</p>
<p>Description</p>	<p>The service offered 1 car, 1 van and 4 electric Twizy cars for tourists. Talybont Energy had almost 100 full or associate members who supported the work of the group and got involved in various projects. The areas served by this service were mainly touristic and remote extra urban areas.</p>
<p>Population and area covered</p>	<p>7,0 km²; 719 inhabitants</p>
<p>Why is this MS considered a good practice?</p>	<p>The added value of this mobility solution was to provide an additional mobility solution to residents and tourists in a scattered rural area near a natural park. Indeed, it aimed to enable both residents and tourists to experience driving of alternatively fuelled (electric and vegetable oil) vehicles without making a personal purchase.</p>
<p>Organisers/Entity responsible for the implementation</p>	<p>Public transport operators were not involved in the service planning and implementation. The local council supported the implementation for the street layout, a funding trust supported the vehicle purchase. The local stakeholder involved was the Energy Talybont (NGO).</p>



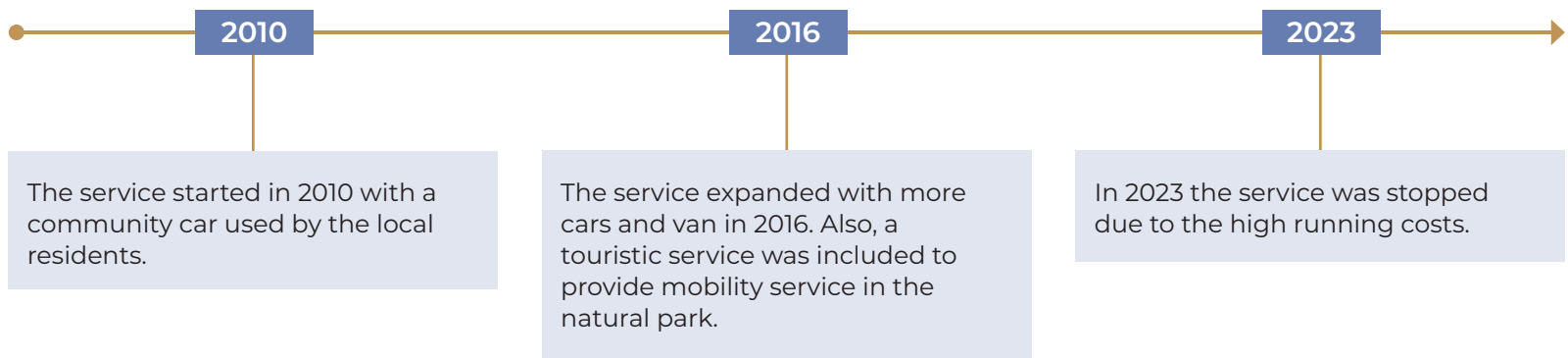
Talybont-on-Usk Energy Car sharing • UK

Sponsors or funding options	<p>The service mainly relied on voluntary effort of Energy Talybont, a local non-profit company, of the local council and of a funding authority (Brecon Beacons Sustainable Development Fund).</p>
Impacts	<p>The data available were only for the first 2 vehicles: members' use of both vehicles is extremely skewed.</p> <p>5 member households account for 91% of the car trips and 97% of the revenue. 4 households did not use the cars at all in 2013 and 2 households only used them once.</p> <p>Despite various changes (and growth) in membership, this skewed pattern of usage remained much the same across the 4 years.</p> <p>The Total Km yearly travelled was 250.000 Km (2016 data).</p>
Costs	<p>The operating costs were around £3.200/per year per car (biodiesel car) and around £1.500/year for electric vehicle.</p>
Revenues	<p>A separate scheme, the Eco Travel Network runs a fleet of electric Twizy for rental to visiting tourists. The Twizy cars are based at accommodation businesses across the National Park and they pay for the vehicles and use them themselves as well as renting them out.</p>
Main barriers identified in the implementation process	<p>Financial conditions and in particular the high cost of insurance have caused the service to end..</p>

Talybont-on-Usk Energy Car sharing • UK

<p>Lessons learnt</p>	<p>If the purchase of the cars cannot be financed by a community and if the operating costs are not supported by the Municipality or other body, the service cannot be economically sustainable.</p> <p>A better model for community car sharing in the future is that private people (or even only one person) allow the use of their private cars to be rented (upon registration of their vehicles with an organisation like Karshare) rather than Talybont Energy having the extra cost of owning, insuring, and maintaining a vehicle which do not need or use.</p>
<p>What is necessary to implement the MS?</p>	<p>The service was stopped due to the high running costs.</p>

Main milestones



hub



Other mobility solutions













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.



The coordination and cooperation of the mobility services is based on different aspects (Organization and Operation procedure, Planning and Service Design, Engagement, Business model and marketing, Product and service schemes, Funding and commercial, etc.) on which the physical layer and ITC and Digitalization play the role of “enabler”

In recent years, besides the ‘virtual’ integration among different transport services, 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.

Other mobility solutions

	 ORGANISATIONAL STRENGTHS			 SERVICE STRENGTHS			 GOOD OUTCOMES		
	Community-based 	User-centred planning 	Responsive to vulnerable users 	Good territorial coverage 	Integration with Public Transport 	Innovative technology 	Sustained ridership growth 	Long-term durability 	Established brand 
Mobility Hubs (NL)		✓		✓	✓				✓
School Bus Service (IT)	✓			✓					
Bad Birnbach (DE)					✓	✓		✓	
Trikala Digital (GR)	✓				✓	✓			
SUMA Elba (IT)				✓	✓	✓			
Local Link Donegal (IE)	✓	✓	✓	✓	✓				
Mobipoints (BE)	✓			✓	✓				

Mobility Hubs • The Netherlands



<p>Mobility Solution typology (MS)</p>	<p>Mobility hub</p>
<p>Description</p>	<ul style="list-style-type: none"> • Collective network of over 57 hubs (34 Groningen and 23 Drenthe) • Principle: every inhabitant of the two provinces shall have such a hub at maximum 15km distance from their home • Co-location of different services, e.g., wifi and water, bicycle lockers, offer of shared electric bikes, sustainable waiting areas, and parcel lockers providing a 24h pick-up service
<p>Population and area covered</p>	<p>1 081 708 inhabitants; 5 640 km²</p>
<p>Why is this MS considered a good practice?</p>	<p>The practice presents a large scale implementation of mobility hubs, integrating transport and other services towards the set up of a network of inclusive hubs. Starting from the co-location of different transport (and its ancillary) services, the two provinces are aiming to improve accessibility to the facilities for everyone, promote suitable transport options for all users, and create a capillar transport network. In this way, the hub is seen as a connecting link between people and facilities.</p>



Mobility Hubs • The Netherlands

Organisers/Entity responsible for the implementation	<p>The main stakeholders involved are the Province of Groningen, the Province of Drenthe, the Municipality of Groningen, the Public Transport Authority Groningen-Drenthe (OV bureau), and the Publiek Vervoer Groningen-Drenthe (a body created as a collaboration between all municipalities in Groningen and Drenthe). These are the actors directly involved with the hub programme and they coordinate the general development of the programme, as well as meet monthly.</p>
Sponsors or funding options	<p>The two provinces and the OV Bureau are the main funding bodies. Individual hubs are always co-financed via municipalities and additional subsidies/funding. Funding for individual hubs is also secured via EU (research) projects such as Surflog and ULaaDs.</p>
Impacts	<p>In the Groningen Drenthe case, two provinces and the city of Groningen put together their public transport (bus) competences in one agency, the OV-bureau Groningen Drenthe. The 24 municipalities also put together their (local) transport competence, like shared taxis, in one agency, Publiek Vervoer. Integration at such large scale is already a big outcome.</p> <p>It's hard to extract quantitative impacts from the solution. The objective of the mobility hub is to fully include rural communities in society and to build stronger rural communities.</p> <p>To an unquantifiable extent, the hubs improve the quality of services offered to the inhabitants of the territories, to tourists and to the vulnerable population as elderly and disabled people. They become a meeting and reference point for people. They improve social inclusion, the environmental conditions, decreasing the use of private cars and increasing the utilization of shared/public mobility services.</p>
Costs	<p>At the start of the programme, the two provinces and the OV Bureau each contributed €1.5 million to cover the overarching costs (programme manager, branding, communication and some pilots) and the implementation of the DRIS panels (dynamic travel information system) at hubs with bus connections.</p> <p>Individual hub projects are financed through subsidy schemes and funding programmes (e.g. subsidies for earthquake areas; Nationaal Programma Groningen etc..).</p> <p>The provinces have a specific budget allocated for the development of hubs; however, local municipalities must contribute as well (but they usually don't have a specific budget available).</p> <p>In the newest vision document for the hub programme, ca. €600.000 has been designated for the hub programme from 2022 – 2025; with most of the budget going towards programme management, communication, and the new working space for the hub programme, while around €30.000 per year is set for investments.</p>

Mobility Hubs • The Netherlands

<p>Revenues</p>	<p>The service in itself is not generating income. It is a (multiplier) investment in the public transport system that should make the regional bus services more attractive</p>
<p>Main barriers identified in the implementation process</p>	<p>Difficulty in financing hub development. For example, compared to the province of Groningen, in Drenthe, the municipalities have less money available, while at the same time having more maintenance costs since they have more roads.</p>
<p>Lessons learnt</p>	<p>The project is a success and is anchored in the long-term mobility strategy of Groningen and Drenthe. The programme team considers 'learning-by doing' a strong point of the project.</p> <p>Lessons learned are:</p> <ul style="list-style-type: none"> • The funding comes from the larger cities/regional governments. Funding in rural municipalities for hubs is usually missing. Cooperation is needed; • Resistance among stakeholders. Stakeholders see the hubs as an inefficient replacement of traditional public transport. The participatory process in the setup of the hub is a possible mitigation measure.
<p>What is necessary to implement the MS?</p>	<ul style="list-style-type: none"> • The whole programme is based on the existence of an efficient public transport network with adequate infrastructure. • Good, reliable, and long-lasting cooperation between the different types of stakeholders have to be set up, with a common and share vision • There needs to be a clear definition of land ownership since that determines the responsible stakeholder for a specific hub

Mobility Hubs • The Netherlands

Main milestones

2016

In 2016, the provinces of Groningen and Drenthe establish their public transport network as part of their urban development plans. This network consists of high-quality public transport lines (HOV), with trains and buses.

2018

The process of installation and development of mobility hubs is mobilised.

2020

The 2020 mobility strategy aims for a greener, more connected and smarter mobility system. Expansion of hubs is specifically mentioned under the goal 'connecting' where hubs help to bridge the first and last mile and fulfil a linking function within the regional chain. Hubs are also seen as a spot where different functions come together. Thus, further developing and adding additional facilities at hubs is crucial. The document specifies that as Groningen and Drenthe are in the development of their own mobility strategies, further guidelines for improving hubs are specified within these policies.

2023

From the concept of "mobility hubs" (suitable transport for everyone), to an "inclusive hub network" (facilities accessible to everyone").

In 2023 the service was stopped due to the high running costs.



Old warehouses along the Hoge der Aa canal in the city of Groningen, the Netherlands.

School Bus Service and technology support • Italy



<p>Mobility Solution typology (MS)</p>	<p>School Bus Service dedicated to children attending kindergartens and primary schools and students attending secondary schools in the Municipalities of Massa Marittima, Monterotondo Marittimo, Civitella Paganico, Montieri, and Campiglia Marittima-</p>
<p>Description</p>	<p>The school bus services are operated on the basis of two different schemes:</p> <ul style="list-style-type: none"> • Conventional school bus service, operated with vehicles dedicated to the specific type of passengers and dedicated exclusively to a specific target user (children attending kindergartens and primary schools and students attending secondary school). • “Open door” School bus service, operated with conventional vehicles for the transport of both school kids and student) as well as for allowing the journey also to other PT passengers/users.
<p>Population and area covered</p>	<p>60.000 inhabitants; 900,31 km²</p>
<p>Why is this MS considered a good practice?</p>	<p>The school bus service is well suited to rural areas or small housing developments with distant primary and secondary schools.</p>



School Bus Service and technology support • Italy

Organisers/Entity responsible for the implementation	<p>The School Bus Service is regulated by a specific service contract, signed between the Municipalities and the transport operator.</p> <ul style="list-style-type: none"> -The Municipalities are involved in the planning of the service, in the assignment of the service to a Transport operator, in the monitoring of the operated service; -Transport Operator: AT Autolinee Toscane provides the overall PT services; -School Bus operators: different companies operate the specific school bus service in the different municipalities/areas contracted by the single Municipality or the union of municipalities. 																																																								
Sponsors or funding options	<p>Deutsche Bahn was the main sponsor. The service has also been promoted at the State Level (i.e., the government of Lower Bavaria, the government of Upper Palatinate, the Bavarian State Ministry of the Interior and for Integration as well as the Bavarian State Ministry of Housing, Construction and Transport).</p>																																																								
Impacts	<p>The following table highlights a total of around 11.000 Kms/week and therefore, considering an average of 35 weeks/year of running service, it is possible to estimate a total of 385.000 Kms/year, operated by different typology of school buses (from minibus to 32 pax bus).</p> <table border="1" data-bbox="409 903 1670 1453"> <thead> <tr> <th data-bbox="409 903 948 1062">Item</th> <th data-bbox="948 903 1061 1062">Monterotondo Marittimo</th> <th data-bbox="1061 903 1179 1062">Montieri</th> <th data-bbox="1179 903 1297 1062">Masa Marittima</th> <th data-bbox="1297 903 1410 1062">Civitella Paganico</th> <th data-bbox="1410 903 1523 1062">Campiglia Marittima</th> <th data-bbox="1523 903 1670 1062">Piombino</th> </tr> </thead> <tbody> <tr> <td data-bbox="409 1062 948 1118">N° of students transported in typical weekday</td> <td data-bbox="948 1062 1061 1118">45</td> <td data-bbox="1061 1062 1179 1118">28</td> <td data-bbox="1179 1062 1297 1118">43</td> <td data-bbox="1297 1062 1410 1118">102</td> <td data-bbox="1410 1062 1523 1118"></td> <td data-bbox="1523 1062 1670 1118">184</td> </tr> <tr> <td data-bbox="409 1118 948 1174">N° of available vehicles</td> <td data-bbox="948 1118 1061 1174">3</td> <td data-bbox="1061 1118 1179 1174">3</td> <td data-bbox="1179 1118 1297 1174">4</td> <td data-bbox="1297 1118 1410 1174">4</td> <td data-bbox="1410 1118 1523 1174">7</td> <td data-bbox="1523 1118 1670 1174">15</td> </tr> <tr> <td data-bbox="409 1174 948 1230">N° of vehicles used in a typical weekday</td> <td data-bbox="948 1174 1061 1230">2</td> <td data-bbox="1061 1174 1179 1230">2</td> <td data-bbox="1179 1174 1297 1230">3</td> <td data-bbox="1297 1174 1410 1230">3</td> <td data-bbox="1410 1174 1523 1230">6</td> <td data-bbox="1523 1174 1670 1230">11</td> </tr> <tr> <td data-bbox="409 1230 948 1302">Type of vehicles used</td> <td data-bbox="948 1230 1061 1302">School bus</td> <td data-bbox="1061 1230 1179 1302">Minibus</td> <td data-bbox="1179 1230 1297 1302">School bus</td> <td data-bbox="1297 1230 1410 1302">School bus</td> <td data-bbox="1410 1230 1523 1302"></td> <td data-bbox="1523 1230 1670 1302">Bus (different size)</td> </tr> <tr> <td data-bbox="409 1302 948 1358">Overall length of the trip (Km/week)</td> <td data-bbox="948 1302 1061 1358">1.295</td> <td data-bbox="1061 1302 1179 1358">726</td> <td data-bbox="1179 1302 1297 1358">1.110</td> <td data-bbox="1297 1302 1410 1358">1.320</td> <td data-bbox="1410 1302 1523 1358">2.178</td> <td data-bbox="1523 1302 1670 1358">2.665</td> </tr> <tr> <td data-bbox="409 1358 948 1414">N° of trips/week</td> <td data-bbox="948 1358 1061 1414">46</td> <td data-bbox="1061 1358 1179 1414">34</td> <td data-bbox="1179 1358 1297 1414">47</td> <td data-bbox="1297 1358 1410 1414">90</td> <td data-bbox="1410 1358 1523 1414"></td> <td data-bbox="1523 1358 1670 1414">154</td> </tr> <tr> <td data-bbox="409 1414 948 1453">Overall number of stops served</td> <td data-bbox="948 1414 1061 1453">25</td> <td data-bbox="1061 1414 1179 1453">24</td> <td data-bbox="1179 1414 1297 1453">31</td> <td data-bbox="1297 1414 1410 1453">53</td> <td data-bbox="1410 1414 1523 1453">104</td> <td data-bbox="1523 1414 1670 1453">169</td> </tr> </tbody> </table>	Item	Monterotondo Marittimo	Montieri	Masa Marittima	Civitella Paganico	Campiglia Marittima	Piombino	N° of students transported in typical weekday	45	28	43	102		184	N° of available vehicles	3	3	4	4	7	15	N° of vehicles used in a typical weekday	2	2	3	3	6	11	Type of vehicles used	School bus	Minibus	School bus	School bus		Bus (different size)	Overall length of the trip (Km/week)	1.295	726	1.110	1.320	2.178	2.665	N° of trips/week	46	34	47	90		154	Overall number of stops served	25	24	31	53	104	169
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School Bus Service and technology support • Italy

<p>Costs</p>	<p>The service is considered as “essential public service” and the costs vary according to the various municipalities and are not available.</p>
<p>Revenues</p>	<p>In addition to the financing of the various Municipalities, parents pay a limited amount as a contribution to the costs of the service when their child signs up.</p> <p>Non-student passengers, who use the service as a PT, pay the current PT ticket.</p>
<p>Main barriers identified in the implementation process</p>	<p>Municipalities must collect and analyse the mobility needs of the groups/families of citizens involved (origin of the trip, safety space, specific support, parents' wishes, number of pupils, etc.) and the various school data (place, timing, etc.).</p> <p>This complex analysis supports the planning of the different routes, the definition of timetables and the identification of the buses/resources necessary to operate the service.</p>
<p>Lessons learnt</p>	<p>It is very important that the municipalities stipulate a service contract with the school bus transport operator which includes various precise obligations such as on-board staff, performance reporting, methods of picking up children, regularity of the service, availability of transport vehicles. reserve, guarantee of maintenance of vehicles in perfect working order.</p> <p>It is also important to carry out surveys with parents to evaluate the performance of the service and in case of deficiencies, take urgent action.</p>
<p>What is necessary to implement the MS?</p>	<p>The service is greatly appreciated by citizens residing in the areas concerned.</p> <p>Regarding its continuity, it must be considered that this is a "public service" and cannot be suspended or abandoned except in cases of force majeure. In particular, in the event of any suspensions by the designated operator, the Administration, to guarantee continuity, may entrust the service to another economic operator, with costs borne by the designated operator as well as applying any sanctions for compensation of damages suffered.</p>

School Bus Service and technology support • Italy

Main milestones

2012

The service is planned and put out for tender (procured) by the single Municipality. In the case of the school bus for high school students the bus service is included in the conventional PT service (procured by the single province or Region (as the case of Tuscany).

2020

In 2019-2020 the service was suspended due to the Covid pandemic to avoid any possible infections.

2021

From January 2021 the service is no longer operated by the assignee of the regional public transport service but by Tiemme.



Historic center of Massa Marittima, Italy

Bad Birnbach Autonomous Shuttle • Germany

Long-term
durability



Integration with
Public Transport



Innovative
technology



<p>Mobility Solution typology (MS)</p>	<p>Autonomous shuttle service.</p>
<p>Description</p>	<p>The service operated in the rural area of Bad Birnbach in Bavaria federal state (Germany), operated by two autonomous vehicles.</p> <p>The service acts as feeder between the railway station and the main points of interest in Bad Birnbach.</p>
<p>Population and area covered</p>	<p>5.803 inhabitants ; 68,81 Km2</p>
<p>Why is this MS considered a good practice?</p>	<p>The solution is relevant because it is one of the first cases in Europe which investigates the possibility of replacing conventional public transport services in a rural area with low demand with autonomous vehicles.</p> <p>Passengers feel comfortable with the service, and there are positive feedbacks with respect to the safety perceived, comfort during the travel and waiting time at stops.</p>



Bad Birnbach Autonomous Shuttle • Germany

<p>Organisers/Entity responsible for the implementation</p>	<p>The project was developed by the Deutsche Bahn in collaboration with the district of Rottal-Inn and the small municipality of Bad Birnbach, and in close cooperation with the company EasyMile and TÜV Süd, a company specialised in technology testing and certification. In addition, scientific support for the project was provided by various Bavarian colleges and universities as well as by DB Regio. Bodies involved under State level are the government of Lower Bavaria, the government of Upper Palatinate, the Bavarian State Ministry of the Interior and for Integration as well as the Bavarian State Ministry of Housing, Construction and Transport.</p>
<p>Sponsors or funding options</p>	<p>The costs were incurred primarily by Deutsche Bahn and, to a lesser extent, by the local partners involved.</p>
<p>Impacts</p>	<p>In May 2018, the service had carried out around 10.000 passengers covering 4.900 kilometres. On average, around 50 passengers a day used the bus service. In March 2019, the passengers transported amount at 27.218 with an average of 61 passengers a day and with 15.389 kilometres.</p> <p>Since the project is the first pilot in the field of autonomous mobility in public transport it acts as a benchmark for operational and approval processes in autonomous public transport mobility, which had a big impact on the creation of a working group related to autonomous mobility on a national level. So far, the service has not been replicated in another region.</p> <p>The innovation is likely to lead to new mobility concepts and business models. Although there will also be losers of the innovation, from today's perspective the benefits of the innovation seem to clearly outweigh the costs. It is not yet clear whether the offer, which has been free of charge up to now, can be maintained in this form beyond the end of the project in 2023. During the project phase, the offer should of course be kept as simple as possible and any intervention in the fare system of the railway should be prevented.</p>

Bad Birnbach Autonomous Shuttle • Germany

<p>Costs</p>	<p>Concerning the capital costs, at the beginning, the goal of the stakeholder was to make as few adjustments to the infrastructure as possible to keep the costs of implementation low. Deutsche Bahn acquired the bus and was also able to use existing infrastructure. Due to the high costs and the administrative project effort, it makes sense for the implementation of such a project to involve large companies that have a good infrastructure and the necessary network.</p> <p>From the operating costs point of view, the project is financed both by loki and Deutsche Bahn (project management, acquisition and operation of the bus and other vehicles, accompanying research) as well as the municipality of Bad Birnbach (public relations, structural measures for infrastructure upgrading on site).</p>
<p>Revenues</p>	<p>The spa administration is seeking partial reimbursement of the costs from the Bavarian state government. Currently, the shuttle service in Bad Birnbach is depending on public funding as well as support of the project partners. The service is completely free of charge for passengers since there is a strategic interest of all partners and stakeholders to learn and professionalize the service instead of creating a revenue stream. The project with the on-demand buses is fully funded by the Federal Ministry of Transport with 2.8 ML euros.</p>
<p>Main barriers identified in the implementation process</p>	<p>The Deutsche Bahn took the project in hand. It lends itself to a large company implementing the project, which already has the relevant infrastructure and the necessary network. The costs were mainly borne by Deutsche Bahn and partly also by the local partners and from public funds, while the offer is free of charge for the users.</p> <p>Any people did not use the bus because of the low range and speed.</p>
<p>Lessons learnt</p>	<p>The connection of the station to the route has brought increasing numbers of users. The acceptance study showed that passengers feel comfortable with the service, and there are positive feedbacks with respect to the safety perceived, comfort during the travel and waiting time at stops.</p> <p>All respondents largely agreed with the statement that the bus represents an opportunity for more mobility for older and less mobile people.</p>
<p>What is necessary to implement the MS?</p>	<p>It is not yet clear what will happen after the end of the project. Conceivable for the future is a flexible mobility network with a wide range. However, a future shuttle network with many small autonomously driving shuttles in the spa town of Bad Birnbach presupposes that the autonomous buses are manufactured in such large numbers that the individual bus gets a cheaper price tag.</p>

Bad Birnbach Autonomous Shuttle • Germany

Main milestones

2017

The first expansion stage of the project was launched on 25 October 2017. The original route leads from the centre of the village to the spa.

2018

A track extension followed in the second expansion stage of the project, doubling the distance travelled from 700 metres to 1400 metres. Two vehicles travel alternately on the route.

2019

The connection to the high-performance public transport system was implemented with the development of the route to Bad Birnbach railway station, which is approx. 1.8 kilometres away from the town centre.

2022

There has been an "on demand" offer. Two autonomous shuttles will be deployed to take passengers from A to B and back again, exclusively on demand. The shuttle collects up to six passengers.

View of Asenham (Bad Birnbach), Germany



Trikala Digital Platform • Greece



<p>Mobility Solution typology (MS)</p>	<p>Digital app for ride sharing and public transport information.</p>
<p>Description</p>	<p>Online application that allows citizens to:</p> <ul style="list-style-type: none"> • Access real-time public transport information; • Join carpooling options (functionality available only for the rural residents of Megala Kalyvia Municipality (8 km from Trikala) and Megarchi (village 20 km from Trikala); • Book target services operated at the InfoPoing (i.e., smart-lockers, wheelchair scooters rental, e-bike sharing).
<p>Population and area covered</p>	<p>81.355 inhabitants (67.000 in the main city of Trikala); 607,59 Km²</p>
<p>Why is this MS considered a good practice?</p>	<p>This practice aims to reduce the number of private cars used by the rural population for their daily commutes to and from the city of Trikala and as a result to eliminate traffic congestion and pollution. It promotes the modal share in favor of public transport and try to pilot organized carpooling in two communities, with the ambition to expand the service to the whole rural area.</p>



Smart Trikala



Trikala Digital Platform • Greece

<p>Organisers/Entity responsible for the implementation</p>	<ul style="list-style-type: none"> • E-trikala S.A., Development Company of the Municipality of Trikala. • DotSoft (Technology providers). This subcontractor is the responsible for the realisation and maintenance of the app. • Municipality of Trikala. This entity is the main stakeholder and is the responsible for the organisation and the implementation of the pilot. • Urban Bus Company S.A (Urban Ktel). Private Transport Operator participated in the consultation & validation workshop. • Megala Kalyvia Local Authority. • Megarchi Local Authority.
<p>Sponsors or funding options</p>	<p>The pilot was implemented in the framework of the SMARTA 2 Project, that provided the financial support to develop the app.</p>
<p>Impacts</p>	<p>During the pilot period, the following results were achieved:</p> <ul style="list-style-type: none"> • 50 registered users for car-pooling (the baseline was zero since this is an entirely new service offered); • Increase of the users of the InfoPoint services (lockers, bicycles and wheelchair scooter) by 50% (the baseline was ~350 users/month); • 400 registered users of the SMARTA2 app; • Around 50% of the registered users have continued using the app after the end of the pilot; • a high level of user satisfaction was achieved for around 70% of the users. <p>The service is still up and working, but at the moment there is a 5-6 months break because there is a renovation of the city center. There are plans to expand the service around all the surrounding areas of Trikala (not only Megala Kalyvia and Megarchi) and expand it with other services (e.g using other e-bike stations- not only the ones in the info point in the city center).</p>

Trikala Digital Platform • Greece

<p>Costs</p>	<p>Concerning the capital costs aspects, the development of the app costed € 25.000, funded in the framework of the SMARTA 2 project. The initial dissemination and promotion budget of the service was around € 10.000.</p> <p>At operating costs level, the maintenance Trikala Digital Platform costs about € 3.000/year.</p>
<p>Revenues</p>	<p>For the time being, no revenue is generated.</p> <p>It might be possible that a proper business model will be introduced (paying fee for the use of the service, advertisements, etc.).</p>
<p>Main barriers identified in the implementation process</p>	<p>Difficulties were encountered during the COVID period that postponed the testing and launch of the service.</p> <p>Moreover, the carpooling was poorly used.</p>
<p>Lessons learnt</p>	<p>A mobility-related app, that (i) digitalizes existing services through an online booking system, (ii) facilitates carpooling options and matching, (iii) provides real-time information about the available transport modes, can contribute to improve accessibility to the city center, reduce the traffic congestion in the city; and introduce the concepts of sustainable mobility and shared mobility to the local rural community.</p>
<p>What is necessary to implement the MS?</p>	<ul style="list-style-type: none"> • Define the desired features of the app; • Ensure the funding necessary to design, develop and deliver the app; • Launch the procurement process towards the recruitment of a reliable subcontractor for the development of the mobile app, in case it cannot be realized in-house. • Deliver an awareness raising campaign to promote the use of the app and encourage the sharing of trips via the carpooling option.

Trikala Digital Platform • Greece

Main milestones

2019

SMARTA 2 Project kicked off (2019).

2020

The project is introduced to the local mobility stakeholders during a workshop in January 2020, to decide on the specific characteristics of the demonstrator and the areas of implementation.

An open competition to identify the suitable sub-contractor for the deployment of the app is organized. The app development is completed in March 2020. Dissemination material (e.g brochures for the Authorities and the citizens) is finalized.

2021

Due to COVID-19 lockdown the testing of the app is postponed. The Covid 19 impacted the launch of the service, it had to be delayed by a few months – but mostly the car-pooling system and the public transport was affected, people still used to pre-book services (e-bikes) at the Info point.

The community had to re-introduce the app after lockdown in July 2020. The pilot testing took place end of August 2020. A demonstration-workshop was organized in September 2020 in order to engage the local community even further.



View of the city of Trikala, Greece

SUMA Elba • Italy

The service is not operated anymore.



<p>Mobility Solution typology (MS)</p>	<p>ICT platform for planning and managing mobility services.</p>
<p>Description</p>	<ul style="list-style-type: none"> Platform for planning, offering, coordinating, and managing different ride sharing services integrated with the (conventional and/or flexible) Public Transport (PT) service, specifically designed for the island of Elba in Tuscany (IT). Users could get all information on the mobility services available in the island and, on the other side, could become potential mobility service providers of shared trips, through the notice board, the key component of the Agency allowing users to share rides (trips request and offer).
<p>Population and area covered</p>	<p>33 600 inhabitants; 450.000 visitors/year; 225 Km².</p>



SUMA Elba • Italy

<p>Why is this MS considered a good practice?</p>	<ul style="list-style-type: none"> • It faces and answers the mobility needs of low-demand areas, coordinating the available transport/mobility offer • It allows the integration of ride sharing services with Public Transport and also the integration of other relevant components of the mobility system (integration of data, payment tool, user information and feedbacks, service KPI validation and evaluation tools, etc.) • It can be easily adapted to a wide range of transport service schemes, and background conditions • It is not limited to transport and mobility services, but also potentially open to a wider range of other added-value tourist services. • It can be considered as a first “step” of a future MaaS scenario • It provides B2C services allowing the coordination/interaction of the different mobility stakeholder and operators.
<p>Organisers / Entity responsible for the implementation</p>	<p>The Municipality of Portoferraio in the island of Elba was the responsible for the management of the Agency implementation and operation. The Tuscany Region was also involved as Authority regulating PT in the region).</p>
<p>Sponsors or funding options</p>	<p>Horizon2020 CIVITAS DESTINATIONS Project.</p>
<p>Impacts</p>	<p>SUMA was developed but did not enter in operation. The testing period was in fact carried out during the year 2020. The first developed demo version of the SUMA platform and related mobile application was released and tested during the summer of 2020 to understand the level of operation and acceptance by the market. However, the advent of COVID 19 was the main cause of its only minimal use in 2020 by citizens and tourists (only 100 download of the APP). The COVID emergency prevented the collection of real data regarding the level of utilization.</p> <p>This did not allow to evaluate SUMA impacts nor the definition of possible improvements to the platform based on the users' feedback.</p> <p>The expected impacts from a full implementation would be the following:</p> <ul style="list-style-type: none"> • Reduction of private vehicles use on the island (with a consequent reduction of the network congestion in the summer) • Give a tangible answer to different travel needs (e.g. need to move at night and from non-served areas currently not covered by local public transport) • The “shared trips” bring significant economic savings for its users, e.g., it offers the possibility to avoid bringing the car on the ferry, the possibility to share a ride (or the taxi expenses) with other people going to the same place, the possibility to avoid the need of a single taxi from/ to discos, etc.

SUMA Elba • Italy

<p>Costs*</p>	<p>Operating costs Total 94,200 € /year</p> <ul style="list-style-type: none"> • Staff for operation and small software maintenance: n. 2 persons x 30,000 €/year = 60,000 € /year; • Offices rent (600 € /month) = 7,200 € /year; • Platform and technologies maintenance 12,000 € /year; • Various expenses 7,000 € /year; • Promotional Campaigns 8,000 € /year.
<p>Revenues*</p>	<p>External Revenues sources:</p> <ul style="list-style-type: none"> • annual fee to be requested at the time of registration to users; • annual contribution from renting operators (bikes, cars, scooters, boats, etc.) included in the network through the platform; • contribution from interested commercial operators (e.g. discos, restaurants, supermarkets, etc.) to be indicated in the platform as main points of departure or arrival of “shared trips”; • possible contributions from local administrations or consultancy companies interested in the documentation and data on mobility and transport.
<p>Main barriers identified in the implementation process</p>	<ul style="list-style-type: none"> i. Scarce use of SUMA during the testing period in 2020 (due to COVID) that prevented the collection of real data regarding the level of utilization and quality assessment; ii. Difficulties in defining the appropriate management structure for the maintenance of the Agency; iii. Difficulties in the definition of specific business agreements with the mobility (rental) operators.
<p>Lessons learnt</p>	<p>Clear prerequisites should be considered for the possible success of the SUMA Agency:</p> <ol style="list-style-type: none"> 1. achievement of clear, effective and positive results (from the platform implementation and organisational aspects to the achieved “real number” of rides) during the testing phase; 2. the ride/asset sharing services should be planned as “support” and complementary mode of PT; 3. preliminary evaluation about the need to develop a new platform or to work/use the existing one(s) taking into account the presence of different existing Mobility services Portal, App and in some case TNC (Transport Network Companies).

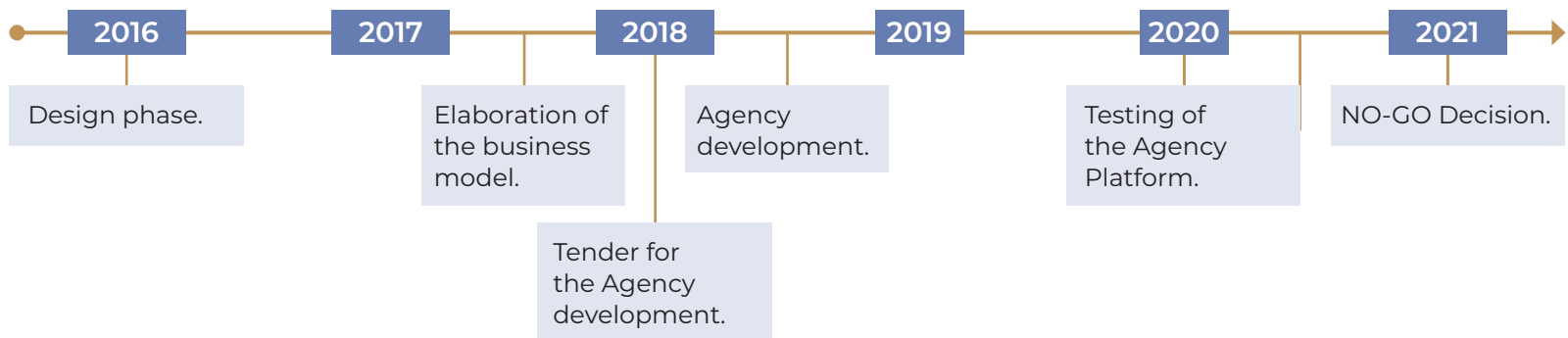
* From Business Model Estimation

SUMA Elba • Italy

What is necessary to implement the MS?

- Support of the Local Authorities (municipalities) in terms of resources and organization;
- Close cooperation among Public Administrations, Mobility Agencies and Transport Operators;
- Technical and functional specifications need to be tailored around the mobility demand and the specific territorial context through an active involvement of relevant stakeholders;
- Possibility to cover the initial investment costs, in particular for the ICT platform realisation;
- Technical capacity required to manage the Agency;
- Effective promotional campaign among the target users (tourists in particular);
- Need to establish a detailed business plan with the estimation of all costs and revenues.

Main milestones



Portoferraio, island of Elba, Italy

Local Link Donegal • Ireland

Good territorial
coverage



Innovative
technology



Community-based



User-centred
planning



Responsive to
vulnerable users



<p>Mobility Solution typology (MS)</p>	<p>Minibus-based fixed route and DRT services for general use.</p>
<p>Description</p>	<p>Minibus-based 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 service, patient discharge and private ambulance transfer to major hospitals outside the area. It functions as a Transport Coordination Unit (TCU), without any in-house operations, and contracts out all services.</p>
<p>Population and area covered</p>	<p>116.000 inhabitants; 4.831 Km²</p>
<p>Why is this MS considered a good practice?</p>	<p>This service can be considered a good practice for the partnership with the local health authority which has been a major factor in the expansion of the services, for the profile and local relevance of Local Link Donegal, and for the acquisition of a stable line of ridership and funding.</p>



Local Link Donegal • Ireland

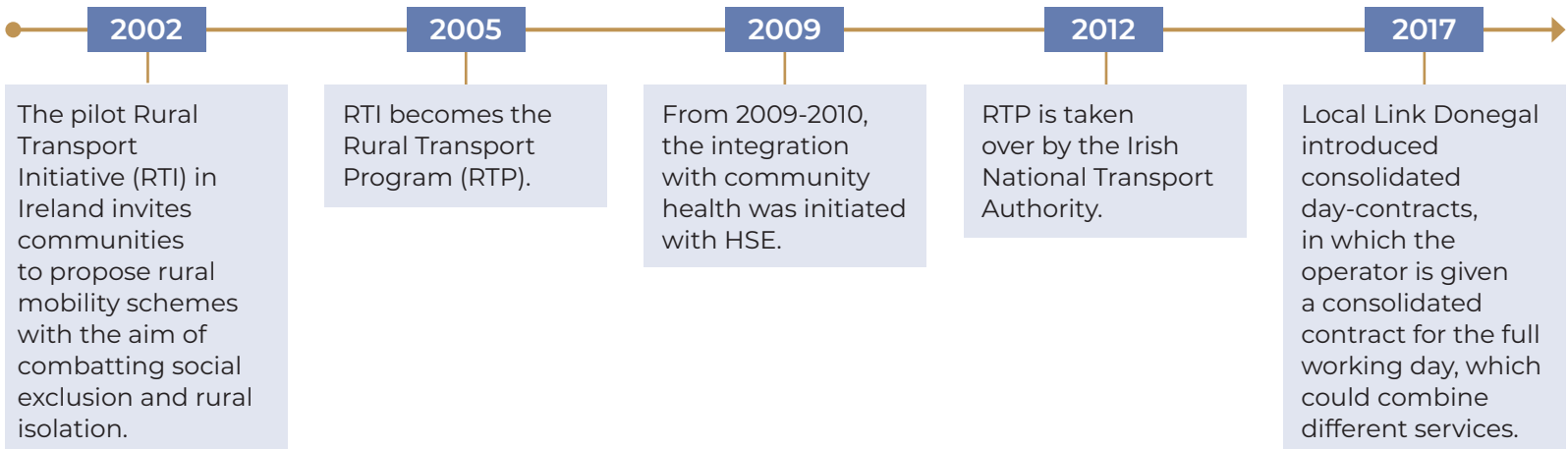
<p>Organisers/Entity responsible for the implementation</p>	<p>Local Link Donegal is operated by a not-for profit company (SITT) with a governance model deeply-rooted in the community. It provides minibus-based fixed route and DRT services for general use, community health services for access to daycare facilities, and non-acute emergency transport for access to dialysis service, patient discharge and private ambulance transfer to major hospitals outside the area.</p> <p>Local Link Donegal provides the transport coordination and contracts in all mobility services from local private operators (minibus, taxi, private ambulance, etc.).</p>
<p>Sponsors or funding options</p>	<p>The main entity is Local Link Donegal, which is one of 17 designated Transport Coordination Units supported by the Irish National Transport Authority.</p> <p>NTA is the transport authority for planning, regulation and PSO contracts for all public transport services in Ireland, and the regulator for all commercial PT services and taxis.</p>
<p>Impacts</p>	<p>The total ridership across all services in 2019 was 500.000, of which about 130.000 are carried annually on the scheduled and DRT services (i.e. the NTA-supported general PT services). The balance 370.000 comprise the Community Health and Non-Acute Emergency Transport. In 2022, total ridership was 730.000, of which 100.000 were DRT and door-to-door services, and 630.000 were regular rural services (RRS). Of the total, the number of passengers carried for HSE was 106.970.</p> <p>To be noted that over the course of 2022, many Ukrainian refugees came to the area, mostly women and children without cars.</p> <p>A further factor was a general reduction in public transport fares in Ireland and additional discounts for younger people. . This led to a large uptake, especially by 3rd level students for whom daily commute now became a more attractive option.</p> <p>These dynamics have continued through to 2023. They estimate that total ridership for 2023 will be in the order of 1.5 million trips.</p>

Local Link Donegal • Ireland

<p>Costs</p>	<p>The total budget for all TCUs is still only about €25 million - about €10 per rural inhabitant in Ireland. The funding generally allows the TCUs to fulfil their social inclusion mandate -that all people in their area should be able to access services at least once a week – but allows only very limited ability to address daily mobility needs.</p> <p>Without doubt, the demand is there, and if more funding was provided, a significant expansion in services and ridership could be achieved.</p>
<p>Revenues</p>	<p>The Local Link Donegal, is one of 17 designated Transport Coordination Units (TCU) and are supported by the Irish National Transport Authority.</p>
<p>Main barriers identified in the implementation process</p>	<p>Financing for rural mobility is always a challenge, but current sources have been reasonably secure and consistent.</p> <p>Observed trend that clients are becoming heavier (reflecting broader trends in the general population) and using larger wheelchair are often electric. While these are clearly beneficially to the user, the larger chairs create new challenges for minibuss-based services. It may become necessary to rethink the vehicle specification and to require Operators to invest in more expensive vehicles.</p>
<p>Lessons learnt</p>	<p>Local initiators consider the mobility services a success.</p> <p>The main lessons would be developing durable structures; maintaining close relationship to the communities; building relationships with entities such as the healthcare sector; gradual but sustained development of services; ongoing adaptation of operating practices.</p>
<p>What is necessary to implement the MS?</p>	<p>Any expansion of the service is closely linked to funding by the National Transport Authority.</p>

Local Link Donegal • Ireland

Main milestones



Mobipoints Gembloux • Belgium



<p>Mobility Solution typology (MS)</p>	<p>Mobility hub, both a local anchor point and a transfer point between different public and shared modes of transport.</p>
<p>Description</p>	<p>Mobipoints aim to meet the needs and requirements of both locals and visitors by serving as local anchor points and transfer points for various public and shared modes of transport.</p> <p>In Gembloux, Belgium, two Mobipoints are planned:</p> <ul style="list-style-type: none"> • one in the city centre, defined as a “small neighbourhood hub”; • one next to the railway station, defined as a “central urban hub”. <p>The project is still in its planning stage.</p>
<p>Population and area covered</p>	<p>26.330 inhabitants; 95,90 Km²</p>
<p>Why is this MS considered a good practice?</p>	<p>Since they are adapted to the needs of the district, several Mobipoints may be available in the same municipality. Each new Mobipoint can be a part of a growing network at local, regional and (inter)national level since they are uniform, identifiable, accessible, and connected.</p>



Mobipoints Gembloux • Belgium

<p>Organisers/Entity responsible for the implementation</p>	<p>The concept of Mobipoint was developed, in Belgium, by MPact. The implementation of the hubs in Gembloux is coordinated by the Wallonian government. The municipality of Gembloux is the main stakeholder of this mobility solution.</p> <p>Two service operators were part of the eHubs project. Unfortunately, they have not expressed their interest in the Mobipoint in Gembloux (yet), due to the uncertain demand for the mobility solutions.</p>
<p>Sponsors or funding options</p>	<p>Service providers were engaged during a market consultation for the eHubs project and, if presented with a plan for a group of municipalities, they seem to be interested.</p>
<p>Impacts</p>	<p>The project is still in its planning stage. The implementation of the hubs, firstly intended for 2023, is postponed by the regional authorities.</p> <p>Service providers were engaged during a market consultation for the eHubs project. MPact explained the project and asked them what their ideal plan would be and how to best collaborate with them.</p> <p>In eHubs, there were already 2 operators involved but since they were involved in the first part of the project, they could not work on the second part (with Wallonia).</p> <p>Preferably, the 5 Wallonian municipalities will tender together to find suitable mobility providers that will offer their services at the Mobipoints.</p> <p>This joint tender will alleviate the administrative burden on the municipalities and will hopefully make the tender more attractive since it creates more potential users for the contractor.</p>

Mobipoints Gembloux • Belgium

<p>Costs*</p>	<p>There is a budget of 210 million euros available for the implementation of the hubs in Wallonia. It is not entirely clear how much the two hubs in Gembloux will cost. 30% of the total budget is reserved for infrastructure investments to implement the hubs.</p> <p>Currently, there is a discussion on making a subsidy available for the mobility provider that will offer services at the hubs in Gembloux. It is not the intention to make this funding indefinitely, but to make the subsidy available for at least for the first years.</p>
<p>Revenues*</p>	<p>The project is still in its planning stage.</p>
<p>Main barriers identified in the implementation process</p>	<p>Financing for rural mobility is always a challenge, but current sources have been reasonably secure and consistent.</p> <p>Observed trend that clients are becoming heavier (reflecting broader trends in the general population) and using larger wheelchair are often electric. While these are clearly beneficially to the user, the larger chairs create new challenges for minibus-based services. It may become necessary to rethink the vehicle specification and to require Operators to invest in more expensive vehicles.</p>
<p>Lessons learnt</p>	<p>The Mobipoints will only be successful if there is sufficient support among the population to use them.</p> <p>Planning the implementation of new Mobipoints, it is useful to consider real estate projects and planned road works in the area.</p>
<p>What is necessary to implement the MS?</p>	<p>The implementation of hubs in Wallonia is hindered by the limited executive power of local and regional administrations.</p> <p>The budget for the hubs is available, but the manpower to implement them within the desired timeline is not.</p>

* From Business Model Estimation

Mobipoints Gembloux • Belgium

Main milestones

2018

The eHubs project started with the aim to extend the Mobipoints in Flanders to Brussels and Wallonia. The project initially planned to implement 50 hubs in Wallonia.

2021

The scope of the eHubs project changed. The goal was now to implement 15 hubs in Brussels and Wallonia. The Wallonia region joined the eHubs project in the same year. The region decided to allocate 210 million euros to the implementation of the 15 hubs.

2023

The planned implementation of the hubs in Gembloux was postponed.

Gembloux (Belgium), the City Hall place and the belfry.





Conclusions

Developing a package of mobility solutions

Any mobility strategy or initiative should start from the issues around understanding and responding to the range of mobility needs in the community. In turn:

- understanding how to harness the available resources;
- understanding whether a mix of paid and volunteer means of mobility can be developed;
- going beyond pilots to plan and deliver at a different scale.

Broadly speaking, rural mobility schemes can be viewed as having three distinct phases:

1. Mobilisation and preparatory phase, in which a set of stakeholders identify that a rural mobility intervention is needed, identify what is needed, agree to work together, build consensus and establish collective capacity to act.
2. Development of solutions phase, in which the specific mobility services and/or technical solutions are selected and acquired, and the capacity to utilise them is established.
3. Operations and long-term sustainability phase.

Each Phase has a number of distinct steps, as indicated in the figure below.

As with everything else regarding rural mobility,

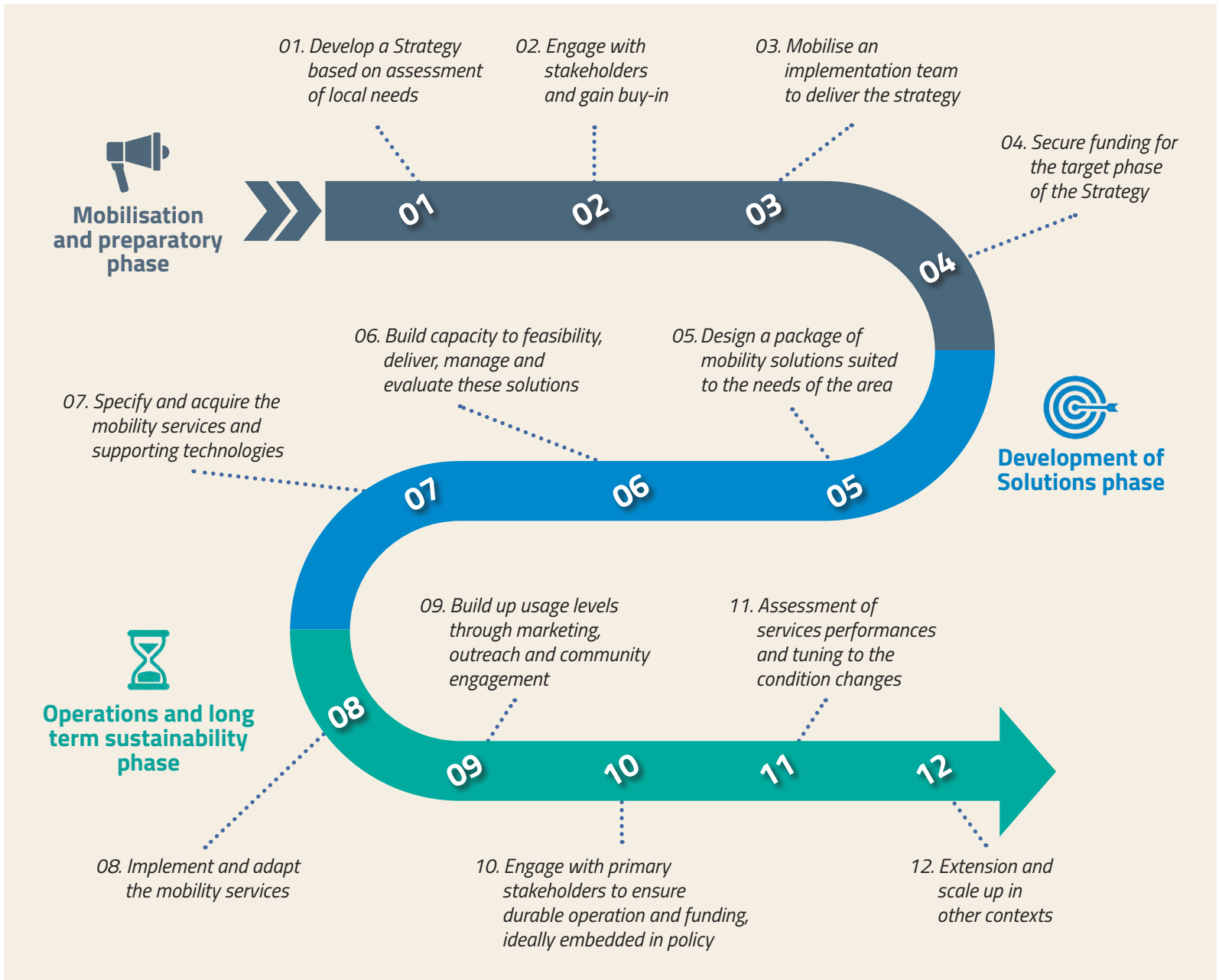
the approach and structure must always be adapted to the context. This is a generalised structure and guidance based on observations. Different places will work in different ways. Some will already be better prepared, such as already having some mobility services in place or having previously mobilised the stakeholders for projects in other domains. Some will have agencies (e.g. LEADER groups) that are proactive and supportive of the community groups, whereas others will need to be more self-sufficient. Nevertheless, this guidance provides a useful checklist which, especially for newcomers, raises awareness of what will need to be done.

Detailed information about each of the 12 steps (reported in the figure above) to help preparing a package of mobility solution answering different range of needs, are reported in the SMARTA-NET

Guidance on Rural Shared Mobility Solutions.

From the experiences collected in this catalogue, rural mobility practitioners can get inspired and learn insight about drivers and lessons learnt not only for choosing a proper solution and implementing it, but also for developing the ridership and the durability in the medium and long-term.





Conclusions

Implementing stakeholders should focus on finding a blend of formal organised and informal forms of mobility, best suited to the needs of the area, the available resources and what the community itself is willing to do.

The package of mobility solutions to be implemented can include a mix of different services. In any rural context, some level of conventional public transport should be guaranteed, either in the target area or nearby.

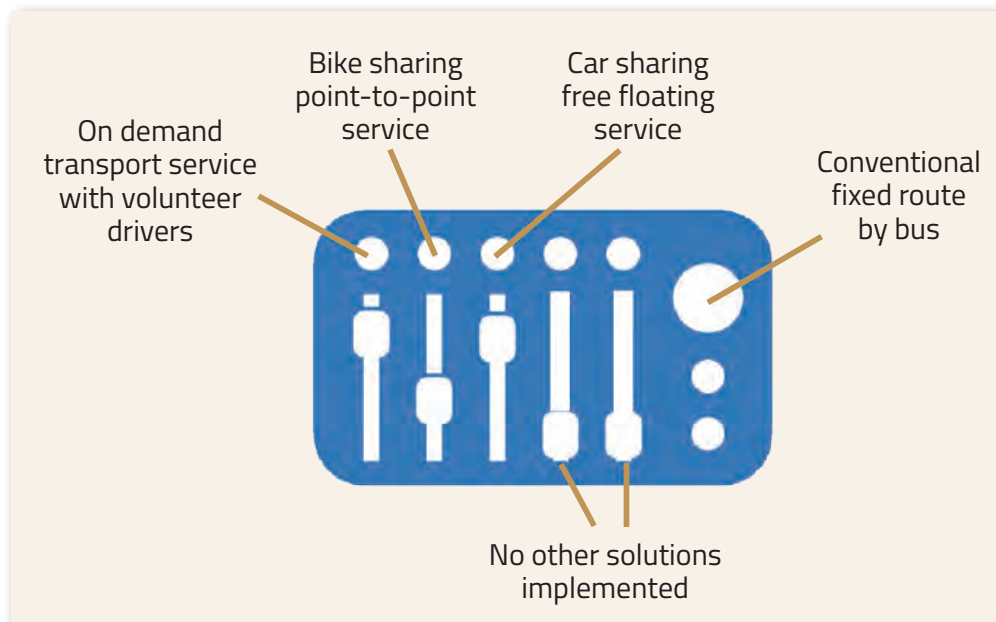
This will provide the structured public transport framework and represents the “backbone” of the mobility offer, being a structuring network that connects towns, cities and regions. In turn, shared mobility services can provide the “first mile/last mile” connections (which in rural areas may be much longer) to the public transport hubs and stops.

The package of mobility solutions to be implemented should depend on the main area needs.

The package of measures might include:

- i. Some level of conventional public transport, either in the target area or nearby, that provide the structuring PT framework;
- ii. Some flexible mobility services, either general or dedicated group DRT, shared taxi, etc.;
- iii. Organised lift-giving within the community;
- iv. Organised and informal ride-sharing, that could include car-pooling, hitchhiking, ride-sharing, etc.;
- v. Asset sharing (car, bicycle); and vi) Other measures suited to the locality.

Starting from the package, the key point is that the implementing stakeholders need to turn their mind to finding a blend of formal organised and informal forms of mobility, best suited to the needs of the area, the available resources and what the community itself is willing to do.



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