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MOBILITY
FOR ALL
IN RURAL
AREAS

Inspiring Solutions From MAMBA

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Welcome

This document presents the innovative mobility solutions developed and implemented within the MAMBA project. Each of them is different because they all take advantage of the opportunities and possibilities of the unique local context in the region. As a result, each individual measure has its own (hi)story, which is featured in this document. These experiences are presented in different styles, mirroring the different people who actually worked on the ground to promote better rural mobility and accessibility. In that sense, this document intentionally takes the reader on a journey to visit the various

MAMBA solutions, where local guides share their experience, talk about the variety of challenges faced, introduce other members of their alliance and present the solutions they discovered. We would like to extend our sincere gratitude to everyone who contributed to this important document. We hope that it will inspire others who seek to pursue similar goals. That is, people who would like to improve the mobility situation in their rural region through new partnerships, through intelligent ideas, and through a good deal of dedication aimed at benefitting everyone living in Europe's beautiful rural areas.

Source: Taneli-Lahtinen/Unsplash

Preface

As Lead Partner of MAMBA, we are convinced: to have a strong, sustainable societal cohesion we need a social Europe that enables just participation for all people, especially for the disadvantaged! Equal access to essential services is one of the social ethical principles of all our actions. Mobility and accessibility of services are obviously crucial factors for achieving this goal, therefore they are cross-cutting issues for all our teams at the Diaconie Schleswig-Holstein which represent all relevant fields of social work. This is the very reason why we proudly led the MAMBA consortium through the exciting joint journey over three years.

We cannot continue relying on conventional forms of transport to solve all mobility problems, especially not in rural areas with demographic challenges such as out-migration and an ageing population. We therefore need to think creatively about new ways of ensuring accessibility for everyone. For example, recent advances in sharing concepts or communication technologies bear the potential for better accessibility in rural areas. There are also promising cases where certain services come to the people, rather than everyone travelling individually to a store, a bank, a doctor's office etc. Projects like MAMBA play a crucial role in this context because they venture out into new territory, try out something innovative, even take some risk and deliver concrete and tangible benefits to people wherever they live. Thereby these projects are fostering socioeconomic inclusion, better chances for everyone and a balanced development in the wider region.

Concretely, MAMBA implemented more than a dozen pilot projects in rural, and sometimes very remote areas in six countries of the Baltic Sea Region. Some of them fall into the people-to-service category whereas others pursue the service-to-people idea. Furthermore, so called Mobility Centers have been established — digitally and physically — to pool and integrate information and services on different modes of transport to provide easier access to mobility and social goods for people. All MAMBA areas struggle with typical challenges but also have specific opportunities like engaged communities, closely-knit social networks etc. It is therefore important, that MAMBA's experience is shared with people in other regions across Europe, who have the motivation to improve the situation in their rural communities.

This publication serves exactly this purpose: It is the result of the transnational collaboration of 16 MAMBA partners from different countries, who have cooperated to implement the best possible ideas at the local level by working together and learning from each other. Now, that their journey has come to an intermediate end, they are "stepping back" in order to self-critically reflect about what went well, what could have been improved and what can be recommended to others who would like to tackle similar challenges. Sharing these lessons is cross-border cooperation in action. It is a way to progress together in an ever-evolving EU, fostering regional cohesion and thereby improving the livelihood of people at the local level.

This publication is one of MAMBA's "flagship" outputs, next to the *Everbody's Guide For Collaborative Mobility Solutions*, *Policy Recommendations* and the *Database For Innovative Mobility Cases*. Together, they provide valuable inspiration and "how-to" advice to people (citizens, service providers, authorities, companies etc.) who want to make a positive difference for their communities. In other words, MAMBA and anyone who takes up its inspiration and advice, joins the Diaconie of Schleswig-Holstein in its endeavour to assist the social development of the less-favoured regions of the European Union. I am grateful to everyone who shares this ambition: roll up your sleeves and go ahead!

Heiko Naß,
*Theological Head
of the Diaconie
of Schleswig-Holstein*

1. Introduction

What is MAMBA?

MAMBA stands for "Maximising Mobility and Accessibility of Services in Regions Affected by Demographic Change." It is a European Interreg project that aims to improve the quality of life in rural areas in the Baltic Sea region through innovative mobility and accessibility solutions.

At first glance, the prospects for such regions seem grim. Certain processes (e.g. ageing populations, out-migration, economic problems, strained public budgets, etc.) are pulling many remote regions all over Europe into a "circle of decline"; a self-perpetuating cycle (or circle) that has a negative impact on the quality of life in rural areas. Looking more closely, however, there is ample hidden potential just waiting to be developed in moving towards solutions. This includes strong social networks, creativity, commitment, resources, a collective sense of charity, and the various infrastructures possessed by local community members and/or the public sector. MAMBA showcases how small interventions can make a real, effective change and counteract this (vicious) circle.

We hope that we will spark your curiosity as we invite you to learn more about MAMBA's ideas and

Source: Anete Gluha, Mazsalaca municipality.

successful local projects (but also, importantly, about the difficulties we encountered, and how we handled them) in this document, which we proudly call "Mobility for All in Rural Areas".

How MAMBA makes rural regions a better place to live

MAMBA promotes sustainable mobility solutions in rural areas in the Baltic Sea region — and involves users in the process. Two main approaches are pursued:

- **People-to-service:** this means enabling people to access certain services (stores, banks, libraries, doctors, etc.) more easily.
- **Service-to-people:** this means that the providers of certain services come to the people themselves — or at least to a place nearby, such as a village centre.

The three-year the project sought to ask:
- How can we organise rural mobility and welfare services in the future, so that they reach the people who need them?
- How can we develop rural mobility services that are as useful and accessible as possible for all residents?
- How could technology be used to support and improve rural mobility services?
- In what ways can users be continuously involved so that we develop rural mobility services that are relevant for them and meet their needs?

With a consortium of 15 partners from six countries, MAMBA has examined these questions and showcased potential solutions. The consortium co-created over a dozen mobility solutions with local stakeholders in remote regions, towns and villages throughout the Baltic Sea region. At times, these interventions all faced challenges of their own — whether financial, socio-cultural, organisational, political or legal. However, with courage, ingenuity and flexibility, most of these challenges have been overcome. For example, MAMBA has launched the

Source: Janis Bikse.

Evaluating
mobility services

Establishing
innovative mobility and
accessibility solutions

Involving
users to design new
solutions

first-ever rural Transport-on-Demand service in Latvia, a process that required a lot of pioneering work (p. 24). On Hallig Hooge, a remote German island in the North Sea, with only around 100 inhabitants, we improved the provision of social counselling through digital means, reducing transport needs and improving the quality of life on the island (p. 56). In Upper Silesia, in Poland, MAMBA has connected remote villages to nearby towns with new, demand-responsive transport service (p. 31), and in a rural part of Southern Sweden we have tested how rural co-working spaces can reduce longer-distance commuting and boost community life. This project was even nominated for the Municipal Innovation Prize of the year 2020 (p. 44). These are but a few examples of MAMBA initiatives.

Further inspiration about these and other case studies follows in this document. Chapter 2 highlights the challenges and opportunities for innovative mobility solutions in rural areas. In Chapter 3, various factors that can play a role in implementing innovative mobility solutions are illustrated and explained. This includes financial, legal and human-resource considerations. The key part of the document is Chapter 4, which presents the MAMBA projects implemented across various rural areas

in the Baltic Sea region. The insights gained from these numerous projects are summarised in Chapter 5, entitled 'Lessons Learnt'.

If these innovative mobility solutions spark your interest and motivate you to take concrete action, here are some other documents that we would recommend:

(1) "A Guide to Collaborative Mobility Solutions in Rural Areas". This is another flagship output from the MAMBA project, which provides step-by-step guidance concerning the planning and implementation of innovative mobility solutions. You can find it on the MAMBA website: www.mambaproject.eu
(2) The MAMBA database of innovative mobility solutions, in which you will find a huge number of examples from the Baltic Sea region and beyond, explanations of good practice, inspiration and contact details for operators: www.mambaproject. eu/database
(3) The guidance document for policymaking, which provides policy-makers seeking to lobby for legislative and policy changes with multiple points of engagement for improved mobility and accessibility of services in rural areas. Again, it is available on the MAMBA website: www.mambaproject.eu.

2. Challenges accepted: Understanding the opportunities for improving accessible rural mobility

The Challenges

Rural areas are characterised by long distances Rural areas are characterised by long distances and low population density. This makes traditional public transport and the provision of social services challenging and expensive for the public sector to maintain. At the same time, sufficient transport options and social services are vital for remote regions, because:

● Access to transport is an important factor in enhancing the competitiveness, sustainability and attractiveness of rural and remote areas. It achieves this by ensuring access to key services — such as employment, education, healthcare and leisure activities — for both inhabitants and potential visitors.
● Access to services is equally crucial. The poor accessibility of services is among the factors leading to the marginalisation and peripheralisation of many rural regions. It can result both in a decline in economic activity and potential, and low levels of socio-economic performance.

Improving both mobility and the accessibility of services in rural areas are central responses to the challenges that these rural regions are facing. They are important in breaking the "circle of decline" faced by many rural communities (see Figure 1).

Rural areas begin the circle of decline when their population — in particular working taxpayers — falls below a critical mass. Since rural areas already have a low population density, any out-migration or ageing of the population leads to a lack of critical mass for services and infrastructure. The cost per capita for the public sector to continue providing these services increases in such situations, making it difficult to maintain or improve them. Consequently, these areas find it difficult to attract and retain businesses, who instead move to more economically viable areas with a greater number of potential customers and employees. This leads to fewer jobs in the area, which inevitably forces residents to continue moving away to find jobs and educational opportunities.

Source: Janis Bikse.

Source: Andris Lapans.
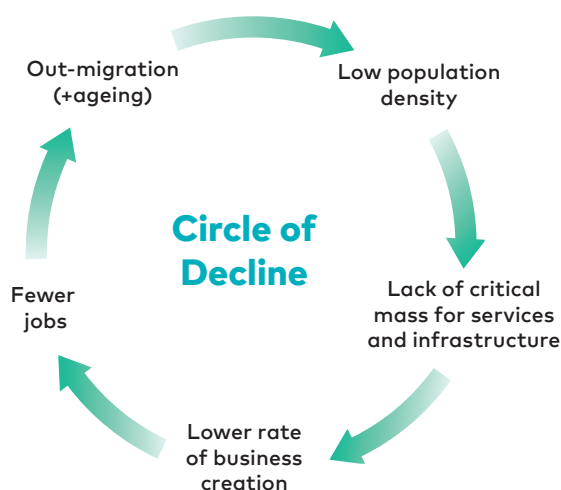
Figure 1: Circle of declining rural areas. Source: OECD, 2010.

So, the vicious circle of decline intensifies, with fewer and fewer resources available for the public sector alone to provide sufficient access to mobility and social services. For many rural areas, this means that the public authorities need to "thin out" public transport services and social services — in some cases discontinuing them entirely. The situation can worsen when a decreasing and ageing population leads to fewer public transport users, while — at the same time — an increasing number of people require special transport provision, such as hospital and paratransit services. Residents in these areas are left with no option but to buy their own cars (if they are physically and financially capable of doing so) so that they can maintain their lifestyles and participate fully in society. Ultimately, all of these factors, taken together, result in a sharp decrease in rural residents' quality of life.

The Opportunities

Finding innovative ways of improving access to mobility and social services in areas experiencing a vicious circle of decline could be one of the keys to reversing it. Declining rural areas require innovative mobility solutions, taking into account structural changes in the economy and in demographics. The main aim is to improve accessibility and serve the mobility needs of the remaining residents, thereby improving their quality of life. In the short term, this makes the area more liveable and reduces social isolation; in the longer term, it could help to reverse the circle of decline by attracting more residents and businesses, ultimately improving the economic vitality of the area.

Rural areas have different needs and different resources than urban areas. As a result, solutions that were successful in urban or peri-urban areas cannot simply be transferred to rural areas. But does the search for better access to mobility and services in rural areas need to be an uphill battle? We believe that it does not — in fact, rural areas can be an especially fertile ground for the public sector and grassroots actors to develop collaborative working and implement mobility solutions successfully. Collaboration between private or voluntary actors and the public sector leads to innovation, greater social cohesion, and ownership of solutions. However, in order to reap these benefits, it is necessary to think "outside the box", diverting away from the established patterns and conventional protocols, roles and responsibilities that typically create a dividing wall between the public sector and the grassroots. The key is either to dismantle this wall or to find ways of opening up windows between different participants. This can be achieved by finding effective ways to mobilise the

Source: Johanna Feuk Westhoff, MAMBA project.

various actors' existing resources, so they reach a common goal together. This requires a willingness on the part of the public sector to be more of an equal partner and a facilitator of collaborative mobility solutions.

There are many opportunities in rural areas to make efficient use of existing social networks, resources and public transport infrastructure at low cost, and in a way that can be of significant value to local residents. Despite the lower population density, rural areas tend to have tighter-knit social networks and a greater degree of trust among neighbours. This is, in a sense, untapped social capital, waiting to be mobilised for collaborative mobility solutions. Projects which have been developed in this spirit, and which are proven to be well-suited to rural residents' needs, focus especially on last-mile solutions and personalised transport — including on-demand and flexible services, car-sharing, ride-sharing and pedelecs.

The MAMBA solutions

MAMBA partners accepted these challenges, attempting to help break the circle of decline by collaboratively developing and implementing innovative mobility solutions. The 36-month project provided the extended period of time necessary to develop, negotiate, implement and test new mobility solutions, and also to judge their effectiveness and sustainability. This time window allowed us closely to monitor changes in the way residents get around in MAMBA project areas, while also taking into account social, cultural and economic factors.

This document describes interventions developed and implemented as part of the MAMBA project. Some of them focussed on people-to-service solutions by improving accessibility to a range of services; others aimed at finding new ways in which services could come to people, and one strove to reduce the need for travel through the provision of a co-working space for remote

MAMBA
rural mobility and accessibility solutions

Social and health care related transportation in the region of South Ostrobothnia, Finland

Public transport portal serving inhabitants across the entire region of North Karelia, Finland

Ride-sharing app in the Smidstrup-Skærup village area of Vejle in Southern Jutland, Denmark

Mobile social counselling for the inhabitants of Hallig Hooge island, Germany

Rural co-working hub in Södra Åby and buses for the elderly. Trelleborg municipality, Sweden

Transport-on-Demand in Aluksne and Mazsalaca municipalities Vidzeme, Latvia

Online platform providing transport service information in Plön, Germany and Transport-on-Demand service

Rural car sharing in Geestland, Neuenwalde district, Cuxhaven, Germany, and county-wide transport service information center

Transport-on-Demand service and ride-sharing application in Bielsko-Biała, Poland. Transport information and booking services via Bielsko District Mobility Center

0   150   300 km

MAMBA rural mobility and accessibility solutions.

working. In other cases, MAMBA partners also developed so-called Mobility Centres as a means to integrate information about different modes of transport in one central information "hub" — be it physical or digital.

MAMBA solutions always seek to leverage local opportunities and resources. They make use of the local community, which was the case in Trelleborg, for example (p. 44), and in Vejle (p. 52). Another ex-

ample is Plön, where additional services extended the already existing public transport system (p. 40). Overall, the experience of the MAMBA solutions is that rural areas are capable of delivering better mobility solutions for the local population when public sector and grassroots actors work together. Read more about how this has been achieved in Chapter 4.

3. Consider the local context!

This chapter explains three crucial aspects to consider very early on in the process of improving local mobility solutions. This involves taking stock of important opportunities, but also of potential obstacles.

- Aspect number one is **internal resources**. That includes people, know-how, experience and skills; decision making structures, existing contacts, money (of course) and other resources.
- Aspect number two is having a clear understanding of the key factors in **your region**. For example, is it hilly or flat? What is the average age of the population? What is the unemployment rate? Are people typically open to trying out new things? Is the regional government stable? When are the next elections? These and various other factors will be significant.
- The highly important third aspect to consider is the **legal situation**. After all, your idea has to fit with existing laws about transportation licences, liability rules, data protection, tax regulations, etc. It is crucial to keep all such related aspects in mind from the outset.

3.1. Make use of your existing resources

Resources can be people, but also forms of financial support or already existing structures in your local community.

Network of (potential) partners
Who could help with innovative mobility solutions?
New mobility solutions can never be the responsibility of just one organisation. They always depend on a range of partners working together. Typical partners in such a strategic alliance would be public transport operators, the local authorities and — obviously — the users. Schools, universities, banks, foundations, citizen's groups, the chamber of commerce and even religious organisations can also play an important role.[1] Think creatively about who might be able to assist and involve them early on.

Management structures
How effective are your organisation's decision-making structures?
The path towards a successful mobility solution is a journey involving a large number of decisions — some small, others more far-reaching. It is important to have an effective management structure in place for this process. Leading questions in this context include: Which decisions can be taken by whom? Do certain decisions require a general assembly of all members (which only happens once a year)? Do you have the computer equipment and skills to communicate effectively with a large group of people, keep track of finances, design flyers, assign and control tasks, and so on? Even if your mobility solution is not required or intended to make a profit, you should be able to treat it as a business operation.

Technological and digital solutions
What are your preconditions for technological and digital solutions?
When thinking about technological or digital solutions (for example, the booking of a flexibly routed on-demand service), it is important to check the availability and quality of ICT (Information Communication Technology) infrastructure. Mobile reception can be unreliable, too, and not everyone will necessarily have a computer, tablet or smartphone with a sufficient data allowance. Do not take such things for granted.

It is also essential to understand the degree of willingness and confidence with which people tend to use digital tools. This is often a challenge in rural areas because older people tend to be less familiar with digital solutions. This was the experience when implementing a digital platform in North Karelia (p. 18). It can take quite some time until people trust and use "fancy" technological solutions.

The exclusion of population groups should be avoided as far as possible. So, even if digital solutions are the core element of your project, think about appropriate support facilities — such as

a (voluntary) telephone service to help elderly or disabled people to benefit from mobility services.

Financing
How is public transport financed in your region, and who could co-finance innovative mobility solutions?

Undoubtedly, money matters, and that goes for innovative mobility solutions, too. Make sure that you pay attention to these three aspects: the set-up and running costs of mobility solutions for the organisers, potential funding sources and the price for users, including any discounts.

To estimate the costs of an innovative mobility solution, various factors should be taken into account. Think about fixed costs (e.g. those which come to the same amount every month), variable costs (one-off expenses) and specific costs for drivers, administrators, maintenance staff or other personnel.[2] Also, don't forget about insurance premiums, communication materials, and so on.

Funding sources for new mobility solutions can be public and/or private. In all regions where MAMBA solutions were implemented, public transport is subsidised by the national or regional budgets. Some philanthropic foundations are also occasionally willing to make financial or other in-kind contributions, typically for the initial phase. You might also consider making sponsorship arrangements with local companies.

When planning the pricing policy for a mobility service, it is not just the total number of planned users that must be taken into account, but also the ability of various target groups to pay. You might want to grant discounts to groups with special needs, such as people with disabilities, senior citizens, students and low-income families or individuals. In order to increase customer loyalty, you could also consider offering discounts for monthly or annual tickets.[2]

Combining with other service providers
Which services already exist in your region, and how do they interconnect (or not)?

In rural areas, there are often locations — such as cafés, small corner shops or even petrol stations — where particular services are offered to people. These may be used as "anchor points" for new solutions. For example, if you plan to establish a new, volunteer-driven bus service, the passengers could wait inside a corner shop until the bus arrives. This solution might also attract new customers to the shop. In addition, social contacts can be forged through the bundling of services. In such cases, both services (transport and shopping, in this example) will combine to create a positive user experience. It is smart to use such existing service structures, as it is much more difficult to set up new structures from scratch[2].

3.2. Build on existing structures
For the implementation of an innovative rural mobility solution, it is important to understand the key factors in your region in order to identify potential obstacles and drivers, as well as to assess users' needs.

Population structure and population density
Who lives in your region?

The population structure and density will affect the purpose, regularity and timing of mobility patterns. Also, the age structure will influence why, when and how people want to get from point A to point B. For younger people, for example, the purpose is often to get to work. When they get older, the demand for social and healthcare services increases. The demand for mobility will, therefore, be different in terms of routes and times. The fewer people who live in a region, the more difficult it becomes to maintain a regular and frequent public transport system. In rural regions with many older people, fewer people go to work during the day, and so the overall demand for transport is lower[2].

To gain insight into some key characteristics regarding the population structure of the MAMBA regions in the Baltic Sea region, check out the analyses (regional profiles, maps) on the MAMBA project website: www.mambaproject.eu/products

Factors related to social groups
How can the dynamics of social groups foster or hinder innovative mobility solutions?

Looking at individual factors, it is noticeable that innovative mobility solutions can be a challenge to people's individual characteristics, taking into account age, gender, attitude, educational status, lifestyle and socio-economic status. It is useful to bear this in mind in order to assess what influence these factors might have on travel behaviour and

on the acceptance and uptake of new mobility solutions[1]. A good example is the Non-Commercial Drive Pooling in Bielsko-Biała. For the first phase of implementation, students were chosen as the target group. They seemed to be the easiest group to reach, because their peer group had certain typical features, such as low car ownership and familiarity with digital solutions (p. 29).

Political atmosphere
How is the local political atmosphere?
Are politicians open to new ideas?
The political and administrative environment can also have an impact on the possible implementation of an innovative mobility solution. If different levels of government and different policy areas (such as health and transport) work well together, this amounts to a positive precondition. If they do not, then the new mobility solution might be a good starting point to improve interaction between different departments.[1] This was the case, in Trelleborg, for example, where MAMBA helped to create a Mobility Discussion Platform (p.38) that brings together different levels of government, and various policy areas, in order to discover innovative mobility solutions for rural areas.

Structure of the local economy
How could you make use of the structure of the local economy?
The structure of the local economy can contribute to the implementation of innovative mobility solutions in a variety of ways. Rural regions tend to have seasonal workflows since sectors such as agriculture, forestry and construction still constitute a high proportion of the overall economy. Another important source of income in rural areas can be tourism. The demand for mobility will then be higher and structured along seasonal lines. In the off-season, for instance, resources which are superfluous at that time of year might become available[2]. Consider using resources not in use at the moment, but which might be helpful in creating a new mobility solution for local people.

Mobility infrastructure
What mobility services can you build upon?
It is important to analyse how people are currently mobile. Even if the areas concerned are rural, there will likely be different forms of public transport.

Local transport may be very car-dependent, and people not used to public transport at all. One innovative mobility solution in Trelleborg sought to change this by providing recreational bus services for older people on weekends, trying to familiarise them with public transport in general (p. 42). Pre-existing public transport can also be a starting point for additional, innovative mobility solutions.

Spatial patterns
Is there some kind of centre, or do people live far away from each other?
Settlement structure can be decisive for certain kinds of innovative mobility solution. This is closely related to specific population density. If large numbers of people are gathered around a single point, it is easier to finance a mobility solution there than for scattered settlements over a large area and greater distances[2]. A (kind of) centre can be used to bundle services, as well as to serve as a meeting point. A good example of that is the Co-Working Space developed in Trelleborg (p. 41).

Geographical conditions
What are the typical landscape and weather conditions in your region?
Typical weather conditions in a region can influence the choice of a suitable means of transport. Heavy seasonal snowfall, or a lot of rain at certain times of the year, may make certain modes of transport less attractive. Topographic conditions, such as hills or the quality of the roads, may also simplify or prevent the introduction of new mobility solutions. These circumstances should be taken into account during planning, especially when thinking about which vehicle types to purchase — especially if new vehicles will be needed.

3.3. Mind the law!
When establishing a new mobility service, it is important to know about existing laws regarding transport, insurance and finance. Some laws related to innovative, collaborative mobility solutions apply Europe-wide, others are national. A comparative analysis carried out by the Institute for Climate Protection, Energy and Mobility (IKEM) and legal experts from the countries participating in MAMBA demonstrates that the prospects are good for establishing innovative mobility solutions on a sound legal basis.[3]

Passenger transport law

Passenger transport laws vary from country to country. They ensure public safety and order in all issues relating to public transport. In most European countries, passenger transport laws require operators to obtain approval from the competent authority before offering to transport passengers on public road space, specifically when the service is commercial.[3] Keep these requirements in mind.

Personal legal requirements for drivers of motor vehicles

Anybody who drives other people around — as a paid driver or as a volunteer — needs certain licences. The type of licence is important; as it governs the weight and the length of the vehicle as well as the number of people it can convey. In most countries, the drivers in the regions where MAMBA solutions were implemented need a category D licences for minibuses. However, with a category B driving license, up to nine people (including the driver) can be transported in vehicles weighing less than 3.5 tons. In most European countries, the authorities must approve the drivers' professional qualifications before they are eligible for any additional passenger transport license. But in Finland, for example, drivers only need to pass an additional health test to be qualified for commercial passenger transport, while in Sweden such drivers need to be over 21 years-of-age.

Finance Law

Solutions can be both privately and publicly funded. The latter are regulated by public finance law, which is different in each country. In this context, it is a great advantage if the solution proposed qualifies as public transport, since this makes public funding options easier to access. Under some regulatory frameworks, a distinction is made between line-based and occasional transport. Some countries will usually choose those transport options qualifying for public funding in any tendering process. Others may provide reimbursement for losses to transport providers because public transport is considered a social obligation. The type of user-group also matters. For example, public transport may be subsidised or free for people with disabilities or for school pupils. In most cases, the government will compensate providers for these costs. In most countries, public transport companies are eligible for tax deductions.[3]

Insurance law

Solutions need to have insurance coverage. The law is different in each country in the Baltic Sea region in this regard. In most countries (such as Finland, Latvia, Poland and Sweden) the owner of a vehicle is responsible for any insurance policy required. In Germany however, not the owner of the vehicle but the person using and maintaining it on their own account needs to take out a vehicle liability insurance. If goods are to be transported, additional insurance for this may well be a good idea.[3]

Procurement law

Procurement law is applied EU-wide, but each state still has its own distinctive legislation, expanding on European law. The main objective of procurement law is to guarantee safe, efficient and high-quality passenger transport services through regulated competition. Whether innovative mobility solutions are subject to a competitive tendering process organised by the respective authorities also depends upon their legal status as a public transport service provider (see above). Here, our analysis presents a mixed picture. Whereas Transport-on-Demand solutions fulfil the criteria of public transport, for instance, car-sharing does not.[3]

Data protection law

All data protection law revolves around the European General Data Protection Regulation (GDPR). This stipulates that processing personal data is lawful if the data subject has given consent to the processing, or if it is necessary for the performance of a task carried out in the public interest. Other key principles of GDPR are purpose limitation and data minimisation. Data protection law plays an important role in the process of establishing innovative mobility solutions. It is important to tailor booking or registration systems in a way that ensures all users actively consent to any processing of their data.[3]

4. Get inspired by these innovative mobility solutions!

Within the MAMBA project, various innovative mobility solutions were implemented in nine different rural areas across the Baltic Sea region. They all sought to improve both general mobility and access to services. This Chapter recounts these stories one-by-one, in distinct sub-chapters. Each of them reflects the different styles of the various main authors, who have always played (or continue to play) a key role in actual activities on the ground. This gives each case description a deliberate degree of "grounding" because the authors involved truly know what they are talking about.

Each sub-chapter is structured along the following lines: the first part always answers the question, **"What is the innovative mobility solution about?"** in a nutshell. It introduces the main stakeholders, the principal users and the overall outcome. This is followed by answer the question, **"What was the starting point?"** This section explains the key determining circumstances, such as the mobility problems and needs addressed, internal resources, and the given situation — including demographic, cultural, economic, infrastructural and geographic factors. After that, the various activities involved are presented, with the aim of explaining, **"How did the actual implementation take place and what are the first results?"**. Obviously, each sub-chapter also includes a section about **"What can other regions learn?"** in order to articulate transferable insights from the lessons learned, but also to identify likely risks or obstacles. Each case description also features an outlook on the next planned steps, as well as related images and sometimes quotes from users, drivers or coordinators. The online resource www.mambaproject.eu/rural-mobility-solutions provides further details about some of these MAMBA solutions.

4.1. Digital Mobility Centre in North Karelia, Finland

Main author: Pasi Lamminluoto, project manager at Regional Council of North Karelia

What is your innovative mobility solution about?

The Regional Council of North Karelia wanted a technical solution to bring together different forms of public transport in one user-friendly digital Regional Transport Platform — a so-called "Mobility Centre", which combines all the relevant transport and mobility data. This has resulted in a public transport portal called POJO, which was launched in February 2020. It is available both at https://pojo.pohjois-karjala.fi/ and as a smartphone app.

The portal shows the timetables and routes of regional buses, long-distance buses, trains and Transport-on-Demand services. It also contains information about airport coach transfers, taxi services and carpooling groups. The main users of POJO are the people of the region, the municipality and tourists.

What was the starting point?

The key stakeholder in the Mobility Centre is the Regional Council of North Karelia. One precondition for developing the idea was a good quality broadband network for the digital services. As in all MAMBA regions, the rural area of North Karelia struggles with the tendency towards reduced on-site public and private services (such as health care, culture and shopping) and therefore has an increased need for transport. The reduction of state subsidies for public bus routes in remote areas in Finland proved an additional motivation in finding fresh, innovative mobility solutions for such areas.
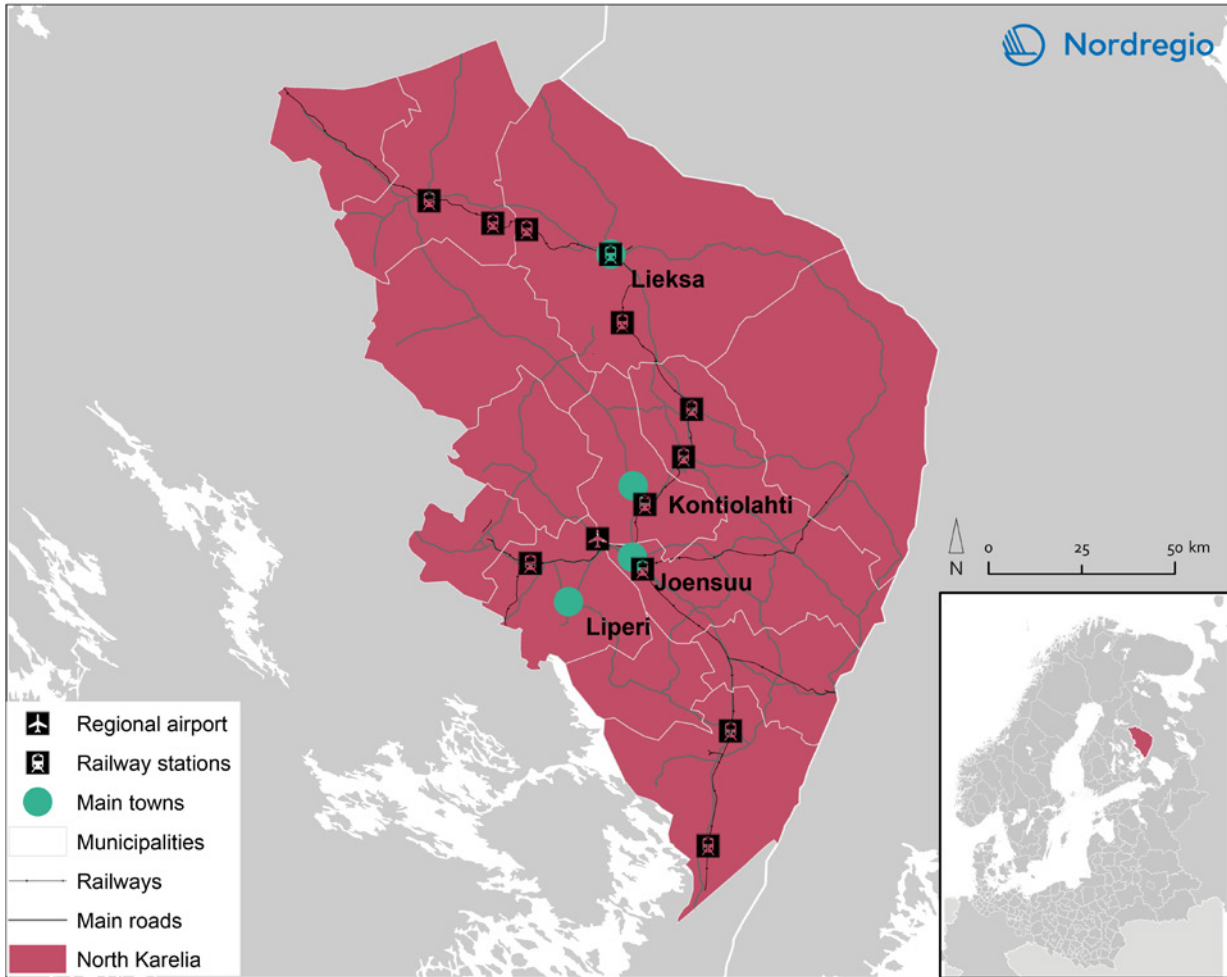
North Karelia. Map by Nordregio.

North Karelia can be characterised as a sparsely populated region with an above-average age demographic. It was important to design the user interface of the platform in a way that considered the special needs of different age groups. From the very beginning, the intended users were consulted about their needs, which led to the realisation that a good number of people are not capable of, or experienced in, the use of digital services. As a result, customised training and learning was required, which slowed down the roll-out process.

Long distances are typical of the North Karelia region, and citizens are used to commuting on foot, by bike or in private cars. Although public transport operates at a basic level around the regional centre, the city of Joensuu, and the nearest municipalities to it, the number of routes has declined in this key network in recent years. Keeping up standards of service in a cost-effective manner has proven challenging. Additionally, sources of mobility and

transport information were fragmented because several operators were involved in providing public transport. These different operators use their own platforms to share relevant information. Customers, therefore, had difficulties in finding the right channels for the information they needed. This has been an issue for quite a while, with many people asking for this problem to be solved.

Luckily, the Regional Council of North Karelia endorsed an effective suggestion to remedy this situation — namely a user-friendly Mobility Centre. This provided a reliable basis for long-term operation and afforded planning certainty for all stakeholders involved.

How was the actual implementation and what are the initial results?

As a first step, a survey was conducted of people living in remote areas, enquiring about their needs in terms of transport and mobility. Based

MAMBA Mobility Centres

Alongside the pilot schemes for innovative Rural Mobility Solutions, the partners in MAMBA have established so-called Mobility Centres. The objective of the centres is to facilitate mobility and accessibility via a combination of measures, e.g. the accumulation and integration of information on different modes of mobility, promoting public and shared transport options, or involving stakeholders in a meaningful process to improve existing (or to develop new) mobility and accessibility offers.This has created a reference framework, which provides guidance to partners in the development of Mobility Centres. We distinguish between three general models of Mobility Centre. These are (1) the traditional model, which is a physical facility with a staff presence to handle customer requests; (2) the advanced Mobility Centre, offering exclusively digital services of different ranges, and (3) the local Mobility Centre, which combines physical infrastructure with automated digital solutions, i.-e. it constitutes a multi-modal mobility hub. However, the creativity of partners comes into play here. This brought about unique attempts at establishing truly "outside-the-box" Mobility Centres. Considering the network and integrative character involved, creating a Mobility Centre by design is a complex endeavour. It requires the involvement of a multitude of actors and stakeholders. For more information, see the Study on the Mobility Centre Models and the partners' Operational Concepts on the MAMBA website.

> ## "A good-looking service that combines different modes of public transport in the region.
>
> User of the POJO mobility services

on the results of this survey, and general discussion about the issues raised, a digital platform for regional transport was launched for a group of key stakeholders. Digital Platform Workshops were used to gather relevant information about potential solutions, challenges and practical tips for the final Mobility Centre. For evaluation purposes, a demo version of the platform was given to certain groups to test and provide feedback that would improve the final version.

As the Regional Council of North Karelia has a very wide regional network of actors in different sectors, the Mobility Centre has been featured in the monthly newsletter, on social media channels and in face-to-face meetings. All municipalities will be marketing this service to their local communities via their own channels. Adverts were also placed in regional newspapers and other media about the launch of the project. One particularly important channel for the future will be the Regional Social
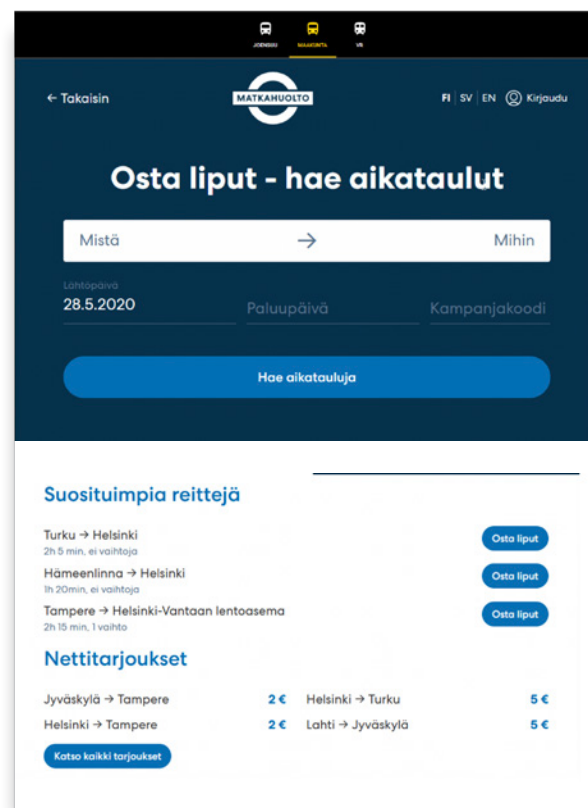
Screenshot from POJO website. Source: https://pojo. pohjois-karjala.fi/routes

> ❝ **A nice feature is that you can actually follow your bus on the map in real time.**
>
> User of the POJO mobility services

and Healthcare organisation (Siun Sote) newsletter, which is delivered to every household in the region twice a year. The educational sector (the University of Eastern Finland, Karelia University of Applied Sciences, and the Riveria Vocational Education and Training provider) were also involved in marketing efforts, in order to reach students and younger people.

During the trial phase, a group of around 120 people tested the digital platform. Overall, the feedback was positive about the app's structure and user-interface. Some constructive criticism was taken on board and incorporated through minor improvements and additions to a revised version.

What can other regions learn?

Finland has a central national database for public transport, which is maintained by the national authorities. During MAMBA activities, however, it became apparent that this database was very incomplete in terms of regional data.

In addition, despite the fact that digitalisation is a massive trend in Finland overall, there are still a remarkable number of people who incapable or inexperienced in the use of digital services. It requires effort to build trust and confidence about this through suitable education and training activities.

A key success factor for this kind of platform, both in the short and long terms, is constant improvement and technical maintenance. Corresponding structures and responsibilities need to be arranged at the beginning of the technical development process in order to ensure its deliverability.

Developing a digital platform is not prohibitively expensive because of the availability of a large number of capable programmers and coders. The real challenge is to involve all relevant stakeholders in long-term operations. It needs to be demonstrated that everybody will benefit from the service in the longer term.

What are the next steps and how will the project continue?

The next concrete steps for the project will be a promotional campaign for the POJO platform and app. The technical improvement and updating of the service will also remain ongoing in the long term.

Overall, long-term sustainability is ensured by different stakeholders sharing responsibilities for the different elements of the platform. The role of the Regional Council of North Karelia, in particular, remains especially important for the coordination of these activities into the future.

4.2. Transport-on-Demand service in Vidzeme Region, Latvia

Main author: Līga Puriņa-Purīte, project manager, Vidzeme Planning Region

What is the innovative mobility solution about?

Transport-on-Demand (ToD) is a unique rural mobility solution. It is an alternative to public transport to increase mobility in remote rural areas, where public transport is poor or non-existent. ToD means that a small bus or a typical passenger car can be ordered by telephone. A Mobility Coordination Centre then bundles the demand for rides into a specific route on a specific timetable, so that several travellers can be conveyed on one trip. ToD vehicles, therefore, adjust their routes based on demand, rather than sticking to a fixed route or timetable, usually picking-up and dropping-off passengers in locations according to the passengers' needs even at their front doors. Passengers can also order return rides, a service the users rate particularly highly.

> ❝ **Currently, there is no easy way for people in Mazsalaca to get to work by public transport. This service could also be a way of addressing that problem.**
>
> Ritvars Sirmais, Executive Director of Mazsalaca County Municipality
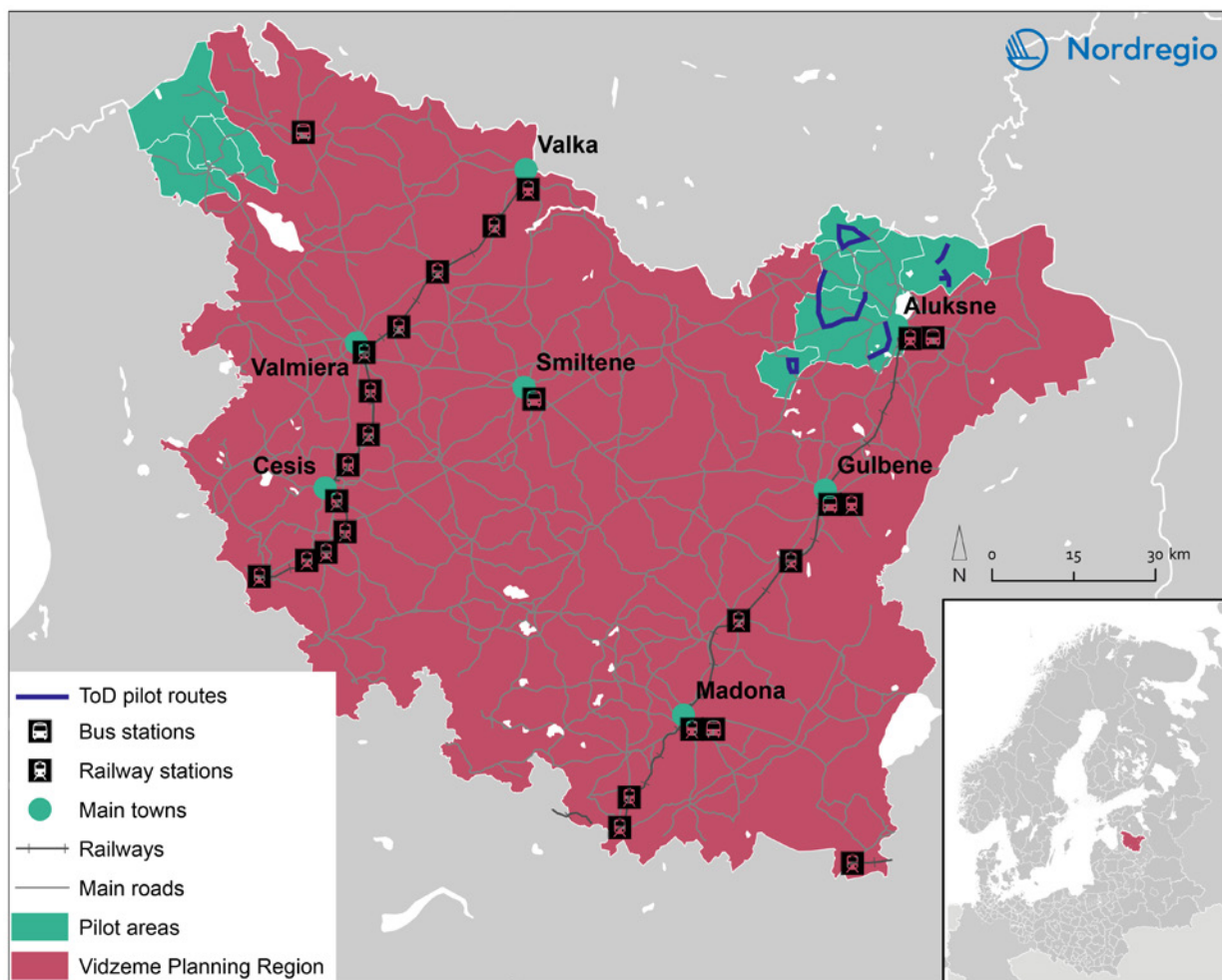
The Vidzeme Planning Region, Latvia. Map by Nordregio.

Software had to be developed to organise this service. The service has been implemented differently and tested in Mazsalaca County and Alūksne. In Mazsalaca it is available every working day from 4 am until 11 pm, if booked in advance. On Saturdays, it is possible to book a trip to go to the local market, which was a particular request by local people due to their long-standing ties with the area. In Alūksne, the TOD runs in a number of areas. Each one of them is served on a specific (work) day, with a connection to the regional centre, Alūksne town. Trips to cultural events on weekends ideally need to be booked a week in advance.

What was the starting point?

The population in the region is declining due to an ageing demographic and heavy migration towards the major cities in the region. Older people have tended to stay in the countryside, while younger

> ❝ I think it's very good, especially considering how many older people live here.

Passenger in Mazsalaca County

people have often moved to the larger cities for economic, educational or work-related reasons. Low population density has made it even harder to finance public transport in rural areas. Limited mobility has also had a significant negative impact on the quality of life of local people and upon their ability to participate fully in social life — as well as to access key social and community services, such as shops, pharmacies, post offices, libraries, and so on.

On some routes, public transport has been rare or non-existent. People live in farmsteads, often with large distances to the next bus stop — definitely too far to walk, especially for older people

> **With this service, we want to offer people the opportunity to travel when they need to, not to have to make plans based on a bus timetable which is not very regular in some areas if there is any public transport at all.**
>
> Project manager, Līga Puriņa-Purīte

or those with certain health conditions. The surface quality of roads tends to be difficult or even dangerous, particularly during the autumn, winter and early spring, which sometimes forces drivers to make significant detours.

Back in 2014, as part of another EU project called "Move on Green", the Vidzeme region learned about the ToD service in Austria, when the Austrian solution was presented as a good practice example to one of the project partners. "Move on Green" was co-financed by the ERDF and by the INTERREG IVC programme, and also focused on mobility solutions in peripheral areas. The knowledge transfer involved inspired Vidzeme region to pursue a similar approach. These ideas matured into ever more concrete plans for a special kind of mobility solution, which the MAMBA project and the Vidzeme Planning Region enabled the implementation of, in parallel to the creation of a Mobility Centre.

Logo of the Vidzeme Mobility Centre.

Mobility Centre in Vidzeme, Latvia

A physical office was opened in this region, with a service operator providing information about all kinds of mobility options. The Mobility Centre also managed a multitude of services to do with the Transport-on-Demand system, including a dispatch system — i.e. relaying information about travel requests to the service provider. The backbone of the Mobility Centre was a telephone hotline, because this form of communication turned out to be the preferred choice of the people surveyed in the region. It was also capable of being extended to cover future digital requirements. In addition to the booking and reservation services, the main aim of the Mobility Centre has been to create transparency within the regional transport system for users, and especially to promote Transport-on-Demand services, the only one of its kind in the region and country.

How was the actual implementation and what are the initial results?

The first activities consisted of identifying the needs of the target group, and also the interests, constraints and possibilities for municipalities and service providers. This was done via interviews, surveys and a variety of focus group meetings in potential pilot areas, all before the MAMBA project could start.

As ideas for specific mobility solutions matured, the concept (how it could work, how to book a ride, etc.) was explained during several meetings aimed at soliciting feedback and further suggestions for improvements. This greatly increased interest and awareness among the local population and encouraged them to try out the new services.

Eventually, the actual Transport-on-Demand service was offered on a trial basis between October 2019 and September 2020 in Alūksne and Mazsalaca. During this period, a small bus or passenger car could be ordered over the phone, 24

Personal invitation postcard to every ToD user. Drawn by a 12 years old girl.

hours before the ride, by any registered user. If ride requests exceeded the maximum number of possible trips, passengers were ranked according to the reason for their trip — with priority given to those who needed to attend a doctor's appointment, for example.

Information about the Mobility Centre and the Transport-on-Demand (ToD) service was widely disseminated to ensure everybody in the pilot areas knew about the service. This was done in close cooperation with municipal communication officers, who placed articles in local newspapers distributed to every household in the county. Information was also spread widely at local, regional and national level (through newspapers, radio and television). In addition, posters and registration forms were displayed in public places to draw attention to the new service. Statements from leading local figures also helped greatly with promotion, as did word-of-mouth communication among friends and colleagues.

Some of the very first local service users in Alūksne County. Source: Evita Aploka, Aluksnes municipality.

Mrs Rasma, from Mazsalaca, is greeted by Vidzeme Planning Region. Source: Anete Gluha, Mazsalaca municipality.

When the service was launched, there was a huge amount of interest and media interest in the number of users. Policy makers at regional and national level were informed about the solution, drawing attention to the fact that it was one of the alternative mobility solutions of the future for remote rural areas, as well as a way of spending public money wisely and efficiently.

The ToD service started in October 2019. Between 21 October 2019 and 30 April 2020, 92 single riders and 493 additional passengers made use

> ❝ **Destinations in high demand are the hospital, the pharmacy, the post office, the shop and back home again.**
>
> **A driver in Mazsalaca County**

> ❝ **... Being in the countryside is becoming increasingly sad. Only older people are left here, and not everyone has private transport. This service is obviously a necessity.**
>
> **Passenger in Alūksne County**

of it in Aluksne, on a total of 169 trips. The main purposes of making trips were shopping, going to the post office, doctor's appointments and various social services. In Mazsalaca during the same period, 605 trips were made, serving 160 single riders and 1,154 additional passengers. Their principal destinations were shops, doctors or the post office — but also workplaces. Some 85% of all users were women, and the average age was 60. Follow-

> ❝ **We are collating data that will be very useful for considering how to organise mobility. This will serve as a basis for the views we will eventually put to the Road Transport Administration or other official bodies.**
>
> Ingus Berkulis, Executive Director
> of Aluksne Municipality

ing suggestions from locals, in addition to the ToD service in Mazsalaca, the municipality assigned a social worker to visit people on request, the idea being to help them get dressed, prepare for a trip using the ToD service, spend time shopping and carry their bags on the return trip.

What can other regions learn?
The launch of the Transport-on-Demand service was delayed due to complicated legal issues. This is because the Latvian legal framework is not flexible enough to categorise ToD as a form of public transport. It required extra time and effort to develop a suitable format for the procurement of ToD services. The lesson here is that it is advisable to reserve ample time to negotiate hurdles of this kind in the development process.

Put positively, time can always be used to consult more extensively with a target population, to launch other services beforehand (e.g. a hotline with information about existing mobility options, to start explaining and marketing the forthcoming services etc. This is also a general lesson learned in the Vidzeme region. Make sure that you truly understand the needs of the target population in detail, and design your services around those needs

> ❝ **My daughter is disabled and lives in the countryside. I regularly provide her with groceries. Usually, I have to find some means of transport. Sometimes I even call a taxi and pay a lot of money for it. This is far more convenient.**
>
> Passenger in Aluksne County

and preferences, working hand in hand with the end-users. This will increase trust and encourage people to try things with which they are unfamiliar. This is particularly important for people of a certain age. It is also important to devote sufficient time, creativity and resources to a good marketing campaign. This should not only be about promotion, but also explanation — even if that requires patience.

Word of mouth will increase passenger numbers and make people believe in the value of the service.

4.3. Mobility Solutions in Bielsko, Poland
Main authors: Maciej Bereda, Anna Plichta-Kotas and Sylwia Hudziec, Bielsko District, Aleksandra Chrystowska-O'Shea, Bielsko-Biała Regional Development Agency

Public transport in rural areas is fragmented and often provided by commercial operators, who prioritise the most profitable routes, which do not require public funding. Due to lack of competition, tickets are expensive, and the level of service is low. Partly because of problems like this, young people tend to leave rural areas and move to cities. However, older people are much less mobile and typically remain in rural areas, often in small villages. Public transport in these areas is, therefore, becoming even less attractive, with fewer services and rising ticket prices. In many cases, unprofitable lines have had to be suspended completely. All these factors are resulting in a population decrease. This has a negative impact on local government finances, and the municipalities have trouble organising and financing transport.

In an attempt to tackle these difficulties, a Mobility Centre and a Transport-on-Demand (ToD) service were set up in the Bielsko area in Poland. Local people now also have a non-profit ride-pooling scheme to use. These solutions were financed by the European Union (85%) and from the Bielsko District budget (15%). Unfortunately, top-up funding from the national budget is not expected because of the innovative nature of the project.
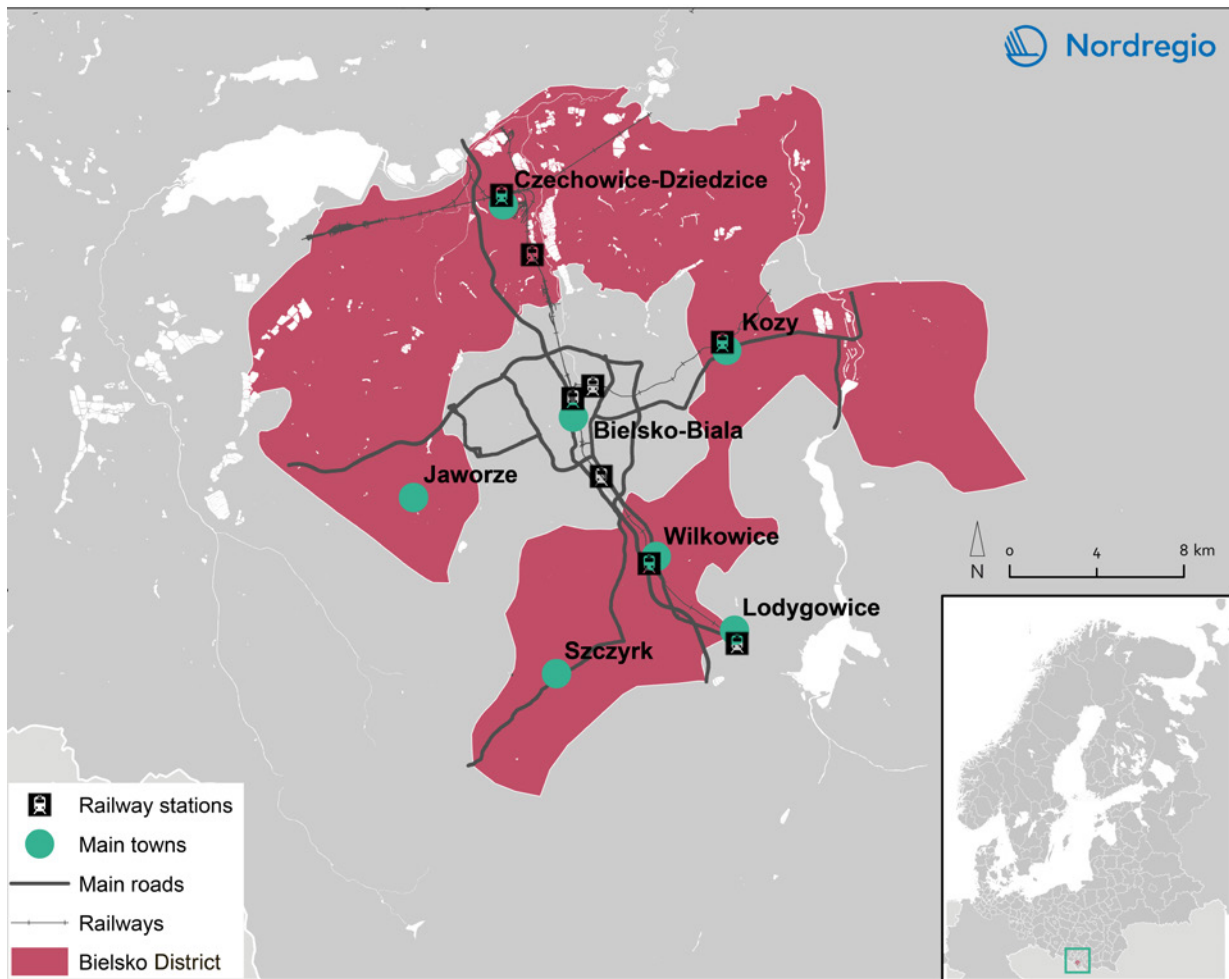
The Bielsko District, Poland. Map by Nordregio.

4.3.1. Transport-on-Demand Service in Bielsko, Poland

What is the innovative mobility solution about?

The Polish District Bielsko set up a Transport-on-Demand service and a complementary Mobility Centre for residents in remote rural areas. The main intended beneficiaries have been disabled and older people who now find it easier to access social, cultural, healthcare and educational facilities located in Bielsko-Biała.

What was the starting point?

In the Bielsko District — and elsewhere — many residents, especially the elderly, are used to traditional forms of public transport with corresponding elements such as fixed bus stops and a fixed and printed timetable. As understandable as these preferences may be, these kinds of habits can be an obstacle to the introduction of innovative and flexible mobility solutions such as Transport-on-Demand (ToD) — see chapter 4.2 for a brief explanation of Transport-on-Demand. In fact, a significant proportion of senior citizens in rural areas feel uncomfortable ordering a transport service over the telephone or online. In addition, they may not have reliable internet connections, they might not have — or may not be familiar with — smartphones or they might be afraid of high service charges. Understanding these potential barriers made it clear that innovative forms of transport service have to not only to work well in a technical sense, but also in a psychological and emotional sense.

How was the actual implementation and what are the initial results?

Representatives of local authorities from the district engaged in in-depth conversations with resi-

The Mobility Centre in Bielsko District, Poland

The MC in Bielsko District is an online platform providing an integrated database on mobility solutions in the region. Residents get quick and easy access to information such as the availability of taxi companies, car rentals, bike-sharing, and ride-sharing. In other words, the solution consists of providing a central depository for the coordination and promotion of non-individualised traffic, combining and reconciling the interests of the private and public transport markets. Its functions also include placing orders for the region's new Transport-on-Demand service. https://www.cmpb.pl/.

dents of the region in order to identify the most suitable solution for them. In doing this, the Bielsko District also worked with an external public transport expert, who participated in a variety of meetings and helped with the organisation and implementation of all of the tasks involved at all stages of the project implementation. He also contributed significantly to the formulation of the requisite procurement texts, et cetera.

Eventually, a Mobility Centre was set up — a "one-stop-shop" where local people could get information about all kinds of mobility options — public transport, taxis, bike-sharing, ride-sharing, car rental, etc.. In practice, this took the form of a user-friendly online platform. Between December 2019 and March 2020, the residents of the Bielsko area could also access a Transport-on-Demand service. They could request a special journey with a small bus within an individually specified time-period. Wherever possible, staff in the Mobility Centre pooled passengers with similar pick-up points, destinations and time preferences, in order to increase the occupancy rate and overall cost-efficiency of the service.

Information about the Mobility Centre and the ToD service was shared widely on social media, via various websites, and by local and regional media as well as a national TV news programme. It was also promoted through leaflets and posters, which were distributed at public places such as schools, health facilities and churches. In addition, the Bielsko District organised several meetings with a range of social groups (e.g. the association of farmers' wives) in the Wilkowice Commune. The aim was to explain the ToD service and develop confidence and trust among its intended beneficiaries.

During the lifetime of the project, all services were free-of-charge and financed entirely by MAMBA. A total of 148 ToD rides were organised between September and December 2019, serving almost 180 people. The number of users has steadily increased, and people are hoping that the service will continue after the MAMBA project ends.

What can other regions learn?

ToD is obviously an innovative form of transport service, and lack of clarity about the category to which innovations belong in relation to current public transport legislation can cause difficulties. An important lesson learned in Bielsko District case is, therefore, the need to prepare well for legal challenges in order to ensure a smooth commissioning process for new services.

Another interesting insight is the split between ToD services ordered over the telephone and via an online platform. Experience (e.g. from ToD services in Krakow and Szczecin) suggests that the telephone is the preferred means of communication, but in Bielsko most journeys there were ordered via the Mobility Centre's website.

What might be of interest for similar initiatives — at least in Poland — is the information outlined in the media and from the district representatives responsible for the implementation of the MAMBA project, that attempts are being made to include the possibility of co-financing modern forms of mobility such as ToD (in an ongoing financial perspective, and for the years 2021–2027) through Operational Programmes at regional level, e.g. in the province of West Pomerania.

What are the next steps and how will the project continue?

As the MAMBA project draws to a close, the impacts of the Mobility Centre and the ToD service will be evaluated in terms of purposefulness, adequacy and efficiency. The results will be presented

Transport-on-Demand in the Bielsko District; Source: Sylwia Hudziec.

to the district authorities and Wilkowice commune. If the evaluation is positive, the Head of the Wilkowice Commune has already declared that the ToD service will be continued from the commune's budget. The Bielsko District Mobility Centre is also likely to continue its operation within the structures of the District Head Office in Bielsko-Biała. Plans are currently being developed to share the experiences gained with other district communes, and ideally to implement similar solutions there as well. Obviously, this depends upon securing the approval of the respective local authorities.

4.3.2. Non-Commercial Ride-pooling in Bielsko-Biała, Poland
What is the innovative mobility solution about?
The Regional Development Agency in Bielsko-Biała has developed a smartphone app to facilitate self-organised and non-commercial ride-pooling in Bielsko-Biała. The main target group for this service is commuting students.

What was the starting point?
It was clear that a good number of people intend to travel, or will actually travel, at similar times from similar starting points to similar destinations for a broad range of purposes — such as education, shopping, medical appointments and recreation. In addition, the initiators of the new service also realised the social purpose of joint travelling per se; that is, as an enjoyable social activity. The combination of these considerations led to the development of a ride-sharing scheme, which helpfully serves multiple purposes at once.

How did the actual implementation happen and what are the first results?
The ride-pooling solution brings together a large number of interest groups. Most importantly, the Regional Agency in Bielsko-Biała (ARRSA) is the main implementing organisation, but the students' association at the local university, an IT hobby group, and a range of social groups, including various clubs and associations, are also involved. This

broad and varied base of (potential) users played a positive role during the development phase when these people volunteered as test users.

The project received no external funding and is not intended to generate a profit. Its sustainability will depend upon the social approval of people who use it, and for whom a shared ride is a 'friendly favour'. In this sense, the Bielsko ride-sharing platform, with its informal relations between members of small communities, can even be considered a 'common good competitor' to commercial providers such as Uber or BlaBlaCar. It is already clear that the app will still be available to download after the MAMBA project ends.

Development costs have been incurred for the procurement of professional know-how by experts — on the legal regulations for transport, and for the development of IT applications. However, internal resources and staff conducted research into the local transport market in its social, economic and demographic context.

What can other regions learn?

The ride-sharing app successfully addresses gaps in a conventional public transport network. Such gaps exist in terms of the hours of operation and geographic coverage — that is, areas that are served very infrequently, or not at all, by public transport.

What seems advisable from the emerging lessons learned is the acknowledgement of 'travelling together' as a legitimate social activity — not only for "serious" purposes but also for fun and leisure, and as pure social interaction. This can and should be part of the promotional message, especially to younger people.

What are the next steps and how will the project continue?

At the moment, the ride-sharing app is mainly used by students, but it will be promoted to other groups like big families living close to each other (especially in villages), associations of seniors and of disabled people, and to groups of parents whose children attend regular classes. ARRSA has agreed to take care of the long-term maintenance of the application.

4.4. Rural Car-Sharing and Mobility Centre Cuxhaven, Germany

Main author: Jasmin Weissbrodt, project coordinator, Cuxhaven County Administration

What is the innovative mobility solution about?

The MAMBA solution developed in Cuxhaven is a combined association- or cooperative-based car-sharing scheme and voluntary shuttle service designed to improve travel to and from rural areas with decreasing population density. Old and young people use this service to reach destinations in nearby villages. A significant number of trips undertaken during the pilot phase were to events, but in the future, it will be used for "ordinary" purposes in people's everyday lives.

In addition to this particular solution, a Mobility Centre is under development, which has begun to bundle — and provide information about — all kinds of mobility services in the county of Cuxhaven. It will be a modern, integrated service, a central agency with a single telephone number, a

The Mobility Centre in Cuxhaven, Germany

In Cuxhaven, Germany the municipality has opened a Mobility Centre and gradually rolled-out an ambitious concept linking the multitude of conventional and new mobility solutions. The Centre provides information and services about all regular public transport provision as well as Transport-on-Demand and shared mobility solutions such as the rural car-sharing service in Neuenwalde. A single hotline combining the scattered Transport-on-Demand services in the county has been provided, and further development and integration into a digital solution is planned. At the moment, trips can be planned from start to finish, including booking, payment, and ticketing by telephone.
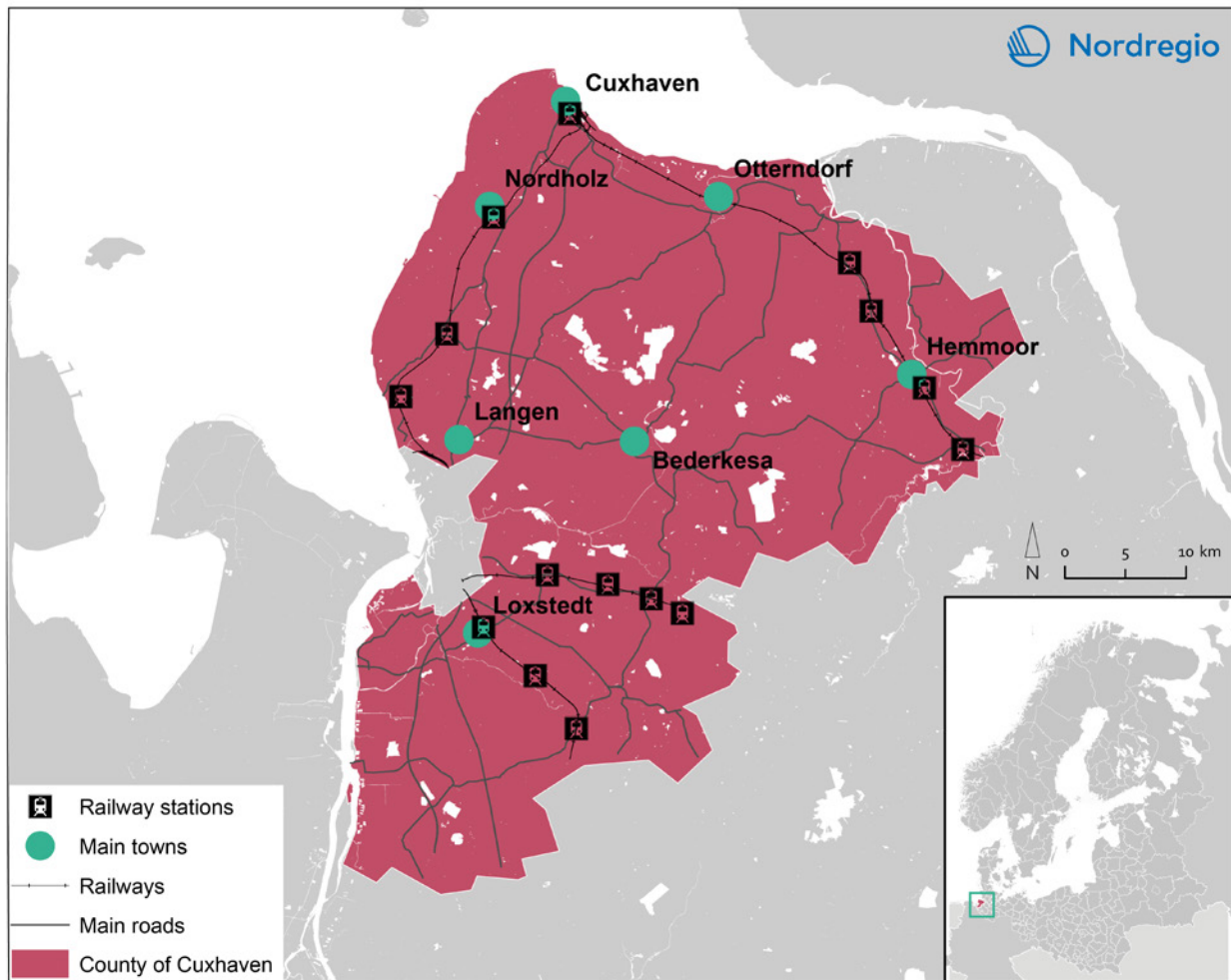
County of Cuxhaven, Gernany. Map by Nordregio.

single coordination platform for everything to do with mobility. There will also be a single, competent point of contact, who deals with information, ordering and billing.

What was the starting point?

Cuxhaven, near the German North Sea coast, is a rural area with the typical problems faced by such regions. As younger people move to the cities for various reasons, the population is declining and older people, in particular, are left behind in a sparsely populated area with poor public transport. Older people also tend to be afraid of new technology and are often unsure about using the internet and smartphones. Digital solutions must, therefore, be introduced gently to this age group, at an appropriate pace, and with appropriate forms of "hand-holding". Another decisive factor for this region is the seasonal fluctuation of po-

tential public transport users, which is strongly influenced by tourism.

Conventional public transport is expensive and unprofitable, due to the sparse population. Excessive operating expenses prevent the municipality from offering any more traditional forms of public transport. New, individual and flexible services are needed to meet the needs of a rural, and increasingly ageing, population.

A few villages have access to the railway network through local stations, but most of them only have a school shuttle bus, and many small villages have no public transport links at all. This makes the whole region highly dependent on the car, and many households own at least one.

The village car, called "mobine". Source: Landkreis Cuxhaven, 2019.

How was the actual implementation and what are the initial results?

The main vision for both the Mobility Centre and the car-sharing service was to improve all three dimensions of sustainability in the region. The aim of the social aspect was to foster personal interaction among people. The intended ecological effect was to cut CO_2 emissions, and financially the idea was to provide affordable transport options as cost-effectively as possible.

The solution emerged from a multi-stakeholder working group — the village-car "mobine", a rural car-sharing concept utilising an electric vehicle. Members of the working group comprised people who live in the village, local politicians, or others interested in innovative mobility. The working group is led by the head of the county's public transport department, who has a great deal of experience of public transport projects. Monthly meetings of-

fered the opportunity to discuss issues, highlight problems and challenges and develop new ideas. Regarding human resources, the most important asset was the local mobility association (Verkehrs-verein Neuenwalde), which received professional guidance from an expert in the development of local public transport from the county council. Funding for these activities came from the MAMBA project and was used to provide infrastructure and hold public events.

The shared car known as "mobine" can be rented by registered users for their own trips. It is also used by a volunteer driver, who drives people of any age who are unable to drive themselves. It was originally launched on 24 August 2019. Since then, several people have offered their services as volunteer drivers. Since summer 2019, the shared car has been used an average of nine times a month, serving 25 passengers and covering 412 km. Although

this is an encouraging start, there is clearly still free capacity. More advertising is needed, preferably of the attention-grabbing kind, to make use of the mobine more popular. The current COVID-19 pandemic makes the next steps rather unpredictable; however, the MAMBA team in Cuxhaven is determined to move things forward.

In Germany, passenger transport legislation limits the possibilities for innovative mobility projects, especially in terms of insurance coverage. For this reason, the legal owner of the vehicle is the town of Geestland (the administrative centre of the village), but the "Verkehrsverein Neuenwalde" volunteer association takes care of the operation and maintenance of the car. A special rental contract was concluded.

The idea of some kind of Mobility Centre had been mentioned in an earlier Integrated Mobility Concept and in the Local Transport Plan. However, it had not been possible to implement the idea at that point in time. The MAMBA project brought a new dynamic into play, together with a focussed pre-study which helped to assess the practical feasibility of a Mobility Centre. The plan increasingly gained interest and commitment among various stakeholders and local politicians. At the time of writing (June 2020), the Mobility Centre for the County of Cuxhaven takes the form of a telephone centre where people can obtain information about all public transport systems and alternative public transport provision in the area. Anyone can also book a Transport-on-Demand taxi ("Anrufsam-

The rear-side of the village car, with logos of related projects and sponsors. Source: Landkreis Cuxhaven, 2019.

meltaxi" in German) over the phone. This is a massive improvement compared to the pre-MAMBA situation when each municipality had its own number for bookings like this. The new phone number for the Mobility Centre replaces six out of the previous 11 numbers, and it is envisaged that it will replace all 11 in the near future.

What can other regions learn?

This solution was highly dependent on the involvement and cooperation of local people. One goal was to cut CO_2 emissions, another to encourage people to combine different modes of transport and cut car usage or even ownership of private cars. The project also brought people together. The village car is intended to make everyday life easier for various population groups in the area.

One strong recommendation to others would be to involve of motivated people on site, as well as specialised support staff who can check compliance with legal regulations and assist with various administrative issues (e.g. usage contracts, leases, insurance, etc.). People with technical know-how are also important in creating the foundations of an infrastructure.

The biggest risk is related to the need to attract enough users., A "critical mass" is needed to make rural car-sharing schemes financially viable. The potential problem can be counteracted through intensive communication and a highly user-friendly booking system for accessing the car. Rural car-sharing also needs a first-rate funding concept, because it is not enough to just buy a car — further funds need to be secured for additional purchases (charging infrastructure, operating platform, etc.). The cost and effort of flyer advertising and a good deal of personal communication are also significant, but worth the effort.

The experience with the Mobility Centre shows that it is really important to work closely together with the right stakeholders. It is operated by the County of Cuxhaven. The main stakeholders are transport associations, traffic companies, taxi companies and the municipalities in the County. They are all highly interested in and committed to the Mobility Centre concept — because it will improve access to mobility for everyone.

What are the next steps and how will the project continue?

The plan is to promote the electric village car much more widely, in order to mobilise more people to use this unique service. Groups, associations, circles of friends and church communities will be addressed with tailored information about the car-sharing opportunity. People should get the opportunity to test the booking system and to use the shared car for test drives or excursions to events. Contrary to the assumption that social media is important for advertising campaigns today, in this case, and for the specific population in the area, printed material seems more appropriate. The advantage of conventional flyers is that they can be distributed to every household in each village, and can also be viewed — repeatedly — by anyone, at any time. It is equally clear that it is not only the "sharing" concept which needs to be well explained. Also (and in particular) the electric component of the village car (charging, range, etc.) requires a good deal of information to be shared among the target population.

Further work is also needed to fine-tune the financial concept. The intention is to raise additional funding after the MAMBA project ends. New volunteer drivers are also being sought, and more training materials are needed to simplify the use of the car even further. What would be nice, for example, is the development of an app to make the booking and user experience easier. The basic concept as such has proven quite successful, however, so no major changes are envisaged in the foreseeable future.

The next planning step for the Mobility Centre is to replace the last six of the original 11 telephone numbers with the new one. Other plans include the development of a booking app and a central billing service to make the use of public transport and the Transport-on-Demand service as easy as possible. The telephone number is provided by an external service company. The rapid pace of at which new technology is developed means that the provider has to move with the times and update its services regularly.

## 4.5. Transport-on-Demand system "ALFA" and interactive map in Plön, Germany

Main author: Beatrice Siemons, project manager, Plön County Administration

What is the innovative mobility solution about?

In Plön, a rural area in Northern Germany, two innovative mobility solutions were introduced as part of the MAMBA project. One is a Transport-on-Demand (ToD) system called "ALFA", which stands for "Anruf-Linien-Fahrten" (Call-Line-Rides). This name represents the solution's main idea. People can take rides in shared taxis, which run on fixed routes and on a fixed timetable, but only if they have been requested by telephone at least one hour in advance. The advantage for the supply side is that the vehicle is only dispatched if there is an actual request. In other words, it will never run empty. ALFA replaces a conventional bus when demand is low, mainly in the evenings and at weekends. The service is used by various target groups: older people, students and even tourists, who spend their holidays near the Baltic sea, which is just 10 km away. These ToD trips offer better connections from small villages to the nearby town (Lütjenburg); and from there, to the city of Kiel, the state capital of Schleswig-Holstein. The county-owned bus company, VKP, organised and implemented the service.

The second mobility solution is a so-called Mobility Centre. In essence, this is an interactive map of the transport network in the county, which can be viewed on any computer, smartphone or tablet. See https://ploen-mobil.de/. Its main goal
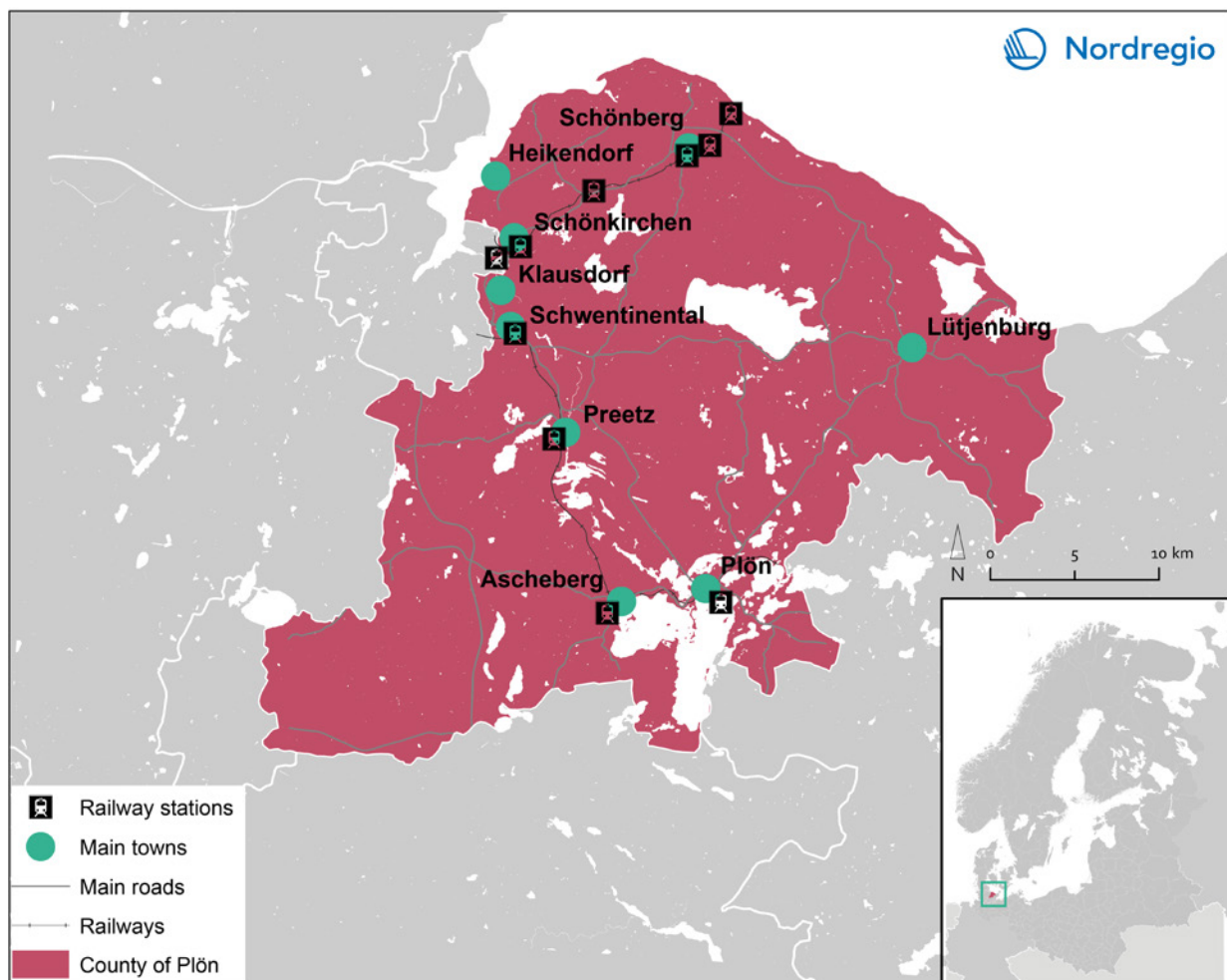
County of Plön, Gernany. Map by Nordregio.

The Mobility Centre in Plön, Germany

The Mobility Centre in Plön, Germany is a digital solution with the prime objective of gathering, structuring and providing easily accessible, reliable information about mobility offers. The aim is to make trip planning simple and accessible.

In addition to traditional public transport routes, it will continuously integrate the ever-emerging market of new, innovative mobility services in the region. In the long term, the system will be integrated with tourist offices as part of a digital-physical Mobility Centre network.

https://ploen-mobil.de/

is to gather and provide easy access to reliable information about mobility services and make inter-modal mobility convenient. The need for such a service is due to the fact that there are many different mobility options in the County of Plön, which can be confusing for some people. There are also different modes of transport (bus, taxi, train, etc.), and these are organised at different levels (county, region, national) with different timetables, different websites, etc. The core of this public transport system is the bus service run by the county-owned bus company (Verkehrsbetriebe Kreis Plön, VKP) and an important regional railway connection (Hamburg–Lübeck–Kiel) in Schleswig-Holstein. Numerous other mobility services are also available or are being developed by different players, e.g. car-sharing or bike-sharing, or committed volunteers who set-up "hitchhike benches" or provide transport services.

The Mobility Centre, therefore, aims to connect these different transport opportunities by making them visible on one central information hub. The intended effect is to attract more passengers for the county's bus company and to integrate other existing and upcoming mobility services into this system. The ambition to make the Mobility Centre as convenient as possible for residents and tour-

ists is reflected by the fact that it includes POIs (Points of Interest).

What was the starting point?

The County of Plön covers almost 1,100 km2 and has a population of around 128,000, which translates into a rather low population density of around 120 people per km2. It has a picturesque landscape, is slightly hilly, has around 80 lakes, and is adjacent to the Baltic Sea coast, all of which makes it quite attractive for tourists.

The idea was to offer more connections for residents between the small villages and the next bigger town (Lütjenburg) by improving the existing public transport system, which is primarily focussed on school transport.

This made the local bus company an obvious and important stakeholder with all the skills and staff to manage such a project. However, simply adding more buses and/or more routes would not have been financially viable and would, therefore, not have gained approval and funding from the county. The explicit political will to improve public transport in the county led first of all to the commissioning of the "Analysis of the potential for demand-oriented transport in the Plön district". The political decisions about implementation of the ALFA project were based on it. The analysis was then developed and managed by a project group consisting of the County Council, politicians and transport companies.

How was the actual implementation and what are the initial results?

ALFA was launched on 1 March 2018 and was quickly adopted, partly because the bus company is well-known and trusted by local people. In addition, and very importantly, the system is very simple to use. Passengers who want to use this service simply request a ride at least one hour before departure by making a quick phone call. They then go to the arranged bus stop just before the scheduled departure time and are picked up there by taxi. However, they only pay the price of a regular bus ticket. A total of 22,545 possible trips per year could theoretically be requested in this way. After running the solution for more than two years, usage figures show that around 2,500 such rides (or ca. 11%) are actually being requested per year. Per month, between 400 and 450 people benefit
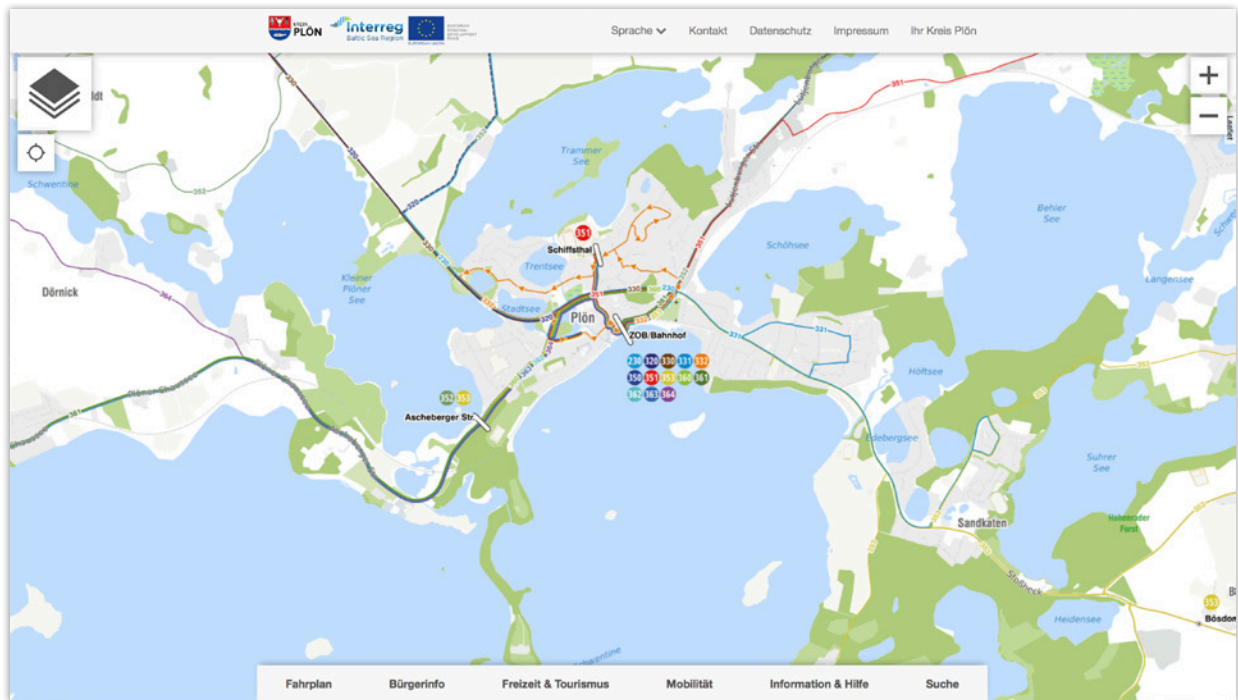
Screenshot of the Plön Mobility Centre. Source: https://ploen-mobil.de/.

from this service, which means that on average two people are served per trip. This is significantly more than the national German average of 1.5 per trip and indicates the correspondingly high adoption rate of ALFA.

What can other regions learn?

Several factors contributed to the successful implementation of this project. The municipally-owned transport company made it fairly easy to introduce a simple system by enhancing the existing routes. In legal terms, ALFA is considered public transport, which makes it much easier to achieve compliance with various legal requirements, liability regulations, insurance and funding. It also turned out that the intensive discussions with stakeholders at the very early stages, and throughout the entire preparation and implementation phase, resulted in a clear mutual understanding and commitment. The fact that the development and operation of ALFA encountered hardly any problems is most probably due to this very systematic involvement of all relevant stakeholders. Another highly important factor has been the political will to fund and implement a project of this kind.

What are the next steps and how will the project continue?

The initiators, organisers and funders of ALFA consider it successful and sustainable. The County Council has decided, therefore, to fund similar ALFA projects in other regions. One started on 11 November 2019, around the county capital, Plön, and two more spin-off pilots in other regions are being planned.

The County of Plön provides €100,000 for every pilot region from its regular annual budget as a part of the so-called "Daseinsvorsorge" — the mandatory provision of minimum public services. The council departments and the politicians involved believe that local public transport is a yardstick for the quality of life in rural areas, so new pilots in different regions of the county have been agreed, funded and will start soon.

The original ALFA solution has in effect been converted — by the decision of the County Council — into a regular public transport service. It will be funded by the County of Plön. For people in the region, this means that they can continue to rely on taxi rides that fill the gaps in service provision at times when bus services are rare.

Start of the ALFA project — with representatives of the public transport company, a taxi company, the County Administration and a local mayor. Source: Orly Röhlk.

4.6. Creative mobility and accessibility solutions in Trelleborg, Sweden

Main author: Christoffer Pettersson-Hernestig, project manager

The municipality of Trelleborg sits at the southernmost tip of the Swedish mainland and has 35 kilometres of sandy coastline in the south, beech woods to the north, and in between some extremely fertile soil. The municipality is only 37 km wide, but it contains some rather rural areas with corresponding challenges and obstacles. The local people have rather typical mobility needs and patterns, which includes a heavy reliance on privately owned cars. When very car-dependent people get older, they have no experience of and confidence about using public transport. Sometimes they are not even sure how to buy a bus ticket or know that all locals people in Trelleborg over the age of 67

can use public transport free of charge within the municipality. Within the MAMBA project, Trelleborg used three different approaches to tackle these challenges.

4.6.1. Mobility Discussion Platform
What is the innovative mobility solution about?

In Trelleborg, MAMBA has succeeded in creating a forum where different council departments discuss mobility challenges and plan appropriate solutions. This might sound a little unspectacular, but it is, in fact, surprisingly rare that staff from different departments (with their respective specialised skills) get together in this way. As a result, there are very few opportunities to pool ideas, discover synergies and develop new ideas and solutions. The MAMBA project provided an opportunity to address this institutional problem and led to a range of very tangible solutions, as described below.

What was the starting point?

The number and frequency of public transport services in Trelleborg are relatively good. Nevertheless, it is clear that too many individual cars journeys are being made, that people — especially older ones — feel insufficiently mobile, that the number of passengers on many buses is far below their capacity, and so on. There has, therefore, been a growing realisation that the various points in the system are not well interconnected and that mobility and accessibility could be improved by better inter-departmental cooperation.

How was the actual implementation and what are the initial results?

To connect different departments in the Municipality of Trelleborg with each other, an internal network, with representatives from different de-

partments, was created. The purpose of this network is to learn about mobility needs, access the competences and ideas of other departments and provide comments and feedback between them. The administration and planning departments were involved in setting up of the Mobility Discussion Platform. Among the most active participants were members of the municipal board, the planning department and the infrastructure department.

What can other regions learn?

One key lesson is that innovation does not always have to be about new technology or new products. In Trelleborg, the project manager realised that it could be innovative and productive to "just" start talking and collaborating across departments — especially in the public sector. In other words, dis-
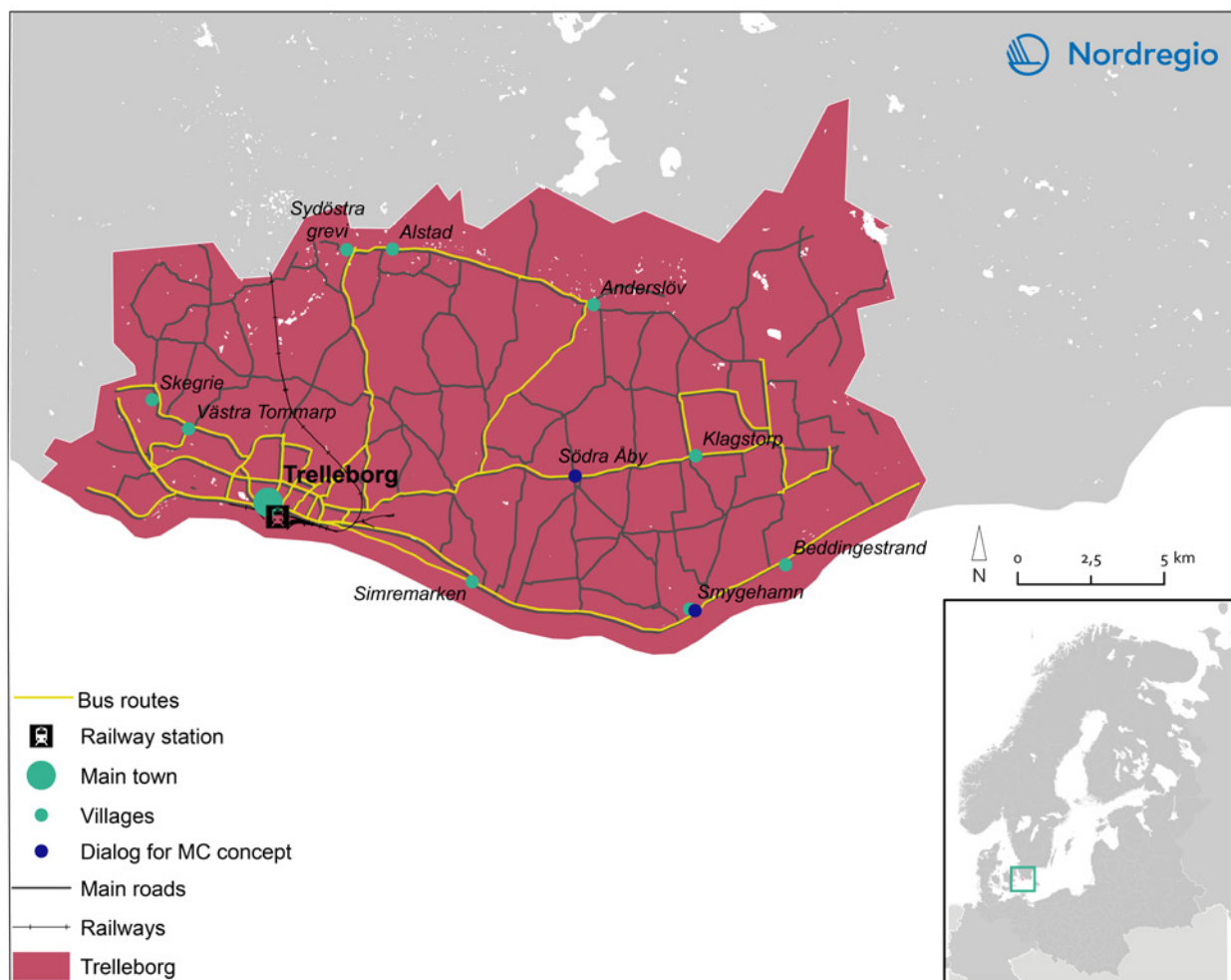
Municipality of Trelleborg, Sweden. Map by Nordregio.

rupting organisational processes and structures can be just as effective and innovative as the introduction of new infrastructure, technology, products or services. In fact, a number of hands-on solutions emerged precisely through this discussion platform. Something as simple as a bus service for older people can be the start of something that can be expanded and spread out later on. The collaborating departments also found approaches to using existing infrastructure in new ways, thus avoiding the costs of expensive new infrastructure. So a house that is vacant for hours during the day could be used for other purposes during this period (see below).

What are the next steps and how will the project continue?

The Mobility Discussion Platform will live on beyond the MAMBA project, with meetings at least twice a year. Measures and results from various activities involving mobility and transport will be presented and discussed in this format.

The digital Mobility Centre in Trelleborg, Sweden

In Trelleborg, Sweden different concepts have been combined. There is an informative website, a supra-departmental mobility working group for the municipality, and a physical (non-)mobility rural co-working hub. The digital Mobility Centre provides information on different modes of mobility including traditional public transport (e.g. bus routes) as well as innovative ones (e.g. ride-sharing), all curated around a spatial representation of the region. The co-working hub not only offers a space where the local population can avoid the necessity of commuting to town, but also organises shared rides and, in the future, will include even more services, such as cargo bike-sharing.

Picture of the internal network discussion on mobility. Source: Christoffer Pettersson-Hernestig.

4.6.2. Co-Working Space "Kontorskafé" and digital Mobility Centre

What is the innovative mobility solution about?

Research showed that many people in the region could work from home (even before the Coronavirus pandemic), and do not, in fact, need to commute to work every day. However, many dread the social isolation of the conventional "home office". A so-called Co-Working Space could thus reduce the number of car trips, foster a sense of community, and increase the quality of life in villages that would otherwise be quite empty.

Trelleborg Municipality has, therefore, established such a Co-Working Space, together with a non-profit village association in the small hamlet of Södra Åby, which is home to around 180 people.

> ## In the hectic world we live in, people need a quiet environment.
> Co-working user

Picture of maps from the digital Mobility Centre, hanging in the Co-Working Space. Source: Christoffer Pettersson-Hernestig.

The basic idea of this "Kontorskafé" (Office Café) is that people should not have to commute for work and travel for every service, but that everything should be close to where they live. The Co-Working Space is a physical meeting place where people who have the possibility of working from home can sit, work together, and use the infrastructure as an office. This emphasises the importance of accessibility (as opposed to mobility), which is an inherent part of the MAMBA logic.

In addition to this physical space, Trelleborg Municipality is developing a digital platform as an interactive map on the website: https://arcg.is/1H4aLi. This serves as an information source about the availability of travel provision in all parts of the municipality. It gives users information about a variety of different transport options. When clicking on a Point of Interest (POI), a link will appear offering more information. The website aims to provide information on ways of travelling to work, ideally not alone in a private car. Digital maps have been printed and are also hanging in the Co-Working Space to give users of the space an understanding of what transport modes are available in the Municipality of Trelleborg.

> ## Innovation becomes greater when people work together.
> Co-working user

What was the starting point?

A commuting system that revolves around private cars causes various transport-related problems and disadvantages people who cannot, or do not want to, drive a car. To address this problem, the Co-Working Space and the mobility platform were developed and implemented as part of the MAMBA project.

Overall, public transport in Trelleborg is quite acceptable. It was decided, therefore, that just adding more services would not be the most efficient and effective way forward. Instead, the ambition was to think "outside the box" about how a new form of a mobility hub — or better, an accessibility hub — could help to improve people's quality of life.

How was the actual implementation and what are the initial results?

Stakeholders involved in the Co-Working Space were the Administration Department at Trelleborg Municipality and the Södra Åby village association. This cooperation is a key success factor because it makes it easier to communicate with residents and gain their trust. The village association owns the facility while Trelleborg Municipality agreed to finance running costs and an on-site support post, which made it possible to have the Co-Working Space open one day a week during the MAMBA test phase.

> " **Rural development is important, but so is maintaining rural culture.**
>
> Co-working user

What can other regions learn?

What worked really well in Trelleborg — and what could be recommended to others — is the intensive and trust-based cooperation between different chairpersons, which led to a number of particularly good ideas. It was also possible — and this deserves to be copied — to search for ways in which existing resources could be used in additional ways. The rooms for the Co-Working Space already existed, for example, and are now used more intensively. Another positive lesson learned came from work-

Co-Working Space in Trelleborg. Source: Christoffer Pettersson-Hernestig.

ing with a nearby university, which made it possible to generate different visions of how the Municipality of Trelleborg should develop. This helped with the discovery of new ideas, and in achieving a clearer picture of desirable future scenarios.

What are the next steps and how will the project continue?

The current test run will be evaluated together with users and all stakeholders. The results will determine whether additional services are added and opening times extended. Marketing and advertising will also be needed to raise awareness of the service.

There is certainly no lack of ideas. It is envisaged that the space will become an information centre for all kinds of mobility-related services, and possibly a hub for shared bicycles. Another possibility is to combine the Co-Working Space with an existing community centre. Ideally, the Södra Åby test case will evolve into a good practice example for other rural municipalities in the Baltic Sea region and beyond.

4.6.3. Bus Transport for older people
What is the innovative mobility solution about?

Trelleborg Municipality arranges bus trips for older people in rural areas as an event per se, in order to foster social interaction among participants. As a side effect, these short excursions also help train senior citizens to be more confident about using public transport. This solution is the result of cooperation between the Administration Department at Trelleborg Municipality, the Social Department and a local bus company.

What was the starting point?

Many older people live in retirement homes or on their own in single-family houses, often exposed to the risk of social isolation. The existing public transport services in the area are not bad, but it has become clear that usage is limited due to other psychological obstacles, knowledge gaps or simply the lack of actual opportunities to venture out and to meet other people. The organised field trips are intended to tackle these issues, bring older people together and take them to destinations that would otherwise be difficult to reach (e.g. rural coffee shops or nature reserves).

" It feels good to do something for the elderly; they deserve it because they have done so much for us. Everyone is happy and nice.

Bus driver

" The weekends are slow and lonely when Träffpunkten (social meeting point for the elderly) is closed. The school bus makes the weekends more meaningful.

Passenger

" It's so difficult to get to the places when you don't have a car and live in the countryside. That's why the school bus project is so great.

Passenger

" I made new friends on the bus.

Passenger

" It's so nice to get out for a while.

Passenger

" These Saturday trips are so nice. You meet so many new people and everyone talks to everyone else.

Passenger

Southern Swedish rural landscape, with the bus for older people. Source: Niclas Ivarsson.

Inside the bus for older people. Source: Niclas Ivarsson.

How was the actual implementation and what are the initial results?

Initially, in spring 2019, municipally-owned school buses were used for the field trips because they are not in use in the evenings or at weekends. This arrangement was seen as particularly innovative because suddenly, administrative units responsible for school buses, social care and transport formed a special working group and started to work together across departmental boundaries. Despite some very positive feedback about the first series of trips, a degree of frustration emerged because it turned out that several older people were unable to get up the stairs onto a school bus. In addition, legal problems affected the service in December 2019, when it became clear that it was not permitted to use school buses to provide transport services to non-students.

A local bus company was commissioned to operate the bus trips from early 2020. The solution could continue, therefore, and MAMBA could support a local actor to continue it. However, it has to be conceded that the original, innovative institutional arrangement did not work out in the long term — but it was, and will remain acknowledged as such — the original source of the idea.

What can other regions learn?

One lesson learned from this particular solution is that a lot of knowledge exists within various organisations — and within their separate units. The challenging (and the rewarding) aspect of this is to mobilise such know-how, for example through a format such as the working group, with leaders for elderly care, elderly transport management and nursing homes staff, who all have daily contact with intended users. However, it is not easy — but still possible — to overcome a "business as usual" mindset. Another recommendation derived from the Trelleborg experience is to think creatively along with a range of stakeholders, not only about commuting challenges in rural areas but also about the social needs of everyone involved.

What are the next steps and how will the project continue?

There is a need to "keep up" with ongoing demographic changes. As the average age of Trelleborg's population continues to rise, it is also likely that the older citizens of the near future will be more active and have higher demands for mobility. The public sector needs to adjust to these trends, both regarding mobility and service in rural areas.

4.7. Ride-sharing Application in Vejle, Denmark

Main author: Marianne Pedersen, project manager

### What is the innovative mobility solution about?

Veijle Municipality cooperated with the Smartphone-App developer NaboGO ApS to implement and promote a ride-sharing app[4] in their rural part of central Denmark. The solution's main target group is people who wish to travel the 13 km from the village Smidstrup/Skærup to the regional centre Vejle. The unique aspect of this project is that — unlike services such as UBER or Lyft — the NaboGO service is focused on rural areas, and is designed only to cover the marginal costs of the drivers, not to generate a profit. Another interesting aspect is that young people without a driving licence are specifically addressed as part of the target group.

In addition, and as a complementary measure, a Mobility Centre has been established in the Vejle Municipality (see separate box).

What was the starting point?

The community in the village Smidstrup/Skærup is tightly knit, with a strong community spirit. When the local sports club holds events, a large proportion of the village participates; and if something of local relevance needs to be done, many people come out to help. This is an important asset for a ride-sharing scheme, which inevitably relies on a high degree of mutual trust.

When the idea of an innovative ride-sharing solution emerged, some residents raised concerns that it could undermine the viability of the remaining bus links to and from the village. These signals were taken seriously — the combination of the ride-sharing solution with the National Travel
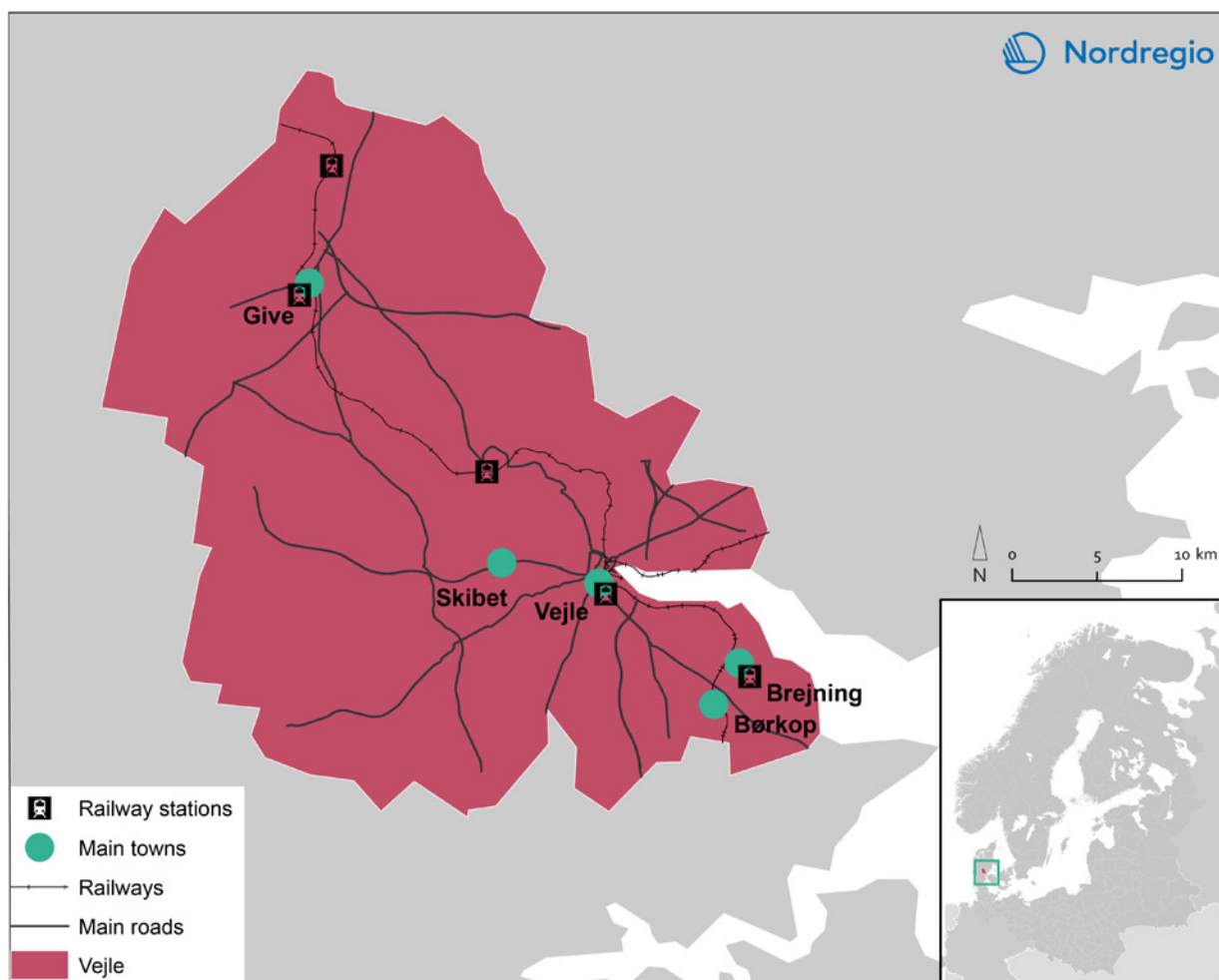
Veijle Municipality, Denmark. Map by Nordregio.

The Mobility Centre in Vejle, Denmark

The Mobility Centre in Vejle, Denmark is a digital solution combining an app for a highly innovative rural ride-sharing scheme with a travel planner connected to the national public transport database. The integration of information about available ride-sharing services and traditional public transport solutions on the selected route offers convenience in mobility planning for the users and encourages multi-modality in the countryside, where travel options are scarce. In addition, an agreement with the municipality makes it possible to use public bus stops to pick up and drop off passengers. This way, both transport modes can be easily combined.
https://nabogo.com/partnerskaber/
https://play.google.com/store/apps/details?id=com.nabogo.app

Planner ensured (and was perceived to do so by local people) not to put existing bus services at risk.

Mobile data connectivity in the area is very good so that the technical requirements are optimal for a digital solution. Care had to be taken, of course, to avoid a disconnect with the older generation, not all of whom are very familiar with the use of a smartphone. But for the rest of the population — especially the young(er) target group — this concern is irrelevant.

An added economic benefit of a service targeting the younger generation is that it is expected to make it easier for them to do an apprenticeship, or to study in their home region, allowing them to feel more tied to the region and maybe even stay there in the long term. A complementary advantage of the ride-sharing service to Vejle is the anticipated reduction in the number of single-occupancy vehicles driving in from the surrounding rural areas, which will help mitigate various traffic-related problems that have been growing in the urban centre.

How was the actual implementation and what are the initial results?

The lead organisation for this solution is Vejle Municipality, in cooperation with the app developer NaboGO, which owns the intellectual property rights to the solution. The public transport company of South Denmark is an associated partner. The local council for Smidstrup/Skærup also had a large role to play in the implementation and promotion of the app in the local area. Various local companies were contacted and asked to spread information about the service. The local news channel TvSyd also helped to promote the solution, both with a feature and an interview with a local politician.

It took around seven months from writing the specification for the desired service until the first stage of the implementation. The user-friendliness of the app was down to existing experience, in-depth conversations with members of the local council and a survey to provide a detailed understanding of the specific mobility needs of the local people.

So far, the app has become quite popular, and NaboGO has even received requests from other areas, who are interested in buying locally tailored licences. This rewards the original intention, which was to develop a digital ride-sharing platform with a strategic view to it being adapted or reused in other areas. In fact, Blekingetrafiken, in Sweden, has already launched NaboGO in their region.

" Bring your neighbour in your car

Kasper Mikkelsen, NaboGO

What can other regions learn?

We highly recommend investing sufficient time and energy into a comprehensive and detailed agreement with all third-party solution providers in order to avoid negotiations and amendments during the project period.

The experience in Vejle also shows that, ideally, you should have a local ambassador to ensure continued focus on the solution, even after the project ends. If you work exclusively with the local Council, there is a risk of it losing focus due to other important tasks.

Screenshot from a TV documentary about NaboGO. Copyright TVS. Source: https://www.tvsyd.dk

It was a big help having the local news channel TvSyd as a supporter and as the communication channel to inform people and keep reminding them about this new mobility solution.

What are the next steps and how will the project continue?

The Vejle team managed to come up with quite creative approaches to promote the ride-sharing app. For example, one of the first events took place in the local supermarket, which led to a very good response and to a rapidly growing number of users. However, the need to talk to actual and potential new users does not stop at any given point. It is an ongoing process. Therefore, plans are underway to visit the supermarket again, to set-up an information booth at the local sports arena, and to have a presence at other suitable locations. The ride-sharing app will also continue to be promoted through posts on social media channels and through more coverage on local TV.

In order to ensure a lasting and reliable connection with the local council, the team is trying to find someone to act as project "ambassador". That is, someone who can keep the link alive and become the identifiable "face" of the solution. In the near

> ❝ **There is no more money for public transport, so we have to do something else**
>
> Steen Rend, the local council

future, it would also be good to get local companies on board, so that their employees offer commuting trips as ride-sharing options for others.

Obviously, the outbreak of the COVID-19 pandemic has affected the service significantly. NaboGO has therefore started to think outside the box about the possibility of incorporating an additional service, which allows users to have various goods delivered by drivers who pass a supermarket (for example) anyway. This is directly connected to an earlier idea about using private cars to deliver goods. It could mean that an older person, for example, one who needs medicine from the city, could order it from home through the app and then the home care staff would deliver it. This concept turned out to be incompatible with data protection rules, and with taxi competition regulations, however, COVID-19 may lead to it being resurrected in a different form.

Promotional event in a supermarket; grocery baskets were given to the first 10 people who created a profile in the NaboGO app. Source: Marianne Pedersen.

4.8. Service-to-people Accessibility Solution in Hallig Hooge, Germany

Main authors: Annika Schmiedek-Inselmann and Nicole Rönnspieß, Diaconie of Schleswig-Holstein

What is the innovative mobility solution about?

Diakonie Schleswig-Holstein is part of a national charity association with a large number of member institutions all over Schleswig-Holstein and a long history of operating social services. In connection with the MAMBA project, Diakonie set up an in-house Mobility Centre in order to discuss the challenges and solutions related to its service-to-people mobility options. The "Mobile social counselling on Hallig Hooge" project is, in fact, the first one in which the Diakonie's in-house Mobility Centre has been involved.

The MAMBA project area is Hallig Hooge, a tiny North Sea island off the west coast of Schleswig-Holstein that is regularly flooded by storms. The population of 109 live on mounted areas occupying a total area of 5.78 km². The ferry from the mainland takes approximately 1.5 hours. There are few cars on Hooge, most of them owned by the islanders, and no public transport apart horse and carriage rides for tourists.

Normally, the islanders have to go to the mainland to access particular social services, especially counselling services, so the Mobility Centre focused on the specific challenges Hooge faces and developed solutions for a service-to-people mobility option.

What was the starting point?

Having decided the kind of service it wanted to provide, the Diakonie MAMBA team worked closely with the mayor of Hooge from the outset. The mayor has a mediating role and participates in meetings with the islanders at their central meeting point — the "Markttreff" — a local grocery store that plays an important role in social interaction on the island. A paramedic based in the "Markttreff" is on hand to help in health emergencies, a doctor visits the island once a fortnight there is a telemedicine connection with the hospital in the regional capital, Kiel. The only public transport is a ferry connection to the mainland, where all the medical specialists, counselling services, food shops, secondary schools and clothes shops are.

Supported by the mayor, the MAMBA team held regular meetings with the islanders. These provided the basic structure for an ongoing, step-by-step process to set up mobile counselling on Hallig Hooge.

Because many people on Hooge, especially older people, were not very familiar with the use of digital communication technologies and preferred face-to-face communication, the In-house Mobility Centre of the Diakonie in Rendsburg also considered providing social services on-site as well.
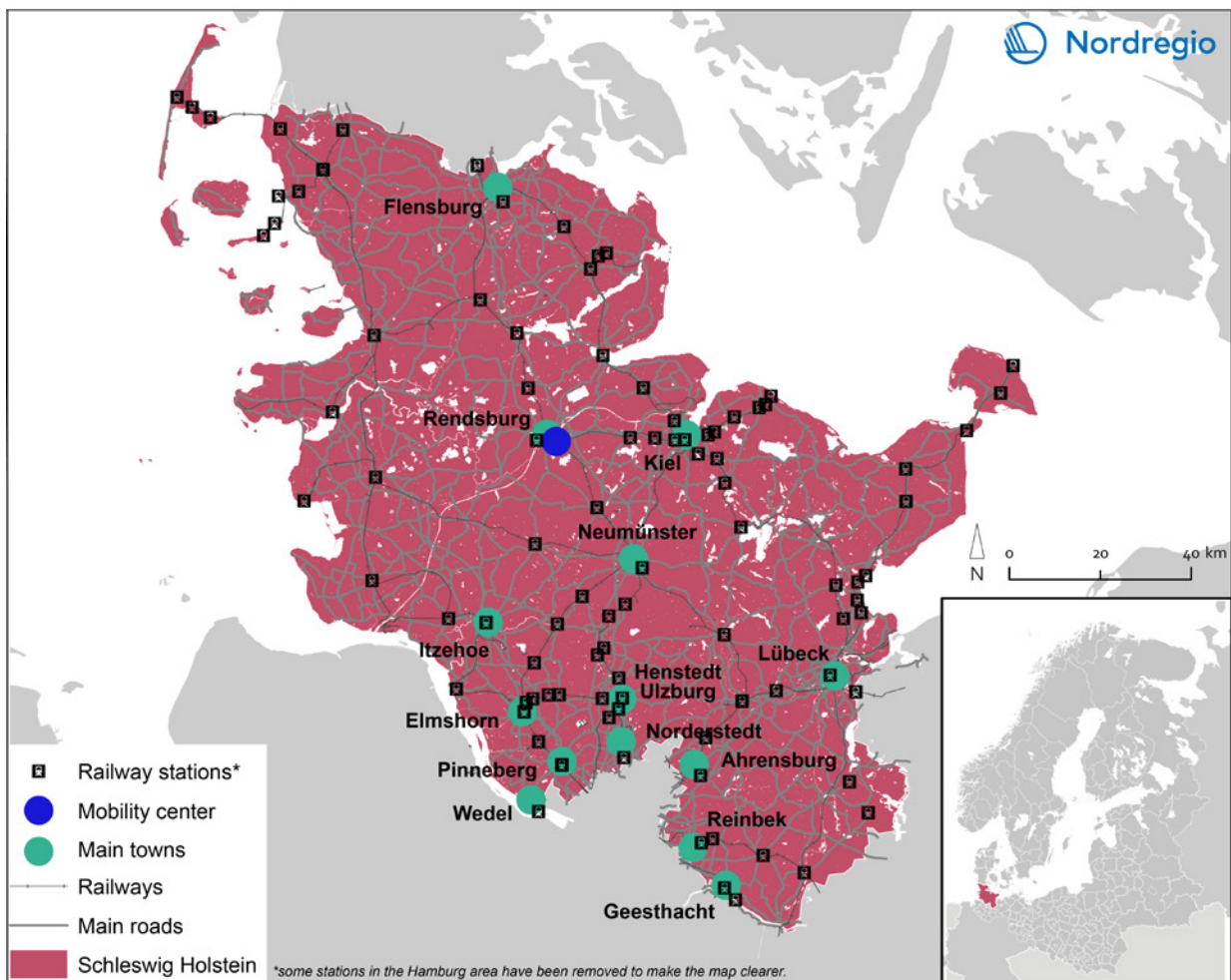
Federal State of Schleswig-Holstein, Germany. Map by Nordregio.

Mobility Centre of Diakonie Schleswig-Holstein, Germany

The In-house Mobility Centre of Diakonie Schleswig-Holstein was set up in 2018. It connects professionals across different work specialisations. It pursues an interdisciplinary approach to mobility questions, in particular in the area of service-to-people mobility. The long term aim is to revise the Diakonie's counselling concept. The professional knowledge of Diakonie colleagues will be a key resource. One of the objectives of the Mobility Centre and the pilot is to improve the quality of life in rural areas by widening access to social services.

How was the actual implementation and what are the initial results?

The first step was to hold regular, on-site MAMBA meetings with the islanders in the "Markttreff". The first meeting served as a way of learning about existing assets and understanding people's needs, concerns and preferences. A "solution tree" was drawn up to visualise these. This showed that the islanders' main emphasis was on how to grow old on Hooge without worrying. They wanted courses about care of the elderly and asked the mayor to apply for a village carer or a state volunteer worker.

At a subsequent meeting, the MAMBA Hooge group linked up with the care support point in North Frisia for a video conference. One of the support point staff explained an about the village carer system in that region and answered many questions. Fortunately, the digital transmission quality was high (which is not usually the case in the rural area of Schleswig-Holstein), and this conversation was a positive first step into the use of digital technology for Hooge inhabitants.

In parallel to this, the In-house Mobility Centre also facilitated further discussions around the topic of "growing old without worrying about it" on Hooge. In addition, a staff member who is in charge of organising social care provision for older people is supporting the MAMBA team in the development of a course for elderly care on-site on Hallig Hooge in summer 2020.

What can other regions learn?

To implement successful service-to-people solutions like the one on Hooge, it is crucial to involve local residents and stakeholders from the very beginning, so that their needs and wishes are well understood, and their constraints and fears are also heard and taken seriously. Highly recommended is the use of visualisation techniques and direct human interaction in a rural community such as that on Hallig Hooge, especially in relation to elderly people. This is particularly important to gain people's trust and explain the proposed solution face-to-face. A bottom-up approach is a key factor in securing success for a project based on an interdisciplinary approach to mobility questions (in this case, the Diakonie's In-house Mobility Centre).
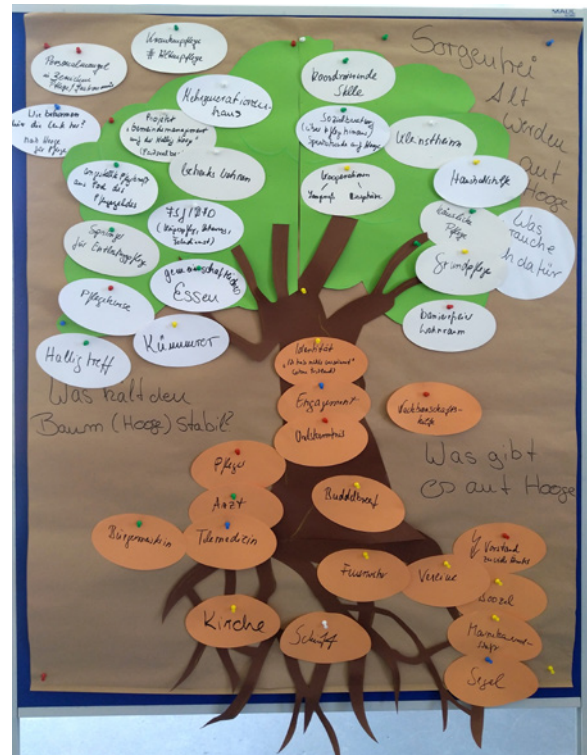
"Solution tree" from a discussion about existing assets in Hallig Hooge. Source: Doris Scheer.

A discussion round on the people-to-service solution proposed for Hallig Hooge. Source: Doris Scheer.

What are the next steps and how will the project continue?

The plan is to transfer the In-house Mobility Centre to the corporate communication structures of Diakonie Schleswig-Holstein, keep widening access to social services and supporting the existing project with the Diakonie's professional knowledge.

On Hooge, the aim is to make meetings with the islanders a regular occurrence and keep going with the service-to-people approach to vulnerable groups — families in crisis, unemployed people, homeless people, people with disabilities, those struggling with financial and psychological problems or with addictions and people with various health issues. One element of the long-term plan is to set up online courses for the people of Hooge. The first course is planned to be a video conference about dementia from a specialist at the competence centre for dementia in Schleswig-Holstein. This course will teach and enable the islanders to provide more qualified support to their elderly neighbours. Other forms of training, such as the basic elements of elderly care, are proposed on-site because they involve practical, face-to-face exercises.

The ongoing Hooge MAMBA meetings will include feedback on all the events that have taken place, and they will keep discussing mobility challenges in relation to issues of access to social services and developing new solutions.

View from Hallig Hooge. Source: MAMBA.

## 4.9. Regional Steering Group for Mobility Services in South Ostrobothnia, Finland

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What is the innovative mobility solution about?

The innovative mobility solution in the Finnish South Ostrobothnia region consists of setting up a cooperative Mobility Centre. The core element is the formation of a regional steering group for mobility services, the main purpose of which is to coordinate and manage various social-service and healthcare-related transport options. The group will guide and support regional planning processes, related procurement activities and the operation of actual transport services.

The initial main target group of the Mobility Centre is people who require transport options for health reasons and to access certain social services (through statutory transport provision). In a later phase, senior citizens and other residents from rural areas in need of transport should also be able to benefit from this service. As seen in the centre of Figure 15, several municipalities are working together on this Mobility Centre in order to coordinate transport services across the region and with the long-term vision of a single transport unit for the entire region.
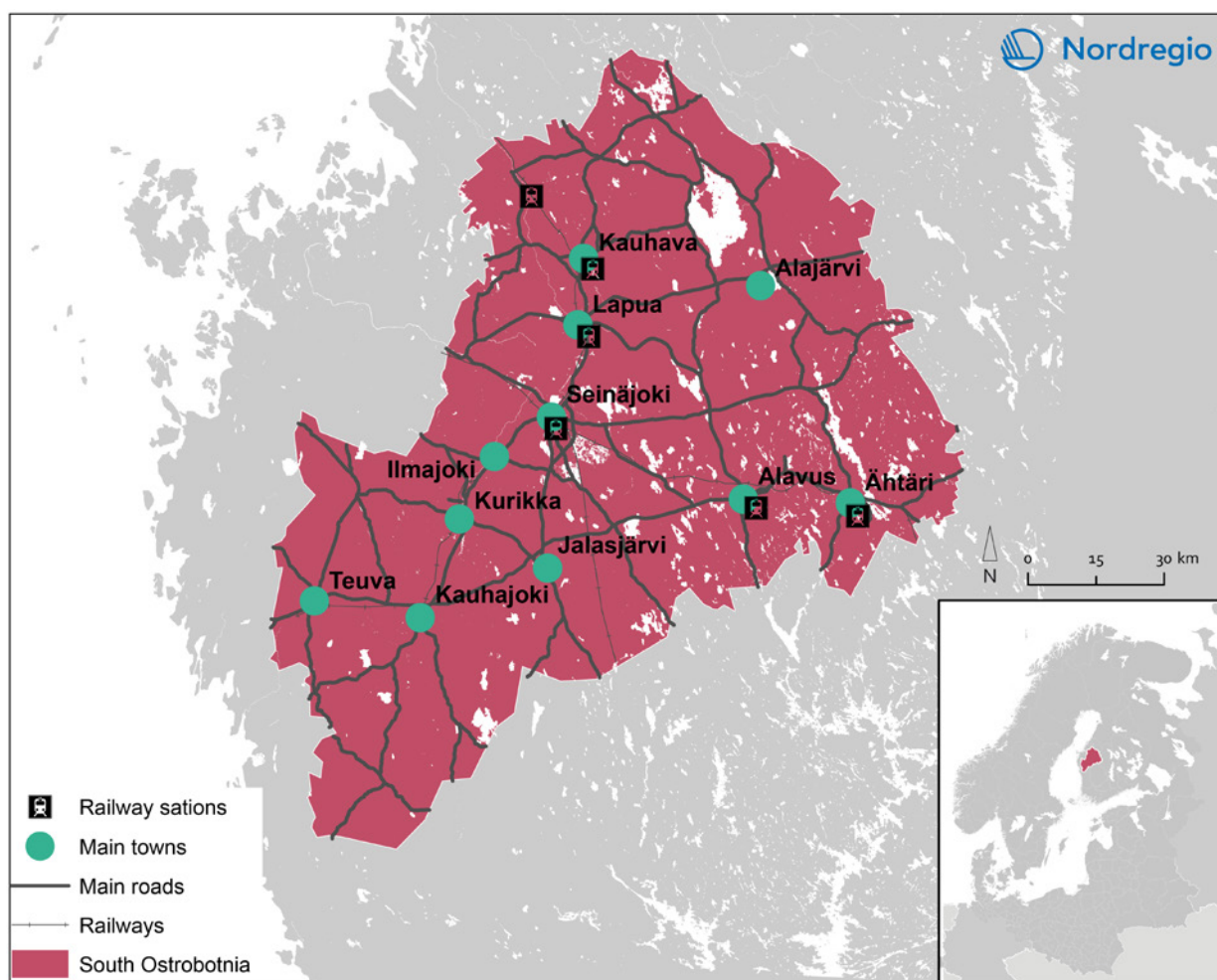
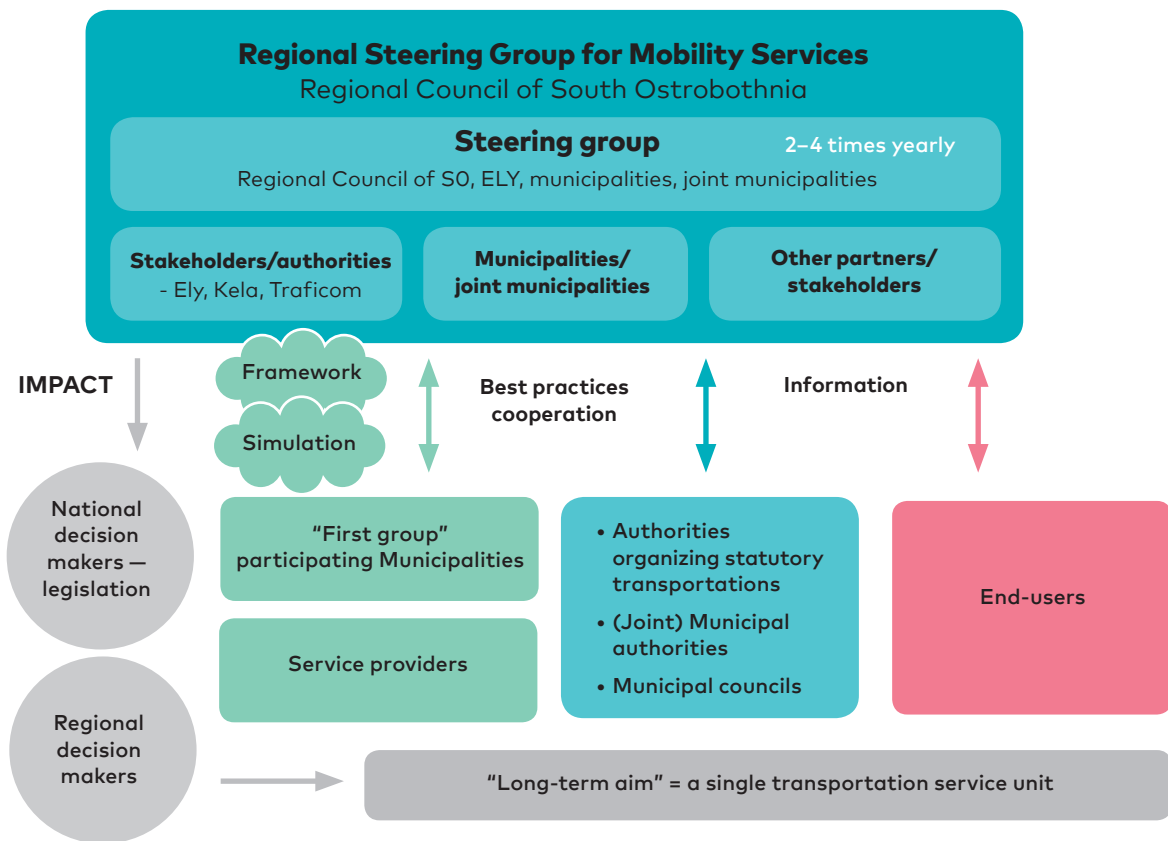*South Ostrobothnia, Finland. Map by Nordregio.*

Figure 2: Schematic representation of the South Ostrobothnian Mobility Centre model. Source: Regional Council of South Ostrobothnia.

What was the starting point?

As with all of the MAMBA partner regions, South Ostrobothnia is a remote rural area with an ageing population increasingly dependent upon various mobility services. At the same time, the capability of the public sector to provide those services is decreasing.

Formally, the national government is responsible for the implementation and funding of the regional transport system plan, and the work is coordinated by the Ministry of Transport. The Regional Council is legally responsible for the planning of the system (including infrastructure and transport services) but not for its implementation and funding. Some of the costs for transport to social services and health-care facilities are covered by the Social Insurance Institution of Finland. Others have to be paid for by the municipalities. These transport services need to be purchased from private providers because municipalities do not organise them as in-house services.

Each municipality has to organise and procure

services separately from its own administrative resource and funding base. This is challenging because, in reality, most municipalities have limited knowledge and resources to fulfil such obligations. Accordingly, public healthcare and social care-related transportation services are not sufficiently organised, and remain poorly integrated. The monitoring of service provision is also inadequate due to limited resources and a lack of transparency.

These are among the reasons why the cost of transport services in rural areas is high and has increased significantly in recent years. As the funds available for public transport remain limited, budgeting and planning for rural areas needing to cope with long distances are becoming more and more difficult. Services also rely mainly on taxis in rural areas, due to the limited availability of public transport.

This situation has led to a growing realisation that information needs to be shared much better and that activities have to be better coordinated among municipalities.

View from South Ostrobothnia. Source: Regional Council of South Ostrobothnia.

How was the actual implementation and what are the initial results?

The MAMBA project team was responsible for the formation of the regional steering group for mobility services. The Regional Council of South Ostrobothnia leads the group and acts as its main organiser.

The group consists of the following organisations: the Regional Council of South Ostrobothnia (Chair); the Centre for Economic Development, Transport and Environment; municipal representatives; the Social Insurance Institution of Finland; the Hospital District of South Ostrobothnia, and the Finnish Transport and Communications Agency (Traficom).

The group meets regularly, about two to four times a year. For the duration of the MAMBA project, several stakeholder meetings and workshops were organised, at which the tendering and procurement processes and other topics were discussed. Thanks to these meetings, it has been possible to share information and best practices between municipalities, and these practices have become increasingly similar across the region.

What can other regions learn?

In order to achieve tangible and acceptable results, it is crucial that all stakeholders, interest groups, target groups and end-users are involved in every phase of the process. Communication also has to be clear, transparent, sufficient and accurately timed.

What are the next steps and how will the project continue?

The regional steering group will continue its regular meetings. It will share information with the various interest groups and target beneficiaries, discussing services and practices with them. The group contributes to the development and creation of concerted practices and procedures for the entire region. If this cooperative spirit continues over the next years, then the long-term aim of establishing a single transport service unit for the whole region by 2023 is clearly within reach. This would lead to tangible improvements in the mobility situation for all of the people of South Ostrobothnia — especially for its most vulnerable residents.

Steering Group meeting. Source: Sanna Valkosalo.

5. Conclusions

Our journey through the various MAMBA solutions has now come to an end. In looking back, we would like to emphasise some key points that should be taken into account by anyone considering initiating or contributing to similar rural mobility solutions.

A common feature in all MAMBA solution areas is the outmigration of younger people to cities and the ageing of the remaining population. This results in a growing demand for mobility solutions that ensure reliable access to health care and social services. Public transport coverage is typically low, especially in areas with a low population density. Moreover, reduced mobility restricts older peole's opportunities to socialise and attend activities.

The success of a mobility solution depends upon the level of interest and the commitment of various **stakeholders** to support it. The MAMBA examples illustrate that the confidence of local authorities in a positive outcome contributes to its sustainability, both financially and by optimising the legal framework, making it more friendly to potential service providers. One example of the importance of such support is North Karelia, where the Regional Council supported the idea from the outset and proposed changes to legislation that would lower the barriers to becoming an entrepreneur in sparsely populated areas (p.18). The success of the Plön project was ensured thanks to the administrative, political and service levels all working together. In addition, a study provided convincing evidence that such a solution was needed (p.35). The Mobility Centre in Cuxhaven receives support from transport associations and taxi companies under the general assumption that only by working together can they provide a better mobility solution (p.30). The involvement of local bus companies in the Trelleborg solution also helps the development of local businesses (p.42).

Another area to be aware of before planning a mobility service is the level of information and communication technology (ICT) skills and the quality of ICT infrastructure in the region. This influences the choice of suitable mobility solutions, as well as the speed of their implementation and adoption. In Vejle, Denmark, the data/mobility connectivity is very good, providing excellent preconditions for the implementation of its digital ride-sharing application. The younger people, who are among the explicitly targeted beneficiaries, tend to be pretty familiar with an app-based approach and can help spread knowledge of the service to other sectors of the population. Although the Finnish region of North Karelia has the support of the local government, the speed of implementation of their mobility solution was slowed down somewhat by the need to train people to use the digital platform. The situation is similar in the Vidzeme region, where a new mobility service was built around communication by telephone (and not web services) because many older people in Latvia do not use the internet. Another lesson can be learned from the MAMBA solution in the Polish Bielsko district, where it turned out that people actually prefer printed timetables posted at the bus stop. Interestingly, the islanders on Hallig Hooge in Germany expressed their preference for face-to-face communication — at least as part of the effort to discuss, introduce and explain a remote counselling service. In essence, people's needs, fears, wishes, abilities and concerns have to be thoroughly understood and responded to — no matter how progressive, antiquated, rational or emotional they appear to be.

Information activities, as well as user interaction, are important for both service providers and users. Information about the Mobility Centre of Vidzeme region has been distributed through various channels: websites, national and regional TV channels, as well as at city festivals. Additionally, the Bielsko district promoted its MAMBA activities through leaflets to schools, health facilities and churches. Vejle regularly informs the public about its mobile application through the local news channel, as well as by posting on Facebook and communicating via the local TV station. The success of the Trelleborg solution is certainly due to the creation of the Mobility Discussion Platform. It does not al-

ways have to be a complicated solution, however. Sometimes, it is simply a matter of enabling the parties involved to communicate with each other.

Procurement issues were a challenge in several projects. For example, Transport-on-Demand is not yet considered an established public transport service in the current legal systems of Latvia or Poland. This means that Transport-on-Demand solutions found themselves entering new territory, which caused some delays. It is, therefore, crucial to be familiar with the applicable local, regional or national legal contexts and procurement regulations, and to consider related activities in project timetable. Trelleborg, notably, encountered difficulties with procurement law, which prevented the initial idea of using a municipal-owned school bus to transport older people for recreational activities. Nevertheless, the project promoters came up with a solution and started working with a local bus company.

One of the significant challenges facing MAMBA solutions is ensuring their long-term **sustainability**. The MAMBA project provided support for the development and launch of various solutions, the testing of new approaches and capacity building. The next step is to find a viable business model, pricing scheme and/or stakeholders who agree to cover the costs of maintaining the mobility solutions into the future. Introducing a fare for the service could solve the problem. However, this typically clashes with the ideal of transport equity because a large proportion of the service recipients are people with disabilities or older people with a limited ability to pay.

Accessibility-as-a-Service is a new approach to how communities can reduce the need for transport while improving communication between members of the community and facilitating access to work environments or to services. For example, the long-term goal on Hallig Hooge is to provide

Source: Alain Duss/Unsplash.

the option of using video-conferencing tools to bring social services directly to the islanders. The rural Co-Working Space in Trelleborg is an example of how to reduce the need to travel through a creative measure. In the future, this Co-Working Space is intended to grow into a small-scale mobility hub offering mobility-related information, and possibly even selected services (such as bicycle sharing), in order to integrate accessibility and mobility even more closely.

This publication features stories of people who dared to ask new questions, who were ready to try out something new and were willing to take some risk in their pursuit of a better quality of life for the people in their region. As with any departure from well-established routines, there were challenges along the way — but they were overcome with creativity, endurance, good planning and strong partnerships.

If you, too, are ready to initiate or support an initiative to improve accessibility and/or mobility in the rural region where you live, then we highly recommend that you also read: ***A Guide to Collaborative Mobility Solutions in Rural Areas***. It provides step-by-step guidance about how results can be achieved. It is available on the MAMBA website (www.mambaproject.eu), where you will also find other inspirational examples that demonstrate the potential for combining the magic of the countryside with the best of the city. So, let's get started!

Further information and endnotes

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Endnotes

[1] For further details see the Nordregio report on sociocultural factors: www.mambaproject.eu/products.

[2] More details are set out in the study from the Vidzeme University of Applied Sciences concerning economic determinants for innovative rural mobility solutions: www.mambaproject.eu/products.

[3] More details are set out in the study from the Institute for Climate Protection, Energy and Mobility e.V. (IKEM) on legal determinants for innovative rural mobility solutions: www.mambaproject.eu/products.

[4] Available in the Apple Store at https://apps.apple.com/de/app/nabogo/id1458408721. Available in Google Play Store at https://play.google.com/store/apps/details?id=com.nabogo.app&hl=de.