PLUS+T REPORT

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Länsstyrelsen Östergötland

SERN

gnf Green Net Finland

Enzkreis

PROVINCIA DI PARMA

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The project in short

ACRONYM
PLUS+T

TITLE
Exchanging practises and enhancing in the field of sustainable transports

FUNDING PROGRAMME
ERASMUS+

LENGTH
2023 - 2025 (18 months)

GENERAL OBJECTIVE
The general objective of the PLUS+T project was to build knowledge among civil servants and to exchange experiences of the local and regional level of governance when it comes to sustainable transports.

ACTIVITIES
The activities foreseen in the project were:

- Collection of good (or bad) practices from the participating countries on how different regions implement and work towards sustainable planning of transport. Partners will exchange knowledge and practices in order to support a bigger change that is not limited only to its own institutions.
- Sustainable Mobility Seminar in Italy (October 2023);
- Sustainable Mobility Seminar in Finland (April 2024);
- Stakeholders reporting back: to ensure that all stakeholders are informed about the results of the seminar and engaged, a series of local online meetings were held in Italy, Finland, Germany, and Sweden.

PARTNERS
ASSOCIATED PARTNERS

County Administrative Board of Östergötland (SE)
SERN (IT), Green Net Finland RY (FI), Landkreis Enzkreis (DE)
Province of Parma (IT)

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Introduction

Across Europe, transport is a major contributor to greenhouse gas emissions, with road transport alone accounting for over 90 percent of these emissions in many regions, including Östergötland Sweden, as well as in Italy, Germany, and Finland. Despite growing awareness and policy efforts, the increasing volume of car traffic and transport means that emissions are not decreasing at the rate required to meet climate targets. The challenge of planning both environmentally and socially sustainable transport systems is widely shared among policymakers, regional authorities, and organizations across the continent.

The PLUS+T project, co-funded by the EU, was developed to support local and regional authorities in addressing these challenges by integrating sustainability into transport planning. The project aimed to balance environmental concerns with social inclusivity by promoting best practices, fostering innovation, and strengthening cooperation between public and private stakeholders.

As part of this initiative, stakeholders from Finland, Sweden, Italy, and Germany were interviewed to gather real-world insights into the opportunities and barriers of sustainable transport planning. This report is the result of that collaborative effort, presenting both successful strategies and persistent challenges faced in different regions. By analysing the experiences of municipalities, transport agencies, private companies, and citizen groups, the report provides a comprehensive overview of sustainable transport planning today—highlighting key challenges and offering solutions that can be adapted and implemented across Europe.

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Summary of challenges

In the following section you can find the challenges among public and private sectors in each participating country.

Finland

The private actors are facing the challenges:
Climate mitigation vs. costs. "The most effective way with the greatest leverage to reduce CO2 emissions is the use of renewable aviation fuels. We need to go to that."

The public actor's challenges:
The governmental plan affects the focus of advancing sustainable mobility. This is not necessarily a challenge but the focus of activity often changes with the political coalition.
Budget limitations. In particular, sustainable mobility such as walking or biking needs good infrastructure and e.g. cleaning the snow efficiently. The winter frost and wear damages the routes. This is a challenge.

Cost and profitability.
Resistance to changes. In sustainable transport, in many cases a change is necessary. On the big picture the fundamental question and challenge is the behavior of citizens - People will choose how they move. How can we provide tempting sustainable transport alternatives which people would choose in the long term?
The heterogenous region. E.g. in the Helsinki greater area, there are diversely populated areas with different needs and features.
It is important to get beyond the piloting stage of innovative, smart and sustainable mobility solutions and to continue larger scale with the best practices. There, it is important to have the right partners and go get beyond from externally funded projects. One big challenge is the bureaucratic hindrances which differ from country to country.

Sweden

The main challenges found in the region of Östergötland, Sweden is connected to the rural areas. The lower amounts of inhabitants on the countryside makes public transports challenging. Hence less priority is given to these areas to develop the public transports in these areas. Specially youths are affected by this, for example giving them ability to practise spare time hobbies compared to those who live in urban areas. The companies situated in these areas are also negatively affected since it is harder for them to get employees to their worksite. Knowledge among public officers in smaller municipalities and companies in the countryside is also lacking. Connected to this is a problem is ensuring organizational learning and memory to avoid that experience and knowledge is in single persons in the organization.

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Italy

The challenges are certainly different in the city or in rural areas as a reference. Urban areas might focus on enhancing quality and sustainability, while rural areas need better coverage and frequency of service to make public transport a viable alternative to cars.

Rural areas often have fewer transport options, with limited bus and train services. The infrequency of these services makes them less convenient compared to private cars. People in rural areas often have longer distances to travel, and public transport can be slow or inefficient for reaching cities or towns, making cars the preferred choice. Certainly in these areas car-sharing modes can be promoted, which are already present, but perhaps little used by the older population.

In the cities analysed, such as Parma and the Ravenna area, the difficulty faced most is changing habits and mentality, among the adult population ,using public transport, bicycles even when the weather is bad. Another aspect is ensuring the safety of users of public transport services; late in the evening, areas around train and bus stations may appear as less safe places and lead people to choose to use their cars.

Germany

The creation and maintenance of equal living conditions throughout the country is an important national objective. In the area of public transport, this is a major challenge, particularly in rural regions. One reason for this is a low population density, which almost inevitably makes any service uneconomical. Another reason is the shortage of skilled labour that now exists throughout the transport industry. The use of unmanned vehicles could be a game changer. Until then, the public sector will have to come up with a mixture of customised services (such as an on-demand service) and voluntary offers.

Addressing identified challenges

The project had a final seminar in Helsinki, Finland in April 2024. A workshop was conducted with the participants to identify common challenges and how to tackle them. One area that is a common challenge sustainable transports in the countryside. This since public transportation often is expensive to arrange in these areas due to less inhabitants. Another common denominator is transports for youths, especially in the rural areas but also in some degree in urban areas. Attitudes and habits are also an area that is important to tackle when you work with sustainable transports. To have more sustainable transport solutions they need to be time- and cost effective so that the users will promote them instead of the unsustainable options.

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To work with these areas, the following actions need to be taken:

- Find out what has been done and current knowledge, conclude and make a guideline for example. And then reach out to stakeholders.
- Use a co-creation process to involve the young. Integrating them in the process is an important factor for a successful project/implication.
- Data – how legislation affects behaviour; can we predict what will happen. The NEB model used by Bologna University could be used.
- Service design and nudging, how can we use communication in a smart way to change behaviour.
- Visualize the change in modelling and 3D-tools. To make it most attractive.
- Focus on green and the will to contribute to the transition.
- Emphasize the "side effects" on health when walking and cycling.
- Take into account the value of accessibility for social cohesion

Detailed information

During the project specific interviews were conducted in both private and public sectors. In this chapter you have more detailed information from the interviews.

Stakeholders

Finland

FINNAIR CORPORATION

What are the main objectives for the organization?

Slogan: "Enriching life by bridging the world". Finnair has a goal of carbon neutral flying in 2045.

Finnair's main hub Helsinki-Vantaa is the major international airport in Finland. It is in the City of Vantaa at the Helsinki-Uusimaa region. The airport website says "Helsinki Airport has multiple transport connections to Helsinki metropolitan area and around Finland. Whether you arrive at the airport by car, train, taxi, bus, or bike, you will have an easy access to the terminal." The airport is operated by Finnavia and it collaborates with the public sector, e.g., the ministries and city of Vantaa.

Finland is from Central European perspective behind the Baltic Sea and today the time to travel via land or sea between Finland and Central Europe is several days long. Aviation, being much faster, is currently the major mode of transport of people for business or tourism between the region of Helsinki-Uusimaa and overseas, although a small amount of people today try to use land or sea transport instead of aviation for sustainability reasons.

From a social perspective, today flying is important socially to many people in Finland, as well as in many other countries. E.g. persons with family members or relatives in other countries want to visit each other

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What are the main objectives for the organization?

Finnair is a network airline specialised in connecting Europe, North America and Asia via its Helsinki hub (Helsinki-Vantaa, HEL).

What connections to planning of sustainable transports do they have?

It is well known that flying has globally a significant impact on climate. Today, despite of the generally increased teleworking, it is still necessary for people to physically travel by flying and this need seems to remain in the future. Flying is very influential in both climate and social aspects.

Finnair has a major role in Finland for the future sustainable transport being a major airline. The company works in a consistent manner with the aim to reduce CO2 emissions.

TRAFICOM

What are the main objectives for the organization?

The Finnish Transport and Communications Agency Traficom works to ensure the availability of well-functioning, safe, secure and reasonably priced transport and communications connections and services in Finland. Traficom is also an authority serving people and businesses in licence, registration and supervisory matters.

In which field do they work?

Land, sea, air traffic. The interviewed Mrs. Sannholm works as a specialist in the Sustainable traffic and mobility section of Traficom.

What connections to planning of sustainable transports do they have?

Taking part to national and regional strategy development processes

Mobility development state aid: Traficom arranges annual calls and funding for national small projects (not infra) for the promotion and development of sustainable mobility. The previously funded projects are listed on their website.

HSL HELSINKI REGION TRANSPORT

What are the main objectives for the organization?

Helsinki Region Transport is a joint local authority whose member municipalities include Helsinki, Espoo, Vantaa, Kauniainen, Kerava, Sipoo, Tuusula, Kirkkonummi and Siuntio. We arrange the public transport.

In which field do they work?

Plan and organize public transport in the region and work to improve its operating conditions. We procure bus, tram, metro, ferry and commuter train services.

We approve the public transport fare and ticketing system as well as ticket prices. We are responsible for public transport marketing and passenger information.

We are responsible for ticket sales and ticket inspections.

We are also responsible for generating "the Helsinki Region Land use housing and transport" plan together with a region of 15 municipalities. All modes of transport are included in the plan.

What connections to planning of sustainable transports do they have?

Strategy goal of HSL is zero-emission public transport in 2025.

HSL aims to be a leader, facilitator and partner in sustainable mobility in 2030.

The Helsinki Region Housing and Land Use plan is legal responsibility of HSL.

HELSINKI-UUSIMAA REGIONAL COUNCIL

What are the main objectives for the organization?

Helsinki-Uusimaa region has set a goal to become the most innovative region in Europe by 2030. The aim is to increase the RDIinvestments to five percent of the regional gross domestic product. Helsinki-Uusimaa is also aiming at climate neutrality by the year 2030, in line with the forerunner municipalities of the region. Smart and emission-free mobility is one of the six climate spearheads that strive to mitigate climate change and to support a green transition.

Sustainable development goals, ambitious climate targets and sustainable growth are the basis for our overall research and innovation activities in the region. These activities naturally call for resources, and therefore, resource wisdom is highlighted in our smart specialization strategy for Helsinki-Uusimaa.

In which field do they work?

Helsinki-Uusimaa Regional Council is a joint regional authority for Helsinki-Uusimaa. Our main operational tasks at the Council are regional and land-use planning, as well as the promotion of local and regional interests. We articulate common regionalneeds, long term development goals and conditions for sustainable development.

What connections to planning of sustainable transports do they have?

This connection comes mainly through the regional land use planning. Our regional land use plans set out the principles of land use and the community structure in Helsinki-Uusimaa. They define the use of areas needed for specific purposes, along with the principles of urban structure.

Sweden

MUNICIPALITY OF ÅTVIDABERG

What are the main objectives for the organization?

The municipality is responsible for development of their geographical area. Their goals are connected to Agenda 2030. The municipality was one of the first in Sweden to adopt the sustainable development goals to their organization.

In which field do they work?

Overall development of the municipality. Connected to this specific project they are responsible for planning in the geographical area and sustainable development of the area. Around 12 000 inhabitants which makes them a medium sized municipality in Sweden.

What connections to planning of sustainable transports do they have?

They have a municipal planning monopoly which means that they are responsible for all planning in their geographical area. An exception is regional and national roads that are planned by national authorities (i.e. major roads passing through the municipality). This means that bicycle- and smaller roads within the city and village are managed by the municipality. They are not responsible for the public transports (the region of Östergötland is responsible for that).

VÄDERSTAD AB

What are the main objectives for the organization?

Contribute to farmers production of food both sustainable and efficient.

In which field do they work?

Invention, production and improvement of agricultural machinery

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What connections to planning of sustainable transports do they have?

Väderstad AB is an international company with production in three different countries. They have their main site in Sweden in the municipality of Mjölby. Approximal 1500 persons work in the site and the majority in production working shift. As the site is placed in an rural part of the municipality, they are depended on public transportation. Vaderstad AB has an ambition to to promote sustainability in all aspect of their production.

REGION OF ÖSTERGÖTLAND

What are the main objectives for the organization?

The region has a mission to develop the regional growth of Östergötland. The are governed by regionally elected politicians.

In which field do they work?

They work in many fields but the largest area is healthcare (hospitals and smaller healthcare facilities). They also support the municipalities when it comes to developing regional and local growth issues.

What connections to planning of sustainable transports do they have?

The work they do within transports is connected to their mission to develop the growth of the region. Based on this they produce development strategies for transports in the region which will benefit growth and development in it. A large focus is on public transports and larger roads in Östergötland. They are also responsible for the actual ordering and management of the public transports in the region. Their aim is to have an overall view of the spatial strategy of the region.

Italy

AGENZIA MOBILITÀ ROMAGNOLA

What are the main objectives for the organization?

The municipality of Ravenna is territorially the second largest in Italy after Rome, and AMR works in the traffic basin under the authority of the province of Ravenna, Rimini and Forlì-Cesena which also extends to some locations in the provinces of Forlì Cesena, Ferrara, and Florence (also in some locations in the province of Bologna).

In which field do they work?

The province of Ravenna has delegated in transportation matters to the AMR agency. This is a part of a merger process based on the law of Emilia Romagna towards an unification of mobility agencies. First there was Ambra, then merger with AMR (Agenzia Mobilità Romagnola). Much of the activities related to transportation was then delegated.

What connections to planning of sustainable transports do they have?

The delegation includes the basin and inter-basin, which are the province's responsibility because they pass through more than one municipality, and on these AMR also operates with regard to needs analysis, changes in ridership, schedules stops routes, etc. On the lines under the jurisdiction of the municipalities, on the other hand, it has no delegated authority, but it advises the municipalities.

UNIONE BASSA ROMAGNA

What are the main objectives for the organization?

A union of municipalities is an Italian entity and formed by two or more municipalities for the joint exercise of functions or services under municipal jurisdiction.

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In which field do they work?

The union has statutory autonomy within the framework of the principles established by the Constitution and by community, state and regional regulations. The Unione di comuni della Bassa Romagna is located in the heart of the province of Ravenna, west of the provincial capital and in the center of important communication routes and is formed by 9 member municipalities.

What connections to planning of sustainable transports do they have?

Among other services, transportation is also under their jurisdiction.

Germany

KELTERN MUNICIPALITY

What are the main objectives for the organization?

Guarantee public transport in the evenings and on weekends (up to 4 a.m.) especially for young people in the municipalities of Keltern & Remchingen (approx. 21 000 inhabitants). With 9 villages off the railroad lines and with no public busses late in the evening/at night due to lack of demand (rural area).

In which field do they work?

- *Transportation of citizens within the 2 municipalities*
- *Vehicles between regular bus and taxi*
- *Very flexible system with 250 stops and booking via app 30-60 minutes in advance*
- *Included in the normal ticket price system*

What connections to planning of sustainable transports do they have?

- *Reduces motorized individual traffic*
- *Social participation especially for young people*

WIPS BÜRGER-BUS WIERNSHEIM

What are the main objectives for the organization?

- *Achieve and maintain independence and mobility, especially for older people in the municipality of Wiernsheim and parts of the neighboring village by organizing a paid transportation (50 Cent one way) for the citizens within the municipality and partly beyond.*
- *The offer is comparable with regular buses due to planned and reliable timetables and routes.*
- *It is included in the normal ticket price system. So there is no extra charge for season ticket holders of the public transportation network of Enzkreis (VPE).*

In which field do they work?

It helps to reduce motorized individual traffic by creating an offer for everyone, so that you don't have to use your own car.

It also creates a mobility offer for citizens who do not own a car. This means a social participation for all income groups.

What connections to planning of sustainable transports do they have?

- *On the one hand you have to ensure affordable ticket prices to reach poorer sections of society.*
- *On the other hand you have to recruite passengers from wealthier classes, because for them it's not a decision whether they can afford a ticket, but whether they want to leave their car in the garage.*

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- *Recruiting a sufficient number of reliable drivers (volunteers!) is permanently very important.*
- *In 2024 there are still no suitable electric vehicles available. Main reason is the challenge between wheelchair-readiness and enough space for batteries.*

ADFC (ALLGEMEINER DEUTSCHER FAHRRAD-CLUB)

What are the main objectives for the organization?

The ADFC is the largest advocacy organisation for cyclists worldwide (230.000 members).
Is committed to the transport transition, with the bicycle as an important component.
Demands improvements to cycling infrastructure and legislation so that everyone can cycle safely and comfortably.

In which field do they work?

Federal and local politics, cycle tours/cycle tourism, all topics related to cycling.

What connections to planning of sustainable transports do they have?

- *Proposals for important legislative changes to improve cycling.*
- *For larger planning projects, the ADFC, along with other authorities, is asked to provide an opinion.*
- *Collaboration with the city and district.*

Challenges in including social and climate mitigation in planning processes

Finland

FINNAIR CORPORATION

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From a social perspective, today flying is important socially to many people in Finland, as well as in many other countries. E.g. persons with family members or relatives in other countries want to visit each other.

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Climate versus costs
"The most effective way with the greatest leverage to reduce CO2 emissions is the use of renewable aviation fuels. We need to go to that." says Mr. Aho (Vice president for strategy, Finnair).

Social sustainability
"Finnair's social responsibility's corner stones are taking care of its employees and customers and efficient control of delivery chains. For employees, the company has principles of equality and non-discrimination. It aims to employ persons of different ages, genders and nationalities, with a wide experience background, and thus it will gather many angles of view and it can improve the company's decision making and success factors. The company also aims to remove hindrances for people with different diseases or disabled. It works in a way to respect every persons' human value, independence, equality."

TRAFICOM

Changing political focus
The governmental plan affects the focus of advancing sustainable mobility. This is not necessarily a challenge but the focus of activity changes with the political coalition.

Budget limitations
In particular, sustainable mobility such as walking or biking needs good infrastructure and e.g. cleaning the snow efficiently. The winter frost and wear damages the routes. This is a challenge.

HSL HELSINKI REGION TRANSPORT

Resistance to changes
E.g. private car use: We have a lot of infrastructure which supports car driving. Do we have to carry on or can we change? This also may involve lifestyle aspects, etc. and not only "getting from point A to B".

Lack of information
It is sometimes challenging to get objective feedback.
Also, people often have strong opinions but they are not always based on facts. The sustainable and functional traffic system needs a balance between many modes of transport. Some residents and stakeholders don't always understand the "full picture" and accept many modes.

The Heterogeneous region
Helsinki greater region includes both urban and countryside areas. In some regions private cars are frequently used, in others not. Also, there are heterogeneous user profiles. There is a connection with land use and planning by the municipalities. How to develop a good sustainable traffic system to serve all?

HELSINKI-UUSIMAA REGIONAL COUNCIL

Behaviour of citizens
On the big picture the fundamental question and challenge is the behaviour of citizens - People will choose how they move. How can we provide tempting sustainable transport

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alternatives which people would choose in the long term? The change is very difficult and slow, e.g. recently in Finland the biggest MaaS operator Whim stopped to operate.
In RECIPROCITY project it became evident that many such smart and sustainable mobility pilots/solutions that are still relevant and innovative elsewhere have already been implemented in Helsinki-Uusimaa. Therefore this project did not give so much to us, we were "a giving" partner more than receiving. Of course, this is just a learning for one project, and thus with some other partner cities/regions the experiment can be different.

Implementing good practises
It is important to get beyond the piloting stage of innovative, smart and sustainable mobility solutions and to continue on larger scale with the best practices. There, it is important to have the right partners and go get beyond from externally funded projects. One big challenge is the bureaucratic hindrances which differ from country to country.

It was found in RECIPROCITY-project that piloting new mobility solutions is in Finland often swift to arrange compared to the bureaucracy in some other countries.

Sweden

MUNICIPALITY OF ÅTVIDABERG

Public transports
One challenge that the municipality have is that they lack control of the public transports. They also feel that they have a hard time to get they often get a lower prioritization when it comes to the regional public transports. It is hard for them to make "their voice heard" in comparison to the larger cities in the region who often gets a higher prioritization of public transports and the planning of it. The commuter train is not electrified, and the railway is not prioritized to be improved (which is needed). This means that the commuter trains often are cancelled which in turn leads to fewer inhabitants using this and travel by car instead. The road to the closest larger city, Linköping, is one of the most affected by accidents where wildlife is involved in the country. This is not only negative for the climate but also affects social sustainability since there are more road accidents. The local public transports, which is limited also affects youths. They have limited options since they cannot travel by car to practises for example without a parent. Those who have leisure activities outside of the urban area. For example, girls who go horse riding cannot travel by bike to the closest stable since there are no bicycle roads to it. The same problem with those who live in the smaller village in the municipality. The public transports are essential to the municipality to get the right competence for the own organisation and companies in the area. Focus from the regional transport planning is from Åtvidaberg to the larger city of Linkoping. However, the municipality also need people commuting to Åtvidaberg which is not a focus in todays policy for transports.

Planning roads in new area developments
Since the municipality is smaller, they do not have the resources to have specific knowledge when it comes to planning roads in a new development are. They use consults to get the specific knowledge needed. This means that they are dependent on the consultant and their knowledge to consider the aspects that you need when you plan a new area. One "bad example" that they have is that in one area which is quite hilly the walking paths became to step for bicycling and for wheelchair bound people to travel by them. This was knowledge that the municipality planners did not have and relied on the consultant to have.

Organisational memory and learning
With the previous bad example in mind, the ability to learn from mistakes and a structure for it is important for an organisation. This is a challenge that is more connected to the structures and document that you have in a municipality. Good and bad examples from the own organisation and other similar organisations needs to be collected and kept so that the same mistakes and success is not or is repeated.
There is also a need for support from regional actors who can have the more specific knowledge needed for different processes that the municipality are faced with.

Public vehicle charging
The municipality have offered free charging of electrical vehicles since there has been no other commercial charging in the municipality. This was however not used in the right way, some saw this as a free parking in the town centre and used it for the whole day. The idea of the charging station was for those who travelled through the municipality and not for those who lived in it. The right target group was not reached and the municipality decided to remove the charging station and focus on getting a commercial company to provide this service.

REGION OF ÖSTERGÖTLAND

Public transports in the countryside
One challenge that they see is that the transports in less densely populated areas needs to be conducted with cars. Specially in smaller municipalities this can be an issue since focus is on larger municipalities when it comes to public transports. A reflection that they have is that we should be open for regional differences and that some municipalities do not have the right conditions to have a full-service public transport. The regional public transports need to be cost effective which means that they will focus on the larger cities where you get a lower cost per transport compared to less densely populated areas. So, the question is what these municipalities can have instead since there still is a need for these types of services in the countryside. The prognosis is that cars will increase in society and especially in the rural areas which is a problem. We should aim to reduce the total number of cars in society.

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Planning roads in new area developments

They, like Åtvidaberg, also see a challenge in planning new roads and pavements. When you plan a new area with roads etc. you have the chance to make it in a sustainable way so that bicycle paths and other necessities are given enough space. However, in already planned and built areas it is much harder to make changes and add roads such as for bicycles. This is a challenge that is hard to tackle. It is also hard to have discussions with actors in the region when it comes to changing existing roads. There is a general need for more knowledge for public officers in these issues which might help the discussions and changes needed for more sustainable transports in the region.

Overall view

There is a general need to have a more holistic approach when it comes to planning of sustainable transports. The value for a measurement is seldom measured for the whole of society. Often it is focused on the costs for the own operations. This means that the savings for one part of the system can mean cost for another making the measurement counterproductive for the whole of society.

We therefore need a better overall view on the measures we do to reach the goals we have set for society and further to not have goals that suboptimize each other.

VÄDERSTAD AB

Public transports in the countryside

The biggest challenge for Väderstad AB is to recruit workers with the desired skills, and that has the ability to drive and own a car. Since the start the company is placed in a rural area in the outskirts of Mjölby municipality. As the company is producing equipment for farmers the connection to the area is crucial. The production is getting more and more advanced and more depended on knowledge in connection to IT skills. Since an increasing number of the desired workforce lives in the bigger cities, also are of interest of other larger companies in the city, the transportation to and the location of the site is of bigger and bigger importance. Väderstad AB is due to this depended on solutions through public transports. Today the workers that work the shifts of odd hours do not have the possibility to travel by bus.

Recruiting

As a consequence of the lack of public transportation there is also a challenge in recruiting. Today there is a lack of skilled workers in the production. To attract engineers to the production that don`t have a background in agriculture is almost impossible.

Parking

A third challenge that is due to the situation there is the actual lack of parking space at the site. With the difficulties in using public transport follows that all the workers need a car and need a parking space.

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Italy

MUNICIPALITY OF PARMA - TEP – PUBLIC TRANSPORT PARMA

TEP – Public Transport Parma owned by the City of Parma and the Province of Parma, provides public transport services in the city and province of Parma (urban and extra-urban buses, trolleybuses).

Reduced number of people using public transportation

The pandemic has caused a decline in the number of people using public transportation, and the ridership levels have not returned to pre-COVID levels. Two key factors contribute to this:

- Remote Work: More people are working from home, reducing the need for daily commuting.
- Car Dependency: Many individuals have become accustomed to using their cars during the pandemic and have continued this habit.

Overcrowding and security

Overcrowding on public transport can detract from the user experience, making it uncomfortable for passengers. Additionally, security concerns, particularly regarding pickpockets, are a problem that negatively affects the perception of safety among users, further discouraging people from using public transport.

The challenge is to offer an efficient and punctual service, vehicles on which citizens feel safe and to increase the number of people using public transport in a highly industrialised area (Parma), with many companies surrounding the city and with many citizens still using their private cars.

A change of mentality is needed, but also to work jointly with companies so that advantages are offered to those who travel by public transport (in some cases this already happens).

RAVENNA PROVINCE AND AMR

The province of Ravenna has delegated in transportation matters to the AMR agency owned by the Local Authorities of the Provinces of Ravenna, Forlì-Cesena and Rimini. AMR plans, organises, promotes public transport services integrated with each other and with private mobility, with particular reference to sustainable mobility.

AMR's r combining the needs of those who establish mobility strategies (local authorities), those who use the services (citizens) and those who provide them (operators), with a view to enhancing environmental liveability.

One challenge is that there are several public and private actors involved in public transport and the interests of the parties may diverge, it is not easy to align everyone with the need to be more sustainable. At territorial level in fact, public transport itself is managed at local level (buses and trams) at regional level (regional trains and buses) at national level (trains) so it is not easy to coordinate all actions when you have so many actors involved.

Germany

KELTERN MUNICIPALITY

- Financing / ensure affordable ticket prices (costs are 260 000 p.a., i.e. 65 000 for each municipality)
- Increasing number of users! (Dec 2023 – Feb 2024 351 > 557 > 707) services in the city and province of Parma (urban and extra-urban buses, trolleybuses).

WIPS BÜRGER-BUS WIERNSHEIM

- Ensure affordable ticket prices
- Passenger recruitment from wealthier classes ("Please leave your SUV at home"), e.g. out of new developed areas with lots of single-family houses
- Recruiting a sufficient number of reliable drivers (volunteers!)
- No suitable electric vehicles available (minibuses: wheelchair-ready vs. space for batteries)

ADFC (ALLGEMEINER DEUTSCHER FAHRRAD-CLUB)

Legal framework conditions make it difficult to promote cycling.

- In fact, the car is the norm, setting up cycle paths is difficult and usually has to be justified by particular dangers.
- Thus there is no preventive installation of cycle paths.
- Tried and tested solutions from abroad will not be adopted.
- The use of the car is strongly encouraged by law, for example through tax concessions.

Thus there is no preventive installation of cycle paths.

- Cycling is still not seen as an attractive form of transport for many people.
- The importance of the automotive industry is overemphasized.
- Many people lack the opportunity to cycle in everyday life.

BADEN-WÜRTTEMBERG CLIMATE PROTECTION AND ENERGY AGENCY, SUSTAINABLE MOBILITY DEPARTMENT

Mobility stations

Mobility stations continue to receive 75% funding, e.g. car and bike sharing services, bicycle parking stands, charging infrastructure for electric vehicles, lockers or changing rooms near public transport hubs and residential neighbourhoods.

"Island projects" should be avoided: solutions should be as compatible as possible between different municipalities (e.g. car or bike sharing access systems). Perception and visibility are also increased through a standardised design.

It usually takes at least 1 ½ years from the idea to implementation; when municipalities join forces, a service provider is usually commissioned to coordinate the project; concluding a framework agreement facilitates progress.

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Obstacles

- No joint approach, municipalities get lost in individual activities
- No commissioning of external service providers, but too little personnel capacity in administration to drive the project forward
- Public relations work only at the start of the project, but not continuously, therefore too little visibility of the offers

Opportunities

Provide groundwork for local authorities, e.g. https://www.vrn.de/mam/verbund/planung/dokumente/vrn-leitfaden_mobilstationen_web.pdf

E-car sharing

If possible, the municipality, associations or local companies should act as anchor tenants and more than one car should be in use. Ideally mayor as role model, municipality uses car as company car during office hours, then open to other users linking to contact person is recommended, as the use of e-cars and car sharing both represent barriers for users.

Obstacles

- Needs are not met, e.g. only one car is provided, availability not given or accessibility of the vehicle too poor for users, vehicles too far away from residential neighbourhoods
- Only initial public relations work, but no lasting visibility of the offer
- Sometimes cost overruns due to long coordination processes, extra requests e.g. for the design of information steles, lack of maintenance contracts

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Good/bad practices and experiences

Finland

FINNAIR

SBTi (Science Based Targets initiative)

Finnair is actively working for decarbonizing aviation. "In the longer term (estimated after at least 10 years) we believe that commercially usable hydrogen has potential for reducing the CO2 emissions of aviation." However, there are many technological challenges to overcome in reaching that, e.g., new H2 airplane technology, logistics, H2 production.

Hydrogen cluster

In Finland there is an actively operating Hydrogen Cluster (H2 cluster Finland) developing the H2 sector and Finland has good opportunities for increasing hydrogen production. "We have clean water, renewable electricity and a recently started H2 production facility (P2X)."

Carbon compensation

Carbon compensation means that in addition to a flight ticket, a person pays a fee to cover the expenses of his/her share of carbon emissions.

Single European Sky

Compared to e.g. USA, Europe has a diversity of regulated routes, national rules of airspaces and security regulations. If a SES could be established, there could be more freedom in planning the flight speeds, routes and using the airspace for reducing the climate impact. However, due to the current security and defense challenges and diverse national legislation, SES seems now very challenging to realize in Europe.

TRAFICOM

Fiksustikouluun (in English: "Active way to school")

Fiksustikouluun (in english: "Active way to school")

The project involves about 30 municipalities in Finland and aims to generate a model for increasing the school pupils to walk and cycle to school. The project was co-funded by Traficom. https://fiksustikouluun.fi/english/

Children's cycling skills (lasten pyöräilytaito) project

The project focuses on the issue that in Finland the cycling skill is usually learned in young age, but not so often amongst the immigrants.

Winter cycling

City of Oulu case of improved cycle road keeping in winter. The city has developed new methods such as the "quality promise" method, which also affects their pay. As a mindset change they consider the citizens who move on the bike roads as customers, instead of the municipality.

Co-funded by the European Union

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HSL HELSINKI REGION TRANSPORT

City of Oulu case of improved cycle road keeping in winter. The city has developed new methods such as the "quality promise" method, which also affects their pay. As a mindset change they consider the citizens who move on the bike roads as customers, instead of the municipality.

"Seutu-barometri" -research poll of opinions

The poll results provide input for planning and reveals opinions of the target groups. In collecting the results, the bigger cities are separated and smaller municipalities are grouped by similarity (e.g. by access to trains). The poll is made about every few years. The recent poll results showed e.g. in: "To which mode should we invest more?":

- 1. public transport,
- 2. biking.

People were satisfied to walking opportunities. There are FIN, SE and ENG poll forms made by HSL.

Agile pilot projects program (nopeat kokeilut)

State aid was applied with help of HSL to municipalities for doing quick pilots. Now two rounds have been arranged, of which first is reported. What is new: this was a part of strategic planning. The pilots included living-street "street paintings" (nature-topics) to reduce speed, maps made for promoting walking and biking, cultural info content for an inspirational cycling route e.g.

COVID-19, also Ukraina war and consequental energy crisis (Not successful)

This has caused the public and political attitudes to separate more from sustainable transport. E.g. before the COVID first road toll fees in Helsinki region major roads were considered, but not any more. Also lowering the road speed limits did not gain support by the public. According to HSL, this did not help in increasing sustainable transport.

HELSINKI-UUSIMAA REGIONAL COUNCIL

Around Europe there have been many good pilot projects/use-cases already for years, but they are often discontinued. The Regional Council itself does not do so much concrete pilots/solutions, but acts more on the facilitator and funding side.

Urban Air Mobility

Drone projects in the city area for delivery of goods (by Forum Virium). Projects like AirMOUR and CITYAM

City of Helsinki is highly involved in the U-space development.

Carbon-Neutral Helsinki-Uusimaa program

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Carbon-Neutral Helsinki-Uusimaa program

Smart and emission free traffic is a core topic. This has been a good tool for developing.

Case collection of the RECIPROCITY-project

More good examples from different parts of Europe can be found from the use-case collection of the RECIPROCITY-project, from the website: https://reciprocity-project.eu/

Peri-urban/sub-urban mobility hubs

Outside of the city centres, sites, where different modes of transport "meet". This is something we are considering for next project idea.

Sweden

MUNICIPALITY OF ÅTVIDABERG

Lending bicycles to inhabitants and tourist

Since several years the municipality have offered inhabitants and tourist to lend one of two electrical cargo bike. This has meant that the inhabitants could test a bike before they make an investment of their own. It has also helped tourist to explore the municipality through biking in it. Overall it has had good effects and the interest have been high in general. However the management has been conducted by a public officer which takes a lot of time and effort. The cost of keeping this service has therefore been deemed to high and will therefore be removed.

Successful management of a fossil free car fleet

Since some years back the municipality have had goals to be 100 percent fossil free when it comes to their own transports within the organisation. They have set a central car fleet management which mean a better control of the cars and its use. This is a prerequisite for becoming a 100 percent fossil free since they can control which cars are bought and what fuels they use. Another prerequisite is the political will. Costs for fossil free fuels, specifically HVO (fossil free diesel) has become more expensive leading to higher costs.

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They have also installed electric vehicle chargers so that they can by electric vehicles for those who travel a lot. The result of this work is that the internal transports has gone from 87 percent fossil free year 2022 to 94 percent 2023. Since around 800 persons work in the municipality you also educate them in the use of fossil free fuels and the use of it.

VÄDERSTAD AB

Workshop with university students

The company invited students from Linköping University to process ideas for solutions:

- introduce a company owned shuttlebus;
- offer flexible housing for the workers to use connected to the working hours.

Carpooling

As a result of the poor supply of public transport, the workers have organised car pooling in a small scale. The company has plans in organizing it but hasn´t yet.

Advocacy work

Participate in discussions with the company that provides the public transport and in dialogue with the municipality try to have some influence on the timetables.

Italy

AGENZIA MOBILITÀ ROMAGNOLA

On- demand public transportation

A very recent initiative is that of on-demand public transportation. The municipality of Ravenna, after an experiment that started in 2020 within the Forese area (southern area of Ravenna), has launched a DRT service in which the service is given by some minibuses that have the same fares as ordinary local public transport, including season tickets. The ride can be booked with a free app called shot, which is rechargeable, and connects hubs of interest in the Ravenna area such as municipal offices, the hospital hub, and the market. There is no set route: the user books the ride via the app, starting from the enabled stop closest to his or her location and ending at the stop closest to his or her destination. If the bus is not around or fails in time to change the route, the app will give the next available arrival. The enabled stops are pre-determined and include both urban transport and school bus stops, in an area identified precisely with the southern area of Ravenna plus the three identified within the municipal area. It is a project that started on an experimental basis in 2020 but was only put into the system in January 2024.

UNIONE BASSA ROMAGNA

The Masterplan

This is a study developed by the coordination office of technical offices (Coordinamento Servizi Tecnici) in collaboration with professionals, and it identified a set of strategies for the development of urban and hyper-urban green and blue bicycle infrastructure and a meeting point between them. Specifically, the masterplan identified an overall bicycle path connecting local urban areas.

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In addition to this, it has then identified a number of areas in the territory of Bassa Romagna (about 180) as potential for carrying out actual planting of essences and trees to create areas that have an environmental function but are interconnected with the bicycle infrastructure that will be built.

From the point of view of planning and strategy, the masterplan has been very useful, especially because we often proceed in implementing interventions without really having a broad vision of the actual development actions. This focus on foresight also has enabled some of the Union's municipalities to access funding that would not have been possible to apply for before, given the need for a longer-range. The fact that the masterplan includes all the bicycle opportunities throughout the territory means that the Union has worked in consultation with 9 mayors who obviously have 9 different points of view, and now this product also serves as a tool for consultation on choices from a basket of opportunities already listed.

Other projects: L'UNIONE FA BENE

Project initiated in 2017 through participation in a ministerial call for proposals as part of a national experimental program of sustainable home-school and home-work mobility. The project was presented under the title "L'unione fa bene: sustainable home-school mobility on foot and by bike." The Union of Romagna Faentina and the Union of Bassa Romagna Municipalities and two private partners, Cras srl and Euromobility, were involved. Pedibus routes were activated for all participating municipalities and efforts were made to secure and adapt home-school routes. At the same time, a whole series of road education lessons were given in schools thanks to the collaboration with the local police, both through theoretical lessons and through walking and biking outings, obviously diversified according to the age of the children. In the municipality of Bagnacavallo, the visibility of some crosswalks has been improved, while in Lugo some home-school bicycle-pedestrian routes have been adjusted and a 30 zone has been created in coincidence with the historic centre and schools. The meter-minute plan was then applied, and then dedicated signage was installed with information on distances and travel times also to promote sustainable mobility and walking. Finally, the free bike-sharing service was launched, where three pick-up stations for conventional bikes were activated and experimentation was undertaken at 1 pick-up point for the provision of pedal-assisted electric bikes (36 bikes).

"L'Unione fa bene", on the other hand, has highlighted what are the peculiarities of an area such as ours, with small towns where perhaps it is easy to get around on foot or by bicycle and where public transportation needs are very different from an area that has the same number of inhabitants but perhaps has them concentred into one big city. "L'Unione fa bene" also presents itself as a great educational tool.

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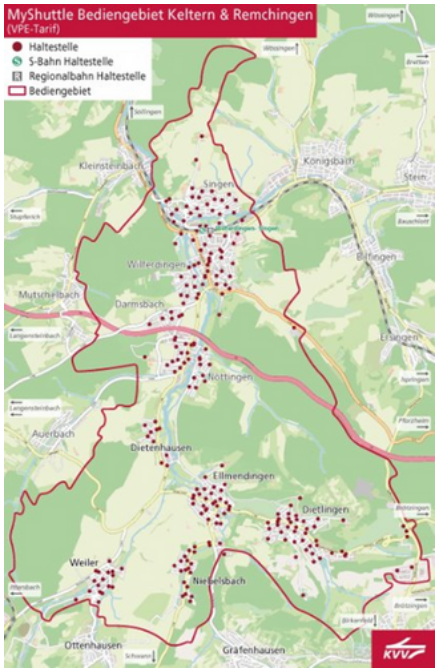
Germany

KELTERN MUNICIPALITY

Bus on demand



- Support of the two local councils (and the mayors) was crucial
- Cooperation in the greater surrounding of public transport association
- Easy access to tickets (via app, 30-60 minutes beforehand)
- Location is important: Keltern is situated in between the Pforzheim-Karlsruhe, Pforzheim-Wildbad and Karlsruhe-Ittersbach railway lines,
- Remchingen has a railway station (Wilferdingen), but 2 villages are far away; regional and suburban trains to Karlsruhe and Pforzheim (major cities) stop in Wilferdingen
- Sustainable: 2 electric vehicles with 6 seats each, wheelchair accessible
- Fewer resources than a large bus -> more cost-effective
- … and it's cool! (London taxi style)
- 250 stops in the municipalities, flexible booking via app (30-60 minutes before departure)
- If you already have a ticket: Cost €0; otherwise: normal fare (€3.70)
- Service times: Sunday-Thursday 21:00-01:30, Friday-Saturday 21:00-04:00
- Primary target group: young people (to get home safely in the evening and on weekends), but in the meantime also many adults use the service, e.g. football fans / 557 / 707

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WIPS BÜRGER-BUS WIERNSHEIM

In the planning process in particular, it is essential to have local decision makers on your side as door openers

Ensure affordable ticket prices (as an important condition for reaching financially weaker households) can be achieved by diversified sources of financing:

- Ticket income
- Advertising space on the bus
- Acquiring funding from the public sector
- Volunteers = low costs

Recruiting a sufficient number of reliable drivers is most important: It strengthens the team spirit by offering "interpersonal added value" for drivers, e.g. barbecue party, regular get-togethers, etc.

Passenger recruitment from wealthier classes is still a heavy problem to solve.

ADFC (ALLGEMEINER DEUTSCHER FAHRRAD-CLUB)

Intermodality: Linking cycling and rail transport (bike and ride)

- Intermodality means linking different modes of transport on one journey.
- The catchment area and accessibility of rail transport stops are significantly extended by secure parking facilities.
- Various parking options are offered: Bike boxes, locked collective garages, free bike racks.
- Opportunities: People with valuable bikes, such as e-bikes, are encouraged to use intermodality, bikes are stored in an orderly and space-saving manner.
- Risks: Partially high demand and inconvenient access to the service, the offering is not uniform locally.

Row of boxes for bicycle parking in underpass below Pforzheim main station. Picture: Bastian Wetzk

Automatic bicyle parking facility at train station in Muehlacker.Picture: Bastian Wetzke

Everyday cycling - Guided tours for new users and new citizens

- Supporting people with everyday cycling
- Often people are new to the city or have changed jobs, this is an opportunity to break routines and use other modes of transport
- Experienced cyclists show the most important routes for everyday cycling: shopping, culture, restaurants, workplaces
- Three tours are offered at the beginning
- Cooperation with the city administration is being sought to make the offer accessible to new citizens
- Publication on the website of the local ADFC and as downloadable routes
- Opportunities: People are encouraged and supported in using the bike
- Risks: The cycling infrastructure urgently needs to be improved so that people enjoy cycling and cycle safely

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Mobility stations
District and urban district of Heilbronn, Rhine-Neckar transport association, Ortenau district (AP Sarah Berberich), Offenburg, Smarte Karre CarSharing in Schäftersheim, others: https://www.kea-bw.de/nachhaltige-mobilitaet/wmm

E-car sharing - Zero CarSharing Bruchsal
All current CarSharing locations in the Enzkreis district can be seen on the keep homepage: https://keep-energieagentur.de/kommunen/klimaschutzkarte/

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PLUS+T

Exchanging practises and enhancing in the field sustainable transports

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