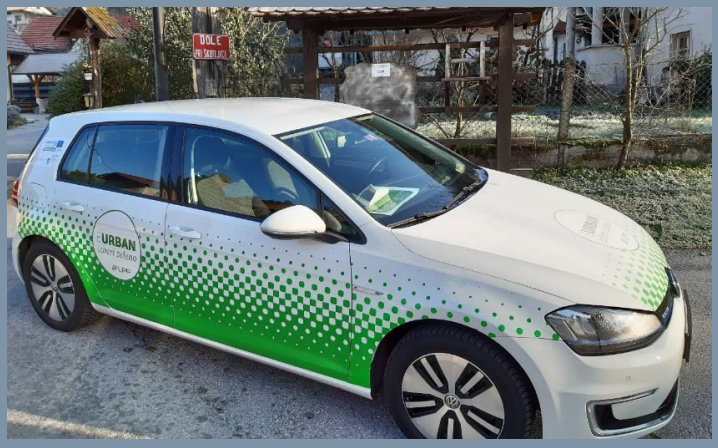
Interreg
CENTRAL EUROPE
Peripheral Access
European Union
European Regional
Development Fund

EVALUATION REPORT



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Federal Ministry of the Interior, Building and Community

EVALUATION REPORT

D.T1.5.3
Policy recommendations: Intermodal mobility in peripheral areas
D.T2.5.3
Policy recommendations: Intelligent mobility in peripheral areas
D.T3.7.3
Policy recommendations: Smart governance and marketing in peripheral areas

Version 2
5.2020

Content

1. Executive Summary

This report provides an analysis and evaluation of the Interreg B Central Europe project "Peripheral Access". The project tackled the lack of connectivity and accessibility in three types of 'peripheral' regions: urban hinterland, rural and cross-border areas and analysed this situation in different regional contexts.

The report addresses two dimensions:

- the **overall project dimension**, collating the joint knowledge or results of the project as a whole, and
- the **specifics of each pilot and investment** carried out over the course of the project, which provide more in-depth knowledge and ultimately allow for a replication or adaptation.

European Territorial Cooperation (ETC), also known as Interreg, provides a framework for the implementation of joint actions and policy exchanges between national, regional and local actors from different Member States. Interreg B involves regions from several countries of the EU forming bigger areas where it aims to promote better cooperation and regional development by a joint approach to tackle common issues. The project Peripheral Access addresses the priority **"Sustainable Transport"** in the **"Central Europe"** programme area.

A project-internal evaluation and monitoring of the Interreg-specific effects on achieving these overarching goals, using six Interreg B specific impact indicators, was carried out. All partners evaluated the impact achieved through their institutions' activities in Peripheral Access according to the respective indicators. The survey shows, that an improvement was achieved along all indicators.

The thematic issue of the project, the **improvement of regional structures through selected interventions in local transport systems**, must also be considered in the wider context of the respective regional strategies and the typology of the region at hand - suburban, rural or across borders.

As part of the project Peripheral Access, some partners carried out pilot projects and investments, while others followed up actions derived in a number of regional action plans. For the evaluation process, each partner observed the same set of topics and indicators which were jointly developed in an Evaluation Framework Workshop.

The report assesses and summarises the individual findings of the project with respect to the work package theme as well as on overall project level. The respective work package leaders developed recommendations according to the three work packages as follows:

- **"Use of ITS and information and ICT for mobility services specific for peripheral areas"**
- **"Smart governance in peripheral areas: Cooperation and marketing"**
- **"Multimodality"**

Overall, the report found that **Peripheral Access has delivered on its promise** and lead to improvements in rural public transport across all regions represented in the partnership. The project demonstrated, that the **pilots and innovative solutions were feasible** but must be conducted with several considerations in mind.

2. Introduction

The Interreg Central Europe programme encourages cooperation in its partner regions and supports transnational projects from the European Regional Development Fund (ERDF). The programme aims at solving common problems on a European scale and transferring knowledge amongst partners.

The project Peripheral Access was such a European project co-funded under the programme. It ran from 2017 to 2020 and was made up of a consortium of nine (originally ten) partners from seven European countries:

- PP 1 – DV: German Association for Housing, Urban and Spatial Development, Non-profit discussion platform with public-private members (Germany)
- PP 2 – ZVV: Authority for Local Public Transport in Vogtland, Public Transport provider (Germany)
- PP 3 – VIU: Venice International University, Private non-profit research body (Italy)
- PP 4 – TT: Trieste Trasporti P.L.C., Public Transport provider (Italy)
- PP 5 – RDA LUR: Regional Development Agency of the Ljubljana Urban Region, Regional Development Agency (Slovenia)
- PP 6 – KTI: KTI Institute for Transport Sciences Non Profit Ltd., Publicly owned research body (Hungary)
- PP 8 – PO Lubin: Lubin District, Local Authority (Poland)
- PP 9 – KOR: KORDIS JMK, Integrated Transport System Public Transport Authority (Czech Republic)
- PP 10 – RMSZR: Regional Agency Metropolitan area of Styria Ltd., Regional Development Agency (Austria)

The project tackled the lack of connectivity and accessibility in three types of 'peripheral' regions: urban hinterland, rural and cross-border areas. These regions combined make up 93 percent of EU territory and all face similar challenges: poor public transport connections, small budgets, demographic changes and high levels of unsustainable, exclusive and costly private car use. Peripheral Access has analysed this situation in different regional contexts, helped to draw up concrete action plans and implement innovative pilot actions in the following three fields of action: Multimodality and integrated transport; Enhanced use of intelligent communication technology and intelligent technology systems; and Better cooperation through transport associations and cross-border marketing.

These fields of action represent key success factors for sustainable mobility. The results of each local intervention as well as the combined and shared knowledge has benefitted public transport users, planners and decision makers and stimulated changes in mobility behaviour.
The goal of this report is to work up the findings and experiences gathered throughout the project over the last three years and present them in a comprehensive and integrated way.

The report addresses two dimensions: the overall project dimension, collating the joint knowledge or results of the project as a whole, and the specifics of each pilot and investment carried out over the course of the project. Whereas the overall project sections will paint a picture of the general background, implementation logic, output and results, the specific pilot sections will be of a more technical nature and help to understand the concrete cases. They will provide more in-depth knowledge and ultimately allow for a replication or adaptation of the concrete approach in a similar framework and with comparable setting of challenges.

Within both dimensions – the project as a whole and the pilot cases in particular - the respective impact and (policy) conclusions will be pointed out throughout the report.

3. Interreg Programme Objectives

3.1. General overview

European Territorial Cooperation (ETC), better known as Interreg, is one of the two goals of cohesion policy and provides a framework for the implementation of joint actions and policy exchanges between national, regional and local actors from different Member States. The overarching objective of ETC is to promote a harmonious economic, social and territorial development of the Union as a whole. Interreg is built around three strands of cooperation: cross-border (Interreg A), transnational (Interreg B) and interregional (Interreg C).

Interreg B involves regions from several countries of the EU forming bigger areas where it aims to promote better cooperation and regional development within the Union by a joint approach to tackle common issues. The transnational programmes add an important extra European dimension to regional development, developed from analysis at a European level, leading to agreed priorities and a coordinated strategic response.

The fifth period of Interreg is based on eleven investment priorities laid down in the ERDF Regulation contributing to the delivery of the Europe 2020 strategy for smart, sustainable and inclusive growth – one of which is "Sustainable Transport".

Our project Peripheral Access addresses this priority in the "Central Europe" programme area. Here, the transport priority focusses on the core-periphery dichotomy, seeking to reduce the gap between peripheral and less accessible regions and the area's well-connected centres. The goal is to improve connections of regions and cities to the European transport networks and to strengthen multi-modal environmentally friendly passenger and freight transport.

3.2. Specific objectives

One of the central features of Interreg B compared to structural fund programs is the relevance given to overarching and thematic goals. Thus, while in Interreg B the overarching, i.e. the integrated development policy goals are of special relevance, in the regional structural fund programs, the thematic goals are receiving stronger attention. These thematic goals are focusing on sectoral elements (such as CO2 reduction, increasing research and innovation activities), while the overarching goals are addressing cross-sectoral, processual and organisational issues, applying equally to all thematic fields.

However, the evaluation framework and data collection requirements in place are standardised. For Interreg B basically the same requirements apply as for the more thematically oriented regional programs. The planned monitoring systems are designed so that they primarily use statistical data to map the effects of the funding. This approach is only of limited use for Interreg B. The cross-thematic effects of Interreg B must also be better mapped, but at the moment they are less of a focus and not yet consistently considered systematically and across programmes.

Thus, the following section will provide a project-internal evaluation and monitoring of the Interreg-specific effect on achieving these overarching goals, using six Interreg B specific impact indicators. The indicators measured are following a suggestion taken from a study by the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) from 2015. They are designed to measure the impact of what sets Interreg apart from other programmes: the idea of cooperation and exchange across thematic, sectoral fields and across national borders.

The impact indicators are:

- Capability of key stakeholders to act through knowledge and competence
  Explanation: Measuring the capability of key stakeholders based on their knowledge and competences at hand. Key players may have been shown new solutions, methods and technologies that specifically expanded their scope for action, in particular through targeted approaches and awareness-raising (e.g.

through consulting services) as well as through concrete offers on competence and knowledge building (e.g. through workshops and seminars).

- Targeted articulation of interests at regional, national and European Level
  Explanation: Defining how targeted the articulation/communication of the interests relating to your institutions intervention in the project were/are on different geographical levels. Stakeholders in networks or similar may have pooled their common interests and thus opened up more effective communication channels. This may have resulted in a greater influence on policy makers and an increased awareness amongst them. As a result, the topic may have been more prominently placed on the agenda of decision-makers and lessons learned are taken into account in decision-making processes.
- Joint action in political decision-making processes
  Explanation: Measuring the degree of joint action in political decision-making processes. The technical and organisational basis for political cooperation at transnational level may have been created or enhanced throughout the project. For example, new communication channels or partnerships were established and strategies were developed, and the respective challenges in the programme area through community action was addressed more effectively.
- Quality of the ecological, social and economic (life) environment
  Explanation: Measuring the improvement of the quality. Joint planning processes and control structures may have been established and concrete pilot projects may have been implemented. As a result, positive changes are brought about that significantly improve the living and working conditions for actors in the region. These may be economic and structural improvements but they may also be an improved social and environmental framework.
- Application of social and technical innovations
  Explanation: Measuring if social and technical innovations are applied more frequently. An increased exchange of knowledge between science and industry, the creation of innovation-promoting framework conditions and the initiation of awareness-raising measures may have led to an increase in innovation performance of different stakeholders. For example, better research tools were provided, access to capital was simplified or relevant research results were made available to businesses in a targeted manner.
- Efficiency and effectiveness of work processes (in concerned institution and/or those institutions related to the implementation of institutions activities in the project)
  Explanation: Measuring whether work processes have become more effective and efficient. Processes may have been improved by developing procedures and practices in both public and private sector organisations. This includes, in particular, making decisions more forward-looking, developing existing processes and procedures and standardising them, and integrating new methods and approaches into the work processes.

All partners were asked to evaluate the impact achieved through their institution's activities in Peripheral Access according to the respective "Impact Indicator", once with a definition of the status quo (first timepoint: 2017) before the project activities began and once at the end of the project lifetime (timepoint: 2020). The partners thus evaluated the change or impact with regard to their specific pilot or intervention, activities, key actors and networks but not on project level.

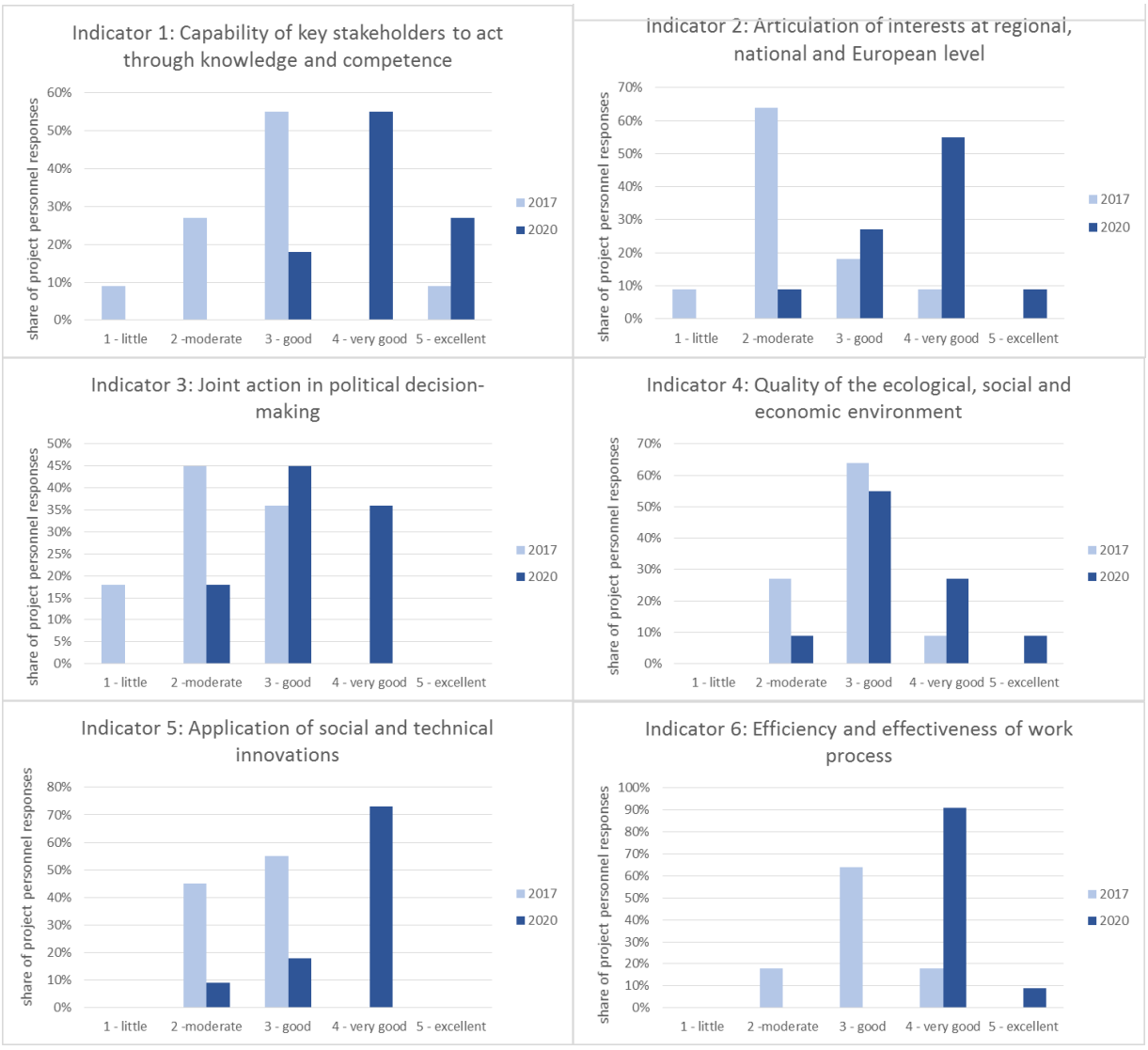


Figure 1: Survey results based on indicators

The survey shows, that an improvement was achieved along all indicators. It is in no way representative but it provides a good insight into the impact, specifically with regard to Peripheral Access, which a project can have and underlines the added-value that Interreg B projects can generate.

4. Strategic and spatial frameworks

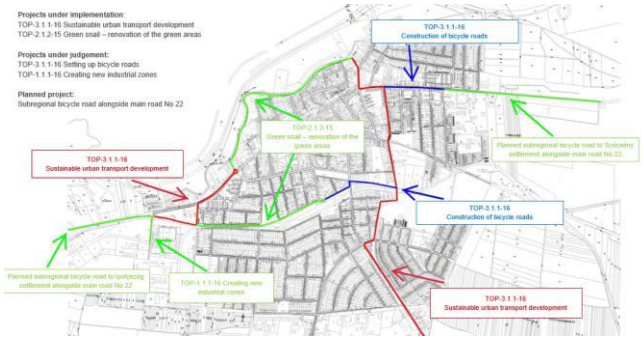
The issue of the project, the improvement of regional structures through selected interventions in local transport systems, must be considered in a general, wider context of the respective regional strategy and the typology of the region at hand - sub urban, rural or across borders. The following section will provide a brief overview about the regional and strategic (planning) background of each pilot. They form the 'canvas', on which each local intervention unfolds.

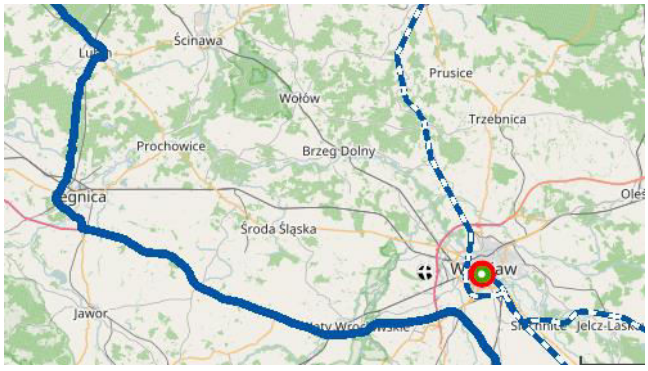
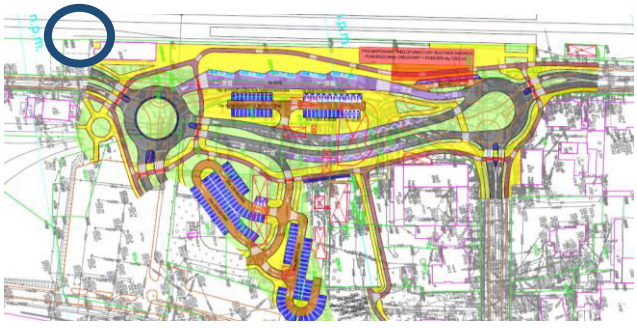
For an in-depth analysis, a number of documents were produced including the regional analysis for the seven partner regions and the associated action plans, both of which are available on the project website.

Vogtland region (PP 2, ZVV - Zweckverband Öffentlicher Personennahverkehr Vogtland)	
	The region of Vogtland comprises territories belonging to the states of Saxony, Thuringia and the Czech Republic (left, in green). The overall goal is to implement a touristic guide system throughout the region, starting with an initial investment that is facilitated through Peripheral Access along one selected railway line, which is part of the overall regional train network, connecting the three-state region (see lower map). By increasing attention to and implementing an initial investment along the project route, future investments to roll out the guide system in the wider region are prepared. Ultimately, this will help sustain the overall network, create better interlinkages to the rural areas and connect the peripheral areas along the German-Czech border.

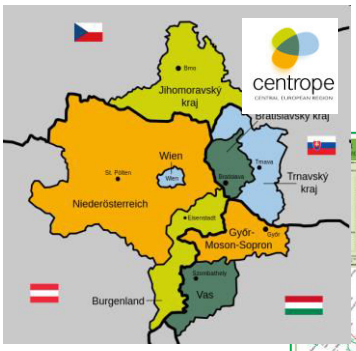
Trieste region (PP 3 & PP 4, VIU - Venice International University, TT – Trieste Trasporti)	
 	The province of Trieste is characterised by a sparsely populated karst region towards the Italian-Slovenian border. At the same time, this area faces geographical constraints, as it is physically disconnected to the low-elevated zones of the city centre. Thus, despite its close proximity to the city, the border area suffers from a lack of efficient and effective public transport services, aggravated by the fact that to the other side an international border further weakens public transport networks in the area. Through the project, TT along with VIU developed and tested an innovative de-mand-responsive transport (DRT) solution – called "SMARTBUS" -. In the long run, the model will be replicated throughout the region and beyond.

Ljubljana region (PP 5, RDA_LUR - Regional development agency of Ljubljana urban region)	
 	The region of Ljubljana is already equipped with a well-functioning multi-modal transport net-work that offers one integrated ticketing solu-tion with only one subscription through various channels. The pilot in this project was the ex-tension of this existing network into the rural surroundings of the metropolitan region of Ljubljana by placing a DRT-system in a rural context. The challenge lay in the design of the operation: the model was set up as complemen-tary to public transport, running where there is no public transport and connecting to the exist-ing public transport access points. Through the pilot, an urban or sub-urban tool was adapted to rural settings and the reach of the public transport network increased.

Balassagyarmat municipality (PP 6, KTI - Institute of Transport Sciences Ltd)	
 	KTI has analysed the city of Balassagyarmat as part of their project activities. It has been identified, that the absence of a bicycle infrastructure, respectively its current development under an investment initiative pose a major challenge for the municipality. KTI has thus accompanied the process through an in-depth analysis of the active transport networks and infrastructures in the city and added on to the municipal investment initiatives through a series of public events. The approach here was to accompany and analyse the creation of another “layer” of public transport, rather than initiating a process that lead to the desirable urban infrastructure.

Lubin district (PP 8, PO Lubin - Powiat Lubiński)	
 	The overall approach to the intervention in Lubin is to improve accessibility of the Lubin region to the TEN-T network (upper map in blue) by creating a regional intermodal public transport centre in the city of Lubin (detailed plan below). The specific objectives of the local activity are to limit the traffic congestion and speed up the passenger flow, to promote environmentally friendly modes of transport and to increase road safety. The concepts and plans to be developed within the Peripheral Access project will be the basis for the future investment, flowing into the construction of the intermodal exchange. In the process, all relevant actors on different administrative levels have been involved, public consultations have been conducted and through the exchange within the project, transnational experience was made available to local actors involved in the concept development.

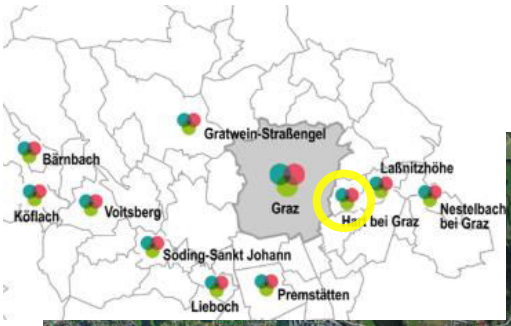
South Moravian Region (PP 9 – Kordis JMK)

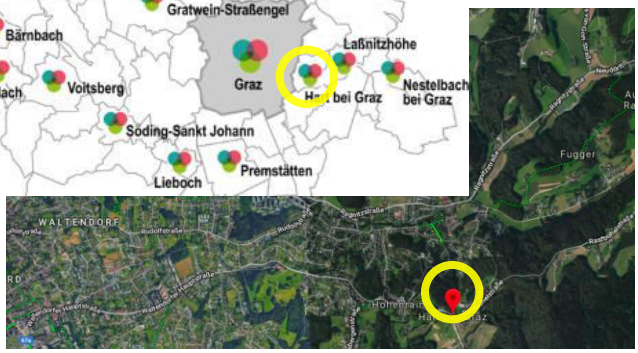


The overall approach of the local activities is to improve accessibility in peripheral areas of the South Moravian Region. This concerns 'inner' rural areas as well as those along the border. The initiatives, especially with regard to cross-border transport (for which a joint working group has been established through Peripheral Access), are rooted in a multi-lateral cooperation in the Centrope region.

As far as the accessibility of rural areas in South Moravia is concerned, the „Cyclobus" has been rolled out in the project. Cyclobus refers to the upgrading of public transportation through trailers, offering spaces for cyclists. The measures have been accompanied by a municipal working group and marketing campaigns.

Metropolitan Area of Styria (PP 10 – RMSZR, Regional Management Metropolitan Area Styria)





The spatial strategy behind the project is to better connect dispersed and rural areas to the regional public transport network and to enable the use of alternative transport modes.

To implement this, an existing and successfully operating system of multimodal transport hubs in the city of Graz is transferred to the sub-urban and rural regions. The initial hub, kicking of this expansion into the rural areas is the pilot investment conducted within the framework of the Peripheral Access project. The intervention is carried out in accordance with the Regional mobility plan. The initial activities in the project (analysis & action plan) covered the whole Metropolitan area of Styria, while the Investment was a local activity with a regional impact (serving as pilot function for future multimodal nodes in peripheral areas). The investment was realised in the municipality Hart bei Graz.

5. Specific evaluation of each pilot and investment

As part of the project Peripheral Access, a number of partners carried out pilot projects and investments, while others followed up actions derived in a number of regional action plans. Towards the end of the project, the performance and results of these pilots and other activities has been assessed by each partner and conclusions been drawn. Individual lessons learned and local policy recommendations were developed and results also fed into the overall project evaluation, with a focus on project-wide policy recommendations (Section 6).

Each partner followed the same set of topics and indicators which were jointly developed in an Evaluation Framework Workshop in 2019. However, as all pilots and activities are unique, the partners could adapt the framework to make sure it was relevant and applicable to their own activities. Essentially, each partner looked at the “performance” of their activities in terms of results and the “process” it went through. At the end conclusions were drawn and, where possible, “policy recommendations” developed.

The specific evaluation comprises:

- Description of pilot/measures and volume (costs)
- Photo(s) and status quo of pilot/measures
- Measuring process and performance of implementing pilot/measures
- Conclusions / Policy recommendations

5.1. PP 2 – Zweckverband ÖPNV Vogtland (ZVV)

5.1.1. Description of pilot/measures and volume (costs)

As part of the EU project, the idea was to create a tourist guidance system along the Elstertalbahn project route. This guidance system initially included the production of 30 wooden information boards along the route (one sign per stop). However, since these signs are limited in their timeliness and there is a risk of deterioration and vandalism, the concept was changed as part of the status quo analysis and the resulting action plan. After the concept was newly created via the control system, it was divided into a static and a digital part. The static part of the guidance system includes floor graphics at selected stops along the Elster Valley Route and the Vogtlandbahn trains. The digital part of the control system includes the website www.elstertalbahn.de, which can be reached via any browser, as well as a QR code on the floor graphic, as well as an augmented reality (AR) app. This app is a supplement to the guidance system and was launched as part of the action plan. The name of the control system is "VOGLAR". This is made up of "Vogtland" and "AR". Voglar is a giant who travels through the Vogtland region undetected and leaves his footprints there. An agency developed the idea from the order "to wake a sleeping giant".

These footprints are represented by the floor graphics mentioned above. As described in the project, a status quo analysis, an action plan and the implementation of the control system (implementation of the action plan) were required. The status quo analysis included a budget of €10.000, the action plan €13.000. These costs were declared as external expenses within the project. As planned in the application form, the cost of the control system was €50.000. A further €30.000 was made available through the ZVV's internal marketing budget.

Furthermore, there were numerous advertising activities as part of the project and the application for the Elster Valley Route. This includes the production of an advertising film for PR purposes and for publication on social networks. A YouTube channel was created as part of the film project. The video was distributed on the Internet and social networks and an offer with the page name "Elstertalbahn" was established on Facebook. The film's total budget was €10.000.

The route was widely advertised in regional magazines, daily newspapers and trade magazines as well as at trade fairs. The design of these advertisements was always in the same recognisable layout. Advertisements were placed among others in the "Lesezirkel", the "Vogtland Anzeiger", the "Freie Presse", the "Vogtlandmonat", the magazine "Eisenbahnromantik", the "Dampfbahn Route Sachsen" and in cooperation with the Vogtland Tourist Association in its products released. The Vogtlandbahn as operator of the route is also a reliable sales partner, as are other cooperation partners – the “Chursächssiche” event company and the park railway Plauen with around 100,000 visitors annually.

These applications were partly paid for by the project, but partly also by the ZVV's internal budget. A total of around €6.000 was spent on promoting the route during the project period.

Another application for the project and the Elster Valley Route was the creation of a Facebook page in 2019. The site now has (as of 10 February 2020) over 250 likes and reaches several thousand people on some posts. Current and historical motifs along the route are shared on the page, along with interesting facts about the route and the surrounding area. Furthermore, the control system, the project, the local transport network "EgroNet" and steam locomotive journeys in 2019 were advertised on the Facebook page. These steam locomotive rides were not financed by the project, but were used for the route marketing and the attractiveness of the route.

5.1.2. Photo and status quo of pilot/measures

Figure 2: Photo and design of the floorgraphics

Figure 3: Image of marketing material

Further images are in the Annex.

5.1.3. Measuring process and performance of implementing pilot/measures

5.1.3.1. Process

There were a number of process indicators for the different phases of the pilot.

- Project phases:
  - Tenders:

    There were five tenders within the project.

    > 1. Choosing a first level controller company. The auditing company DOMUS was selected for this.

    > 2. The preparation of a status quo analysis. A bidding consortium won this tender.

    > 3. The preparation of an action plan for the project route. The creative agency WENN + ABER won the tender.

    > 4. The implementation of the action plan. The tender went to WENN + ABER again.

    > 5. The preparation of a project brochure. The winner of the tender was again WENN + ABER.

  - Main activities

    The main activity of the project was the marketing application of the project route. In order to get the route back into the focus of potential interest groups, a lot of time had to be put into the application of the route. It was important to keep the project and the route in the focus of the public, the media and the interest groups in order to ensure constant participation in the project. Furthermore, a lot of work and elaborations had to be done on the internal project level during the project period. This included, for example, reports to the lead partner about current project progress, delays or deviations in the project budget. An advisory board was appointed to accompany this.

- Human resources needed

  At the beginning of the project there was a time-limited position in the project in addition to the main position of the project manager. This position was then no longer filled from the end of the third reporting period. Furthermore, the following positions were essential for the orderly implementation of the project: accounting staff, legal adviser, marketing staff. With a higher level of staff participation in the project, however, there would have been potential for optimisation in the area of public relations - e.g. for the greater involvement of neighbouring communities.

- Delays

  As part of the project, the introduction of a tourist guidance system was planned. There were delays due to changes in the presentation of this control system. Originally, the guidance system was to contain wooden signs as information boards, this was changed to floor graphics due to various indicators (risk of vandalism, lack of updating, permits to install at all 30 train stations along the route, ...), so that it can be linked to the website required by the project "www.elstertalbahn.de" and the additionally developed augmented reality app. As a result, the creation and publication of the brochures on the project route was postponed. An AR app was first developed in Germany for route marketing and shows the potential in the future.

- Indicators:

  - for the design: location criteria

    The design of the control system should primarily be based on the rural and natural conditions of the Vogtland. Therefore, the logo of the fictional ambassador for the project route, Voglar, was deliberately kept in shades of green and blue. Since the Vogtland is very well known for its ski tourism, about a third of the logo was kept in shades of blue. The rest of the logo and the fonts contain shades of green, since in addition to the corporate design of the ZVV or VVV, the Vogtland is of course green. The images of the footprints on the Floorgraphics were also provided with images from nature (e.g. trees, grass, ice, leaves). This should also show the connection to the Vogtland.

  - for delays: length of delay in months

    The implementation of the control system was delayed by about a year (two reporting periods, from third to fifth), instead of summer 2018, the introduction took place in summer 2019. As a result, the planned brochure on the project was postponed (two reporting periods, from fourth to sixth).

  - for tenders: number of offers received

    As part of the project tenders, there were always different numbers of offers received.

    > 1. Choosing a first level controller company. Of the three bidders requested, only DOMUS submitted an offer

    > 2. The preparation of a status quo analysis. A bidding consortium won the tender from the companies dwif consulting GmbH, KCW GmbH and Probst & Consorten Marketing consulting

    > 3. The preparation of an action plan for the project route. The creative agency WENN + ABER won the tender as one of seven companies submitting offers

    > 4. The implementation of the action plan. The tender went to WENN + ABER, who were the only ones to submit an offer

    > 5. The preparation of a project brochure. The winner of the tender was WENN + ABER after three agencies submitted an offer

5.1.3.2. Performance

Before the EU project started, the Elster Valley Route was not really advertised at all. Due to the tourist potential, this was done by the project. By promoting the route, the EU project and the "EgroNet" traffic network at trade fairs, in print media, daily newspapers, websites and online portals, YouTube channels, in regional tourism organisations and on television ("TV Westsachsen"), greater attention was drawn. Target groups are not only commuters, but also cycling and hiking tourists as well as day tourists. There is holiday potential on the route for several days. Therefore, it should be suggested to travel the route several times. In addition to passengers, public authorities in the region around the route were also made aware of the project. In a project advisory board, this includes mayors, representatives of other railway companies, disabled people's associations, photographers and anyone interested in the railway. Due to the high advertising of the route in social networks and channels such as YouTube, a measurable number of users could be reached (see Figure 5), and there were also many positive responses in the form of comments. The implementation and presentation of the tourist guidance system continued to bring users closer to the route. Beyond the end of the project, further marketing and support from local authorities and tourism associations will be important for user behaviour.

- Application of thematic results indicators prescribed by the AF to pilot/measure:
  - Number of institutions adopting new and/or improved strategies and action plans:

    Various municipalities in the Vogtland and ZVV
  - Number of institutions applying new and/or improved tools and services:

    Application Form: "Several institutions will use the new services to incorporate them into the project. As far as this is currently possible, they are listed below:

> pilot action 5: ZVV, regional transport companies in Germany and Czech regions

The use of the guidance system within the Elstertalbahn refers to the entire route from Thuringia via Saxony to the Czech Republic in the Karlory Vary district. The website "www.elstertalbahn.de" is in three languages (D, ENG, CZ), and the information boards along the route and on the trains can be read in these three languages. The augmented reality app can only be used in German. However, since the app was developed in addition to existing project specifications and these were also paid for by the ZVV's internal funds, there was no requirement for multilingualism. However, since only the Vogtlandbahn runs on the project route, only this company uses the control system directly. The tourism association Vogtland could be mentioned secondarily, which helped to publish the guidance system and the project.

> Amount of funds leveraged based on project achievements

As part of the project, the idea of creating a tourist guidance system came up. In addition to the website and information signs (now floor graphics) that are required by the project, this control system also includes the augmented reality app. The AR app was from the start not planned content of the project. Since there was no longer an equipment budget available for this project, around €30.000 from the ZVV's internal marketing budget was used.

> Number of jobs created (FTE) based on project achievements

At the Zweckverband ÖPNV Vogtland (ZVV), a job was created to be able to supervise the project over the entire duration of the project. This person was searched for in a public job advertisement and subsequently hired. It was not necessary to create additional jobs at ZVV, since other necessary positions such as accounting / finance and marketing were already filled internally.

- Application of qualitative and quantitative performance indicators for the pilot project:
  - Qualitative indicators:
    - general development process of the project

      In general, all outputs defined in the project, such as the status quo analysis, the action plan, the introduction of the tourist guidance system, the implementation of public relations or the creation of a website were carried out. There were additional outputs that were not prescribed by the project. Activities were organised as part of the project that were not specifically stipulated and fell under public relations or marketing. Actions such as the cooperation with the Plauen park railway, the creation of the Facebook page “the Elstertalbahn”, the creation of a YouTube video or the support of steam train rides on the project route in 2019 made a positive contribution to the public's perception. In the project, constant attention was paid to the permanent marketing of the route, but some outputs could not be carried out on time. Overall, it can be calculated that all the required outputs have been produced, but the concentration and agility of the project could not be kept even among all stakeholders. At the end of the project, it is therefore important to make the control system known in the Vogtland region again and to keep it in focus beyond the end of the project.

    - potential of the identified rural areas

      The Elstertalbahn route is located in the heart of the Vogtland. The route crosses Thuringia, Saxony and the Czech Bohemia and is the most bridge-rich route in Germany over a distance of 120 km, making it particularly worthwhile for technically interested railway enthusiasts. The railway line with its 30 stations and stops can look back on 140 years of tradition and offers travelers a wonderful natural backdrop along the White Elster and attractive tourist destinations. Along the route there are starting points for hikers and cyclists on certified paths, such as the "Vogtland Panorama Weg®", the "Elsterperlenweg®" or the "Elster Radweg". The touristic potential of the route is only due to the external natural circumstances. It remains to be seen whether other circumstances such as economic potential, rail infrastructure, operators and the budget of the partners can justify future use.

    - useful findings gathered from specific activities

      Activities were organised as part of the project that were not specifically stipulated and fell under public relations or marketing. However, such steps are often very time-consuming and investments such as the production of postcards or the mention of the route in daily newspapers cannot be directly linked to a possible increase in passenger numbers.

    - needs of passengers determined

      The needs of passengers on the project route mainly relate to the general availability of trains. Due to a lack of personnel at the railway, bad weather and construction sites, there were increased train cancellations or delays and longer-term rail replacement traffic during the project period. Since the route is not only used for tourism, but is also important for job commuters, the needs for regulated train traffic should be taken seriously. Additional needs emerged from surveys of passengers, on the one hand the desire for accessibility on the train and at the train stations, the usability of the station buildings, the usability of WLAN in the trains, information options or sufficient parking spaces for cars or bicycles at the train stations. The assessment was carried out by employees of the "Inclusion" network, who cares for physically and mentally impaired people.

    - satisfaction of targeted customer groups with services provided

      The objective of implementing a control system was achieved. This resulted in a touristic added value for municipalities along the route, for the railway companies and the tourism association in the form of potentially new guests in the Vogtland. Since the guidance system is the first of its kind

in tourism use in Germany thanks to the augmented reality app, there is a unique selling point and competitive advantage and thus good tourism potential. It cannot be estimated whether the number of guests and passengers will change positively. No change could be achieved for the interest groups of the physically restricted persons in the project period, however the answers from the questionnaires are available to the respective task bearers.

- Quantitative indicators:

> functionality of digital platform (e.g. number of errors reported)

The website "www.elstertalbahn.de" was designed and created by the creative agency WENN + ABER. This agency also designed the overall tourist guidance system, including the augmented reality app. The app can be downloaded from the iOS and Android app stores, and there is customer support from the IT company Bitmotec, where users of the app can report problems. However, there have been no major problems since the app was released, which is probably also due to the current update status of the app (for example, new iOS version 13 released in September 2019).

> Passenger numbers

Since the project started in June 2017, four passenger counts have taken place on the two lines of the project route (RB4 Gera to Weischlitz, RB2 Weischlitz to Cheb). In general, there was an increase in passenger numbers during the project period. A concrete increase in passenger numbers in connection with the project launch and the resulting control system can only be estimated. Recently there was even a small decrease in the number of passengers in the last survey. It can be justified by the fact that train cancellations due to construction sites, unsuitable vehicles or staff shortages unfortunately occurred again and again. The Adorf - Oelsnitz section was inaccessible for about a year due to flooding and further construction measures meant that the route was never marketable as a whole, but only with restrictions or in sections.

Although cancelled trips were mostly compensated for by rail replacement traffic, the guidance system could not be used there and the passengers were also unable to respond positively. Furthermore, floor graphics were destroyed, so that the AR applications could not be started at the hot spots of the route. However, these floor graphics will be reattached in Spring 2020.

> day by day increase in passenger use of a new service

The tourist guidance system includes the website "www.elstertalbahn.de". This was put online at the end of July, shortly before the augmented reality app was implemented, and was published on the project's public relations work. After implementation of the entire guidance system, it was advertised through advertisements in magazines, daily newspapers, websites and social media. However, since the route and the project could not be fully advertised due to unfavourable weather conditions and vandalism on the control system (illegal removal of the floor graphics), the monthly user numbers have also decreased seasonally since the implementation. It is always necessary to actively draw the attention of the tour operators and municipalities to point out the route and to advertise the offer. However, this is to be changed by the end of the project, by increasing the awareness of the route, the guidance system and the project through advertising from Spring 2020.

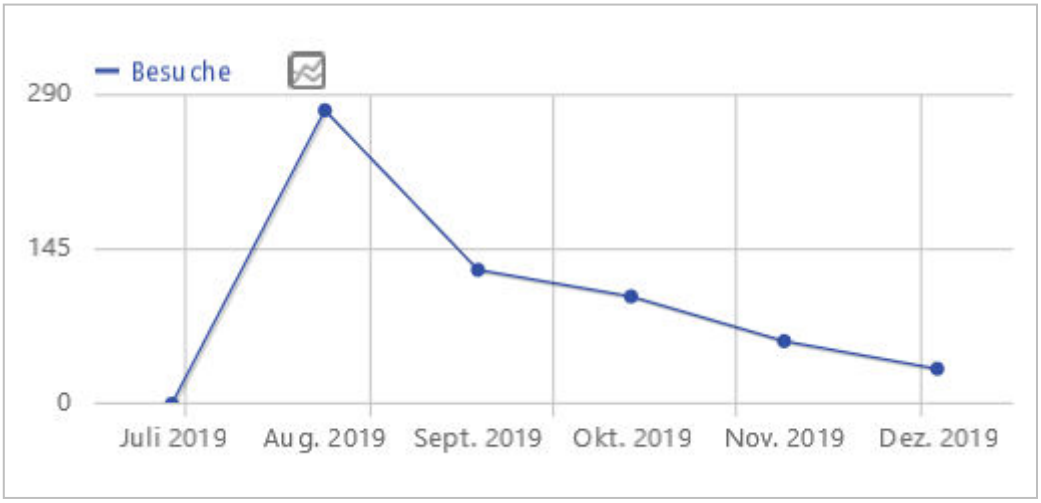


Figure 4: Last visits - monthly user numbers

- number of people reached by marketing campaign

Getting an exact number of people reached in the marketing campaign turns out to be difficult to find. Marketing products of the project included a postcard about the Elster Valley Route, a YouTube video, a Facebook page, the website "www.elstertalbahn.de" and various mentions in specialist magazines and daily newspapers. The project was also presented at various trade fairs in Germany and abroad. Personalised roll-ups were also made for selected municipalities along the route. In concrete terms, however, some approximate numbers of users can be assumed (see table below).

Marketing medium	Number of people reached / quantity
post card	approx. 8.500 pieces
Facebook page about the route	approx. 250 Likes
YouTube Video	approx. 32.000 Clicks
Website	approx. 650 visits
number of customer magazine VVV "Vis-chelant"	approx. 25.000 pieces
steam train rides on route	approx. 650 passengers

Figure 5: Number of people reached by marketing measures

- web analytics/traffic

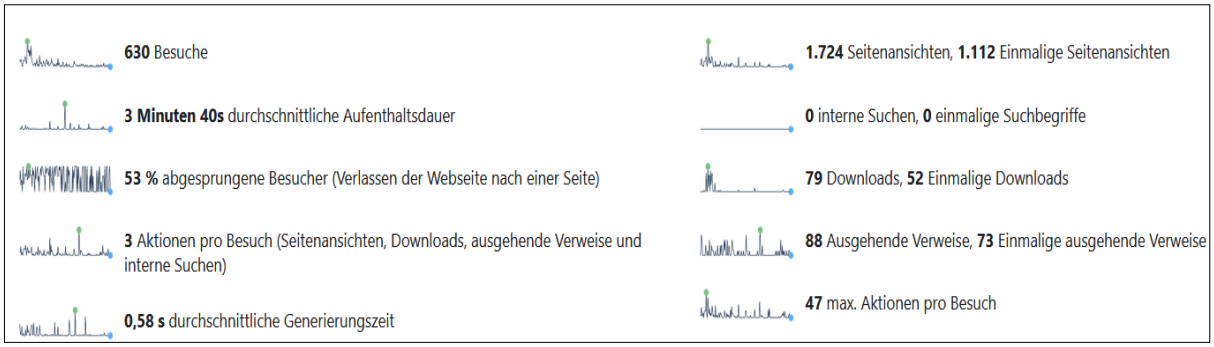


Figure 6: Web analytics for project website/ visits

- performance of the service

  In the course of the project, the number of vehicles running on the project route has not changed. However, train cancellations occurred again and again due to construction sites, unsuitable vehicles or staff shortages. Because of this, train cancellations occurred during the project period. As a result, the project route could not be advertised consistently.

- number of participants at promotional event

  On the day of the implementation of the control system, a press meeting took place at Plauen train station (centre), which corresponds approximately to the middle of the route. Representatives of the city of Plauen, the ZVV and the "Länderbahn" were present, journalists from the regional press and the managing directors of the creative agency WENN + ABER, who created the concept of the control system. At this press event, the control system was presented theoretically and practically using illustrations and tablets, and any questions that arose were answered. Questions regarding the content of the project were also clarified. The number of people present was 15. A nationwide reach could be achieved with the publication.

- potential for portability

  The ZVV as a project participant was the first German company to use the idea of an augmented reality app for tourism purposes. This pioneering technology not only made the technology of AR applications known to the specialist public, but also to the general public. This idea, and in general the idea of a touristic guidance system, can of course also be applied to other touristic and non-touristic companies. The AR application is currently a unique selling point, but it will not be possible to expand it in the foreseeable future due to a lack of budget funds from the partners on the project route. Since the ZVV, as a pioneer of this idea, has of course paved the way for other companies to use it, it is very likely that new AR apps and applications will also be used in the future. These companies do not necessarily have to come from the transport or tourism industry, since the fields of application are open to all product lines.

5.1.3.3. Stakeholders

An advisory board was founded at the beginning of the project. This consisted among other things of mayors of cities on the project route, representatives of railway companies, representatives of public institutions of the cities, public transport experts, officers for the disabled or railway affinities. Outside of the advisory board there were also meetings with people from these interest groups in order to provide information about the project or to advance the project or even improve outputs. The stakeholders were always informed about project outputs and invited to public events such as the introduction of the tourist guidance system. However, the challenge for some stakeholders was to maintain interest in the project and to be able to further inspire these stakeholders to work together. However, there were also some stakeholders who always tried to work well together and who themselves submitted ideas for suggestions for improvement.

5.1.4. Conclusions / Policy recommendations

As part of the project, important knowledge about the implementation of a new control system was gained. The cooperation of various interest groups in the region is important for the feasibility of an implementation. In addition to the transport service providers on the route, this also includes political representatives of the cities and municipalities as well as tourism decision-makers. It will always be important for the implementation of such a tourist system to involve a wide range of interest groups in the project in order to be able to better deal with possible bureaucratic obstacles (e.g. permits). All interest groups should be actively involved during the implementation process in order to be able to use their specialist knowledge. This means that financial and time resources can be used. It is important for marketing-related advertising of such a control system, also during the implementation and publication phase, to continuously inform and involve stakeholders about the project. This effort is enormous.

In addition to the stakeholders mentioned, this also applies to potential passengers. The application should continue to be made in print and social media.

When designing and creating a control system, the needs of potential users should also be taken into account. Since not every cyclist or hiking tourist can and does not want to use a digital solution of the guidance system, the floor graphics and the brochures created at the end of the project should always be up-to-date and distributed with a large range. With a mix of static and digital control systems, regional marketing will be possible.

The lack of follow-up funding for the project remains a disadvantage, as all partners also have no financial and personnel options. Demographically, a “car-free tourism” project would be sensible and up-to-date for rural areas and could help to attract holidaymakers and passengers and live up to the ecological zeitgeist.

The current number of users of the website and the AR app show that user behaviour increases with targeted and concrete marketing. However, since targeted marketing over the winter of 2019/2020 was not possible due to vandalism, there was less use of the control system during this period. Since user behaviour, especially for hiking and cycling tourists, also depends on the seasons in the Vogtlandbahn, this should also be taken into account for the route's marketing measures. User behaviour can be measured specifically using web analysis methods. In addition to page views, length of stay or downloads can be recorded and viewed here. This should also be used after the end of the project in order to further improve the user-friendliness of the website "www.elstertalbahn.de". The AR app, on the other hand, can only be analysed in terms of how many downloads were made and on which operating systems. Data protection prohibits further analysis.

An expansion of the offer of the control system is definitely achievable, however, for example, extensions in the AR app are associated with high financial expenditure. These financial expenses are not manageable for neighbouring municipalities and should be made possible either by the internal budget of the ZVV or a follow-up project.

5.2. PP 3 – Venice International University (VIU) & PP 4 – Trieste Trasporti (TT)

5.2.1. Description of pilot/measures

SmartBus is an on-demand bus service operating on the Trieste plateau (Karst). The service has been authorised by the Friuli Venezia Giulia Region and managed by Trieste Trasporti (the local public transport company). It operates every day of the week, including holidays, from 8:30 to 21:00 and can be booked through the web site and the call centre. Two buses are deployed to carry out the service: one operating in the western part of the plateau (between Opicina and Borgo San Mauro) and the other in the eastern part (between Opicina, Cattinara and Draga Sant'Elia). The network design includes the existing routes and stops of Trieste Trasporti. Unlike traditional services, it operates only by reservation and along a route that, from time to time, is planned according to user's requests.

The costs of overall pilot activities have been partially funded by Peripheral Access, while additional relevant investment and operational costs have been incurred by Trieste Trasporti internally in the range of €230.000.

5.2.2. Photo and status quo of pilot/measures

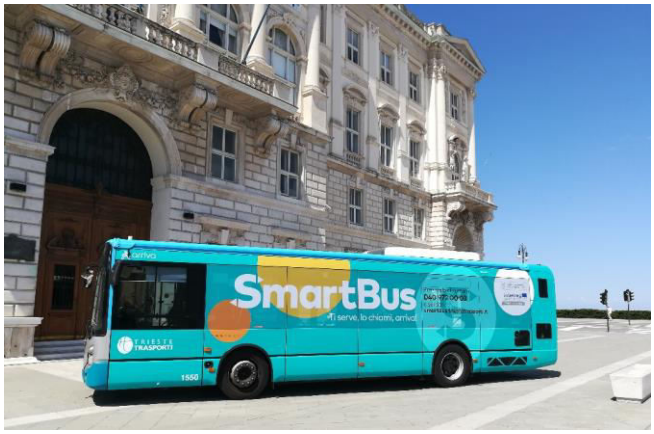


Figure 7: Smartbus, pictures of the vehicles in operation

5.2.3. Measuring process and performance of implementing pilot/measures

5.2.3.1. Process

Introduction

An overall methodological approach has been followed during the implementation and evaluation of pilot activities. Most of the data was collected originally (e.g., primary sources), mainly through the pilot IT platform, Trieste Trasporti data sources and face-to-face interviews with Trieste Trasporti staff. Additional information came out from meetings with relevant stakeholders. Some secondary sources were used as well, namely consisting of relevant regional planning documents. No significant limitations were identified.

In the following, relevant processes related to pilot activities deployment are identified and a number of indicators are associated to them.

Designing the pilot: site criteria and catchment area

Smart solutions have been tested in selected peripheral and rural areas around Trieste. The pilot study area consists of the former province of Trieste, which is made up of six Municipalities, including Trieste, Muggia, San Dorligo della Valle, Monrupino, Sgonico, Duino-Aurisina.

The territory is composed by a narrow (5-10 km) land strip about 30 km long, which stretches between the Adriatic sea and the Karst plateau (some 400 metres above the sea level) from North-West (provinces of Gorizia, Monfalcone, Gulf of Panzano) to South-East (Trieste), bordering Slovenia (coast) and West with the Gulf of Trieste (in the Adriatic Sea). Its peculiarity is the central localisation of Trieste, as the main hub of the area with the other five Municipalities as hinterland spokes, also partially incorporated in the urban settlements of Trieste.

For a comprehensive understanding of the territory, the new Master Plan of the Municipality of Trieste (2016) describes the study area through the identification of seven territorial layers (Figure 8), which are represented by the overlapping of seven thematic maps:

1. Logistics and manufacturing hubs;
2. Metropolitan Mobility System;
3. Network of the Karst villages;
4. Linear development of the road SP n.1;
5. The “compact” city;
6. The “water“ city;
7. Territorial Hubs.

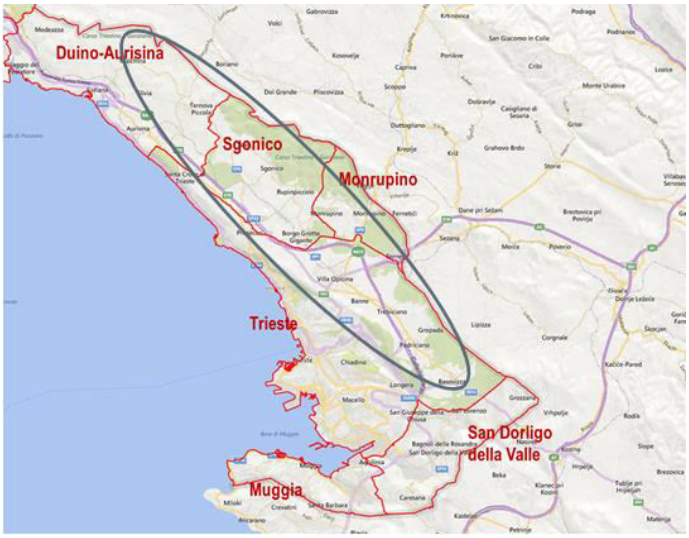


Figure 8: Pilot study area

Within the study area, the focus of pilot activities is on the 5 municipalities of the Karst plateau: Sgonico, Duino-Aurisina, Monrupino, San Dorligo della Valle and partially Trieste (District I and II).

Equipment: IT platform features and type of vehicles

The selection of the most suitable IT solutions was performed through a specific public procedure specifying detailed requirements (see Tender). The platform had to present ad hoc features and requirements, namely:

- a free cartographic support, that can be easily integrated with the Trieste Trasporti cartographic system;
- a monitoring system;
- service reservation channels (such as an app for smartphones and tablets, a web site and a call centre);
- a user-friendly driver interface, providing real time data and information.

As for the vehicles employed in the operations of the on-demand service, traditional 10,5 metres long buses were employed, already belonging to the Trieste Trasporti fleet. The buses were rebranded with the project colours and logos. A bus equipped with the required equipment for people with physical disabilities was employed in each area.

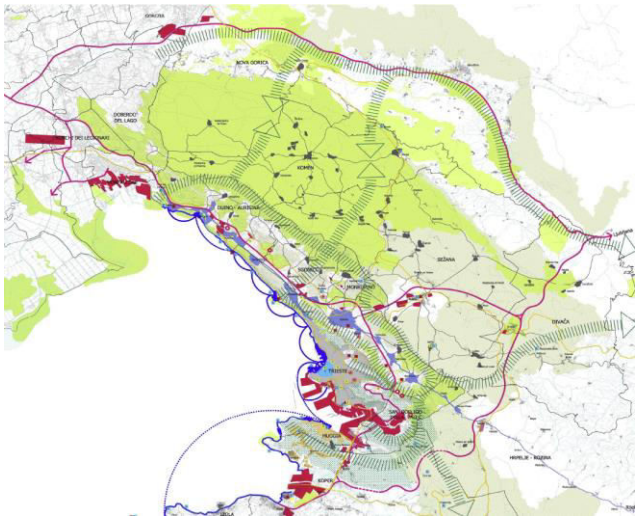


Figure 9: Pilot study area depicted by the new Master Plan of the Municipality of Trieste (2016)

Human resources needed and training

Each driver went through a one-day training programme to get used to the operating system, tablet features and overall smart solution modes of operation, including driver's behaviour towards users.

Authorisation path

Trieste Trasporti represents the local public transport company, which is subject to regional legislation and planning. According to the Regional Public Transport Plan, Trieste Trasporti and the Friuli-Venezia Giulia Region signed a Service Agreement to deal with the provision of public transport services in the regional area. The Service Agreement includes the pricing policy. Based on that, the proposal of an additional public transport services must be agreed between the two bodies. Thus, Trieste Trasporti had to be formally authorised to carry out a new on-demand service by the Region. Trieste Trasporti and Friuli-Venezia Giulia Region met several times to eventually come up with the necessary authorisations to implement the pilot activities. In particular, the whole process was rather articulated, since in Peripheral Access not-already existing (e.g., innovative) services are at stake and no previous experience exist in the whole region.

The on-demand service to be tested in Peripheral Access was finally approved as a third level public transport service, according to the Regional Public Transport Plan. It consists of innovative solutions of public transport services based on flexible routing and timetables. Pilot activities were implemented in the peripheral and rural areas around Trieste, with the aim to extend the provision of the service in other regional areas while considering cross-border (e.g., with Slovenia) issues and synergies.

Tenders

The selection of the most suitable IT solutions was performed through a specific public procedure specifying detailed requirements. Four IT companies were called, while only three of them participated to the tender. The companies were invited to present a demo of an IT platform solution for the planning and management of the on-demand service. The platform had to present ad hoc features and requirements (see Equipment).

Each company met individually with a commission and presented a proposal including both technical and economic aspects. TT identified the most suitable platform through a technical and economic comparison of the proposals presented. Eventually, the solution proposed by PluService was selected as the best option and was adopted and implemented.

Delays

Following the authorisation path and tender procedures, the smart solution ("Smartbus") was tested from 1 July 2019 to 11 November 2019 in selected peripheral and rural areas around Trieste and Smartbus is still operational. No significant delays were reported.

Booking system

The booking system of the Smartbus is based on the selected IT platform. In particularly, it can be accessed either through the Trieste Trasporti website or a dedicated call centre (which was made operational in a later stage of the pilot). Booking can be made by users up to two hours prior to departure. Confirmation is received ten minutes after the request, displaying stop and departure time. Some additional booking choices about departure time are also provided. The booking system delivers routing and scheduling programmes according to requests. Payment methods include tickets, prepaid cards and smart ticketing systems relying upon the Smartbus mobile app.

Network design, routing and scheduling

Smartbus operations relate to a specific network design, routing and scheduling in the selected areas. In particular, two interconnected sub-areas are identified to run the service, covering the Western ("ADD West") and Eastern ("ADD East) sections of the Karst plateau respectively. A major interchange hub is identified in the village of Prosecco. Overall, the Smartbus routing and network design include 68 stops in the Eastern areas and 199 stops in the Western ones. The service uses the existing stops and routes, but it is operative only upon requests by users.

Smartbus operates daily, 7 days a week, from 9 AM to 9 PM.

Ticketing and pricing policy

Smartbus was provided for free until 15 September 2019 to all users. Afterwards, a fare of two euros per run was introduced. The service remains free for annual subscribers. Users can access the service by buying tickets or prepaid cards (coupons of two to six euros) or they can use the Smartbus mobile app (smart ticketing).

Figure 10: network and routing of the service

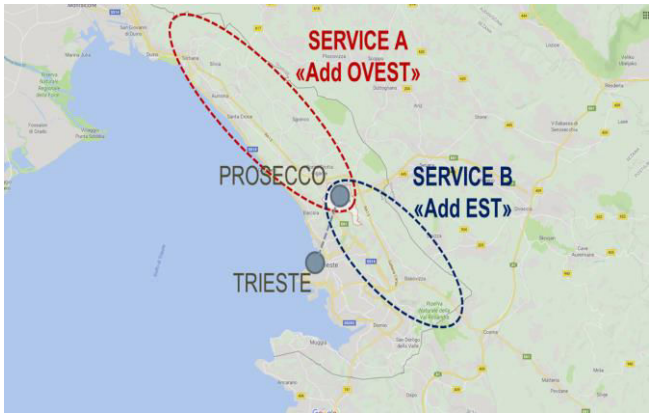


Figure 11: concept of the service

5.2.3.2. Performance

Overall, targets and expectations were identified mostly on a strategic and qualitative level. In particular:

- Verifying a strong political and technical will by relevant stakeholders to gain experience and build expertise from innovation solutions in the field of public transport. That was certainly achieved.
- Introducing innovative public transport solutions at regional level for the first time ever. That was certainly achieved.

- Deploying pilot activities to consequently be able to extend innovative solutions at regional and cross-border level. That was certainly achieved.
- Building an "innovation system" for public transport supported by a new IT platform selected through a public tender to test innovative solutions. That was certainly achieved.

In summary, the overall strategic targets set by project partners and relevant stakeholders involved was to develop and test a completely new "innovation ecosystem" for public transport at regional level. Rooms for further improvements would certainly follow from pilot activities. Pilot outcomes are then the basis for a radical change in the attitudes towards innovation in the field at regional and cross-border level. Thus, Peripheral Access was an opportunity to drive such a change. Overall, strategic targets were achieved. A significant added value related to performance assessment is represented by the fact that innovative solutions were deployed "on the road" and they are still operational.

The effect of the Pilot action has been particularly relevant in terms of knowledge increase. The operational experience with such kind of innovative services now allows to better plan and operate such systems also in other contexts, both at regional level and in urban environment (especially in off-peak periods such as during the nights or for specific users' targets). The pilot action allowed also to increase the knowledge of the users thus making it possible a change in their behaviour and attitude (also thanks to a number of communication initiatives during the project).

Contribution to the achievement of the results indicators prescribed by the AF

The pilot project has contributed to the achievement of the following Application Form's result indicators:

- Number of institutions adopting new and/or improved strategies and action plans [Trieste Trasporti, Regione Friuli-Venezia Giulia, peripheral and rural municipalities]
- Number of institutions applying new and/or improved tools and services

For both indicators, the value is "1" corresponding to the Friuli Venezia Giulia Region.

Additional qualitative indicators: users' satisfaction

Although high users' satisfaction was reported during pilot activities, the proposed online questionnaire for users is not already in place. It could be developed soon. A survey on University students was carried out – since the University of Trieste represents a major generation and attraction transport node and it is located close to the Karst plateau – to assess the smart solutions and its probable development to include a night schedule.

Additional quantitative indicators: transport demand analysis and service assessment

Several indicators were identified and assessed to provide insights into the decision-making process by users. As mentioned, an online questionnaire reporting on users' satisfaction is envisaged to be implemented soon.

Indicators about users' assessment of the Smartbus service are listed and discussed below. They were reported by collecting and elaborating data from the IT platform.

- Number of passengers using the service: 1.761
- Number of requests: 2.234
- Number of requests from the Eastern Area: 60%
- Number of requests from the Western Area: 40%
- % fulfilled requests (trips): 78%
- % partially fulfilled requests (trips): none. All the requests were totally fulfilled
- % not fulfilled trips: 22%

- Number of additional users: estimates show that some 75% of users are subscribers, thus, some 25% could be considered as additional users, meaning some 440 over the period
- Number of fulfilled requests from disabled users: 3

Additional indicators were analysed and elaborated regarding output assessment, namely:

- 14.739 km travelled
- 750 routes
- 19,65 km/route
- 2,35 passengers/route
- 0,12 passengers-km
- Number of vehicles employed: 2

As stated before, the main aim of the pilot was to introduce an innovative on-demand service to increase knowledge and attitude towards these kinds of smart solutions. The "numbers" that are usually used to measure the effectiveness of any transport solution were not the main aim of this action. This is especially true given the feature of the territory where the pilot was realised (small and sparse villages) and that the service was added to the traditional one (and not alternative).

5.2.3.3. Stakeholders

Several meetings were organised with relevant stakeholders during the pilot activities in order to get feedbacks and recommendations to possibly improve the characteristics of the proposed innovative solutions. In particular, the following stakeholders were involved:

- Area Science Park: it consists of a major scientific and technological park located in the periphery of Trieste. It is of utmost relevance for the pilot project, since it represents a major generation and attraction transport node;
- Sincrotone: similarly, to the above;
- Municipalities in peripheral and rural areas, including Monrupino, Duino-Aurisina, Sgonico;
- Citizens' associations;
- Institutions in the Karst Plateau.

5.2.4. Conclusions/ Policy recommendations

In this section, some lessons learnt and specific barriers and drivers ultimately arising from pilot activities are discussed. Importantly, they explicitly benefit from a comparison with other EU e non-EU experiences analysed in previous Peripheral Access deliverables, including status-quo analysis, regional analysis and action plans.

5.2.4.1. Drivers and benefits

As for major drivers and benefits we identify:

- A strong political and technical will by major relevant stakeholders and organisations (including Trieste Trasporti as project partner) to promote innovation at regional level in the field of public transport, namely on-demand transport solutions in peripheral and rural areas.
- The availability of innovative public transport services never been implemented in regional areas so far.
- The development and implementation of a new "innovation ecosystem" at regional level for public transport in peripheral areas supported by a "best in class" IT platform.

- A reported high users' satisfaction.

5.2.4.2. Barriers and corrective actions

Several barriers leading to further improvements and corrective actions at a later stage are identified from pilot outcomes. Overall, they refer to the need to improve some "flexibility" features of the on-demand service by addressing several current constraints, namely:

- The need to improve the operational synchronisation of the service at interchange nodes. Currently, Smartbus is designed to be a "feeder" service in selected peripheral and rural areas, thus, its operations must be further enhanced by optimising the management of passenger flows at interchange hubs. In doing so, some features of mobility patterns (e.g., the role of internal vs radial flows) should be further considered.
- The need to optimise the size (and overall technical characteristics) of the vehicles employed. So far, pilot activities have been conducted (indeed, the service is still operational) by employing traditional buses (10,5 metres long). However, more options must be considered in the future to optimise the performance, including mini-buses, minivans and electric options (to increase also the capillarity of the service). Indeed, some corrective actions are still in place to replace traditional buses with minibuses by this year.
- Additional options would consist of the design of broader governance framework encompassing the integration (by means of ad hoc agreements) with taxies and car rental with driver (NCC) companies.
- The need to move on with such further options and governance schemes is also supported by some collected performance indicators (reported in this document), which clearly show how passengers choices and preferences should be optimised by employing smaller vehicles – which seems to be the ultimate goal when serving peripheral and rural (e.g., weak-demand) areas;
- The need to further promote communication efforts. There is the need to change users' overall attitude (a kind of "cultural" corrective action) toward public transport, going from a supply-driven ("waiting for the bus") to a demand-driven ("calling the bus") approach. Despite remarkable communication efforts made during the pilot activities, some inertia is still in place by users[1]. Further communication efforts should be made to highlight opportunities and benefits of "flexible" solutions.
- The need to address the overall financial sustainability of proposed flexible solutions. Although reported KPIs are mostly in line with other EU and non-EU experiences in peripheral and rural areas (both in absolute terms and depending upon population size), the Smartbus service turns out to be rather expensive (which is in turn something in line with other experiences reported). Other similar initiatives – to be found in previous PERIPHERAL ACCESS deliverables – show ticket revenues accounting for some 20% to 70% of overall costs (thus, a rather broad range).
- Importantly, financial sustainability should lead to the development of broader governance schemes. In fact, many similar initiatives at EU and non-EU level show how the overall financial burden of on-demand services are taken not only by public transport companies, but also by relevant organisations benefiting from an improvement in accessibility in peripheral and rural areas. They include, for instance, both economic activities (shops, restaurants, banks, etc.) and municipalities. Quite often, relevant stakeholders promote associations to deal with the support of on-demand services[2]. Some estimates show that such associations can cover up to 50% of overall costs of the on-demand service.

[1] We reported some paradoxical cases during pilot activities in some peripheral and rural areas. Although local users traditionally raise complaints about an insufficient provision of public transport services, they nevertheless show a rather low demand for the Smartbus options.

[2] And normally users pay an annual fee to the association.

- At the same time, it should be noted that such broader governance schemes face some constraints within the current regulatory framework in our areas. In fact, public transport services (of any type) are provided by the public transport company based on a regional public tender – in other words, the public transport company operating the services are selected through such a procedure. Thus, rooms to include additional stakeholders in the operations cannot currently be proposed. As such, there is the need in the future to address such regulatory issues as well.
- The opportunity to address further potential markets. Based on pilot outcomes and stakeholder meetings, some further opportunities are envisaged, including the provision of the Smartbus services to university students. In fact, the university of Trieste is located closed to the selected peripheral areas and it would represent a concrete opportunity to further develop the service. Moreover, night/evening extensions –targeting mainly students – would be beneficial for the service as well. Actually, a "night bus" service is already envisaged by Trieste Trasporti in co-operation with the University of Trieste.
- The need to optimise (and revise) overall network design. In fact, pilot activities have been performed so far by considering Smartbus as a complementary solution with respect to existing services in the selected areas. A possible major revision of the role of Smartbus as a – at least – predominant choice for users in the areas should be considered. Consequent positive impacts on users' demand would follow.
- Finally, the need to further enhance cross-border synergies. Although the approval of innovative cross-border solutions between Italy and Slovenia rely upon international agreements, whom currently significantly restrict such opportunities, nevertheless operational synergies coming out from Smartbus are still in place (for instance, cross-border users can directly access the service – e.g., at major interchange hubs – and Arriva, a major shareholder of Trieste Trasporti, operates also some cross-border services)
- This pilot action allowed to point out the constrains related to the bilateral agreements between cross-border countries especially in terms of "cabotage" and vehicle types. Cabotage restrictions force passenger to cross the border; in other words, it is forbidden boarding and alighting in the same Country. This constraint leads to the need for doubling the services (given that national mobility cannot be served by cross-border services) thus worsening any economic assessment. Also, the main features of the vehicles are fixed (for example in some cases urban busses are prohibited). In the context of the European Union, a strong recommendation towards a simplification of international regulations (even updating existing bilateral Agreements) may arise.

In order to summarise major barriers and corrective actions, the following table clusters these points according to four criteria: 1. Service improvements, 2. Sustainability, 3. Scalability and 4. Transferability:

SERVICE IMPROVEMENT	*Routing and scheduling* ▪ Operational synchronisation of the service at interchange nodes *Fleet* ▪ More options must be considered in the future to optimise the performance, including mini-buses, minivans and electric options *Governance* ▪ Integration (by means of ad hoc agreements) with taxies and car rental with driver (NCC) companies. *Communication* ▪ Despite remarkable communication efforts made during the pilot activities, some inertia is still in place by users. Further communication efforts should be made to highlight opportunities and benefits of "flexible" solutions.
SUSTAINABILITY	▪ The Smartbus service turns out to be rather expensive (which is in turn something in line with other experiences reported). ▪ Financial sustainability should lead to the development of broader governance schemes to include additional stakeholders in the operations
SCALABILITY	▪ Optimise (and revise) the overall network design ▪ The need to further enhance cross-border synergies, with a strong recommendation towards a simplification of international regulations (even updating existing bilateral Agreements)
TRANSFERABILITY	▪ The opportunity to address further potential markets: the provision of the Smartbus services to university students and the night/evening extensions targeting mainly students

Table 1: summary of the barriers and the corrective actions

5.2.4.3. Policy recommendations

Policy recommendations can be drawn eventually at different levels:

At local and regional level:

- Following the official recognition of Smartbus as (the first ever) "3rd level regional public transport" and on the basis of positive pilot results, the extension, replicability and scalability of on-demand transport solutions are recommended at regional level – within the time horizons of the existing Regional Plan - targeting additional peripheral and rural areas (for instance, some Northern – Carnia, Eastern – Pordenonese – and North-Eastern – Goriziano – areas).
- Revisions of current regulatory framework should be addressed to allow additional stakeholders to support the development and financial sustainability of on-demand services, according to various EU and non-EU similar initiatives.

- Revisions of the current regulatory framework should be promoted to allow the coordination and integration of the local public transport company with other transport operators (taxies, car rental with driver companies) to achieve an overall optimisation of the on-demand service by enhancing its "flexibility". Such revisions would in turn represent significant and strategic policy innovations to realise a pro-active attitude of "public" mobility organisations.
- Significant further communication efforts should be made to change users' attitude towards flexible public transport solutions.

EU level:

- Despite several operational synergies still in place regarding cross-border services, revisions of the current regulatory framework for Italy-Slovenia cross-border operations in the field of public transport should be addressed to relax current constraints.

At thematic level:

- Based on pilot results and the experience gained in Peripheral Access by project partners, the development of "IT ecosystems" should be crucially promoted to pragmatically foster innovation in the field of public transport. IT systems (IT platforms, mobile apps, etc.) are at the heart of innovation processes in the field supporting the planning (strategic level), management (tactical) and control functionalities necessary to implement innovative solutions.

5.3. PP 5 – Regional Development Agency of the Ljubljana Urban Region (RDA LUR)

5.3.1. Description of pilot/measures and volume (costs)

Improving public transport is considered as the biggest potential in the sustainable mobility development in the Ljubljana urban region (LUR). Public transport – buses and trains – connect the more densely populated urban centres, while the accessibility of rural areas is less favourable.

Demand responsive transport (DRT) is one of possible solutions for improvement of public transportation in LUR. In 2018 Ljubljana urban region adopted The Sustainable urban mobility plan of the LUR, a key tool in regional mobility planning. The document proposed a comprehensive set of measures for sustainable mobility in the region, one of them being implementation of DRT in less accessible rural areas. A survey was held in the document's reparation process, where more than 70% of were in favour of introducing this new service of public transport.

A consultation conference on the topic of DRT was held by RDA LUR in November 2018. The conference showed that about a third of the municipalities in the region have a strong interest in such services but are not yet thinking about a common model that would serve the whole region, they found implementation of this service through pilot project more appealing.

Based on several criteria, within the analysis and preparation of the Demand responsive action plan in the previous stages of the project, the municipality of Škofljica came up as a possible case for the pilot project implementation Action Plan.

The pilot was implemented in collaboration between RDA LUR, Ljubljanski potniški promet d.o.o. – Ljubljana passenger transport (LPT). Out of 3 tenders, LPT was chosen as the most economical and appropriate candidate. The main cost of the pilot was the cost of providing vehicles and drivers. The service was carried out with E-urban vehicles provided by the LPT. The cost of the whole pilot was a little bit above €17.000.

Prior to implementation of the service, LPT had to execute following tasks:

- modification of the IT system to incorporate new service into existing charging system,
- establishment of control centre,
- appoint new points for collecting passengers alongside existing stations of public transport,
- equip e-cars with a reader for Urbana, a unified urban card,
- training of the drivers to introduce them to the new service procedures.

After completing these steps, the implementation of the DRT could begin.

5.3.2. Photo and status quo of pilot/measures

Figure 12: Vehicle used for on-demand transportation; Media announcement of the new service.

On-call transportation is an advanced form of public transport for up to eight passengers and is carried out in areas where there is no organised public passenger transport, or in areas with lower demand for public passenger transport.

Public transport in Municipality of Škofljica, which operates with regular timetables only in the morning, primarily covers transportation needs school children. All other times of the day and especially on week-end, its functionality is poor. Therefore, this municipality was highly suitable for on demand responsive transport pilot.

On-call transportation is carried out according to a pre-determined timetable subject to the "on-call" mode. It is performed only if the condition of prior announcement of the carriage by the potential passenger is fulfilled, or according to a flexible timetable, where the time and the route are shaped according to the passenger's transport need.

The pilot project was designed to bring in passengers, who are away from the centre of the Municipality of Škofljica and do not have the possibility of using other public transport, especially in the afternoon, when the public transport options are worse. We primarily targeted the elderly population who would need transportation to health centres, libraries and more.

Agreements on the mode and frequency of transport and the locations of transport were made in agreement with all three parties implementing the pilot, RDA LUR, LPT and the Municipality.

Call services in the Municipality of Škofljica were designed in such a way that passengers had access to many pre-determined stops for both entry and exit. The passenger had to call two hours before the scheduled trip to the control centre. At the control centre, the coordinators accepted the passenger's need to travel. There was a fixed call-to-call time between 09:00 - 12:00 and 16:00 - 22:00, since during this time the public had the least possibility of transport by public passenger transport.

Promotion of the pilot was done thorough following channels:

- an ad in the local newspaper, which is delivered to each household free of charge,
- social media,
- Websites of all three parties.

Two vehicles with 100% electric drive were included in the pilot project. Due to the very variable geographical configuration of the Municipality of Škofljica. LPT conducted test runs that were used to identify the reach of vehicles and to determine how many kilometres they could travel per day.

LPT also equipped E-Golf with additional recognisable stickers from all partners involved in the pilot. The vehicles themselves have a module with the option of a public transport payment system. Each passenger had the option of paying a city urban card. One ride cost €1,30 and can be crossed within 90 minutes. The built-in module was linked to an application that allows traffic control centre loggers to record all announced and completed rides. The control centre was equipped with an A0 map on which all call points were outlined. They also operated with all scheduled timetables operating in the municipality of Škofljica. They were backed up with the figures they needed in their work. As a result, passengers wishing to make on-call transportation could be assisted with accurate explanations and available on-call transportation facilities.

The key factors in enabling the smooth flow of on-call transportation were drivers. We have conducted several trainings with them on call transportation procedures. Drivers were given precise instructions on where the points for passenger transportation were placed, as well as for the application of the vehicle, the times of their services and how to deal with any inconvenience. They also learned the specifics of driving electric vehicles, as these vehicles need to be managed economically.

5.3.3. Measuring process and performance of implementing pilot/measures

5.3.3.1. Process

In 2018, the Ljubljana urban region adopted the Regional sustainable urban mobility plan, where one of the proposed measures for improvement of sustainable mobility in the region was to provide an on-demand transport in areas where there are no conditions for traditional forms of public passenger transport. RDA LUR tested the feasibility of introducing this service with a pilot project within Peripheral Access.

In November 2018, a **stakeholders' conference** was held for municipalities of Ljubljana urban region, public transport providers and sustainable mobility experts. The panel established that the most suitable out of 3 DRT models is the one where service is provided at a charge to residents in areas without public transport and connects passengers to the nearest station. Municipality of Škofljica was chosen as the most appropriate for the pilot, due to its proximity to the capital and manageable size. In February 2019 formal agreement to run the service was signed by RDA LUR and the Municipality.

The next step was the **Implementation plan**, which amongst other, determined passengers' target groups, collection points, method of charging, type of vehicles to be used, etc. Before running, all public transport services must be approved by the Ministry of Infrastructure. Ministry's permission to execute the pilot was issued to RDA LUR and Municipality of Škofljica in August 2019.

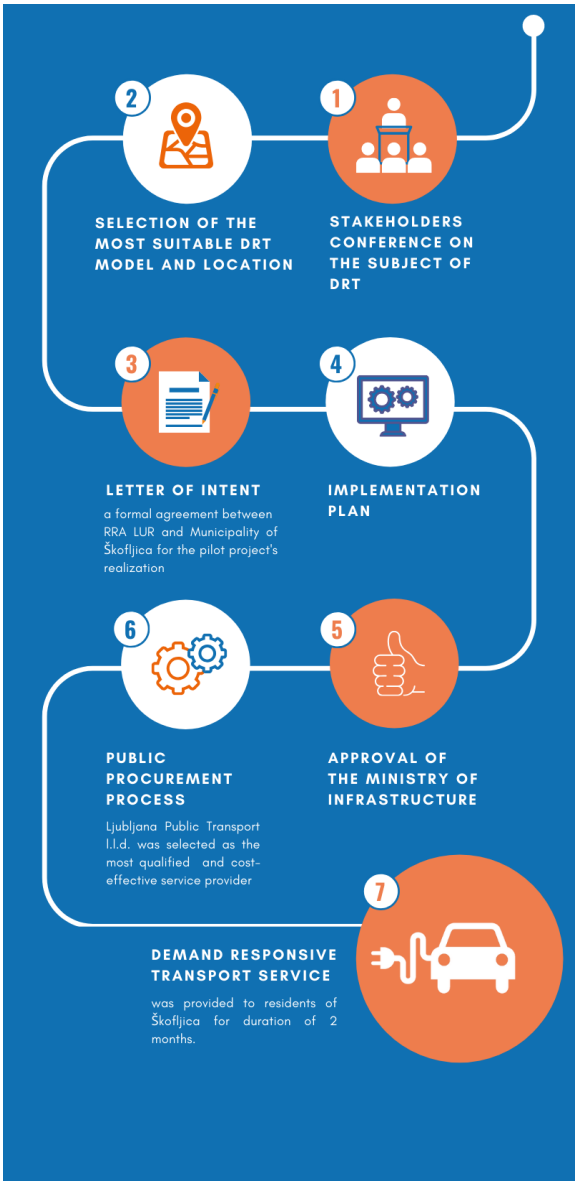


Figure 13: Process diagram

In the tender process of **public procurement process** Ljubljana passenger transport l.l.c. (LPT) was chosen as the most qualified and cost-effective service provider. A contract was signed by all three parties in October 2019. LPT concluded the preliminary work in November 2019 and in December 2019 a new public transport service was offered to residents of Škofljica, which ran until the end of January next year.

5.3.3.2. Performance

The main objective of the pilot project was to check feasibility and effectiveness of on-demand transport as a service of public transport in the peripheral areas of the Ljubljana urban region, where conditions for traditional public transport services are poor.

The service was purposefully provided in the months of December and January. Every December, LPT records a substantial increase of passengers, due to the holiday season, while in January the number of passengers usually drops significantly. This gave us LPT a broader in-view of the actual needs of passenger in rural areas.
During the implementation of the pilot (January 2020 and December 2020), we recorded the following results:

- During the project 158 passengers used the new service, the average number of daily passengers is 4,38. The expectation within our frameworks was to bring at least 20 passengers a day.
- All passengers using the on-call transport service welcomed the operation of the on-call transportation program in the Municipality of Škofljica.
- Two E-Golfs were used to carry passengers, and we travelled 6125 km in total.
- Passengers have shown further satisfaction that the service is provided exclusively by electric vehicles.
- All passengers brought in were younger (between 15 and 18 years old), mostly traveling in the afternoon. Passengers using the on-call shuttle service were largely the same daily.
- A total of 46 people was trained. This group includes managers, supervisors, drivers.
- The pilot project served as a good learning platform on how to integrate peripheral areas into the system of regular public transport.

The pilot project showed that the chosen model was appropriate, and that on-demand transport is needed in areas without public service.

5.3.3.3. Stakeholders

Stakeholders at national, regional, and municipal level were involved in the pilot project implementation process, namely:

- Ministry of Infrastructure,
- Regional Development Agency of the Ljubljana Urban Region,
- Municipality of Škofljica and Ljubljana passenger traffic.

The process itself showed the need for improved top-down communication, since the Ministry's approval for performing On-demand service in the frame of public transport came after 6 months after the Municipality of Škofljica submitted the formal request.

5.3.4. Conclusions/ Policy recommendations

Potential areas for the introduction of on-demand transports in the LUR should are areas less accessible by public transport. Roughly these are all populated areas with scattered settlements in the hinterland, where there is either no public transport or the frequency of its arrivals and departures is low. An on-demand transport system makes sense for the whole region and is estimated to be most effective in areas

that are relatively close to the centres or can be linked relatively quickly (at distances of up to 5 km) to the existing public transport corridor with good frequency.

On-demand transport service must be organised in such a way that they are suitable for the socially disadvantaged citizens as well as for all other users. When organising on-demand transportation, the limited use of information technology in the elderly should be considered.

On-demand transports should be implemented as a complementary service to existing to the existing public transport. Information on on-demand transportation information should be easily accessible, comprehensible, and published in the same place as other public transport related information.

A major problem with the provision of on-demand services is in the existing legal basis. Legislation changes are necessary in following areas:

- more efficient division of competences between the state and the municipality,
- fewer rigid regulations for organising on-demand transport as a n integrated service of public transport,
- more effective arrangements for granting concessions,
- promoting opportunities for public-private partnerships (for example, Taxi services and public transport),
- elimination of inconsistency among existing regulations.

The efficient implementation of on-demand transports would have to go beyond municipal boundaries. The Ministry of infrastructure should take the role of the coordinator and at the same time regulate the above-mentioned contents of the legislation.

In case of expanding on-demand transport service on regional level, the Ministry of infrastructure should be assigned as the coordinator and establish a unified information system and oversee the updating of the data-base and also conduct the coordination between the municipalities and service providers.

5.4. PP 6 – KTI

5.4.1. Description of pilot/measures and volume (costs)

KTI organised a Transport Safety Day on 12 September, which can be primarily related to intermodality when relevant topics of the project is considered. The venue of the event was Civitas Fortissima square in Balassagyarmat and the Municipality of the town, the associated partner of KTI was strongly involved in the organization of the event. Main target group of the event was students from the local elementary school. A training court was built for the students where they could learn about traffic regulations in practice. A quiz was also prepared for local inhabitants to test their knowledge on traffic regulation related to cycle transport. Besides a tent was installed where participants could test night visibility.

Our idea to organise the transport safety was twofold. On one hand, the currently extending cycling infrastructure of the town was taken into account even if the related projects are in an almost one-year delay. On the other hand, intermodality was considered and those inhabitants, commuters were addressed who use bicycle in the town to get to the bus station where they change transport mode and continue their travel by bus. Therefore, all the activities of the event were focused on cycling from the perspective on transport safety.

The Transport Safety day was carried out by the own staff of KTI. The Municipality lent the public square, the venue of the event together with all the used equipment free. Therefore, only personnel costs for one day and travel costs were raised.

5.4.2. Photo and status quo of pilot/measures

Since the Transport Safety Day was a one-day event, it is not relevant to consider its status quo.

Figure 14: Transport Safety Day in Balassagyarmat

5.4.3. Measuring process and performance of implementing pilot/measures

For preparation of the regional status quo analysis and the action plan, several databases and strategic documents were used from various sources. Input data of passenger flows to and from Balassagyarmat was based on the country level origin-destination matrices prepared by KTI in 2017 (see Figure 15). At the same time, timetables of transport services and data of the Hungarian Central Statistic were overviewed and analysed. Furthermore, integrated settlement development strategy of the town provided transport development objectives, however, it has to be noted that transport is quite under represented topic in the strategy. Besides a standalone transport strategy for Balassagyarmat has not been prepared so far that is why it is hard to introduce local strategic transport objectives. Personal interviews with transport service provider companies and the municipality (see chapter 5.4.3.3) helped to gather these objectives.

Regarding the evaluation of proposed measures given in the action plan, the most significant constraint has been the lack of completed projects. It was planned that two cycling infrastructure projects will be

completed by the end of September 2019 but they are in a huge delay therefore the impact of these project cannot be evaluated.

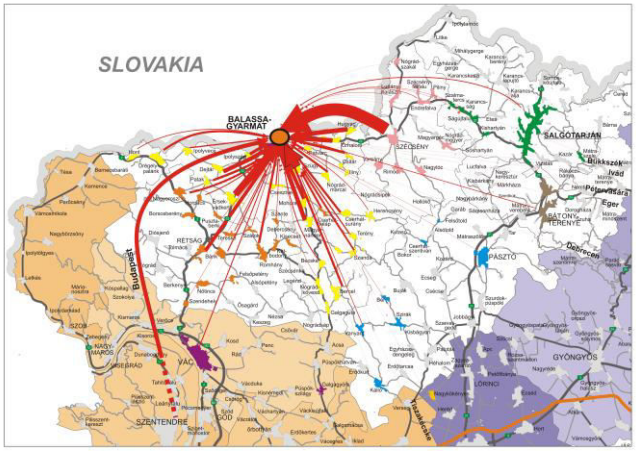


Figure 15: Number of passengers who travel to Balassagyarmat by bus (Volán) on an average workday (source: KTI)

5.4.3.1. Process

The first step of the process was to examine best practises of European peripheral regions. In the EU-wide status quo analysis KTI was responsible for the examples of good practices in the field of intermodality. After the examination of the best practises in this field and in the fields of intelligent communication technologies (ICT), intelligent transport systems (ITS), smart governance and joint marketing, KTI analysed the status quo of Balassagyarmat. In cooperation with the municipality, the local bus service provider and the local railway service provider, the transport system and traffic conditions of Balassagyarmat was overviewed.

The individual road traffic is quite significant in Balassagyarmat: almost 7.500 vehicles goes on every day (according to data from 2015) on the most popular road of the town and approximately 10% of these is freight traffic. The operating bus terminal was built in 2007 so functionally it is quite well prepared for the challenges of the 21st century. With its highly used bicycle parking facilities the bus terminal offers a good transfer opportunity. Quality of railway transport service is low, which is also confirmed by statistics: approximately 4.400 passengers use the interurban bus services and 200 passengers travel by train. There are lot of people who use their bicycle for everyday transport, but the only bicycle road of Balassagyarmat is 150 metres long and runs next to the Ipoly Bridge (which connects Hungary and Slovakia here). It has almost zero traffic on it. From Szügy settlement (south of Balassagyarmat) there is also a bicycle road but it ends at the administrative border of Balassagyarmat.

During the exploration of the status quo, the stakeholders mentioned many ways of developing the service level of the transport system. However, in most cases the main priorities of the action plan consist of ongoing projects. A north-south and an east-west bicycle road will be implemented by TOP-3.1.1-16 and TOP-2.1.2-15 projects. The electronic and interoperable ticketing (and probably the dynamic passenger information system) will be ready by the end of the HKIR (information system of suburban public transport) project. According to these, it was hard to define possible answers to the present challenges because these projects might have relevant effect on the transport system. Our traffic safety day in Balassagyarmat tried to prepare the inhabitants for the usage of the future bicycle network.

Figure 16: bicycle storage at the bus main bus station of Balassagyarmat

5.4.3.2. Performance

Originally, it was not obligatory for KTI to implement a pilot measure, but when the action plan was created, it was realised that a Transport Safety Day could help the inhabitants to raise their awareness regarding transport safety. Local inhabitants prefer to use their bicycles for transport purposes but they can only use the infrastructure of cars and pedestrians (as there are no bicycles roads or lanes in the town). After the opening of new bicycle infrastructure, it is essential to transfer the habitual bicycle routes to the new cycling infrastructure when it is real option.

The Transport Safety Day was held on a Thursday so the main target group consisted of local students. In cooperation with a primary school around 180 children visited the event – instead of usual classes they came out to the Square Civitas Fortissima with their teachers to participate in the interactive games. Unfortunately, this time frame was not applicable for local adults as it was a working day. Only a few adult local inhabitants could get some impression about the message the event wanted to deliver. In the short term it would be useful to scale up the pilot traffic day to a weekend-day event where families can be widely targeted.

5.4.3.3. Stakeholders

The associated partner of KTI and therefore main local stakeholder was the Municipality of Balassagyarmat and after two and a half year, there are reasonable grounds to evaluate this relationship. Our first contact person left the Municipality after the first full partnership meeting so then a new one needed to be selected. After that, keeping the connection with the Municipality became more difficult for several months. Then the next contact person also left the Municipality and the most competent colleague from the urban development department was designated as the contact person. When Transport Safety Day started to be planned a new colleague of the Municipality helped KTI in the organisation who was dedicated for this task. From this time, communication with Municipality has been smooth as it is now.

KTI had two effective meetings with colleagues of the Municipality discussing overviewing cross-border transport infrastructure and possible transport services and discussing on-going and planned cross-border transport infrastructure related projects of Balassagyarmat and its subregion.

Eastern Central Hungarian Transport Centre (Hungarian acronym: KMKK) was the bus service provider company of Nógrád county (and other two counties) and the local bus service provider Balassagyarmat and its surroundings until 30 September 2019. KTI has a fruitful meeting with its traffic director who was responsible for Nógrád county. Possible project ideas, which could increase the service level of public transport in Balassagyarmat and its subregion, were discussed at the meeting. KMKK also participated and gave a presentation in the workshop held in Balassagyarmat.

Hungarian State Railways is the Hungarian national railway company, with divisions "MÁV START Zrt." (passenger transport), "MÁV-Gépészet Zrt." (maintenance) and "MÁV-Trakció Zrt." MÁV START Zrt. is the local train service provider for the Balassagyarmat region. Its colleagues participated and gave a presentation in the workshop held in Balassagyarmat.

The Central European Service for Cross-border Initiatives (CESCI) is a Budapest based think-tank of cross-border issues. CESCI is an open association the members of which are local and regional municipalities, natural persons and professional bodies. One representative of CESCI attend the workshop held in Balassagyarmat and presented the objectives of the organisation.

Hungarian bike association is officially not represented in Balassagyarmat however one of its members, who lives in the town, was interviewed on phone about potential development perspectives related to the cycling infrastructure.

5.4.4. Conclusions/ Policy recommendations

The Transport Safety Day highlighted how important is to ensure inhabitants that their needs are considered and they are in the focus of e.g. transport developments. Lot of people feel that their opinion are not accepted because of the lack of communication (and cooperation) during the planning and implementation phases different projects. Therefore, it is recommended to policy makers to invest energy

- to co-creation methodologies,
- to collect the needs and suggestions of active inhabitants,
- to inform local inhabitants about current status of the potential and on-going projects,
- to collect feedbacks about an implemented new measure.

5.5. PP 8 – PO Lubin

The pilot action under the implemented project was the creation of communication solutions in the centre of the city of Lubin enabling focusing on a relatively small area of various types of public transport in connection with the restoration of rail connections in Lubin and ensuring the modality of this transport throughout the entire poviat. At the same time, communication solutions should be taken into account to ensure smooth traffic between the eastern and western parts of the city if two railroad crossings were to be closed along 1 Maja Street and Stary Lubin Street. Because such an undertaking required the involvement of many institutions and concerned the city centre, it was already adopted at the outset that representatives of several decision-making institutions from the poviat and voivodship as well as the railway infrastructure manager should work on the planned solutions. The more that the company Polskie Koleje Państwowe implemented at that time a project to rebuild the railway line No. 289 from Legnica through Lubin to Głogów co-financed from the funds of the Regional Operational Program for the Lower Silesian Voivodship covered by a five-year durability period.

5.5.1. Description of pilot/measures and volume (costs)

The project envisages the reconstruction of a part of the city centre of Lubin and the creation of a transfer centre along with the communication system of access roads and parking lots enabling efficient access to this place from any part of the city even if rail crossings on the streets of 1st Maja and Stary Lubin are completely eliminated. Then the city would be divided by railway line No. 289 into two parts: east and west. As the railway infrastructure manager strives to achieve its own goals, including improving safety by limiting the number of collision locations for road and rail transport, it should be expected that in the near future rail crossings in the city centre will be completely abolished. From the road administrator's point of view, this solution is also beneficial because currently these crossings are a serious impediment to traffic because they are closed several dozen times a day. However, eliminating journeys without providing an alternative connection between two parts of the city in the form of a two-level road-rail intersection is currently impossible. Hence, actions were taken to build a road tunnel connection under the railway line, which is ultimately to be financed from European Union funds aimed at improving the safety of rail transport by eliminating single-level intersections with public roads.

Developed concepts for the construction of a transfer centre and tunnel construction guidelines along Odrarzenia street assume multi-million costs of construction works and land purchase costs that will be used for implemented investments. It is estimated that the interchange centre along with the reconstruction of the road system is about 75 million euros plus the estimated cost of building the tunnel another 19 million euros. That is why the developed concepts enable staging of construction works in a way that guarantees the functionality of the project after each of the subsequent stages. However, the cost of tunnel construction is to be ultimately transferred to a minimum of 80% to the railway infrastructure manager. In the adopted and consulted solutions of the concept of the interchange centre, the tunnel is a key element of the entire undertaking and further proceedings and execution of the next stages of the interchange centre depend on its implementation.

5.5.2. Photo and status quo of pilot/measures

Two variants of the concept of building a transfer centre were developed, which assume:

- I variant connecting the eastern and western parts of the city only with a pedestrian bridge over the railway tracks without the possibility of closing the level crossings on the streets of 1 Maja and Stary Lubin; and

- II variant involving the connection of two parts of the city by a road tunnel along Sikorskiego Street enabling movement of vehicles and pedestrians with exits directly to the railway platforms

Figure 17: Aerial images with site rendering

Both variants were subject to public consultations and arrangements between the involved project participants. As a result of ongoing arrangements and consultations, the variant assuming the construction of the tunnel along Sikorskiego Street did not receive the approval of the railway infrastructure manager due to restrictions arising after the implementation of the reconstruction of the railway line No. 289 and the Lubin railway station by the Polish State Railways (PKP), and due to the required regulations EU sustainability of the project, it is not possible to make the necessary changes to the Lubin railway infrastructure. Therefore, as suggested by the PKP authorities, a decision was made to change the location of the tunnel and move it towards Odrarzenia Street. Guidelines have been developed for the new location, which will also be subject to consultations and arrangements of the railway infrastructure manager, who will be able to make further decisions on financing the construction of the tunnel by PKP and closing of level crossings in the city centre. The tunnel construction guidelines also take into account the possibility of expanding the Lubin railway station in the future by another two platforms, which was imposed by the PKP management board at the stage of preparing a tender for the selection of a contractor for tunnel construction guidelines.

Figure 18: Drawing from the guidelines - initial development phase

5.5.3. Measuring process and performance of implementing pilot/measures

5.5.3.1. Process

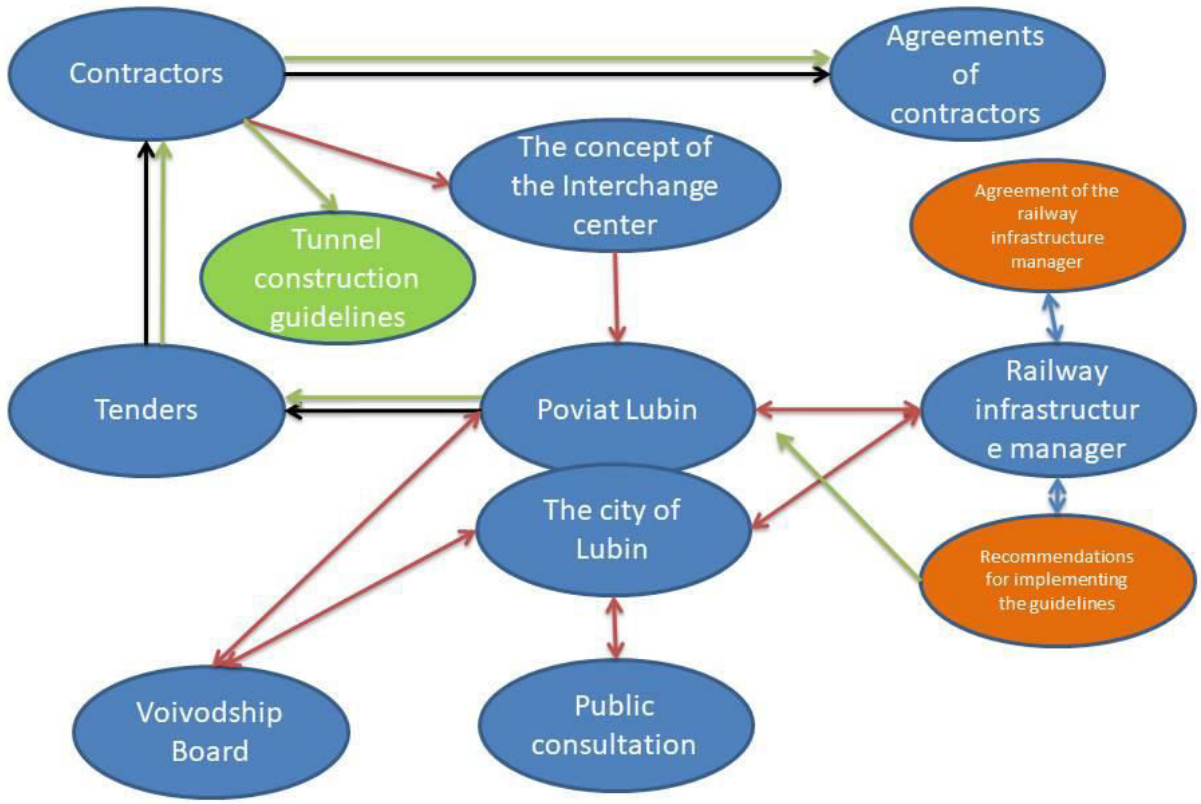


Figure 19: Process diagram

By joining the project, the Lubiński Poviat concluded a cooperation agreement with the City of Lubin due to the area in which the investment is planned. As a result of tender proceedings, the contractor for the concept of building a transfer centre was selected. The contractor, while developing the concept, made its arrangements regarding the legal and technical possibilities of carrying out the investment. Then, the finished product was handed over to the Lubiński Poviat, which subjected it to extensive public consultations and arrangements with the Voivodship Board and the PKP Railway Infrastructure Manager.

As a result of public consultations, the selected version of the concept was forwarded to PKP, which did not accept the location of the tunnel along Sikorskiego Street, while recommending the location along Odrarzenia Street for which tunnel construction guidelines should be developed according to PKP recommendations.

The developed guidelines will be subject to consultations again and then serve as starting materials for the Lubiń Poviat and the City of Lubin to apply for financing the construction of the tunnel in the new location. Activities carried out by the Lubiński Poviat and the City of Lubin are supported by the Voivodship Board, which conducts talks at the level of the central authorities of PKP.

5.5.3.2. Performance

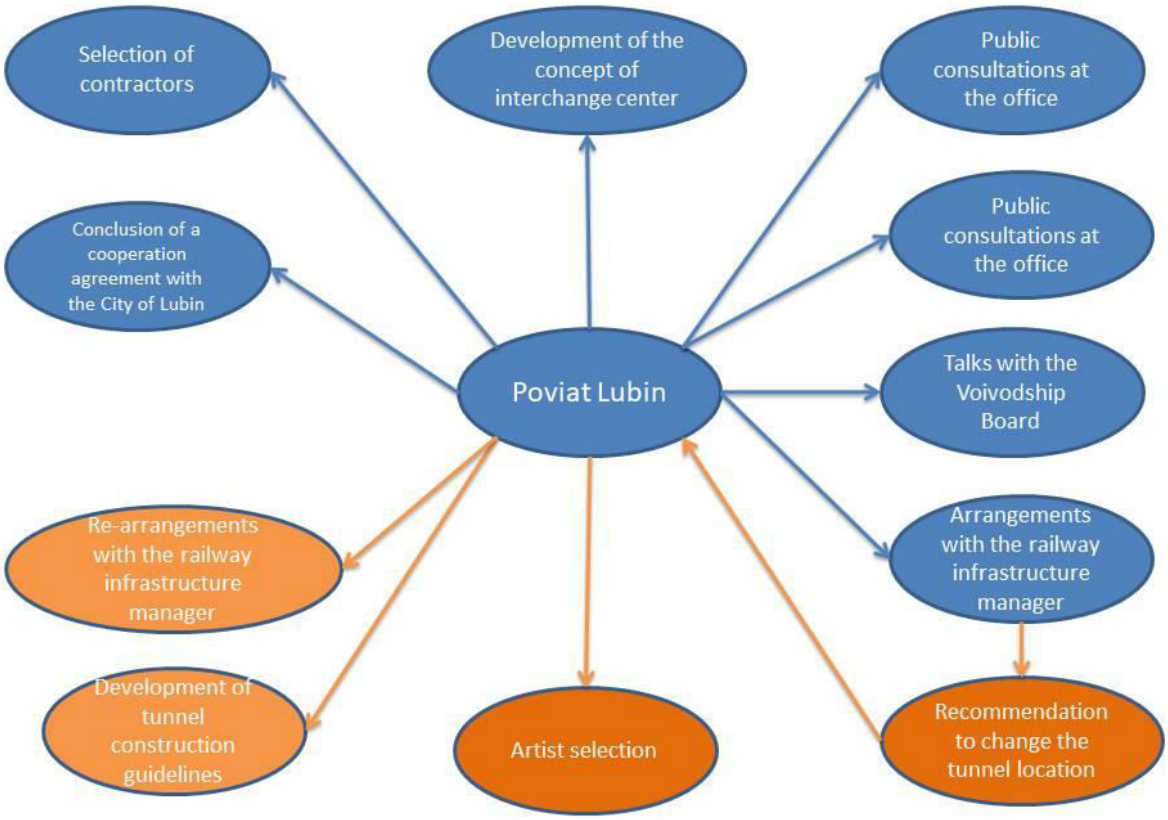


Figure 20: Performance diagram

The main purpose of the actions taken is to develop documents enabling the construction of a transfer centre in Lubin. To this end, the Lubin Poviat, following tenders, selected contractors, who developed subsequent concepts and documents enabling the further investment process to carry out construction projects and to obtain a building permit for the planned investment. The developed concepts were subjected by the poviat to numerous public consultations carried out both at the office and via local media and the website www.lubin.pl where residents had the opportunity to post their own opinions and ideas on improving the interchange centre in terms of its functionality and usefulness for a wide group travellers using different means of transport.

- At the same time, the authorities of the poviat and city of Lubin held talks at the voivodship level and the central board of the Polish State Railways (PKP) about possible tunnel locations under the Lubin station tracks and the possibilities of financing this part of the transfer centre from the central budget or the European Union's financial programs.
- The results of the talks gave a recommendation to the railway infrastructure manager regarding the change in the location of the tunnel under the Lubin railway station. The new location along Odrarzenia Street is initially accepted and the only one that can bring benefits in the form of obtaining funds from outside the budget of the Lubiń Poviat and the City of Lubin
- The products obtained as a result of these activities were described earlier in the evaluation report. Currently, the Lubiński Poviat, after conducting the tender procedure, selected the contractor and signed a contract for the development of guidelines for the construction of a road tunnel according

to the recommendations of PKP. The planned date for obtaining the guidelines, according to the concluded agreement, is the end of May 2020.

5.5.3.3. Stakeholders

Cooperation with the City of Lubin is based on the concluded contract. Ongoing arrangements are made for the materials received in terms of the possibility of developing construction projects and the implementation of the intended project. Meetings in these matters take place at the headquarters of the Municipal Office in Lubin and the seat of the Poviat Eldership in Lubin. In total, dozens of such meetings were held during the duration of the project. Their results and findings were regularly provided to everyone involved in the project depending on the stage of the work being carried out.

Together with representatives of the City of Lubin, we had five meetings with the PKP railway infrastructure manager, which were organised at the company's headquarters in Warsaw. The meetings were attended by, among others vice president of the company for railway infrastructure and representatives of the company from the voivodship level. The effects of the ongoing conversations are described above.

The authorities of the Lower Silesian Voivodship and the deputy marshal responsible for transport at the voivodship level were also involved in the implementation of the project, who supports the local authorities in talks on obtaining external funds to finance the construction of the tunnel along Odrarzenia Street. The tunnel construction guidelines submitted by the contractor were consulted with the services of the deputy marshal in Wrocław and as a result of these consultations the main directions were determined as to the location of the tunnel and ways to solve the communication system that will lead circular traffic to the tunnel and connect the interchange centre with the eastern and western parts of the city after eliminating the crossings railway on 1-go Maja Street and Stary Lubin.

Consultations with the guidelines contractor are also ongoing, as was the concept with the contractor of the interchange centre concept. Meetings are held every 10 days, and if urgent problems need to be resolved, they can be held more often.

5.5.4. Conclusions/ Policy recommendations

The project of building a transfer centre in Lubin due to its size, the number of changes in the communication system and the vast area requiring a change of the existing development of the area must be implemented in stages. Firstly, for the economic and financial reasons of the municipalities involved, and secondly, for technical reasons and the location of the project. Carrying out construction works in such a large area in the city centre will lead to communication paralysis and will bring the opposite effect from the planned one during the construction period. Therefore, the stages of project implementation should be set in such a way that:

- Each of the stages could be fully functional after its completion and could fulfil its role without the need to implement subsequent stages,
- The order in which the investment stages were carried out enabled the implementation of the next one without significant changes in the designed land development,
- The scope of each of the stages was set in such a way as to minimise communication difficulties during the implementation of subsequent ones.

As a result of numerous consultations conducted during the development of individual concepts with the road administrator in the city of Lubin and the contractor performing transport services in poviat communication, a recommended project implementation model was developed.

The first and most important element of the interchange centre is the construction of a tunnel under the tracks of the Lubin railway station and the provision of access roads to this tunnel. Only the creation of this engineering facility will allow for the implementation of the next stages of the interchange centre. For this part of the investment, the key element is to obtain final information by the end of 2020 regard-

ing the possibility of co-financing by the railway infrastructure manager or from EU programs dedicated to improving safety at intersections with public roads.

Considering the above provisions, in consultation with project participants and based on public consultations, the following stages of construction of the interchange centre in Lubin have been proposed.

The individual stages have not been intentionally numbered so as not to impose the order of their implementation. They can be carried out in any order depending on the current needs and ongoing expansion of the transfer centre as well as the financial capabilities of the poviat and municipalities involved in the construction of the transfer centre.

Reconstruction of a part of the city on the other side of the Lubin railway track Chocianowska Street together with the connection with Jana Pawła II Street and the southern bypass of Lubina and Okrzei Street, which will also be an access road to the tunnel under the railway tracks, can be carried out completely independently.

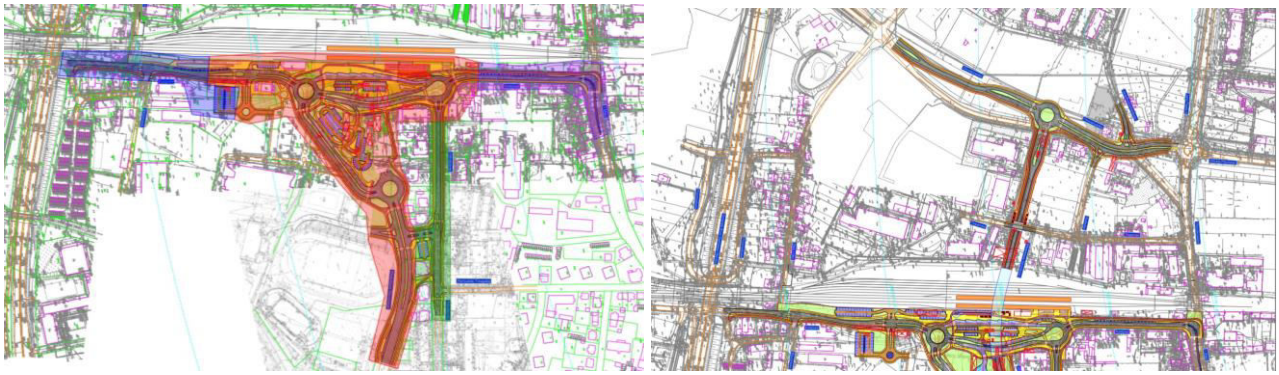


Figure 21: Additional site drawings

5.6. PP 9 – KOR

5.6.1. Description of pilot/measures and volume (costs)

Within the Peripheral Access project KORDIS has mainly targeted to the Smart governance work package but, it solved also another two important packages infrastructure and ITS issues. The aim was to consider all three work packages as a whole which can bring synergies and better results as if every work package has been solved individually.

Pilot measures were connected to smart governance issues. The main aim was: to find out new ways how to improve following issues:

- establishing of local stakeholders working group - coordination of activities and improving feed-back flow from locals to responsible bodies
- accessibility of the region by buses usable for transporting bikes (accessibility from out of the region inward the region) – specifically for tourists
- accessibility inside the peripheral region by public transport – establishing the permanent bus connection between municipalities in the Moravian and Austrian borders.
- connection of the region towards Retz and Vienna / Austria by train and accepting the South Moravian integrated tickets (improving the accessibility of the region outwards).
- new „smart“ services
- testing of new tourism-oriented services (special tourist train)
- promotional campaign - the awareness and willingness to use PT for commuting and support of tourism
- City Industry Dialogue – presentation of smart solutions on the conference to public and smart solutions specialists.

In order to assess the financial demands of the above-mentioned activities, it is necessary to distinguish which activities were realised directly within the Peripheral Access project and which follow up previous effort of KORIDS JMK and the South Moravian Region to develop cross-border public transport services.

To roughly summarise the costs, the single activities can be valued as follows:

- establishing of local stakeholders working group – two person months + low organisational costs €400 for the meetings;
- accessibility of the region by buses usable for transporting bikes specifically for tourists - the costs of operating buses for cyclists are compensated by the South Moravian Region (ca. €1,57 / 1 km), KORDIS is in charge of preparation of timetables incl. discussions with local stakeholders two to four person months;
- accessibility inside the peripheral region by public transport – as in the case above, the operating costs for buses are compensated by the South Moravian Region, KORDIS ensures conditions for bus operation and prepares the timetables - two to four person months;
- connection of the region towards Retz and Vienna / Austria by train and accepting the South Moravian integrated tickets – both actions are based on political decision. KORDIS participated in the preparation of the meetings and contracts, prepared the timetable and set up the fare and fare-rules – two to four person months;
- new „smart“ services – KORDIS developed on-line map showing all stops, positions of public transport vehicles and further features, the map was designed in-house – four person months

- new tourism-oriented services – KORDIS developed and organised a special tourist train to test the willingness and demand for travelling to the region, and simultaneously tested the cooperation possibility with organisers of local tourism in Austria – 4 person months.
- promotional campaign - the awareness and willingness to use PT for commuting and support of tourism – printed leaflets €600 + preparation (several person months), but due the COVID-19 epidemy and governmental restrictions of outdoor activities, further promotional posters have been cancelled.
- City Industry Dialogue – KORDIS organised the formal workshop / conference and informal evening with specialists - six person months;

5.6.2. Photo and status quo of pilot/measures

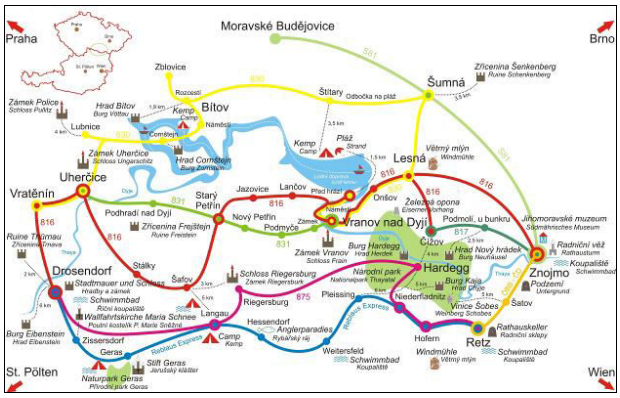


Figure 22: Map of bus and rail connections; photo of cyclobus in operation

All of planned pilot measures have been successfully performed. The new workgroup of the local stakeholders has been established. The new cyclobus lines operate, new on-demand cross-border bus connection exists, the possibility to cross the border by train with the IDS JMK ticket exist since 12 December 2019. As a smart solution the new web-based map with the real time positions of the all public transport vehicles in the region is working. New contacts with the neighbouring partners are alive and last but not least the promotion and marketing campaign continues. The cross-border activities have to be suspended due to the Coronavirus, but we are sure, that all of the activities will continue after the virus danger will be over.

All planned activities have been fully implemented. The demand for new services of the bike transportation as a result of the local stakeholders' groups is a source of ideas for future activities. The immediate implementation was not possible due to the lack of skilled drivers.

The second issue is connected to promotion. For spring 2020 both the on-line promo campaign via Google and Facebook and A1 physical posters have been prepared and planned. Due to the Coronavirus it will not be probably possible to carry out these ideas but we the leaflet campaign oriented on the whole country will be carried out instead.


Figure 23: Images of working group and special train event

5.6.3. Measuring process and performance of implementing pilot/measures

In following two sections a summary of the methodologies used for project implementation and performing results are named.

5.6.3.1. Process

Following indicators carried particular weight in the evaluation:

Pilot project stages:

- ideas and design
- human resources
- technical possibilities
- authorisation
- key activities
- tenders

Indicators:

- for ideas and design:
  - site criteria
  - finding the specific stakeholders and implementing bodies
  - needs for changes declared by stakeholders
  - needs for changes identified by KORDIS
- for human resources to find the responsible staff – very important process, shortage of staff in the Czech Rep.
- for technical possibilities
  - technical possibilities of timetable – cyclobuses and cross-border connections
  - technical possibilities of cross-border cooperation
  - financial possibilities of cross-border cooperation

- technical background for smart solutions

- for authorisation
  - agreement with the financing bodies – very important process
  - agreement with the local municipalities
- for key activities
  - agreement on the targeted results
  - coordination with other activities
  - coordination with stakeholders and decisionmakers
- for tenders: number of entries received – not important parameter

5.6.3.2. Performance

- Thematic results indicators:
  - number of institutions adopting new and/or improved strategies and action plans (1)
  - number of institutions applying new and/or improved tools and services (5)
  - amount of funds leveraged based on project achievements (0)
  - number of jobs created (FTE) based on project achievements (0)
  - number of persons trained (20 directly)
- Qualitative indicators:
  - needs of passengers and other key players determined (1)
  - new transportation services tested (1)
  - new smart services tested (1)
  - new cross-border contacts established (1)
  - identified needs for change satisfied (2)
- Quantitative indicators:
  - new working group established (1)
  - satisfaction of WG members (high – personal interviewing)
  - new cyclobus lines established (2)
  - new cyclobus lines – connections / year (60 couples)
  - new cyclobus lines users per year (200)
  - new cross-border bus connection established (1)
  - new cross-border bus connection - theoretical cross-border connections / year (730 couples)
  - amount of cross-border round tour visitors (40)
  - number of people reached by marketing campaign (2.000 - leaflets + 5.000 - leaflets + 20000 potentially - RegionTour Trade fair + 98 tourist train)
  - functionality of new web map (approx. 500 / day)

5.6.4. Stakeholders

The new long-term local working groups for transportation, cycling and tourism development has been established. It is expected that the group meets every half of the year – at the beginning and at the end of the tourist season.

It has following participants:

- Znojmo City
- Regional development agency Znojmo
- National Park Podyjí
- Vranov town
- Association of accommodation in National Park Podyjí
- Cykloklub Znojmo
- Tourist information centre Znojmo
- South Moravian Region
- KORDIS

KORDIS has called two official meetings of all aforementioned stakeholders so far. A third meeting has not taken place due to the COVID 19 epidemy, yet. The first meeting took place in order to explain existing public transport services for tourist in the Znojmo district and to introduce the idea of cyclobuses. In the second meeting, stakeholders were asked for remarks to proposed timetables of cyclobuses, their opinions on tourists' requirements on public transport and tips how to advertise the services to be offered.

As a result from the second meeting, KORDIS gained requirements to add several bus connections for cyclists however after analysis of operational aspects, these requirements could not have been met. Despite that, thanks to that meeting KORDIS got in touch with stakeholders who are interested in the public transport services for tourists and their further development. Three attended institutions from the list can be listed as key stakeholders, namely:

- Tourist information centre ZNOJMO - key partner for promotional activities,
- Cykloklub Znojmo – tourist cycling club that promotes cyclobuses among cyclists and provides feedback regarding practical experience from travelling with bicycles
- Association of accommodation in National Park Podyjí – provides requirements of tourists in peripheral border region

Contacts with these stakeholders are maintained bilaterally mostly via emails. Nevertheless, it is supposed that the meetings with all stakeholders will take place even after the project end.

5.6.5. Conclusions/ Policy recommendations

PA project and all its three main work packages have brought quite important long-lasting results which improved the accessibility and connectivity of the peripheral region around Vranov nad Dyjí with a low density of residents. The new contacts and new services have been established and they seem to be sustainable for the further years. The stakeholders from the area included in the special working group declared quite high satisfaction with the project activities and results.

Our pilot has shown:

- the interest of local stakeholders to improve the public transport services for locals and tourists
- the willingness to cooperate on new smart services
- the possibility to bring new solutions for low price

As a recommendation to EU bodies it is necessary to declare, that the lack of financial support for areas with low density of inhabitants laying close to border from both the EU and National level increases the gap between the rich regions surrounding the big cities and rural areas laying far from them.

5.7. PP 10 – Regional Management Metropolitan Area of Styria (RMSZR)

5.7.1. Description of pilot/measures and volume (costs)

In the thematic field of “Multimodality” the project partner Regional Management Metropolitan Area of Styria (Regional Management) implemented a multimodal node in a peripheral municipality of the region as a project investment and pilot activity. A measure of major publicity in the city - but also suitable for smaller municipalities in the suburbs?

Baseline of the pilot project idea was the existing concept of multimodal mobility in the City of Graz, which was developed by Holding Graz Linien (public transport operator in Graz) and the respective city-departments. The concept, developed in 2015 and funded by the federal ministry, carries the name “tim”, which represents an abbreviation of the German words “täglich.intelligent.mobil” (daily. intelligent. mobile).

The first tim-node in Graz started its operations in September 2016, succeeded by seven additional nodes by 2018. Under the working title “REGIOtim”, the roll-out of the “tim concept” into the peripheral-rural area was initiated in 2017, as a cooperation between the Regional Management, the City of Graz and Holding Graz, when the implementation of a first pilot became possible within Peripheral Access (PA).

The combination of public transport with e-carsharing, public e-car charging stations, bicycle parking and – service infrastructure, micro public transport and additional features should enhance flexible, interconnected mobility within the region and represent an affordable alternative to car ownership in accordance with the daily needs of the local population.

After selecting the suitable site within the municipality of Hart bei Graz beneath an existing P+R spot, the following components were implemented or connected to one hub:

- 3 e-car charging points
- 1 e-carsharing charging point
- 5 bicycle racks for 10 bikes
- 1 bicycle service station
- 3 small lockers
- 1 pylon
- 1 e-carsharing3
- Public transport access (existing bus-stop)
- Station of demand responsive transport system “GUSTmobil” (existing)
- P+R access (existing)

Parallel to the pilot project in Hart bei Graz, ten further municipalities submitted a project for the implementation of a tim node with the support of the Regional Management, funded by the European Union and the Government of Styria. For this reason, simultaneous activities were carried out on a regional operator model. Further information can be found at www.tim-zentralraum.at.

The costs for the investment within PA amounted to about €125,000 incl. tax. 50% belongs to the part "Infrastructure & works", 40% of the costs were for "Equipment" and 10% for “External Experts”.

[3] The purchase of the e-car "Renault ZOE" for the operation of car sharing was not funded by the "Peripheral Access" project but implemented and supported by the Styrian regional development law.

5.7.2. Photo and status quo of pilot/measures

The status quo of the investment *planning and implementation of a multimodal mobility node* covers 100% as of March 2020.

Figure 24: Status quo tim-Hart bei Graz.

Figure 15: On the 18th of December 2019 the On-the-spot-check of the Joint Secretariat of Interreg CE took place.

Figure 26: Marketing measures tim-Hart bei Graz.

5.7.3. Measuring process and performance of implementing pilot/measures

5.7.3.1. Process

The process is evaluated by a Target/Actual Comparison and then summarised in table format (see Table 2 in Section B of the Annex to this report) along the following indicators:

- Indicator & Target
- What was the target indicator?
- Process section
- How did this section the process proceed in terms of content?
- Stakeholders
- Who were the (mainly involved) involved stakeholders?
- Lessons Learned
  - What were barriers (-)?
  - What were drivers (+)?

Furthermore, the following table shows that the investment in the municipality Hart bei Graz corresponds in general with the planned intentions defined in the Application Form (AF). Only three factors could not be implemented because of different reasons:

Application Form	Actual implementation
Road construction - CPV 45.23 construction of pedestrian ways, parking spaces, roads, bicycle lanes	Since implementation was carried out on an existing park and ride space, no new roads had to be built. A connection to the bike path was not possible because no one runs along the main road, where the multimodal node is placed directly nearby.
Special construction and other civil engineering - Assembly of external steel elements - CPV 45.25 secure bicycle parking spaces and e-bike boxes	In addition to the roofed (secure) bicycle parking spaces there was no more space and budget available in order to implement e-bike boxes. Instead 3 lockers and 1 bicycle service station could be added beside the 5 bicycle racks. In addition, two trees, one bench and one waste bin were implemented.
Electrical installation - CPV 45.31 charging point for electrical vehicles	2 charging stations for 4 vehicles were implemented as planned
Special construction and civil engineering work - Manufacture of foundations, including pile foundations - CPV 45.25 info pylon	1 info pylon was implemented as planned
Road construction - CPV 45.23 marking and composition	general asphalt work was carried out as planned

Table 3: Comparison AF to actual implementation status of the investment.

5.7.3.2. Performance

Quality increasing by introducing a new mobility offer cannot measured by numbers and figures alone. Especially after a short period of time in place, evaluating numbers can only be the start of an evaluation process for the long run. But due to the short duration of the evaluation and the insufficient existing customer base, a qualitative customer survey was not conducted in the context of the project Peripheral Access. This will be carried out for the first time in autumn 2020.

The main objective for quantitative evaluation is to observe certain figures over time to get information about usage, acceptance of the system and operating costs. The results are an input for adjusting the service either by extending or reducing the offer or possibly changing contracts with contractors.

Important indicators are:

- Active customers - customers using the system constantly and paying for it
- Other carsharing users - internal personnel, service and maintenance
- Carsharing utilisation - number and duration of bookings
- Utilisation of public charging points - number and duration of charging processes and amount of energy taken

The following quantitative data analysis will be evaluated in the case of tim-Hart bei Graz in a monthly basis from sections Carsharing & Charging. For a first PA evaluation see the time frames below:

Carsharing: 1.1.2020-31.3.2020

Charging: 10.3.2020-31.3.2020

Monthly indicators of the Car-Sharing booking platform

- Number of active customers per promoter
- Number of bookings per vehicle
- Number of journeys per vehicle and their length in km
- Kilometres driven per vehicle
- Occupancy rate per vehicle in percent

By end of March tim-Hart bei Graz had five active customers. Other people with access to the system are employees from the municipality and the support team. In the following figure the number of carsharing bookings are listed along these different user groups.

Customers book their slots within the carsharing platform “IBIOLA” (see Figure 29).

One booking can count several rides / journeys per vehicle. The number of rides and kilometres driven can be seen in Figure 28.

The utilisation capacity in % can be seen in Figure 30.

Due to the short evaluation timeframe and the effects of the corona crisis, which began in Austria in March, no trend or derivation can yet be made along these figures.

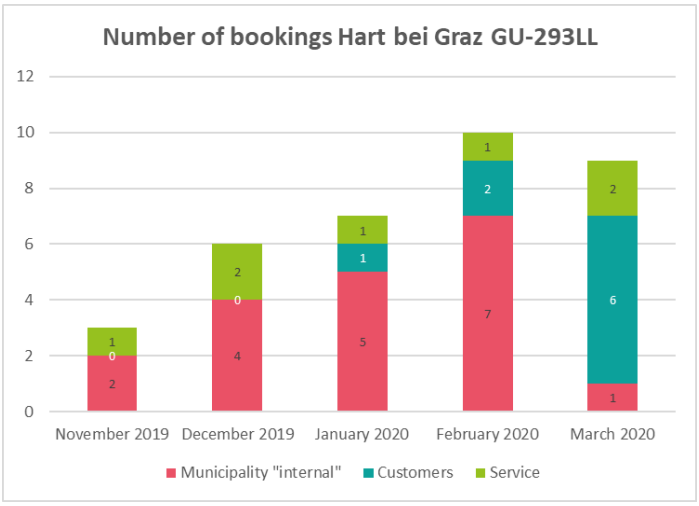


Figure 27: Number of Carsharing bookings. Nov 2019 - Mar 2020 (c) Regionalmanagement SZR

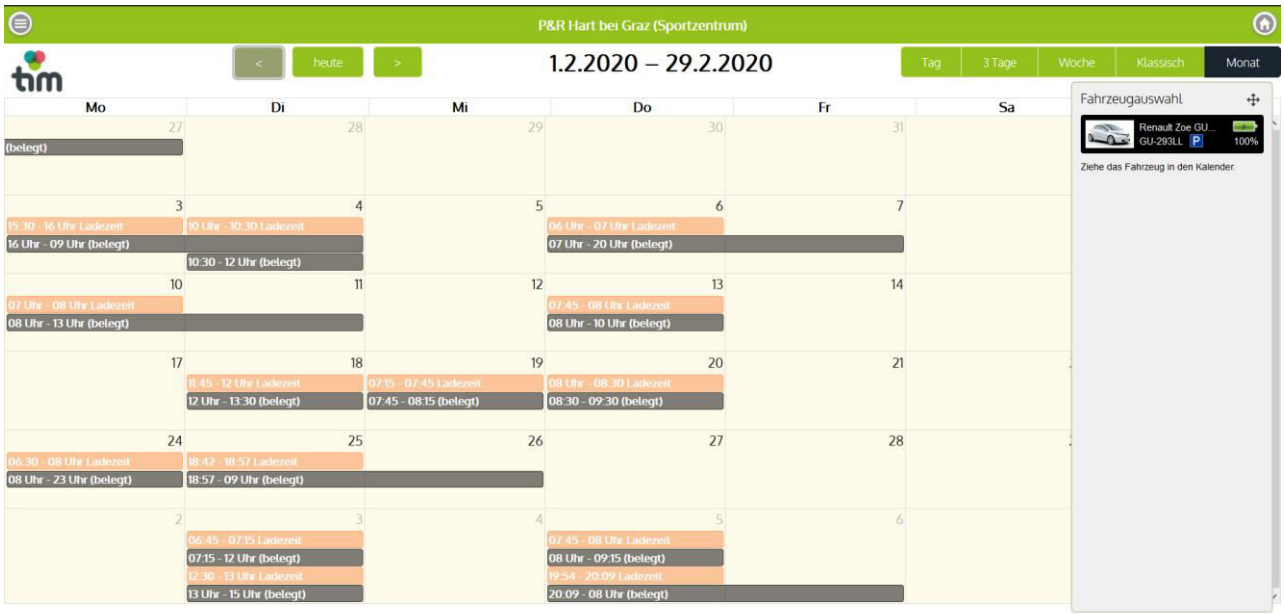


Figure 28: Booking platform "IBIOLA", booking slots in the month of February Hart bei Graz

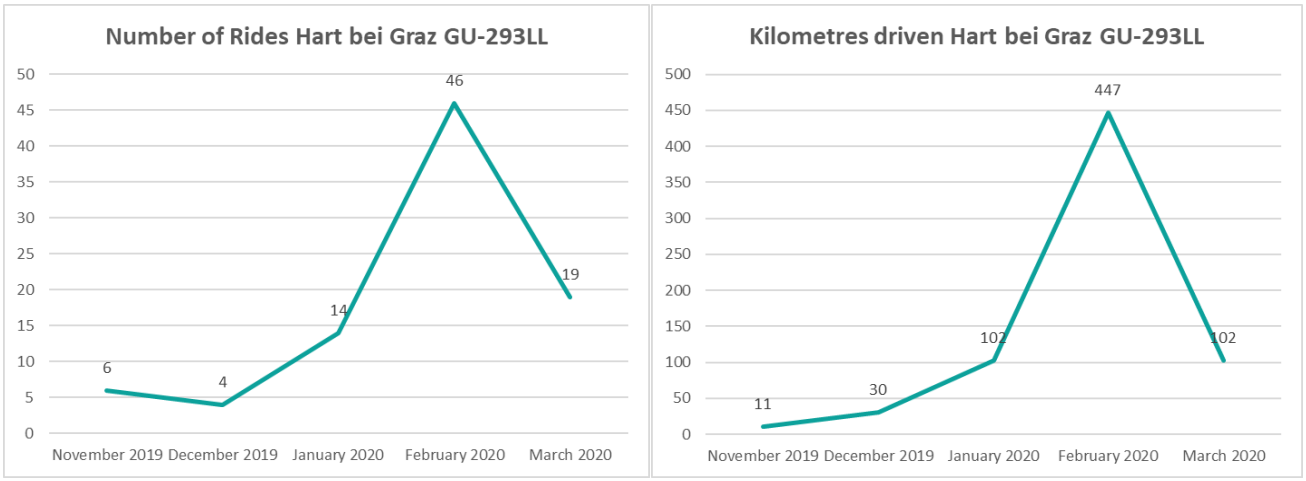


Figure 29: Number of Carsharing Rides and kilometres driven in Hart bei Graz. Nov 2019 - Mar 2020 (c) Regionalmanagement SZR

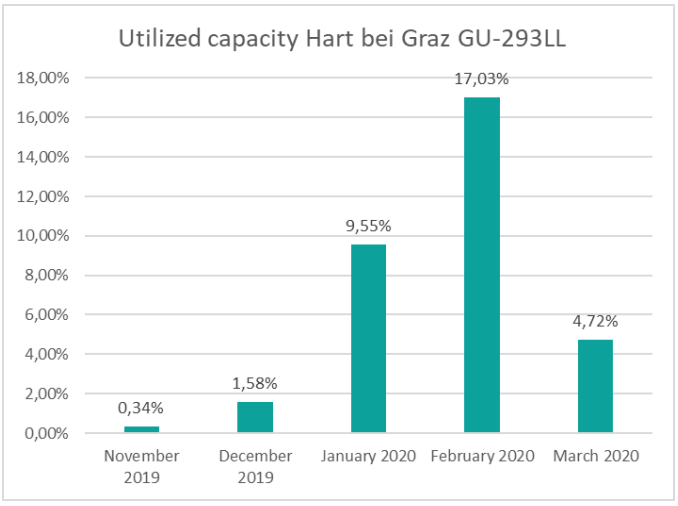


Figure 30: Utilized capacity. Hart bei Graz. Nov 2019 - Mar 2020 (c) Regionalmanagement SZR.

The monthly indicators for the three public charging infrastructure points are:

- Number of loading processes per location
- Number of charged kW/h per site-
- Total parking time without loading

Due to the fact, that of the late start of public charging at the tim-site, no data are available yet because between 10.3.2020 and 31.3.2020 nobody charged a private e-car. One reason is the situation of the Coro-na Crisis 2020.

5.7.3.3. Stakeholders

The following table describes to what extent the project partner engaged with relevant stakeholders (how often, in which format, what effects this had) and if and how the relationship changed over time.

Stakeholder	How often	Format	Effects
Municipality of Hart bei Graz Mayor, head of office, head of building	weekly-monthly		> deepened insight into communal structures
External planning company Primarily responsible for project planning and implementation	weekly		> more coordination effort than expected
External construction partners direct contact mainly with problems or billing questions, except for: Graphic agency*	monthly-rarely weekly	 	> * development of the basic structure for multimodal nodes
Province of Styria co-funding	rarely		> no significant effect
Holding Graz tim brand holder	weekly		> development of the basic structure for multimodal nodes

Table 4: Exchange with stakeholders.

5.7.4. Conclusions/ Policy recommendations

Conclusion

The promotion of multimodal mobility not only in cities but also in peripheral areas is currently an intensively discussed perspective. This is reflected in programmes at European and national level and even in initiatives of regional and local politicians. Within the framework of the Interreg project "Peripheral Access" it was recognisable along the regional activities for the Styrian Metropolitan Region that the focus on "multimodal mobility" have been set correctly. One result of the regional analysis was that there is considerable development potential in the areas of “Multimodal Mobility" and "Smart Mobility".

Even if the direct success of the pilot project in Hart bei Graz cannot yet be measured, the need for alternative mobility solutions and services is confirmed by the participation of ten further municipalities within the REGIOtim roll-out process. For the end of 2020, another municipality in the Styrian Metropolitan Region will join, and also beyond regional borders the interest grows. The possibility to expand an urban system under an existing brand brings many advantages to rural areas. The mobility behaviour in

rural areas is anyway more difficult to change than in the city. The approach of multimodal linking of different measures per se already helps to accelerate the process of changing behaviour by "unifying" and "channelling" them. To do this under a strong brand, a strong communication and a low-threshold usability can only contribute positively.

Without this possibility to cooperate with the city, the factors time and budget in the pilot project would not have been sufficient. A clear accelerator was the existing know-how of the Holding Graz Linien, the willingness to share it and to develop the adapted model for the regional sites together on eye level. This resulted in cost savings from the planning stage to ongoing operations. It must be added at this point that the implementation and promotion of only infrastructure (equipment) is the smallest and least costly part of the system. Without complementary national and regional support systems for municipalities e.g. for purchasing the e-car or develop the operator model in terms of IT technology, the pilot project in Hart bei Graz could not have been implemented.

The pilot project in Hart bei Graz provided extremely valuable insights into equipment and technical implementation knowledge, which could be directly passed on to other tim projects in the region.

All recommendations on implementation level can be found in the “Application Manual”, which should give public stakeholders and planners some hints to avoid certain mistakes or shrink some barriers within implementation projects in the fields of multimodal mobility and/or carsharing.

Derived from practical experience, the following recommendations can be made at policy level:

Policy Recommendations

Local

- More courage of politicians to test and offer innovative mobility services has to develop.
- More awareness of the issue of multimodal mobility at the municipal level and sensitivity about the perception as a provider of such mobility solutions has to build up.
- Experts should be strongly included into political decision-making processes in order to avoid misunderstandings.

National

- Develop better tools in spatial planning to keep strategically important areas free for traffic and mobility as a community.
- The topic of multimodal mobility in rural areas should be anchored even more intensively at strategic level (in mobility strategies and -plans).

European decision makers

Increasingly include innovative, multimodal mobility and the topic of Mobility as a Service in funding programmes, also for peripheral rural areas or city-regions.

6. Overall project evaluation

This section represents an aggregated summary of the findings of the project with respect to the work package theme as well as on overall project level. It can be directed to different levels of policy making or no specific level at all, as the responsible level for the changes requested may not be clear and vary from country to country. That is why this section is not country- or case-specific but focuses on the WP's theme or the overall project instead.

It is not defined at which level a change needs to happen but emphasised, which general change needs to happen. This is sometimes based on the specific findings from the pilots but also the general experiences throughout the project. There is a distinction made between the policy making field and the technical issues.

6.1. Project-wide policy recommendation – Work package level

The respective WP Leaders developed recommendations according to the three work packages as follows:

- **Work Package "Use of ITS and information and ICT for mobility services specific for peripheral areas" (Lead: VIU)**

  On the basis of pilot results and overall project activities the following policy recommendations arise:

  - There is the need to promote a revision of current regional plans and overall legislation to allow for the support of additional stakeholders in peripheral and rural areas in the development of innovative solutions by local public transport companies so as to ensure financial viability – which still represents a critical issue EU-wide. Broader governance schemes should be promoted to involve all relevant stakeholders interested in improving accessibility of peripheral and rural areas.
  - Similar needs arise about revising regulation at regional level to allow for an integration and coordination between public transport companies and other mobility operators – including taxis and chauffeurs – when providing flexible transport services in peripheral and rural areas. Remarkably, such revisions – which are needed to overcome existing constraints deriving from tendering procedures employed to assign public transport services at regional level - would shape broader governance schemes where the public sector plays a more pro-active role in fostering innovation in the field of mobility.
  - An overall revision and indeed simplification of international regulation is required to enhance cross-border mobility operations, since cross-border public transport services – albeit showing good operational synergies - are currently hindered by a variety of legislative constraints (in particular, cabotage restrictions leading to a duplication in the provision of mobility services).
  - Important communication efforts should be further promoted to change users' attitude towards innovative solutions in the field of public transport in peripheral and rural areas – going from a "waiting for the bus" to "calling the bus" paradigm. Despite remarkable communication efforts already in place, users still tend to show inertia to benefit from "flexible" mobility solutions.
  - At thematic level, the development and implementation of best-in-class "IT ecosystems" by relevant stakeholders should crucially be promoted to foster innovation in the public transport sector and ensure replicability at wider territorial level, since they represent strategic asset.
  - On-demand/flexible public transport services should be carefully designed to optimise overall performance. In particular, users' targeted categories, vehicles size, operational integration, coordination and synchronisation with traditional public transport networks should be addressed to optimise technical performance.

- **Work Package "Smart governance in peripheral areas: Cooperation and marketing" (Lead: RMSZR)**

  Improving planning and implementation processes in the field of regional transport faces complex coordination efforts and huge financial challenges on peri-rural or cross-border-level. Related partner activities within Peripheral Access showed that applying thoughtful and strategic governance structures can boost transport-planning, -implementation or -marketing projects. Adapted to different local, regional or cross-border stakeholder compositions, some proven and new cooperation approaches led to very good project results. Important findings are:

  - to create long-term-working structures to better address regular feedback flows;
  - to use agile methods supported by adjustable stage-frameworks; and
  - to set up consequent control-systems, especially when involving various interest groups.

  The following points examine some background information:

  - The cooperation of relevant political and non-political representatives from affected municipalities, cities, public institutions, transport companies mixed with involving external experts and people from relevant interest groups is crucial for the feasibility of implementation processes. Classical cooperation forms can be advisory boards or working groups with the focus on creating them in a durable and sustainable way. For long-term cooperation structures, it is important to keep interest and willingness of involved stakeholders alive by not overstraining time and financial scope.
  - A form of agile project management can be recommended when planning bigger infrastructure projects with complex stakeholder structures and unforeseeable (organisational, legal or financial) barriers in the transport sector. Designing these processes in certain stages in a functional, independent but ordered and scope-realistic way enables resilient actions. It is advisable to set up cooperation agreements as a solid foundation.
  - Within the marketing scope of Peripheral Access' activities, the main user groups addressed in pilot regions were tourists, therefore, the coordination of meetings has been adapted to timeframes of certain tourism seasons. This can be assumed as ideal in order to include substantial feedback flows and address them directly to key stakeholders as a basis for adapting activities.
  - When establishing new marketing campaigns for e.g. existing PT-routes or services it can be recommended to deal with both digital and static or analogue measures. Combining innovative, digital communication forms, especially interactive platforms (e.g. augmented reality) and videos for social media with real-life guidance elements and conventional print material will enhance people's attention.

  It is concluded that new marketing and communication approaches in the digital-age as well as the trend for multimodal, service-oriented mobility brings tremendous drivers for the transport sector in rural areas. Peripheral Access shows that some governance activities can be carried out effectively even to a certain extend on a low-cost level. Meanwhile, the reasonable development-degree of existing peripheral-rural mobility concepts and the high level of regional willingness brings projects faster to implementation phase. Implementing new infrastructure – analogue and digital – is what rural and cross-border regions need to a greater extent to be competitive with better situated urban regions. But there is still a gap when it comes to financial support for areas with low density of inhabitants which must be closed on EU and national level.

- **Work Package "Multimodality" (Lead: KTI)**

  Apart from door-to-door walking, everyday trips, e.g. commuting between home and workplace or educational institutions, are usually multimodal way of travelling, therefore cities or peripheral areas have to deal with this perspective regarding their transport systems. Multimodality provides the oppor-

tunity for inhabitants to find the optimal way of travelling, to find their optimum considering travel time and cost, comfort, sustainability and other aspects that are essential for them.

In Peripheral Access, every partner examined the potential multimodal actions (in the status quo analysis and the action plan) and every pilot project has multimodal aspects. However, the projects of Lubin and Graz had a particular focus on multimodality. In Lubin, the reconstruction of a part of the city centre was envisaged to achieve better multimodality. In Graz, a multimodal node at a hub of a P+R parking lot and a bus stop was set up. The experiences of these activities provide the primary basis of policy recommendations regarding multimodality as follows:

- The mobility behaviour in rural areas is more difficult to change than in the city. The approach of multimodal linking of different measures per se already helps to accelerate the process of changing behaviour by "unifying" and "channelling" them.
- It brings many advantages to rural areas if the expansion of an urban system can be implemented under an existing brand. Beside a strong communication, low-threshold usability can be another key of success.
- Carrying out construction works in a larger area (e.g. in the city centre) might lead to communication paralysis and might bring the opposite effect from the planned one during the construction period.
- In case of reconstructing an existing area to increase the level of service by developing multimodality, the project needs to be implemented in stages because of economic, financial and technical reasons.
- Each of the stages should be fully functional after its completion and should fulfil its role without the need to implement subsequent stages.
- The order in which the investment stages are carried out should enable the implementation of the next one without significant changes in the designed land development.
- The scope of each of the stages should be set up in such a way as to minimise communication difficulties during the implementation of subsequent ones.
- From a general perspective, the topic of multimodal mobility in rural areas should be emphasised even more intensively at strategic level (in mobility strategies and plans).

6.2. Project-wide policy recommendation and lessons learned

Peripheral Access has delivered on its promise and lead to improvements in rural public transport across all regions represented in the partnership. The overall approach – applying an existing framework, mode of operation or digital solution in peripheral areas where they will better the situation of public transport - has been successful. Most of these solutions already existed in urban areas. The project demonstrated, that this transfer is a feasible solution but must be conducted with several considerations:

- When implementing a successful transport model and transferring the approach from urban to rural areas, the concepts require adaptation. Mobility patterns, population density but also the composition of private actors involved in transport provision are subject to change and, thus, models need to be adapted. Simply implementing an innovative service unchanged while it works in an urban context does not suffice. Various ways of adapting the model design have been visible throughout the project. Actors engaging with the thought of providing their respective peripheral areas with new mobility solutions must keep this in mind.
- Marketing is key. In an environment, where people have made choices regarding their main mode of transportation a long time ago and where this is usually materialised for many years through the possession of private cars, it is not sufficient to expect users to actively seek out new offers available to

them. Instead, the actors involved in transport provision have to interact with the target groups. The marketing dimension becomes even more relevant in cases, where tourism traffic is targeted, making up a relevant fraction of the overall transport volume along a selected connection.

- Integration into an existing network is crucial. New offers are usually increasing the range of options available to public transport users in peripheral areas and they are placed in a location that has previously not been sufficiently serviced. In order to maximise the use of these interventions, the integration into the already existing public transport network has to be ensured. Parallel booking, payment and schedule systems, working through separate platforms and access points will increase entry barriers and hinder users to profit from a new offer.
- Innovation can be “informal” but continuity needs to rely on official legislation and financing. Many innovations in rural transport provision build and rely on a mutual agreement, support from cross-sector, cross-border or cross-administration boards or some sort of working group. The establishment of these networks does not always happen within a formalised framework. Instead, their exchange and cooperation are often based on good will, yet decisive in successfully implementing a pilot. However, as projects, initial financing and pilot studies come to an end, funding and administrative agreements have to be ensured, providing a long-term prospect with sound legal and financial basis. Otherwise, good examples and pilots remain subject to political good-will. As most of these measures are relevant on a regional level (sometimes involving territories of two or more national states) and thus concerning the European domain, the EU should provide the means to ensure continuation. With regard to the cross-border context, one legal instrument is already in place but the provision of funding for measures in these areas is still insufficient, especially in comparison to the budget available to activities in urban areas.
- Rural transport needs more funding. As digital a solution may be, as small the vehicle may be or as much as private companies’ involvement is ensured - in the end, user numbers will remain far below the volume generated in urban areas. Yet, it is not the absolute increase in user numbers which define the success of a new mean of rural transportation. It is the fact, that an option has been given to residents in rural areas whereas before, no or insufficient alternatives have been available. Municipalities and public transport providers must acknowledge this fact and provide sufficient funding to turn successful pilots into starting points for regional strategies.
- Horizontal and vertical cooperation is necessary. New transport solutions in rural areas often apply to a wider regional context, involving multiple actors and levels of administration. The intercommunal actors such as transport associations or regional agencies in particular play a vital role and should receive greater recognition and better funding.

7. Overall conclusions and summary

Interreg projects provide a good framework for analysing problems of general relevance and for testing solutions by way of models or pilots. By providing European funding, the projects also have a lower financial risk during implementation, can facilitate the transfer of their experience in other partner regions through thematic and technical exchange and offer the opportunity to communicate successful approaches to the political arena and on a European scale.

This evaluation report has shown that with the help of a jointly developed framework as a guide, it has been possible for a number of very different pilot projects and thematic activities to be assessed individually and reviewed from an overall perspective, allowing for better comparability and replicability.

The existing three thematic work packages provided the framework in itself for developing wider policy recommendations that draw from the work of all project partners. In the spirit of Interreg, collaboration and cooperation were key to this process.

All of the pilot actions and regional activities have made it clear, that mobility in rural areas faces two fundamental challenges:

- Adequate access solutions have not been found or implemented in the majority of peripheral areas in Europe so far.
- While urban solutions can be transferred to the surrounding or peripheral areas, they must then be carefully adapted to the local conditions. This is both a technical as well as political challenge.

The project has successfully addressed both dimensions over the course of the project period. However, more needs to be done at all levels of governance to ensure such pilots can be replicated and to ensure suitable strategies are put in place that provide guidance and facilitate cooperation in the long term.

8. Annex

A: Further images for 5.1.2. Photo and status quo of pilot/measures (ZVV)

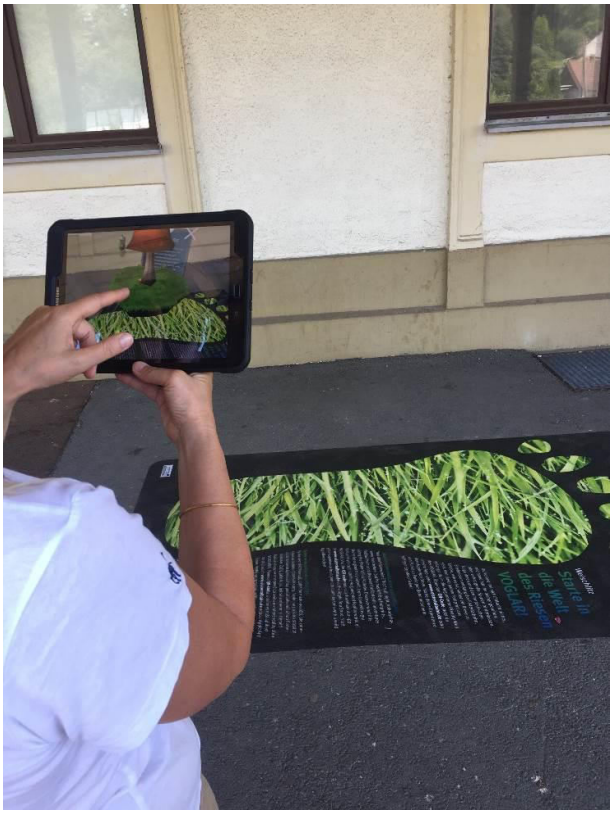
Guiding System

Logo “Voglar”

Presentation of the guiding system at the project advisory board 2019

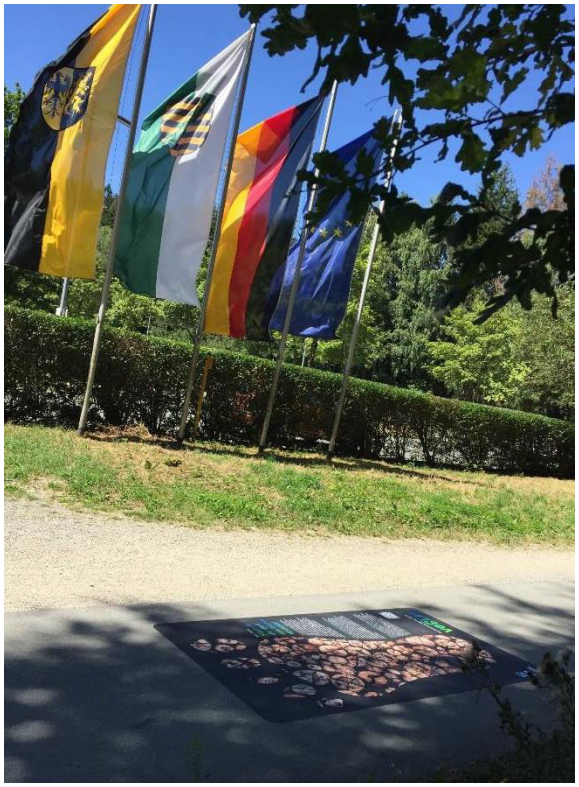
Showing size of previously used floorgraphic (length approx. 1.90 m)

Floorgraphic at the train station “Weischlitz”

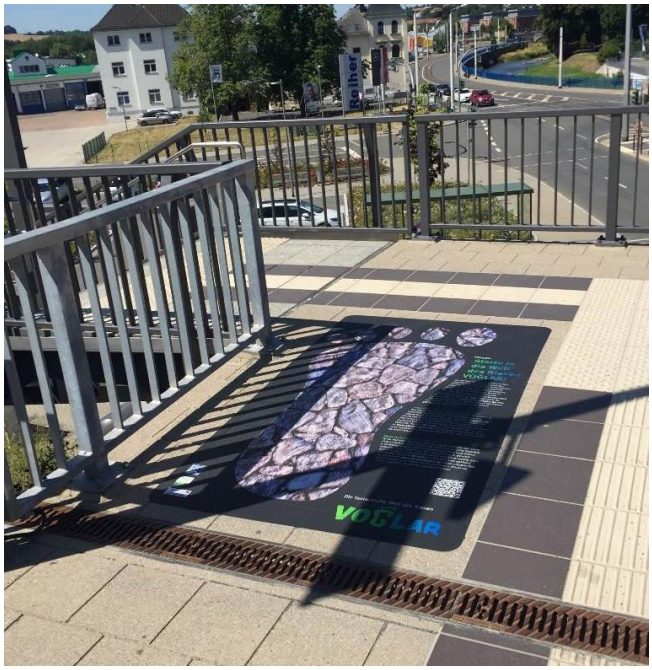


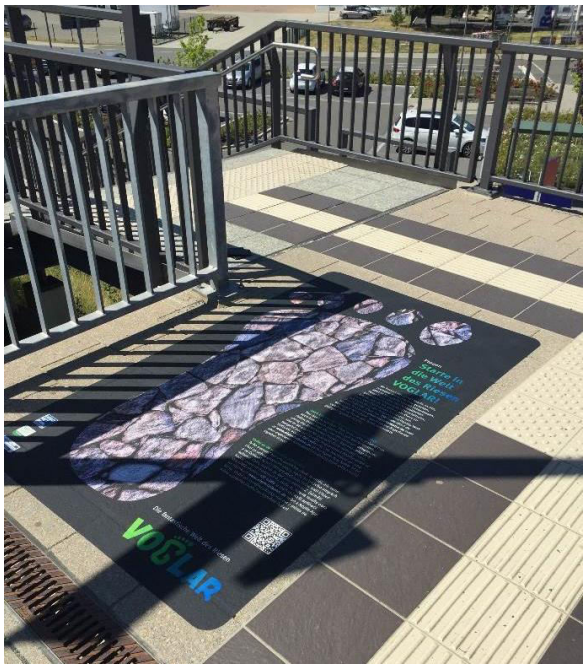
Floorgraphic at the train station “Bad Elster”

Floorgraphic at the parking lot in “Bad Elster” and a guiding sign in the forest

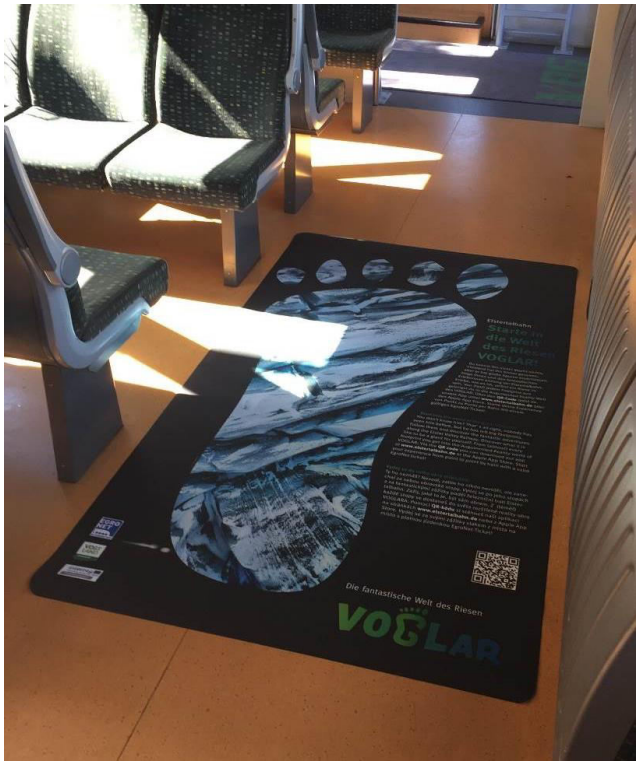


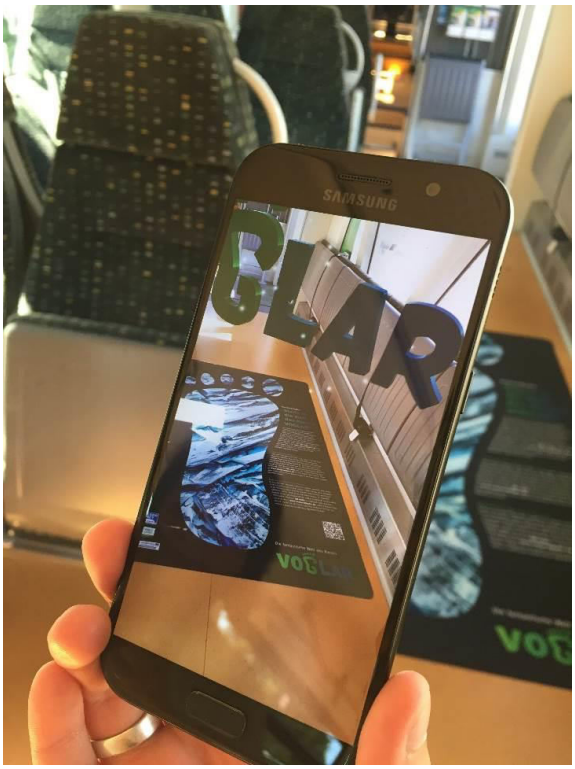
Floorgraphic at the train station “Plauen Mitte”





Floorgraphic in the train of the “Vogtlandbahn”





Marketing measures for the project & the guiding system

YouTube contribution on "TV West Saxony" to the guiding system

Advert in the ZVV customer magazine, "Vischelant"

Articles in the daily newspaper “Freie Presse” about the commercial clip about the project route

PLAUENER ZEITUNG — Freitag, 12. Oktober 2018

Vogtland-Videoclip wirbt für brückenreichste Eisenbahnstrecke

Der Verkehrsverbund Vogtland will seine Fahrgäste über Emotionen packen. Ein neues Video macht Lust aufs Zugfahren – und setzt einen Superlativ der Region in Szene.

VON NICOLE JÄHN

Schon in Stimmung für eine Zugfahrt? Der Verkehrsverbund Vogtland erzählt in einem neuen Mini-Film von Natur und Viadukten im Elstertal.

Tino Peisker, Filmemacher

PLAUENER ZEITUNG

Neuer Werbefilm soll Reisenden Lust auf das Vogtland machen

Schön anzusehen, mit Vogtland-Motiven beklebt, ist seit kurzem ein Teil der Vitrinen im Durchgang zu den Bahnsteigen des Oberen Bahnhofes. Die Schönheiten der Region werden den Besuchern aber noch auf andere Weise nahe gebracht.

VON PETER ALBRECHT

Etwa zwei Wochen lang läuft in der Halle des Oberen Bahnhofs ein Werbefilm über das Vogtland. Marco Lukat, der das Projekt mitgestaltet hat, stellte gestern den Streifen vor.

Article in the daily newspaper “Freie Presse” about the guiding system

Kreative Tourismus-Werbung: Auf Riesenspuren durchs Elstertal

Im Mittelpunkt des neuen Projektes steht die Elstertalbahn. Ziel ist es, mehr Fahrgäste in die zwischen Gera, Greiz, Plauen-Mitte und Eger verkehrenden Züge zu locken – auch mithilfe einer Märchenfigur.

VON PETER ALBRECHT

Diese Fußmatte mit dem großen Fußabdruck im Bereich des Bahnsteigs in Plauen-Mitte ist Bestandteil der neue Werbekampagne.

Adverts on the project route for use on social media and print media

B: Further images for 5.2.2. Photo and status quo of pilot/measures (VIU)

A video of the bus service is available at: https://www.youtube.com/watch?v=96ZPaa9su_s

C: Table 2 for section 5.7.3.1: Measuring process of the investment Hart bei Graz

Indicator & Target	Process section	Stakeholders	Lessons learned
What was the target indicator?	How did this section the process proceed in terms of content?	**mainly responsible (bold)** further involved actors	What were barriers (-)? What were drivers (+)?
Site-selection (D.T1.4.1) Selection of one location for planning and implementation of the multimodal node. **Indicator** "one positive council decision of a pilot municipality with a suited investment site" = 100% fulfilled **End date (AF):** 09.2017 **End Date (Actual):** 03.2019 (+18 M)	From March to October 2017 a regional analysis of suitable municipalities for multimodal nodes was carried out in the metropolitan area of Styria (ERDF/ IGJ funded). Based on the site criteria elaborated within this analysis the municipality of Kumberg in the district Graz-Umgebung was chosen to be best suited for the PA-investment. Although a commitment from Kumberg was already evident, the decision of the municipal council from 20.09.18 was against the participation as pilot area for the following reasons: "The majority has the opinion that it is not the task of the municipality to invest in higher grid supply for the construction of e-charging stations whilst the e-industry will ultimately profit from this. Also, they doubted the demand for operating an e-car sharing." The decision against the investment of the municipal council was an unforeseen decision. After this message the Regionalmanagement prepared the quest for an alternative site. The opportunity was presented at the regional assembly meeting on 19.10.18. Six municipalities communicated their interest. The potential could be checked and ranked very quickly along the existing regional site analysis (see details in Application Manual). The municipality of Hart bei Graz emerged as the one with the highest potential because of high population density, good accessibility by foot/bike, good visibility, sufficient grid power and a property owned by themselves (existing P+R). On 21st of March 2019 the municipal council unanimously decided to participate in the project, so that the site selection could be completed: Pachern Hauptstraße 94, 8075 Hart bei Graz (47°02'42.0"N; 15°31'14.8"E)	**Regionalmanagement GmbH** Municipality of Kumberg (Mayor, head of office, council) Province of Styria Regional Assembly Metrop. Area of Styria Municipality of Hart bei Graz (Mayor, head of office, council)	– Mediation of the EU directives difficult – language in AF too high-brow/technical for pilot municipality (excessive demand) – long-lasting decision-making processes in municipalities – Communication between mayor and local council insufficient (not well informed) + The fast access to the existing location analysis to select a new municipality. + Regional structures and channels like the regional assembly.
Contractual agree-	As described in the application form (p. 76), a contract should be concluded	**Regionalmanagement**	– Not in line with Inter-

ment with site owner (D.T1.4.2) Contractual agreement with the site owner regarding the sustained maintenance and operation of the multimodal node. **Indicator** "one agreement" = 100% fulfilled **End date (AF):** 12.2017 **End Date (Actual):** 03.2019 (+15 M)	between the landowner (Municipality) and the investor (Regionalmanagement GmbH) within the project. "The municipality of the location […] owns the site, also after the end of the project. The durability of the investment is guaranteed, since sustainable structures and funding will be established as a PPP model (see Application Manual) during the project together with the relevant municipality as the owner, the relevant transport and energy companies, the Province of Styria and the Regional Management. Together they will ensure the maintenance of the investment. Therefore, a cooperation agreement will be signed." (see AF, p. 76) Since the operation cannot be separated from the infrastructure, it was the plan from the start to transfer ownership rights of the infrastructure to the public operator and landowner at the end of the project. The durability requirements are still adhered to as required as described in the agreement. With the help of the assoc. partner, Province of Styria Dept. 16 transport and building, the Regionalmanagement adapted an existing model contract for Park and Ride spaces to the needs of the investment of a multimodal node and finished it in period 3. The agreement includes the subject matter of the agreement, the acquisition of the rights, the costs, the period of performance, the usage, the system description, the operation and service, the form specification, the copy, the legal succession. The contract was discussed and afterwards signed within the council meeting of the municipality of Hart bei Graz on 21st of March 2019. The Regionalmanagement signed it on 16th of April.	**GmbH** Municipality of Hart bei Graz (Mayor, council)	reg CE program durability rules although described in AF. + Early involvement of the Interreg CENTRAL EUROPE Joint Secretariat in the process. + Good instrument for clarifying the different responsibilities.
Site-specific detailed	The Regionalmanagement procured the detailed planning to an external plan-	**External planning compa-**	– One charging station has

planning (D.T1.4.3) This planning phase includes detailed conceptual- and equipment planning, legal procedures, submission and execution planning. **Indicators** "One detailed plan with a positive notification from building authority" = 100% fulfilled **End date (AF):** 12.2018 **End Date (Actual):** 08.2019 (+8 M)	ning company "verkehrplus" on 16th of April 2019 along the following tasks: General planning, detailed calculation, procurement of implementation, local construction supervision, coordination corporate design/illustration, implementation support and evaluation. Landowner of the site for the investment is the municipality of Hart bei Graz. Building client and investor is the Regionalmanagement GmbH. The submission plans where elaborated from verkehrplus in close cooperation with the municipality. According to the Styrian Building law [Stmk. BauG § 20], the investment is a notifiable project [Stmk. BauG § 33] because *construction, modification or expansion of parking spaces for more than two motor vehicles* were undertaken. The Regionalmanagement has reported the construction project to the municipality as building authority. There were no prohibition reasons and no further approval process was introduced. On August 28, 2019, the Regionalmanagement was awarded the *building notification* [Baufreistellung] according to granted permission to set up the investment on the community plot KG 63255 Messendorf, based on a unanimous municipal council decision. The indicated project was considered approved from delivery of the notification. After the positive notification the external planners coordinated the procurement of the construction companie(s) for the main building work, energy provision, illustration, steel manufacturer and electrician. The planning team gave the Regionalmanagement recommendations for the award of contracts for each service (based on comparative offers) which was commissioned. During the construction phase, the certified planning company carried out three construction meetings and ensured that the implementation was carried out in accordance with all regulations. The Regionalmanagement sent the *completion notification* [Fertigstellungsanzeige] to the municipality of Hart bei Graz on February 4th, 2020 in order to officially finalise the investment.	**ny "verkehrplus"** Municipality of Hart bei Graz (Mayor, head of office, head of building) Regionalmanagement GmbH Graphic agency "achtzigzehn" Building company "Swietelsky" Steel company Regional Power supply company "Energie Steiermark" Electric company External technical consulters Province of Styria	two charging points each. Longer coordination was necessary to find a suitable technical solution for separate billing of two charging stations, whereby one charging point (car sharing) is to be considered separately and the other three charging points (public charging) as well. + Easy decision process because landowner and building authority was municipality at the same time. + Sufficient power grid directly beneath the places for 2 e-power stations. + Fast draft creation of adhesive labels for all components based on the umbrella brand "tim" because already available.

Marketing measures (D.T1.4.4) Accompanying marketing measures to attract potential users of the multimodal node via 5 articles in regional online and print media. **Indicators** "5 articles in regional online and print media" = 100% fulfilled **End date (AF):** 06.2019 **End Date (Actual):** 03.2020 (+9 M)	Marketing Measures can be divided in two parts: 1. Regional measures along the tim brand manual: Since the implementation of the pilot project in Hart bei Graz was immediately followed by other tim-locations, the Regionalmanagement raised some marketing measures to the regional level in order to create added value for all. These included the production of a regional tim-folder and the creation of tim-advertising material (e.g. roll-up, pens, seminar folders, refreshing towels). The implementation is not part of the Peripheral Access project but was supported by a regional accompanying project within the framework of the Styrian regional development law (StLREG). Since all tim-projects in the region are supported by different funding programmes (Interreg CE, EFRE/IGJ, StLREG, Province of Styria) the regional marketing measures were of course based on the respective publication guidelines. 2. Local measures "Peripheral Access" in local media: Several marketing measures about "Peripheral Access" and the investment took place on local and regional level: **Events (2)** • Citizens' Dialogue on EU Regional Policy, holding a presentation about the project "Peripheral Access", March 2018 • Civitas Forum 2019 in Graz, Leading an excursion group on multimodal nodes, October 2019 **Regional newspapers (2)** • Article about Hart bei Graz being part of Peripheral Access, Die Woche, April 2019 • Article about the Peripheral Access Consortium Meeting in Graz, Die Woche, Site Visit, October 2019 • Article about the Opening of the node, Die Woche, November 2019	**Regionalmanagement GmbH** Municipality of Hart bei Graz (head of office, head of building) External operation company (prime mobility) Graphic agency "achtzigzehn"	+ Availability of templates, text material and designs along the umbrella brand "tim" accelerated the process.

	Community newspaper (2) • Residents' info on the opening, community newspaper, November 2019 • Residents' information on current operations, community newspaper, March 2020 **Homepage of the municipality Hart bei Graz (1)** Project page **RMSZR Homepage (5)** • Contributions to the investment or the project in general under "News", ongoing & Project Page **RMSZR Newsletter (1)** Article about the investment, November 2019 **RMSZR Facebook (10)** Posts about the investment or the project in general		

Construction and design of the multi-modal mobility node in the area around Graz. (D.T1.4.5) Implementation of a prototype-multimodal node in a rural area with recognisable elements of different forms of mobility, which meet at a public transport hot-spot and cover demand-oriented needs. **Indicators** "1 prototype-multimodal node" = 100% fulfilled **End date (AF):** 06.2019 **End Date (Actual):** 11.2019 (+5 M)	The construction phase lasted from 2nd of October until 6th of November. In total four construction meetings took place at the investment site where the quality and correctness got reviewed and documented by the certified planners. Only two elements of the multimodal node could not be finished within this period (bicycle service station & lockers) but on the 18th of December 2019. That means that the investment is fully equipped and working since then. The implementing activity started with the contracting of a general contractor responsible for all civil engineering works and the steel construction and separately contracting, grid operator, electrician and advertising agency. Coordination between these companies and scheduling of the construction was done by the construction supervision verkehrplus. This was necessary due to the unsolved matter of charging infrastructure (see details in Application Manual). The result was a try and error process over the implementation period to get the know how to define clear requirements for such constellations. Parallel to solving these matters, construction took place and was supervised by an external planning company. The progress and necessary adaptions were documented. Once all decisions had been made, the charging poles were ordered, delivered and installed by the electrician. One week prior to the official opening, the charging poles were put into service by the manufacturer and the grid operator. Pavement marking and the labelling of all elements were the last steps in the implementation activity. The official opening took place on the 08. November 2019.	**External planning company** Regionalmanagement GmbH Municipality of Hart bei Graz (Mayor, head of office, head of building) Graphic agency "achtzig-zehn" Building company "Swietelsky" Steel company Regional Power supply company "Energie Steiermark" Electric company	+ Involvement of an external planning company who coordinated the implementation from A to Z – There was an unclear structure and knowledge about the planned operating model to suppliers of charging infrastructure.

Report on Implementation and testing of a multimodal mobility node in a selected peripheral area of Styria (D.T1.4.6) Derivation of results out of an existing analysis in central Styria in order to provide a transparent manual with general applicable recommendations about planning and implementing peripheral-rural multimodal nodes. **End date (AF):** 10.2019 **End Date (Actual):** 04.2020 (+7 M)	The "Application Manual" sums up the planning and implementation process of the multimodal node in the municipality Hart bei Graz, shares lessons learned and recommendations for public stakeholders dealing with similar issues along the following chapters: ▪ Site selection ▪ Market analysis ▪ Planning and equipment ▪ Implementation ▪ Operation model ▪ Evaluation The manual was developed in cooperation between Regional Management, the transport planner "Verkehrplus" and the company responsible for regional tim support and operations "Prime Mobility Consulting". Thus, the experiences could be collected from strategy, planning and implementation to operation. The recommendations contained therein are directed at the implementation level to those stakeholders who are planning similar projects. The policy recommendations can be found in chapter 5.7.4.	**Regionalmanagement GmbH** External planning company "Verkehrplus" External tim Support Company "Prime Mobility Consulting"	+ The system around "tim" represents a very special, interwoven and new kind of cooperation between the city and the surrounding area with many stakeholders. Nevertheless, it has been possible to derive generally applicable recommendations.

Table 1: Measuring process of the investment Hart bei Graz.

D: Website, social media and contact information

Project website

https://www.interreg-central.eu/Content.Node/Peripheral-Access.html

Social media channels for the project

https://www.facebook.com/periaccess/

https://twitter.com/periaccess

https://www.linkedin.com/company/peripheral-access/

https://www.youtube.com/channel/UCpZwYJjZ7LQ8F5BI1LsOyHQ

Partner contact details

Zweckverband ÖPNV Vogtland (Authority for local public transport Vogtland)

Göltzschtalstraße 16, 08209 Auerbach, Germany

www.egronet.de

Contact: Kerstin Büttner, k.buettner@vvvogtland.de, +49 3744 83020

Venice International University

Isola di San Servolo 1, 30100 Venezia, Italy

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Contact: Marco Mazzarino, marco.mazzarino@univiu.org, tedis@univiu.org, +39 041 2719511

Trieste Trasporti S.P.A. (Trieste Trasporti P.L.C.)

Via dei lavoratori 2, 34144 Trieste, Italy

www.triestetrasporti.it

Contact: Michele Scozzai, michele.scozzai@triestetrasporti.it , +39 040 7795336

Regionalna razvojna agencija Ljubljanske urbane regije (Regional Development Agency of the Ljubljana Urban Region)

Tehnološki park 19, 1000 Ljubljana, Slovenia

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