

LEARNING FROM SUBNODES

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1. Objectives of the project

SubNodes tackles the weak intermodal integration of peri-urban hinterland regions to primary TEN-T rail hubs. Suitable medium-sized cities in these areas shall be developed into attractive intermodal secondary hubs - so called “subnodes”- which better connect the hinterland to the TEN-T rail network and offer passengers a continuous travel chain. Partners from six central European countries implement the project SubNodes: Germany (Thuringian Ministry for Infrastructure and Agriculture ,Lead Partner; University of Applied Sciences Erfurt; County of Sömmerda), Czech Republic (KORDIS JMK “Integrated Public Transport in the South Moravian Region), Italy (Lombardia Region), Poland (Marshal’s Office of the Wielkopolska Region), Slovakia (Bratislava Integrated Transport), Slovenia (Institute of Traffic and Transport Ljubljana l.l.c.).

Within the project’s duration of three years, partners strive towards a change in the approach of public transport planning. In this sense, the development of subnodes is an instrument to better exploit accessibility gains also in the hinterland. An important goal is also the promotion of public transport among residents living in peripheral areas. The project envisages the implementation of innovative and pilot instruments, including introducing a system of modern and effective management by public transport organizers. The project intends to establish the subnodes approach in the participating regions and beyond by adopting a SubNodes-strategy, conceptualizing its implementation and testing innovative actions in real world conditions. Policy recommendations derived from this process are integrated into the transport plans of the regions. TEN-T infrastructure significantly alters the transport network in the regions affected. Hierarchies of destinations change and along with it locational advantages. Medium-sized cities in the surroundings of primary hubs gain importance for the connection of the secondary transport network with TEN-T. A joint strategy of the partners formulates basic principles on how regions should adjust their passenger mobility policy to better respond to these new opportunities. This basic strategy is translated into the regional context of the participating regions and displayed in the action plans. Rooted in the Territorial Agenda 2020, SubNodes is a strategic approach to promote polycentric development in the public transport sector considering changing settlement patterns and locational advantages due to major investments in TEN-T. The development of subnodes on a transnational level is an instrument to better exploit accessibility gains also in the hinterland, therefore SubNodes’ transnational added value is to enhance the effects of the transnational TEN-T infrastructure.

The project envisages the implementation of innovative and pilot instruments, including:

- introducing a system of modern and effective management by public transport organizers,
- implementation of innovative passenger information systems,
- harmonization of timetables in intermodal transport nodes,
- introduction of incentives and pricing strategies to increase the share of public transport,
- preparation of recommendations for changes in regional transport plans.

Public transport services in rural and remote areas in general concentrate on the provision or the maintenance of service for the general public. Within the planning process, financial and organisational aspects are the main issues. In countries where transport provision in rural areas more or less is public service, it is common that groups are targeted, which represent people with mobility disadvantages: usually elderly people or people with disabilities, children or poor people. This is the case in nearly all countries of the EU. Transport service in rural areas is more understood as a service of public interest and less as a competitor in a market together with private motorized transport. Thus, attracting new target groups in order to maintain the service is in part underdeveloped and measures to attract new target groups seldom present. The exception are tourist regions or districts that aim at developing their tourist potential. There are quite a few efforts to attract tourists of all kinds for public transport not only to



support the tourism sector in the region but also to use their potential as passengers to sustain or even improve the public transport services.

2. Pilot/project preparations

2.1. Stakeholder involvement

Public transport is a cross cutting topic with a variety of stakeholders responsible for certain aspects of the transport chain. Therefore, all those actors not represented as partners, but relevant for the sector, are involved and integrated into the implementation. In the course of three regional events each, the SubNodes-strategy, the respective action plans and their integration into regional transport plans were discussed. Moreover, three transnational events for partners and key stakeholders are conducted to facilitate mutual learning on transnational project level, covering the three topics addressed by the pilots and action plans in all participating regions. The new strategic subnodes approach calls for explanation, awareness and persuasion. Hence, project partners address the diverse target groups individually. These stretch from political decision-makers, planning authorities, transport operators and associations, up to today's and tomorrow's passengers. Varied means of communication integrate them into the project, such as a policy conference, a photo competition and Facebook campaign, pilot action and videos.

Below three examples of stakeholder's involvement:

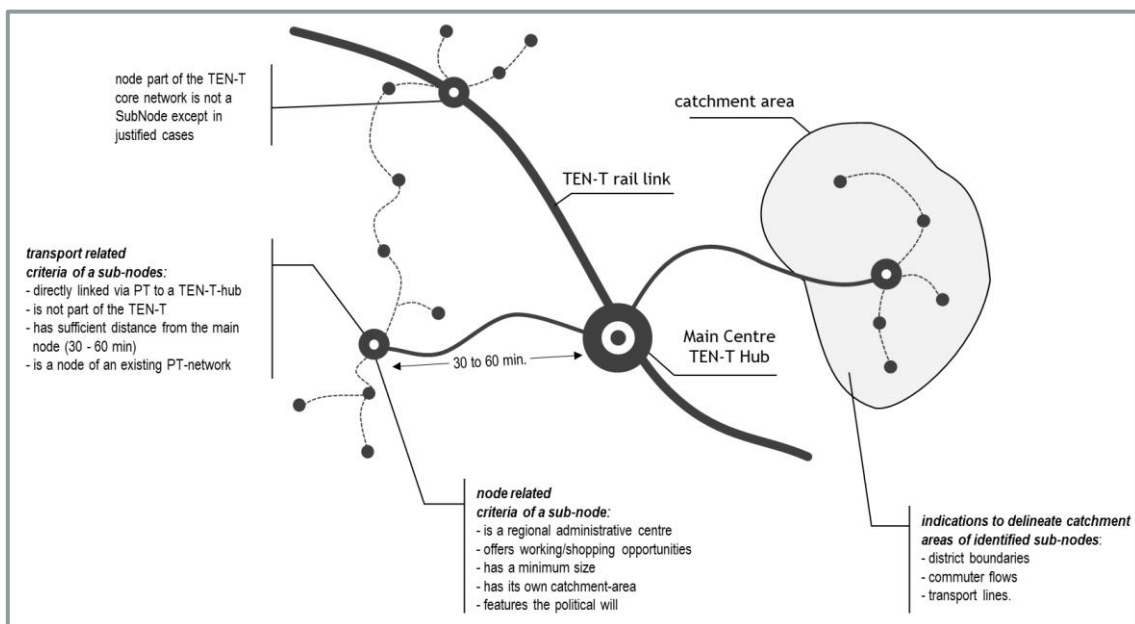
- The key stakeholders in the case of Pilot Action in the Wielkopolska Region were decision-makers: representatives of the local administration (Mayor of Wągrowiec, Head of the Wągrowiec County), representatives of the local bus transport organizers (from the municipality of Wągrowiec and the Wągrowiec County, from the town of Poznań), representatives of the regional train company (Koleje Wielkopolskie) and IT specialists in the field of transportation. Several meetings, mails as well as many phone calls with them were conducted.
- In the case of PA conducted by KORDIS JWK there were extensive discussions on routing of bus lines, which had to be reorganized in connection with the establishment of the train line, timetables, transport children to schools and whether the connections would be direct or with a transferring the preparation of the timetables. The changes were discussed with following stakeholders: affected municipalities, Židlochovice residents and representatives of the South Moravian Region. During the preparation of new timetables, the changes were consulted with the public on-line and per mailing. Information about the changes has been discussed three times in the working group with transportation specialists and decision makers. The final workshop has been attended by public. All changes were announced in an informational leaflet which has been delivered to citizens together with municipality news.
- Regarding the County of Sömmerda many meetings were conducted on the level of policymakers (the County and the Regional Administration) and with a headmaster of the "Albert-Schweitzer-Gymnasium" in Soemmerda. Scientists from The University of Applied Sciences in Erfurt were also involved in preparation of new integrated timetables. Local bus carriers (VWG Sömmerda), train operators in the region (Abellio Rail Mitteldeutschland, Erfurter Verkehrsbetriebe AG), the Thuringian Infrastructure Ministry as well as the local transport Association nearby (VMT - associated partner) were informed about the SubNodes video project by mails and/or calls. The SubNodes video focused on the integrated interval timetable as future framework for the local transport system More than 100 enterprises in the region were also informed about the PA by direct mailing letters.



2.2. Methods and technologies

As the SubNodes strategy emphasises, there are three perspectives, from which partners were able to tackle the task of establishing sub-nodes as supplement hubs within the TEN-T:

1. The city as a hub in a wider network of villages and cities of the region and beyond.
2. The transport infrastructure within the sub-nodes, especially an existing train station and whether the station already qualifies as an intermodal hub for public passenger transport or needs particular modification to better fit the needs of the passenger.
3. The quality of the transport network and the reliability of public transport service, which connect the hinterland with a sub-node and the sub-node with the main TEN-T hubs. Taking this place related aspects and transport related aspects of a sub-node into consideration, we are able to distinguish the criteria for the identification of central places in the region into exactly these two classes: a) node-related criteria and b) transport-related criteria as it is shown on the figure below:



1. Figure Transport-related criteria

The identification of cities, which are qualified as subnodes is one of the first steps for implementing the project. With the knowledge about the cities, we are focussing on, we are able to improve the quality of connections and infrastructure between main-nodes, subnodes and the hinterland. This could be done via a two-step process: first by the identification of shortcomings, like missing links or a poor quality of services, and second through the recommendation of well-adapted measurements to establish new connections out of the hinterland to the identified subnodes as well as actions to improve the quality of services. There are three perspectives, from which we are able to tackle the task of establishing subnodes as supplement hubs within the TEN-T network:

1. The city as a hub in a wider network of villages and cities of the region and beyond.
2. The transport infrastructure within the subnodes, especially an existing train station and whether the station already qualifies as an intermodal hub for public passenger transport or need particular modification to better fit the needs of the passenger.
3. The quality of the transport network and the reliability of public transport service, which connect the hinterland with a subnodes and the subnodes with the main TEN-T hubs.



In order to meet the overall aim in turning small and medium-sized cities into attractive intermodal transport hubs by strengthening the conditions for eco-mobility and thus the conditions to reduce motorised private transport, the following hypotheses for further discussions are suggested:

1. Ticketing and pricing systems have to be developed according to the different target groups, like commuters, leisure travellers and tourists or occasional passengers.
2. A regional transport association is able to combine different transport services under one roof, with one unique ticketing system and a transport network beyond the administrative borders of the regions. A regional transport association helps people to understand the all too often fragmented chain from origin to destination as one connection without further hassle about ticketing or schedule issues at system boundaries. Transport associations are able to manage and schedule interchange possibilities from bus to train and other modes of transport across transport operators - they are therefore a key element in organising intermodal transport hubs.
3. The local transport network and service must not only meet needs of the users according to their mobility patterns and commuter flows - this is a demand-driven approach to public transport planning. Public passenger transport could also be improved, when the network design is subject to a supply-directed approach. This implies that a public transport service not only responds to a certain demand but also makes more competitive offers by improving the connectivity of the network by either establishing new or improving existing connections.
4. The definition of intermodal transport includes more than just an intersection of bus and rail service. Particularly in rural areas - where the distances between bus or rail stops are widely spaced in contrast to urban areas - the access way to a stop could be comparatively long. Long access ways to bus or rail stops are considered as one of the key elements that prevent people to use public transport by an otherwise relatively good service. Simply improving the service by increasing the frequency or adjusting the ticketing system, might not necessarily achieve the desired effect to increase the number of passengers. In an intermodal transport chain, passengers can use their bikes to cover the distance between their home and a bus stop. And if a carriage of bicycles even along short journeys is possible, the passengers are more flexible at the destination in terms of their mobility. Therefore, intermodal public transport considers possibilities that cycling offers in either upgrading bus stops with sufficient bicycle parking facility or the carriage of bicycles in buses or trains.
5. With the rise of instant information and mobile communication technology, the expectations of passengers to get informed during disruptions or along a journey are significantly higher as in the decades before smartphones have become widely spread. Pre-journey, as well as on-journey real time information, is standard by now for long-distance public transport and in most major cities with a complex transport system. Therefore, passengers do not only appreciate additional information before or during their journey, but they also expect comprehensive information especially during disruptions or delays. Along with an intermodal transport chain with interchanges between local and long-distance transport services, real-time information and information about journey alternatives with a clear focus on passengers' needs could significantly improve the service and achieve customer satisfaction.

The following typology was used to set every single pilot action of each partner region into a wider context of a common methodology:

1. Planning and monitoring: this include the development of plans, political activities, monitoring and participation.
2. Service, integration and improvements: with integrated transport, information, communication, rapid transit.
3. Digitalisation: such as data-management, real-time information, system architecture.



2.3. Risks and obstacles

Following risks have been identified regarding implementation of the SubNode Strategy:

- Difficulties in finding extra funding resources to develop new railway connections and passenger information services;
- Reduction of road congestion level due to road network development making private car even more advantageous with respect to public transport;
- Inhabitants' refusal to accept changes connected with introducing an integrated public transport system (e.g. because of more transfers during one journey, another departure- arrival time or higher travel ticket prices);
- Difficulties of elderly people in using of modern passenger information systems leading to refusal of the public transport and thus mobility excluding;
- Insufficient promotional activities regarding any changes in the transport system;
- Poor strategical planning on the site of public authorities at different levels (local, regional and national) and on the site of transport providers;
- Lack of political will to cooperate between the region and/or the county and/or the subnode in the future.
- Formal, structural or infrastructural obstacles in implementation of the goals connected with the SubNode Strategy

Examples of the obstacles which appeared during realization of the project:

Initially, there were three smart displays planned as the product of the pilot action implemented by Prometni institut Ljubljana, but during the market research it was realized that the costs within budget planned are sufficient only for 2 displays and there are no other sources for buying the third display.

Long internal procedures regarding preparation of tenders and extended realization of the tender procedure caused a delay in the PA implementation in the case of the Urząd Marszałkowski Województwa Wielkopolskiego. An essential obstacle was also an unstandardized, different way of data collection by the transport organizers and providers. Additional obstacle which could not be foreseen, and which contributed to that delay was the outbreak of the COVID-19 pandemic.

3. Pilot/project implementation

3.1. Fare integration and better coordination of timetables in the Trnava region

The goal of the pilot action implemented by the Slovakian partner, Bratislavská integrovaná doprava (BID) was the extension the existing Integrated transport system in the Bratislava region (IDS BK) on the railway line to Trnava. Trnava railway node was identified as the main subnode to Bratislava. Although Trnava itself lies on a TEN-T corridor, it also lies just 46 km from Bratislava, which lies on a junction of several TEN-T corridors. Trnava and its surrounding region is considered to be part of the larger catchment area of Bratislava, so it is crucial for it to be part of the same system of public transport, as the rest of the Bratislava region. The pilot action was intended to be the first step in integrating the whole Trnava region in the future.



3.2. Conception and implementation of an interval timetable in the NUTS III region Sömmerda and revision of the local public transport plan

Regarding the County of Sömmerda - a weak structural connection between bus and train is in the subnode of Sömmerda and its catchment area. Huge difference between school days and weekdays - there are more trips at school days and sometimes at weekdays some settlements aren't connected with the local public transport. Connection to the industrial and commercial sites with local public transport is poor -the stops are far away from the companies and the arrivals of local public transport isn't harmonized with the beginning of the shifts. The solution would be revision of the local transport plan and implementation of an integrated timetable in the administrative district. For this purpose the SubNodes Lead Partner TML (Thuringian Ministry of Infrastructure and Agriculture) and the Project Partner CoS drafted a service contract for the creation of an concept of an Integral Synchronized Timetable (IST) for the public bus transport in the County of Soemmerda in special consideration of the railway station Soemmerda as a potential Subnode. The University of Applied Sciences in Erfurt was also involved in this project.

3.3. Reorganizing of public transport in context of the newly implemented projects as bus terminals and new electrified rail tracks in Židlochovice and Hustopeče

KORDIS JWK was going to reorganize public transport in context of the newly implemented projects as bus terminals and new electrified rail tracks in order to offer a quick and comfortable connection by public transport to the inhabitants of subnodes Židlochovice and Hustopeče and neighbouring catchment areas. The both cities are important centres of the Brno district, assuring public administration services for neighbouring municipalities, working and shopping opportunities. Until now, the city was connected only to bus lines, whose capacity was beginning to be insufficient due to the number of passengers transported. New train line will shorten the important direct bus line and offer passengers a 10-minute shorter journey to the city centre. Moreover, the trip to the station in the city will be shortened for 30 minutes. The South Moravian Region set up electrification of railway lines and their connection to the TEN-T corridor. The task of KORDIS is to consult proposals of the new timetable with local society and to promote new connections.

3.4. Improving of intermodal passenger information by installation of three smart interactive displays in the town of Grosuplje

The main TEN-T hub in Slovenia is Ljubljana, the capital and centre of the Central Slovenia region, which the most important sub-node is Grosuplje, a medium-sized municipality located on the south-eastern edge of Ljubljana. Grosuplje is connected with Ljubljana by public transport via bus and train and the journey takes approximately 30 min. Prometni institut Ljubljana (PROM) has come to conclusion that not sufficient usage of public passenger transport on this route is a consequence of high private car usage but there is a big potential to attract more people using public transport by accurate and fresh information for intermodal travels so the partner decided to buy and activate 3 smart interactive displays for Grosuplje.

3.5. Increasing of passenger streams by implementation of trains suitable to transport bicycles on board

Regarding the Znanstveno raziskovalno središče Bistra Ptuj, a cooperation with Slovenian railways to implement regional trains suitable for bike transportation was the idea how to increase passenger streams between the subnode Ptuj and the TEN-T node Maribor. The town Ptuj has ca. 18.000 inhabitants and it is



a place of historical importance. It is very well connected by high-way E59 and a train line with localized 30 km northwest Maribor, the second largest and important economic, cultural and touristic city in Slovenija (95 000 residents).

3.6. Conception and realisation of an IT tool intended to enable the collection, storage and sharing of data related to public transport in the region

The pilot action of Urząd Marszałkowski Województwa Wielkopolskiego (UMWW) is taking place in Wągrowiec County and Commune Wągrowiec, which meets the requirements as a subnode located a short distance from the core of the TEN-T network but outside it. Better integration of PT within the Wągrowiec subnode, a town located about 50 km north of Poznań (Wielkopolska region) will influence positively on economic development and environmental protection not only in the county but also of the whole region. This can be achieved also by modern IT solution in the form of an online platform that will:

- fulfil the functions of data sharing and their visualization,
- be dedicated to several groups of recipients (passengers, transport organizers, transport providers and administrators of internet portals which enable journey planning.

The planned IT tool should:

- enable the organizers of public transport, modern and more effective planning and management of public transport in the region,
- improve effectiveness of the public transport, in particular bus transport, and its availability in the Wielkopolska voivodship, especially in peripheral areas,
- change the preferences of the residents of Wielkopolska in terms of choosing between public transport and a private car, for the benefit of the former.

The platform will allow displaying data on timetables and the location of vehicles on the map. This right way of presenting data directly affects people's reception and understanding. There are a number of ready-made solutions on the market that can use the data collected on the platform (e.g. Google maps, jakdojade.pl application). Although it will have an illustrative character, it will meet the most important expectations of the recipients.

4. Results

All pilot actions except the 3.6 have been already finished and are evaluating now. The PA of UMWW is pending due to some legal and formal obstacles during the tender process and it will be finished in the beginning of August 2020. Every partner's budget planned in the Application Form was covered all costs needed to implement the PA. Partners prepared short video films (3-4 minutes long) about the project and Pilot Actions which can be watched on their websites. Below the results obtained by project partners.

4.1. Bratislavská integrovaná doprava (BID)

The pilot action was finally implemented on the 1 August 2019. Since this date the fare system of the Integrated Transport System in the Bratislava Region (IDS BK) is in force on the whole section of the railway line number 120 between Bratislava and Trnava. Commuters can use the regional train lines S20 and S25 and choose from the whole selection of travel tickets offered within ID BK when travelling on any



section of the railway line between Bratislava and Trnava. The pilot action was implemented without installing new ticket validators, as was originally planned. Thanks to several existing alternative ways of ticket purchase within the IDS BK it wasn't in the end inevitable to have the validators in place before the system was expanded to Trnava. It was first necessary to reach an agreement between the stakeholders (mainly BID and the partners within IDS BK) and then to modify the information systems behind the ticket sale systems and the revenue redistribution systems by adding a new fare zone to the existing zones. Single tickets can be purchased at the ticket desks of the national train operator operating trains to and from Trnava and also in the IDS BK mobile app. Both methods were tried out by the reviewers during the pilot action peer review visit in Trnava in August 2019. On top of the mentioned possibilities for the use of single tickets, commuters have the option to use prepaid travel tickets for 7, 30, 90 and 365 days, with which they can travel unlimited times within their time and zone validity.

4.2. County of Sömmerda (CoS)

The output are the findings of the preliminary study, effects based on the announcement of the results and experiences from the process.

Findings:

- Overall, the preconditions for the implementation of an IST in the County are good: the structure of the county is appropriate, the existing Transport System can be a good basis, the infrastructure is eligible for the building of nodes, communication structures and cooperation with neighbouring Transport authorities and companies already exist and could be extended.
- Besides the advantages for the PT System in general, an IST might create disadvantages on certain travel routes/lines too.
- Connecting services will generate additional benefits for passengers.
- An integration of School Transport in existing and new bus services will create a financial flexibility for further improvements.
- The adaption of school opening/closing times to bus timetables gives the needed general flexibility in planning of public transport services.

Effects:

- The drafting of the IST preliminary study including the interchange required for this purpose gained knowledge about the transportation offer in the County of Soemmerda, its strengths and weaknesses as well as chances and opportunities.
- Political stakeholders on a local level are interested on the concept of an IST and willed to enable a realization of the concept.
- Political actors at the local level were also encouraged by the concept of an IST to review the monetary access system to public transport, the tariff system.
- Based on the idea of the IST, further possibilities for improving the mobility offer were discussed which complement the transport network of the Integral Timetable. These focus on connecting very rural parts of the county and on electromobility.
- The County applied for funding within a national funding programme for improved mobility in rural regions. Core components of the application are offers for improved mobility in addition to the network of the Integral Synchronized Timetable. The application seamlessly follows the SubNodes project and pilot activity in the County of Soemmerda in terms of time and content.



4.3. KORDIS JMK (KOR)

A large amount of work was devoted to a preparation of new train timetables, both as bus timetables, which were modified several times. During the preparation of the timetables, the changes were discussed with stakeholders: affected municipalities, Židlochovice residents and the South Moravian Region. There were extensive discussions on routing of bus lines, which had to be reorganized in connection with the establishment of the train line, timetables, transport children to schools and whether the connections would be direct or with a transfer. Regarding rail transport, it was necessary to find a solution that would meet the requirements of citizens and at the same time allowing trains to pass through the Brno node. During the preparation of the timetable's changes were consulted with the public on-line and per mailing. After 40 years the railway line Brno-Židlochovice has been renewed and reopened on 15 December 2019. KORDIS JWK has carried out a quick opinion research on 174 train users, very soon after the new service started operation (on 13-17 January 2020). It shows that 5% of train users changed from car to train which is quite a good result. From the same research it can be observed that the customer satisfaction is high. Nearly 60% of train users are satisfied with the new service and another quarter is rather satisfied. Only 4% are rather unsatisfied, nobody was unsatisfied.

4.4. Prometni institut Ljubljana (PROM)

Intermodal displays were installed in June 2019 and was fully operational in November 2019 on two locations (sub-nodes): Grosuplje and Škofljica. The external provider was selected by collecting competitive bids. The external provider also integrated passenger transport data which are displayed on the screen. The following data are integrated: Ljubljana city buses, including extended bus city line from Ljubljana to Grosuplje and Škofljica as well as rail transport data (train arrivals).

The installed displays include the following information:

- Live local bus and train arrivals
- Intercity buses (live arrivals)
- Weather information
- Information on public transport offer
- Other information for passengers (timetables, parking places, tourist information).

4.5. Urząd Marszałkowski Województwa Wielkopolskiego (UMWW)

At first a preliminary study titled: "The concept of an IT solution supporting an organizer of public transport for improving communication in the Wielkopolska Voivodship" was prepared by the external expert. This study presumes that the IT tool, prepared by the UMWW, will take the form of an online platform. So far, a website project of the internet platform was prepared as well as the functionalities of the application in the so-called working environment. The website is called: <https://platformatransportowa.com> and can be used in two languages: Polish and English. It consists of two parts: the first one is publicly accessible for everyone and enables to plan a multimodal journey from every bus/train stop stored in the data base. This part includes also information about the project and transportation news. The second part is accessible only for exclusive users from the local administration, the bus/train providers and administrators of journey planners (also free of charge). The next step will be collecting data and transfer them into an IT cloud and then, after some security tests and improvements the application can be used in the world of the internet. Additionally, there will be also prepared an innovative IT tool which will enable regional bus providers to applicate for routes and subsidies on- line and which will enable the transport organizers more effective and faster processing of such applications.



This app will be also finished early August 2020. After the internet platform as well as the IT tool for regional bus transportation will be finished a short video film will be made to promote the project and the PA.

4.6. Znanstveno raziskovalno središče Bistra Ptuj (ZRS)

The output of pilot activity is a constructional adaption of two running trains on the line between Ptuj and Maribor in terms of enabling on-board bicycle transport. The outputs are also promotional activities - posters, promotional and presentational videos. With additional service it is expecting to increase the use of public railway transport in the Ptuj region. In the year 2019 results were already seen - the increase in selling of tickets for bikes on trains was made by more than 200%. The pilot action was also upgraded with covered standings for bicycles - so called "cycle-boxes". In front of the railway station in Ptuj, several cycle boxes were set, providing train passengers safely storage of their bikes if they use the railway for further travelling. Pilot output also affects bike tourism and recreative biking as the subnode area has essential bike routes: Drava cycling route, Iron curtain cycling route and LAS cycling route.

5. Lessons learned

The integration of the railway node Trnava makes intermodal travel easier when traveling between Trnava and Bratislava, or any town and village in the Bratislava region. The implemented measures improve the respective subnode as an intermodal transport hub. The IDS BK system integrates Bratislava city public transport (bus, trolleybus, tram), regional buses, regional trains operated by the state train operator and also a private train operator. This makes the pilot action successful in terms of securing a more user-friendly public transport environment and on top of this also a bit more affordable, than before. By expanding the IDS BK system to Trnava a new part of the wider catchment area of Bratislava is covered, which makes the integrated transport system more effective and at the end of the day also more attractive for new passengers. The pilot action is the first step in a larger strategy, with the aim to integrate the whole Trnava region within IDS BK and later to expand the integrated transport system even beyond these two regions (Trenčín region and Nitra region). Integration of the railway node Trnava was an important prerequisite for this further integration. Another positive effect of the pilot action is, that it opened new discussions about further integration and created more intensive demand for improving the existing system of public transport. This enhances the potential for closer cooperation between regions by creating a common goal overlapping regional borders and thus bringing them closer together.

Public transport integration of a regional capital into a system belonging to the neighbouring region demonstrates an innovative solution in the conditions of Slovakia. An interesting point is, that at the same time as the pilot action was implemented, also regions in other parts of the country started to develop integrated transport systems. This doesn't have a direct link to this project, but there is no doubt, that the development of IDS BK, as the only large scale properly functioning integrated transport system in the country, positively influences their development in the rest of the country by inspiring them and giving good practice examples. Based on the experience with deepening transport integration in the Bratislava region, it is possible to predict, that it will take several years to optimize and fully integrate the whole public transport network in the Trnava region. The fact, that integrated transport is becoming a generally accepted concept in the Bratislava region and hopefully also in the rest of Slovakia, brings optimism into all the work regarding integration in the Trnava region waiting to be done.

The joint work on improvements regarding the Public Transport in the County based on talks and meetings with partners from politics and administration (LP TMIL), from research (PP FHE) and from consultative economy (office charged for drafting the study) produced a wide range of results: diverse requirements for action, tasks, objectives and proposed solutions.



The drafting of a study by an external business helped to interchange between different offices within the County Administration and also to politicians. The widely neutral results became inspirations for decision- and policymaking. Besides the positive effects, a continuous work on a reliable, strong communication with external as well as internal stakeholders is important to grant a timely implementation.

During the Pilot Action in Židlochovice it was observed that there exists a large demand for information leaflets about public transport services.

Initially, there were more displays planned for the pilot action implemented by Prometni institut Ljubljana, but during the market research it was realized that the costs within budget planned are not sufficient enough for more than 2 displays. The costs within the AF have been undervalued what is also a lesson to be learned from this PA.

The IT tools planned to be finished by the Urząd Marszałkowski Województwa Wielkopolskiego end of the 2019 are delayed and will be finished in August 2020. The delay is connected with many formal and technical problems which appeared during the implementation of the project. The intern IT strategy and infrastructure had to be matched with the new challenge of introducing a new IT system based on the cloud. The conditions regarding safety of collected commercial and personal data had to be tested and verified. The tender procedure proved to be much longer and with many questions to be solved as expected. Very important lessons to be learned in spite of introducing an innovative approach, not used before in any other Polish administrative institutions and with many legal understatements.

The biggest lessons learned by Bistra Ptuj was that the smooth cooperation with the state railway company is a key factor to implement a project on railway transportation with success.