

D.5.2.3

Policy action plan on Behavioral change

WP5 Transport strategies and results roll-out A.5.2 Harmonized services for passengers

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1 Introduction

1.1 The ICARUS project

The goal of the Interreg Italy- Croatia ICARUS project is to create new intermodal solutions taking into consideration passengers' mobility needs and allowing the maximum level of flexibility for users. This goal has been achieved thanks to:

- Improvement of passengers' intermodal connections in and between the territories of the Programme area;
- Foster of behavioural change of transport users and increasing the use of intermodal low carbon transport solutions;
- Creation of seamless multimodal and environmentally friendly intermodal transport solutions
- Easing the sustainable transport integration of the coastal and hinterland areas
- Boost of existing or new maritime connections among the Italian and Croatian coasts by raising the level of service of ports land side.

To improve passenger intermodal connections and ease access to the coast for the hinterland population, mobility behavioural change have been promoted using the Mobility as a Service (MaaS), a concept which moves passenger needs from the transport means to the mobility service. MaaS and ICT are among ICARUS' three pillars, which also include Intermodal Mobility and behavioural change.

Thanks to ICARUS, partners have carried out and implement 8 pilot projects and a case study focusing on timetable harmonisation, car/bike sharing within transport nodes, ICT solutions for seamless flow of information, integrated intelligent multimodal payment systems, dynamic travel planning and cross-border intermodal services.

The planned activities have been tested in the regions of Emilia-Romagna, Abruzzo, Veneto, Friuli Venezia Giulia, Primorsko-Goranska, Istrian Region and throughout the Croatian railway area.





2 Contribution of pilot's projects to the mobility behavioral change

Icarus contributes to the mobility behavioral change of Italy-Croatia region through a multi-channels approach:

- As a result of a set of activities: easier accessibility to transport services also through ICT services, activation of seamless not pre-existent intermodal solutions.
- Set up pilot, training & promotional activities have boost seamless harmonized intermodal transport in cross border territories. Pilot test activities showed practical benefits of using multimodal transport solutions to passengers, commuters, and tourists. The lessons learned in behavioural change practices have been rolled out by local/regional authorities to be embedded in policies or used by operators for decision making.
- By educating people about sustainability related issues and enhancing the sense of community because of the use of intermodal transport solutions and sharing mobility.
- The change of behaviour has been supported by strong marketing techniques with local events and a clear brand image to make the ICARUS intervention recognizable.

In this framework, the following tables focuses on the most significant changes observed in the local context of intervention through the implementation of the 8 pilot projects:

	Main output	Relevant changes	Relevant expected changes (short term)	Possible permanent changes (long term)
D.4.2.1 Friuli Venezia Giulia Region Pilot Action n.1 Bike wheeling ramps installed at rail stations	Installation of n. 28 wheeling ramps in 10 railway stations along the Parenzana cycle path, in order to remove infrastructural barriers and facilitate the use of bikes for a seamless train-bike intermodality for both Italian and Croatian passengers.	①②③④⑤ (Low) (High)	Increase in the awareness of the general public towards the mobility option represented by bike-train intermodality to satisfy their mobility needs.	Increase in the number of passengers travelling on train carriages with their own bike, resulting in a lower number of users resorting to their private cars to reach the railway station.
D.4.2.2 Friuli Venezia Giulia Region Pilot Action n.2	Implementation of a bike-bus connection (with a capacity of 40 passengers and 40	①②③④⑤ (Low) (High)	Increase in the awareness of potential users of the bicycle option to visit cross-border territories	Increase in the number of people using their bikes both for their daily





bicycles) from Trieste to Poreč with two daily journeys operated during the weekends and holidays, from July to October 2021, for a total of 54 round-trips. Following users' requests, an intermediate stop near Plovania was added during the month of	along the Parenzana cycle path.	commuting and for recreational purposes.
October		

	Main output	Relevant changes	Relevant expected changes (short term)	Possible permanent changes (long term)
D.4.2.4 HZPP Technical solutions for improvement and implementation of integrated ticketing system of Croatian Railways	Online ticketing improvement + multimodality as possibility	①②③④⑤ (Low) (High)	Considering that Document will give us clear picture on current condition and what can be done in order to achieve better operational status regarding online ticket sales, this would be only clear benefit. Company will remain with actions such as procurement of such software solution or improvement of existing online sales system. However, next steps will be clear and transparent.	New software and hardware solutions supporting multimodal ticketing.





	Main output	Relevant changes	Relevant expected changes (short term)	Possible permanent changes (long term)
D.4.2.5 KIP Development of an ICT Web application in Primorsko Goranska County to promote intermodal passenger transport	ICARUS Mobility Pilot platform	①②③④⑤ (Low) (High)	Serving as a "one-stop shop" for information on public transport and cycling options in the region; learning about available public transport and cycling options in the region, and using them as a trial.	Using public transport / cycling on a regular basis, keeping up with mobility trends in the region and committing to behavioural change.

	Main output	Relevant changes	Relevant expected changes (short term)	Possible permanent changes (long term)
D.4.2.6 Emilia Romagna Region Development of a platform calculating pollutants saving linked to RER's dynamic travel planner	Currently it is expected that the main change should result in the quantification of emissions by public transport users (useful for monitoring by the Region), possibility to activate incentives based on the emissions estimated with RogerAmbiente, and Raise of awareness	①②③④⑤ (Low) (High)	A measure simple to understand for users and possibility to be used on a wide scale	Nudging on the behaviour of the single users, awareness on environmental impact, first case study to build new actions/measures

	Main output	Relevant changes	Relevant expected changes (short term)	Possible permanent changes (long term)
D.4.2.7 IDA Connecting coast and countryside	Istra bike and train – hinterland and coast connection with multimodal solution	①②③④⑤ (Low) (High)	Passengers are already using new product and pilot confirmed it's success	Since this train route has trains with not so high speeds, this pilot project will encourage new intermodal solutions with Italy and Slovenia such as





of the Istria County with bike and train integrated solution.			project documentation development for alternative and sustainable trains propulsion(i.e. hydrogen)
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	Main output	Relevant changes	Relevant expected changes (short term)	Possible permanent changes (long term)
D.4.2.8 Metropolitan City of Venice ICT platform for mobility data systematisation supporting intermodality in the area of the Metropolitan City of Venice	Support to intermodality in coastal areas through the improvement of both facilities and digital tools as listed below: - Equipment of 1 bus line serving coastal areas with 2 fixed bicycle racks with a capacity of 15 bikes; - Improvement of the existing ICT platform of CMVE with the systematization and optimization of data and information related to transport and mobility; - Design and implementation of a new mobility portal providing users with information related to transport and mobility services	①②③④⑤ (Low) (High)	Implementation of facilities and digital services to ensure a seamless intermodality, increasing the awareness of citizens and tourists towards the availability of alternative and more sustainable mobility solutions.	Relevant increase in the number of users adopting intermodal solutions to satisfy their mobility needs (with particular reference to the use of bicycles) thanks to the wide availability of both facilities supporting the combination of different means of transport and digital tools delivering information on existing services and solutions.





throughout the territory of CMVE.		

	Main output	Relevant changes	Relevant expected changes (short term)	Possible permanent changes (long term)
D.4.2.9 ARAP ICT Systems to better connect coast and rural areas, real time check in and tracking for passengers in the Abruzzo region and for reaching the Croatian coast	App "happy travel"available on IOS and Android store	①②③④⑤ (Low) (High)	The dissemination process is obviously complete, because some attitudes and habits are rooted in the population. But the fact that the key stakeholders are involving different sectors of society (school, local authorities, tourism sector, transport) makes us confident not only on the continuation of change, but also on the strengthening of certain virtuous dynamics.	Arap Abruzzo has signed a protocol of intent with local authorities, committing itself to give continuity to the pilot action even after the project. The app wants to become a permanent tool for sustainable mobility. For this, the operators of the institution have been trained, so as to be able to update and enrich the contents of the app, in addition, a series of activities will start in the schools to radically reduce the change in attitude in the new generations.





3 Relevance to EUSAIR and EUSALP

The macro-regional strategies of the European Union¹ are policy frameworks to allow regions in specific geographic areas to jointly tackle and find solutions to territorial issues and better use their common potentials to foster territorial development. They aim at strengthening the cooperation between European regions and help them delivering more efficient policies and actions thanks to a joint effort in identifying territorial issues and potential solutions.

ICARUS involves regions which are mainly in the Adriatic-Ionian macro region, plus Veneto which is in the Alpine Space. This Chapter analysis the relevance of ICARUS to the two macro regional strategies with reference to project topic of Mobility Behavioural change.

EUSAIR

The analysis of the EUSAIR Action Plan² and macro-regional strategy web site³ indicates that two EUSAIR Pillars are relevant to the ICARUS topic of Mobility Behavioural change:

Connecting the region

The overall objective of Pillar 2 "Connecting the Region" is to improve connectivity within the Region and with the rest of Europe in terms of transport and energy networks. This requires thorough coordination of infrastructure works and improved operation of transport and energy systems between the countries in the Region.

Efficient and sustainable transport connections, capable of coping effectively with increased traffic flows, will create attractiveness, both for foreign direct investments and for tourism, hence jobs and prosperity. Better use of intermodal transport will reduce the costs of delivering goods in Central and Eastern Europe, improve the eco-balance and restore the competitive position of the North Adriatic ports as natural gateways to Central and Eastern Europe. Better interconnected energy networks will benefit the whole SouthEast Europe region, and beyond. A better working and interconnected energy market will reduce wholesale prices and attract investors.

Sustainable Tourism

¹ Please see: https://ec.europa.eu/regional_policy/it/policy/cooperation/macro-regional-strategies

² European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning the European Union Strategy for the Adriatic and Ionian Region, COM(2020) 132 final, 2.4.2020

³ www.adriatic-ionian.eu





This pillar focuses on developing the sustainable and responsible tourism potential of the Adriatic-Ionian Region, through innovative and quality tourism products and services. It also aims at promoting responsible tourism behaviour on the part of all stakeholders (wider public, local, regional and national private and public actors, tourists/visitors) across the Region. Facilitating the socio-economic perspectives, removing bureaucratic obstacles, creating business opportunities and enhancing the competitiveness of SMEs are essential for the development of tourism. The specific objectives for this pillar are: 1. Diversification of the macro-region's tourism products and services along with tackling seasonality of inland, coastal and maritime tourism demand. 2. Improving the quality and innovation of tourism offer and enhancing the sustainable and responsible tourism capacities of the tourism actors across the macro-region.

Therefore, ICARUS and its focus on mobility behavioural change is fully relevant and contributes to the EUSAIR strategy.

EUSALP

The analysis of the EUSALP Action Plan⁴ indicates the thematic pillar relevant to the ICARUS topic of Mobility Behavioural change, that are reported here below:

2nd THEMATIC POLICY AREA: MOBILITY AND CONNECTIVITY

Action 4: To promote inter-modality and interoperability in passenger and freight transport

This action aims to promote inter-modality and interoperability in passenger and freight transport, in particular by removing infrastructure bottlenecks, bridging missing links, coordinating planning and timetables of public transport (including multi-modal information and planning services), modernising infrastructure, and enhancing cooperation. In this context, the term 'inter-modality' means combining several means of transport during the same journey, using different types of vehicles to get from one place to another. 'Interoperability', on the other hand, is defined as the capability to operate on any stretch of the transport network without any difference.

Action 5: To connect people electronically and promote accessibility to public services

The focus of this action will be twofold. On the one hand to draw up a comprehensive strategy for guiding and shaping the ongoing process of digitisation in the Alpine Region and on the other hand the accessibility

⁴ European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning the European Union Strategy for the Alpine Region, COM(2015) 366 final, 28.7.2015





to services which are provided by public authorities to people living within a certain area. This can be achieved by making the best use of new 26 available technologies, such as satellite broadband connections in the most remote areas as well as developing take-up of e-services.

Therefore, ICARUS and its focus on mobility behavioural change is fully relevant and contributes to the Action Group.





4 Recommendations to policy makers

The following tables summaries the main insights from the pilot projects, in terms of transferability and scalability of the pilot to the whole region.

Pilot Actions	Transferability of the pilot action to other areas of the region	Scalability of the pilot action to the whole region
D.4.2.1 Friuli Venezia Giulia Region Pilot Action n.1 Bike wheeling ramps installed at rail stations	 The same initiative could be applied to different territories of the FVG region through the provision of additional wheeling ramps to be installed in the railway stations located within the selected area. As a matter of fact, RFI is the only operator managing railway stations of the region, and therefore is already aware of the activity and could be easily involved in further implementations of the same infrastructural works. The same goes for the company that built and provided the ramps. In addition, the initiative would not require the involvement of authorities at the highest levels, due to the limited nature of works implemented. As for financial sustainability, the action would require a single investment to realize an infrastructure that would be highly beneficial to many users. 	 The pilot activity is definitely scalable to the whole region, as it involves light infrastructural works that do not require relevant decision from high-level institutional actors. Moreover, as mentioned above, RFI is the only operator managing FVG railway stations, which facilitates the replicability of such infrastructural solution, which could highly benefit regional citizens and push for a seamless train-bike intermodality.
D.4.2.2 Friuli Venezia Giulia Region Pilot Action n.2	 Being FVG a territory rich of cycle paths, the pilot initiative certainly has the potential to be transferred to other parts of the regional area. As a matter of fact, capitalizing on the agreement already reached among authorities of FVG and bordering regions of Croatia and Slovenia, the same service could be arranged for additional lines, which would highly benefit tourists and 	 Building on existing institutional agreement and cooperation with stakeholders, the service could be extended to the whole region thanks to a careful transport planning carried out at the reginal level and the allocation of the necessary funds. Moreover, the monitoring surveys implemented has shown that the majority of passengers would be willing to pay for such service,





	citizens visiting this cross-border territory in their free time.	which could be highly useful to ensure the financial sustainability of the service in the future.
D.4.2.4 HZPP Technical solutions for improvement and implementation of integrated ticketing system of Croatian Railways	 Results that Study will show will be transferable to other railway operators and will show disadvantages of current IT system and suggestions for improvements. The Study will give the detailed steps which are necessary to carry out the pilot action in the future, but that cannot be completed within the end of the ICARUS project. This particular "Study" will be named "Technical documentation of functionalities necessary for new online sales system" and will cover technical description of all necessary changes for future and improved online sales system, with time frame for implementation within 3 to 5 years. 	 Study will have influence on railway undertaking. Considering HŽPP is only railway undertaking in Croatia conducting railway passenger transport, company must obey national and EU laws. According to law and Regulations, and according to National Ministry for Transport approvement, new software systems can be accepted and implemented. In which time frame will changes occur is hard to predict.
D.4.2.5 KIP Development of an ICT Web application in Primorsko Goranska County to promote intermodal passenger transport	 The pilot action already encompasses the entire Primorje-Gorski Kotar region, but it is sustainable for years after the project's lifespan has ended. The pilot platform will be updated with new information as it becomes available and will keep up with mobility trends in the coming years. 	 The pilot action encompasses the entirety of Primorje-Gorski Kotar region, but given the time and resources could be expanded by local and regional authorities to neighbouring regions and, eventually, the entirety of Croatia.
D.4.2.6 Emilia Romagna Region Development of a platform calculating pollutants saving linked to RER's dynamic travel planner	 This pilot action will be analysed in the framework of the PREPAIR project, which aims to reduce emissions across the Regions of the Po Valley through a series of measures. RogerAmbiente will be included in one of the measures of PREPAIR, so that further development can be studied. RogerAmbiente can be fully transferred to other regions. Also, the fact that it is accessible through SPID makes it usable by everybody, provided that a travel planner exists. 	 RogerApp is available for all citizens of Emilia-Romagna Region, so RogerAmbiente will be available to the users of RogerApp The platform is scalable to other areas and its scalability will be considered thanks to PREPAIR. The scalability would involve the regions of the North of Italy with the funding provided by PREPAIR. RogerAmbiente could be available to other dynamic travel planners to calculate the emissions of other trips.





D.4.2.7 IDA

Connecting coast and countryside of the Istria County with bike and train integrated solution.

- Other routes will be also promoted and this can be only more developed not only with the focus on bike and train but also on the maritime connections to Italy. Regional authorities recognised this project as valuable, so they have already started to discuss with Croatian railways for future collaboration.
- MIMOSA projects- one of successful follow up
- It will be possible to scale it on maritime connections or with other types of transport (bus + bilk) to the other regions.

D.4.2.8 Metropolitan City of Venice

ICT platform for mobility data systematisation supporting intermodality in the area of the Metropolitan City of Venice

- Both the equipment of bus lines with facilities aimed at transporting bicycles and the systematization of data on mobility could be easily shifted to other areas of the region even after the closure of the project.
- As a matter of fact, the acquisition of bike carriers would represent a one-off investment that would not require additional funding (except for maintenance) while the main efforts related to ICT platform should be identified in the content that would need to be updated regularly.
- A platform with systematized data on mobility at regional level would even be more efficient in the provision of information on existing services and the support to intermodality.
- As for institutional and political sustainability, a support at the highest level could be easily obtained given the clear and shared purpose of the activities, which is to enhance the use of public transport and alternative means to private vehicles, combined with the need to reduce the regional ratio of pollution, which is one of the highest at the national level.

D.4.2.9 ARAP

ICT Systems to better connect coast and rural areas, real time check in and tracking for passengers in the Abruzzo region and for reaching the Croatian coast

- Since the design phase of the app, its extension has been foreseen, in order to expand and transfer its effects. It is possible, in fact, to foresee an extension of the app to insert routes, destinations and means and modes of transport in the regions of the other project partners.
- The effects of the app will go far beyond regional borders. Through a simple agreement it will be possible to enrich the application and thus make it accessible to a wider territory. In this way the connections between Italy and Croatia will benefit a lot
- The app due to its thematic structure is designed for its "scalability" to other sectors and other territories.
- It is easy to insert other sections and other contents and the staff who manage the app are already prepared to update it.
- The virtuous partnership created with the project partners, but also with local authorities already creates the basis for its scalability. The Croatian partners have already provided useful content on Croatian territory, this virtuous process can only continue





Linking the transferability and scalability to the Recommendation to the Policy Maker, the following table indeed summaries the lesson learned from the pilot projects.

Pilot Actions Lessons learned			
D.4.2.1 Friuli Venezia Giulia Region Pilot Action n.1 Bike wheeling ramps installed at rail stations	 From the implementation of pilot action n. 1, FVG has learnt that the promotion of a service or an activity is as important as the implementation of the activity itself. Otherwise, it is difficult to reach the public and thus the desired outcome, which in this case has to do with pushing users to increase the use of bicycles to travel across the FVG territory and beyond at cross-border level too. 		
D.4.2.2 Friuli Venezia Giulia Region Pilot Action n.2	 The success of the initiative, especially during the last months of activity, demonstrated the great need for additional services aimed at cyclists riding along the Parenzana cycle path. Many lessons were learnt by FVG during the process, such as how to deal with the presence of electric bikes occupying a bigger space, how to respond to the need for intermediate stops and the risk for the service to be used by people without a bike. The awareness and experience acquired within this initiative will be greatly useful for the development of additional services to be developed in the upcoming years in the framework of future mobility plans. 		
D.4.2.4 HZPP Technical solutions for improvement and implementation of integrated ticketing system of Croatian Railways	 Communication/cooperation – among partners, stakeholders at national and international level. Proper communication has significant meaning for progress and better results. Visible results will give positive feedback and will be used by different parties/organization/railway undertakings/ NGOs/ agencies etc. Ideas for improvements – principles, best practice and real examples (solutions) can be achieved within HŽPP as well. Planning process – detailed planning is must in order to conduct successful procurement and achieve results. Depending on time frame is obligation for any project partner therefore detailed planning and following Gantt charts can only provide fruitful results. 		
D.4.2.5 KIP Development of an ICT Web application in Primorsko Goranska County to promote intermodal passenger transport	 KIP has learned valuable lessons about including active modes of transport (such as cycling) into the equation of promoting intermodal and integrated transport options. Promoting intermodality, raising awareness and achieving behavioural change are long-term processes which need to be carefully planned and organized in order to reach as many target groups as possible. These should be achieved by using bottom-up and top-down approaches and this is exactly what KIP is going to emphasize in the following period even after the project life. 		





D.4.2.6 Emilia Romagna Region Development of a platform calculating pollutants saving linked to RER's dynamic travel planner	 One of the main lessons learn is that, beside the idea and technical implementation, there are issues which are underestimated, such as that of privacy. Many of the preliminary meetings were spent to deal with all the GDPR and privacy aspects which are necessary to deal with the data of the users, and to allow organisations and GDPR representatives to discuss this matter. Various departments and problems should be taken into consideration in the planning phase. We discovered that currently there is no regulation in RER related to transferring of mobility data. This is also an issue to be considered when thinking about the extension of RogerAmbiente to a larger public.
D.4.2.7 IDA Connecting coast and countryside of the Istria County with bike and train integrated solution.	 Impact can be maybe only with team-work and even if something is not possible at the beginning, it can be realised if partners communicate and work together. For the future applications is important to have all strategies rolled out so that all lessons learnt could be developed and implemented.
D.4.2.8 Metropolitan City of Venice ICT platform for mobility data systematisation supporting intermodality in the area of the Metropolitan City of Venice	 The lessons learned mainly concern cooperation with stakeholders and institutions of the territory: it is essential to ensure a strict collaboration among different actors and the achievement of a shared vision, in order to avoid misunderstanding and delays hampering the implementation of activities.
D.4.2.9 ARAP ICT Systems to better connect coast and rural areas, real time check in and tracking for passengers in the Abruzzo region and for reaching the Croatian coast	 The main lesson learned is the awareness that behaviour changes are long processes, which take time to be radical and not temporary changes. It is not enough to create a virtuous tool to bring about change, it is necessary to work continuously on the fertilization of the territory. Only then a tool will be truly used and can contribute to change





The lesson learned supports some considerations on how the major outputs and results achieved by the project have helped to solve the challenges of the regions directly concerned by the pilot activities.

- Overall, results were identified mostly on a strategic and qualitative level. They are: (1) the increase of the political and technical will of the relevant stakeholders to gain experience and build expertise on innovative solutions in the field of public transport and ICT implementation. (2) the application of innovative public transport solutions at regional level for the first time ever. (3) the deploying pilot activities to consequently be able to extend innovative solutions at regional and cross-border level.
- Concerning the transnational cooperation, the main added was in the mutual learning, especially
 in the design phase of the pilot, by benchmarking the local pilot cases with other similar
 applications in other European.
- The pilot's result contribute to achieve the application of an innovative service. The overall strategic targets set by project partners and relevant stakeholders involved was indeed to develop and test a completely new "innovation ecosystem" for public transport at regional level. Pilot outcomes are then the basis for a radical change in the attitudes towards innovation in the field at regional and cross-border level. The results of the pilot action have been particularly relevant in terms of knowledge increase.
- The operational experience acquired during pilot activities on innovative services allows for a better planning and management of similar initiatives in other regional and urban areas. The pilot action also increased the knowledge by users, thus, making it possible a change in their behaviour and attitude toward innovation in public transport and use of intermodal solution (also, thanks to various communication initiatives during the project).