**What is ICARUS project?**

Air pollution, traffic congestion and long waiting are just some of the main consequences of the excessive use of private cars in the seaside regions between Italy and Croatia. Citizens are very much aware of the noise, poor infrastructure and lack of parking spaces. Passengers also experience rather poor connections between the coast and its hinterland, and during their cross-border journeys across the Adriatic Sea.

We, therefore, believe the integration of intermodal transport services - establishing cooperation among transport and information providers both locally and overseas - is the answer to all these problems.

ICARUS will test new solutions such as timetable harmonization, car/bike sharing, ICT solutions for seamless information flow, intelligent and integrated multimodal payment systems, dynamic travel planning and cross-border intermodal services.

Sustainable multimodal seamless solutions will be tested through 8 pilot actions consisting in harmonisation of timetables, availability of car/bike sharing within transport nodes, innovative ICT solutions for seamless flow of information, integrated intelligent multimodal payment systems, dynamic travel planning and cross-border intermodal services.

For more information visit our website: [https://www.italy-croatia.eu/icarus](https://www.italy-croatia.eu/icarus)
What’s the challenge?

ICARUS aims at improving passenger intermodal transport connections and easing coast-hinterland sustainable accessibility, promoting car-independent lifestyles.

The main objective of the ICARUS Pilots is to improve intermodal transport seamless and low carbon connections. Pilots will prove the possibility to better integrate intermodal passenger transport system through harmonization of different types of soft/hard interventions: infrastructural accessibility, seamless cross-border multimodal transport solutions, Integration of ICT tools for travel planning, smart card & payment & harmonization of timetable & solutions, ticket price, integrated intelligent ticketing systems, web/mobile applications and connecting software systems, Common tariffs and harmonized timetables, promotion of alternative to car intermodal transport solution via web application (KIP), Info mobility with real time check in and tracking for passengers. Pilots results will be used for the change of behaviour in all partners locations. It will also raise the awareness of non partner organizations which aim to establish new intermodal seamless solutions in passenger mobility. The Mobility as a Service and intermodality concepts are crucial for the change of behavior strategy which ICARUS will develop in WP4. Pilots will be discussed at project level through the peer review meetings, which will ensure also the exchange of experiences within partners Pilots. Dedicated behavioural change events will be developed in order to ease the “change”. Surveys will be developed before and during the pilots in order to check also the perception of users and transport operators in passenger mobility.
Pilot action number 1 – Intermodality bike-train development from hinterland to the coast in FVG Intermodal rail/bike solutions to strengthen and link the CAAR cycle path - Resp. FVG

The pilot action n. 1 envisage new infrastructures for bicycles as bicycle stairways/wheeling ramps as an alternative to elevators to improve the accessibility to railways platforms from Tarvisio to Cervignano del Friuli (20 stairways equipped by December 2020 in 9 Railway Stations).

State of art of the pilot action
Contract signed in December 2019 with RFI (Rete Ferroviaria Italiana owner of railways structures) – work in progress. Works assigned by RFI to the work companies. The approved schedule of works foresees the procurement of materials by June 2020 and the start of works with the installation of materials in the railway stations from July to December 2020.

Pilot action number 2 - Cross-border intermodal services put in place Cross-border bike & bus service to connect Parenzana and CAAR - Resp. FVG

New pilot Bike & Bus connection from Trieste to Poreč and back with a Minibus (around 20 persons) and a bikes truck (around 20 bikes) with a schedule trip from Trieste to Poreč at around 8:00 am and the trip back from Poreč to Trieste around 6:00 pm during all the weekends (Friday, Saturday and Sunday) and holidays from September – October 2020 and April – May 2021.

State of art of the pilot action
Contract signed in May 2020. The bus company D’Orlando Srl is in charge of the service as winner of the tender. FVG find an agreement to postpone the starting date. The company are working on the website to promote the new service. Due to Covid-19 and closure of the borders FVG postponed the starting date in September 2020.

Pilot action number 3 - Improving integrated ticketing and booking system in train & bike category - Resp. HZPP

The upgrading of the existing web integrated ticketing and booking system (ISPRO) and hence the promotion of bike & train mobile solutions as a sustainable mode of transport for leisure time during weekends, as well as the exploration of possibility in different towns is a pilot action of the company HŽ Passenger Transport from Croatia. The purpose of the pilot action is to promote train and bike transport through the existing online platform by simplifying the ticketing. This pilot aims at promoting the use of bicycles as a transportation mode for leisure activities.

State of art of the pilot action
HZPP has conducted several meetings with external experts, hired by the company
to improve the current technology and software for integrated sale of bike and passenger tickets via a web/mobile application. Time frame for the completion of this pilot action: July 2020 – December 2021.

Pilot action number 4 - Boosting intermodal solutions through ICT Web/mobile application for the promotion of intermodal passenger transport - Resp. KIP

This pilot is performed by the Intermodal Transport Cluster and it is based on ICT solutions to promote intermodality and integrated public transport in the region - Primorje – Gorski Kotar county (PGŽ) in Croatia. This will be provided through a website, which will include also information about the new integrated solutions in the partner regions. This way visitors can discover integrated travel and bike sharing options in the Primorje – Gorski Kotar county, bicycle transport options, cross-border travel between Italy and Croatia, new integrated services in ICARUS partner regions, webinar and e-learning.
State of the art:
The Intermodal Transport Cluster has collected the information necessary for the website and is building the basis for the website. Further information will be made available through various links to pages providing timetables, pricings, selling points, bike-sharing/rental services, bicycle transport on trains and ships, apps for cycling in the region etc.

Pilot action number 5 - Dynamic travel planner for seamless intermodal solutions
IT solutions for an integrated mobility Resp. RER

With this pilot action, Emilia-Romagna Region aims to encourage people to use public transport and intermodal connection between the airport of Bologna and the coast. The aim is to improve ticketing, so that users will only need to buy one ticket that works among different transport companies (automated people mover, train, public bus).

State of art of the pilot action:
The testing phase of the new ticket will be launched in 2021 and then, after a testing of 6 months, if successful, it will be integrated in the Roger app (dynamic travel planner). Currently, work with the transport agencies involved (TPER, START) is ongoing because, beside the technological aspect, discussion with them is vital for the success of the project.

Pilot action number 6 - Sustainable intermodal solutions between coast and hinterland area in Istria with main focus on bike and train –Resp. Istrian Development Agency (IDA)

This pilot action will focus on 3 ICARUS goals including MaaS/ICT, behavioral change and intermodal mobility.
1. IT guidelines are developed which will enable implementation of smart card/app development
2. Multimodal opportunities will encourage people to use more economical modes of transport
3. Intermodal mobility will be promoted

State of art of the pilot action:
Within this project all important stakeholders were gathered including local authorities, public transport providers, development agencies and private companies which will represent starting point for future activities.
We are happy to announce that MaaS & journey planner Application Guidelines are delivered, online event was organised and multimodal transport (bike+train) will be promoted from the beginning of next year.
Pilot action number 7 - Fostering bike-bus-train-ferry intermodality in coastal areas and related hinterland Open data ICT platform - Resp. the Metropolitan City of Venice

The pilot action proposed by Metropolitan City of Venice (MCVE) consists of two main initiatives. A first one more concrete related to the installation and improvement of facilities fostering the intermodality between bike-bus-train-ferry in selected test sites of the territory (i.e. mobile bike racks for buses, bike sharing stops...). A second set of more soft measures aimed at enriching existing ICT platform thanks to the optimizing of data and information on mobility, thus facilitating users and pushing for intermodal solutions: an “entry point” linking existing ticketing and booking opportunities as well as other information delivering additional information about services dedicated to bike users. Such set of interventions, paired with the ongoing planning initiatives (e.g. SUMP development), will optimistically stimulate the behavioural change of users towards intermodal solutions for mobility.

State of art of the pilot action:
At the time being, after a prolonged dialogue with public transport provider serving the coastal areas of MCVE, a first tender for mobile racks has been accomplished in December 2019 in order to identify and frame the most suitable path to be followed in order to adopt such devices in one of the bus lines serving seaside. Despite the emergency determined by the COVID-19 pandemic, its potentialities were considered very interesting by transport provider which suggested to enrich the number of buses to be equipped with such devices considering the 2021 horizon. In this purpose, MCVE will work on such option since summer 2020 to be ready with additional equipment asap.
At the same time, MCVE decided to support the ongoing effort of the synergic intervention of the Municipality of Venice which is adopting free floating bicycles solution by contributing to the realization of dedicated bike-hubs in specific areas of the territory connecting different modes of transport (e.g. train, bus and ferry station/stops). Such initiative - agreed with JS of the Programme - came from a prolonged consultation with different stakeholders of the territory with particular reference to the Municipality of Venice and implied to slightly adjusting the means that MCVE will use to pursue the main project objective, without changing the expected results.
Considering the recent evolution connected to the COVIE-19 pandemic and in consideration to the ongoing activities related to the development of the SUMP of the MCVE, the soft intervention regarding the optimization of the existing set of data and information is still under evaluation with the internal staff of MCVE working on ICT and Web-GIS as to define the more practical and effective solution to be delivered.

Pilot action number 8 - ICT Systems to better connect coast and hinterland Infomobility& integrated ticketing, real time check in and tracking for passengers - Resp. ARAP ABRUZZO

ARAP pilot case objectives is Integration of Abruzzo port with hinterland
Improvement of services for passengers. ARAP will test new ICT Solutions to better connect coast and hinterland, through Infomobility & integrated ticketing, real time check in and tracking for passengers. Main goals:
- Facilitate USERS ACCESSIBILITY and promotion of the public transport
- Increase Abruzzo Croatia transport appeal for users
- Stimulate Abruzzo Croatia maritime transport demand

State of art of the pilot action:
As preliminary phase it was developed a feasibility study to determine the general characteristics of the app. Arap constituted the base for the network that will support the implementation of the pilot, involving local relevant stakeholders:
1) Municipalities
2) Regional Authorities
3) Public transports
4) Private transports
5) Logistic center
6) Non profit associations

All the local partners have expressed their interest in collaborating in the development of the ICARUS APP. Each of them is providing the contents necessary to integrate the APP information. Arap launched in these days the tender for the selection of the agency that will develop the app. The App will be ready in early September 2020.