



# ICARUS FINAL PUBLICATION

**2021** Intermodal Connections in Adriatic-Ionian Region  
to Upgrowth Seamless solutions for passenger

# ICARUS

Intermodal Connections  
in Adriatic-Ionian Region  
to Upgrowth Seamless solutions  
for passenger



**PROJECT DURATION**  
01/01/2019 - 31/12/2021



**ERDF**  
1.870.000,00 €



**TOTAL BUDGET**  
2.200.000,00 €

[www.italy-croatia.eu/icarus](http://www.italy-croatia.eu/icarus)

The ICARUS partners would like to thank the Project Officers of the European Union cross-border cooperation policy!  
ICARUS is co-funded under the Interreg V-A Italy Croatia CBC Programme.



**Interreg**  
Italy - Croatia  
ICARUS



EUROPEAN UNION



PROJECT PARTNERS



## ICARUS PROJECT

# PROJECT OBJECTIVES

## ICARUS promotes intermodal connections in the Adriatic Ionian Region



# CROSS BORDER IMPACT

Cross-border cooperation plays a crucial role in the implementation of the project actions since Italy and Croatia face a lack of intermodal solutions for passengers. ICARUS developed cross-border solutions and an e-learning platform to expedite the capacity building process in the territory.

ICARUS aimed at improving intermodal passenger transport and at easing coast-countryside sustainable accessibility to promote car-independent lifestyles. Accidents, congestion and pollution are some of the problems generated from the massive use of private cars. In some cases, car usage is the only alternative, in some others it is the result of a lack of transport services integration, collaboration among transport providers and integrated information. ICARUS aimed to overcome these problems, making a use of innovative technologies to adapt smart mobility in a digital world.

With its results, Icarus Project contribute to national, regional and international policies in order to bring at a higher level the lesson learnt and needs in sustainable intermodal low carbon mobility.

### PROJECT PILLARS

- BEHAVIOURAL CHANGE
- INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)
- MOBILITY AS A SERVICE (MAAS)



# ICARUS approach / methodology

Needs »  
Gaps »  
Solutions



## ICARUS PROJECT

ICARUS partners built the framework for the long-term sustainability of results and beyond by setting the basis for their scaling up in Italian and Croatian territories. Partners explored the local context and developed knowledge in solutions and best practices by analysing the needs and gaps. The work has set the baseline for the approach of the pilot actions, delivering tangible results while providing important insights for future large-scale implementation.

Furthermore, ICARUS focused on results transferability in other Italian and Croatian contexts, involving non-partner authorities in an Enlarged Transfer programme.



# PILOT PROJECTS

1

Intermodal solution bike&train in the Friuli Venezia Giulia Region: bike ramps installed in the train stations connecting CAAR and Parenzana cycle routes

2

Launch of cross-border intermodal service bike&bus from Trieste to Porec, connecting CAAR and Parenzana cyclepaths

3

Technical solutions for improvement and implementation of integrated ticketing system of Croatian Railways

4

Development of an ICT Web application in Primorsko Goranska County to promote intermodal passenger transport

5

Development of a platform calculating pollutants saving linked to RER's dynamic travel planner

6

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

7

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

8

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

# PILOT PROJECT ONE



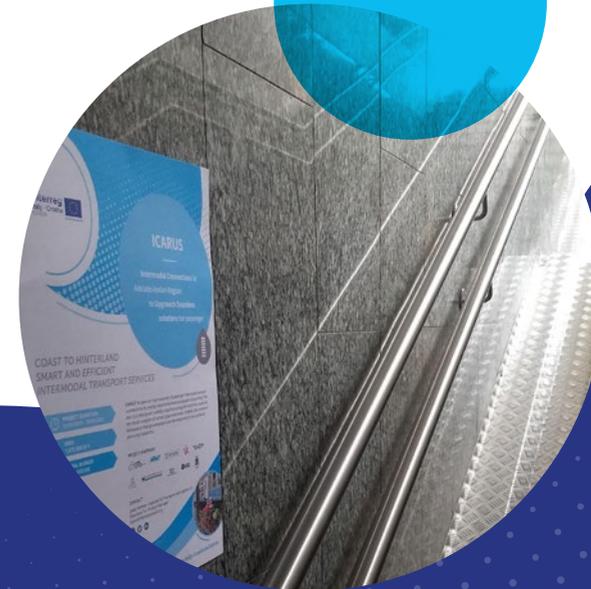
**Intermodal solution bike&train  
in the Friuli Venezia Giulia Region:  
bike ramps installed in the train  
stations connecting CAAR and  
Parenzana cycle routes.**



Friuli Venezia Giulia Autonomous Region aimed at ensuring easier access to train platforms for all cyclists. Train stations from Tarvisio to Cervignano del Friuli were fully equipped with bike ramps.

## PILOT PROJECT RESULTS

Easier access to the stations and trains is a strong incentive to use the bike to get around. Furthermore, the train stations are located along the CAAR cyclepath, facilitating cyclists who wish to take it.



# PILOT PROJECT TWO



**Launch of cross-border intermodal service bike&bus from Trieste to Porec, connecting CAAR and Parenzana cyclepaths.**



REGIONE AUTONOMA  
FRIULI VENEZIA GIULIA

Through this pilot action, Friuli Venezia Giulia Autonomous Region activated daily bus connections from Trieste to Poreč on weekends (Friday – Sunday) from July till October 2021. The service was active with a minibus equipped with a bike rack. This measure has ensured an effective multimodal option, linking the Alpe-Adria and Parenzana cyclepaths.

## PILOT PROJECT RESULTS

The bike and bus connection was beneficial for tourists and citizens crossing the Italian-Croatian border. It allowed users to embark on their journey without their private cars.

Bike&bus connection between Trieste and Porec from July the 2<sup>nd</sup> to October the 2<sup>nd</sup> 2021  
All the weekends  
(Friday, Saturday and Sunday)



  
  
**TRIESTE - PARENZO**  
**TRST - POREČ**



# PILOT PROJECT THREE



**Technical solutions for improvement and implementation of integrated ticketing system of Croatian Railways.**



Croatia railways planned to improve the existing ticketing and booking system for passengers travelling by train and carrying also their bikes. The current web application allows the purchase of passenger ticket only. The app update would allow the purchase and booking of both, passenger and bike ticket.

## PILOT PROJECT RESULTS

HŽPP drew a technical specification report on the current condition of online sales channels and provided recommendations for future improvements of online sales system through web and mobile applications.



# PILOT PROJECT FOUR

# 4



## Bike sharing

**Ricikleta**

Ricikleta is a smart e-bike sharing service in Rijeka with 4 bike sharing stations and 28 available e-bicycles. The bikes are unlocked via QR code, and after payment the user receives the QR code and instructions for unlocking the bike.

For more information, user guide and other useful information about the service can be found here: [ricikleta.rijeka.hr](http://ricikleta.rijeka.hr)

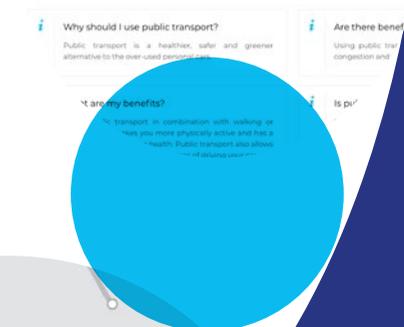
Development of an ICT Web application in Primorsko Goranska County to promote intermodal passenger transport.

International Transport Cluster developed an ICT solution for promoting intermodality in the Primorsko Goranska County, in Croatia. Moreover, the web platform offers information about the new integrated solutions in other partner regions.

## PILOT PROJECT RESULTS

This web platform represents a one-stop-shop for users who wish to travel around Croatia in a more sustainable way. Quickly available information enables citizens and tourists to find their optimal travel solutions and choose a set of environmentally friendly transport modes for their journey.

>> [icarus-mobility.com](http://icarus-mobility.com)



Klaster  
intermodalnog  
prijevoza

# PILOT PROJECT FIVE



Development of a platform calculating pollutants saving linked to RER's dynamic travel planner.

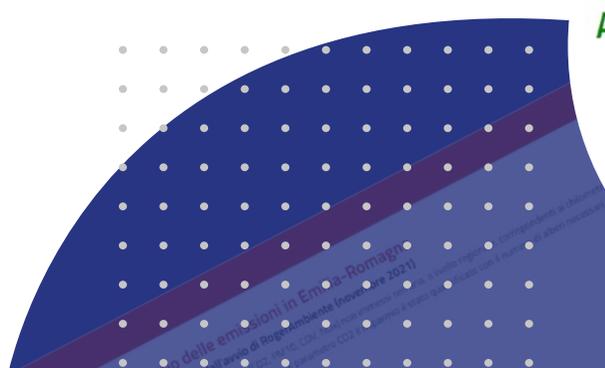
Thanks to the ICARUS project, the Emilia-Romagna Region developed a web portal to calculate the CO<sub>2</sub>, PM<sub>10</sub>, NOx and VOC savings by choosing to use public transport as an alternative to the car. These pollutants are particularly important for measuring the level of air pollution. The calculator is connected to RogER, a service that provides all users with tickets and traveling information in Emilia-Romagna Region.

## PILOT PROJECT RESULTS

RogerAmbiente raises awareness on pollution generated by the users' trips and will be used to incentivize virtuous travel behaviors. A user can check his or her own specific environmental savings because the portal data come directly from the dynamic travel planner. RogerAmbiente can be scaled up easily, by linking it with other dynamic travel planners or ticketing systems. The access to the portal is by SPID (Italian Digital Identity).



>> rogerambiente.it



# PILOT PROJECT SIX



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



Istrian Development Agency (IDA) planned to improve connections between the coast and the rural areas in the Istrian county by promoting the combined use of bike and train.

IDA focused on the railway route from Pula to Buzet where up to now passenger had no possibility to load their bikes on the train.

## PILOT PROJECT RESULTS

IDA organised special promotional activities to present the new bike&train solution now available in Istria. Numerous tourists will now have the opportunity to enjoy Istrian natural and cultural sites by traveling in an environment friendly way.



# PILOT PROJECT SEVEN



The Metropolitan City of Venice worked on the data systematization related to mobility and infrastructures through a webGIS platform. It includes information about transport services and infrastructures, thus supporting the overall management of intermodal connections and connectivity within the different territories of the Metropolitan City of Venice. Moreover, such a tool represents a support to be further update and upgrade according to future needs of this sector.

## PILOT PROJECT RESULTS

The data systematisation will provide:

- Presence of accommodations and assistance services;
- Identification of bottlenecks and black spots in the system;
- Implementation of public spatial policies.



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



# PILOT PROJECT EIGHT



**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.**



**ARAP**  
AZIENDA REGIONALE ATTIVITÀ PRODUTTIVE

The pilot action developed by the Regional Agency for Production Activities aimed at better connecting the countryside and the coast of the Abruzzo region. ARAP developed a new ICT solutions providing info mobility and integrated ticketing, real time check-in and tracking for passengers.

The app is a tool for informing visitors about routes, points of interest and available means of transport to reduce the number of cars and to stimulate tourists to visit the sites using environmentally friendly transport.

## PILOT PROJECT RESULTS

The application developed by ARAP allows tourists and citizens to organise their trip and buy tickets online. Easier access to information will increase the use of more sustainable transport means and incentive citizens to leave their car at home.





## CASE STUDY

Venice International University tested a case study with the aim of fostering the development of a multimodal transnational soft corridor between Italy and Croatia, to be used for leisure purposes to increase the touristic offer. The case study identified the route, tested its usability and provided recommendations for large scale implementation. The main focus was to create a seamless solution including bike, train and ferry integration starting from existing public services and cycleroutes.

## CASE STUDY RESULTS

### The case study analysed:

- the quality of the infrastructure, safety and infrastructure of the route;
- intermodal connections and their continuity in a wider system of routes through wayfinding to connect to other corridors

# ICARUS ENLARGED TRANSFER PROGRAMME

The Enlarged Transfer Programme (ETP) is a training programme, where non-partner institutions can get insights and specific training into mobility issues. ICARUS partners shared their experience and knowledge to support the ETP participants in developing light action plans, focused on sustainable mobility solutions to improve cross-border connections between Italy and Croatia.

Five participant organisations were selected through a specific call, namely: Team for the TW Project supported by the Municipality of Pula, City of Poreč, Istria county – department for tourism, Municipality of Pescara and Unione Bassa Romagna.

After a set of trainings organised to meet the needs of the ETP participants, the ICARUS partnership supported the participants in developing their light Action Plans.

# WEBINARS #



**Mobility under uncertainty:  
trends and scenarios  
in a (post) COVID-19 time**



2

**Chat with the experts:  
public transport  
operator's strategies  
and ict solutions in post  
COVID-19**



**Demand Responsive  
Transportation:  
what's next?**

3

**EU and MS Policies  
& Strategies for  
sustainable mobility  
& multimodal transport**



**Introduction to MaaS  
and its functionalities  
(MaaS Talks Episode 1)**

**Open data to improve  
the mobility planning**



**The MaaS ecosystem  
and its Business Model  
(MaaS Talks - Episode 2)**



4



**Planning MaaS  
and the Mobility we want  
(MaaS Talks - Episode 3)**



**How to finance mobility projects?**

9

7

8

# ICARUS EVENTS

## BEHAVIOUR CHANGE EVENTS

ICARUS partners organised a whole set of different events, involving citizens, public authorities, transport operators, tourist agencies and regional agencies presenting the new services developed in the framework of the project. Some of these events were dedicated to students and children, as well. These events were crucial to incentivize citizens to try new and more sustainable transport services, changing their way of traveling and leaving their cars at home.

## DISSEMINATION EVENTS

Every pilot action was promoted in a public event, launching the start of the service or presenting the new available applications and ICT solutions. Some of the events were held on line due to the covid-19 restrictions, while others were held on the field, with the involvement of relevant authorities and stakeholders. These events were meant to inform the public about the new service to be tested and about their opportunities to evaluate the solution proposed.

## QUALITY PARTNERSHIP MEETINGS

ICARUS partners organised 16 working group meetings with the key players in each region with different profiles (public authorities, transport operators, transport experts, etc) during which specific problems and solutions identified by the project were discussed.

## PUBLIC EVENTS



New intermodal services for sustainable mobility – Joint event with MIMOSA and E-CHAIN projects funded under Interreg Italy-Croatia CBC Programme



Develop reliable passengers transport networks and intermodal connections in the EUSAIR area – Joint event with MIMOSA and SMACKER PROJECT (Interreg Central Europe)

# ADDITIONAL ACTIVITIES

With its results, the ICARUS project contributed to the national, regional and international policies. Indeed, the project outputs and in particular the pilot activities, have implemented some innovative measures foreseen at political level. Thus, it has contributed to test on real scale the policy measures and for this reason represent the first step for the further upscaling for future initiatives. The ICARUS approach allowed to bring at a higher level the lesson learnt and the needs, in sustainable intermodal low carbon mobility.

# NOTES

## Contact info

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watch the video



[www.italy-croatia.eu/icarus](http://www.italy-croatia.eu/icarus)



Mattia Simeoni,  
drawing from the contest  
"Una Mossa Sostenibile"  
organised  
in the Emilia-Romagna Region  
in the framework  
of the ICARUS project.

