

D4.3.2 Marche Region pilot site



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1. Introduction

1.1 Purpose of this document

The object of this document is to describe the pilot project performed by Marche Region.

1.2 Pilot description

Marche Region extends over an area of 9,694 square kilometers of the central Adriatic slope between Emilia-Romagna to the north, Tuscany and Umbria to the west, and Lazio and Abruzzo to the south, the entire eastern boundary is formed by the Adriatic Sea.

Thanks to its excellent geographic position, Marche Region can be reached in different ways:

- By plane from international airports (i.e. Munich, Brussels) Raffaello Sanzio (located in Ancona). The airport can be reached by local bus or by car via the highway;
- By train. The region is served by railway transport system that covers 386 kilometers of lines. It directly connects all cities within Adriatic sea; moreover the main Italian cities (i.e. Milan and Rome) are linked to Ancona through the high speed train connection;
- By bus. Marche is an Italian central region, for this reason the available long-distance buses that operate from the north to the south of Italy can move people in our area.
- By ferry. Ancona, the capital city of the Region, is characterized by an important RO/PAX port (for passengers and goods). From the port of Ancona is possible to travel to other countries like Croatia and Greece.

Its strategical geographic position and the three major interchange HUBs (airport, port and train station) should ensure that the city of Ancona is considered a strategic starting point for tourists and residents to travel across Europe.

The lack of a single multimodal information system and the difficulty to display transport information, discourage users to start their travel from Ancona or using public transport (like train or bus) to reach the interchange HUBs.

Since 2007 the Region has activated a web-based system for searching LPT lines and timetables available at this link <http://orari.trasporti.marche.it> .

This system allowed to have all transport data from 5 different transport operators within Marche region. All data are periodically published in the Marche cloud and this guarantees updated data available to the user on web regional platform.

This situation improves the previous scenario where each single transport operator provided such information on its personal website without any integration to the others.

Thanks to the STEP-UP project, Marche Region is overcoming the limits of previously web-based system, in fact it includes also other transport model (for example train and ferry) for a wider European connection.

With its pilot project, Marche Region has developed a single multimodal and cross-border travel planner in order to facilitate at first the access to the transport network and on the other side attract more demand thanks to the inclusion of events and points of interest. It is important to offer easy and complete information for a high quality users' experience avoiding the proliferation of web applications.

1.2.1 How the pilot is accessible by the end-users

Marche Region aims at reaching as much travellers as possible, thus the pilot was performed to include different communication channels: web, APP. In fact, the first part of the project has been dedicated to the definition of the pilot design (logical and physical architecture). Since summer season 2019, the travellers have the opportunity to access and use the web platform for their trips, search for information/multimodal trips, looking for events or points of interest within interested area. Hereafter the steps of Marche Region pilot:

- 1) Firstly, the pilot project will be accessible to the end-users via responsive web platform (English and Italian language available)
 - a. <https://www.stepup-tp.eu/>
- 2) Secondly, the STEP-UP functionalities will be accessible also by a mobile app.

2. Final platform

During the project, Marche Region developed a door to door multimodal travel planner platform in order to achieve the objects of facilitate the access to the transport network for tourists, citizens and commuters.

Hereafter, what has been developed:

- Back-office to upload events and points of interest of each territory involved in SEP-UP project
- Import for Mobility data collection in GTFS well format to feed the E-planner.
- Tourism platform has been realized and published to make easier the access to end users for the consultation of events and points of interest

- Travel planner platform has been realized and published to make easier the access to end users for searching multimodal travel solutions


The STEP-UP platform includes tow type of communication channels: web, app where collected information will be accessible for end-users.

2.1 E-Planner – Never been so close

The E-planner – Never been so close is available through the following link: <https://www.stepup-tp.eu/>

Hereafter the Home Page designed by UX/UI team of expert to guarantee an easy and comfortable use of the services offered by Marche Region within STEP-UP project. Marche Region wants to maintain these services.

[PLAN TRAVEL](#)
[EVENTS](#)
[PLACES](#)
[EN](#)



FROM ⇄ TO


Today
 After 19:13

Never been so close

EVENTS IN OUR TERRITORY

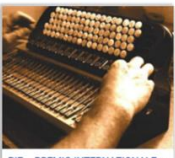
Come to discover the events planned in our territory

Show all




SALENTO INTERNATIONAL FILM ...
04/09/2019 - 08/09/2019

Discover more




PIF - PREMIO INTERNAZIONALE ...
18/09/2019 - 22/09/2019

Discover more



FIERA NAZIONALE DEL TARTUFO...
27/10/2019 - 10/11/2019

Discover more




PAOLA TURCI IN CONCERTO
23/11/2019

Discover more

WONDERFUL PLACES TO VISIT


Visit our territory choosing spectacular places

Show all




MOLE VANVITELLIANA
Ancona - Marche

Discover more




TEATRO DELL'AQUILA
Fermo - Marche

Discover more



CHIESA GRECA
Lecce - Puglia

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PIAZZA SANT'ORONZO
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Figure 1: E-planner home page

During the E-Planner development, Marche Region worked in parallel on three different fronts:

- Development of a multimodal calculation engine able to:
 - o take in input mobility data of different transport providers and of different modes of transport (bus, train, boat)
 - o elaborate these data
 - o provide multimodal travel planner solutions in line with end users needs.
- Development of a back office system for the insertion and management of events and points of interest of the territory. Thanks to this tool each partner can upload territory information and integrate mobility and tourism information in a very simple way.
- Development of a user-friendly interface for:
 - o visualizing multimodal and multi-vector travel solutions
 - o consulting events and points of interest in the chosen area

Multimodal calculation engine

As travel planner engine has been decided to use the open source platform OTP, Open Trip Planner (<http://www.opentripplanner.org/>), is a known and proven open source platform, recognized at worldwide level, suitable for calculating multimodal routes in multi-company contexts. OTP is based on de facto standard data such as:

- ✓ GTFS for public transport,
- ✓ OpenStreetMap (OSM), for road network.

The main strengths of the system are the following ones:

- **Speed of the calculation:** thanks to the use of the AStar calculation algorithm, the system takes few milliseconds to calculate multimodal travel solutions regional level.
- **Evolution and maintenance:** thanks to the support of the design team and the developer community, the product is constantly evolving; in this way, with each new release, new functions and calculation methods are available.
- **Integration with real-time data** through the support of GTFS RealTime.

Back office system

Public transport and tourism integration is one of the main objectives of the Marche Region pilot project. For this reason has been decided to develop a back-office system able to collect events and points of interest information. Thanks to the login credential assigned to each partner, it is possible to access to the back-office system and upload events and points of interest of the managed territory.

Each new uploaded item is automatically shown in the E-Planner interface. In this way each user can view a point of interest or an event and find out how to reach it by public transport.

User friendly interface

Together with the travel planner calculation engine and back-office system, a user friendly interface has been designed and developed. User can query the interface to search travel solutions to move from point A to point B through the use of public transport, or to search events and points of interest in the area covered by the project.

Home:

As soon as the user lands in the STEP-UP portal, he will find himself in front of an image with two box “From“ and “To“. The aim is to give greater prominence to the transport section, making sure that the user is immediately able to understand what the purpose of this platform.

Inside each box the user can insert, helped by Google autocomplete, a specific address or a specific stop, railway station, port.



Figura 2: search form

Scrolling the page, points of interest and events will be shown.

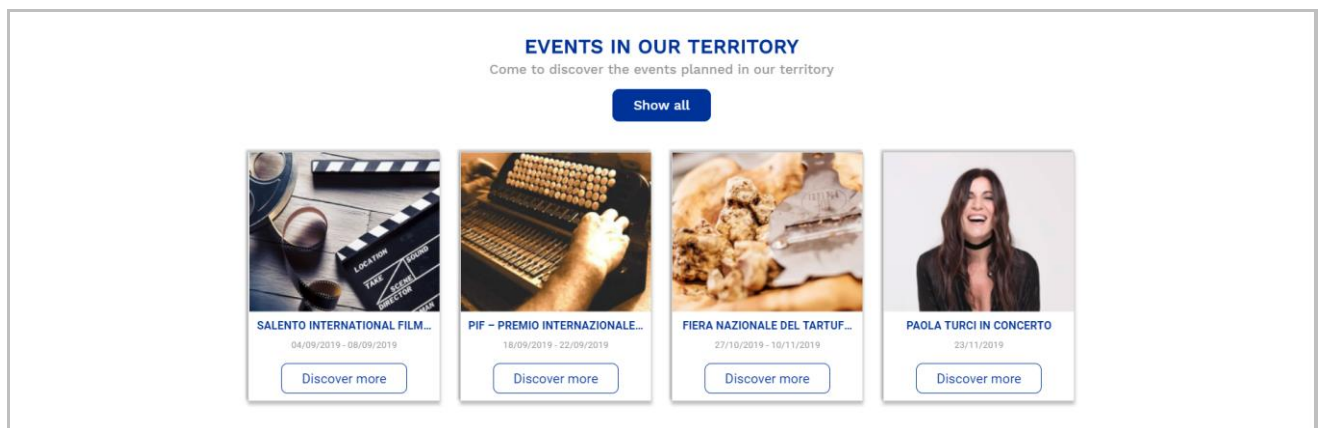


Figure 3: Events section

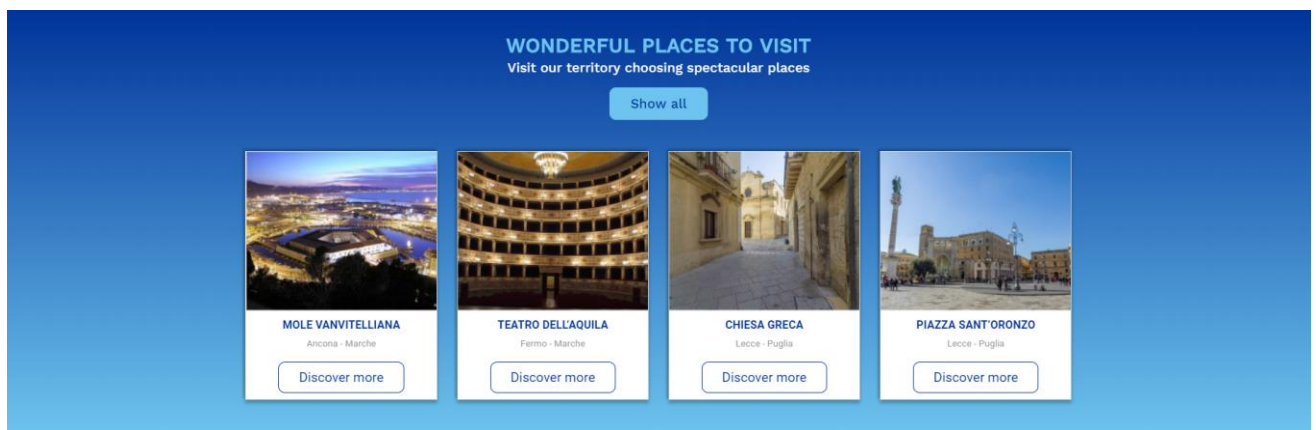


Figure 4: POIs section

Travel solutions:

Once inserted departure and destination points, the travel planner system is able to calculate one or more multimodal travel solutions in order to satisfy user's requests.

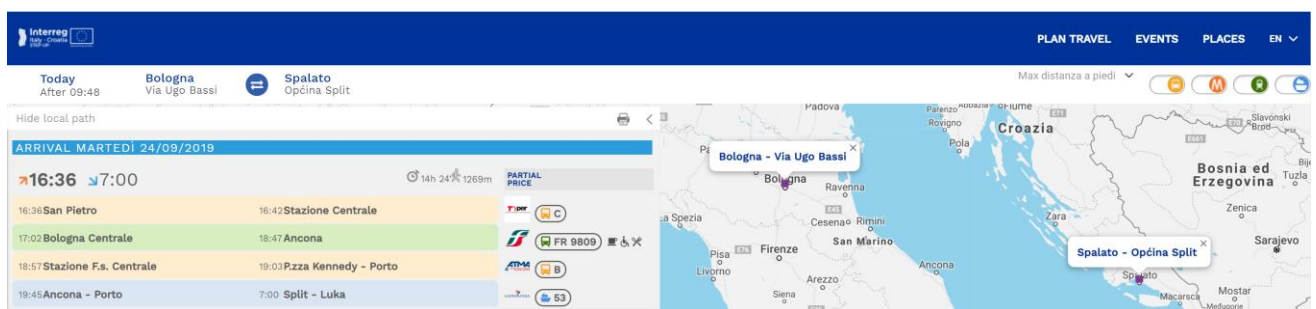


Figure 5: Bologna - Split travel solution

For each travel solution it is possible to show the details of the solution and the stops that each vehicle makes.

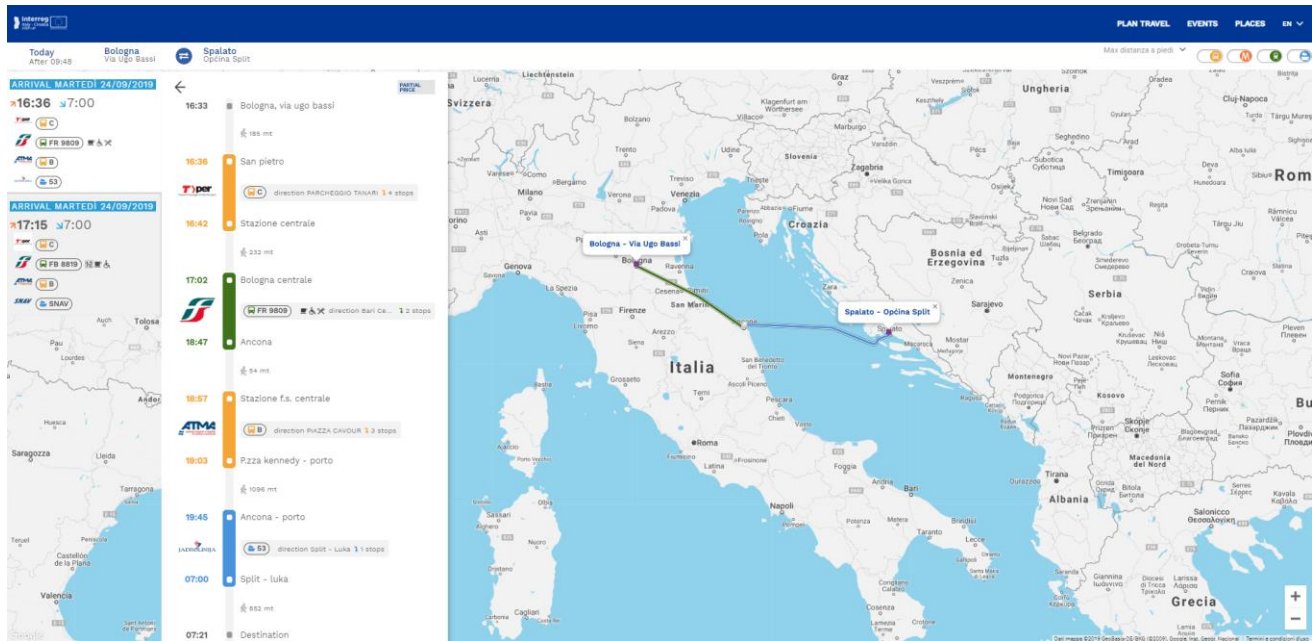


Figure 6: Detail of Bologna - Split solution

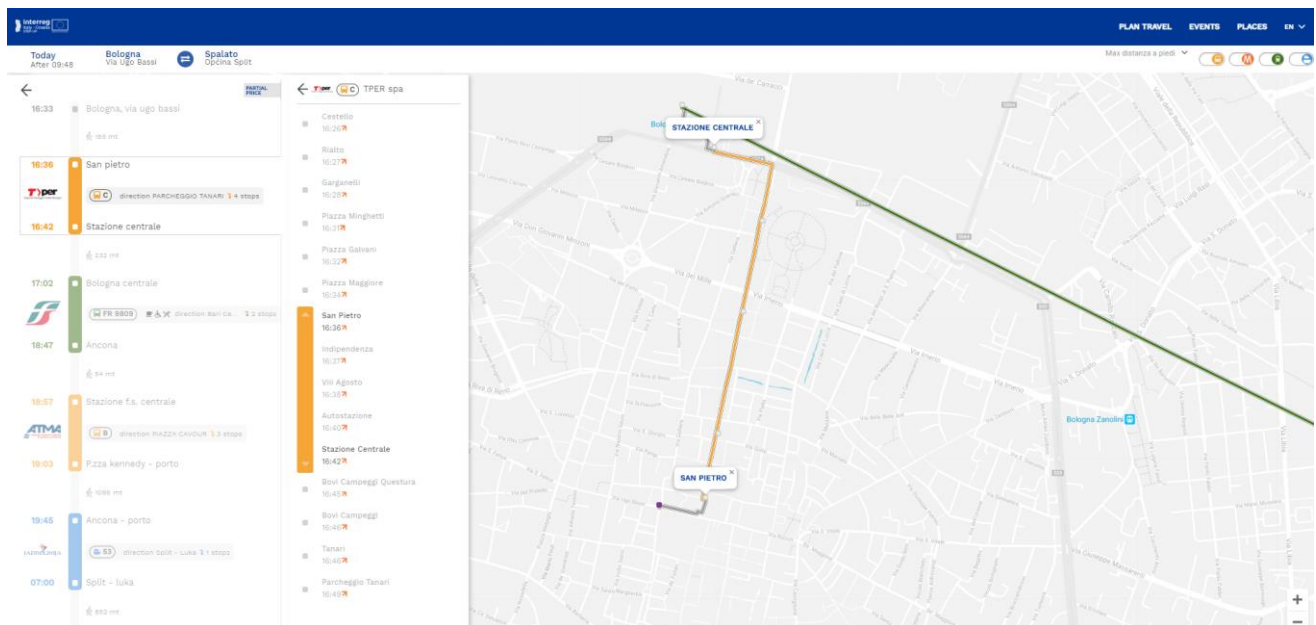


Figura 7: detail of a trip

Landing page of events

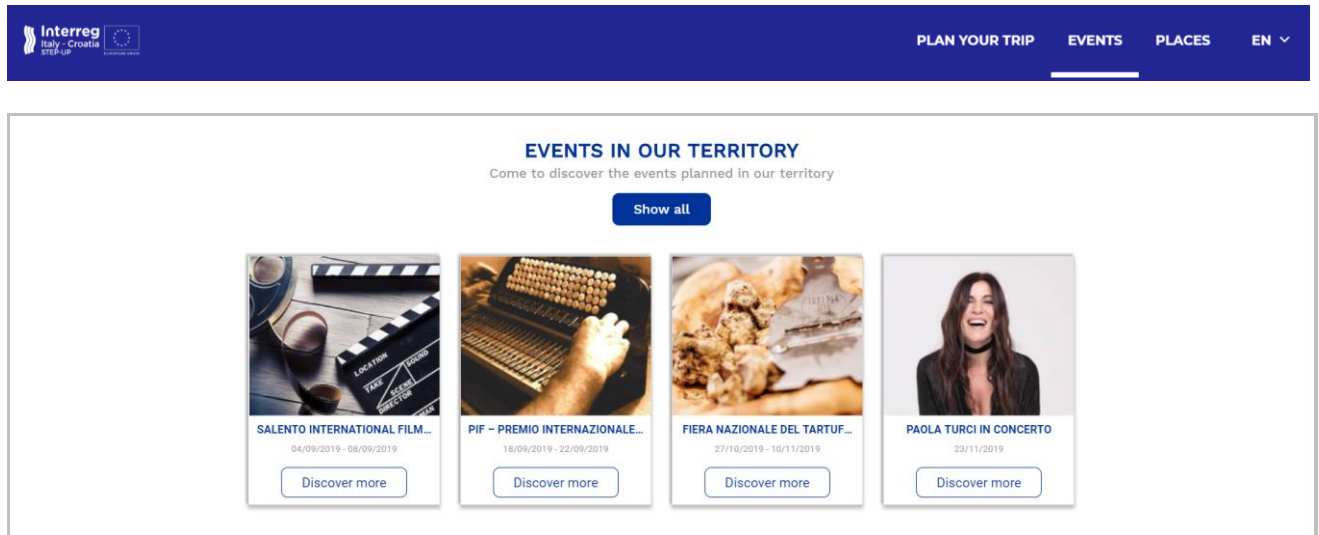
In the home page there are only some events and points of interest uploaded by the partners.

To view all Events uploaded by the partners, it is possible to access a dedicate section.

This section is easily accessible through two buttons in home page:

- Events: button in the right of header

- Events in our territory – Show all: in the home page section dedicate to the principal events



With these two buttons the user will be land in a page where all events uploaded are shown. For each event it is possible to discover the detail of the event and how to reach it.

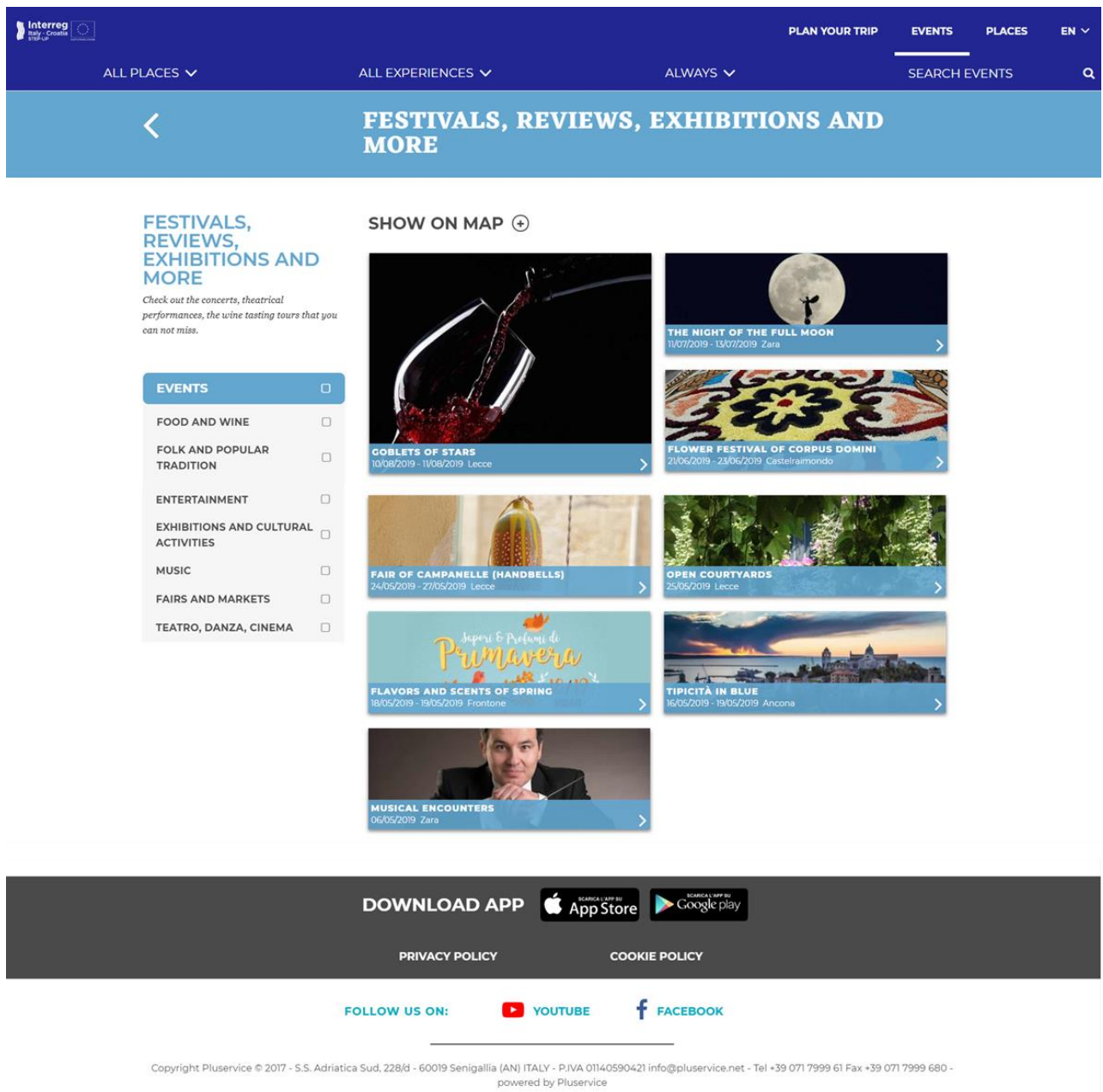


Figure 8: Landing page of events

Landing page of Points of interest

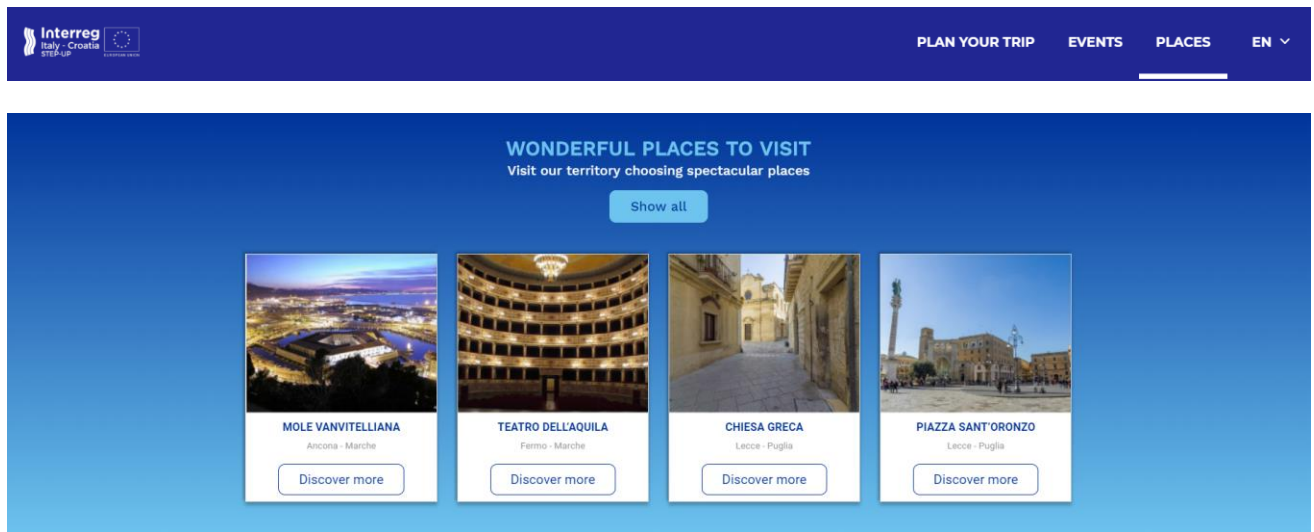
In the home page there are only some points of interest uploaded by the partners.

To view all points of interest uploaded by the partners, it is possible to access a dedicate section.

This section is easily accessible through two buttons in home page:

- Places: button in the right of header
- Wonderful place to visit – Show all: in the home page section dedicate to the principal places

- With these two buttons the user will be land in a page where all events uploaded are shown. For each event it is possible to discover the detail of the event and how to reach it.



With these two buttons the user will be land in a page where all places uploaded are shown. For each place it is possible to discover the detail of the place and how to reach it.

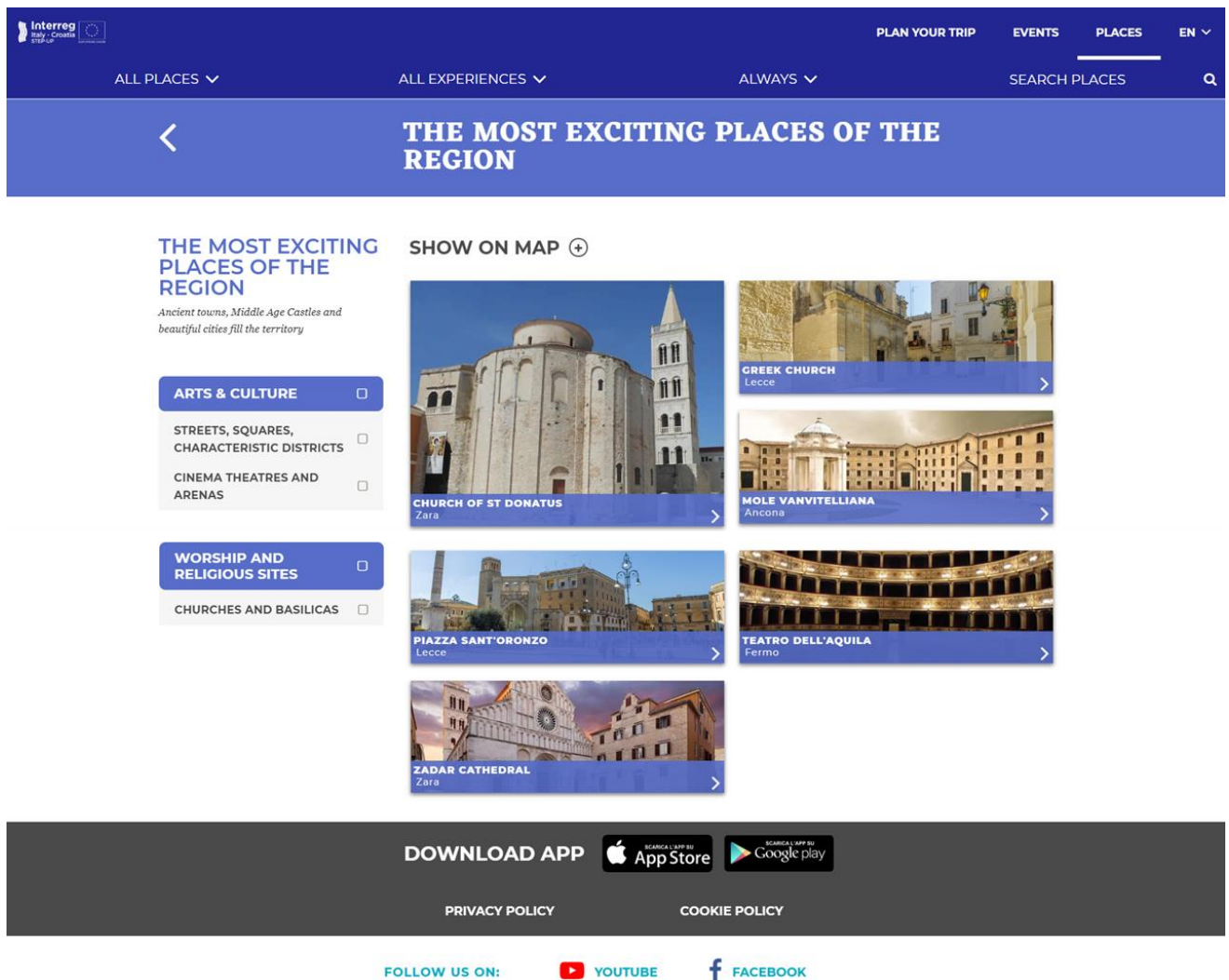


Figure 9: Landing page of points of interest

3. Test and results of the E-planner

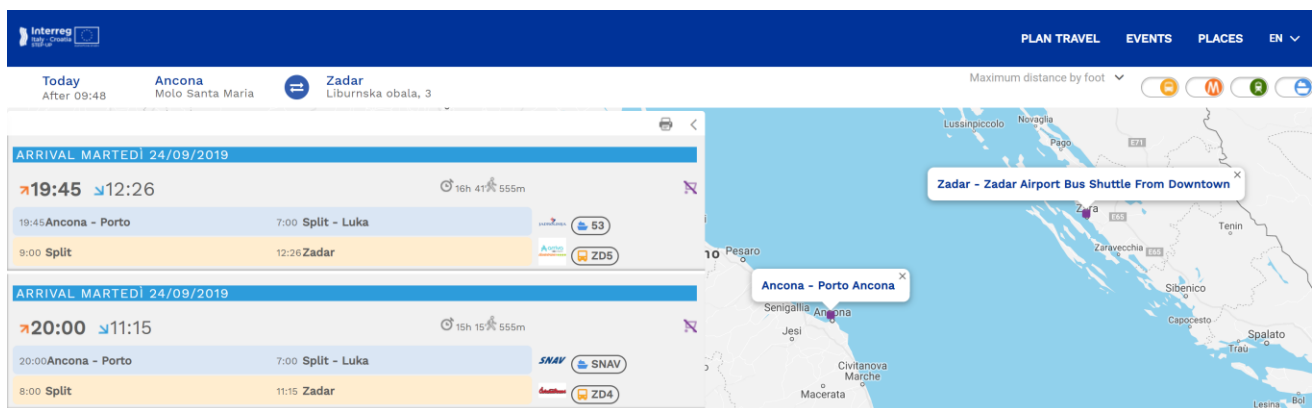
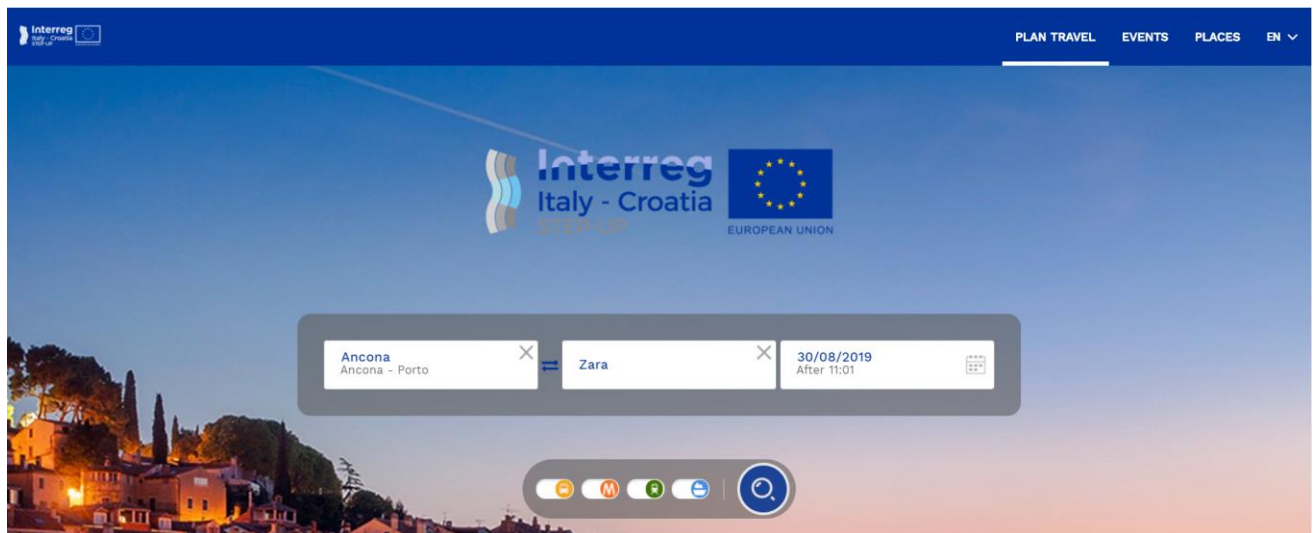
Hereafter some use cases managed by STEP-UP web portal. These scenarios can explain better the scope of the project and its potentialities.

a. Scenario 1 – from hub A to hub B

Travel solutions between backbones, from hub A to hub B.

Example: the user queries the STEP-UP portal and requests a trip solution from Ancona port (hub A) to Zadar airport (hub B).

User and operations	STEP-UP WEB PORTAL
Enter Origin as Port of Ancona	STEP-UP web portal identifies the location (Google API will be used for this scope).
	The location becomes departure point
Enter Destination as Zadar airport	STEP-UP web portal identifies the location (Google API will be used for this scope).
	The location becomes arrival point
Click on “Search”	The portal displays a list of available backbones to connect the origin and destination. The solutions are also displayed on a map. The user selects the favorite trip solution and he/she can visualize some details (e.g. departure time, meters by foot, etc.).



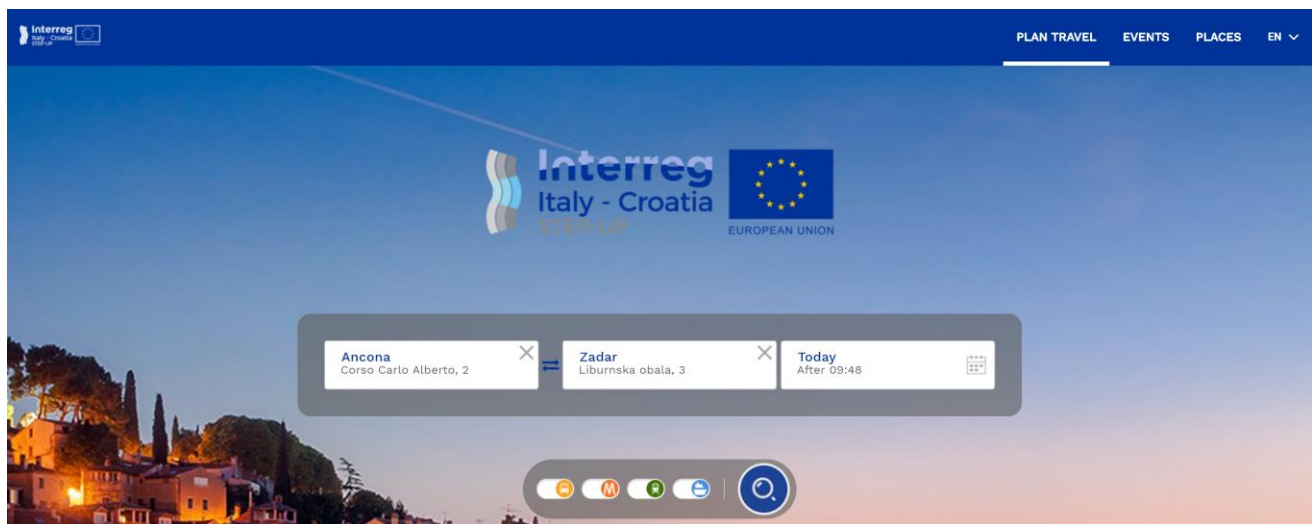
b. Scenario 2 – from address A to HUB B

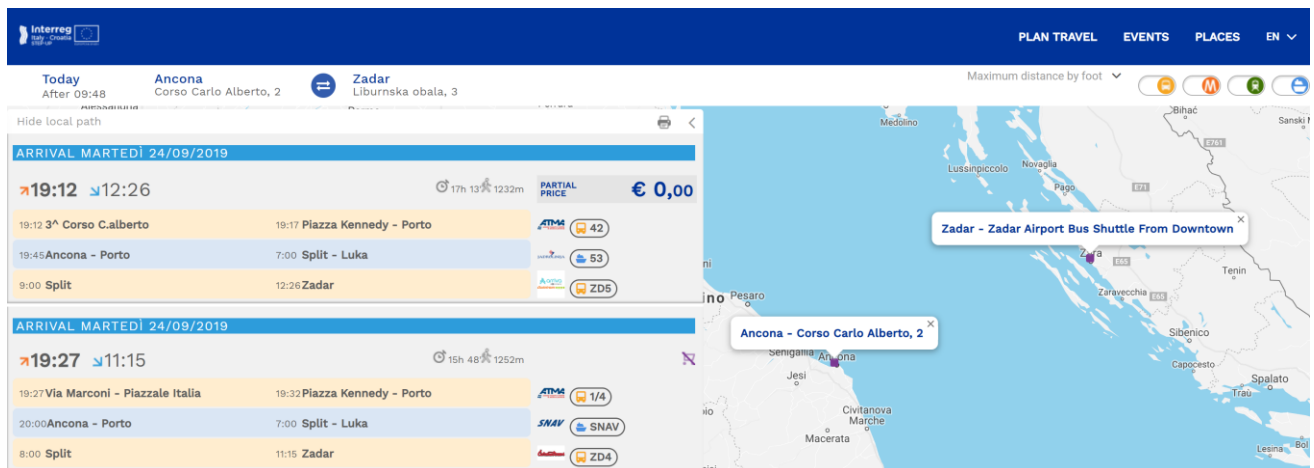
Travel solutions from address A to hub B.

Example: the user queries the STEP-UP portal for a trip from Corso Carlo Alberto, 2 Ancona (address A) to Zadar airport (hub B).

The same scenario is applicable if the departure point is set as hub and the arrival point as full address. In this case, the local transport data will be used to calculate the last mile (from HUB B to destination address).

User and operations	STEP-UP WEB PORTAL
Enter full Departure address (e.g. Corso Carlo Alberto, 2 Ancona)	STEP-UP web portal identifies the location (Google API will be used for this scope).
	The location becomes departure point
Enter Destination as Zadar airport	STEP-UP web portal identifies the location (Google API will be used for this scope).
	The location becomes arrival point
Click on “Search”	The portal displays a list of available multimodal solutions (backbones + urban lines) to connect the origin and destination. The solutions are also displayed on a map. The user selects the favorite trip solution and he/she can visualize some details (e.g. departure time, meters by foot, etc.).



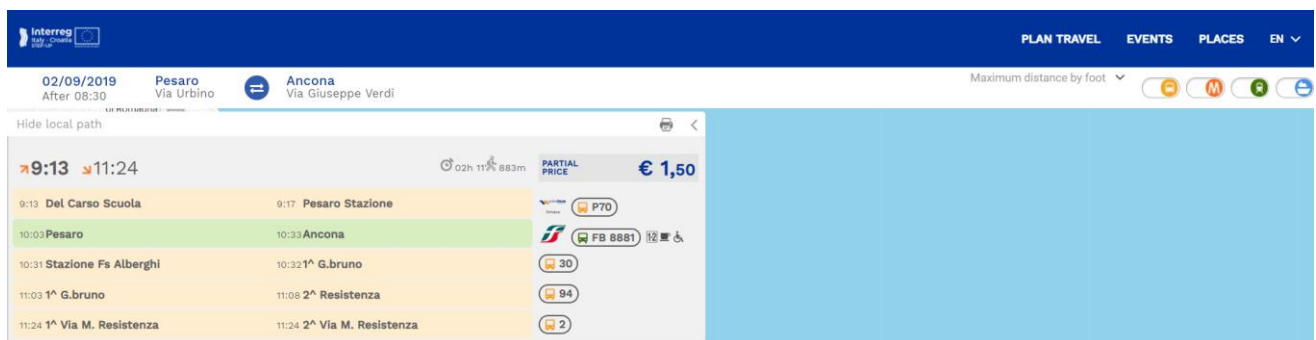
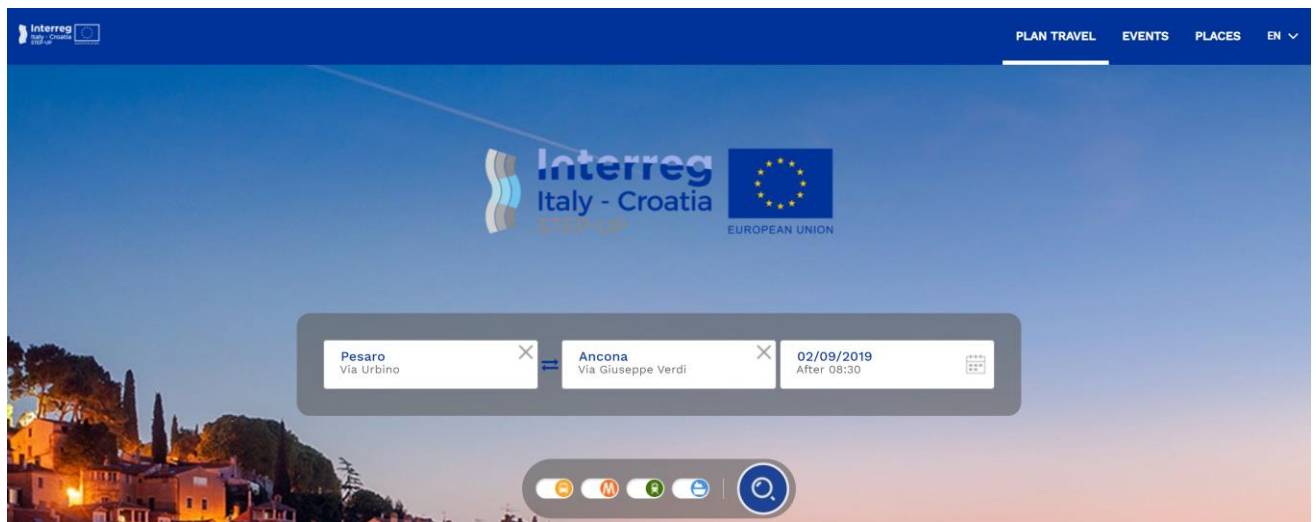


c. Scenario 3 – from location A to location B (same region/area)

Travel solutions in the same region/area, from address A to address B.

Example: the user queries the STEP-UP portal for a journey from via Urbino, Pesaro (address A located in Marche Region) to via Verdi, Ancona (address B located in Marche Region).

User and operations	STEP-UP WEB PORTAL
Enter Origin “via Urbino, Pesaro”	STEP-UP web portal identifies the location (Google API will be used for this scope).
	The location becomes a departure point
Enter destination “via Verdi, Ancona”	STEP-UP web portal identifies the location (Google API will be used for this scope).
	The location becomes arrival point
Click on “Search”	<p>The departure and arrival points are in the same area and the STEP-UP engine identifies the best travel solutions considering the local transport data that feed the whole system. This allows to display only the relevant travel solutions for the interested area.</p> <p>A list of local solutions will be displayed both in a table and on a map. The user can select one solution and visualize some details of it.</p>



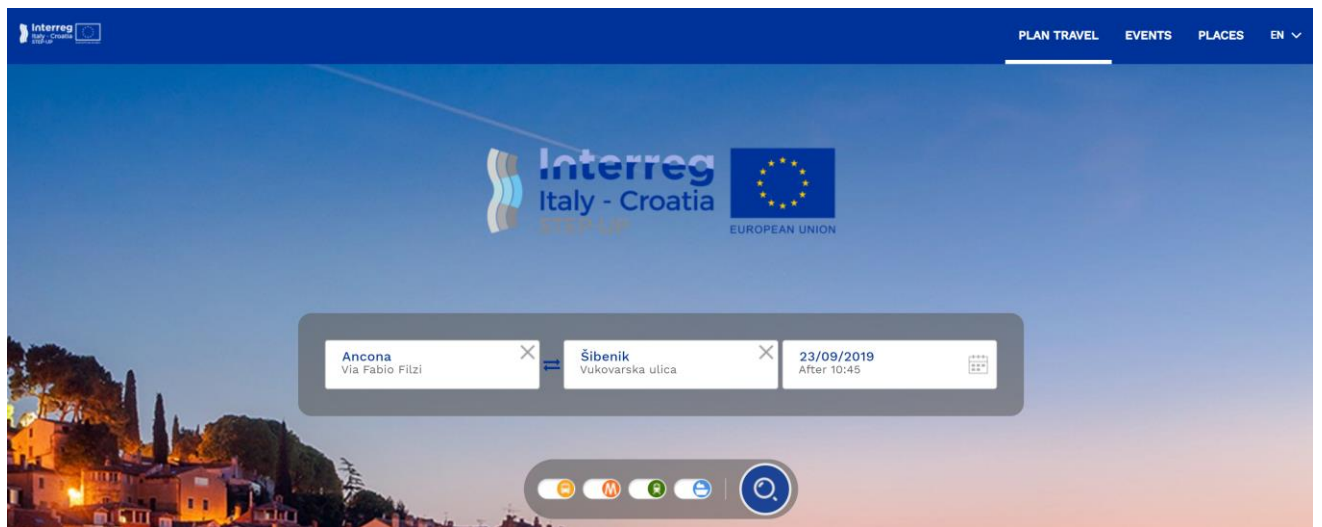
d. Scenario 4 – from full address to full address

Travel solutions from address A to address B.

Example: the user queries the STEP-UP web portal for a trip from Viale Fabio Filzi, Rimini (address A located in Emilia Romagna Region) to Vukovarska ulica, Šibenik (address B).

The user selects the solution from a list and visualizes some useful details.

SCENARIO 4 is similar to SCENARIO 2. The flow described for Scenario 2 can be applied both at departure and arrival point.



23/09/2019 After 10:45 Ancona Via Fabio Filzi Šibenik Vukovarska ulica Maximum distance by foot

ARRIVAL MARTEDI 24/09/2019			
19:09	10:33	15h 23m	2385m PARTIAL PRICE
19:09 Piazza Diaz	19:17 Piazza Kennedy - Porto	ATM4	1/4
19:45 Ancona - Porto	7:00 Split - Luka	53	
9:00 Split	10:33 Šibenik Bus Terminal	ZD5	

ARRIVAL MARTEDI 24/09/2019			
19:25	9:35	14h 09m	2385m
19:25 Piazza Diaz	19:33 Piazza Kennedy - Porto	ATM4	1/4
20:00 Ancona - Porto	7:00 Split - Luka	SNAV	SNAV
8:00 Split	9:35 Šibenik Bus Terminal	ZD4	