



THE PATHS OF REGINA

Web Mapping to promote slow
tourism: the geoportal and the app

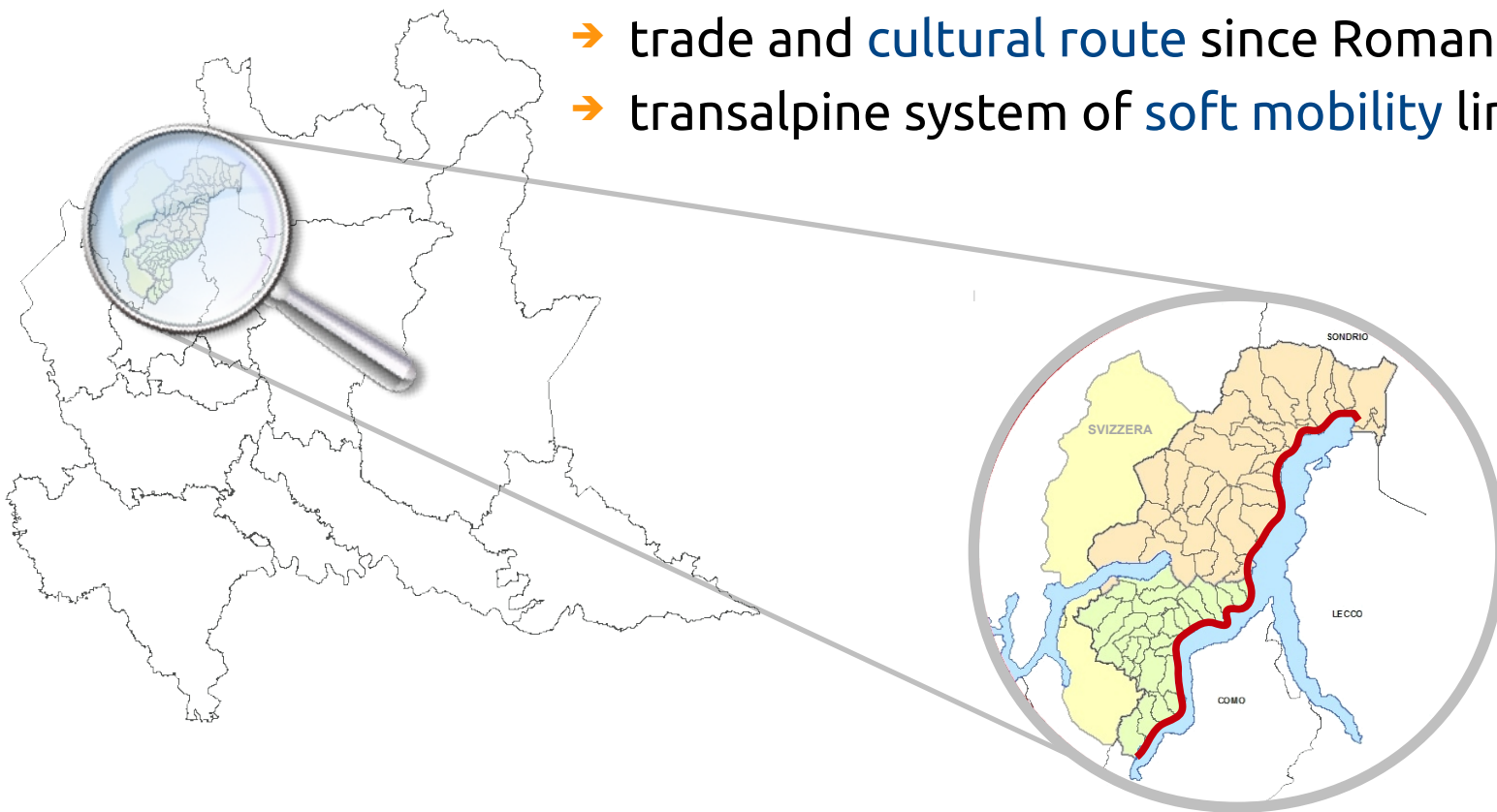
**XMAS in PoliMi Como Campus,
December 18, 2015**

Marco Minghini, Maria Antonia Brovelli, Candan Eylül Kilsedar, Giorgio Zamboni

Politecnico di Milano, GEOlab, Como Campus – Via Valleggio 11, 22100 Como, Italy

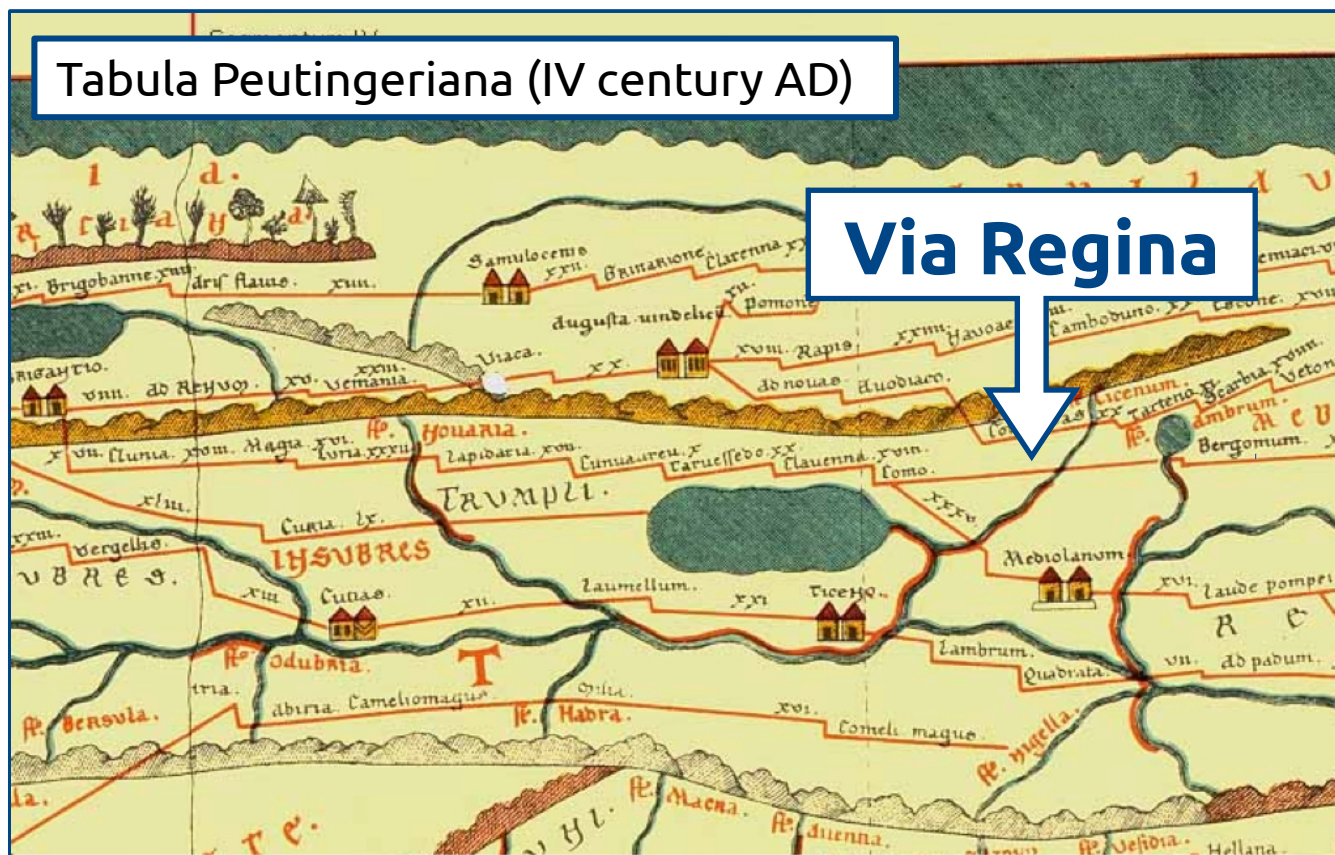
Via Regina: a European cultural route

- ✓ Via Regina defines a **cross-border area** between Italy and Switzerland
 - trade and **cultural route** since Roman times
 - transalpine system of **soft mobility** links



Via Regina: a European cultural route

- ✓ Via Regina defines a **cross-border area** between Italy and Switzerland



The project “The Paths of Regina”

- ✓ “The Paths of Via Regina” INTERREG project (Italy/Switzerland)
 - **purpose**: to valorise the cultural heritage of the area and foster tourism
 - **beneficiaries**: local communities, administrations, pilgrims, tourists
 - **expertise** involved: cultural heritage, land use and design, geomatics

- ✓ Partners:

- universities

POLITECNICO DI MILANO



Scuola universitaria professionale
della Svizzera italiana

SUPSI

- local administrations

POLO TERRITORIALE
DI COMO



- cultural associations



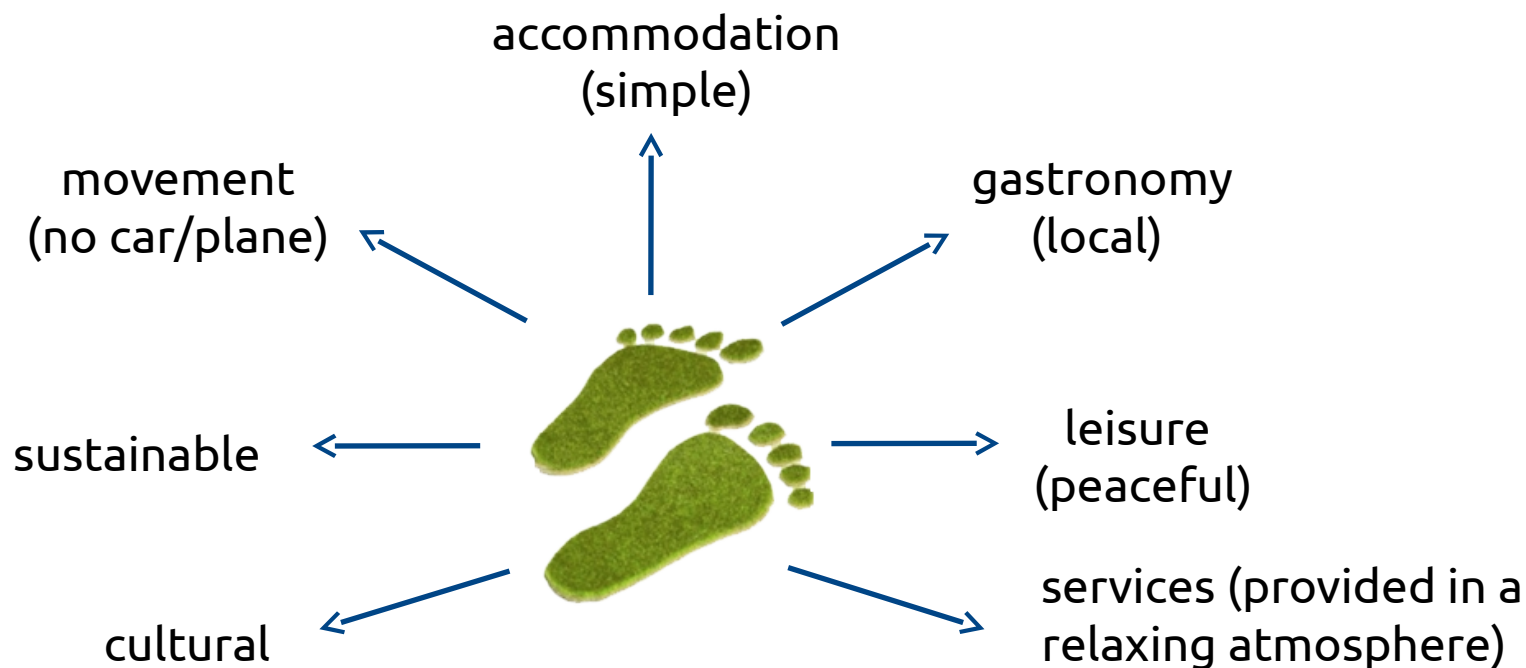
IUBILANTES
ONLUS - organizzazione
di volontariato culturale



M.M. V.I.S.
Museo della Via Spluga
e della Val San Giacomo

Slow tourism at a glance

- ✓ A special case of sustainable tourism focused on:
 - environmental friendliness
 - rediscovery of local traditions and cultural knowledge



The Via Regina geoportal

- ✓ Entry point to the **Web Mapping** applications developed in the project
 - ➔ main WebGIS for **planning routes**



MOBILE APP FOR SLOW TOURISM



GEOIVS

- ➔ mobile app for **slow tourism**
- ➔ **3D Web viewer**
- ➔ mobile app for **surveying paths**
- ➔ **virtual tour** application



3D WEB VISUALIZATION

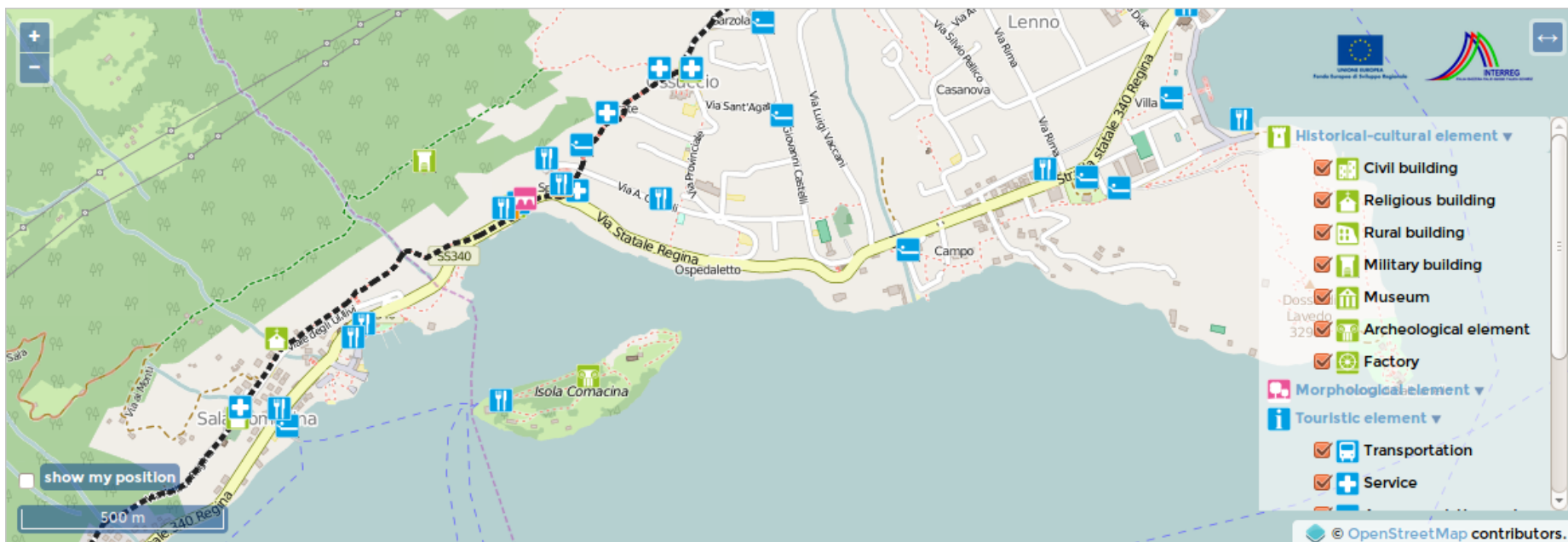


TRANSQUARDI

- ✓ Link: <http://viaregina3.como.polimi.it/ViaRegina>

The main WebGIS of Via Regina project

- ✓ Displays all the geospatial data surveyed during the project:
 - ➔ Via Regina and the related historical paths
 - ➔ the points of interest available along them



[CALCULATE ROUTE!](#)

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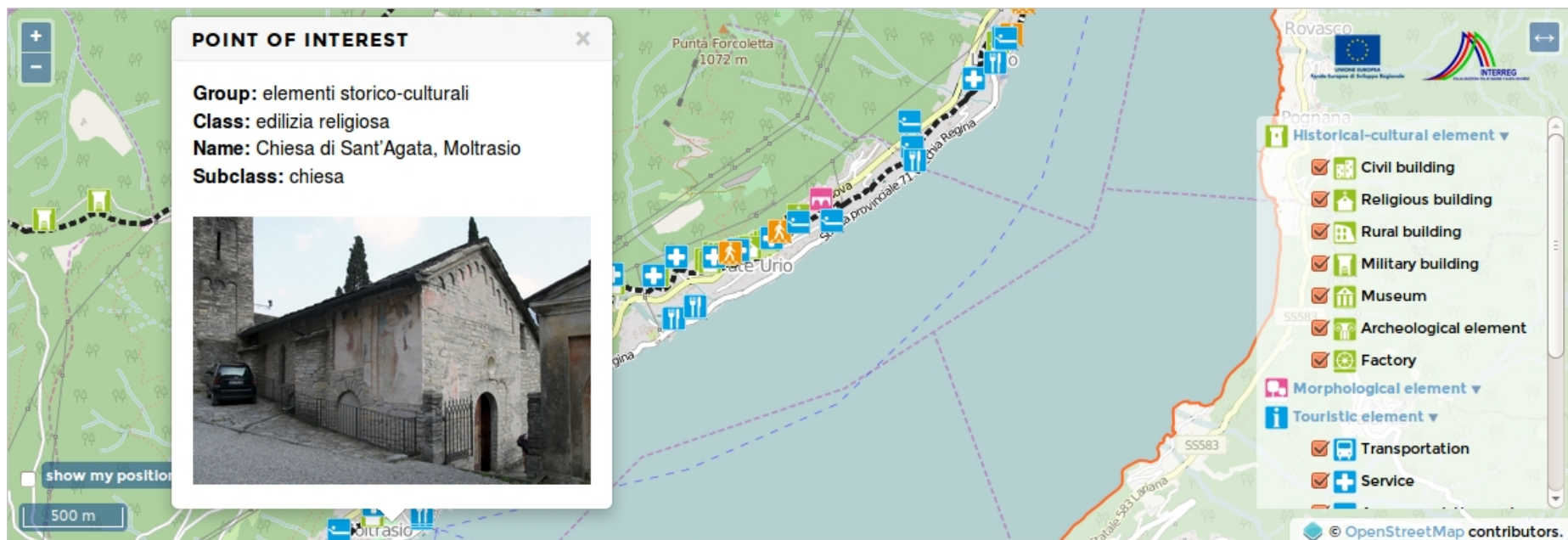
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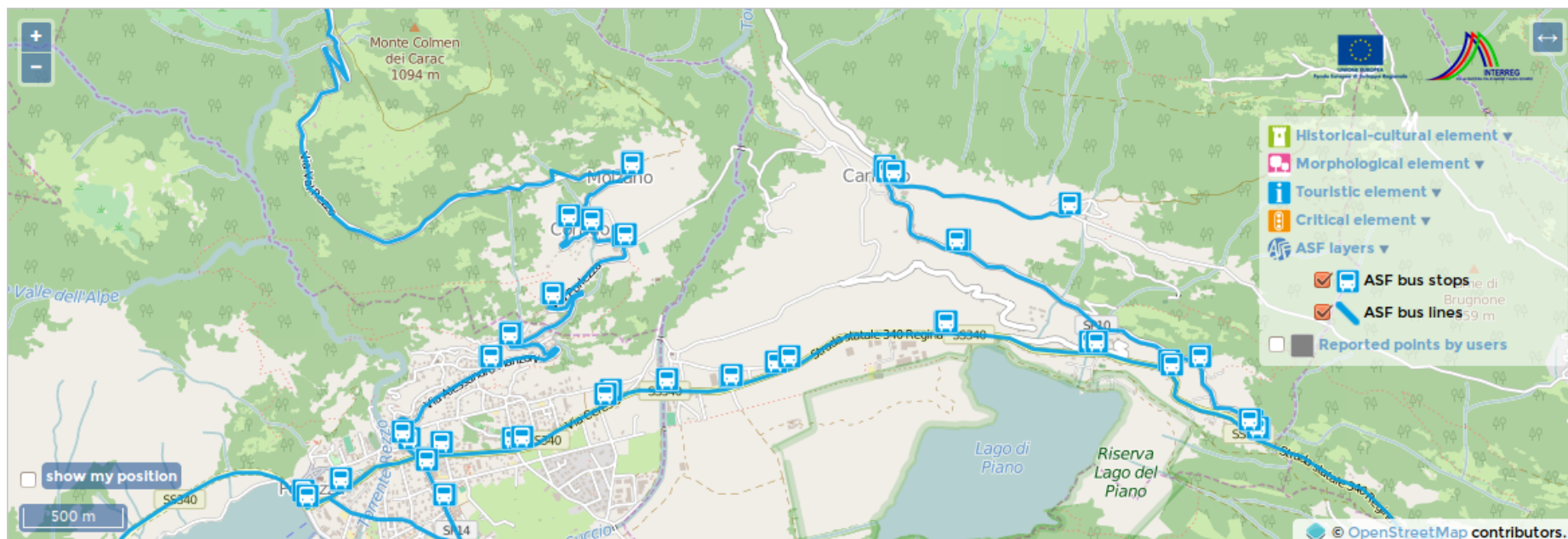
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The main WebGIS of Via Regina project

- ✓ Displays the bus routes and bus stops in the project area
 - ➔ kindly provided by ASF Autolinee
 - ➔ each bus stop has the link to its real time schedule



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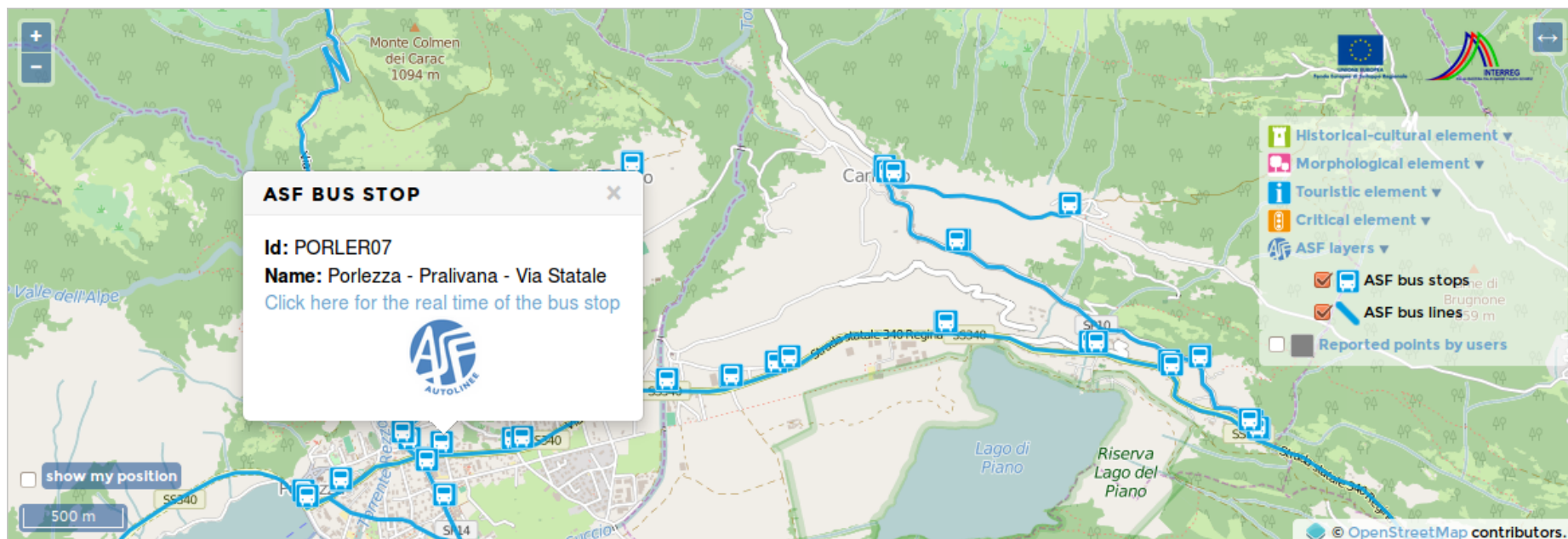
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The main WebGIS of Via Regina project

- ✓ Allows to plan **customized routes**:
 - ➔ based on the **type of points of interest** chosen by the user

WHICH POINTS OF INTEREST DO YOU WANT TO SEE?

- NAVIGATION PREFERENCES -



☒ **RELIGIOUS**



☒ **CIVIL**



☒ **MUSEUM**



☒ **RURAL**



☐ **ARCHAEOLOGICAL**



☐ **MILITARY**



☐ **FACTORY**



☒ **PANORAMIC**

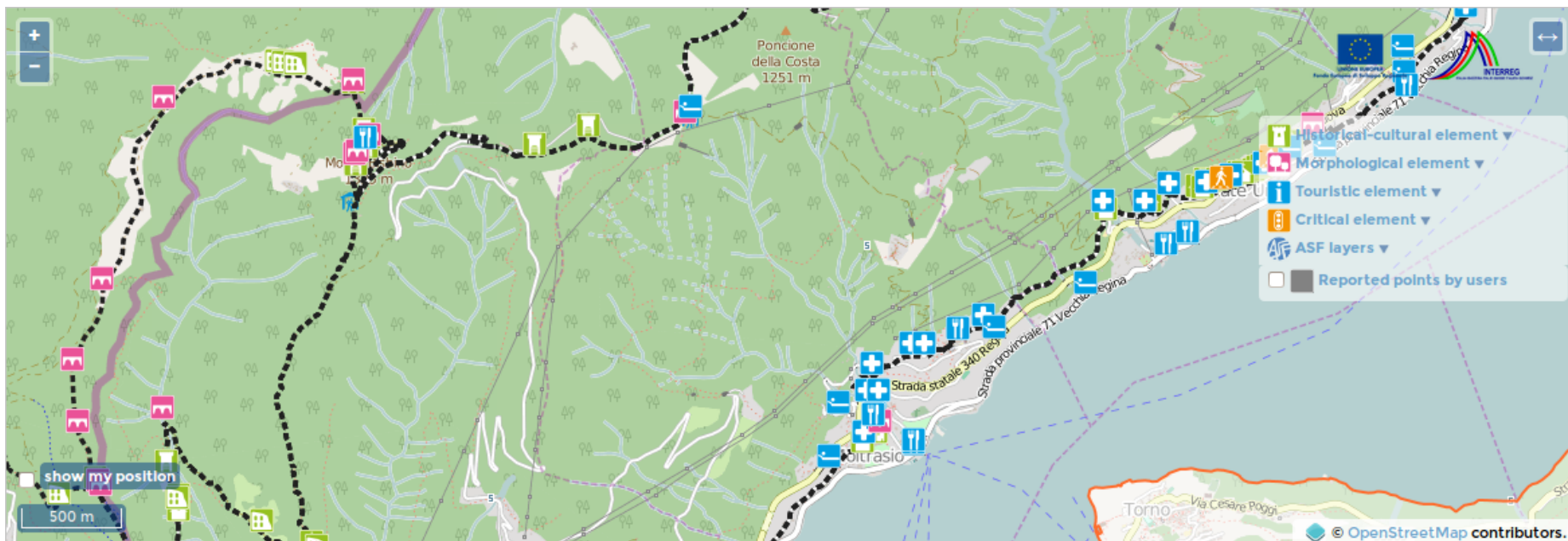


☐ **GEOLOGICAL**

- GO BACK TO MAP -

The main WebGIS of Via Regina project

- ✓ Allows to plan customized routes:
 - ➔ based on the type of points of interest chosen by the user
 - ➔ based on a start point and an end point



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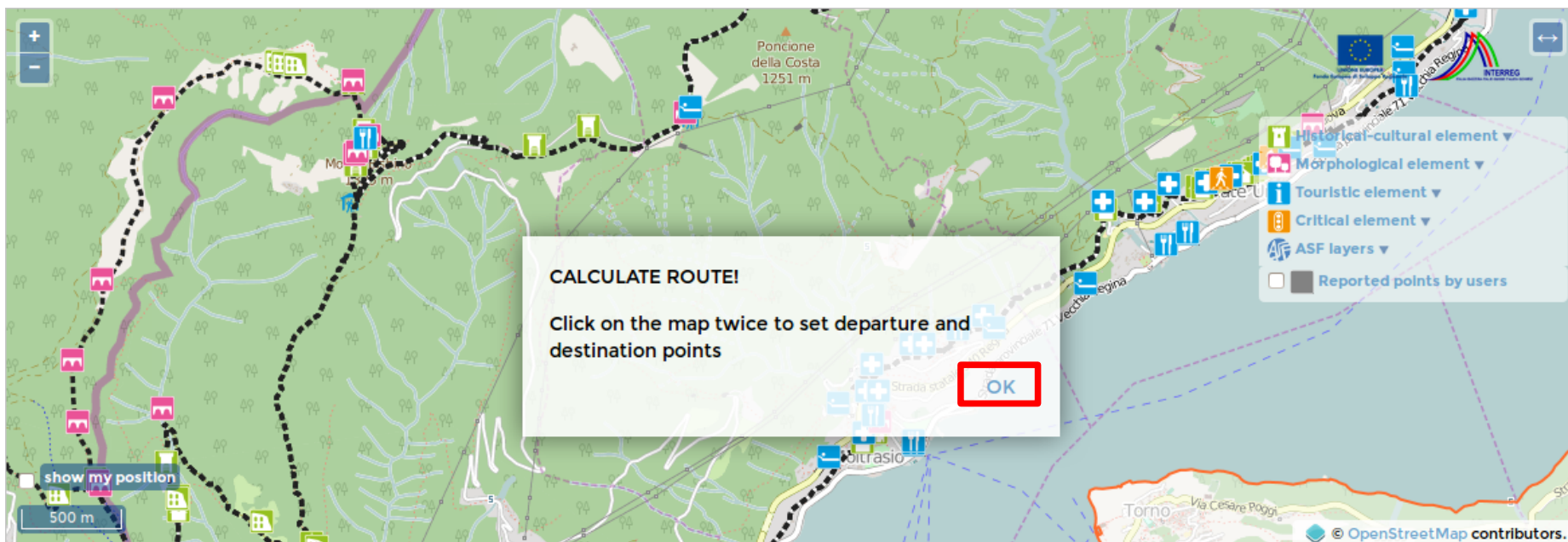
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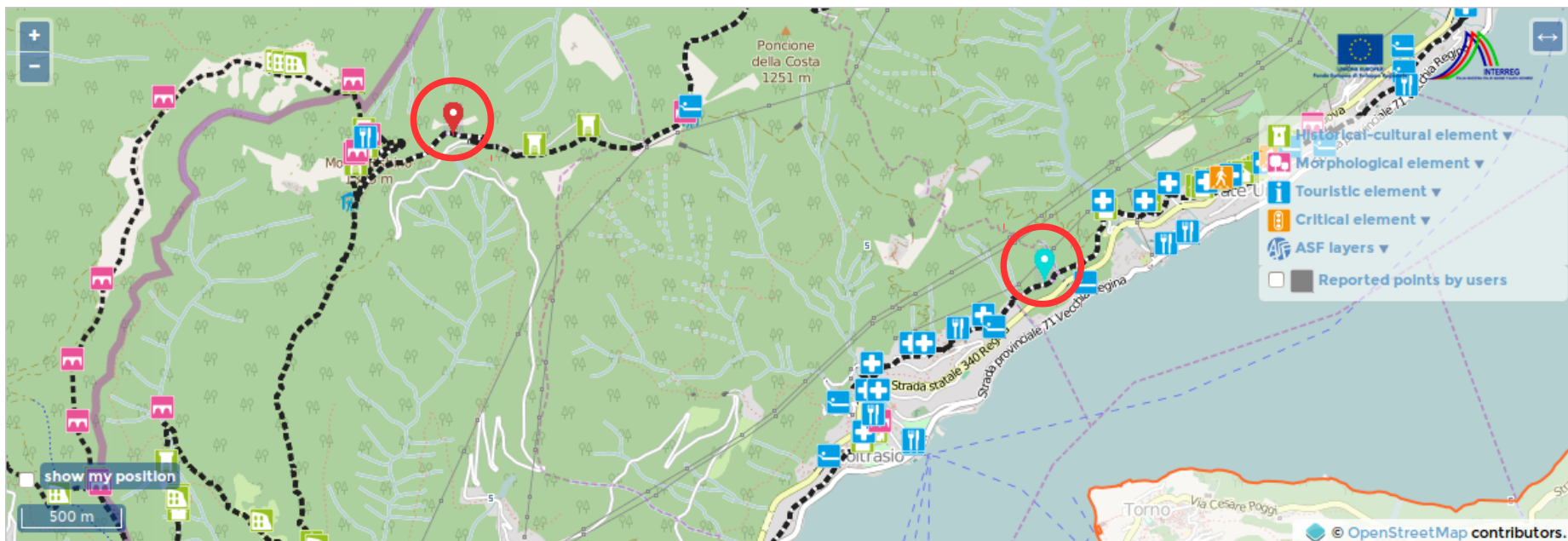
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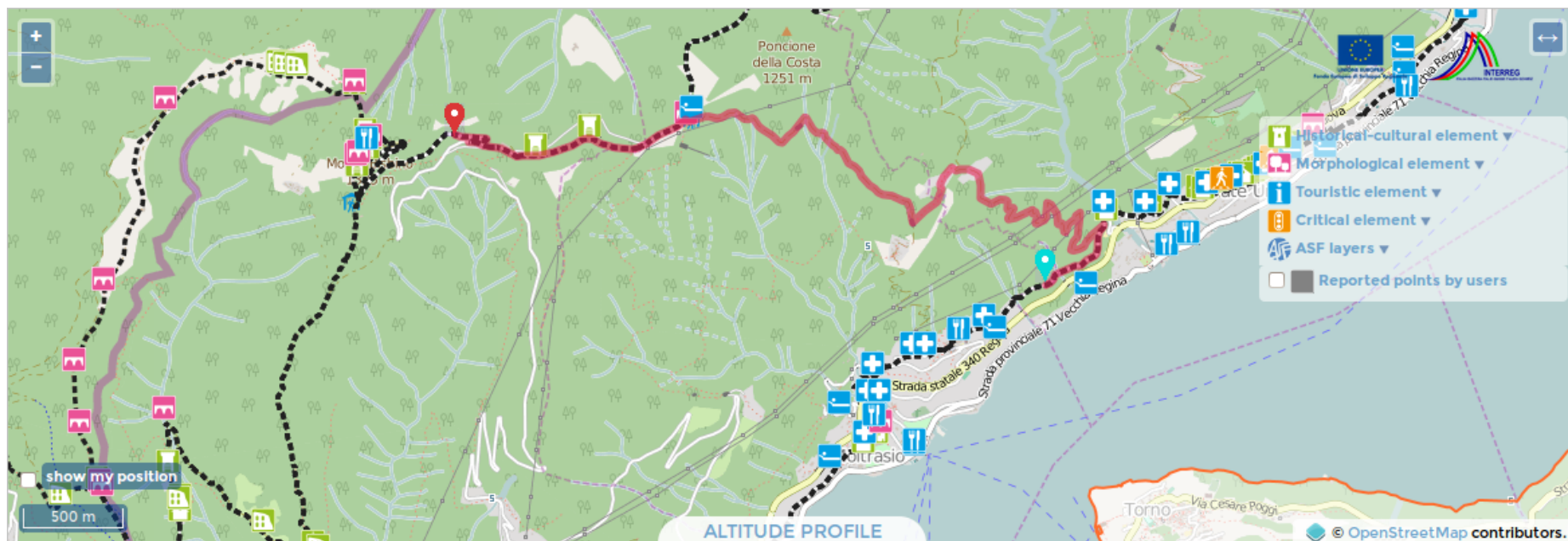
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EXPORT PDF

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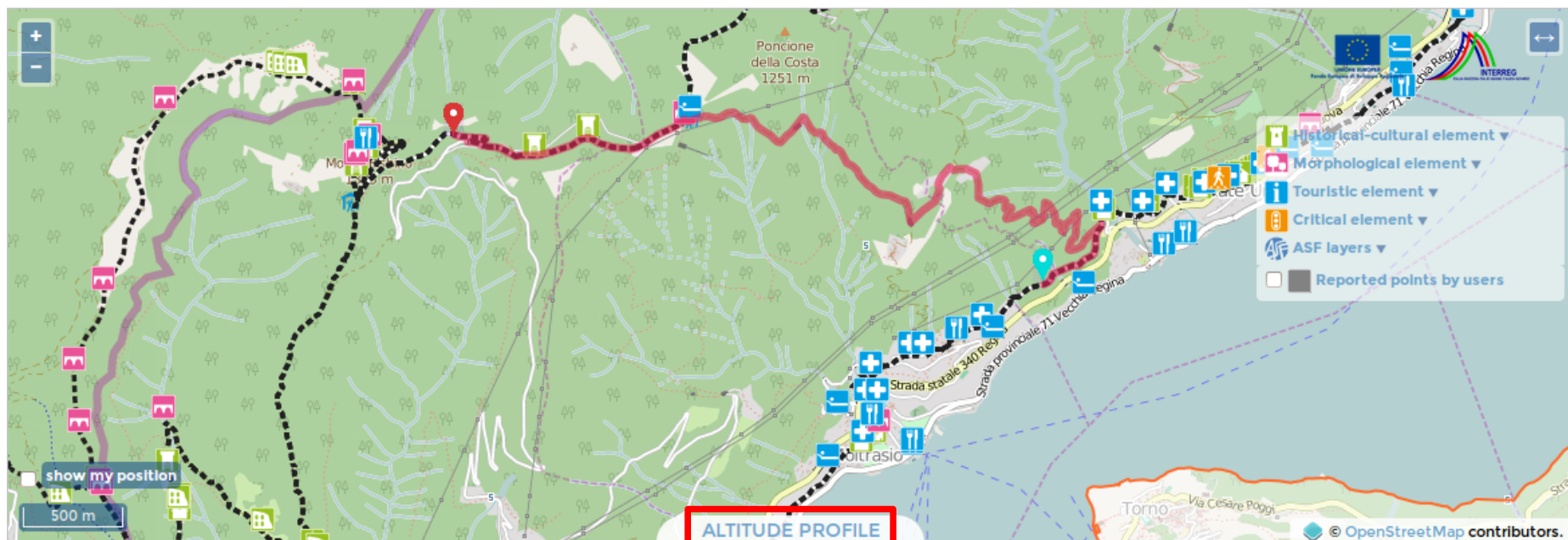
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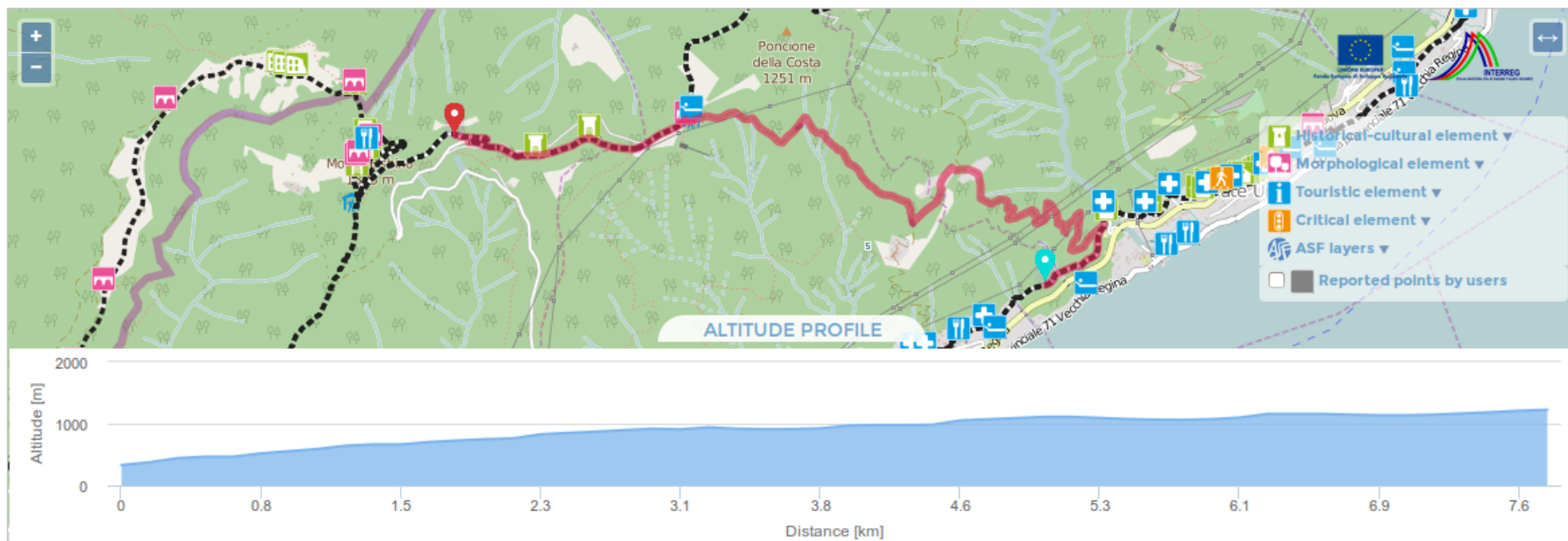
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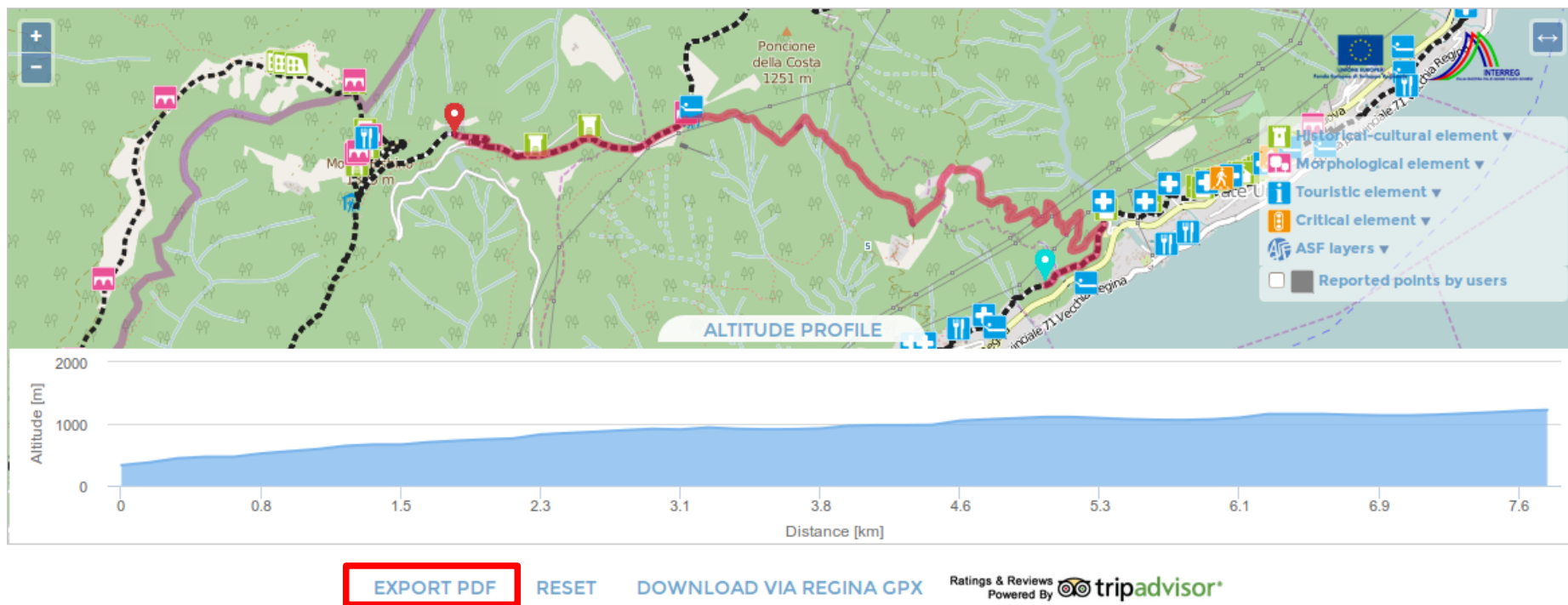
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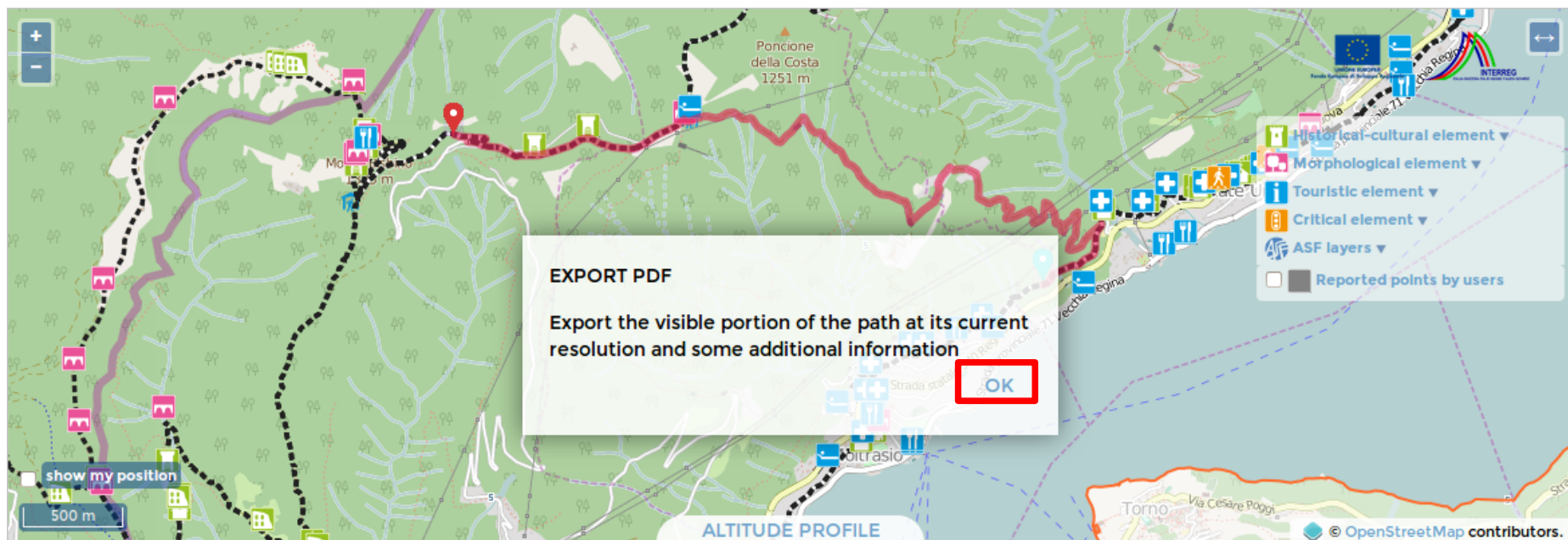
The main WebGIS of Via Regina project

- ✓ Print the **information** on the computed route:
 - ➔ 2D/3D distance, average slope, height increase/decrease



The main WebGIS of Via Regina project

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EXPORT PDF

RESET

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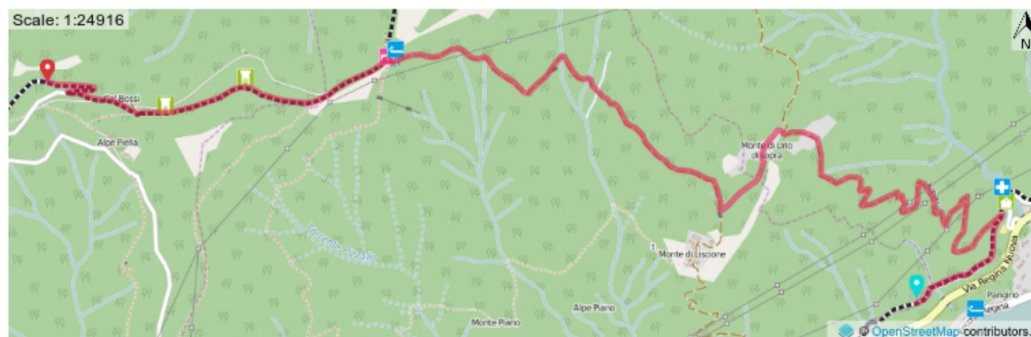
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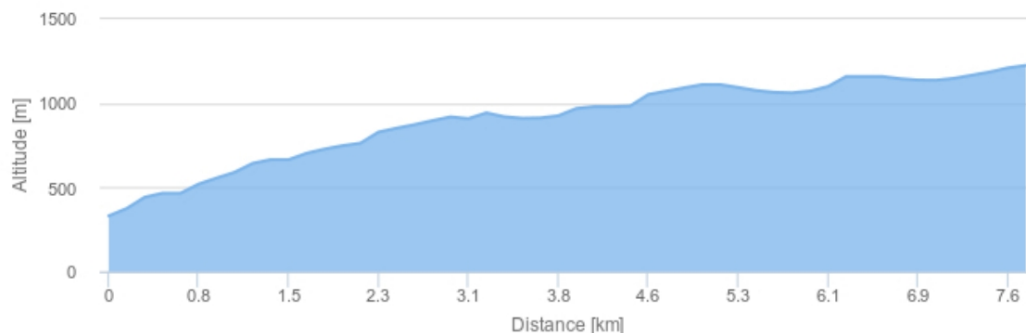
- ✓ Print the **information** on the computed route:
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Your path

www.viaregina.eu



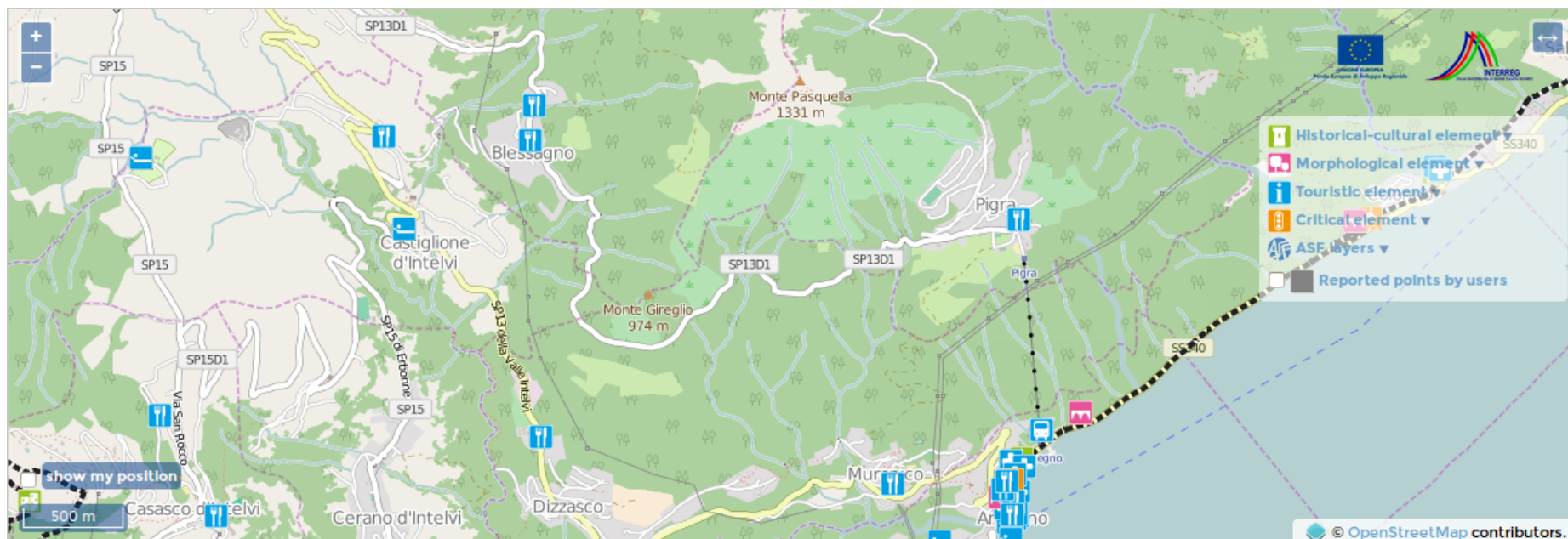
Altitude profile



Total 2D distance: 7.79 km
Total 3D distance: 7.99 km
Average slope: 18.08%
Up height: 1007 m
Down height: 113 m
Height difference: 894 m

The main WebGIS of Via Regina project

- ✓ Integration with **TripAdvisor** database:
 - ➔ access to the info/reviews of hotels, restaurants & attractions



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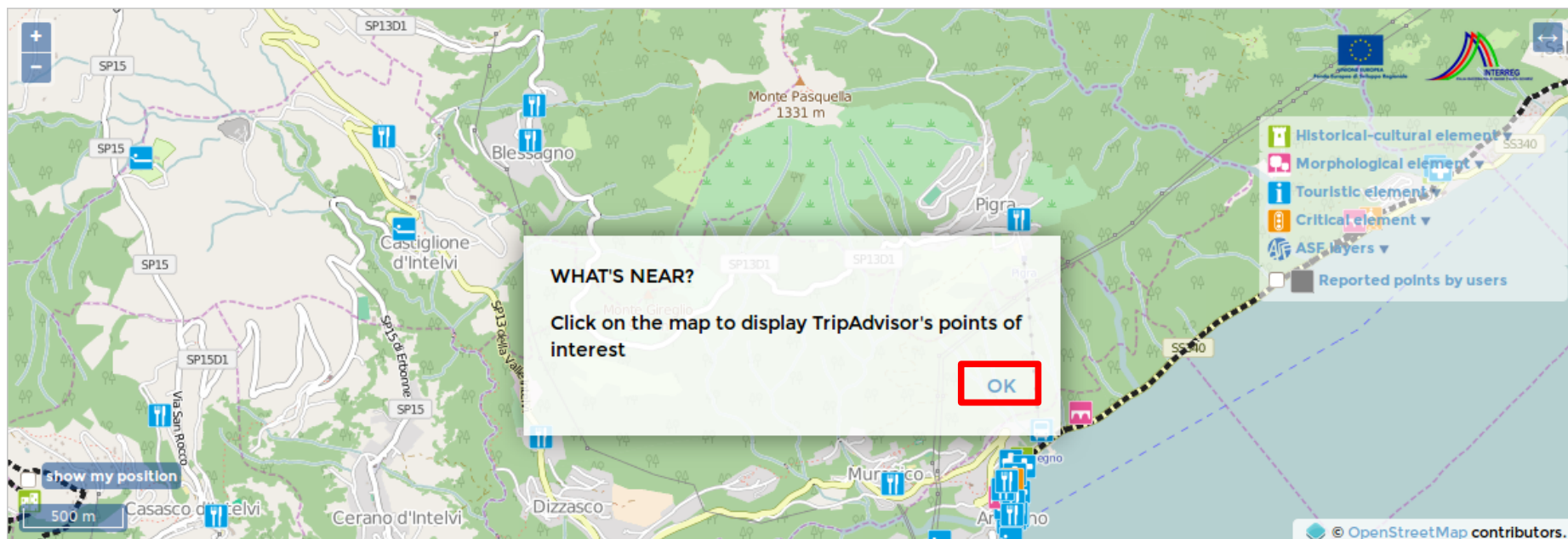
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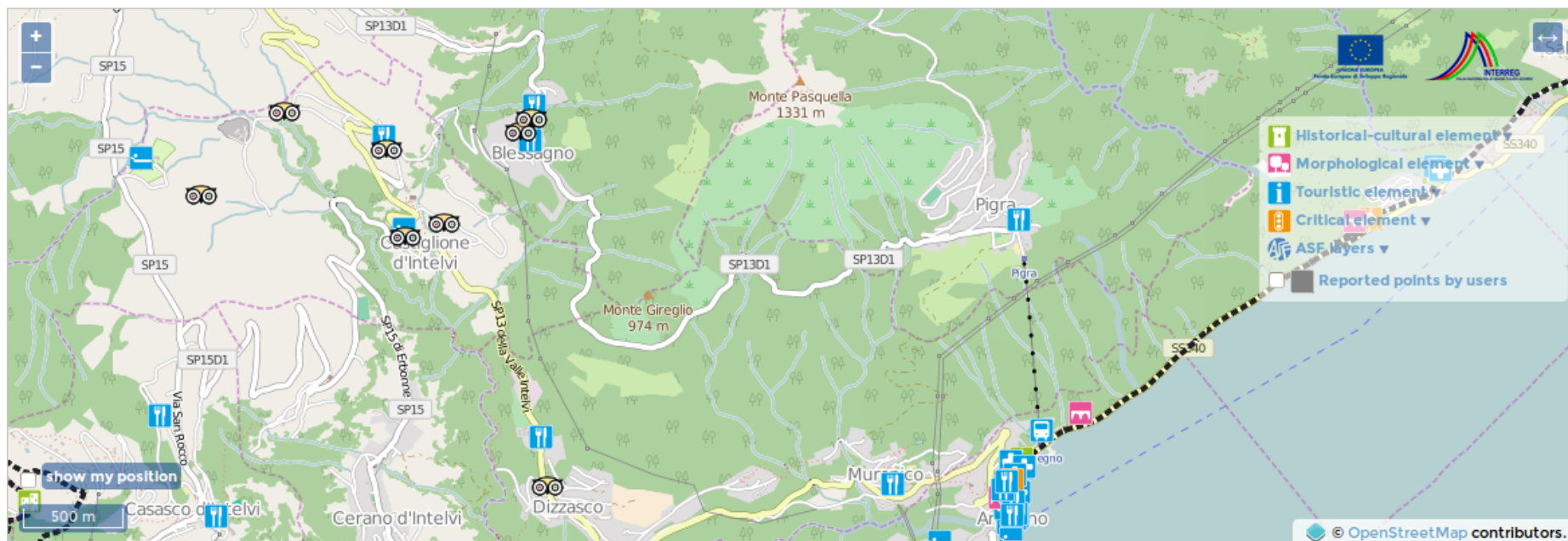
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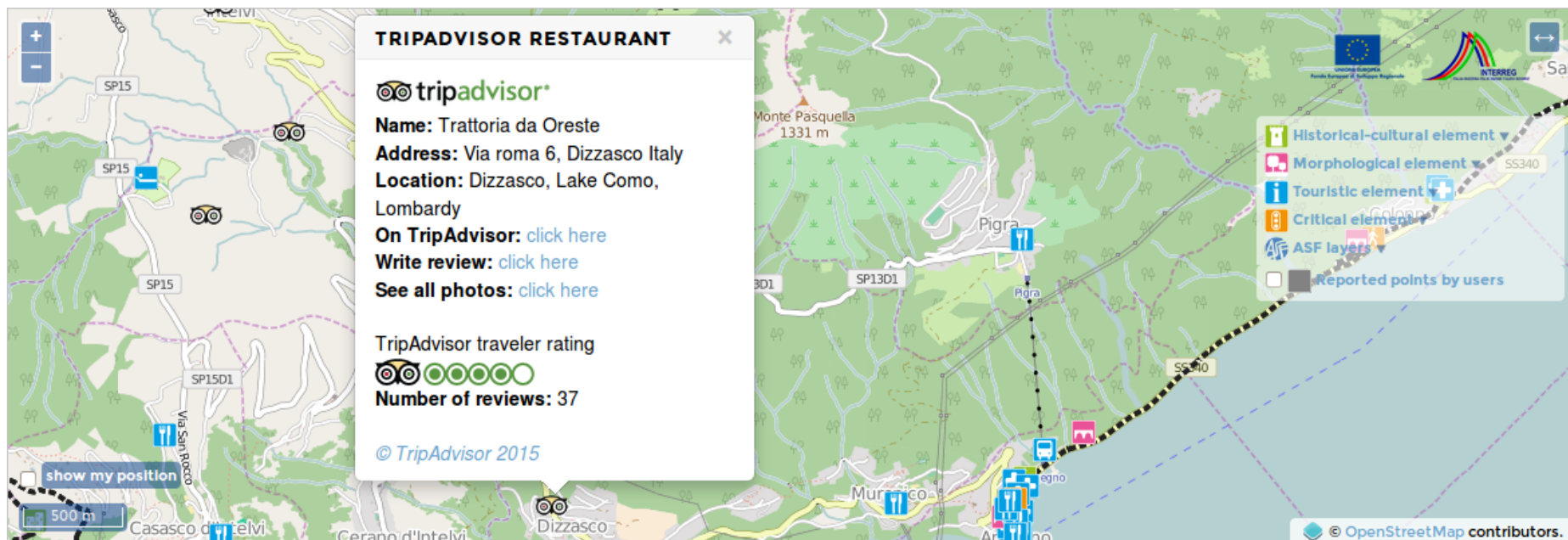
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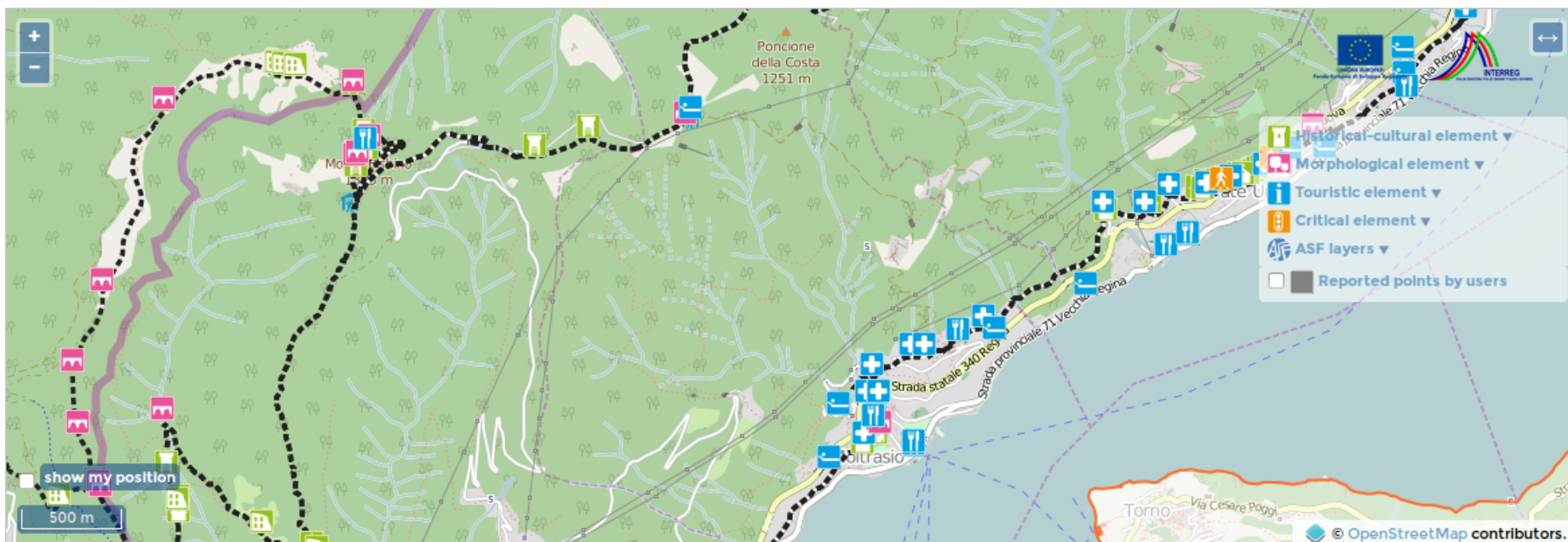
RESET

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The main WebGIS of Via Regina project

- ✓ Download of Via Regina **GPS track** (in GPX format):
 - ➔ useful for people willing to walk along the path!



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The Via Regina app – Purpose

- ✓ Allows **everyone** to report georeferenced points of interest:
 - ➔ historical and cultural elements
 - ➔ morphological elements
 - ➔ tourism elements
 - ➔ critical elements



The Via Regina app – Reportable categories

✓ Historical and cultural elements

→ museum

- x ethnographic
- x thematic
- x gallery
- x collection

→ religious building

- x church
- x oratory
- x sanctuary
- x chapel
- x via crucis
- x fresco
- x abbey

→ civil building

- x historical building
- x contemporary building
- x traditional building
- x monument

→ rural building

- x pasture/shed
- x snow deposit
- x granaio/metato (chestnuts drier building)
- x roccolo (system designed to catch birds)
- x casello o turbino
- x hydraulic structures
- x masseria (farm)

The Via Regina app – Reportable categories

✓ Historical and cultural elements

→ archaeological element

- x archaeological element
- x archaeological site
- x element inside a building
- x single element

→ military building

- x castle
- x tower
- x defensive wall
- x fort
- x trench
- x redoubt (secondary fort)
- x bunker

→ factory

- x furnace
- x trip hammer
- x mill
- x sawmill
- x quarry
- x mine
- x rural factory

The Via Regina app – Reportable categories

✓ Morphological elements

→ surface

- x pavement
- x natural material
- x gravel
- x asphalt
- x steps
- x ford

→ bounding escarpment

- x rock
- x ground escarpments
- x rock escarpments
- x support walls
- x boundary walls and railings

x tree-lined avenues

x fence/barrier

x vertical plate

→ traffic support & mfd products

x kilometric stone

x border stone

x stone marker

x isolated tree

x panoramic viewpoint

x fountain

x ancient laundry

x rest of bridge

x tomb

x underpass

x tunnel

x inscription

The Via Regina app – Reportable categories

✓ Tourism elements

→ accomodation and overnight

- x hotel
- x hostel
- x B&B
- x hut/shelter
- x camping
- x private accomodation
- x free accommodation
- x agritourism
- x apartment

→ services

- x pharmacy
- x parking

- x school
- x public safety
- x spring
- x city hall
- x post office
- x wc
- x info point
- x wifi hotspot
- x bike sharing
- x bank
- x park area
- x ATM

The Via Regina app – Reportable categories

✓ Tourism elements

→ transport

- x bus stop
- x dock ferry
- x train station
- x funicular and ski lift




→ products

- x wine shop
- x craft
- x food/typical products
- x clothing shop

→ food services

- x restaurants
- x crotto
- x bar
- x food shop

The Via Regina app – Reportable categories

- ✓ Critical elements 
 - morphological 
 - ✗ ford
 - ✗ landslide
 - structural 
 - ✗ crossing with traffic light
 - ✗ crossing without crossing stripes
 - ✗ crossing with crossing stripes

The Via Regina app – Data collection

✓ Cross-platform app:

→ desktop and mobile browsers

✗ <http://viaregina3.como.polimi.it/app>

→ Android app

✗ <http://viaregina3.como.polimi.it/app/viaregina.apk>

✗ on Google Play soon!

→ iOS app

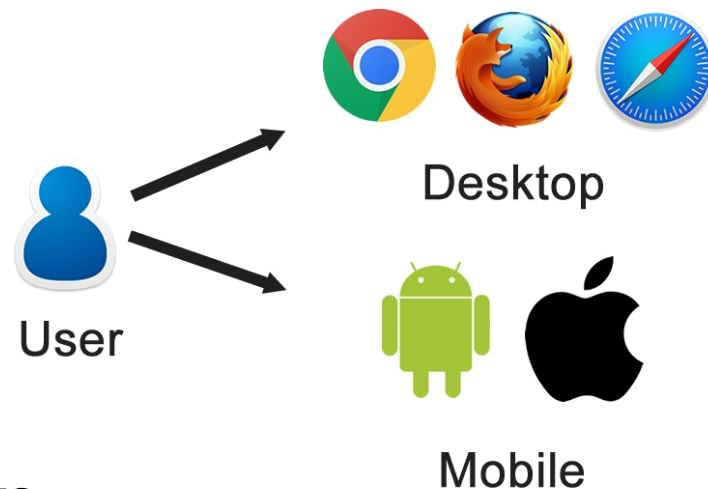
✗ on Apple Store soon!

✓ Main features:

→ offline data collection

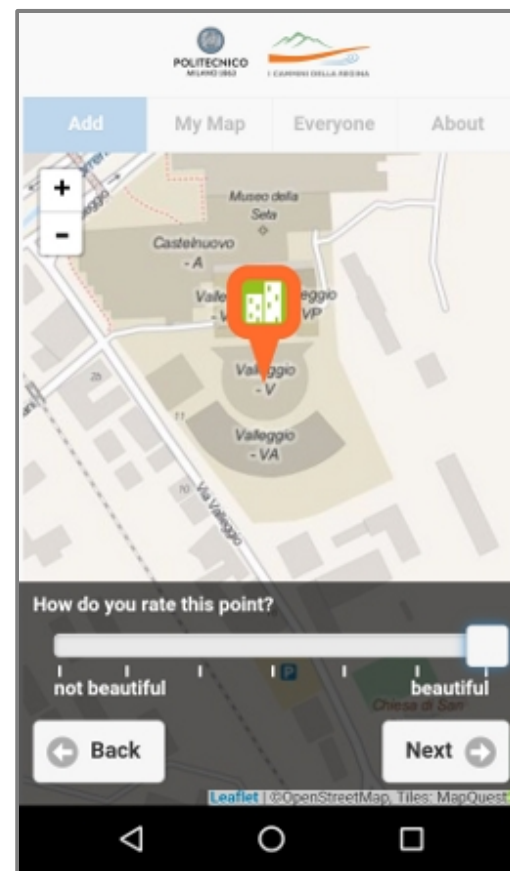
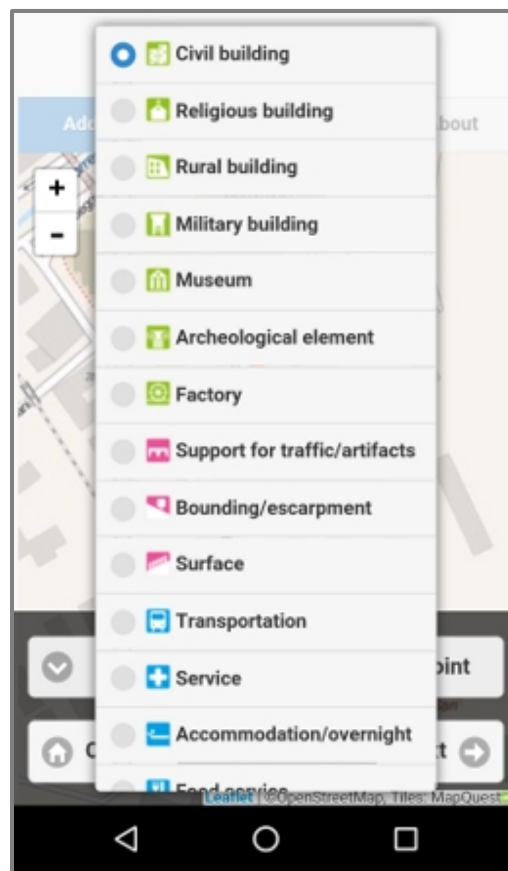
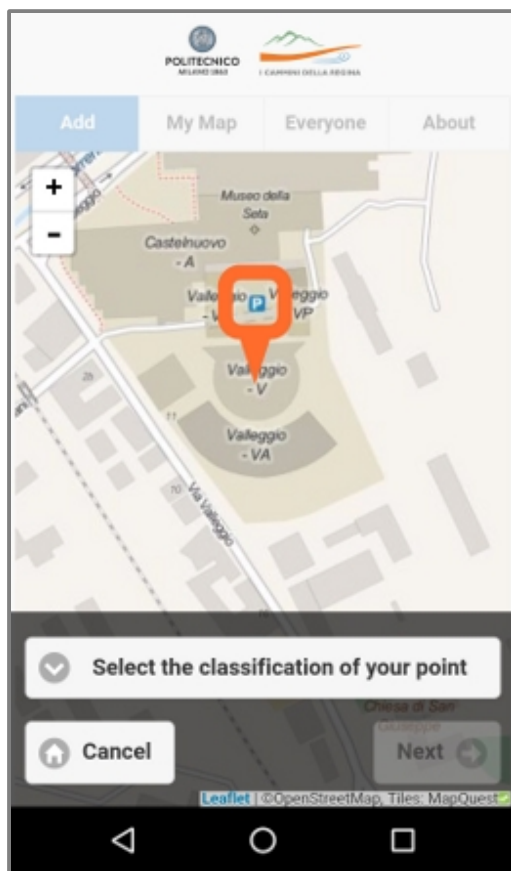
→ points rating

→ integrated maps showing collected points



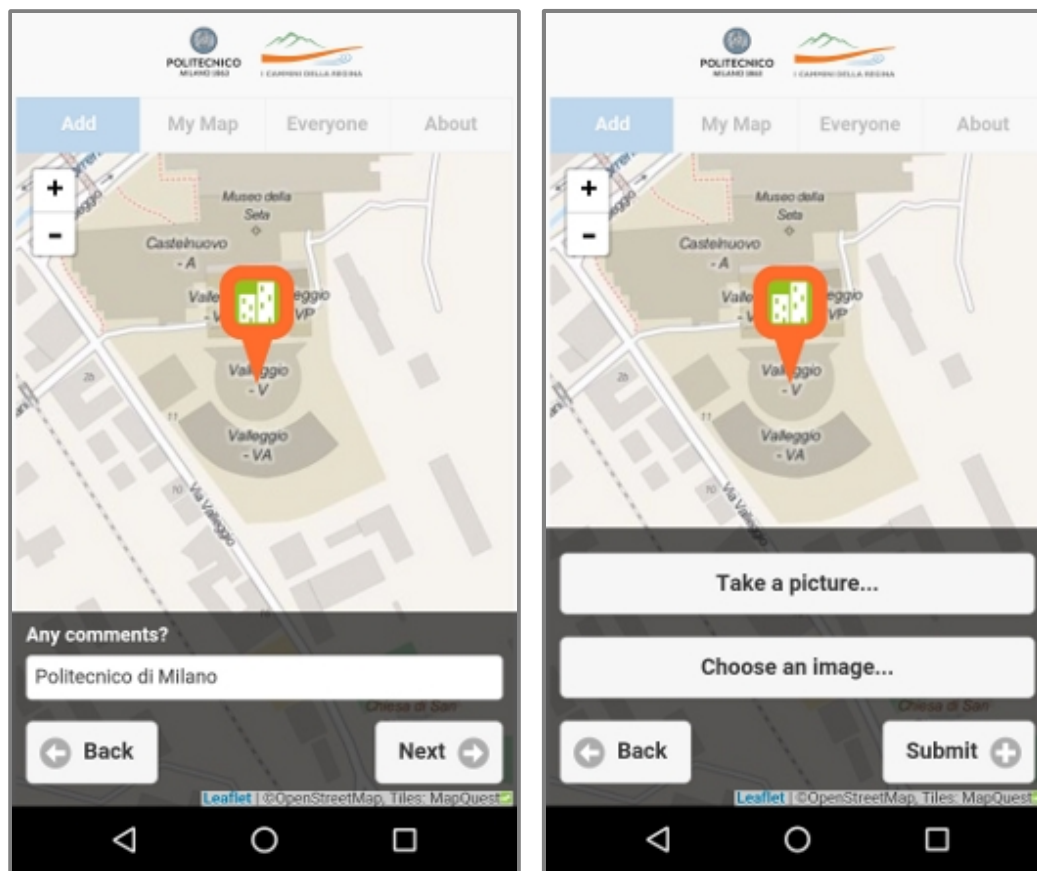
The Via Regina app – Data collection

- ✓ Report a new point, **classify** and **rate** it



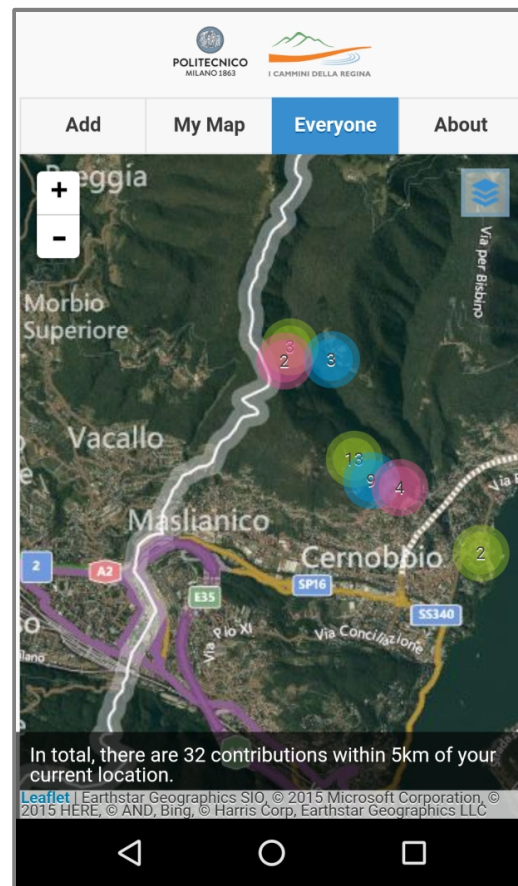
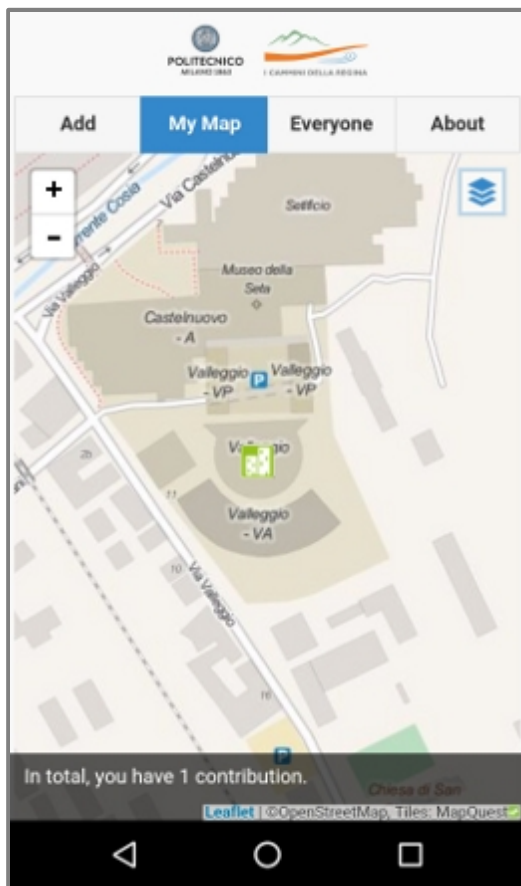
The Via Regina app – Data collection

- ✓ Report a new point and **take/upload** a picture of it



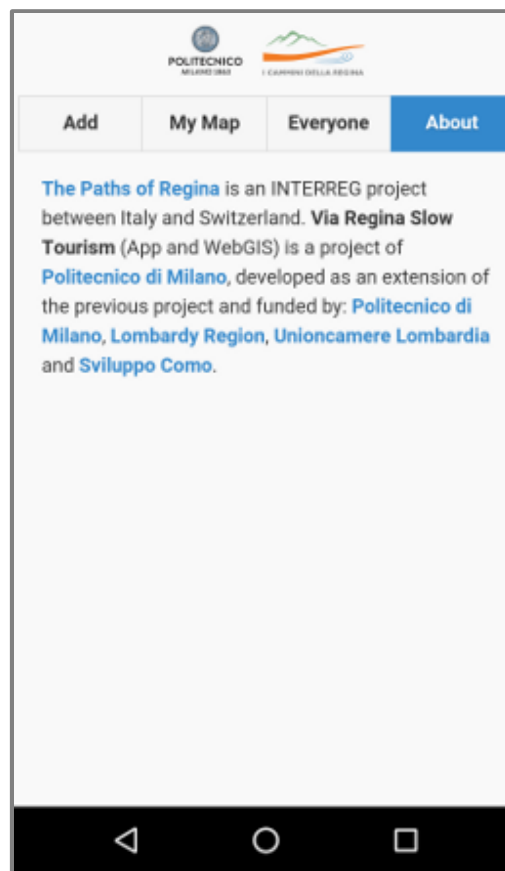
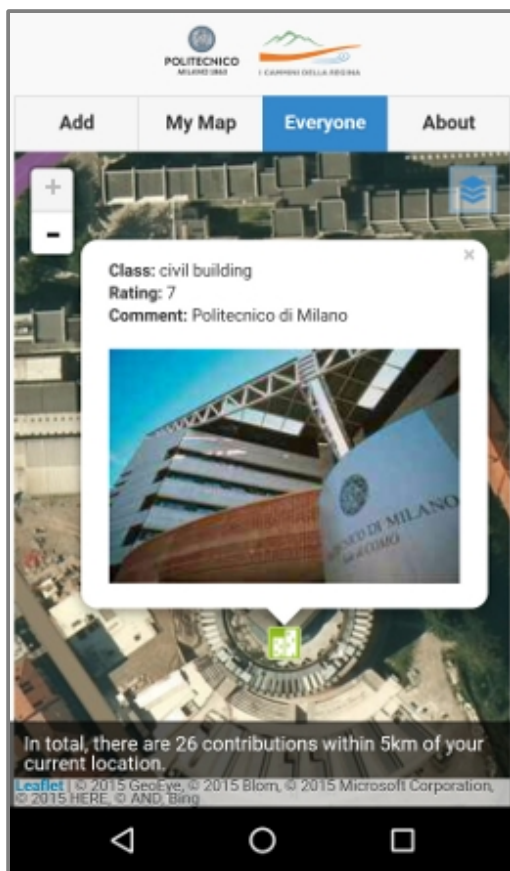
The Via Regina app – Data collection

- ✓ Visualize the map of points added by **you** or by **all the users**



The Via Regina app – Data collection

- ✓ Query the points collected and access the [app info](#)



Merry Christmas and Happy 2016 to all of you!



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