



December 2021—Fourth Newsletter

NEWS FROM THE RAIL

The RailToLand project's Newsletter



Updates and news in this issue:
Report of the 4th period
Past and upcoming events

SHORT REPORT ON THE FOURTH SEMESTER ACTIVITIES

As the **European Year of Railways** draws to end, the RailToLand project fast runs and is able to focus on the main intellectual outputs, recovering difficulties caused by the Covid-19 emergency. The partnership is finally publishing the whole career pathway in the form of MOOCs.

The **App development has taken a significant step forward** with the commitment of CCG, UNIVPM and UPM: **the main output of the RAILtoLAND project is a mobile geo-localised app**, a digital solution providing didactic and interactive contents to promote culturally and historically relevant Points of Interest (POI). It may allow users to access heritage beyond what is visible from the train, turning the journey in an experience that goes beyond going from the origin to the destination.

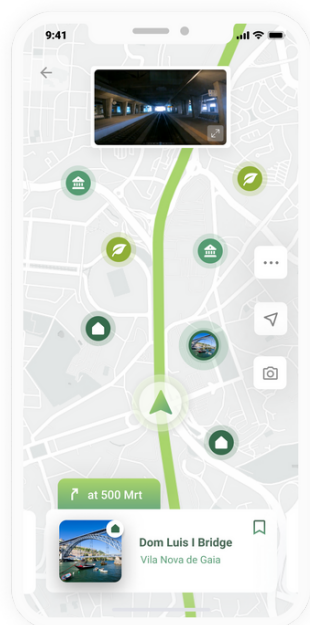
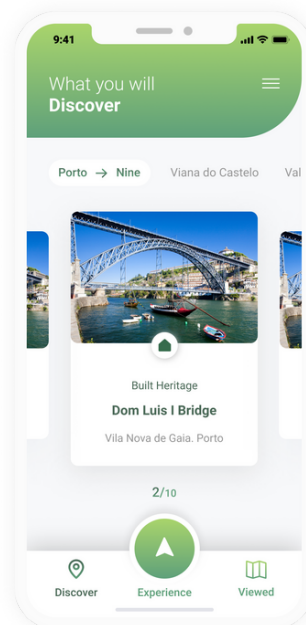
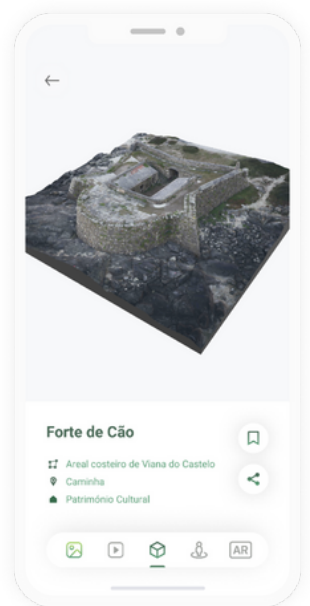
IO3- APPLICATION DEVELOPMENT

From the Lab's partners

The RailToLand APP presents an **interactive and innovative way** to acquire knowledge about railways landscape and heritage. Regarding its development, the CCG team focused mainly on the implementation of the general user interface, namely the animations and screen transitions. The core of this application is the **“Experience” tab that enables the user to explore the landscape thanks to different multimedia such as panoramic images, videos, and 3D models**. A main feature is the real time geo-localization, showing the POIs directly on the map and giving access to a variety of contents. Along with that, the team worked to incorporate the didactic contents provided by Polytechnic University of Madrid and the 3D objects and 360° images provided by Polytechnic University of Marche. This consisted of a sequence of tasks that comprehended the definition of best formats for the didactic contents by testing multiple formats and sizes for the didactic contents, in preparation for app shipping size limit requirements. Preliminary tests were made, along multiple bug fix's and optimizations, to ensure the maximum quality of the product, and to maximize the compatibility of the app for both Android and iOS.

Keep in touch:
THE APP WILL BE RELEASED SOON!

*Cover page:
full dome image of the Forte Vinha (credits univpm)*



*Here:
three tabs of the RailToLand APP (credits CCG)*

IO4- LANDSCAPE 3D INFOGRAPHIC

From the Lab's partners

One of the expected outcomes of the landscape 3D infographic is a **set of models having both lightweight and high visual quality**, to be effective in supporting travellers in discovering the Railways Landscape. Starting from a list of 50 POIs along the railway line Porto-Vigo, pertaining to different categories (Built, Natural and Cultural Heritage) **12 POIs were selected for 3D surveying**.

Due to their typological differences and landscape extension, the integration of UAV, TLS and GNSS-RTK was mandatory. A DJI Mavic 2 was effective to access facades overlooking the sea and bridge arches crossing rivers, a Leica RTC360 allowed to promptly scan also hidden parts from aerial view, and finally a Spectra Precision SP60 was required to acquire the Ground Control Points (GCP) needed for the global reference system.

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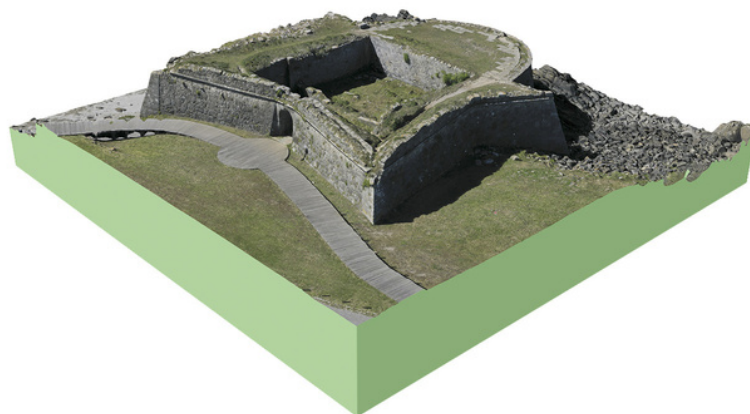
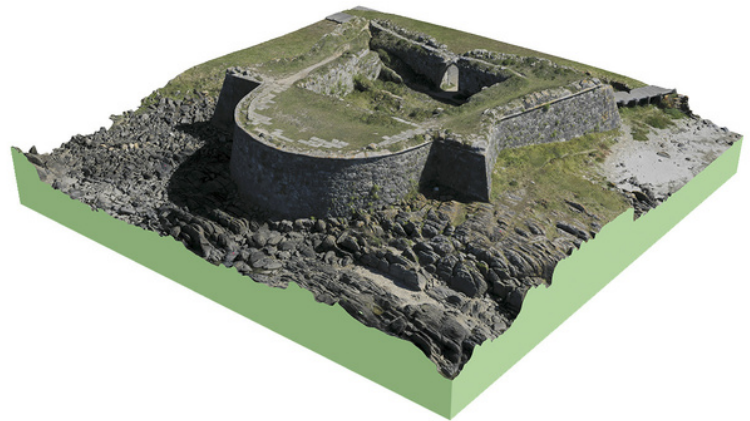
two views from the 3D model of Forte da Vinha, Viana do Castelo (credits UNIVPM)

following pages:

flyer for the event Top Rail Forum (credits UIC)

picture of the historical railways Fabriano-Pergola

see https://www.fondazionefs.it/content/dam/fondazionefs/fondazione-fs-new/hp-prenota-un-viaggio/locandine-2021/settembre-2021/2021_26_9%20Fabriano%20Pergola%20copia.pdf



PAST EVENTS

Third TopRail & RailtoLand Forum held online on 26 October

The third TopRail Forum was held online on 26 October in cooperation with the RailtoLand Erasmus + European project consortium. The theme of the forum was **'Railway and tourism: a cultural perspective'**.

The key issue during this forum was the landscape as a tourist resource, which is especially relevant to the development of entrepreneurial actions in the railway system and improvement of the traveller experience. When travelling by rail, customers are attracted by natural beauty, as well as cultural and historical assets such as tunnels and bridges. It is the combination of the uniqueness of the landscapes, the beauty of the train carriages and the onboard experience that creates an extraordinary experience for travellers.

The forum hosted high-level representatives and experts from various international organisations, including representatives from Spain, France, the Netherlands, Iran, Russia and the United Kingdom, as well as **international associations such as FEDECRAIL**, who shared their experience and knowledge in the field of railway tourism.

The forum was opened with a welcome speech by Carles Casas Esplugas, Director of Strategic & Prospective Planning at FGC and TopRail chairman, and concluded with a round table on the theme of 'Landscape as a resource for railway tourism' moderated by Dr Nacima Baron, Université Gustave Eiffel, ENPC.

As Multiplier event of the project, inside the TopRail forum also project results were presented. **Professor Clara Zamorano, in coordination with Dr Ana Berrocal, presented the project**, which is a collective platform for ideas on innovative challenges for communicating European cultural landscapes by train. The project focuses not only on innovation, but also on education and learning activities with students, professors and experts.

If you missed the opportunity to attend the meeting, you are invited to participate in the forum via Rail Event:

<https://www.youtube.com/watch?v=ougJjjRhD2E>



UPCOMING EVENTS

RESIDENTIAL LEARNING ACTIVITY & MULTIPLIER EVENT 14-18 JUNE 2022

Delayed by the COVID pandemic, the **Learning Training Activity** foreseen in September 2020, was postponed and it **is now scheduled in the 2022 June month in Italy**. An intensive program that brings together students and teachers with a duration of 5 days will be carried out. The activities foreseen are the following:

- Workshop to identify landscape units and visual basins through the use of cartography and geographic information systems
- Field trip for the determination and characterization of the key elements that organize a landscape (natural dominant and cultural dominant)
- Photogrammetry and remote sensing workshop for landscape analysis

The learning activity will be held **in the sub-Apennine area**. It will pivot to a centre in the Marche region, very interesting for the debate on inner areas: the town of Cagli. In this area, along the ancient Via Flaminia, there are both disused and reactivated railways: in particular, **the Pergola-Fabriano railway** recently reopened.

Beside learning activities, a multiplier event titled **“EUROPEAN LANDSCAPE AND HERITAGE IN THE DIGITAL AGE**. Promotion, public engagement and participatory design of cultural heritage” will be organized.

