VR integrated Platform

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Specific objective	3.1 - Make natural and cultural heritage a leverage for sustainable and more balanced territorial development
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Work Package Title	Clustering thematic activities
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Activity Title	Awareness raising and engagement
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Partner(s) Involved	European Point Consortium
Author	Emiliano Galluccio
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European Regional Development Fund

Sommario

Platform specifications

The platform offers the widest possibility of modification/integration/update of the contents through a back-end interface, in the respect of specific technical requirements (codec, formats, extensions, dimensions) to be respected in the insertion audio/video, photo and hyperlinking.

It has been developed in HTML5 , CSS e Javascript and operates through WebGL 2.0 (Web-based Graphics Library) based on API OpenGL ES 3.0.

It provides an API in 3D graphic via canvas elements being capable, though integrated API Javascript, to visualize tridimensional virtual environments without the necessity of external additional plugins on the web browsers.

That aspect makes the platform exploitable with the most common web browser, Windows, Mac and Unix-based:

GOOGLE CHROME 9 or higher

MOZILLA FIREFOX 4 or higher

SAFARI 5.1.10 or higher

OPERA 11 or higher

EXPLORER 11 or higher

The platform is browsable from any device (Pc, laptop, smartphones, VR headsets) in two modalities: web-embedded and standalone.

In web-embedded modality, it will be hosted on a dedicated webspace in order to be reachable, via browser, in the worldwide web and reachable from any location through an internet connection.

In standalone modality, it will be available through self-executing packages that could be installed both on traditional 2d hardware (personal computers, laptops, tablets, smart tv) than on 3D devices (e.g. HTC Vive and Oculus Quest headsets).
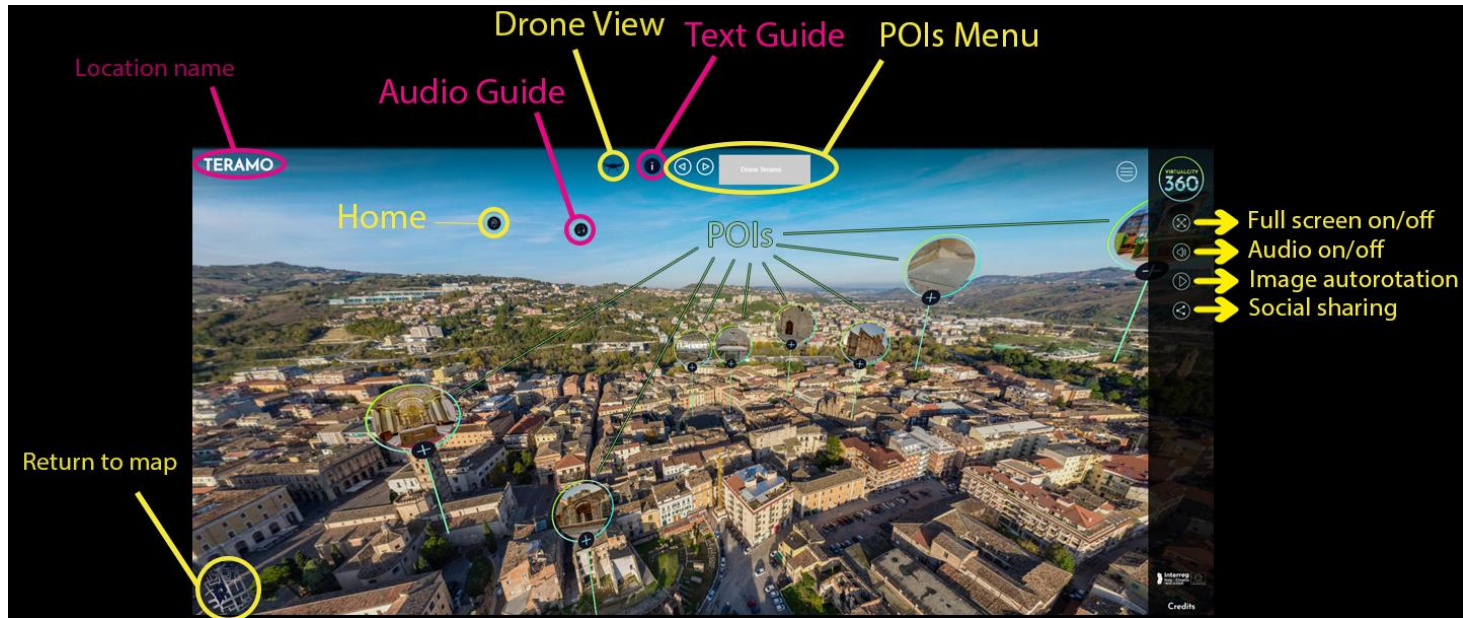
VR Platform structure and navigation

The homepage of the platform shows the graphical profile of the regions in which the virtualized locations are located and can be selected.
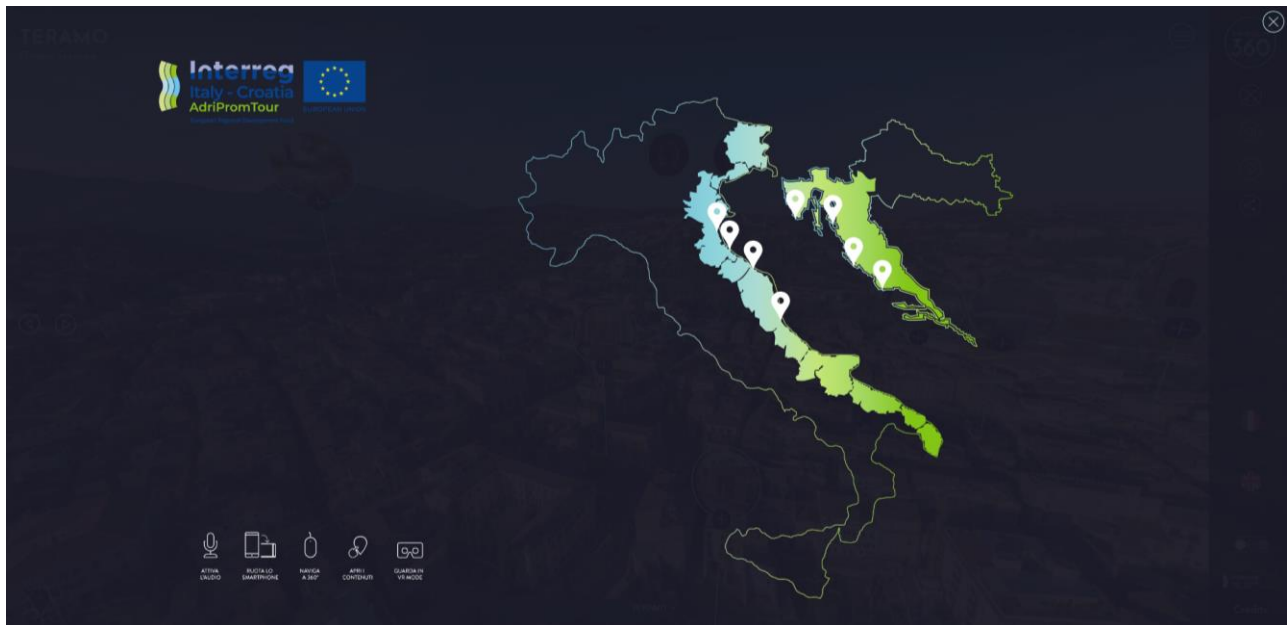
**Pic. 1 – Webpage showing region Territory and locations**

PC/laptop/mobile navigation Mode

Operating with a standard device, the user reaches the landing page of the selected location that shows a navigation structure as follows:

Pic. 2 – Landing page of the selected location (Teramo)

Starting from an aerial view (drone picture): Navigation buttons help browsing the platform structure; Location information (containing general info, text and audio-guide of the location) can be activated in order to acquire information; POIs icons can be clicked to navigate into sub-directories.
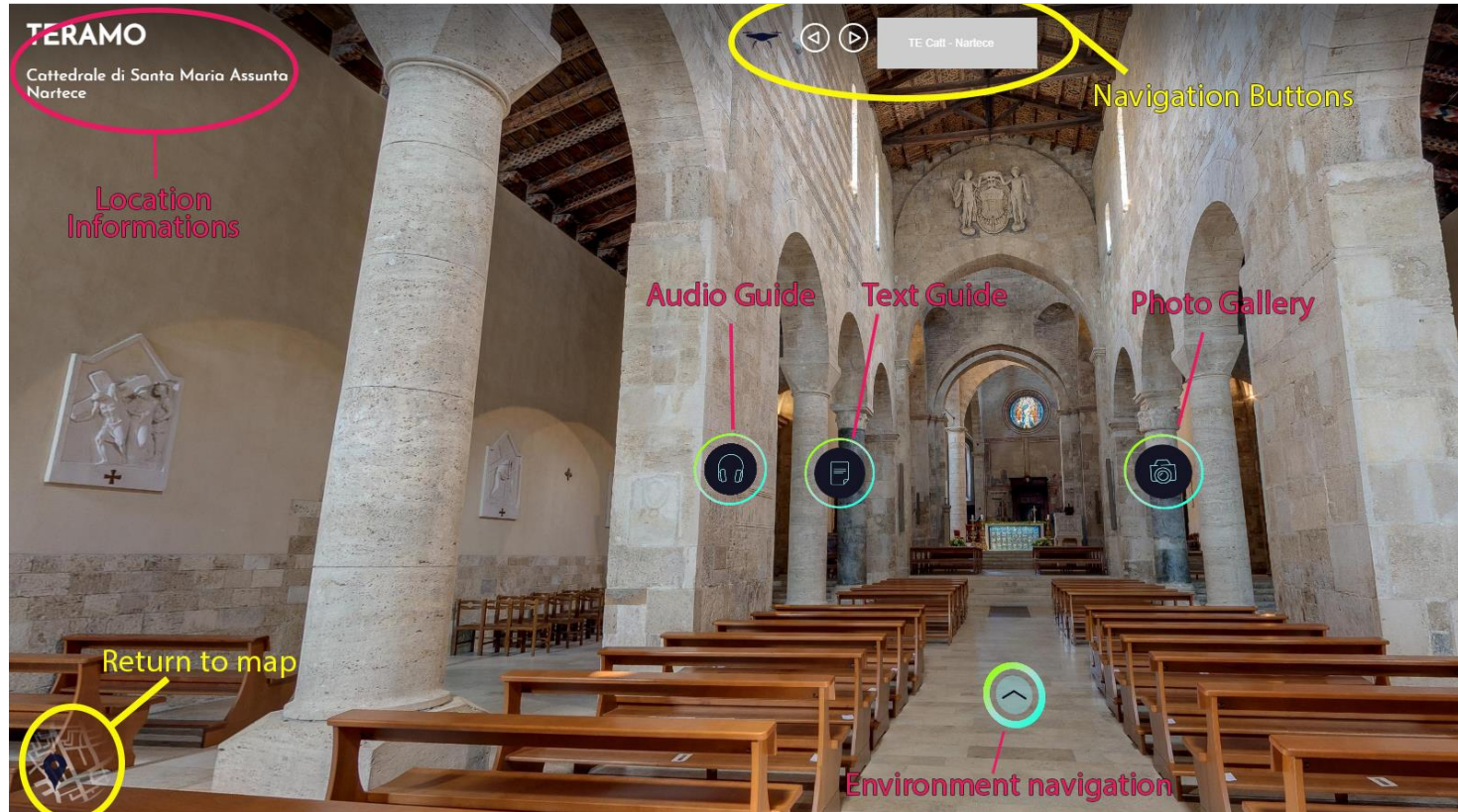
Pic. 3 - POIs VR navigation

The 360° view gives the possibility to get text and audio guides and to navigate among different places/views belonging to the same POI

VR headsets navigation Mode

All the above-mentioned navigation functionalities are available also in VR native mode, when using VR headsets (e.g., HTC Vive or Oculus Quest), and can be activated, using the eyesight pointing at the corresponding buttons.

Pic.4 VR modality

In the case of usage of a VR headset, the icon on the floor (visible at user's feet) will lead back to the drone aerial view of the location.

Link to the VR Platform: https://www.consorziopuntoeuropa.it/adripromtourvr/index.htm