Erasmus+ Action Type: KA220-HED - Cooperation partnerships in higher education
Climate change, cities, communities and Equity in health Cli-CC.HE
Project Reference: 2021-1-IT02-KA220-HED-000032223

Teachers Training Workshop
Belgrade, June 16-17, 2022

Session 3: Application and impacts

Urban Project scenarios: development of design alternatives for a sustainable, resilient, and inclusive urban regeneration - supported by Virtual and Augmented Reality

George Artopoulos, Salvatore Carlucci, Ioanna Kyprianou

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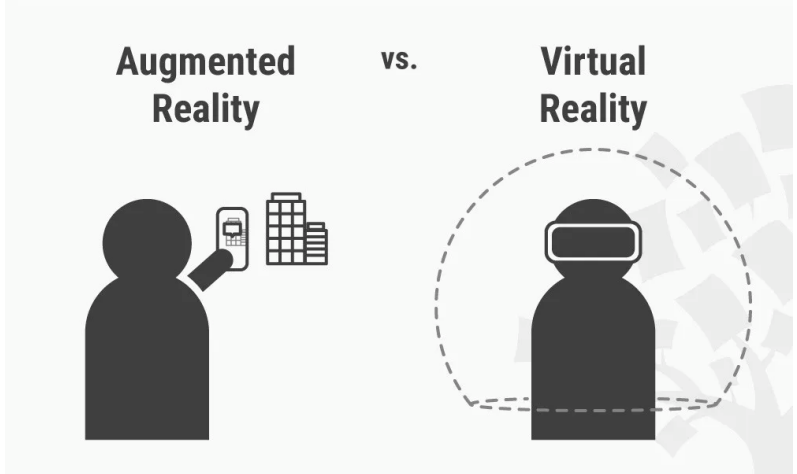
What is Virtual Reality and its difference to Augmented Reality?

- Virtual Reality (VR) is the use of computer technology to create a simulated environment;
- VR technology places the user in space through immersive experiences. Instead of viewing a screen in front of them, users are immersed and able to interact with 3D worlds;
- AR—You design for digital elements to appear over real-world views, sometimes with limited interactivity between them, often via smartphones. Examples include Apple's ARKit and Android's ARCore (developer kits), the Pokémon Go game;
- VR—You design immersive experiences that isolate users from the real world, typically via headset devices. Examples include Oculus and Google Cardboard, where users can explore a city or an archaeological site using headset-mounted smartphones.



National Initiatives for Open Science in Europe – H2020 Research and Innovation action – contract no. 857645

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Use of VR for interaction among authorities, local stakeholders & communities

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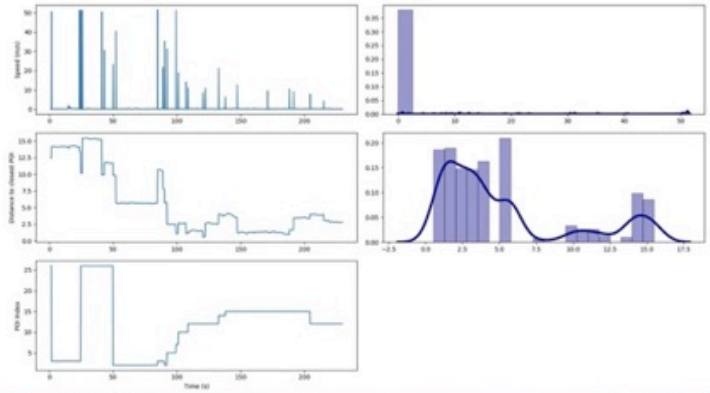

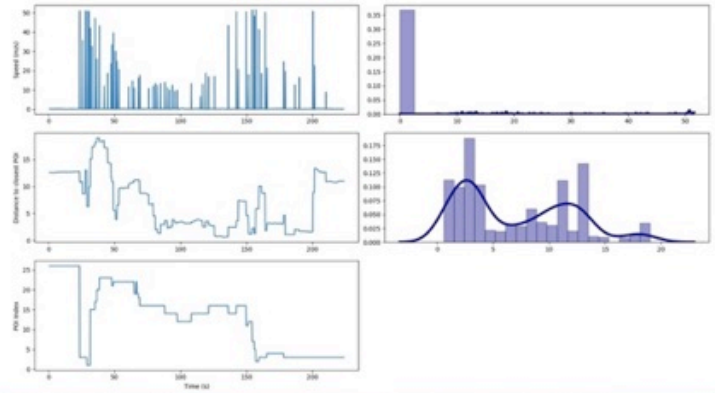

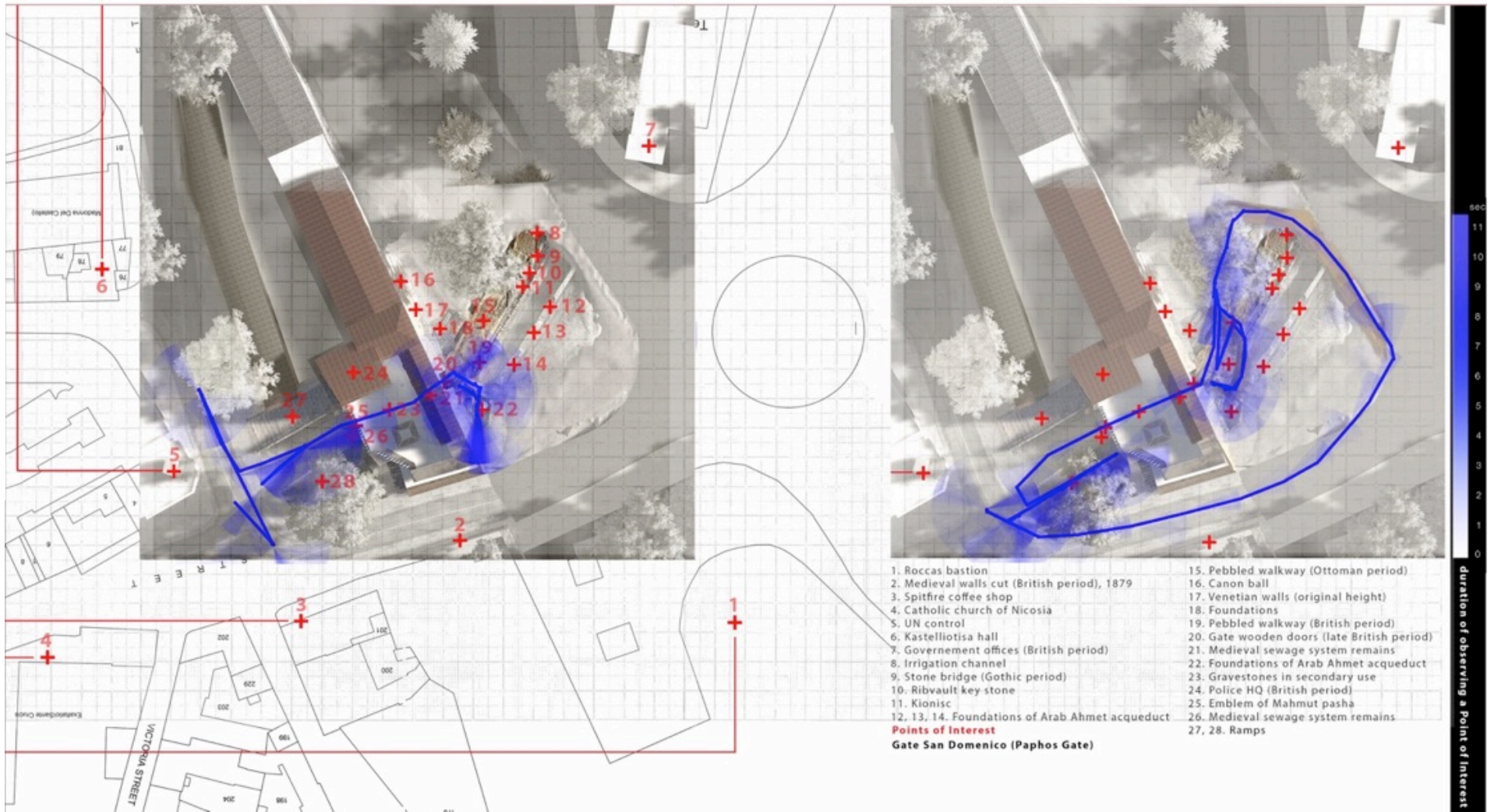

Walking platform (the result of co-design through VR) currently under construction on site in Nicosia

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NCSA

DEPARTMENT OF ANTIQUITIES CYPRUS

Δήμος Λευκωσίας Nicosia Municipality

II_Use of AR / mobile apps for community building actions, and the collection, curation and delivery of humanities open data, Including the FAIRification of data.

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DARIAH mobile app for collection, curation and delivery of humanities open data
https://play.google.com/store/apps/details?id=mobility.deustotech.dariah_android&hl=es_419

NI4OS
National Initiatives for Open Science in Europe

DARIAH-EU

DeustoTech

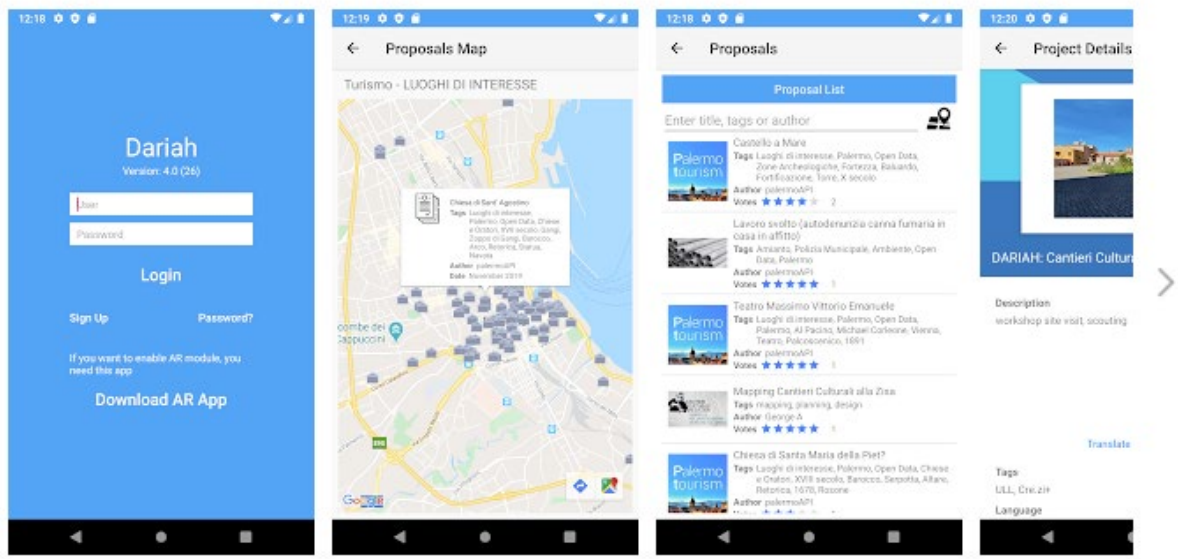
DARIAH

Mobility DeustoTech Art and Design

PEGI 3

This app is compatible with some of your devices.

Installed



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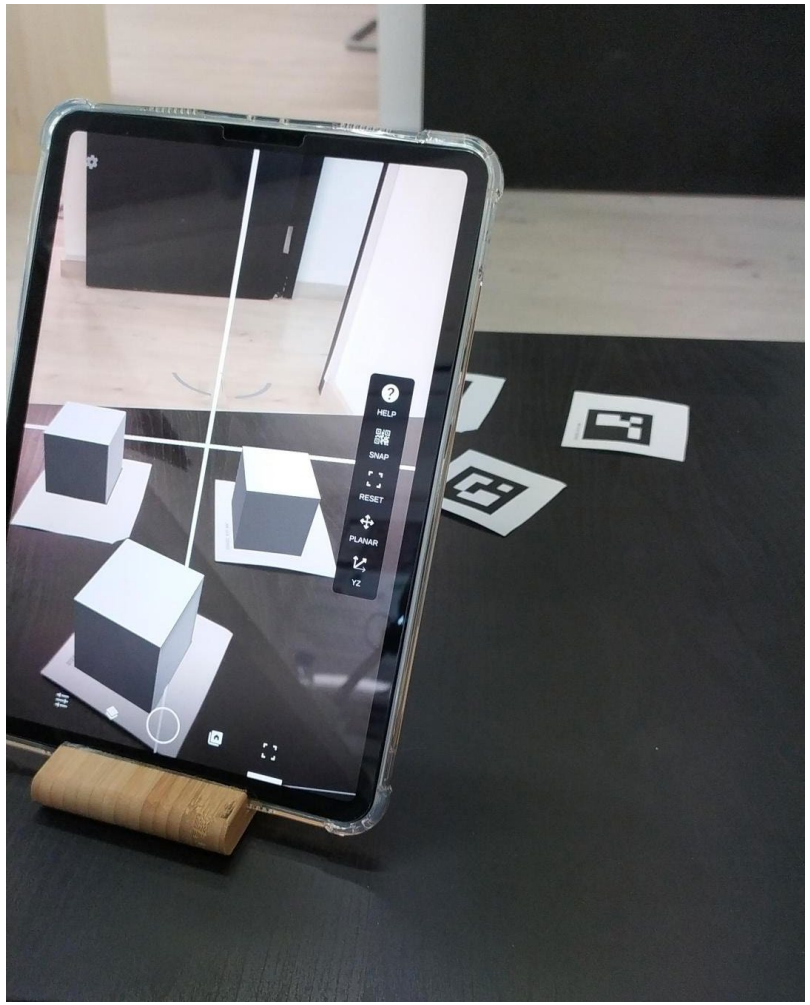
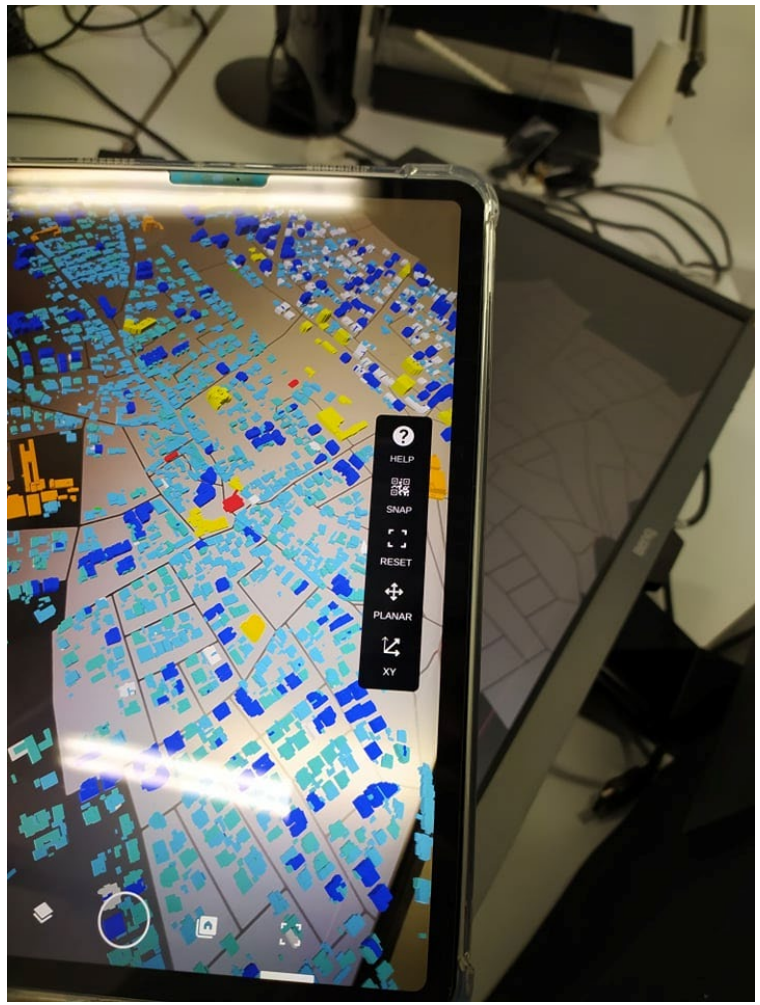
Augmented reality prototypes for data visualization





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Related publications

- Artopoulos, G., Charalambous P., and Wehmeier, C., ‘Immersive Computing and Crowd Simulation Techniques in Modelling Urban Commons: The Case of Nicosia-Cyprus,' in *International Journal of E-Planning Research* (IJEPR), Vol 8(1) 2019, pp. 35-49. doi: 10.4018/IJEPR.2019010103
- Artopoulos, G., and Charalambous, P., ‘Analysis of Spatio-Temporal Data in Virtual Historic Spaces,’ in International Conference on Artificial Reality and Telexistence Eurographics Symposium on Virtual Environments, edited by Gerd Bruder, Shunsuke Yoshimoto, and Sue Cobb, Eurographics Proceedings, Eurographics Association: ACM Library, 2018, pp. 9-12. doi:10.2312/egve.20181308.
- Artopoulos, G., Paschalis Arvanitides, Sari Suomalainen, ‘Using ICTs in the management of public spaces as a commons’, CyberParks-The Interface Between People, Places and Technology. New Approaches and Perspectives. Series Lecture Notes in Computer Science (LNCS 11380) - State of the Art Survey (Springer, 2019), 167-180. doi: https://doi.org/10.1007/978-3-030-13417-4
- Georgios Artopoulos, & Alfonso Bahillo Martinez. (2021, December 9). DARIAH Open WG Meeting: Digital practices for the Study of urban Heritage. Zenodo. https://doi.org/10.5281/zenodo.5769870

Thank you

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