



**HAL**  
open science

## A DARIAH Impact Case Study: UDigiSH -Digital Practices for the Study of Urban Heritage is cooperating with artists and NGOs to crowdsource local knowledge on built heritage at risk

Georgios Artopoulos, Gaia Redaelli, Fabio Maria Montagnino, Colter Eugene Wehmeier

### ► To cite this version:

Georgios Artopoulos, Gaia Redaelli, Fabio Maria Montagnino, Colter Eugene Wehmeier. A DARIAH Impact Case Study: UDigiSH -Digital Practices for the Study of Urban Heritage is cooperating with artists and NGOs to crowdsource local knowledge on built heritage at risk. Cyprus Institute; Politecnico Milano; University of Illinois at Urbana Champaign. 2024, pp.4. hal-04697877

**HAL Id: hal-04697877**

**<https://hal.science/hal-04697877v1>**

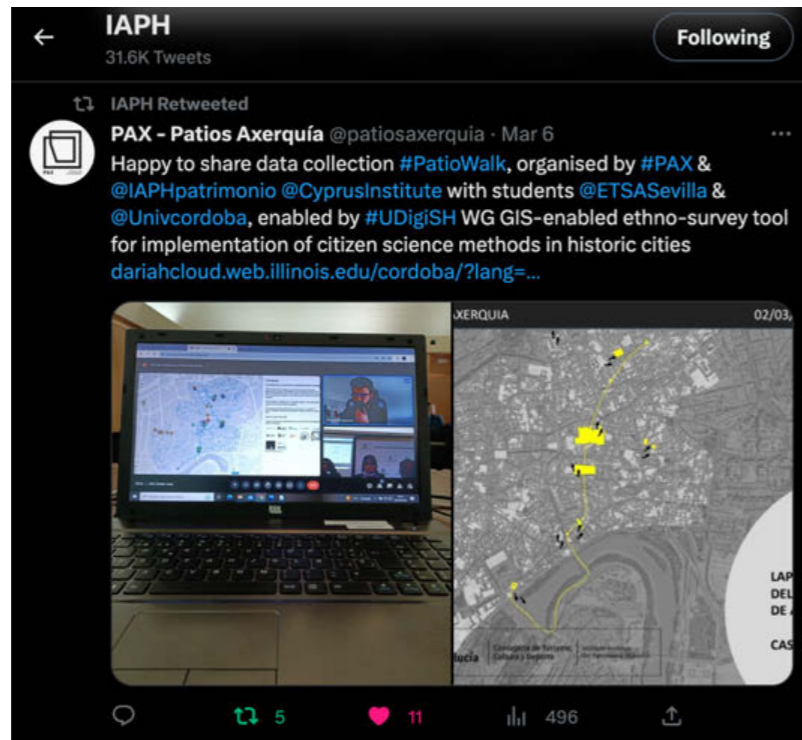
Submitted on 14 Sep 2024

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Public Domain

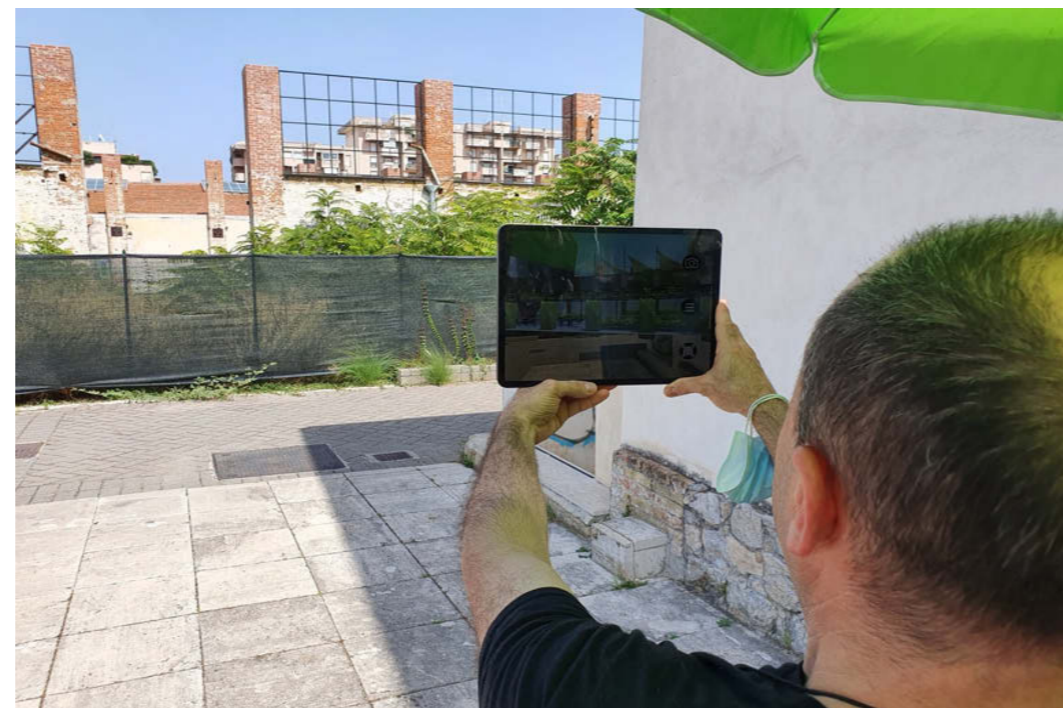
A DARIAH Impact Case Study: UDigiSH – Digital Practices for the Study of Urban Heritage is cooperating with artists and NGOs to crowdsource local knowledge on built heritage at risk



Instituto Andaluz del Patrimonio Histórico retweeting about our WG activity in Cordoba.



International online audience engaging with WG experimental playful interface (2023).



WG's AR tool used by local stakeholders at Cantieri Culturali Alla Zisa, Italy (2021).



## What did we do?

With strong support from its members, UDigiSH developed data-enabled workflows and digital tools for information collection, access and visualisation on the study of neglected examples of heritage and sites in historic cities. This was achieved through the engagement of local communities and stakeholders by means of participatory events and workshops.

## Why did we do it?

Through our mission-oriented activities and innovative software, key stakeholders and local social groups can now better understand how built heritage contributes to the development of resilient cities. Our activities reached new audiences (e.g., authorities' officers, university students) promoting the value of re-using and safeguarding neglected urban spaces and heritage buildings in second- and third-tier European historic cities.

## Who did we do it for?

The beneficiaries included built heritage researchers and CH organisations, local authorities, a huge range of disciplines and stakeholders, as well as university students.

---

## Overview of the UDigiSH Working Group

UDigiSH started as an international cooperation that dates back to 2019\* (1), including University of Illinois at Urbana-Champaign, Instituto Andaluz del Patrimonio Histórico, (Spain), National Lab of Civil Engineering (Portugal), ICOMOS Cyprus, Europa Nostra Cyprus and Israeli Architects Association. The members involved had the common goal of developing a digital method that would: a) enable key actors to exchange views through innovative digital interfaces and share knowledge about challenges that neglected heritage examples in their neighbourhood are facing; and b) allow systematic collection, analysis and linking of descriptive information about this heritage.

\*For a list of UDigiSH publications visit: <https://udigish.hypotheses.org/publications>

---

## Description of the Impact

### NGOs adopting built heritage management tool for the co-creation of design scenarios

UDigiSH developed a DARIAH mobile app published under the name [DARIAH app](#), a digital research tool designed for community building through participatory design and co-creation methodologies. This app was embraced by local actors in Palermo, Italy, such as Cre.zi Plus, and was used to study, discuss and analyse Spazio Incolto- Pad. 7 Cantieri Culturali Alla Zisa (2-3). Our citizen-volunteered geolocation software was used by the following organisations and groups: Legambiente Sicilia; French Institute; Goethe Institute; Arci Tavola Tonda. It enabled consultation about the creation of a legible, inclusive, accessible, resilient and enjoyable heritage site in Cantieri Culturali Alla Zisa (4). The tool then attracted the interest of other European initiatives, like the one about the industrial heritage of Dornbirn, Austria (ERASMUS+ ViRAL Project 2018-1-AT01-KA204-039209) (5), as well as of international networks like the Geoparque Oeste and the Geopark network (6).

### Artists, academia and museums seek deeper visitor engagement with and new interpretations of information about spatial conditions of heritage through innovative interfaces

The use and potential of UDigiSH visualisation workflow in archaeological and cultural heritage applications for the immersion of the public in the history of cultural places and landscapes, as well as for educational purposes, was demonstrated in several occasions by:

BEAMY.space art network and The Architects' order of Palermo, as well as by internationally acclaimed artists, such as Erwin Wurm and Eva Schlegel (7), for the creation of AR-enabled art exhibitions, e.g., [Kunst Raum Stadt: Eva Schlegel with 2MVD – Kunstraum Dornbirn](#); [Flying Eyes by Eva Schlegel + 2MVD \(mqw.at\)](#); [Kunst Raum Stadt – Art in public space – Kunstraum Dornbirn](#). This activity was widely publicised by the news (8).

Universities, specifically for the assessment of student work and public exhibition: Using the uploading and placement features of the Wikar AR app, 30 students and faculty were able to develop and deploy large scale immersive augmented reality works in Graz, Munich, Vienna, and Heft/Hüttenberg, where they remained accessible to the public for months. During this year, the Wikar app had more than 5.5k downloads and tens of thousands of app sessions. Further to this, research that formed the main enquiry that led to the creation of the DARIAH Working Group UDigiSH was selected as one of the two [best](#)



projects in the Open Call of Public Play Space Initiatives. The State of the Art Catalogue collected and analysed 30 best-practice case studies, offering an international panorama of the emerging methodologies and strategies for the public space co-design through digital technologies (9). Our work was also appreciated by the URBiNAT network, which led to new applications of our Working Group workflow in the URBiNAT network's activities (10-11).

### **Crowdsourcing knowledge about vernacular architecture and heritage that is threatened**

UDigiSH developed an [online browser-based ethnographic survey tool](#) for engaging new audiences in dialogue about heritage. This online database, that is available to the community for study of historic cities, enables non-experts as well as scholars to collect ethnographic data from the field. A GIS-enabled ethno-survey tool developed by the Working Group for the implementation of citizen science methods in the study of historic cities was used by 30 students of the Universities of Seville and Córdoba to collect multimedia documentations of patio housing heritage and local knowledge of their inhabitants.

The collective PAX-Patios de la Axerquía, an innovative system of governance for heritage buildings that fosters a new model of urban regeneration, which was included by Europa Nostra in the European Heritage Awards (2022) and in the list of good practices of the Faro convention, used our WG tool, together with 15 researchers and scholars, towards the creation of an online tool for knowledge elicitation and the international dissemination of the cultural and social value of patio house, with the support of the research project "Open Laboratory of the Cultural Heritage of Andalusia", coordinated by the Instituto Andaluz del Patrimonio Histórico (12). Other bodies that monitored this activity are the University of Lusófona, University of Nova de Lisboa, University of Valladolid, Housing Chair of the University of Sevilla, Research project LaPat-Laboratorio Abierto del Patrimonio Cultural de Andalucía (PAIDI 2020) (13-14).

In our attempt to expand the audience of our research, we developed [Cordoba Court](#), a playful interface and an experimental social game that aims to reach individuals internationally to engage them in raising awareness about patio housing and its cultural heritage in a virtual space, mirroring community greening and habitation practices. The experiment had 1112 visits during the Fall and Winter 2022 (15).

---

## **Evidence of the Impact**

[1] WG was invited to participate in the [Urban Transitions Pathways Symposium 2019](#) on the future of Living Labs which was organised by JPI Urban Europe at Maastricht 21-22 October 2019.

[2] Use of WG software in Palermo (2021), <https://udigish.hypotheses.org/176>

[3] Municipality of Palermo (2021), <https://www.comune.palermo.it/accade-a-palermo-dettaglio.php?id=201>

[4] WG tools and results were selected to feature in the Programme of the CAAD Futures 2021 Conference, USA, organised by the University of Southern California.

[5] WG invited by the ERASMUS+ The ViRAL Project (2018-1-AT01-KA204-039209) at the Conference *Virtual Reality Archive Learning: Telling history in virtual spaces*, 6 October 2021, Dornbirn, Austria.

[6] WG tools were discussed at the 16th European Geoparks Conference, 28th-30th September 2022, Verbania, Italy. <https://www.egn2022conference.eu/>

[7] Kunstraum Dornbirn (2021), <https://www.kunstraumdornbirn.at/en/exhibition/kunst-raum-stadt-eva-schlegel>

[8] Examples of use of WG software by artists publicized in the news: <https://youtu.be/HKiTFpJBkQw> and [www.thepavilion.eu](http://www.thepavilion.eu);

[9] International recognition of WG (2021), <https://udigish.hypotheses.org/174>

[10] WG tools and results disseminated at the *Cross-border Collaboration in Support of Healthy Corridors and Climate Change Adaptation, Joint on-line Expert and Dialogue Meeting*, organised by the URBiNAT network, 30 September 2021. <https://urbinat.eu/>

[11] WG invited in the Copenhagen URBiNAT Workshop a hybrid workshop with URBiNAT's Observers on the theme "Digital enablers, NBS and co-creation", May 9, 2022.

<https://urbinat.eu/articles/digital-enablers-digital-enablers-for-citizen-engagement-and-co-creation-of-nbs-key-takeaways-for-policy-makers-and-city-administrations/>

[12] WG discussed at the Talk "Faro and Gamification: institutional promotion or democratic participation", 7 October 2021, organised by the Faro Convention, Council of Europe.

[13] H2020 INHABIT project, The *Jornadas de cierre de lapat* project, at Instituto Andaluz del Patrimonio Histórico, March 2023 invited us to share WG tools.

<https://repositorio.iaph.es/handle/11532/363442>

[14] PAX on Twitter: <https://twitter.com/patiosaxerquia/status/1632732357085089792?s=46&t=z1LCMXhEDQxBKb4GwbuCGg>

[15] User analytics of the Cordoba Court experimental social game (2023): [https://dariahcloud.web.illinois.edu/cordoba/court\\_report/](https://dariahcloud.web.illinois.edu/cordoba/court_report/)

---




**Lead Authors:** Georgios Artopoulos, Gaia Redaelli, Colter Wehmeier



Follow us on:     

## Contact DARIAH


 [info@dariah.eu](mailto:info@dariah.eu)

## Privacy and Legal

 [Legal Notice](#)

 [Privacy Notice](#)

## Quick Menu

 [DARIAH in a Nutshell](#)

 [Members and Partners](#)

 [Projects](#)

 [Events Calendar](#)

 [Helpdesk](#)

## Subscribe to our mailing list and newsletter

Email Address\*

First Name\*

Last Name\*

Institution

\* = required field

[SUBSCRIBE](#)

