University students for Ukrainian cultural heritage protection through space data and Earth Observations

DigiEduHack Challenge

7-8 November, 2023

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Space4UA team members

1. Stefania Oikonomou, Web2Learn

2. Katerina Zourou, Web2Learn

3. Charalambos Chatzidiakos, National Observatory of Athens

4. Germans Titbelts, University of Latvia

5. Maria Grazia Oikonomou, Aristotle University of Thessaloniki

6. George Nikitas, Aristotle University of Thessaloniki

Our idea

Development of an application that combines *space data*, *Earth observations* as well as *in-situ data* *provided by citizens* (citizen-generated data) to **monitor** and document **threats** and **damages to cultural heritage in conflict zones**.
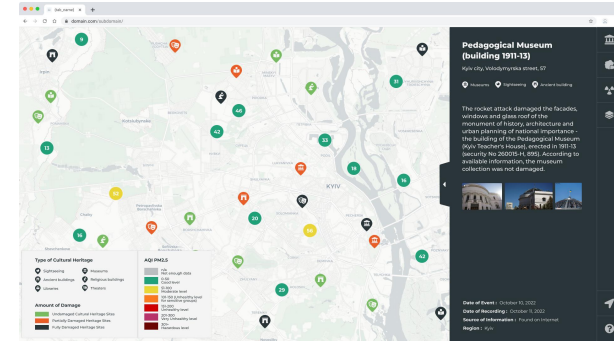**Target group**: Cultural heritage managers, decision makers, civil society organisations in the public and private sector.

Our Idea: A unique approach to cultural heritage management

➢ **Space4UA** goals:

  ○ bring together **space data** with **citizen-generated data** and **in-situ data** for cultural heritage protection and preservation;

  ○ integrate citizens' observations, **empowering** thus communities;

  ○ provide **up-to-date information** of the status for **cultural heritage** on the ground.

  ○ **raise global awareness** about the importance of safeguarding cultural heritage in conflict areas.

Defining the problem

Armed conflicts pose a great threat to communities' cultural heritage.

How can digital education enhance safeguarding of cultural heritage it during war?

→**Our goal:** engage students and teachers in preserving cultural heritage in conflict zones, with a particular emphasis on monitoring, documenting, and raising awareness about the threats and damages faced.
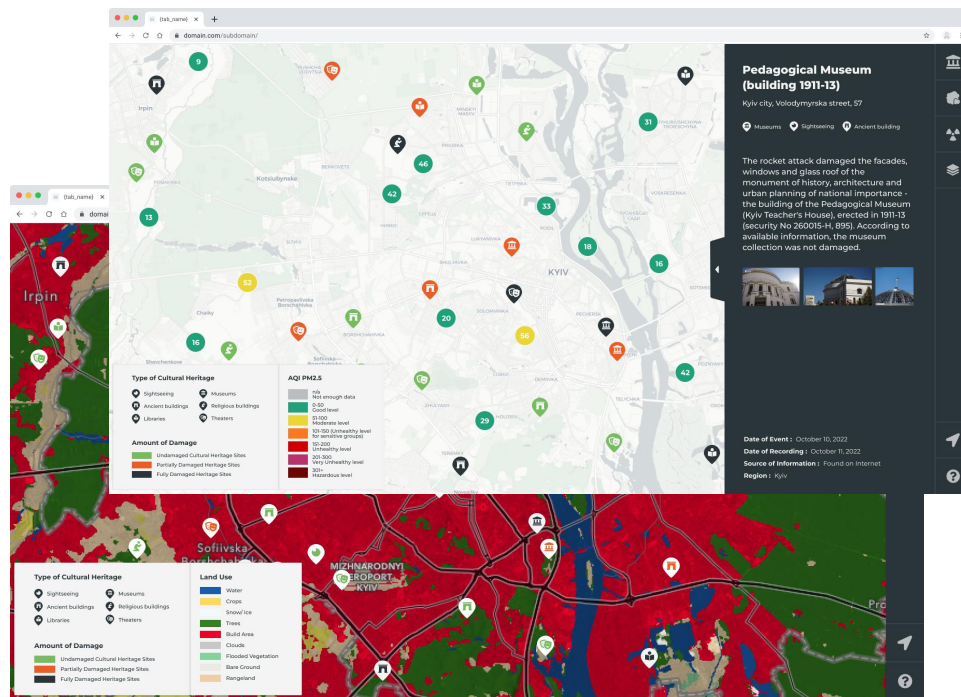
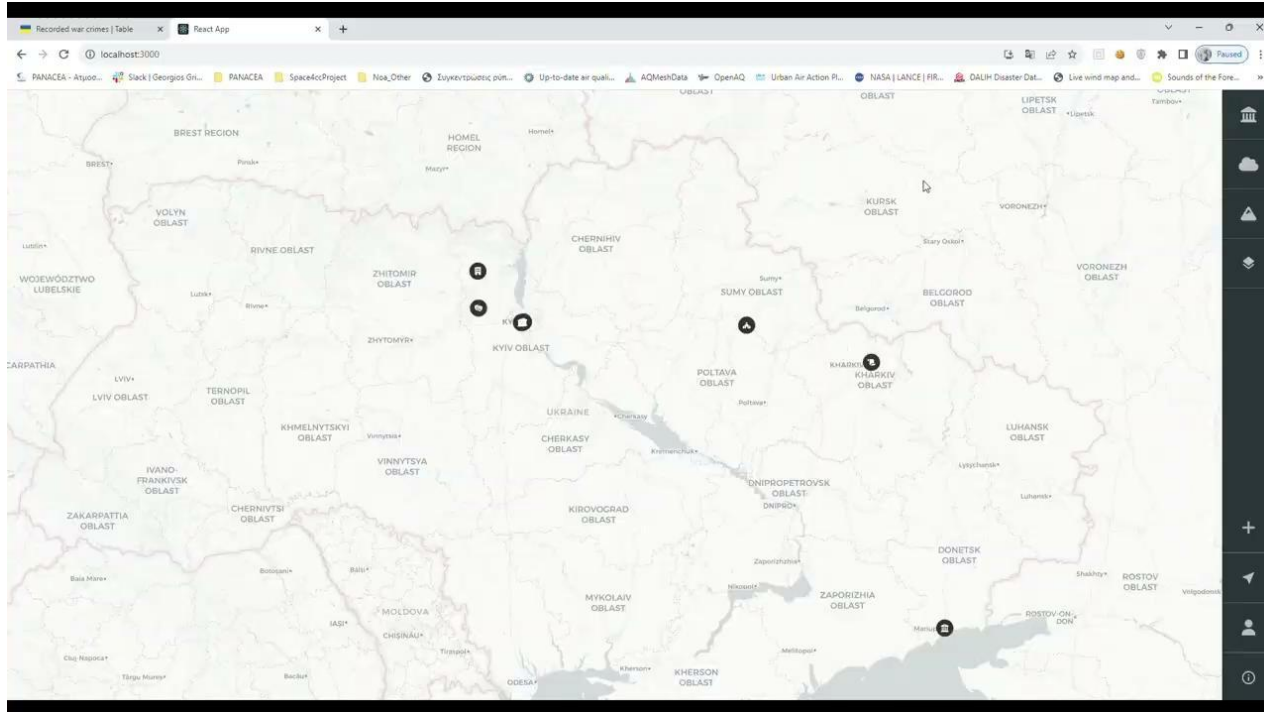→ **Our starting point:** Ukrainian cultural heritage.

Our solution

Develop a comprehensive cultural heritage tool that will:

- Integrate space-based data, in-situ data (environmental), and citizen-generated data (photos, historical records).
- Promote interdisciplinary collaboration with an interoperable approach.
- Provide a user-friendly interface through co-design and inclusive methods.

Satellite data + In-situ data+ Citizen Science data →Decision Support tool 4 Cultural Heritage

Our solution (DEMO)

Space4UA next steps

Perspectives

➢ Expand the use and study of space data in geography courses & programmes.

➢ Serve conflict and post-conflict **environmental recovery**.

➢ Widen **student participation** in the scientific process, extend the collection of **citizen-generated data** (images, citizen-based sensors, historical data).

➢ Explore the integration of **AI tools and 3D modelling**.

Next steps

➢ **Develop the system further**, **pilot with more end users**. **Create synergies** with other projects and networks such as CitiObs, GEO-UCHO, Data spaces networks, Europeana, other.

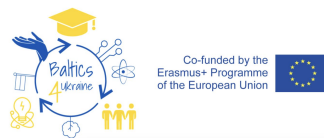➢ Expand and seek **funding opportunities/synergies/collaborations**.

Our trajectory

February 2022
Outbreak of Ukrainian war

September 2022
Hackathon Challenge: Ukrainian cultural heritage threats, at the Jupiter Notebook Competition

JUPYTER Notebook Competition

Copernicus

WEkEO

February 2023
Baltics4UA project

Baltics 4 Ukraine

Co-funded by the Erasmus+ Programme of the European Union

UKRAINE HERITAGE EDITION

July 2023
Хататон 4.0: Ukraine Heritage Edition

HATATHON HACK THE CULTURE

July 2022
Hackathon Challenge: Ukrainian cultural heritage threats, #EUSpace4Ukraine

#EUSpace4Ukraine HACKATHON

Open innovation in academia–society cooperation: examples of cultural heritage preservation in crisis contexts

Bente Lilja Bye, BLB
Daniele Spizzichino, Istituto Superiore per la Protezione e la Ricerca Ambientale
Alex Papadopoulos, De Paul University
Stefania Oikonomou, Web2Learn
Katerina Zourou, Web2Learn
Isber Sabrine, Heritage for Peace

EUROPEANA 2022

Friday 30.09.2022, 13h15–14h15 CET
Online– Europeana conference
https://pro.europeana.eu/page/conference

September 2022
Europeana Conference Session

myEUspace COMPETITION
CASSINI
IDEA TRACK WINNER
Space4CC

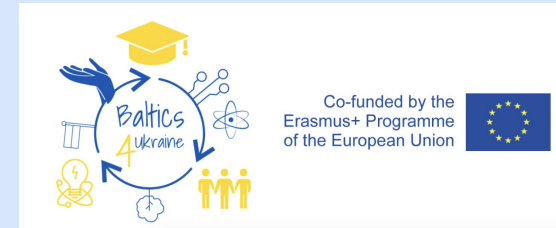**February 2023**
Cash prize at the myEUspace Competition

Thank you!

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Baltics4UA project: https://baltics4ua.eu/

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#StrongerTogether