

#EUSpace



EUSpace4Ukraine demonstrator for humanitarian NGOs

Online Workshop – short summary

2 February 2023



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• **Context**

- EUSpace4Ukraine initiative
- EUSpace4Ukraine demonstrator
- EUSpace4Ukraine demonstrator ideas
- Outlook and next steps

EUSpace4Ukraine demonstrator workshop



Workshop held
on 2 February
2023

Thank you to all workshop participants for your valuable contributions and insights. Your participation helped make the workshop a success!



This compact version of the slide deck highlights the **key takeaways** from the workshop and provides an overview of the EUSpace4Ukraine Initiative, and the potential demonstrator applications for the humanitarian sector.

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EUSpace4Ukraine timeline

Launch



Online
platform
launch

12-April 2022

Matchmaking



Connecting
NGOs &
innovators

17-May 2022

Hackathon



#EUSpace4
Ukraine
7 teams
3 winners
29-Jun to
01-Jul 2022

UCP 2022



User
Consultation
Platform

Oct-2022

Demonstrator



#EUSpace4Ukraine **Demonstrator**
follow-up to validate solutions in
NGOs operational environment

Nov-2022 to Nov-2023

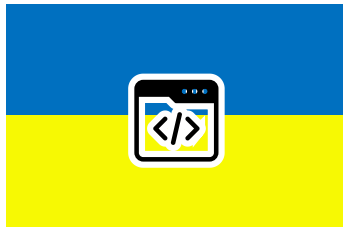
More information to be found at:

<https://www.euspa.europa.eu/euspace4ukraine>

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The demonstrator will focus on a civil application



Objective

Help NGOs to solve technological problems, obstacles and challenges



Help Ukraine more efficiently



Thematic focus

- Civil/humanitarian usage
- **Military application**



Characteristics

- Technical implementation to be defined based on needs of NGOs, options include app, API, web portal, (hardware)
- Usage will be free of charge

NGOs can actively shape the demonstrator

Process & timeline

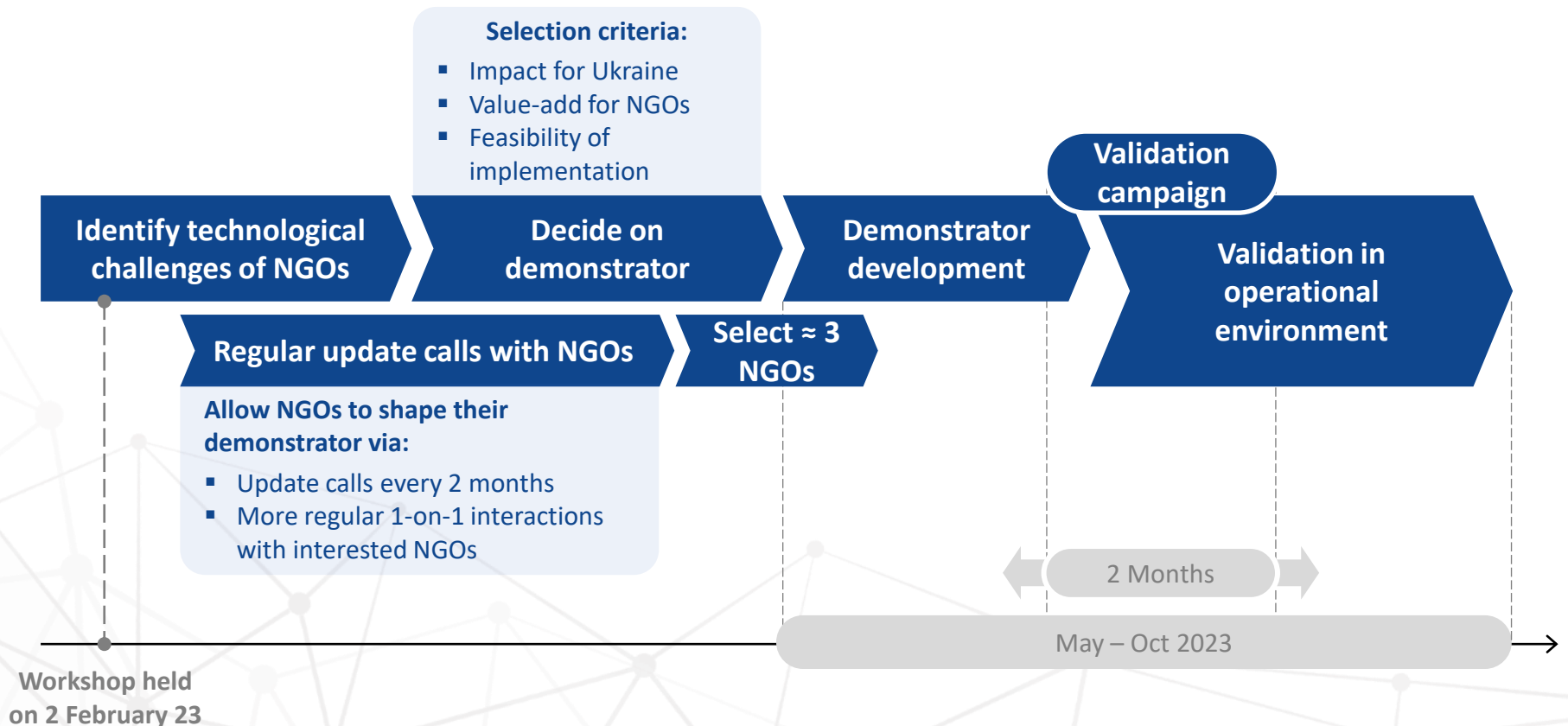
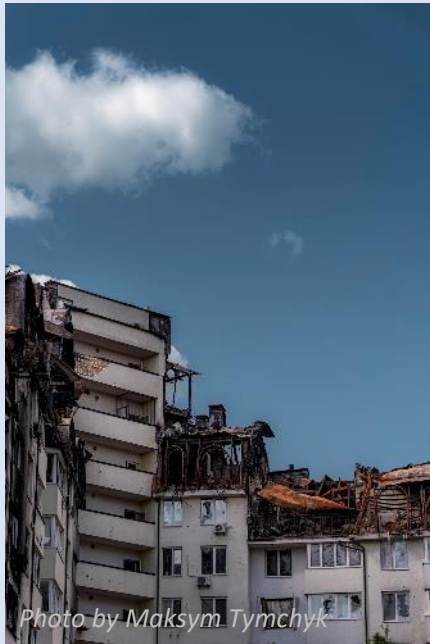


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Assessment of infrastructure damage using Copernicus

Reasoning:



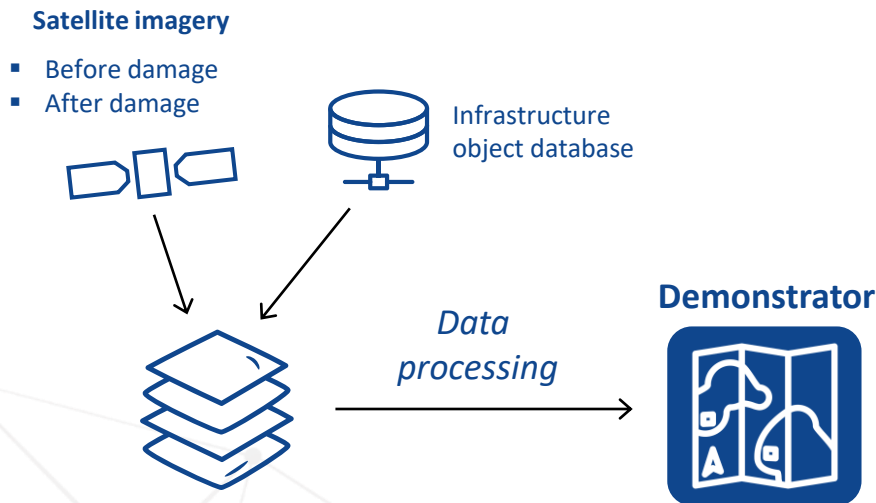
Hundreds of thousands of residential buildings, schools, kindergartens, and other civil infrastructure has been damaged

*Automatic large-area **post-event damage assessment** is essential for planning rebuilding activities after the war.*

Demonstrator goal:

Localize, detect, and assess damaged buildings and infrastructure objects using Copernicus data

The demonstrator will leverage space and non-space data



Security concern:

Data could contain sensitive information that could be misused

Possible solutions:

- In-depth risk analysis
- Access only for selected NGOs only
- Availability after end of war

Localising using Galileo in case of a support situation

Reasoning:



NGO staff is often operating in high-risk areas and health of the NGO staff is not always known.

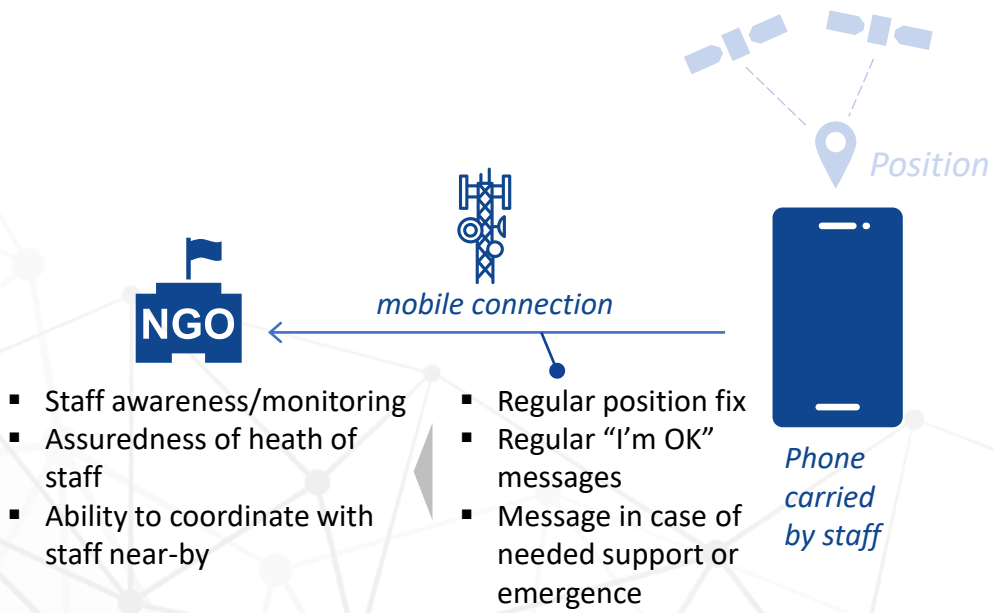
Often, communication via the cellular network is not always possible due to terrestrial infrastructure damage.

Demonstrator goal:

Allowing NGO staff working in high-risk areas to transmit status of their well-being and alert in case of an emergency

Different implementations are depending on the connectivity situation are possible

For regions where mobile connectivity is operational



For regions where mobile connectivity is NOT operational



Environmental impact assessment with Copernicus data

Reasoning:



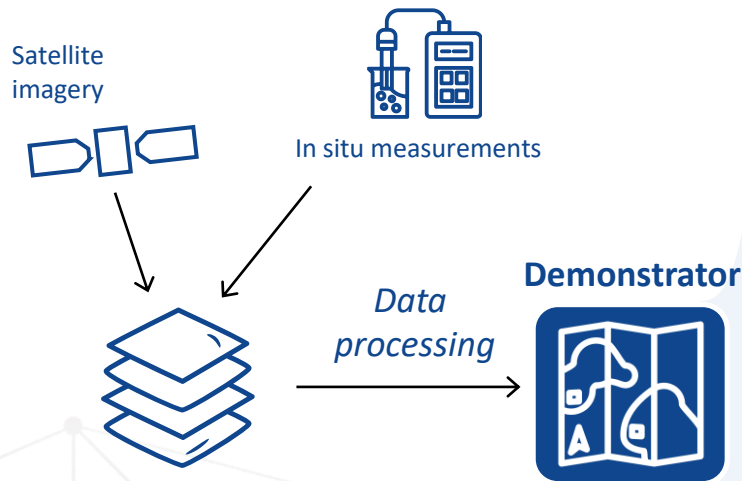
*The war has caused extensive and severe **environmental damage** and has serious **long-term consequences** for human health and ecosystems.*

*Information on **soil contamination**, **water** and **air pollution** is essential for planning of cleaning and rebuilding activities.*

Demonstrator goal:

Detect and classify environmental damages (on air, water and soil) using Copernicus data

The demonstrator will combine space data with local measurements



Possible outputs:

- Land use
- Terrain analysis
- Air quality
- Water quality
- Waste disposal
- Chemical safety
- Flora
- Fauna
- Thermal emission
- ...

Actionable data:

- Imminent dangers for population
- Mitigation measures to minimize the impact
- Long-term monitoring plans to ensure health of environment
- ...

Assessment of war impact on agricultural land

Reasoning:



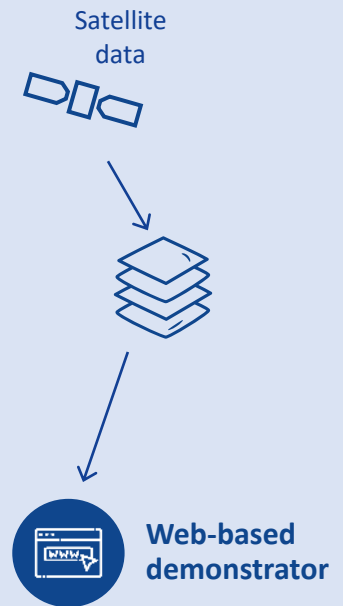
The war in Ukraine leads to decline in agricultural productivity, resulting in food insecurity.

An assessment of agricultural land is necessary to identify areas that require mitigation actions.

Demonstrator goal:

Provide valuable and actionable insights on agricultural land usage

Implementation



Monitoring of cultural heritage using space data

Reasoning:



Photo by Maksym Tymchuk

Ukraine is home to many unique religious sites, museums, historical buildings, monuments, libraries of high cultural relevance.

As of January 2023, damage to 236 historic and cultural sites has been verified as direct impact of the war

Demonstrator goal:

Detect and localize damaged cultural heritage sites to protect them during the war and assist their reconstruction

Implementation

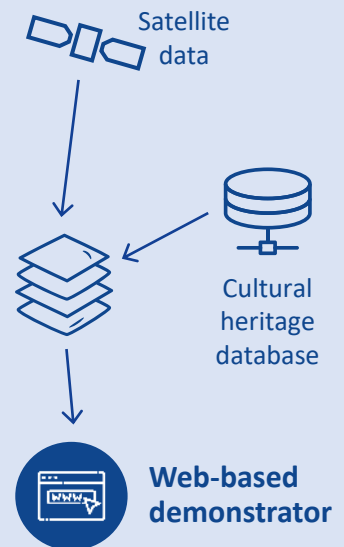
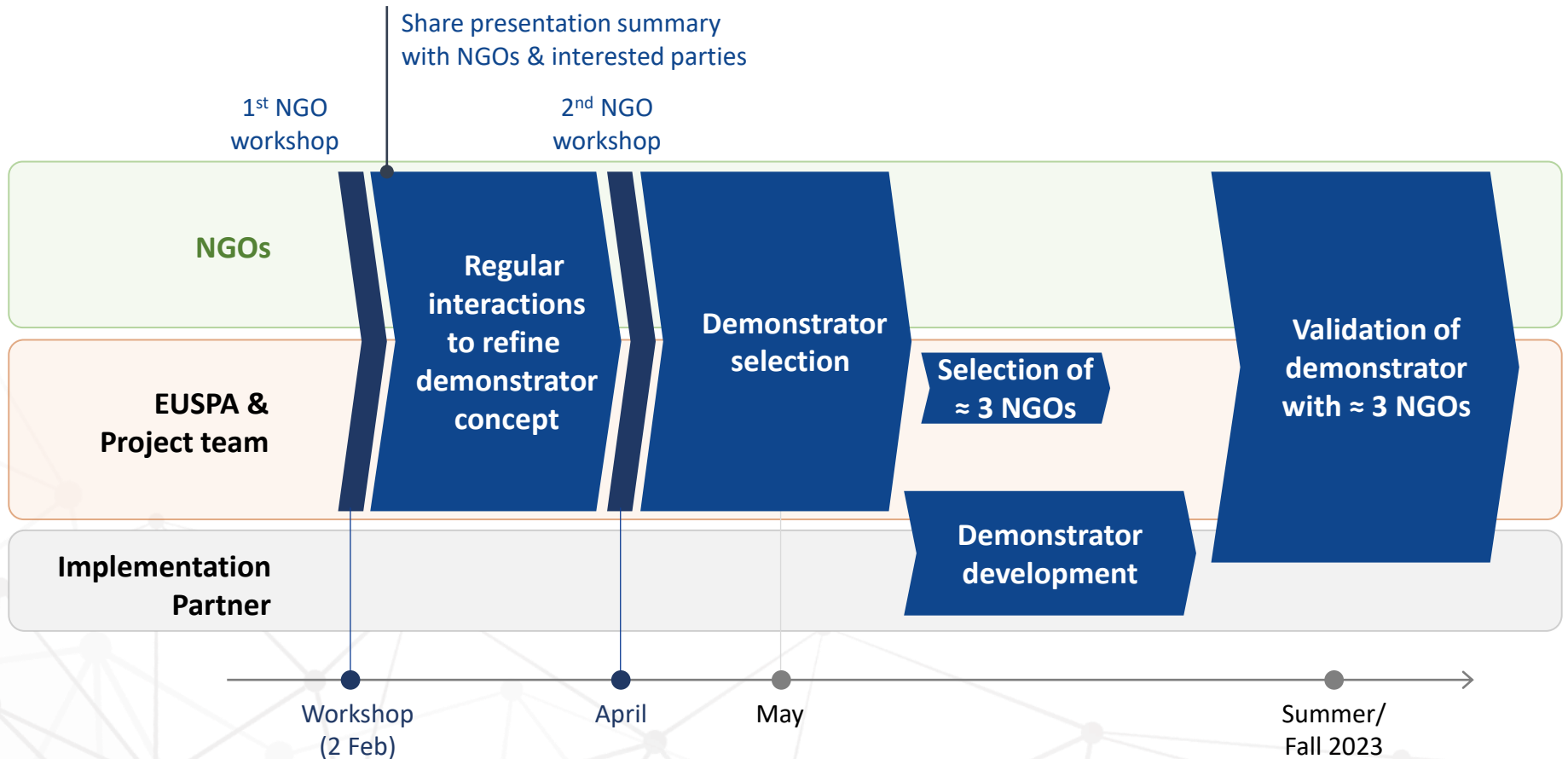


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We want to shape the demonstrator together with you as final users



Questions, Comments, Ideas?

You are welcome to contact us any time:



rottmann@spacetec.partners



schuessler@spacetec.partners

#EUSpace



Linking space to user needs

Get in touch with us

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