



# The EU Space Programme enabling AI for emergency management applications

ITU/WMO/UNEP Workshop on AI for Natural Disaster Management, 24 Oct 2022

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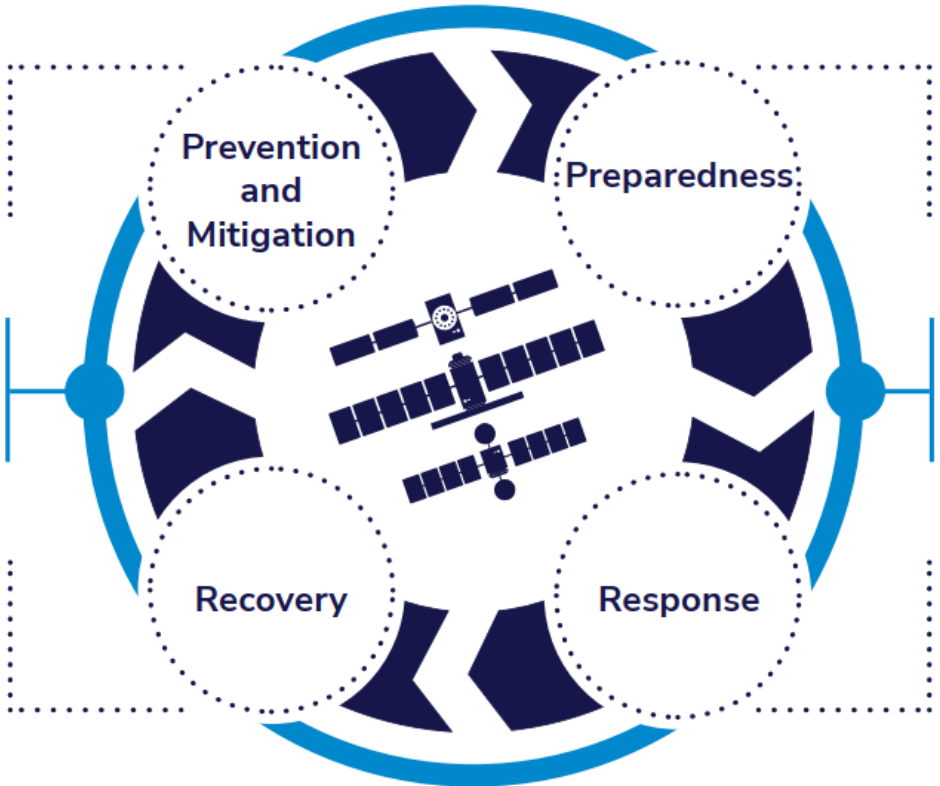


# Why AI for “Natural Disaster” Management?

- Need for **understanding** of the hazards to prevent them from becoming...disasters!
- **Detect and monitor** patterns/phenomena/events
- **Forecast** events
- Assist efficient and quick **decision-making**
- **Safer and efficient tools** for practitioners

# Emergency Management & Humanitarian Aid segment

EUSPA User Consultation Platform  
Prague 3-4 Oct. 2022



# The EU Space Programme boosting AI4NDM applications



## Copernicus

- Delivering a treasure of **free, open and accessible Copernicus data to detect and monitor hazards**
- **Operational Copernicus Services** -> **Emergency Management Service, C3S** etc.
- **Supporting downstream development** with cloud-based infrastructure – see DIAS

## Galileo/EGNOS

- **Navigating** responders (and autonomous vehicles/drones) on the field
- Enable **asset management** applications for more efficient response
- **Receivers** accurately detect earthquakes, landslides, land deformations & tsunamis

## GOVSATCOM

- **Connectivity** to first responders and humanitarian aid actors, enabling secure and resilient communication and data transmission services



# Project: SWIFTT



## Satellites for Wilderness Inspection and Forest Threat Tracking



**Protect forest health and production** with an early warning system of forest threats, using space data and Artificial Intelligence



Coordinator (SME): **wildsense**


9 participants from: 

# Project: OVERWATCH

## Integrated holographic management map for safety and crisis events



Copernicus and Galileo synergy, **enhancing the capabilities of disaster response teams** allowing better information gathering and dissemination for improved situational awareness

Coordinator: 

10 participants from: 

HORIZON-EUSPA-2022-SPACE-02-55



# LARGE-SCALE COPERNICUS DATA UPTAKE WITH AI AND HPC

9,6  
Mio  
EUR

Planned to be published on  
27th Oct 2022

- Break data silos and allow discoverability, querying and linking between data infrastructures. Artificial Intelligence technologies, Linked Open Data paradigms and semantic archives able to scale to the full archives data volumes.
- Connect Earth Observation data to European Data Spaces.

Develop new, enabling, scalable, **operational solutions and technologies** to improve capabilities and performance of the Copernicus value chain and supporting infrastructure.

**Copernicus** data assets and services **at the core** of the solutions.

Proposals can address individual elements of the value chain or the value chain as a whole.

Activities are expected to achieve TRL 5 by the end of the project.

TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)

Research &  
Innovation Action

Credit: European Union





9,6  
Mio  
EUR

## COPERNICUS DOWNSTREAM APPLICATIONS & THE EUROPEAN DATA ECONOMY

- Actions under this Topic will contribute to **increase the integration and uptake of Copernicus** into the economy, and/or to solve societal challenges.
- **Enable Copernicus penetration in many vertical domains**, through sizeable and scalable applications enabled by modern ICT technologies.

Proposals are required to make use of **existing European data infrastructures**, such as Copernicus DIAS platforms, European open data portals, and industrial data platforms.

Applicants are required to present initial qualifying items of their **business plan** in the proposal, which will then have to be fully developed as part of the project's exploitation plan.

Activities are expected to start at TRL 5 and **achieve TRL 8** by the end of the project.

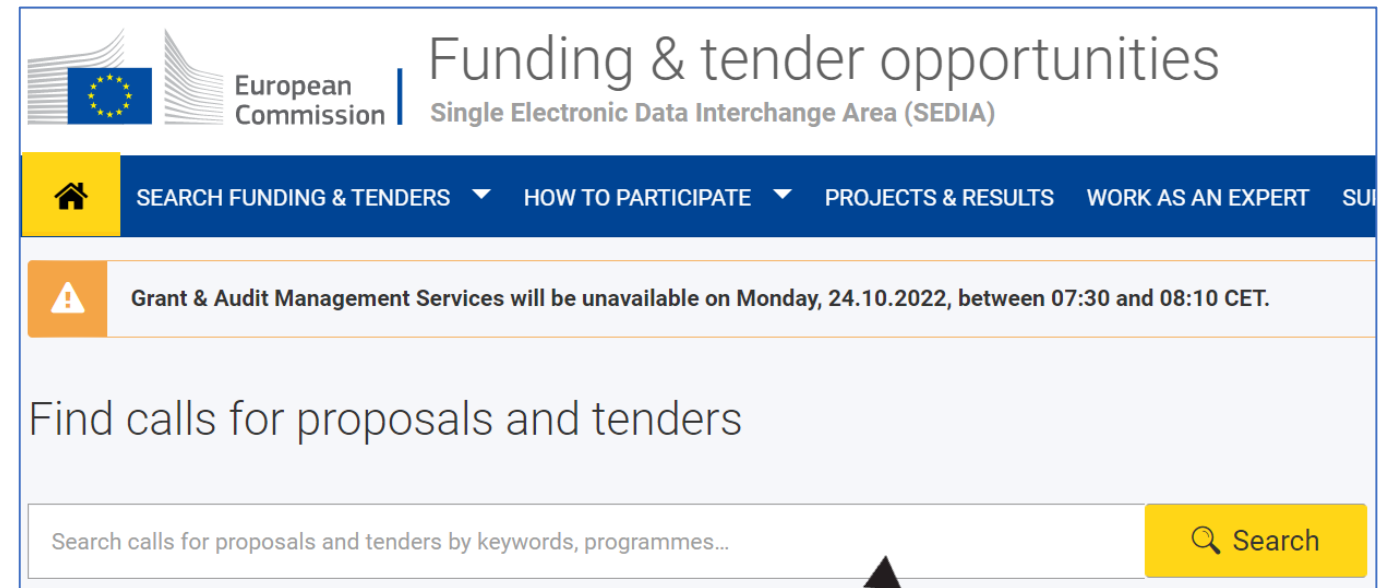
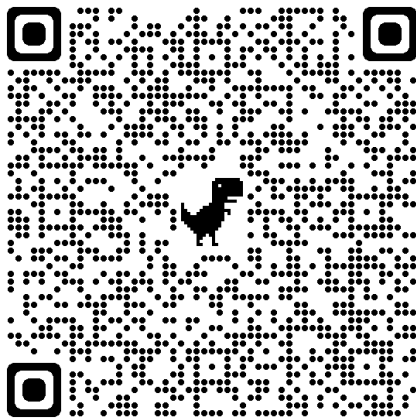
TRL 8 – system complete and qualified

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Innovation Action

# Stay connected & keep applying AI

Horizon Europe  
Work Programme  
2021-2022



The screenshot shows the top section of the European Commission's 'Funding & tender opportunities' website. It features the European Commission logo and the text 'Single Electronic Data Interchange Area (SEDIA)'. A navigation bar includes links for 'SEARCH FUNDING & TENDERS', 'HOW TO PARTICIPATE', 'PROJECTS & RESULTS', 'WORK AS AN EXPERT', and 'SUI'. A warning banner states: 'Grant & Audit Management Services will be unavailable on Monday, 24.10.2022, between 07:30 and 08:10 CET.' Below this is a search bar with the text 'Find calls for proposals and tenders' and a search button labeled 'Search'.

- LARGE-SCALE COPERNICUS DATA UPTAKE WITH AI AND HPC
- COPERNICUS DOWNSTREAM APPLICATIONS & THE EUROPEAN DATA ECONOMY



Linking space to user needs

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