

# Enhancing Copernicus Security Services – EU governmental crisis management hub for forced population displacement

# THEIA

HaDEA  
**SHOW  
CASE**  
Event 2026



Funded by the European Union  
This project has received funding from the European Union's Horizon Europe research and innovation programme under GA 101190051. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.



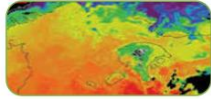
**THEIA**

GeoAI for Security

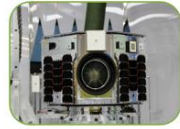
# THEIA "Enhancements" complementary to the CSS



Space-based RF monitoring systems (e.g. the "concentration" of RF signals including timestamp and location vs previous situation identifies "gathering of people")



Thermal satellite imagery (mainly from the National Missions)



VHR SAR imagery fusion with optical and VHR satellite video



Cubesat and Microsatellites from the National Missions/high revisit and VHR data



Crowdsourced data, social media – dark web. (Specific functions for the use and fusion of these data)

**GeoAI**

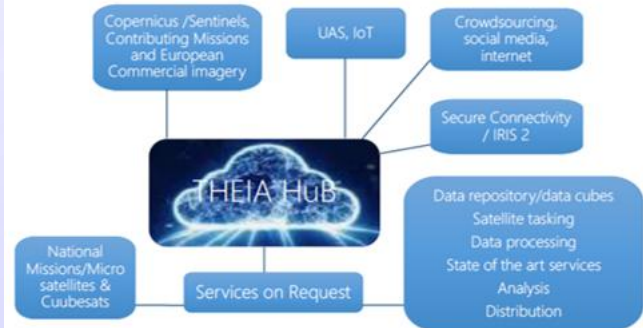
GeoAI and EO data analytics with diverse application-specific data sources in fusion.



Integrated platform – the THEIA platform / Data fusion and automation a cohesive system.



UAV-acquired data to enhance these applications



## PROJECT NAME

Enhancing Copernicus Security Services – EU governmental crisis management hub for forced population displacement

## SHORT DESCRIPTION

THEIA leverages GeoAI and Machine Learning to fuse space and non-space data, enhancing detection, decision-making and coordination for population displacement and climate- and conflict-related crises.

## EU FUNDING PROGRAMME

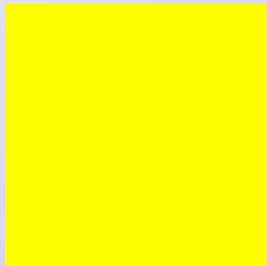
HORIZON Europe

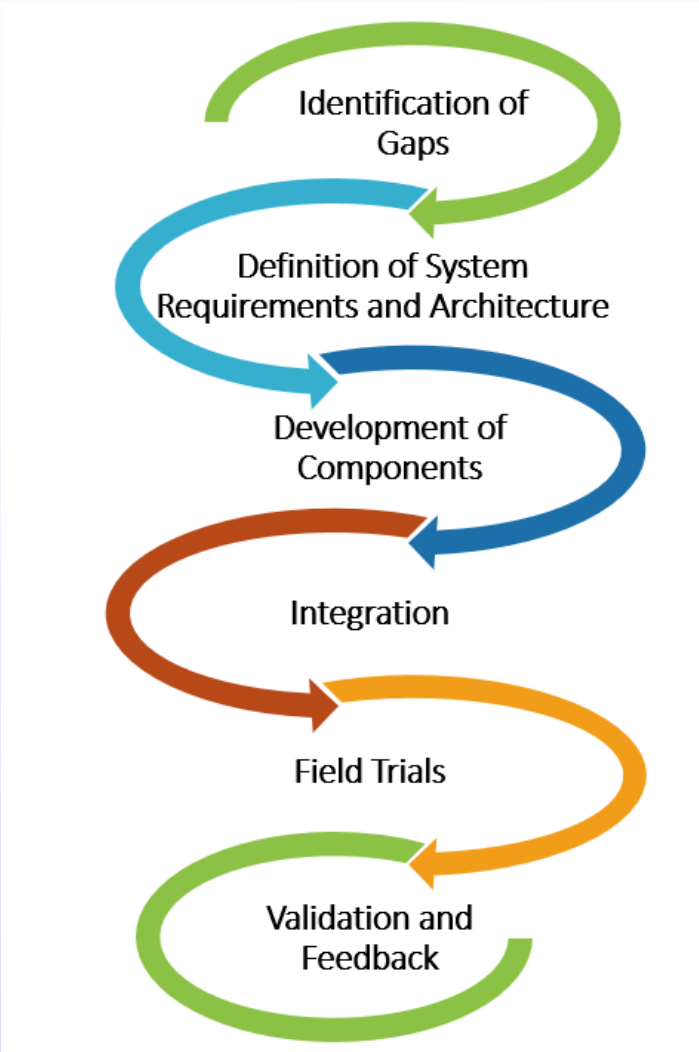
## PROJECT DURATION

12/2024 – 05/2027

## BUDGET

€3 997 608





**PROJECT'S IMPORTANCE TO EU POLICY OBJECTIVES OF COMPETITIVENESS AND/OR PREPAREDNESS**

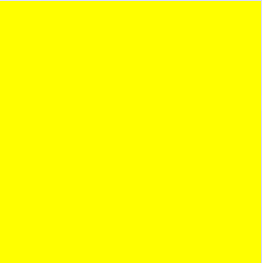
THEIA opens new markets for crisis services, strengthens Europe’s EO-based service economy and improves response to population displacement and disasters by enhancing community and institutional resilience.

**PROJECT RESULTS**

THEIA is a modular, GeoAI-powered platform for automated crisis detection, integrating EO, AIS, and RF data. It enables motion tracking, scene analysis, and transforms multi-source data into actionable decision-support insights.

**PROJECT PARTNERS**

- GEOSYSTEMS HELLAS S.A. (Coordinator)** EUROPEAN DYNAMICS LUXEMBOURG SA
- EUROPEAN UNION SATELLITE CENTRE CREOTECH
- OHB DIGITAL SERVICES GMBH C3I LTD
- LUXSPACE SARL WEB2KLIMATE
- ICCS MPL Brussels
- AIT GMBH



**Detections of illegal border-crossing at the EU's external borders on entry**

**331 553**  
(200 101)

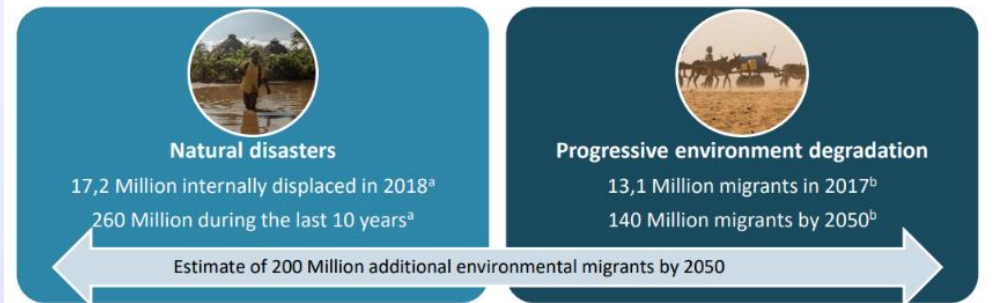


**WHAT WE CAN OFFER AT THE SHOWCASE EVENT?**

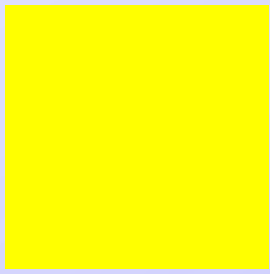
1. Specialized knowledge
2. State of the art innovating solutions
3. Express end users' needs and their interest to THEIA platform

**WHAT WE ARE LOOKING FOR AT THE SHOWCASE EVENT?"**

Networking with experts, getting feedback, discovering new trends, and finding collaboration opportunities, all while boosting GSH professional visibility and inspiration in a focused environment for deep discussion. It's a chance to refine ideas, learn cutting-edge research, and potentially spark new projects through direct interaction.



<sup>a</sup> Global report on Internal Displacement 2019, Internal Displacement Monitoring Center.  
<sup>b</sup> International Organization for Migration and United Nations Convention to Combat Desertification (2019): Addressing the Land Degradation – Migration Nexus: The Role of the United Nations Convention to Combat Desertification. IOM, Geneva.





Optical Data:

Input:



(a)

Output:



(α)



(b)



(b)

SAR Data:

Input:



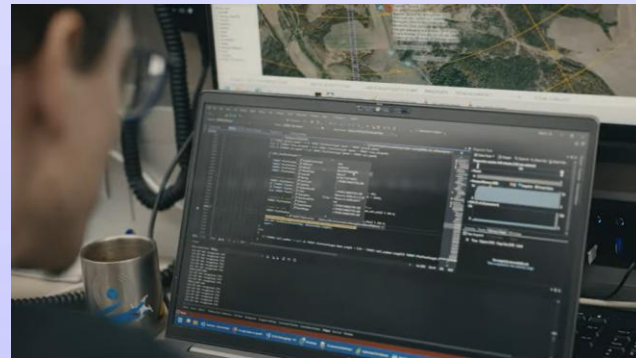
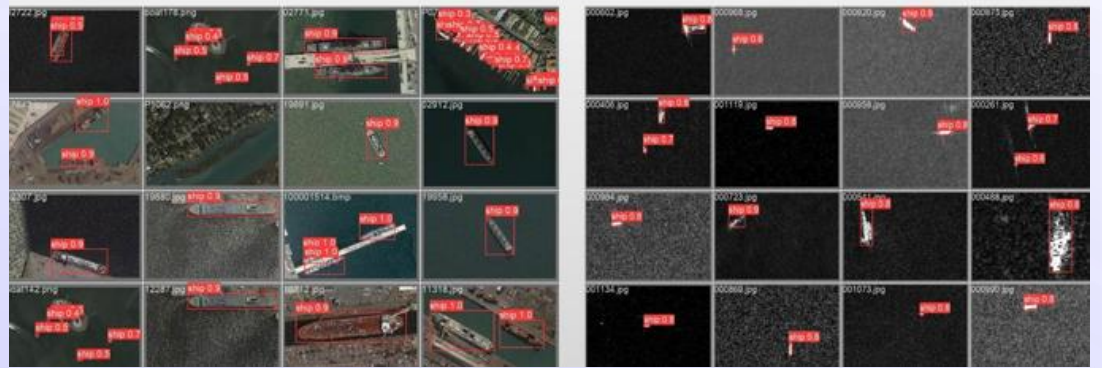
(c)

Output:



(c)

(a) Landsat, (b) Sentinel-2, (c) Sentinel-1



Co-funded by the European Union



# Monitoring of MARITIME traffic

**Vessel Spot**

**Vessels List**

Vessel ID	Distance	Status
47790300	224km	50% O
47796100	191m	60% O
41347825	166m	68% O
41349990	166m	62% O
41302330	166m	58% O
41335420	195m	61% O
41339140	195m	59% O
41324810	167m	60% O
Dark Vessel	226m	58% O
Dark Vessel	178m	58% O
Dark Vessel	267m	41% O
41372100	209m	67% O
41374310	216m	76% O
47790300	244m	58% O

**Vessels History**

**Vessels Summary**

84.1% of vessels tracked



**Real time video to**

Tracking\_16112023\_NHDH1Istanbul2TT\_cel\_HR