This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 821282

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shelter

Solutions & Tools

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Main objective

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Objective

Cost-effective low-carbon technological solutions for **prevention, preparedness, response and recovery through building back better** and integration with Shelter tools (the Decision Support System and Data Resilience Dashboard).

Highlights

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Highlights

- **Six** solutions and tools that provide a **robust technological basis for improving the protection, resilience and sustainability** of Cultural Heritage buildings and sites for the different **Disaster Risk Management phases** (prevention, preparedness, response and recovery through building back better).

- **End-users requirements** addressed.

Key challenges

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Key challenges

- Address **heritage materials, structures and sites specificity and requirements.**
- Meet the **great variety of needs** of the Open Labs.

Main outputs

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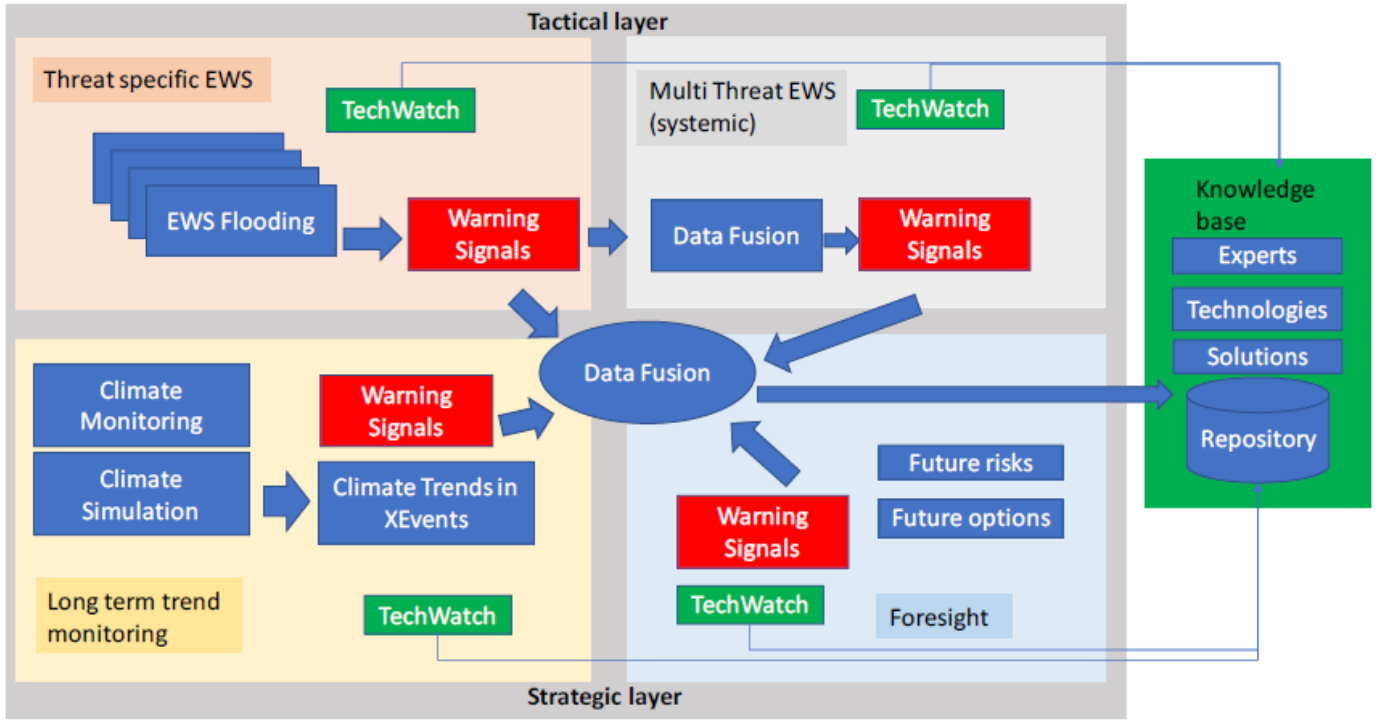
Early Warning System (EWS)

Conceptual model of the **Multi-hazard** Early Warning System tailored **for each Open Lab**.

Phase of DRM & hazard: preparedness.

Role in Shelter: baseline document for implementing EWS tools.



Solutions Portfolio

148 solutions including a **Life Cycle Analysis** and **Cost Benefit Analysis** together with a **prioritization tool**.

Phase of DRM: prevention, preparedness, response and recovery, as well as emergency phase.

Hazards: floods, storms, wildfires, heatwaves, subsidence, earthquakes.

Role in Shelter: feed Decision Support System.

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Immersite

Simulation tool.

Phase of DRM: prevention.

Hazards: floods.

Role in Shelter: awareness and training.

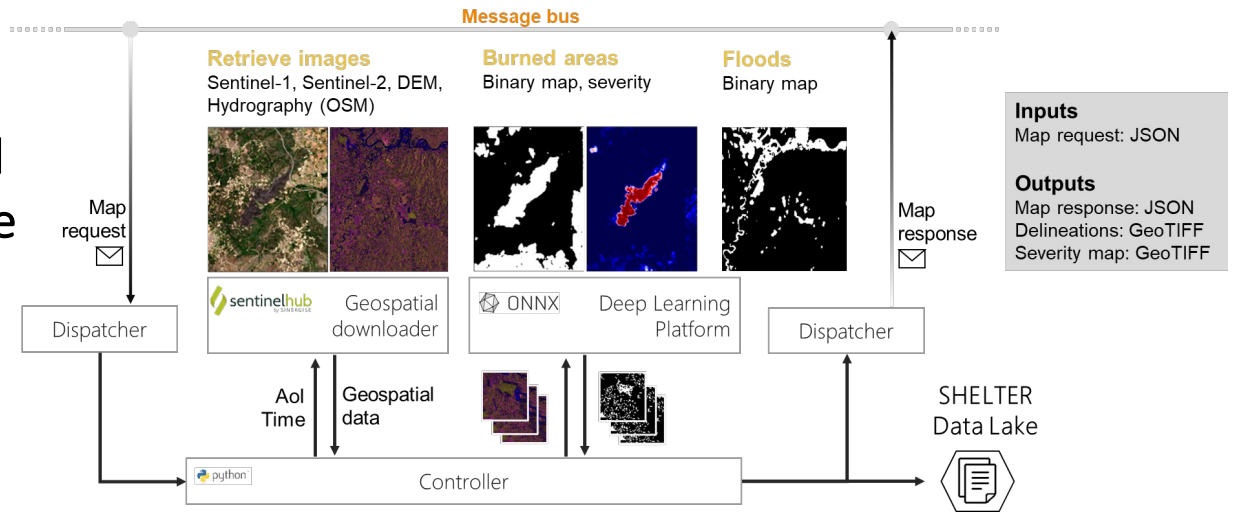
Rapid Damage Assessment Technologies

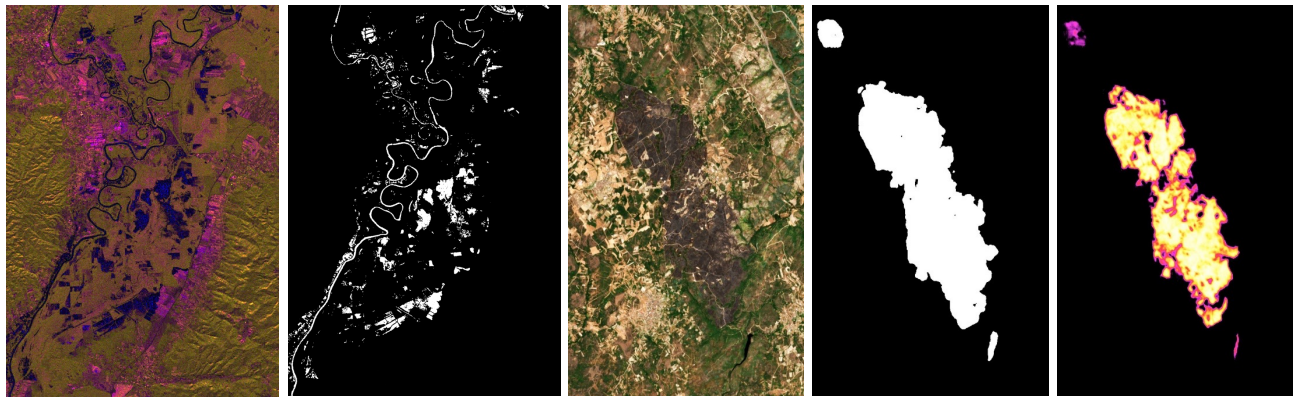
Automatically compute the **delineation of areas impacted** by **floods and fires** in a short amount of time and **estimate severity** and the impacted elements.

Phase of DRM: preparedness, response, recovery.

Hazards: floods, wildfires.

Role in Shelter: feed Data Resilience Dashboard.



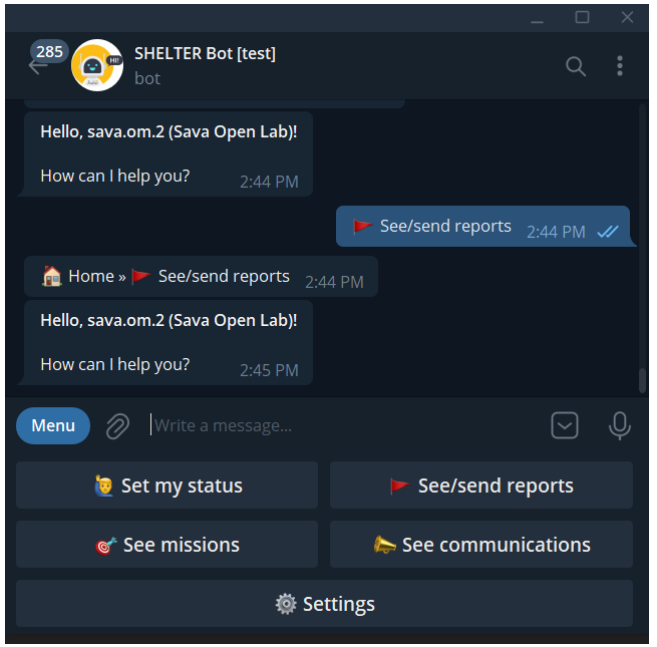


Crowdsourcing solutions

Chatbot: structured data collection process to improve in-field forces management and citizen awareness.

Social media module: to extract meaningful disaster-related information of the ongoing situation and allowing the creation of a curated list of historical events.

Phase of DRM: prevention, preparedness, response and recovery.
Hazards: floods, storms, wildfires, heatwaves, subsidence, earthquakes.
Role in Shelter: feed Data Resilience Dashboard.



Conclusions

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Conclusions

- Useful tools for Cultural Heritage managers that can be tailored to specific needs.
- Four Disaster Risk Management phases and six hazards covered.
- Implemented in user-friendly tools.
- High scientific impact.

THANK YOU!

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