EXTRECS

GOVSATCOM Extreme Crisis Management Service: Demonstration of Space Saving Lives

Funded by the European Union

February 2025

The GEXTRECS project aims at demonstrating an end-to-end GOVSATCOM service supporting Extreme Events Crisis Management

EXTRECS

GOVSATCOM EXTREME EVENTS CRISIS MANAGEMENT SERVICE

Horizon Europe Research Project

Grant Agreement no. 101129626

Leader: **GMV Aerospace and Defence SA**

Duration: **24 months (February 2024 – January 2026)**

Consortium members: **8 partners from 4 EU Member States**

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GEXTRECS rationale

- Ensuring an adequate level of action in terms of **provision of proper SATCOM services and response time** in the event of natural or manmade disasters
- **High risk of network saturation and deficiency of SATCOM resources** in crisis management situations due to multiple and simultaneous requests from different End-Users
- Necessity of **end-to-end solutions** to preserve the security of the EU citizens in such conditions
- **Harvesting synergies** resulting from the use of services and products offered by different components of the **EU Space Programme**

Use case scenarios

LAND: Destruction of the Niedów Dam in a terrorist attack

Selected response actions:

- Land search and rescue
- Operational coordination

End-User involved in the use case:

- I.S.A.R. Germany
- Virtual On-Site Operations Coordination Centre (OSOCC)

Impact:

- Over 100,000 affected people

MARITIME: Undersea earthquake in the Mediterranean Sea

Selected response actions:

- Evacuation of tourists from a cruise
- Containment of oil spill from a tanker

End-User involved in the use case:

- Marine Technology Unit (UTM) of CSIC
- “Sarmiento de Gamboa” – a multidisciplinary research vessel

Impact:

- Above 3,000 affected cruise tourists + family and friends

Ensuring robust communications for response

Dynamic Planner – expected results:

- Dynamic and optimal allocation of the most suitable SATCOM resources to service requests
- Maximisation of usable throughput of a satellite system while securing acceptable communication quality to users

Network Balancer - expected results:

- Preservation of secure communications while switching between different communication networks
- Distribution of internet traffic across multiple WAN links based on predefined rules to direct the traffic

Initial GEXTRECS demonstrations

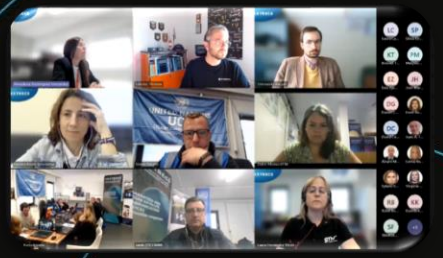
When: **15-18.11.2024**

Where: **Training Base Weeze (DE) and Port of Vigo (ES)**

Participants: **GEXTRECS partners, Advisory Board members, EUSPA**

Scope:

- Capacity-building through **dedicated training**
- Testing **GEXTRECS Service Pack** (i.e., GOVSATCOM users services), **data transfer integrity and technological innovations** (i.e., Dynamic Planner, Network Balancer, specific Copernicus Emergency products, and both Galileo OSNMA and PRS services)
- Emphasis on **procedures, technical performance** and **relevant KPIs**
- Followed by **Stakeholder Workshop 1**



Lessons learned from demonstrations steps

Pre-demo test campaign:

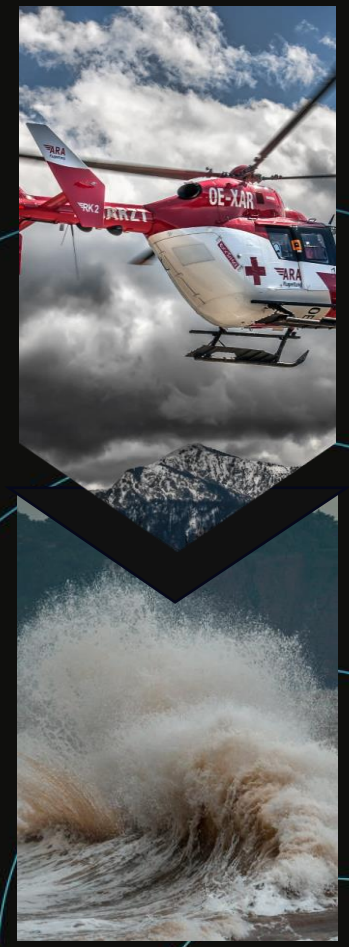
- Testing period to be extended.
- Assessing feasibility of avoiding daily antenna dismantling and setup.

End-Users training:

- Enhancing capability-building materials including scenarios limitations to manage end-users' expectations
- Outline the key factors to consider in decision-making processes, such as bandwidth, security, cost, and performance.

Demos:

- Allocating Service Request priority levels in accordance with end-users
- Incorporating realistic and relatable details into the scenario as well as visual elements to make it more believable and engaging for the stakeholders.



Final GEXTRECS demonstration

When: **Q4 2025**

Where: **Training Base Weeze (DE) and Port of Barcelona (ES)**

Participants: **GOVSATCOM End-Users, stakeholders, and CGAs**

Aim & scope:

- Focus on End-Users' evaluation of the **GOVSATCOM Crisis Management Service Pack and proposed solutions** (acceptance, performance functionality, user-friendliness, etc.)
- Possible use of the **GOVSATCOM-Hub**
- Followed by **Stakeholder Workshop 2**

Join us!

GEXTRECS GOVSATCOM EXTREME EVENTS CRISIS MANAGEMENT SERVICE

Thank you for your attention

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