GEXTRECS

Using space to save lives on Earth

GOVSATCOM
Crisis Management Service Pack

Funded by the European Union

August 2025

#EUSpace

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

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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**

What is the GOVSATCOM Crisis Management Service Pack?

- A set of telecommunication services required in disaster and emergency response provided through EU GOVSATCOM
- **Defined together with End-Users** who manage and respond to extreme and massive disaster events to **address their specific requirements and expectations**
- GOVSATCOM services supporting the usage Copernicus geo-intelligence products and Galileo secure positioning services
- **Demonstrated and validated** in the context of two disaster scenarios:
    - a land cross-border disaster
    - a multinational maritime disaster

GOVSATCOM Crisis Management Service Pack – key telecommunication services

- Voice communication
- Video conferencing
- Video sharing on-the-move
- Real-time content sharing
- High-resolution image transmission
- Remote & secure access to information systems
- Low data rate communications
- IP services
- High data rate communications

Use case scenarios

LAND: Destruction of the Niedów Dam in a terrorist attack

- Huge flood wave in Poland and Germany
- Over 100,000 people affected

Selected response actions:

- Search and rescue
- Operational coordination

End-User involved in the use case:

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

MARITIME: Undersea earthquake in the Mediterranean Sea

- Massive environmental devastation and infrastructural damage
- Death toll exceeding 200,000 people

Selected response actions:

- Evacuation of tourists from cruise ships
- Containment of oil spillage from a tanker

End-User involved in the use case:

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

Ensuring robust communications for emergency 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**

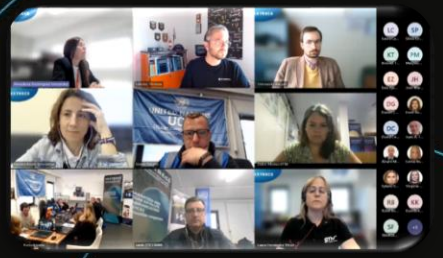
Where: **Training Base Weeze (DE) and Port of Vigo (ES)**

Meeting format: **hybrid**

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

Scope:

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



Lessons learnt from initial demonstrations

Pre-demonstration test campaign:

- A sufficiently long testing period needed
- Reducing the need for a daily setup devices as much as possible (e.g., setting & dismantling of antennas)

Preparation of End-Users:

- Explanation of key factors and their interrelation for decision-making regarding a requested GOVSATCOM service (bandwidth, security, cost, performance)
- Implementation of awareness raising activities, focusing also on demonstration limitations to manage End-Users' expectations

Demonstration activities:

- Incorporation of realistic details in a use case scenario and appropriate visual means to make demonstrations credible and engaging
- Adequate reflection of threats accompanying performed operations (in the crisis area) in the score assigned to service criticality and, consequently, in the GOVSATCOM service priority level

Final GEXTRECS demonstrations

When: **23 October 2025**

Where: **Water Castle „Hause Wohnung", Voerde (DE) and Port of Vigo (ES)**

Meeting format: **hybrid** (possibility to join online)

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

Aim & scope:

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

Join us!

GEXTRECS

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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