

# EUSAFE24

Advanced RLS functionality for EPIRB

## Key facts

### Full name

Advanced RLS functionality for EPIRB

### Project call number

EUSPA/GRANT/05/2022

### Project call

New SAR beacons for maritime

### Funding

700 687,23 EUR

### EU contribution

490 000,00 EUR

### Topic

Emergency Response

### Market segment

Emergency Management and Humanitarian Aid and Maritime & Inland Waterways

### Project start/end

01/04/2024 – on-going

### Galileo differentiators

SAR

## Context and motivation

As from January 2022, the world's fleet of propelled sea-going merchant ships of no less than 100 GT comprises 102,899 ships. Of these around 50,000 merchant ships are traded internationally. Improvement of (emergency) communications based on the Emergency Warning Satellite Service and considering the number of reported maritime accidents (approx. 80 per month with 5-7 ships lost with an average of 30 reported fatalities) might reduce the number of reported fatalities as well as reduce the workload on rescue organization by better control on the situation. Traditional EPIRBs don't provide the ships with an indication of current status visible

in the ship's navigation bridge. As well as incorporating the RBA feature, we propose to address this shortfall by linking ships float free EPIRB to a Remote-Control Unit (RCU). The RCU providing real time override control and indication of the EPIRB RLM and Galileo PNT status at all times, readily available to the ship's officers to watch. Further proposed is an RCU supported RBA addition, to augment pre-evaluation planning prior to abandonment of the vessel by allowing user selection of a specific Cospas Sarsat distress designation code prior to activation and deployment of the EPIRB into the sea.



### Targeted GNSS innovation

Galileo Search and Rescue, Remote Activation of beacons



### Targeted Product

EPIRB (Emergency Positioning-Indicator Radio Beacon) with Remote Activation Capability (RBA)

## Scope

The primary goal of the EUSAFE24 project is to develop a ship EPIRB (float free distress beacon), maximizing the effectiveness of the RLM message, incorporating Galileo Remote SAR Beacon Activation (RBA). The EPIRB is to have a remote activation and deactivated feature, while held in a float free release mounting bracket, and after the EPIRB has been deployed at sea. Continuously monitoring for RLS instructions embedded in the Galileo navigation message and be able to react to different requests.

## Challenge & technical solution

Develop a new hardware and software interfaces to continuously read Galileo SAR RBA messages. This requires an additional source of power and to have antenna of the beacon deployed and ready to transmit when necessary.

The project will reach TRL 7, for which a prototype will be developed to work in an operational scenario.