AWARE

Satellite based alerts to support Civil Protection Authorities for crisis management

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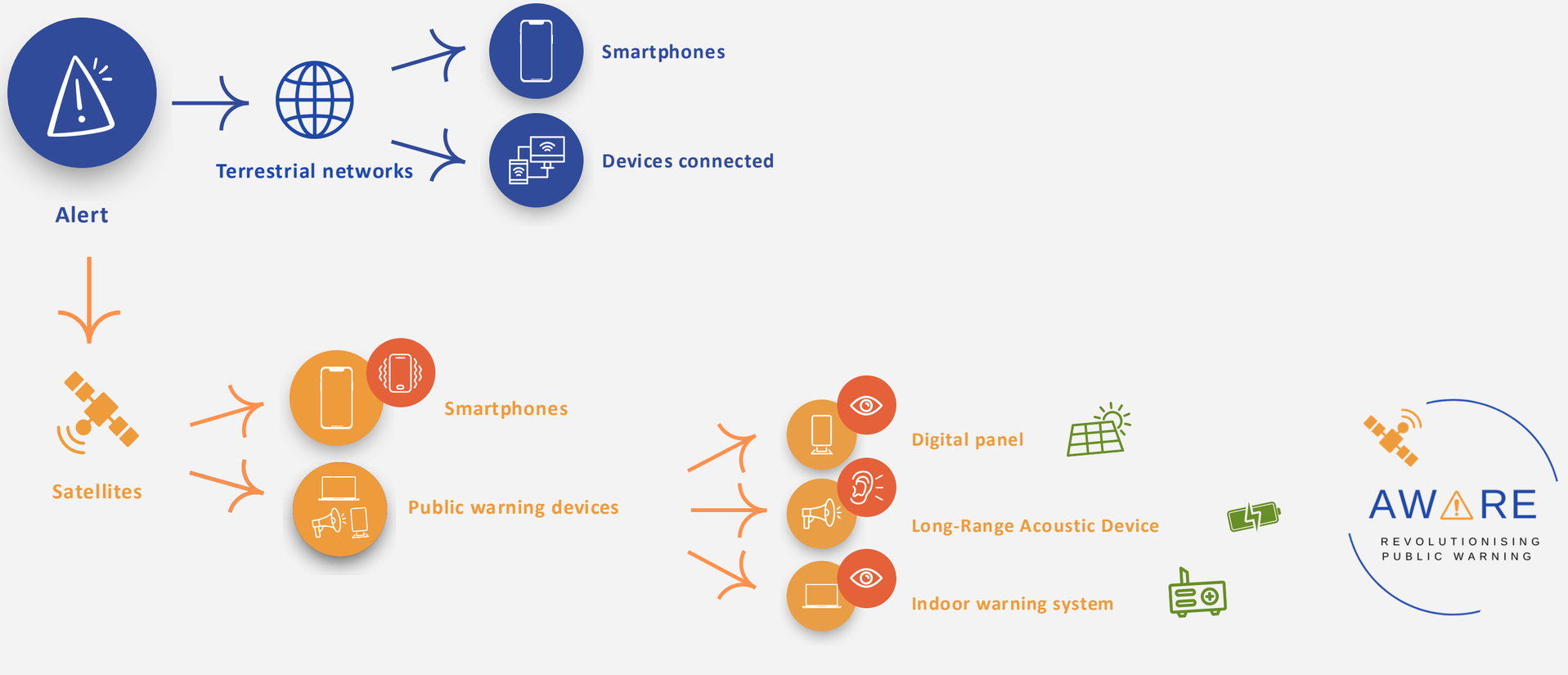
Presentation at EENA 25 - Helsinki

TELESPAZIO
a LEONARDO and THALES company

AWARE
REVOLUTIONISING PUBLIC WARNING

AWARE :
A COMPLEMENTARY APPROACH FOR RELIABLE ALERTS BROADCAST



✓ **Resilient & complementary solution**

✓ **Enhanced alert credibility & trustworthiness**

AWARE PROJECT

AWARE's mission is to develop reliable, resilient and trustworthy solutions for Galileo EWSS and dedicated tool for CPAs allowing its monitoring

A PROJECT BORN OF A CONSORTIUM:

ADMINISTRATION FOR CIVIL PROTECTION AND DISASTER RELIEF

cnes

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TELESPAZIO a LEONARDO and THALES company

Université de Strasbourg

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EUSPA European Union Agency for the Space Programme

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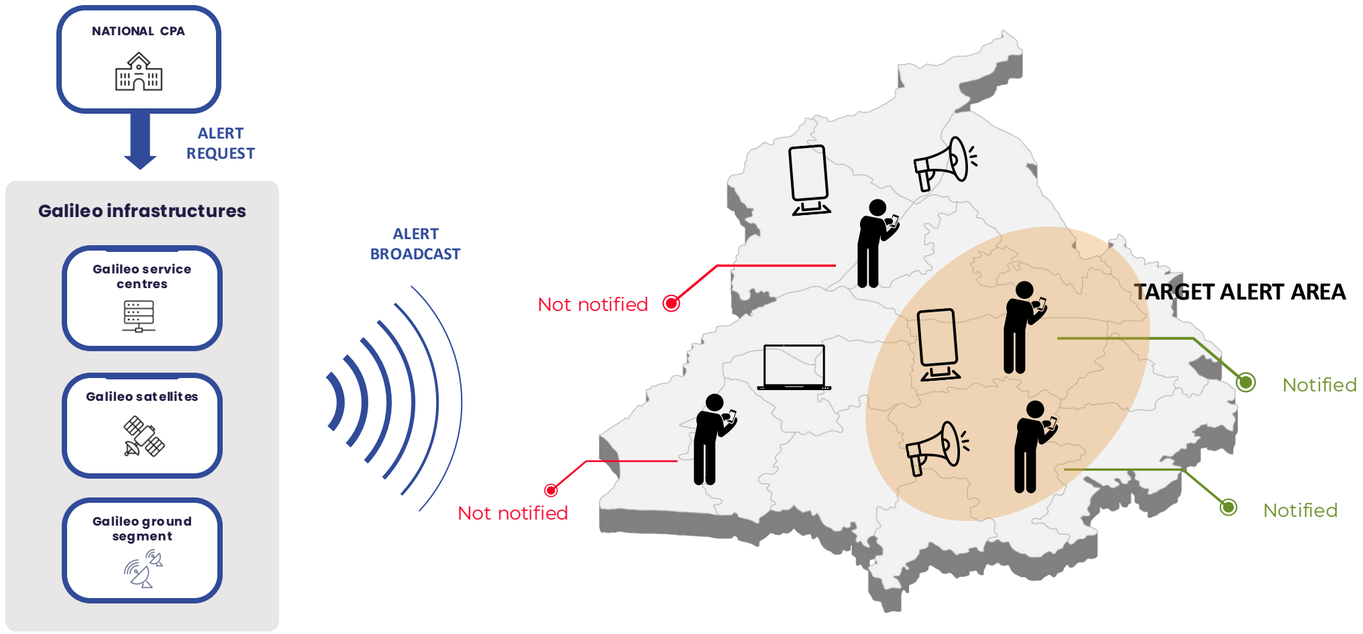
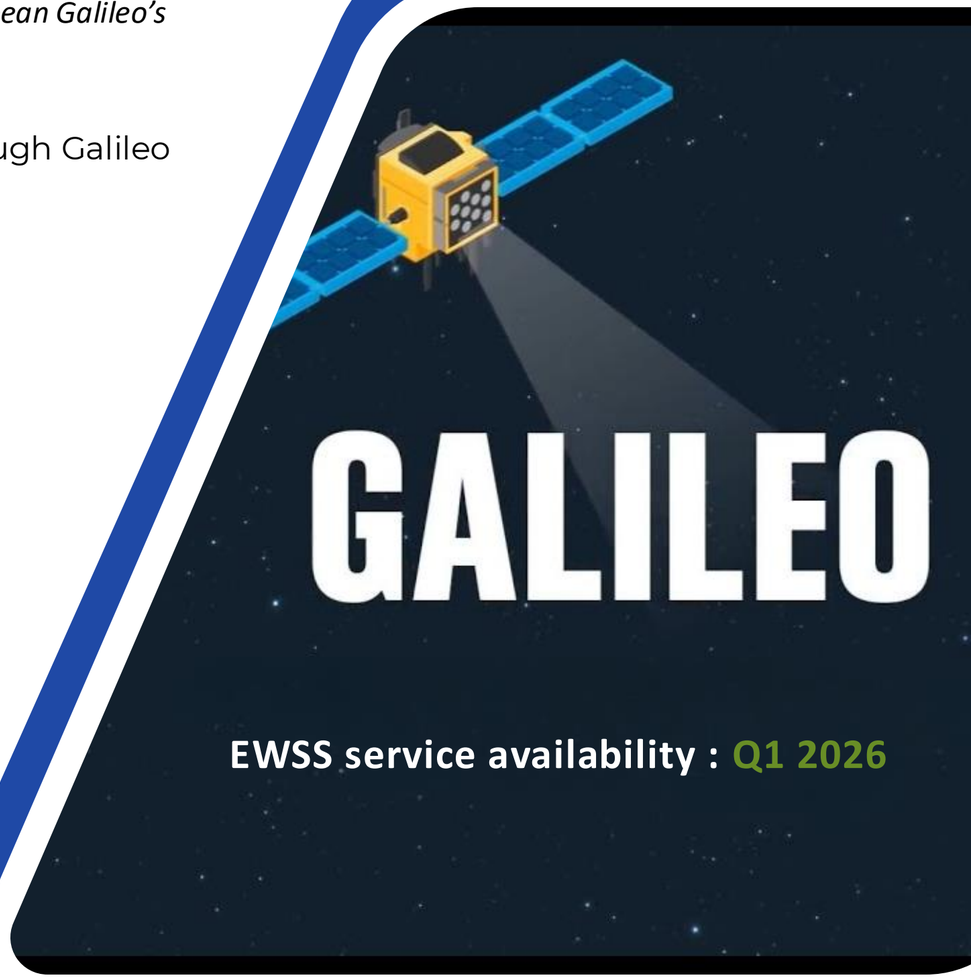
GALILEO SATELLITES

The Emergency Warning Satellite Service (EWSS) is a new satellite-based emergency channel leveraging the European Galileo's constellation

- ☑ National Civil Protection Authorities can send alerts directly to affected areas through Galileo
- ☑ Alerts are transmitted via the satellite constellation ensuring **Global coverage**
- ☑ Citizens are notified if within the pre defined area





AWARE PROJECT

1

Module

Device integrating satellite receiver to transmit the secured satellite based message

2

Warning Devices

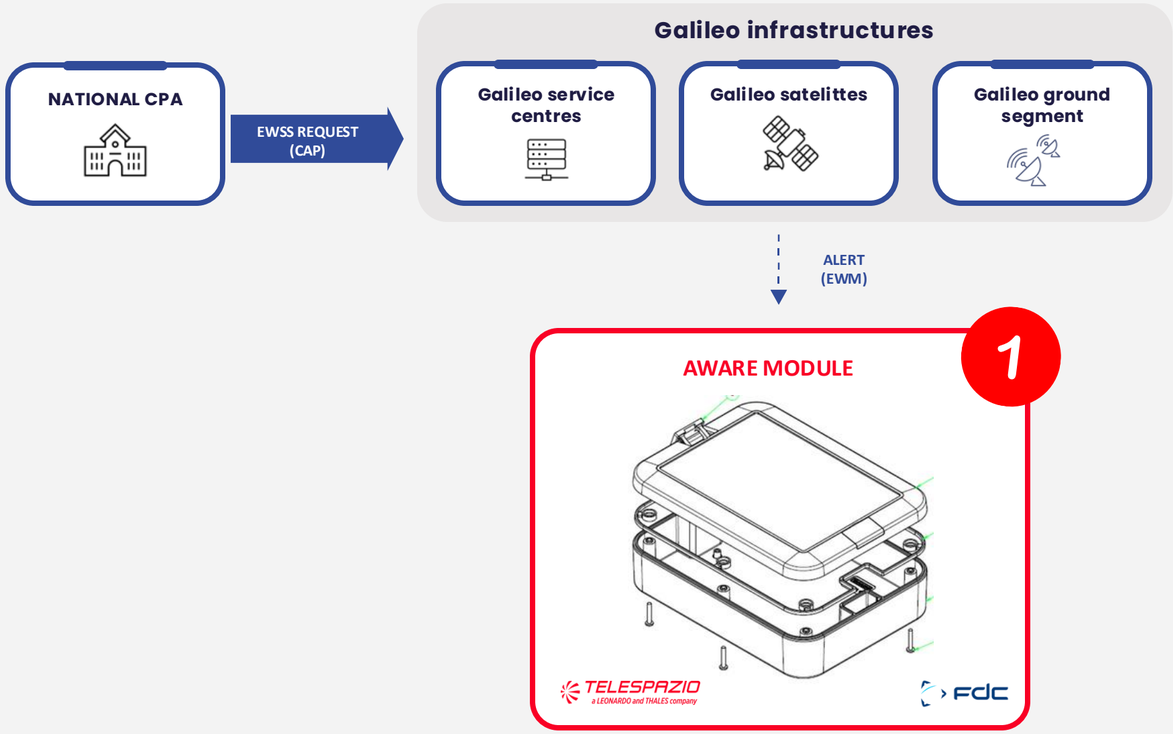
Display the alert received over different sensory channels

3

Service Centre

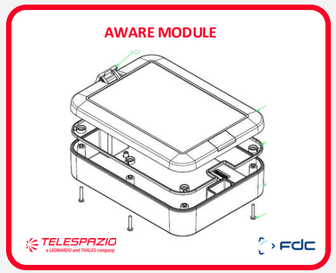
Monitor the service and support CPA analysis

AWARE ARCHITECTURE



1

AWARE MODULE



Galileo EWSS Alerts Decoding & Processing

Fast and secure transmission of emergency messages.

Enhanced cyber security for alert authenticity

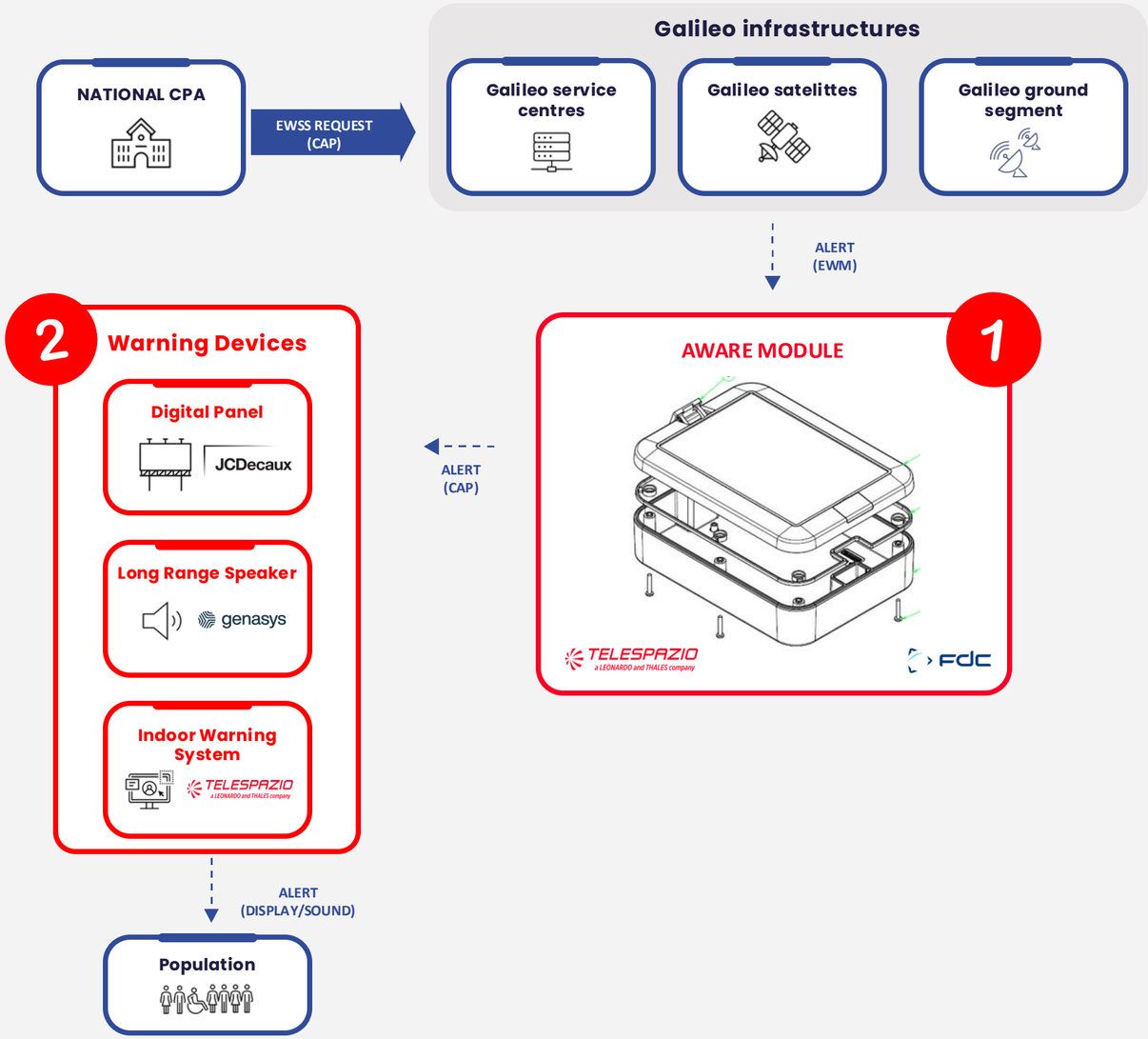
- **OSNMA Authentication (Galileo signature):** Ensures satellite messages are verified and authentic.
- **Spoofing Detection:** Unique algorithm to detect fake alerts.
- **Jamming Detection:** Identifies and mitigates signal interference.
- **Level of Confidence (LOC):** Only verified, high-confidence alerts are broadcasted.

Seamless integration

Fully compatible with existing systems using Common Alerting Protocol **(CAP format).**

AWARE guarantees that every alert is authentified, secured and impossible to falsify

AWARE ARCHITECTURE



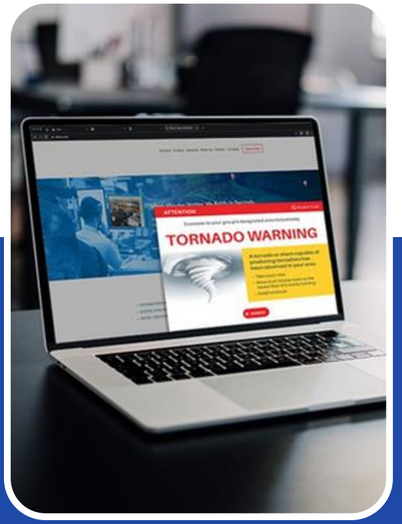
2 WARNING DEVICES

Digital Panel

Real-time priority alerts: ad interruption

Long Range Accoustic Device

High-power speech alerts

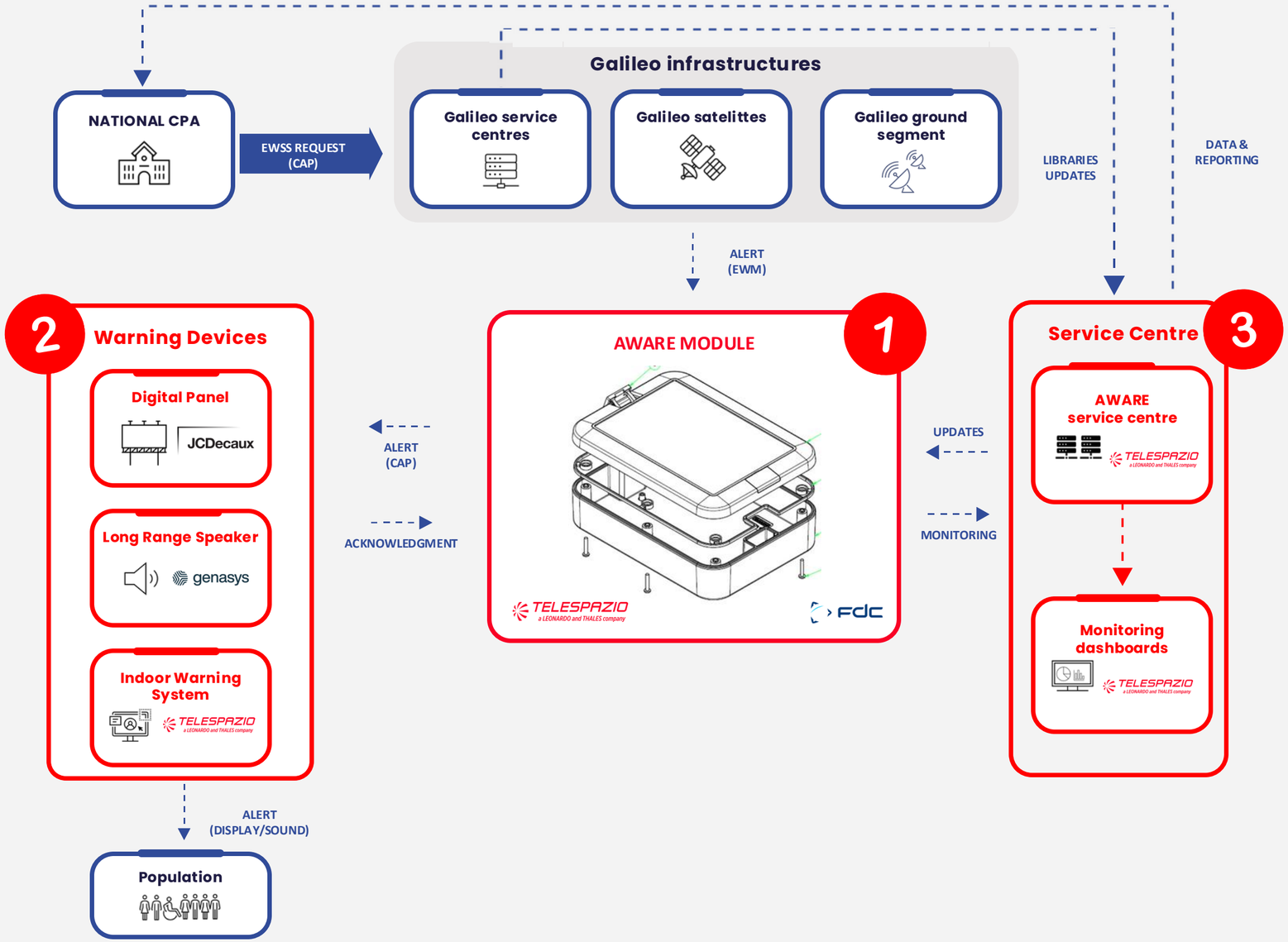


Indoor Warning System

Operates via a rooftop receiver antenna

- Multi-language message broadcasting
- Upcoming : power resilient solutions
- More devices to come : informations panel, sirens, ...

AWARE ARCHITECTURE



3

SERVICE CENTRE: ENHANCING EXISTING CPA SYSTEMS

Some examples of the service centre capabilities

BEFORE CRISIS

DURING CRISIS

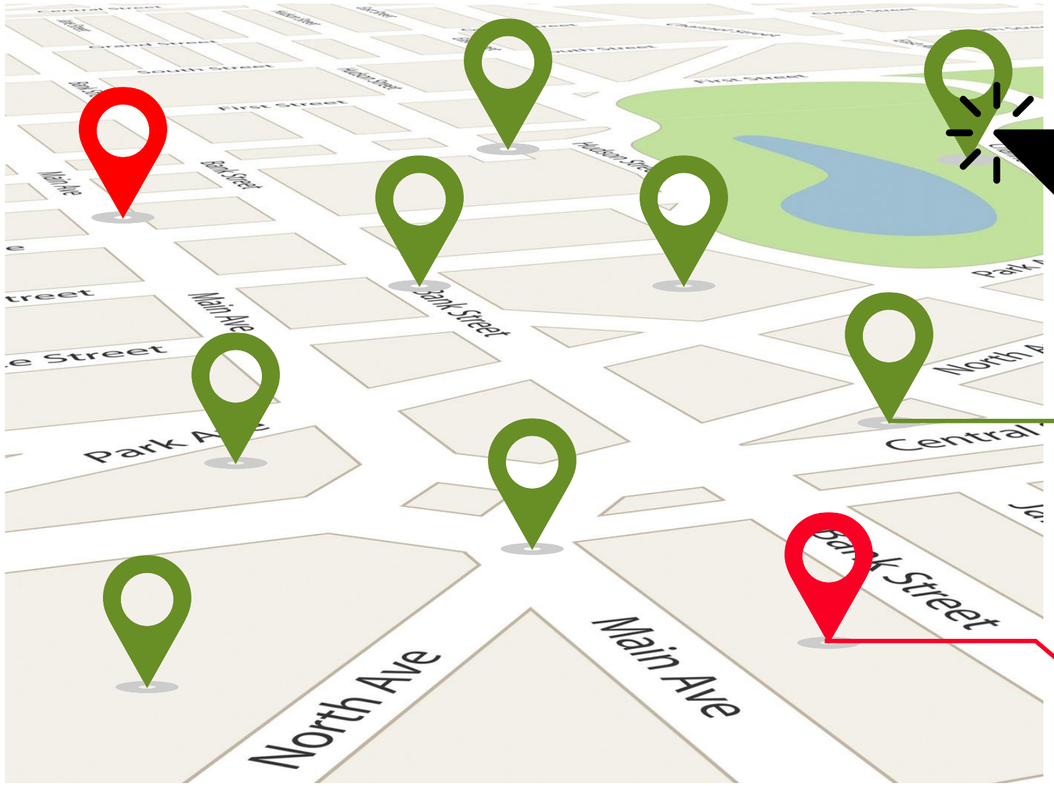
AFTER CRISIS

3 SERVICE CENTRE: KEY FEATURES

BEFORE CRISIS

DURING CRISIS

AFTER CRISIS



Module status

SN : AW0039-123786
Statut : OK
WD Type : LRAD
Library : v3.12
Attack detected: No

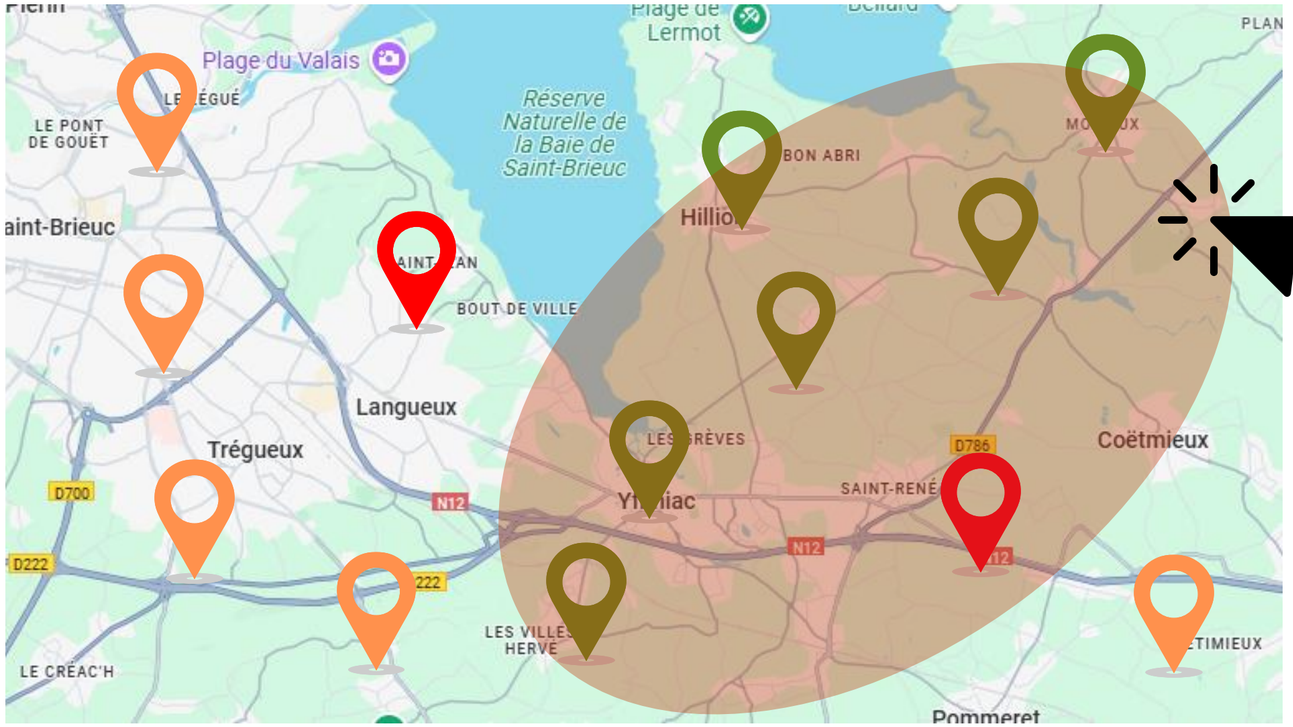
- ✓ Proactive monitoring
- ✓ Territory coverage analysis
- ✓ Remote Maintenance
- ✓ Infrastructure status
- ✓ High level of granularity
- ✓ Cyber secured infrastructure

3 SERVICE CENTRE: KEY FEATURES

BEFORE CRISIS

DURING CRISIS

AFTER CRISIS



Alert status

ID: 14ea10001
Hazard type: Tsunami
Severity: Moderate
Onset: 11/03/2025 - 15h00
Status: Active
Emitter: FR - SDIS22

Alert notified

Alert received not notified

Alert not received

- ✓ Real-time alert notification acknowledgment
- ✓ Monitoring of all active alerts status in Europe
- ✓ Feedback from affected areas even when communication networks are disrupted
- ✓ Cyber Secured alert notification

3 SERVICE CENTRE: KEY FEATURES

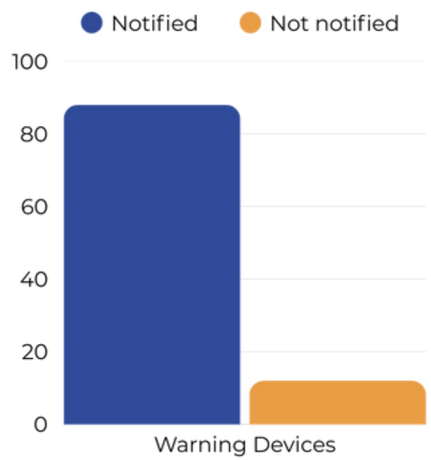
BEFORE CRISIS

DURING CRISIS

AFTER CRISIS

ALERT RECEPTION

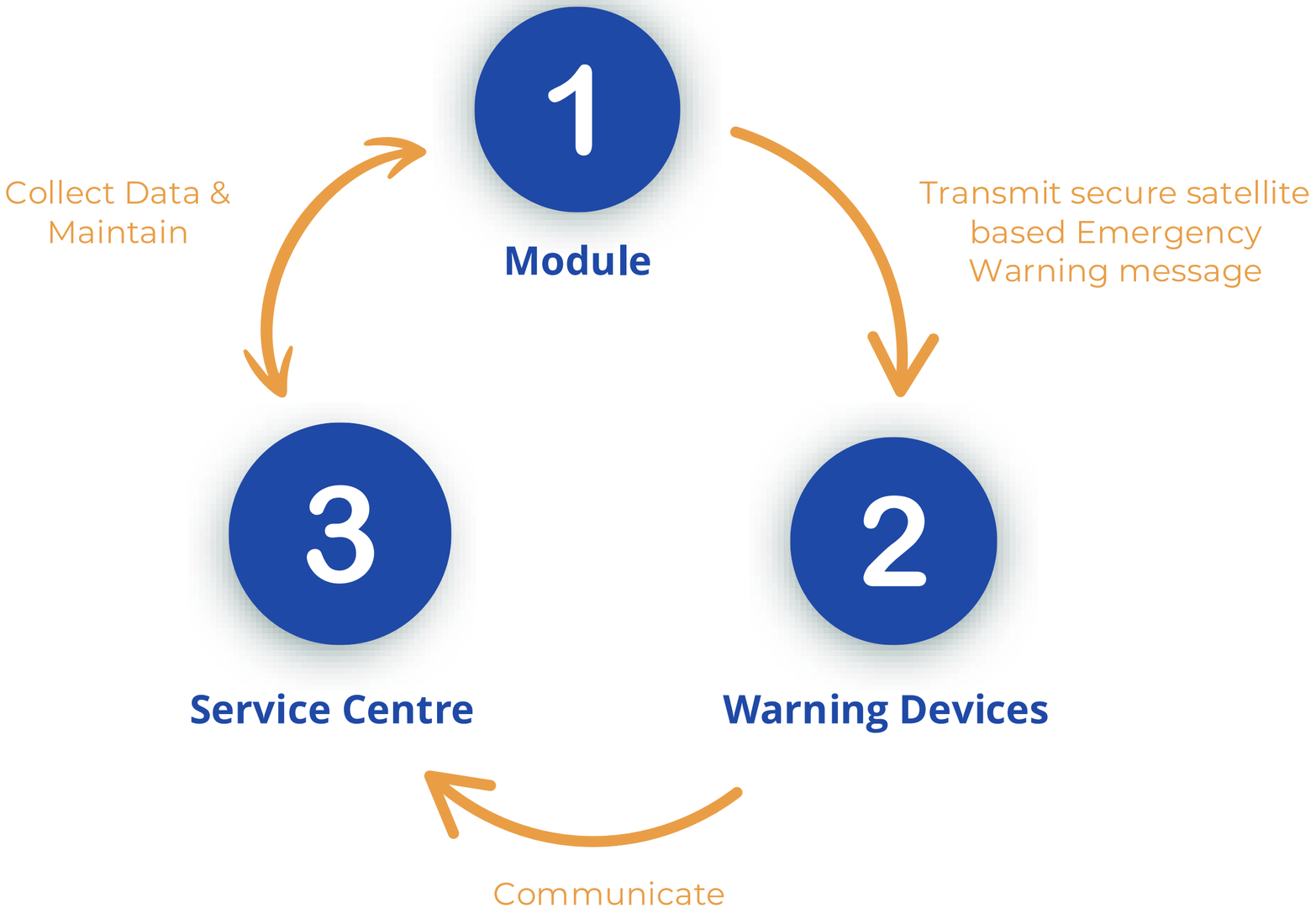
ALERT NOTIFICATION



KPIs	Value
Alert notification within 30 seconds	35%
Alert notification within 2 minutes	89%
Alert notification within 10 minutes	95%

- ✓ Secured data archiving for post crisis analysys
- ✓ Access to precise event logs to reconstruct timeline
- ✓ Relevant dashboards to help the implementation of lessons learnt

AWARE ARCHITECTURE



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WHY CHOOSE AWARE?

- **Life Saving:** resilient link to alert the population
- **Efficient :** quick alerts reaching everyone, everywhere
- **Secure :** a robust solution against cyber threats
- **Simple :** easy integration with your existing systems

READY TO ENHANCE YOUR ALERT SYSTEM? LET'S TALK!

https://euproject-aware.eu/

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Join the session with Charly tomorrow on Galileo EWSS
Don't miss it!

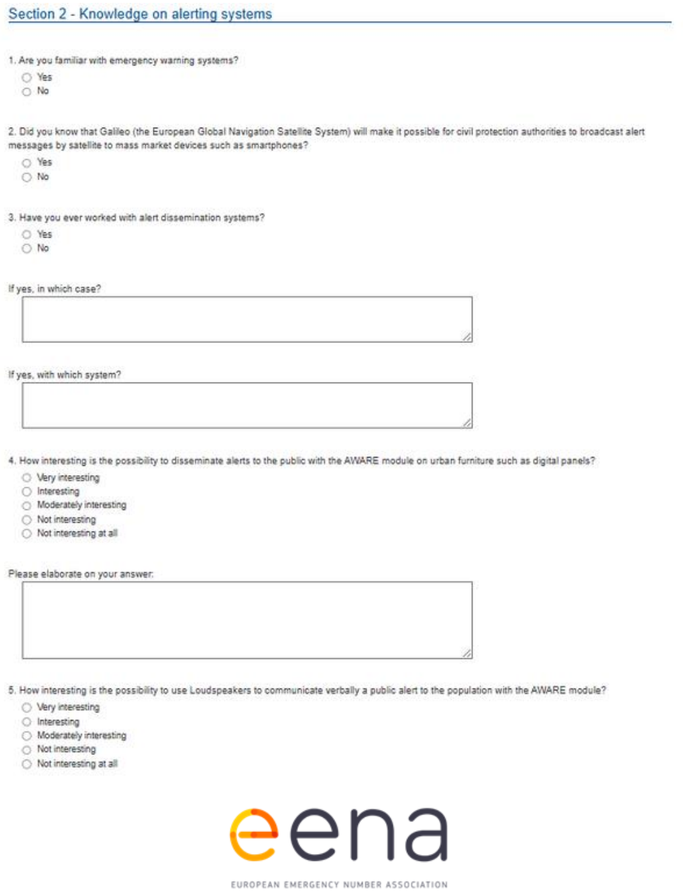
SCAN ME

AWARE
REVOLUTIONISING
PUBLIC WARNING

Please help us to improve EWSS compatible devices and give your feed back through this EUSurvey !

SCAN ME

https://ec.europa.eu/eusurvey/runner/aware-stakeholder-consultation



Section 2 - Knowledge on alerting systems

1. Are you familiar with emergency warning systems?
- Yes
- No

2. Did you know that Galileo (the European Global Navigation Satellite System) will make it possible for civil protection authorities to broadcast alert messages by satellite to mass market devices such as smartphones?
- Yes
- No

3. Have you ever worked with alert dissemination systems?
- Yes
- No

If yes, in which case?

If yes, with which system?

4. How interesting is the possibility to disseminate alerts to the public with the AWARE module on urban furniture such as digital panels?
- Very interesting
- Interesting
- Moderately interesting
- Not interesting
- Not interesting at all

Please elaborate on your answer:

5. How interesting is the possibility to use Loudspeakers to communicate verbally a public alert to the population with the AWARE module?
- Very interesting
- Interesting
- Moderately interesting
- Not interesting
- Not interesting at all

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