# GOVSATCOM and Public Services

Switch to Space - Space Security and Defense

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# Agenda

1. GNSS and the Galileo Public Regulated Service

2. Secure EU SatCom: GOVSATCOM

3. Synergies of the EU Space programme

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# Satellite Navigation market overview

- The satellite navigation (GNSS) market alone represents more than 50 000 jobs in the EU.

- Current estimates show that satellite navigation alone drives 6-7% of Europe's Gross Domestic Product (GDP)

- The global installed base of GNSS devices in use is forecast to hit 9.6 bln in 2029.

GNSS Market Report 2019, Issue 6

# Galileo and PRS applications

**Wide range of potential PRS User Communities and applications**



**Law Enforcement, Internal Security & Customs**
Police, Coast Guards, Special Units etc.

**Emergency Services**
Fire Brigades, Civil Protection, Ambulances etc.

**Critical Energy, Critical Telecom**
Network operators, Energy Suppliers

**Critical Transport**
Mass, high-value & hazardous goods transporters

**Strategic, Economic & Commercial activities**
Banks, Commercial ports, Space Agencies etc.

**Defence**
Army, Navy, Air Force, Joint Forces
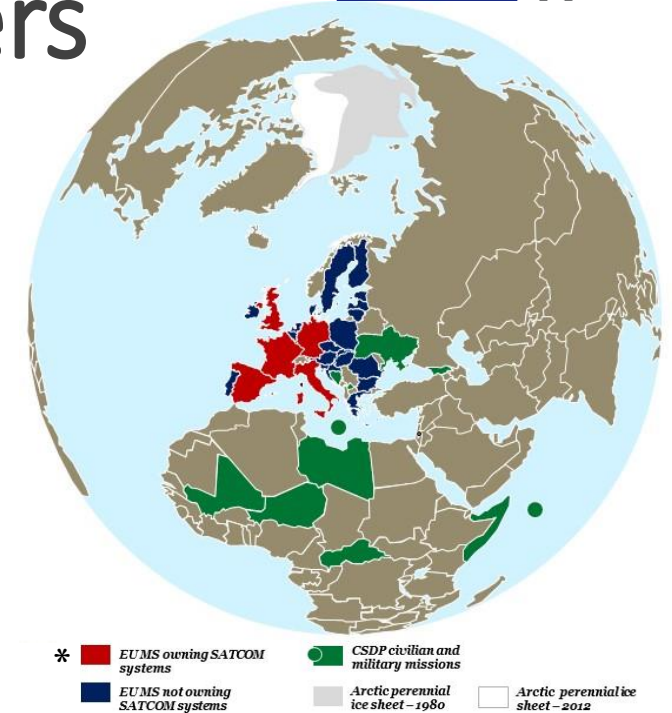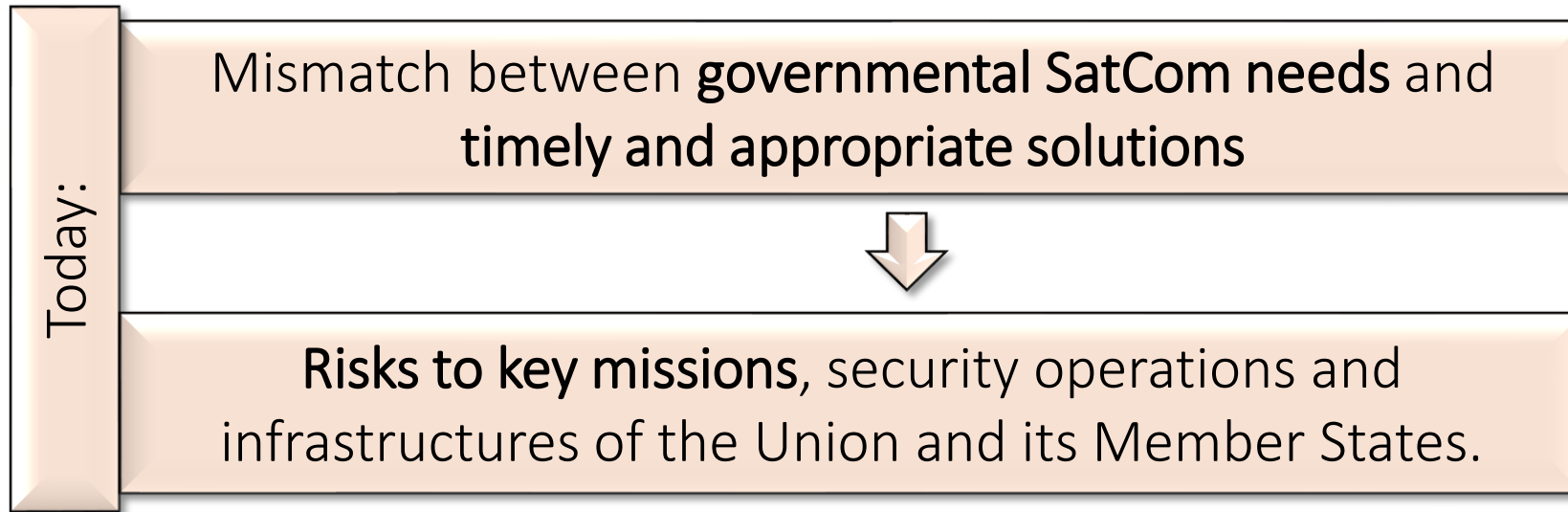
# What is Galileo Public Regulated Service?

- The Galileo Public Regulated Service (PRS) is an encrypted navigation service designed to be more resistant to involuntary interference and spoofing.

- It is similar to other Galileo services, but with some important differences:

  – Ensures management of Users

  – ensures unlimited and uninterrupted access to the PRS worldwide

  – In cases of interference, the PRS increases the likelihood of continuous availability of the Signal-in-Space

  – Provides an authenticated position, velocity and timing service.

# How does PRS work?



PRS Decision 1104:

- Each PRS participant wishing to use PRS must **establish a Competent PRS Authority**
- Each **Member State decide** which **PRS users is authorised**
- Each CPA ensures permanent supervision of users and **compliance to the Common Minimum Standards**.

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# GOVSATCOM will provide secure Satellite Communications to authorised users

Today:

Mismatch between **governmental SatCom needs** and **timely and appropriate solutions**

**Risks to key missions**, security operations and infrastructures of the Union and its Member States.

Need of **autonomous, secure and cost-effective satellite communications services** for EU and national public authorities managing security critical missions and infrastructures.

\* *EU MS owning SATCOM systems*
*EU MS not owning SATCOM systems*
*CSDP civilian and military missions*
*Arctic perennial ice sheet – 1980*
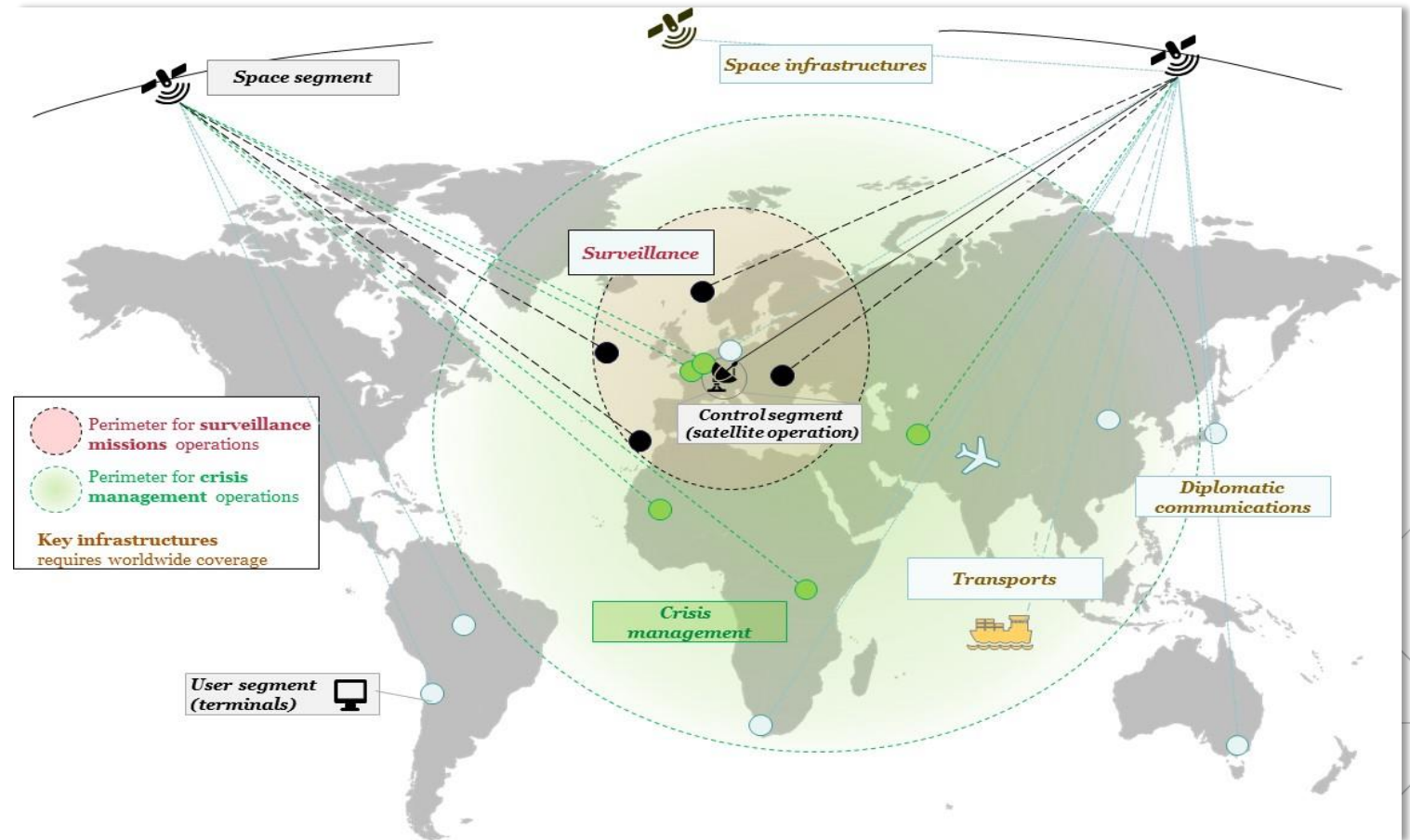*Arctic perennial ice sheet – 2012*

*Source : IMPACT ASSESSMENT GOVSATCOM*
*(\* subject to UK withdrawal)*

# GOVSATCOM use-case families

- **Surveillance**
- **Crisis management**
- **Key infrastructure**



Source: GOVSATCOM High Level Civil Military User Needs for Governmental Satellite Communications *[EEAS(2017) 359]*

# GSA leading MS and Agencies to shape the user perspective of the future EU GOVSATCOM

Foster cooperation and knowledge exchange between MS and EU institution

**Common understanding of governmental user needs and requirements for secure SATCOM systems**

**ENTRUSTED**
European Networking for satellite Telecommunication Roadmap for the governmental Users requiring Secure, inTeroperable, InnovativE and standardiseD services

**Kicked off on 15 September 2020**

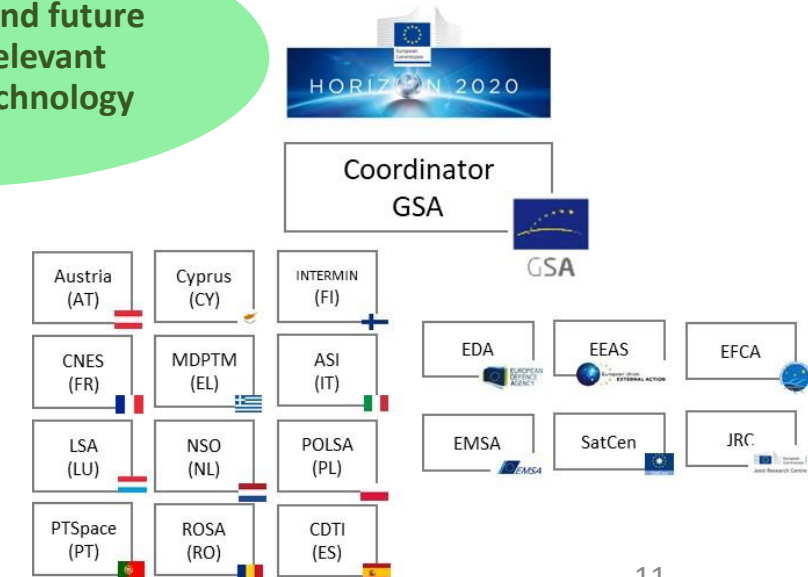**Long-term roadmap and coordination plan for research and innovation activities (RIROC)**

Governmental User Network

**State-of-the-art and future trends of the relevant SATCOM User technology**

HORIZON 2020

Coordinator GSA

GSA

Additional nominated representatives are welcome!

In case of interest:
Entrusted@gsa.europa.eu

**User technology gaps to be filled**

| Austria (AT) | Cyprus (CY) | INTERMIN (FI) |
| CNES (FR) | MDPTM (EL) | ASI (IT) |
| LSA (LU) | NSO (NL) | POLSA (PL) |
| PTSpace (PT) | ROSA (RO) | CDTI (ES) |

| EDA | EEAS | EFCA |
| EMSA | SatCen | JRC |

11

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# Space programme components mutually improving each other

**GALILEO**
- Where we are

**GOVSATCOM**
- Everyone connected everywhere

**COPERNICUS**
- What's around

- User level
  - Benefitting the users with integrated use cases

- System level
  - E.g. (i) Galileo synchronising GOVSATCOM Hub functionalities and network, (ii) GOVSATCOM interconnecting Galileo remote sites, ..

# Environment protection and emergency services will benefit from EU space programme

Oil spill pollution in European waters: detection and response

- Galileo: navigation of the surveillance vessel(s)

- GOVSATCOM: Secure and reliable communication between coast guard patrol and control centre

- Copernicus: Identification of possible oil spill thanks to imagery products.

Emergency response in case of Natural disaster (Earthquake, Flood, ..)

- Galileo: Positioning, navigation and remote tracking of civil protection forces

- GOVSATCOM: communication between civil protection forces and control centres, in absence of (or in complement to) terrestrial networks

- Copernicus: provides mapping information of the mission area

14

# Linking space to user needs

How to get in touch:

**www.GSA.europa.eu**

EGNOS-portal.eu

GSC-europa.eu

UseGalileo.eu

The European GNSS Agency is hiring!

**Apply today** and help shape the future of satellite navigation!