



GALILEO overview

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GALILEO - what is it?

- A Global Navigation Satellite System financed, owned and controlled by the European Union
- The only civilian system under civilian control
- Provides accurate positioning and timing information
- Available to anyone with GALILEO enabled device – www.useGalileo.eu
- Currently used in combination with other satellite navigation systems
- Up to now 26 satellites – latest launch of 4 satellites in July 2018 – Kourou, French Guiana

GALILEO IMPLEMENTATION: A STEP-WISE APPROACH

By 2020 Galileo will be:

- fully deployed
- adopted by the widest user communities
- a civilian infrastructure delivering robust positioning and timing services with high degree of performances

Galileo System Testbed v1
Validation of critical algorithms

2003

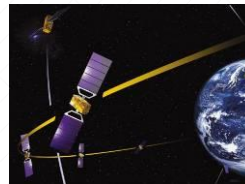


GIOVE A/B
2 test satellites
2005/2008



In-Orbit Validation
4 operational satellites and ground segment

2013



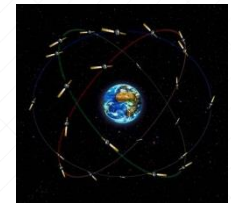
Initial Services Provision
Initial services for OS, SAR, PRS,
and demonstrator for CS

2016





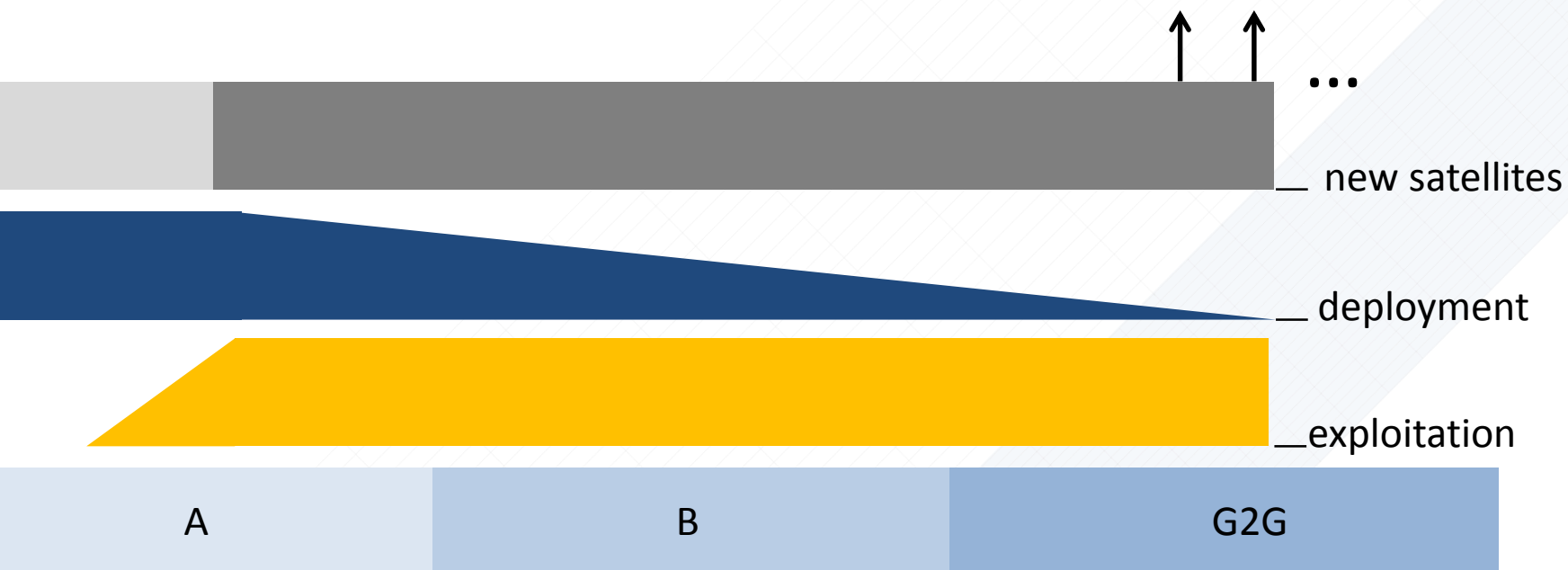
Full Operational Capability
Full services, 30 satellites

2020







GALILEO NEXT STEPS

2017	2018	2019	2020	2021
 19-22		 23-26		



THE SERVICES

Open Service (OS)	Freely accessible service for positioning, navigation and timing	
Public Regulated Service (PRS)	Encrypted service designed for greater robustness and higher availability	
Search and Rescue Service (SAR)	Assists locating people in distress and confirms that help is on the way	
Commercial Service (CS)	Delivers authentication and high accuracy services for commercial applications	

What next?	GALILEO fully independent More features and and accurate services for emerging technologies as automated cars and Internet of Things	Full Operational Capacity
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GALILEO INITIAL SERVICES PERFORMANCE LEVELS

OS Navigation

Good ranging signals
($< 2\text{ m}$ 95%,
 $< 87\%$ availability)

Excellent timing performance
($< 30\text{ ns}$ 95%,
 $< 87\%$ availability)

SAR Forward Link

Contribution to COSPAS/SARSAT with
* **shorter detection times (10min)**
* **better localization accuracy**

PRS Access

Good ranging signals

APPLICATIONS



eCall

- Legally binding since April 2018 for all new car and light duty vehicles undergoing type-approval in the EU
- In case of serious accident automatic dial of European emergency number
- Provides European emergency services with exact location established with GNSS – to be compatible with Galileo

Where can companies find information on developing services using GALILEO?

- **European GNSS Service Center** in Madrid
- www.gsc-europa.eu
 - One-stop shop for Galileo customers
 - Interface between Galileo system and communities of users of the open and commercial services
- **European GNSS Agency**
 - budget to develop new chipsets and receivers and innovative applications with GALILEO data
- www.gsa.europa.eu

EGNSS in the **SPACE STRATEGY** FOR EUROPE

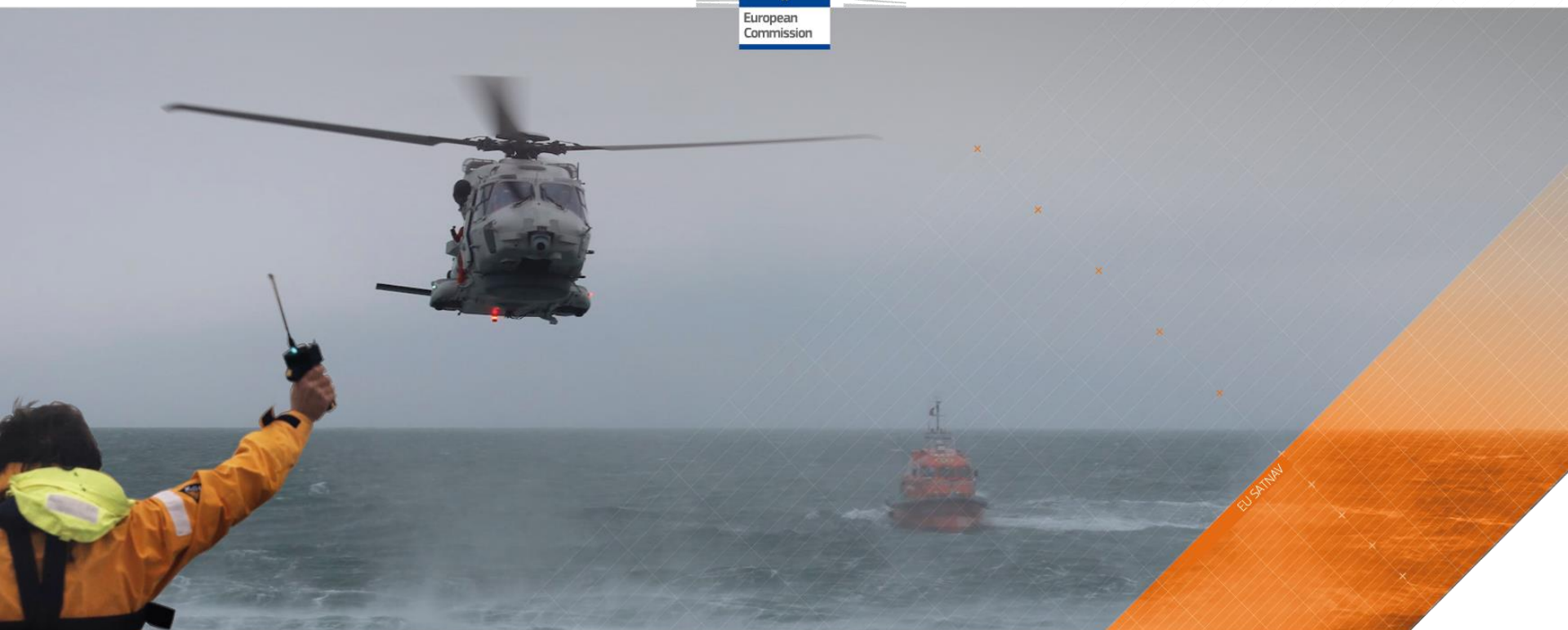
- **Space Strategy** for Europe adopted in October 2016
- Four strategic goals:

**MAXIMISING THE BENEFITS OF SPACE FOR SOCIETY AND
THE EU ECONOMY**

**FOSTERING A GLOBALLY COMPETITIVE AND INNOVATIVE
EUROPEAN SPACE SECTOR**

**REINFORCING EUROPE'S AUTONOMY IN ACCESSING AND
USING SPACE IN A SECURE AND SAFE ENVIRONMENT**

**STRENGTHENING EUROPE'S ROLE AS A GLOBAL ACTOR AND
PROMOTING INTERNATIONAL COOPERATION**



THANK YOU

<http://ec.europa.eu/growth/sectors/space/galileo/>