



The European Union Space Programme - Overview

European Commission
DG Defence Industry and Space
DEFIS B - Development and Innovation
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Uses of Outer Space

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Foster a strong and innovative space industry

Objectives of the Space Strategy for Europe

1. Maximise the benefits of space for society and the EU economy
2. Ensure a globally competitive and innovative European space sector
3. Reinforce Europe's autonomy in accessing space in a safe and secure environment
4. Strengthen Europe's role as a global actor and promoting international cooperation

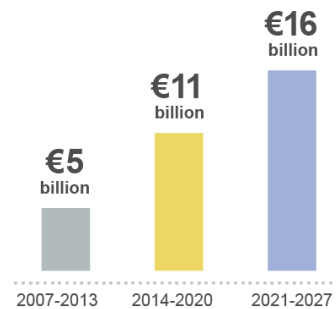
Foster a strong and innovative space industry

Boosting the economy

30+ EU-owned satellites in orbit for EO and GNSS



EU Investment in space



proposed budget for 2021-2027

European space industry supports 250.000+ jobs

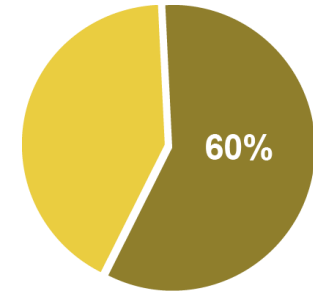


with a value added estimated at € 46-54 billion

Over 2 billion Galileo-enabled devices



Copernicus data is used by 60% of the European EO companies



enabling over 10% of the income in the sector

Foster a strong and innovative space industry

An investment in a future-ready Europe

The EU Space Programme provides established space technology, data and services indispensable in the lives of Europeans today. **In the future, it will address an increasing range of EU ambitions and priorities:**



Competitive edge:
Completion of current satellite constellation, development and launch of next-generation satellites



Research & innovation:
the ambitious research and innovation programme to succeed Horizon 2020



Fighting Climate Change:
Monitoring biodiversity, environmental compliance and CO2 emissions (Paris Agreement).



EU as a global actor:
Support disaster relief, humanitarian assistance and security operations.

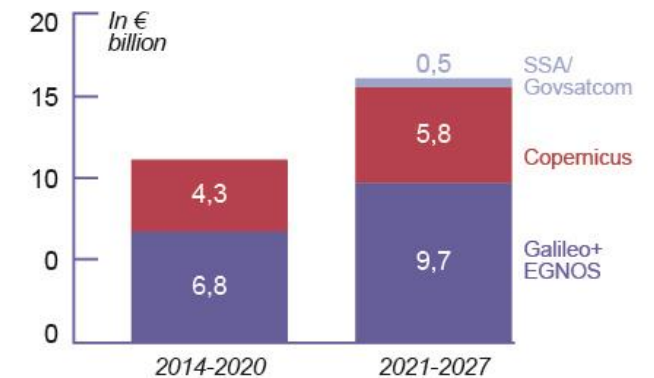
What we do

Implement the EU Space Programme, covering Galileo, EGNOS, Copernicus, SSA and EU Govsatcom

Overview

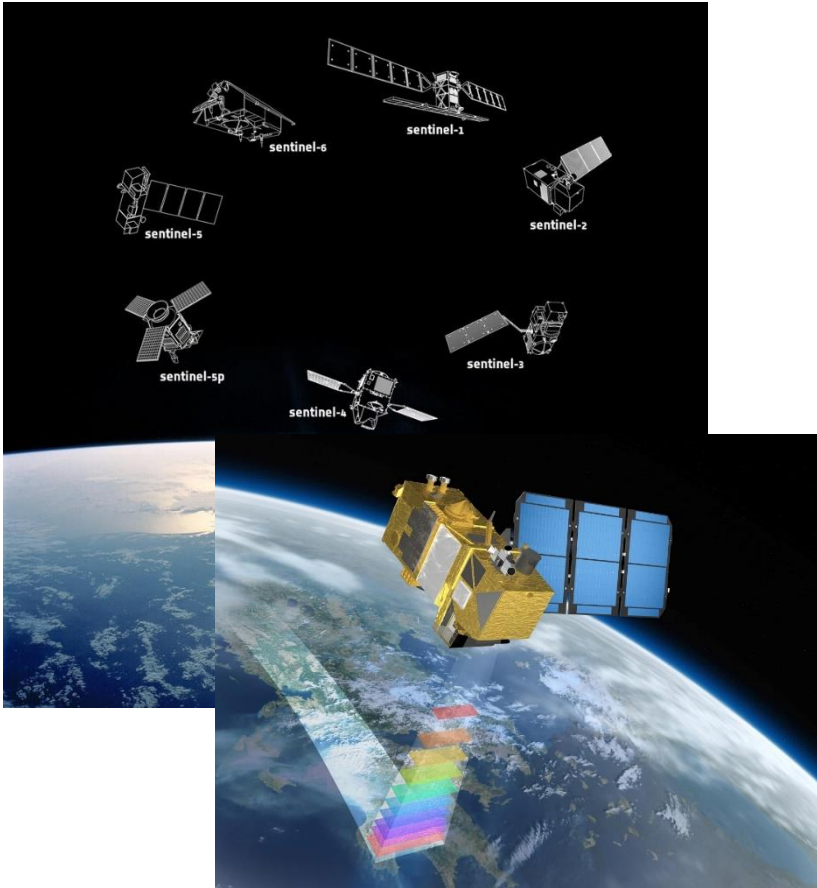
THE EUROPEAN SPACE PROGRAMME

<p>Copernicus Earth Observation (EO) and monitoring based on satellite and non-space data. Nr.1 world provider of space data and information.</p>	<p>Galileo Global satellite navigation and positioning system (GNSS). 10% of the EU GDP is enabled by satellite navigation.</p>	<p>EGNOS Makes navigation signals more accurate and reliable. Operational in 300+ airports in 23 countries.</p>	<p>SSA Space situational awareness, monitors and protects space assets. Providing surveillance and tracking services to 129 European satellites.</p>	<p>EU GOVSATCOM Secures satellite communications for EU security actors.</p>
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Copernicus

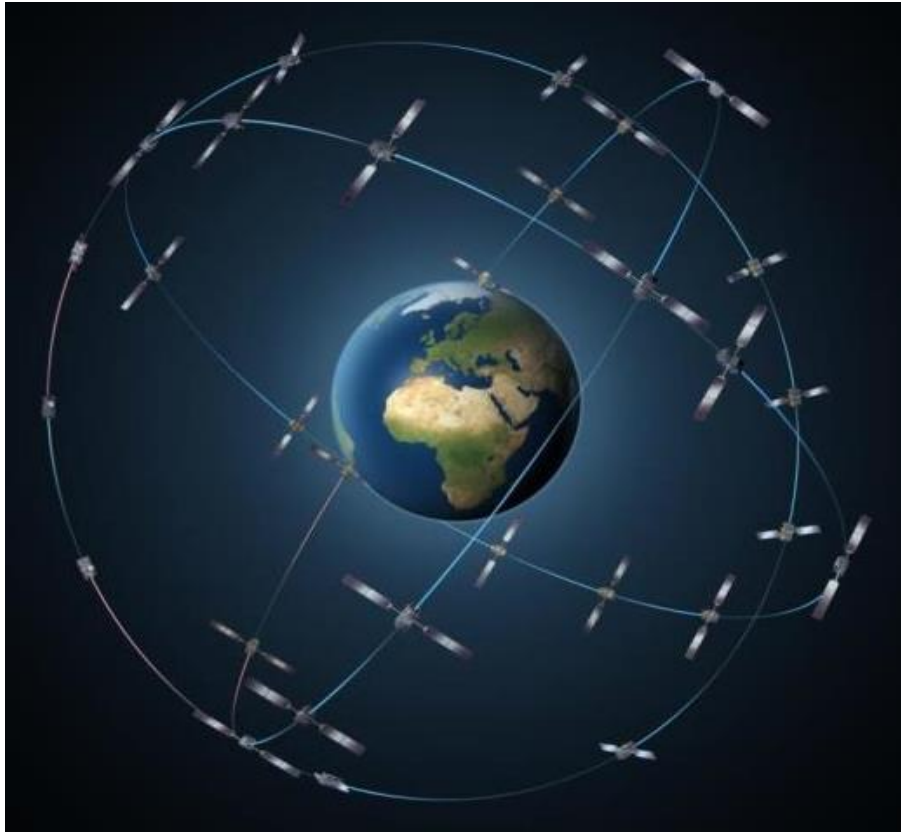
Copernicus' Satellites: the Sentinels



- Land Monitoring Service
- Marine Environment Monitoring Service
- Atmosphere Monitoring Service
- Climate Change Service
- Security Service
- Emergency Management Service

**free, full and open
data policy**

Galileo: EU's positioning, navigation and timing capability

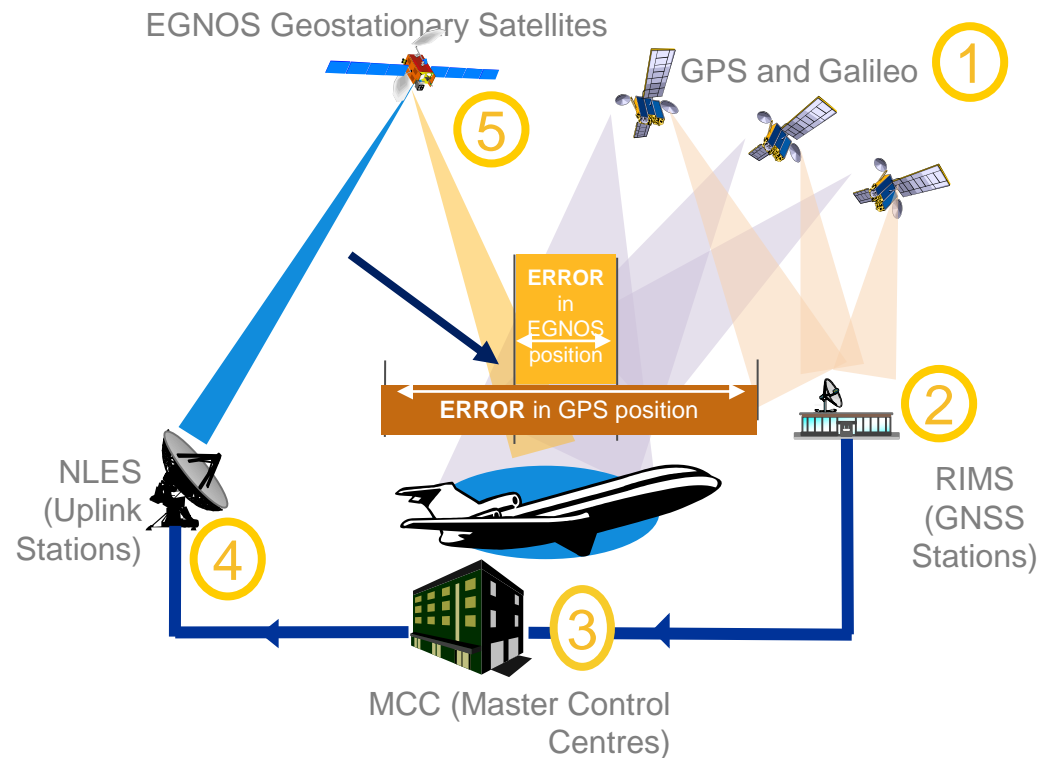


- **Open Service**
- High-accuracy service
- Signal authentication service
- **Public regulated service (PRS)**
- Emergency service
- **Timing service**
- **Search and rescue support service (SAR)**
- Integrity – monitoring services
- Space weather information

Available
In development

EGNOS enhances GPS and Galileo in Europe

EGNOS improves position accuracy and provides integrity



Fields of application

- Landing approaches of aircraft
- Precision agriculture
- Toll systems (e.g. Slovakia)
- Aviation and maritime (incl. ports)
- Tracking the transport of hazardous materials
- Surveying

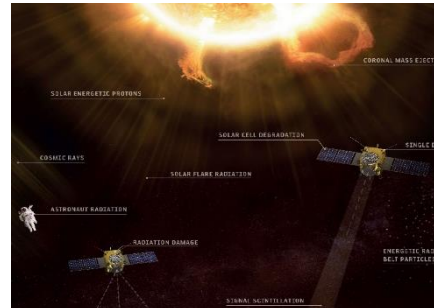
SSA/SST: An autonomous capability to monitors and protects space assets

Space Surveillance and Tracking (SST) Services



- Risk assessment of collision, collision avoidance
- Detection and characterisation of in-orbit fragmentations, break-ups or collisions
- Risk assessment of the uncontrolled re-entry of space objects and space debris
- Space debris mitigation and remediation

Space Weather Activities



- Space Weather services for civil protection and protection of various sectors (e.g. transport)

Near Earth Objects Activities



- Mapping and pooling Member States capacities
- Development of a routine rapid response service
- Creation an European catalogue

Govsatcom: EU's secure access to space communication for public service



- Will provide government-authorized users a reliable and secure access to space communication with emphasis on emergency and security related activities
- Ensuring long-term **secure, reliable and cost-effective** SATCOM services to EU and Member State authorities
- ... through **pooling and sharing** of governmental and commercial SATCOM capacities, assembling users and by seeking civil-military synergies
- ... enhancing the EU's **strategic autonomy** and its non-dependence on third parties

Thank you !