

European  
Global Navigation  
Satellite Systems  
Agency



GALILEO EGNOS  
NAVIGATION SOLUTIONS  
POWERED BY EUROPE

# Galileo Programme Update

Market opportunities for E-GNSS

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21 September 2017, Lisbon

# Agenda



- European GNSS Agency (GSA) Overview
- Galileo Services
- Galileo Architecture and Network
- Galileo Service Commitments
- Galileo Service Roadmap

# GSA and Galileo



# GSA: Galileo Operations, Security and Market Uptake

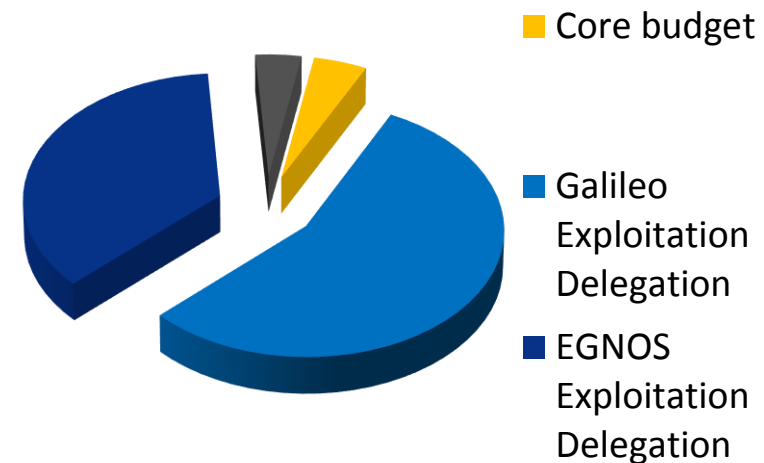


OUR MISSION: to support EU objectives and achieve the highest return on European GNSS investment, in terms of benefits to users and economic growth and competitiveness

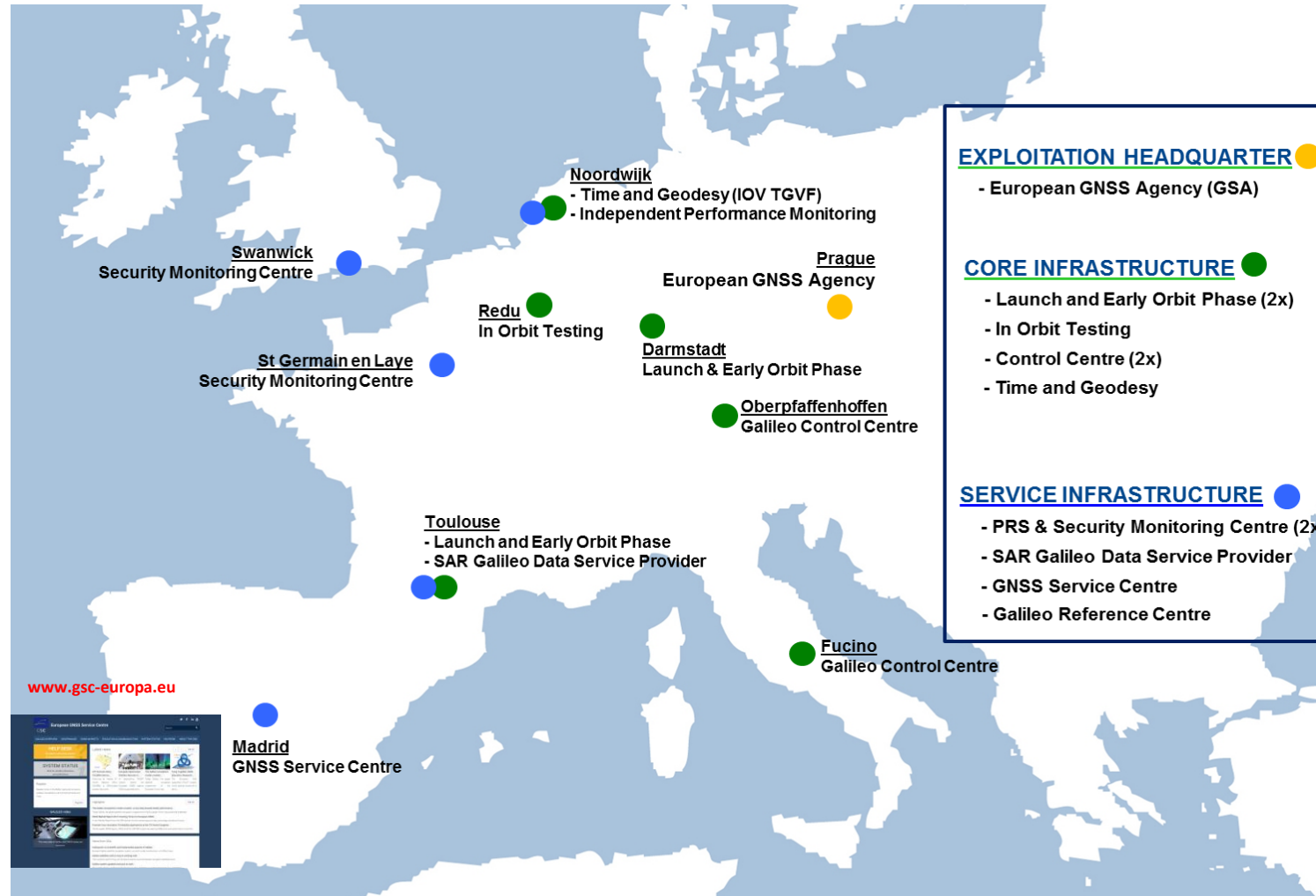
- Staff: c.a. 150
- Nationalities: 22
- Headquarters: Prague
- Other locations:
  - France
  - Spain
  - The Netherlands
  - United Kingdom



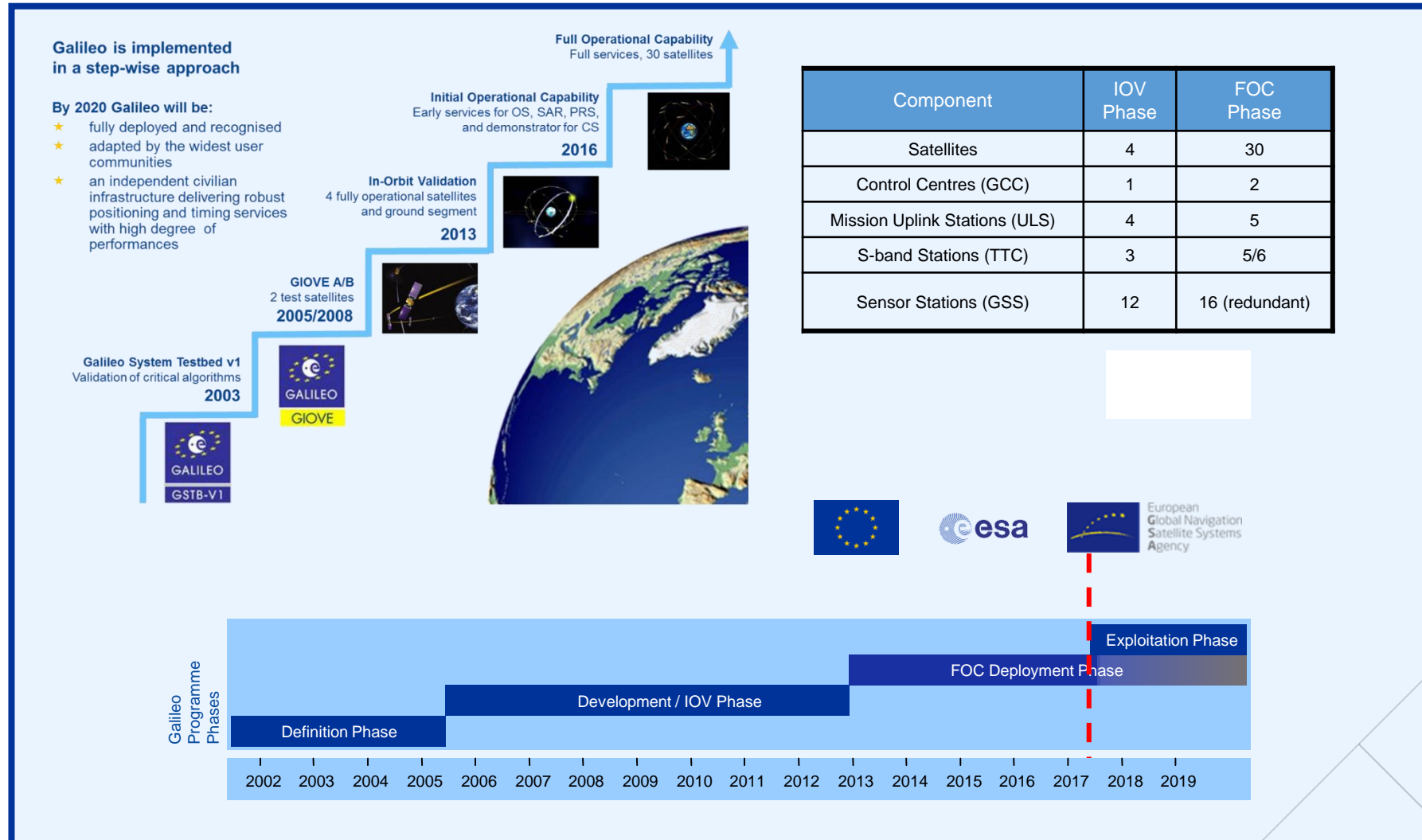
Budget: €4.3B to 2020



# GSA geared towards Service Delivery



# Galileo Programme Roadmap



# Galileo Services



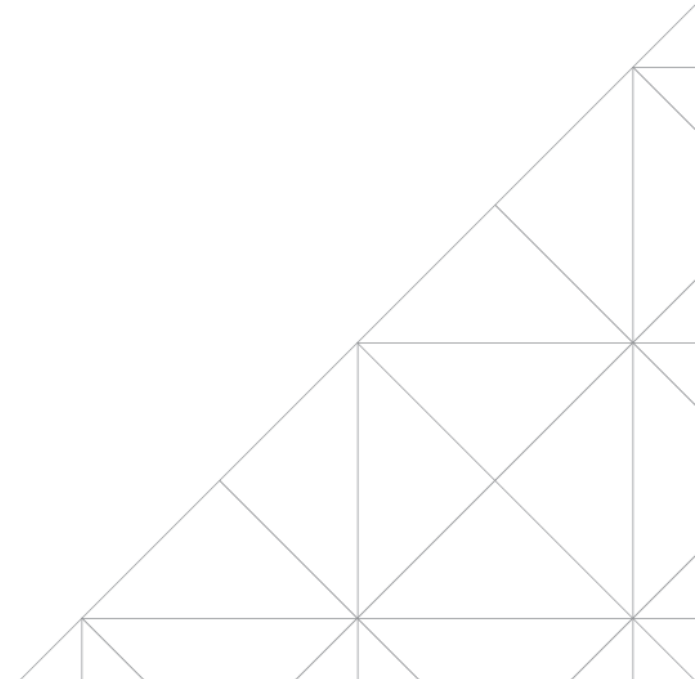
# Galileo: European GNSS offering four services



- Worldwide navigation system “made in EU”
- Fully compatible with GPS
- Open service free of charge, delivering dual frequencies
- Signal authentication will provide trustability



<b>Open Service (OS)</b>	Freely accessible service for positioning and timing	A man in a suit talking on a mobile phone.
<b>Public Regulated Service (PRS)</b>	Encrypted service designed for greater robustness and higher availability	A helicopter in flight over water.
<b>Search and Rescue Service (SAR)</b>	Assists locating people in distress and confirms that help is on the way	A large ship at sea.
<b>Commercial Service (CS)</b>	Delivers authentication and high accuracy services for commercial applications	An offshore oil rig at sea.

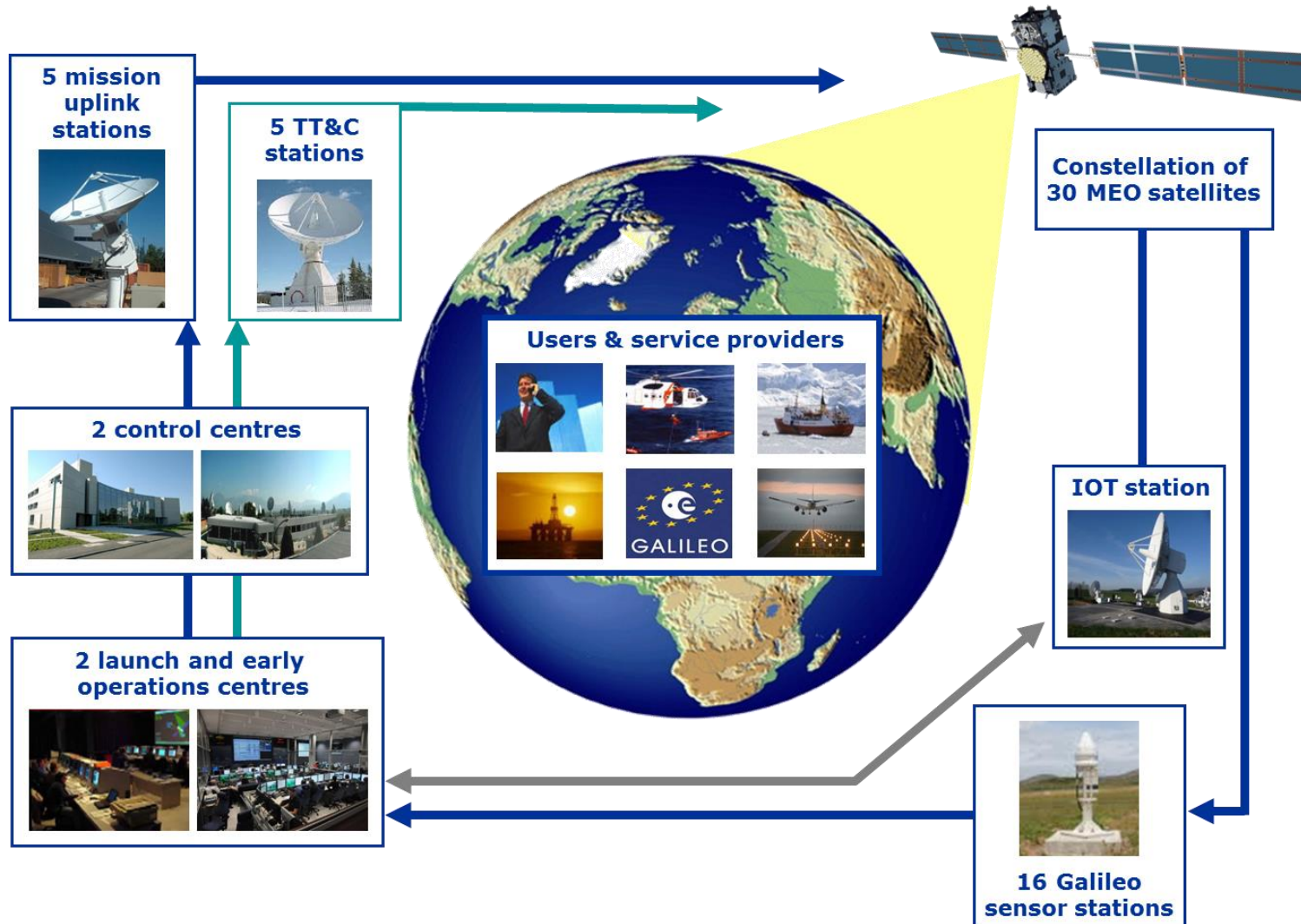




# Galileo Architecture



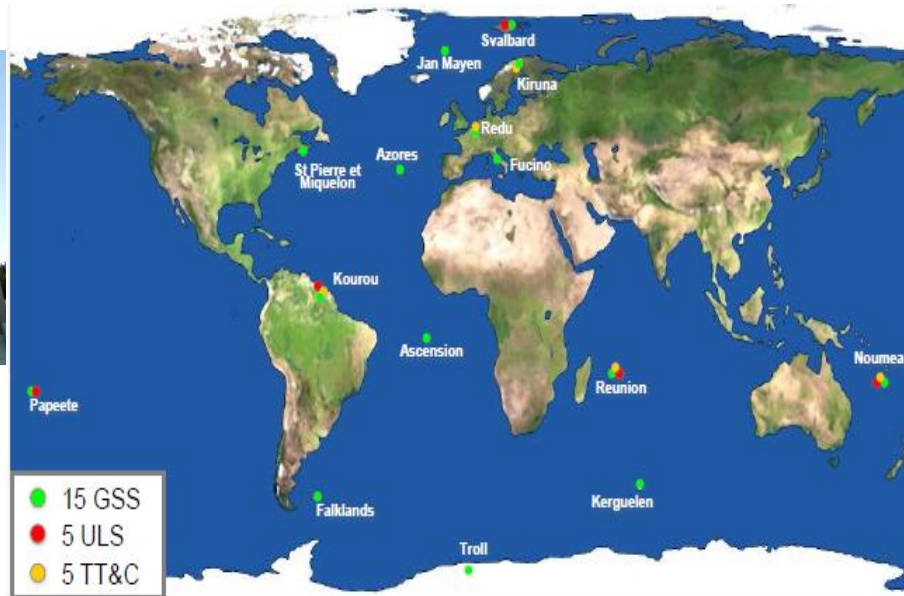
# Galileo Architecture



# Galileo Global Network



**GCC Oberpfaffenhofen, D**



**GCC Fucino, I**



**GSS Azores, P**



**GSS Ascension, UK**



**ULS & GSS Papeete, F**



**TTC & GSS Kiruna, S**



# Galileo Service Facilities



**GNSS Service Centre, Madrid, ES**



**Galileo Reference Centre, Noordwijk, NL**

# Galileo Service Commitments



# Galileo Initial Services declaration



- Last 15<sup>th</sup> December 2016, EC official declares the start of the Galileo Initial Service provision to public authorities, businesses and citizens.
- Three services offered:
  - **Support to emergency operations** through the **SAR/Galileo** contribution to the COSPAS-SARSAT worldwide SAR service.
  - More accurate navigation and timing for final users through the **Galileo Open Service**.
  - **Secure services for public authorities**: through the **Public Regulated Service**

# Galileo Initial Services documents



Open and SAR/Galileo Service Definition Document officially made available to the public in the European GNSS Service Centre webpage:

<https://www.gsc-europa.eu/electronic-library/programme-reference-documents>



NAVIGATION SOLUTIONS POWERED BY EUROPE  
**OPEN SERVICE**  
SERVICE DEFINITION DOCUMENT



NAVIGATION SOLUTIONS POWERED BY EUROPE  
**SAR/GALILEO**  
SERVICE DEFINITION DOCUMENT



NAVIGATION SOLUTIONS POWERED BY EUROPE  
**INITIAL SERVICES**  
SERVICE DEFINITION DOCUMENT

# First GNSS IS OS quarterly performance report now available



- The European GNSS Agency (GSA) has published its first European GNSS (Galileo) Initial Services Open Service (IS OS) quarterly performance report
- [https://www.gsc-europa.eu/system/files/galileo\\_documents/Galileo-IS-OS-Quarterly-Performance\\_Report-Q1-2017.pdf](https://www.gsc-europa.eu/system/files/galileo_documents/Galileo-IS-OS-Quarterly-Performance_Report-Q1-2017.pdf)
- For the most up-to-date information, check the European GNSS Service Centre (GSC) website (<https://www.gsc-europa.eu/>)
- REGISTER to receive service notifications on your email.





# Galileo Service Roadmap



# Service Provision Milestones



Programme Phases



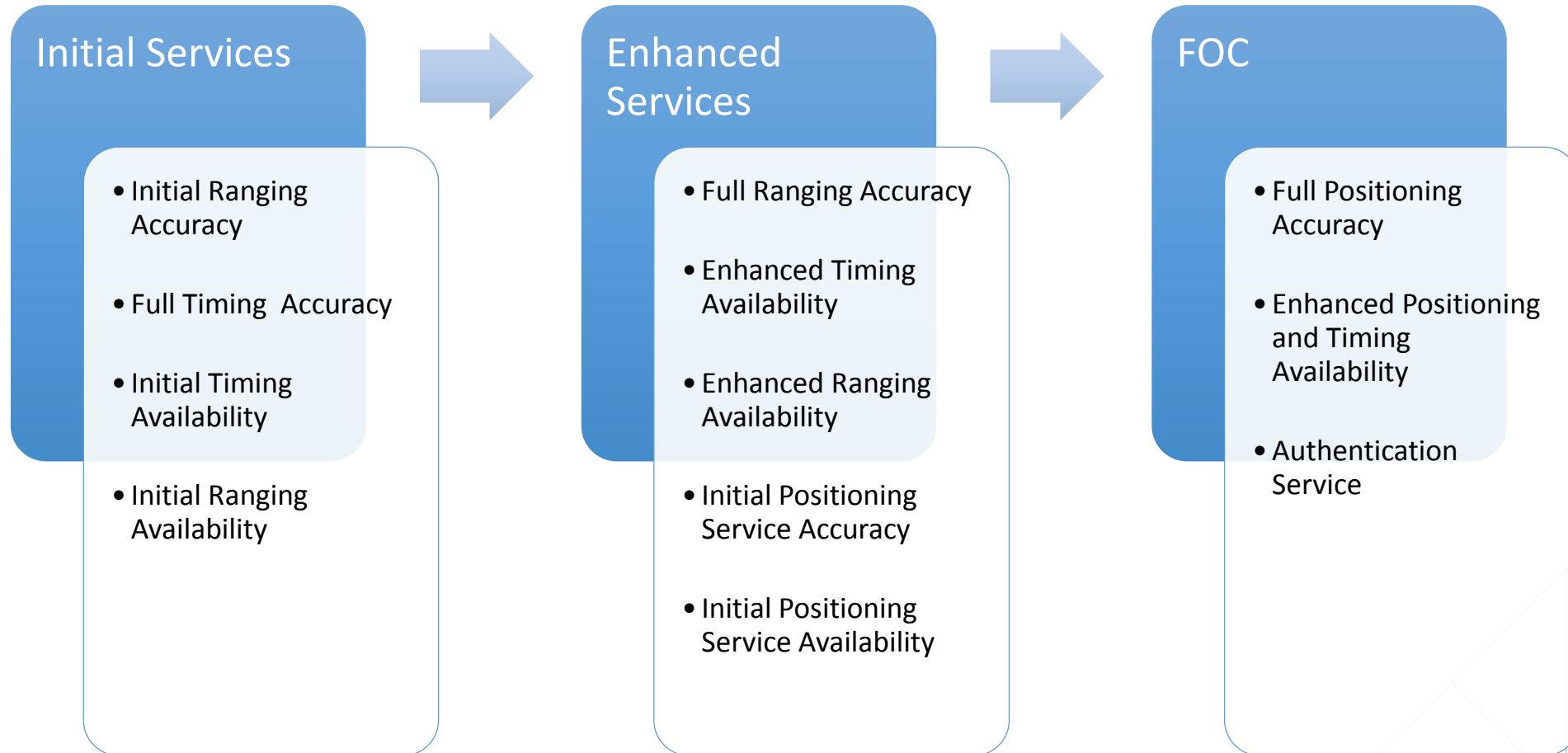
Service Phases



Service Milestones



# Galileo Open Service Roadmap



# Linking space to user needs



How to get in touch:



[www.GSA.europa.eu](http://www.GSA.europa.eu)



[EGNOS-portal.eu](http://EGNOS-portal.eu)



GALILEO

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The European GNSS Agency is hiring!

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