

# FACT SHEET



## Galileo Full Operational Capability Procurement

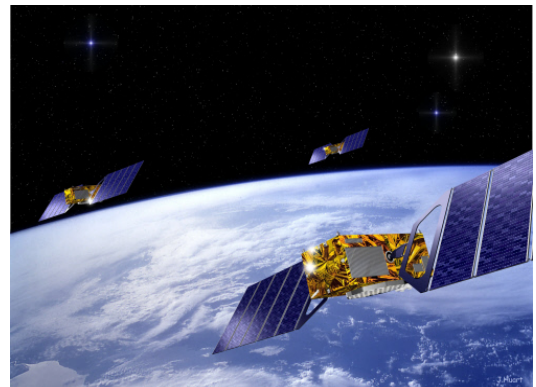
Once all the satellites have been deployed, operation will commence with the complete constellation of 27 operational satellites and three reserves, all stationed on three circular Medium Earth Orbits (MEOs) at an altitude of 23 222 km and with an inclination of 56° to the equator. To support this there will be an extensive network of ground stations and local and regional service centres.

The deployment of the Galileo system until its Full Operational Capability (FOC) is done under a public procurement scheme, entirely financed by the European Union.

ESA, in its role as delegated procurement agent, has launched in July 2008, in the name and on behalf of the EC, a specific procurement procedure.

For such an important and complex infrastructure, EC and ESA have opted for the procurement procedure of competitive dialogue allowing the refinement of the tender requirements through dialogues with the selected candidates.

In view of the strong synergies between IOV and FOC at system and segment level, an efficient transition from the Galileo system in its IOV configuration to the FOC is also a key element of this procurement process.



### System Support

This Work package covers all the necessary Industrial activities necessary to support ESA in its role of Galileo System prime, namely: System Engineering, System integration and Validation, security engineering, product assurance, and safety engineering services together with the associated development tools and verification facilities. This contract was signed with TAS-I, (IT) on 27 January 2010.

### Space Segment

This Work package covers the design, development, assembly, integration and test of the baseline constellation of 27 operational satellites placed in the baseline orbit configuration (Walker 27/3/1) plus 3 active spares (one per orbit plane) (The first four satellites are developed and will be deployed as part of the In Orbit Validation Phase).

A first contract was signed with EADS regarding the Long Lead Items in June 2009. In December 2009, framework contracts were signed with OHB and Astrium. A contract for the provision of 14 satellites between 2012 and 2014 was signed with OHB (DE) on 27 January 2010.

On 2 February 2012, an additional order of 8 satellites was placed with OHB.

### Ground Control Segment

This Work package covers the elements necessary to support the management and control of the satellite constellation. The principal functions provided by the Ground Control Segment include:

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Telemetry acquisition and Telecomm and uplink, control and monitoring of the satellites and payload, Satellite ranging, constellation monitoring and control; planning and automation functions that allow safe and correct operations to take place and the support of payload related operations such as uplink of navigation data. The contract was signed with EADS Astrium during the Le Bourget Airshow on 22 June 2011.

### **Ground Mission Segment**

This Work package covers all the functional chains necessary to acquire and process the navigation data, to determine the navigation, timing and integrity data part of the navigation messages and to transmit it to the satellite. In addition to the basic navigation service, the Ground Mission segment provides a Search & Rescue service, which is implemented by a dedicated payload. The contract was signed with Thales Alenia Space France during the Le Bourget Airshow on 22 June 2011.

### **Launch Services**

This Work package covers the launch services associated to the deployment of 26 Galileo satellites in Medium Earth Orbit in accordance with a launch scenario consisting of a mixture of dual and multiple launches using Soyuz and Ariane from the Kourou European launch site. The contract with Arianespace for the provision of 5 Soyuz launchers was signed on 27 Jan 2010.

The adaptation of Ariane 5 allowing the simultaneous launch of 4 satellites, co-funded by EC and ESA, has been contracted to EADS on 2 February 2012. On the same day, ESA procured the booking an Ariane 5 launch in 2014, plus two launch options in the 2015/2016 timeframe.

### **Operations**

This work package concerns the provision of Operations services of the Galileo system in the timeframe of the FOC deployment phase.

It comprises the operations of all deployed spacecrafts in the Galileo constellation, including launch and early operations, in orbit tests, routine operations, contingency recovery operations, orbit correction, Operations of the Ground control and ground mission segments facility both in the Galileo Control Centres and in the remote sites, and the management of telecommunication network. The contract with Spaceopal, company created by DLR (DE) and Telespazio (IT) was signed on 25 October 2010.

### **Information about the European Global Navigation Satellite Systems:**

[www.satellite-navigation.eu](http://www.satellite-navigation.eu)

[www.esa.int/esaNA](http://www.esa.int/esaNA)

[ec.europa.eu/enterprise/policies/satnav](http://ec.europa.eu/enterprise/policies/satnav)

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