# FACT SHEET

Galileo Status

Galileo is Europe's programme for a global navigation satellite system, providing a highly accurate, guaranteed global positioning service, interoperable with the US GPS and Russian Glonass systems. Galileo's modern and efficient design will increase Europe's technological independence, and help to set international standards for Global Navigation Satellite Systems (GNSS). Galileo is developed in collaboration between the European Union and the European Space Agency (ESA).

The complete Galileo constellation will consist of 24 satellites plus spares. With the satellites taking about 14 hours to orbit Earth at altitudes of 23 222 km, there will always be at least four satellites visible anywhere in the world. The satellites will be positioned on three orbital planes at an angle of 56 degrees to the equator, which will provide coverage right up to the polar regions.

Galileo also depends on an extensive ground infrastructure, which will have to make sure that time and positioning data are extremely accurate – a single second's clock error means a positioning error up to a range of 300 000 km. This ground infrastructure includes sensor stations worldwide, two control centres, Mission Uplink stations, and Telemetry, Tracking and Command (TT&C) stations (as shown below).

Last updated: August 2018
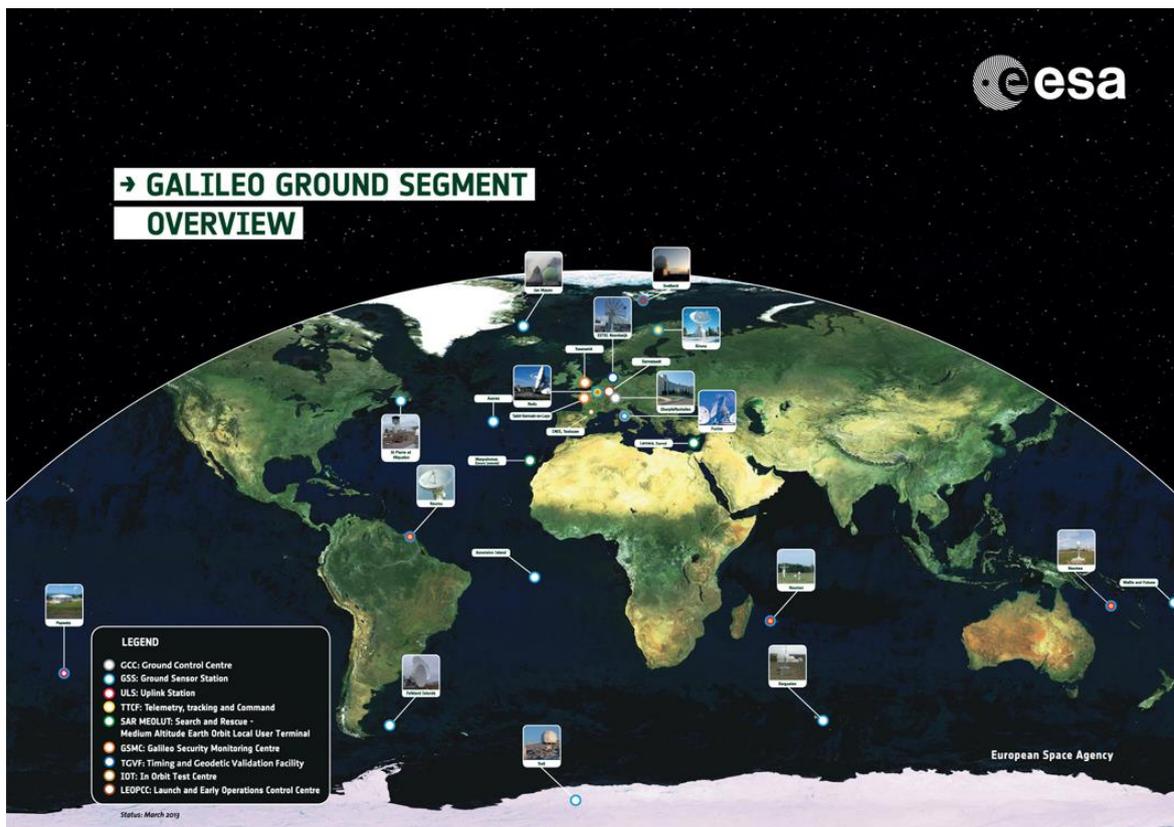
Two main phases of the programme

1. During the In-Orbit Validation (IOV) phase, the system was assessed through tests, first with the operation of two experimental satellites then with a reduced constellation of four operational satellites and their ground infrastructure. These first four Galileo satellites were launched in pairs, on 21 October 2011, and on 12 October 2012. This phase was successfully concluded end of 2013 showing good results.

2. The Full Operational Capability (FOC) phase consisting of the deployment of the remaining ground and space infrastructure is currently ongoing:

Satellites	Mission Name	Launch Dates	Satellite names	Status
Sat. 26	Galileo Sat 23, 24,25,26	25.07.2018	GSAT-222	In-orbit Testing
Sat. 25			GSAT-221	
Sat. 24			GSAT-220	
Sat. 23			GSAT-219	
Sat. 22	Galileo Sat 19, 20,21,22	12.12.2017	GSAT-218	Operational status on www.gsc-europa.eu/system-status/Constellation-Information
Sat. 21			GSAT-217	
Sat. 20			GSAT-216	
Sat. 19			GSAT-215	
Sat. 18	Galileo Sat 15, 16, 17, 18	17.11.2016	GSAT-214	
Sat. 17			GSAT-213	
Sat. 16			GSAT-212	
Sat. 15			GSAT-207	
Sat. 14	Galileo Sat 13 & 14	24.05.2016	GSAT-211	
Sat. 13			GSAT-210	
Sat. 12	Galileo Sat 11 & 12	17.12.2016	GSAT-209	
Sat. 11			GSAT-208	
Sat. 10	Galileo Sat 9 & 10	11.09.2015	GSAT-206	
Sat. 9			GSAT-205	
Sat. 8	Galileo Sat 7 & 8	27.03.2015	GSAT-204	
Sat. 7			GSAT-203	
Sat. 6	Galileo Sat 5 & 6	22.08.2014	GSAT-202	
Sat. 5			GSAT-201	
Sat. 4	IOV-2	12.10.2012	GSAT-104	
Sat. 3			GSAT-103	
Sat. 2	IOV-1	21.10.2011	GSAT-102	
Sat. 1			GSAT-101	
GIOVE-B		27.04.2008		Retired
GIOVE-A		28.12.2005		Retired

Who is involved?

The Galileo programme is funded and owned by the EU. The European Commission has the overall responsibility for the programme, managing and overseeing the implementation of all programme activities.

Galileo's deployment, the design and development of the new generation of systems and the technical development of infrastructure are entrusted to ESA. The definition, development and in-orbit validation phases were carried out by ESA, and co-funded by ESA and the European Commission.

The Commission and ESA have signed a delegation agreement by which ESA acts as design and procurement agent on behalf of the Commission.

The European Global Navigation Satellite System Agency (GSA) is ensuring the uptake and security of Galileo. Galileo operations and provision of services are entrusted to the GSA from 2017.