COSMO-SkyMed is one of the most innovative Earth observation programmes and is funded by ASI, the Italian Ministry of Defence and the Italian Ministry of Education, Universities and Scientific Research. The COSMO-SkyMed system involves a constellation of four satellites equipped with radar sensors that can operate under any weather or visibility conditions and with a very high revisit frequency.

COSMO-SkyMed was conceived as a programme capable of meeting civil needs (environmental monitoring, civil protection, Oil & Gas) as well as military ones. The general features enable interoperability with other systems and the use in the context of international agreements. In particular, COSMO-SkyMed is able to meet the stringent operating requirements of Copernicus, the European programme for Earth observation.
THE CONSTELLATION

The COSMO-SkyMed constellation, built by Thales Alenia Space (a Thales/Leonardo-Finmeccanica company), comprises four identical satellites that “watch” the Earth day and night, under any atmospheric conditions, thanks to high-resolution X-band radar. The system was implemented in stages: the first satellite was launched in June 2007, the second in December 2007, the third in October 2008 and the fourth in November 2010.

TELESPAZIO’S ROLE

Telespazio built the entire ground segment. The Fucino Space Centre houses the Control Centre for the constellation, and managed the phases of acquisition of satellites after launch and the subsequent putting into orbit. Today the Centre carries out command and control activities and the scheduling of requests for the acquisition of images.

The Matera Space Centre, managed by e-GEOS (Telespazio 80%, ASI 20%), is responsible for the acquisition, processing and distribution of satellite data for civil applications. Through e-GEOS, Telespazio is active in all areas relating to the Earth observation market: from acquiring and processing satellite data to developing and selling software and products. Specifically, e-GEOS is a leading international operator with an integrated range of application solutions and value-added services, based on radar and very high-resolution optical data. e-GEOS markets COSMO-SkyMed data worldwide.

The COSMO-SkyMed programme will move forward in the near future with the development of two second generation satellites with improved performance.