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PRESS RELEASE

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Telespazio transfers the Payload Data Processing System of the European Copernicus programme's Sentinel-3 satellites to public cloud

- **Transferring the mission's data processing to the cloud enables an optimisation of its computing resources by around 40%, increasing system's reliability ensuring in parallel the performance level.**

- **The data generated by the first two satellites of the Sentinel-3 mission provides monitoring of the oceans, the atmosphere and the Earth's surface**

Telespazio, a joint venture between Leonardo (67%) and Thales (33%), has successfully migrated the data processing infrastructure of the European Space Agency (ESA) Sentinel-3 mission to the commercial cloud. In the past, these activities took place in a physical infrastructure hosted at three different sites in Europe.

In recent days, ESA has given go-ahead for the Sentinel-3 mission's a switch-off of the physical scientific data processing infrastructure. The switch-off has been confirmed after an observation period lasting one month, on which the two infrastructures (physical and cloud) have been jointly operated. Telespazio has managed the entire design, development, qualification and roll-down to operation of the data processing system, adapting it to the new technologies and ensuring the best possible performance from a cloud platform. The migration process was approached by consecutive steps, starting from migration of the acquisition systems to migration of the various data processing centres.

The two Sentinel-3 mission satellites, launched in 2016 and 2018, belong to the European Copernicus programme to monitor the Earth's environment managed by the ESA and the European Commission. When fully operational the mission, for which Telespazio is responsible for the operations, maintenance and development of the ground segment for data processing, will comprise 4 satellites (for which the prime construction contractor is Thales Alenia Space, a joint venture between Thales 67% and Leonardo 33%) equipped with systems to monitor the oceans, the atmosphere and the Earth's surface. Among these the SLSTR (Sea and Land Surface Temperature Radiometer), developed by Leonardo, will provide valuable meteorological and climatological support. The Sentinel-3 ground segment is capable of providing products in real time, just 3 hours after data acquisition by the on-board instruments.

The transfer of the Sentinel-3 mission's entire ground segment to the public cloud enables an optimisation of its computing resources by around 40 per cent, increasing the system's reliability and resilience while ensuring that all users have the same amount of time to access information.

Telespazio's role within Copernicus

Leonardo, together with the Telespazio and Thales Alenia Space joint ventures, is one of the main industrial partners in the Copernicus programme with activities including the construction of satellites (Thales Alenia Space is the prime contractor for the Sentinel-1 and Sentinel-3 constellations), **important payloads and equipment, and the supply of services and applications.**

In particular, Telespazio has taken part in the construction, maintenance and evolution of the Payload Data Ground Segments (PDGS) for the Sentinel-1 and Sentinel-3 missions, of the Sentinel-1, Sentinel-2, Sentinel-3 and Sentinel-5P Mission Control Systems, and of the infrastructure for accessing the earth observation products of the Copernicus missions *(CSCDA/CDS, Copernicus Space Component Data Access/Coordinated Data Access System)*.

Telespazio has also created PRISM, an evolution of the CDS system that is entirely available in the commercial cloud and totally integrated with the ESA's Sentinel missions, with the Italian COSMO-SkyMed satellites, and with the other missions linked to the Copernicus programme. PRISM activities are managed by an international consortium led by Telespazio that also includes - among others - Serco, ONDA DIAS, OVH, Intecs, and Werum.

In the operational sector Telespazio provides its own personnel to support ESOC, the European Space Operations Centre of the ESA, during the pre- and post-launch phases of the Sentinel satellites, as well as data acquisition for the Sentinel-1 and Sentinel-2 satellites from the Matera Space Centre operated by e-GEOS, a company owned by Telespazio (80%) and the Italian Space Agency (20%).

In the field of services Telespazio is active – through its e-GEOS, GAF and Telespazio subsidiaries - in emergency management, in land and maritime security management, in land resources management, and in monitoring climate change through contracts with delegated European Agencies. Finally, Telespazio supplies the Copernicus programme with Earth observation data relating to the Copernicus Contributing Missions, COSMO-SKYMED and IRS.