

Leonardo: Earth observation and big data, a new partnership with Silicon Valley to provide the satellite services of the future

- **e-GEOS, a Telespazio/ASI joint venture, has signed an agreement with US company Orbital Insight to provide innovative services based on satellite data**
- **Artificial intelligence, machine learning and cloud computing will be used to transform big data harvested from Space into targeted and easy-to-use applications for emergency management, precision agriculture, environmental monitoring and safety**
- **Pasquali: “This partnership combines our experience in processing satellite data with innovative techniques from the commercial sector, allowing us to explore exciting new services and applications”**

Le Bourget (Paris), 19 June 2017 – Today at the Paris Air Show in Le Bourget, Leonardo announced the signing of an agreement between e-GEOS (a joint venture between Telespazio and the Italian Space Agency) and the US-based company Orbital Insight to provide revolutionary satellite services. The partnership will see the convergence of Space technologies and big data analytics to provide radically new products and services for numerous applications including emergency management, precision agriculture, environmental monitoring and safety.

With the support of the Italian Space Agency (ASI), the collaboration between the two companies will allow cloud computing solutions and innovative machine learning/artificial intelligence techniques developed by Orbital Insight to be used to analyse high-resolution satellite images. The pictures, which e-GEOS acquires from the COSMO-SkyMed Earth observation satellite system and processes, can also be supplemented with data from other information sources.

To give an example, satellite radar images could be used to help generate a comprehensive picture of an area’s economic activity and urban development. By combining different strands of information, such as the income and consumption levels of the people that live there and the intensity of agricultural activities, it is possible to produce ‘poverty maps’ to help decision makers define support or growth policies. The use of Space imagery means that this kind of information can even be provided in regions which, due to a lack of funds to carry out ad hoc surveys or due to current conflicts, have little usable official data available.

“Space already provides an unimaginable quantity of information for a multitude of uses; the real challenge is working out how best to use it”, said Luigi Pasquali, Director of Leonardo’s Space Sector and CEO of Telespazio (a 67-33% joint venture between Leonardo and Thales). “The most sophisticated big data analytics solutions today come from the commercial sector, which are making it possible to manage and process the huge amount of information generated every day by space sensors, by a wide variety of data-gathering platforms and by industry, government organisations and citizens. Our partnership with Orbital Insight will combine our extensive experience in the processing of satellite data with these innovative new techniques, allowing us to offer new services and applications”.

Having signed important contracts in Europe, the United States, China and Japan which include the monitoring of energy infrastructure, land and maritime safety, Leonardo provides geo-information applications and services around the world through Telespazio and e-GEOS. Using large volumes of data from the *earth observation dataset*, Leonardo can supplement high-resolution images of our planet with data coming from sensors on the ground and on aeroplanes, helicopters or drones, as well as from archives and social media.