



United Nations - Germany International Conference on International Cooperation Towards Low-Emission and Resilient Societies

Bonn - November 22-24, 2017



The COSMO-SkyMed constellation's contribution to address disaster risk reduction, climate change and sustainable development

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- .4 (x-band) SAR satellites
- .Multi-mode imaging capability
- .Day/night visibility even without light and through clouds
- .75 Narrow Field
- .375 Wide Field Images per day per satellite
- .1800 images per day (end-to-end system)



**RISK MONITORING AND MANAGEMENT
OF EMERGENCIES**

OCEAN AND ICE MONITORING

**MONITORING AND MANAGEMENT
OF COASTAL LINES AND INLAND WATERS**

**MONITORING AND MANAGEMENT OF
FORESTRY AND AGRICULTURAL RESOURCES**

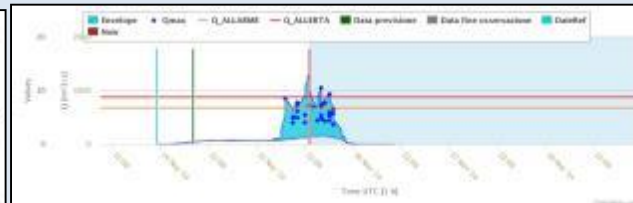
**TECHNICAL CARTOGRAPHY –
URBAN PLANNING**

SCIENTIFIC APPLICATIONS

SECURITY APPLICATIONS



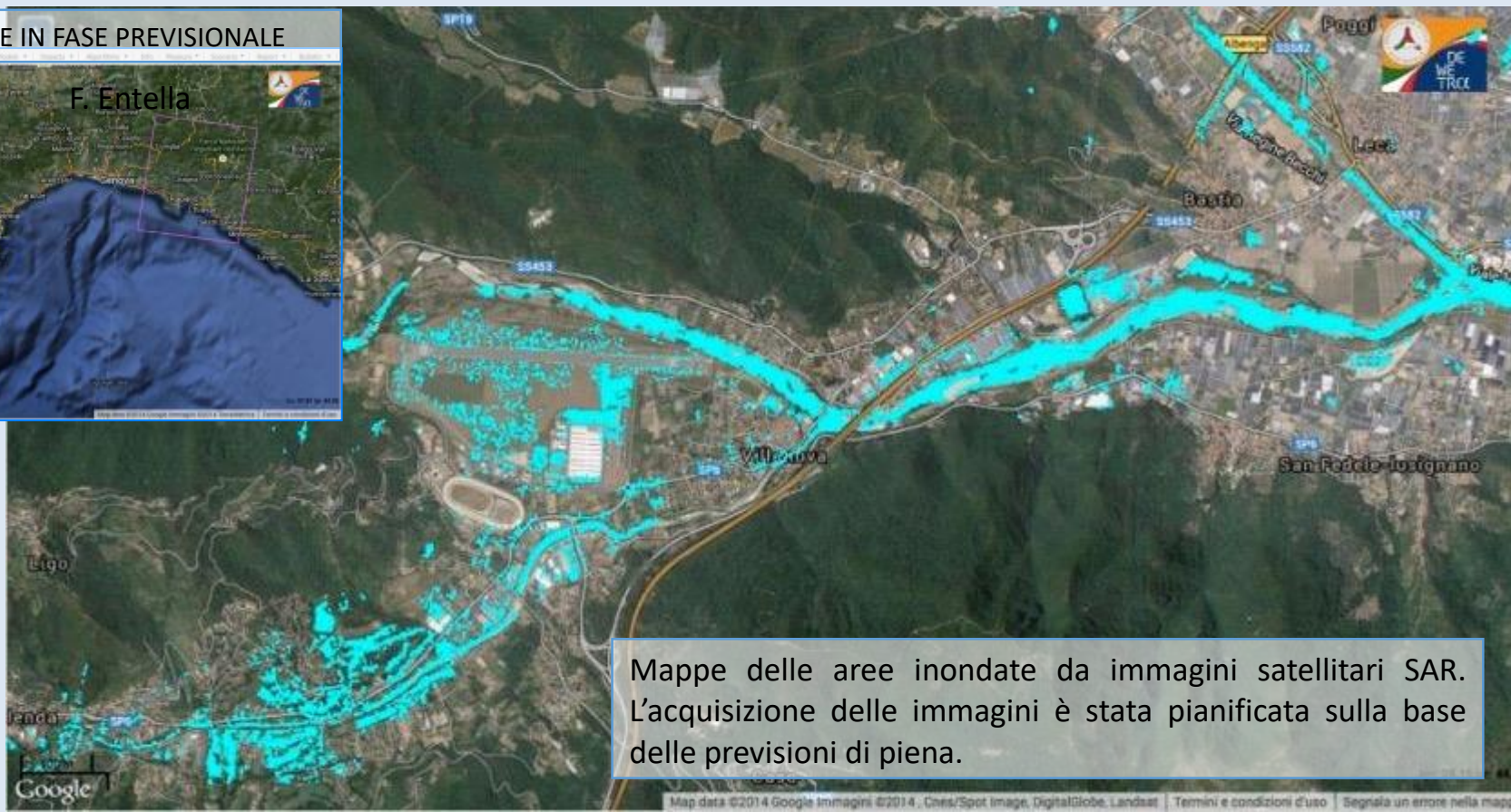
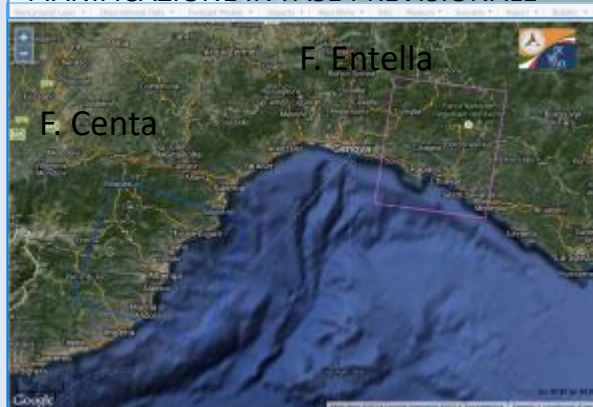
Hydrogeological risk



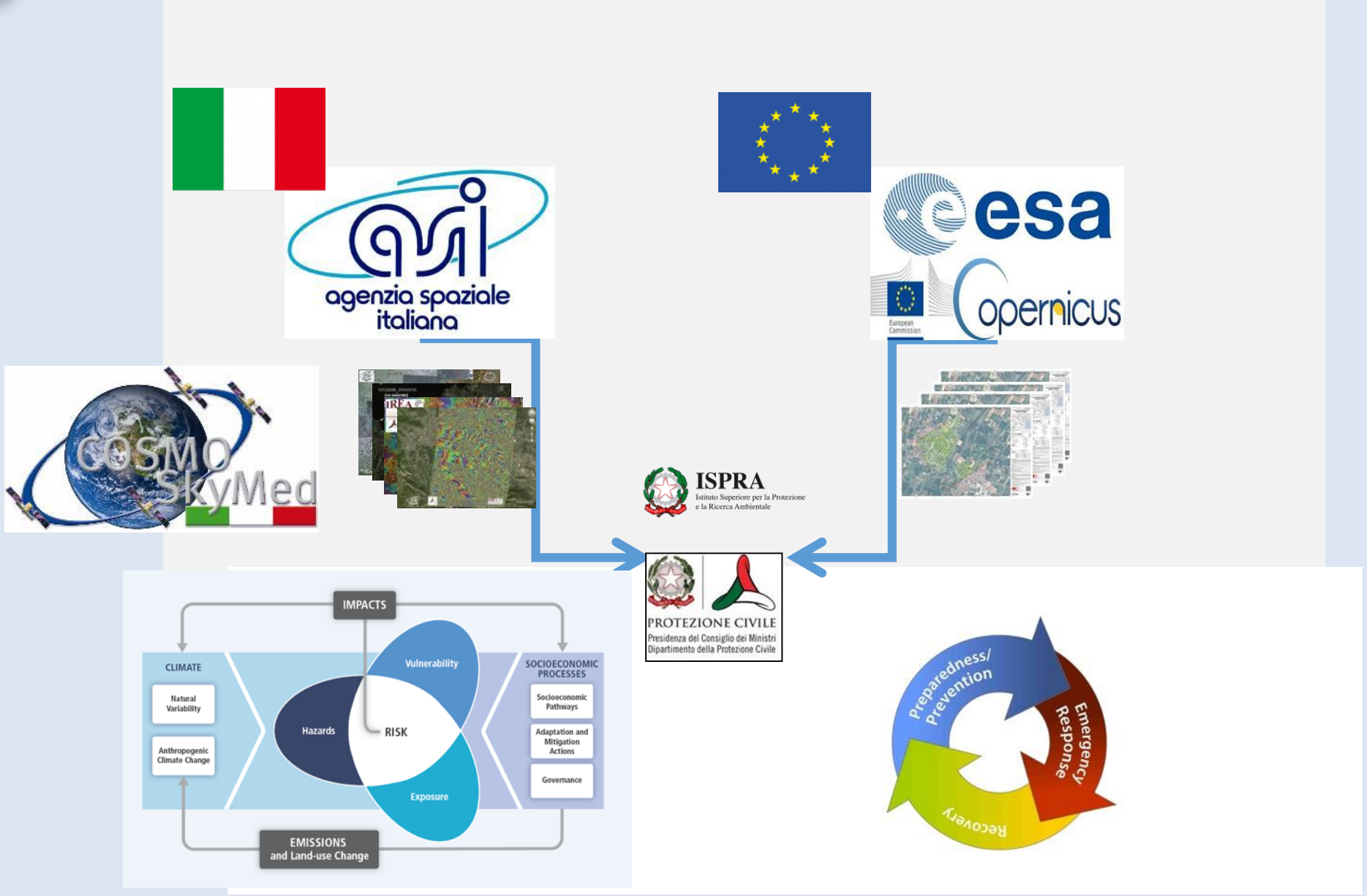
PREVISIONI PER IL FIUME CENTA ED ENTELLA EMESSE DAL CF REGIONALE IL 14/11 E VALIDE PER IL 15/11
(FONTE CF-ARPA LIGURIA).

Entella and Centa floods November 2014

PIANIFICAZIONE IN FASE PREVISIONALE



Mappe delle aree inondate da immagini satellitari SAR. L'acquisizione delle immagini è stata pianificata sulla base delle previsioni di piena.



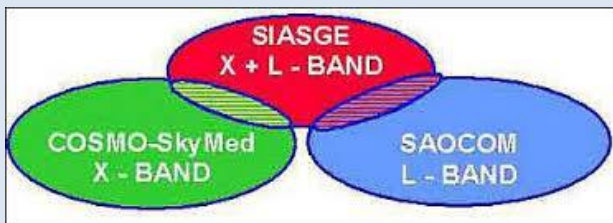
- ❖ The significant investment in space-based infrastructure has not yet been fully exploited for DRR. Realising the full benefits requires a solid base of political support, laws and regulations, institutional responsibility, and trained people.
- ❖ A number of international coordination efforts have been pioneering the establishment of the necessary connections between data providers, information developers, and end users to ensure that decision-makers be able to benefit from satellite EO.



The **Committee on Earth Observation Satellites** coordinates civil space-based EO programmes. More than 30 agencies participate in CEOS coordinating efforts being collectively responsible for the operation of more than 100 current EO satellite missions



The WMO Global Integrating Observing System WIGOS

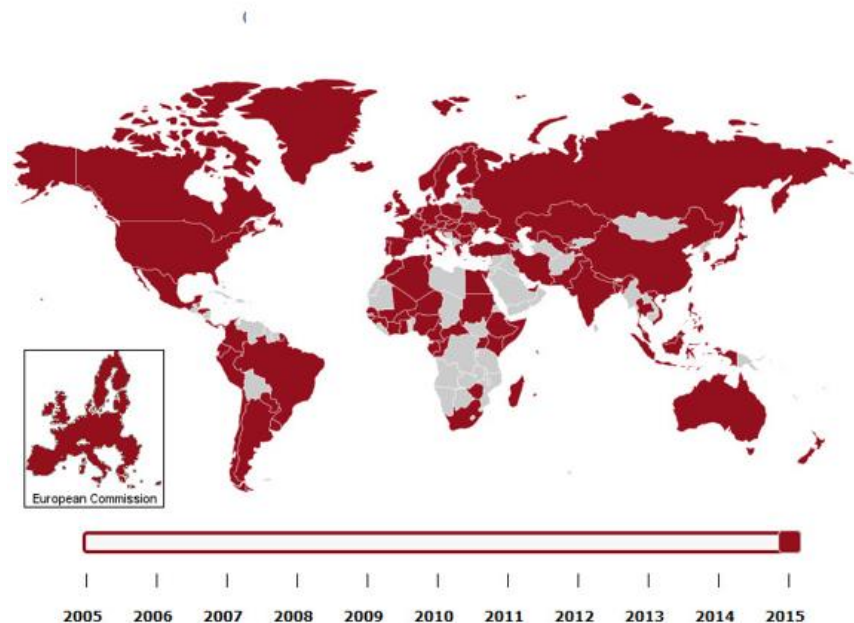


SIASGE constellation: 2 x-band satellites and 4 X-band [COSMO-SkyMed](#) satellites form the *Italian-Argentine System of Satellites for Emergency Management (SIASGE)* constellation. Thanks to a new agreement between ASI and CONAE, two additional COSMO-SkyMed satellites and two additional SAOCOM satellites will be added to the constellation, for a total of 10 satellites.



The **Group on Earth Observations** is a voluntary partnership of governments and organizations aiming to **improve international collaboration in environmental monitoring**

102 GEO Members



The GEO-GSNL initiative

An international partnership aiming to improve, through an **Open Science** approach, **monitoring and research** on seismic/volcanic interest areas called **Supersites**, providing better **scientific information support for DRR**.

The partnership

- The scientific community
- The in situ data providers
- The satellite data providers



Courtesy of S. Salvi GSNL Chair

ASI CONTRIBUTION:

ASI is the Agency which provides the largest contribution in the GSNL and CEOS initiatives.



The **Space Science Data Center (SSDC)** is a Research Infrastructure of

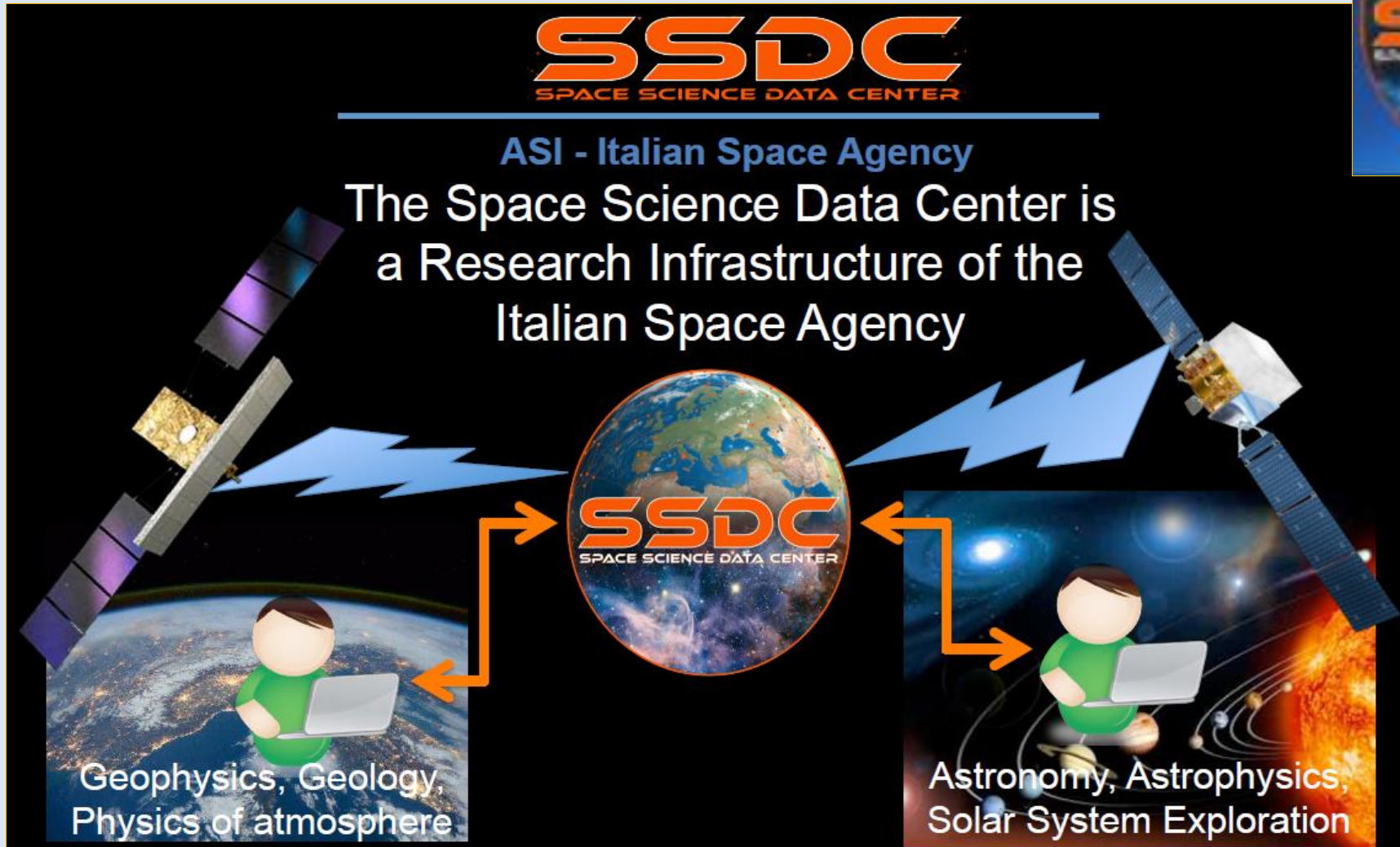
developed with the ambitious goal of extending the utilization of space science data from the relatively small community of scientists to a large part of society.

It was proposed at the 59th session of the United Nations Committee on Peaceful Uses of Outer Space (UN COPUOS) as part of the **Open Universe Initiative** and was included in the preparations of **UNISPACE+50**. In line with the United Nations, ASI shares the vision of open data as a driver for knowledge and development. With its [Space Science Data Centre](#) (SSDC), ASI has responded to the increasing demand for more open space science data providing services for several satellites, some of which are implementing a completely open data policy.

Based on a **Multi-Mission Interactive Archive**, it will support Earth Observation scientific research. The project is aimed at allowing access to a subset of COSMO-SkyMed data (MapItaly) as well as scientific products (velocity maps) obtained in collaboration with CNR (National Research Council, Italy) and INFN (National Institute for Nuclear Physics).



ASI Space Science Data Centre (SSDC)





ASI - Italian Space Agency

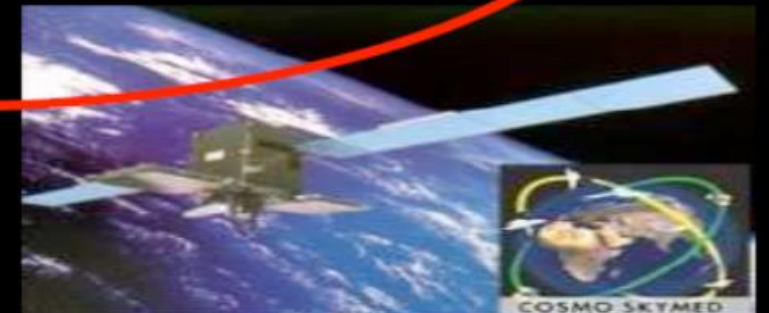
Space Science
Data Center

Universe
Observation

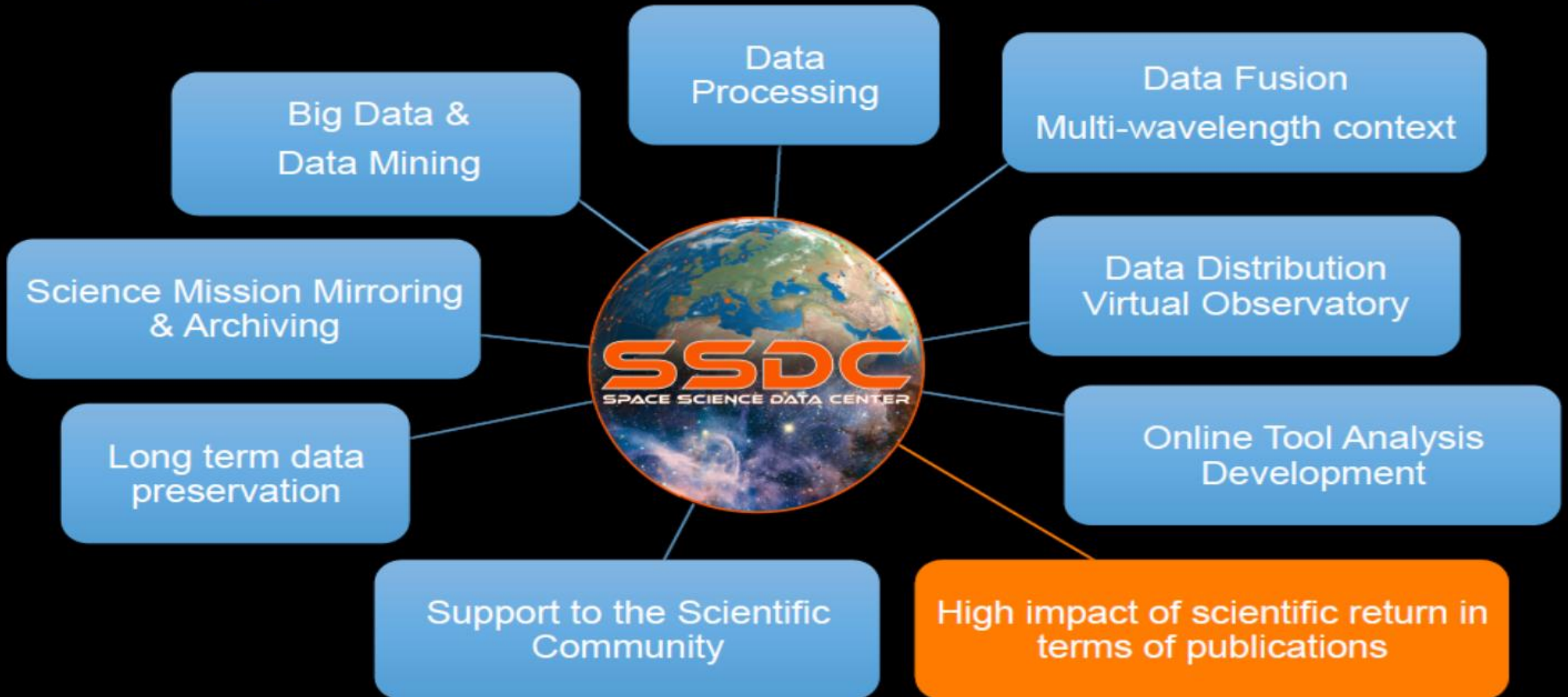
Information &
Computing
Technologies

Earth
Observation

Since 2017



SSDC Experience





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Thank you!