

WP 9

Coordinator

Vincenzo Romano

Advisor

CTS COS

Platform for Earth Observation from Space

Assigned Budget: 3.58 M€



WP9 aims to realize a common platform of data and products of Earth observation from space, an important and challenging effort in one of the most promising scientific disciplines for hazard assessment and mitigation.



Activity 9.1 - Strengthening of observational and ICT infrastructures
M. Musacchio (INGV)

Activity 9.2 - Platform design & development
C. Marcocci (INGV)

Activity 9.3

Space geodesy and SAR
products

M. Manunta (CNR)

Activity 9.4

Optical products

G. Ganci (INGV)

Activity 9.5

Space Weather and
LAIC products

C. Scotto (INGV)

Activity 9.6

Calibration and
validation products

E. Marotta (INGV)

Activity 9.7 - Training and Higher Educations
C. Cesaroni (INGV)



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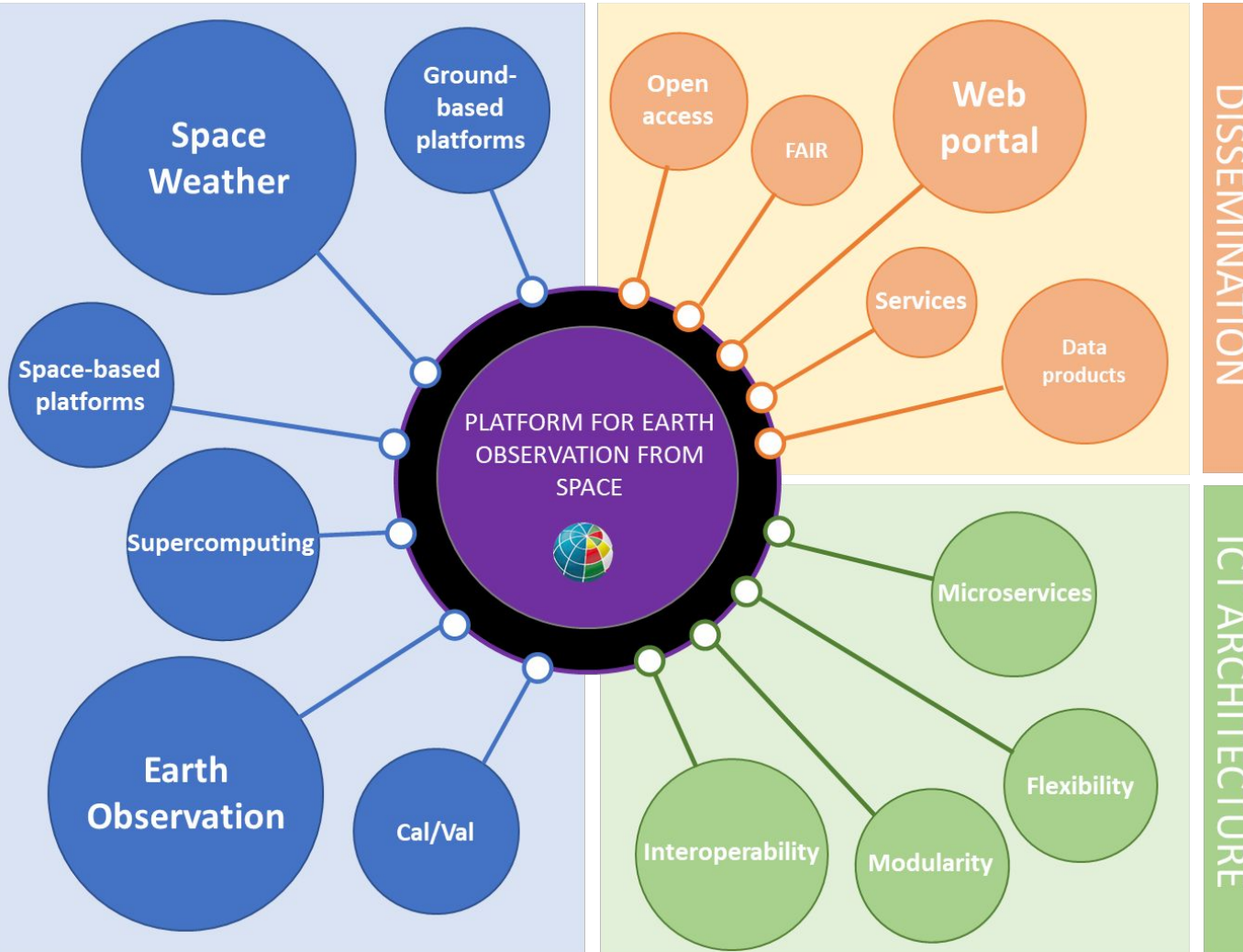


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MODULES AND THEMATIC AREAS

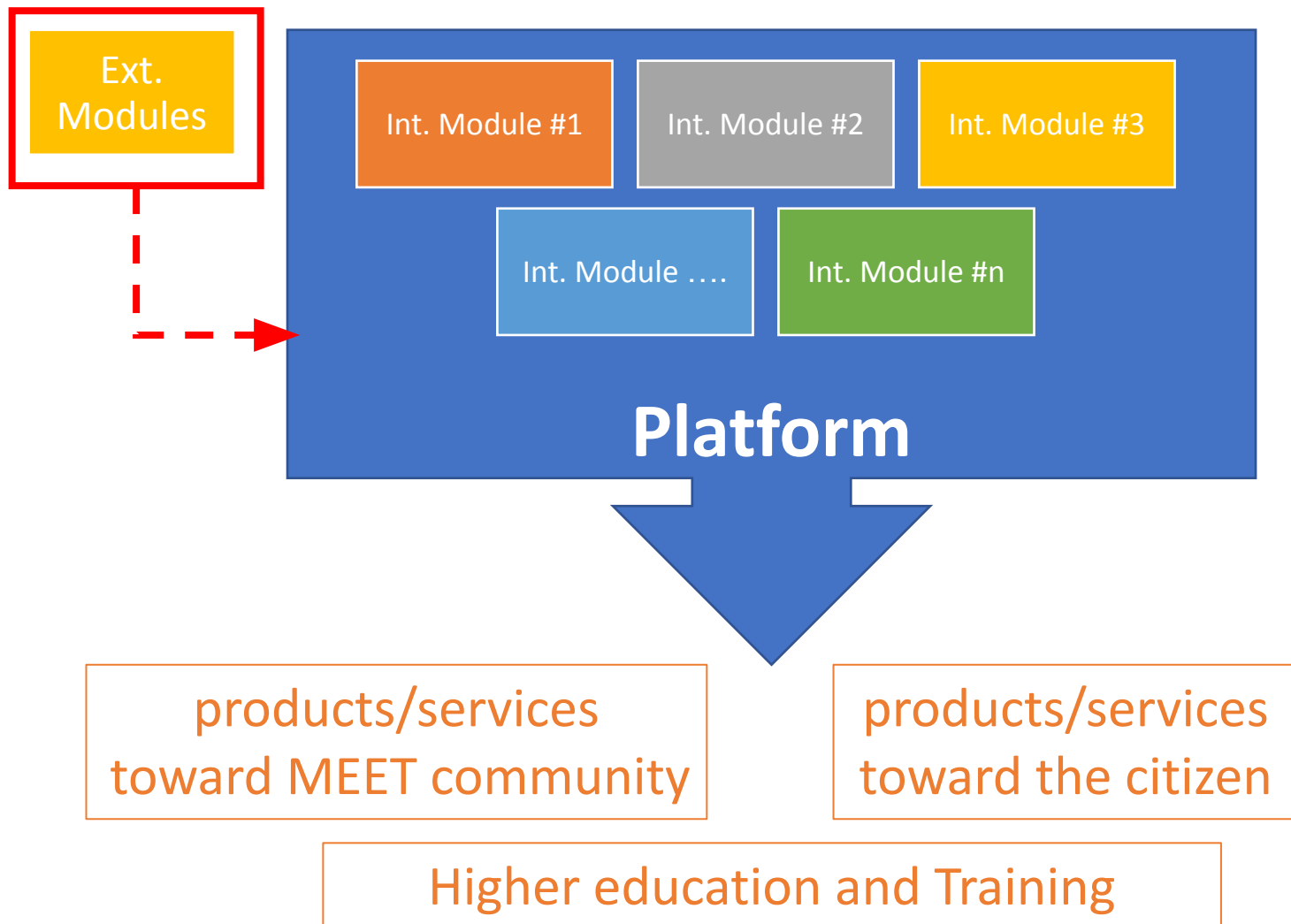



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COS | CENTRO OSSERVAZIONI SPAZIALI DELLA TERRA



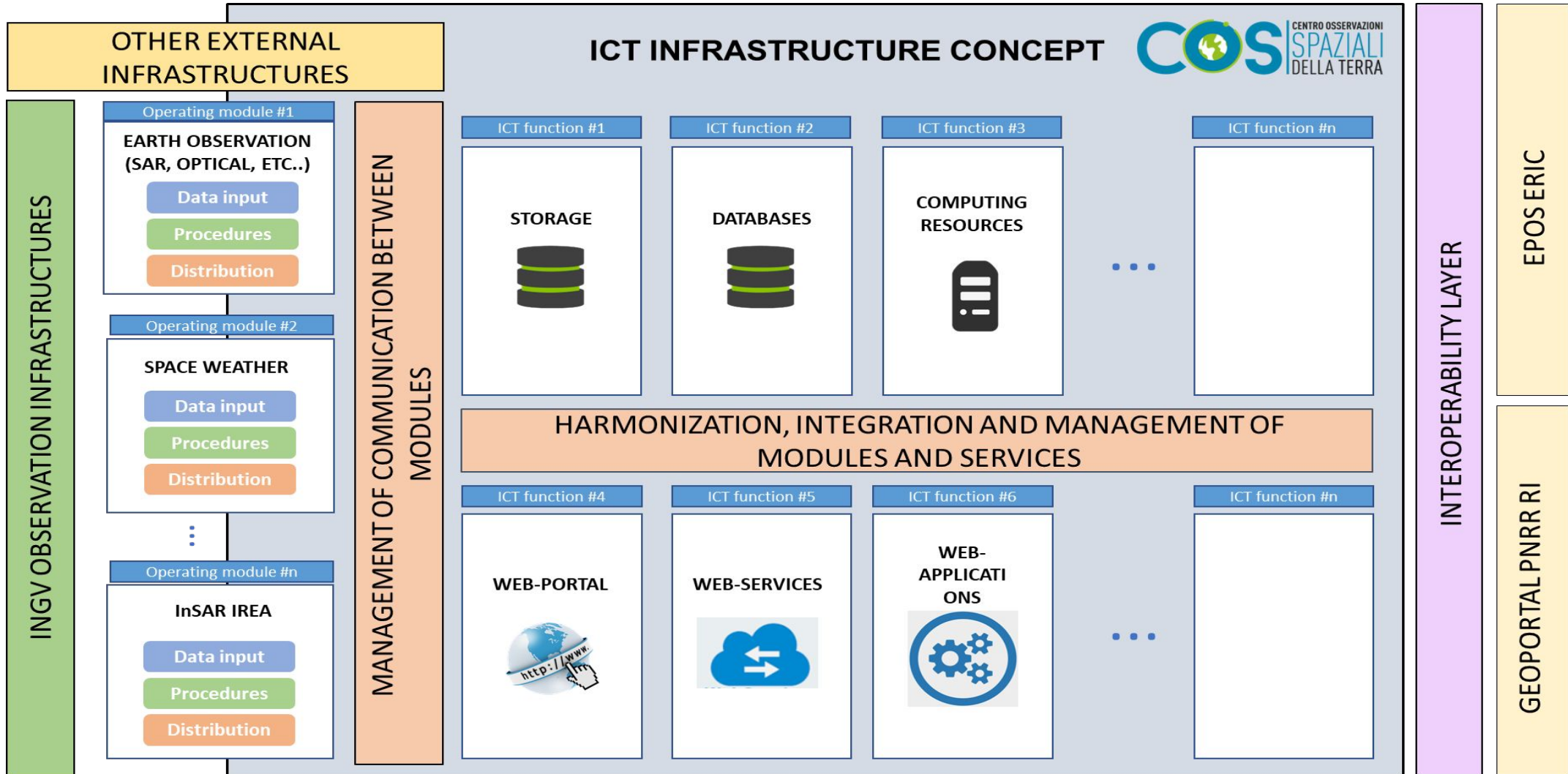
istituto per il rilevamento elettromagnetico dell'ambiente



External Modules (and sub modules) provide products/services to the Platform by using their own resources enlarging the capability of the platform in furnishing products toward the user community

Internal Modules (and sub modules) generate and provide products/services to the user community by using shared resources ensuring the capability of the platform in furnishing products

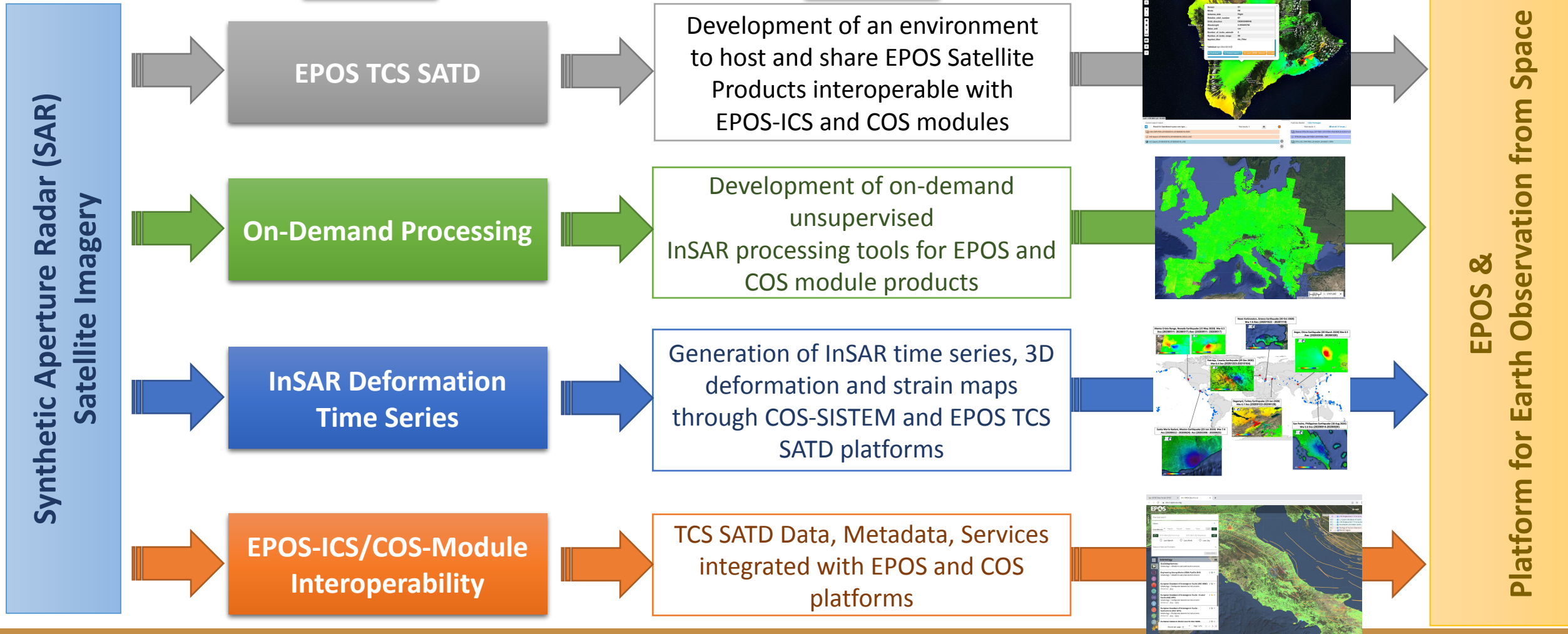
- Modules for Space geodesy and SAR products
- Modules for Optical products
- Modules for Space Weather products and LAIC
- Module for Calibration and Validation products





Modules

Products





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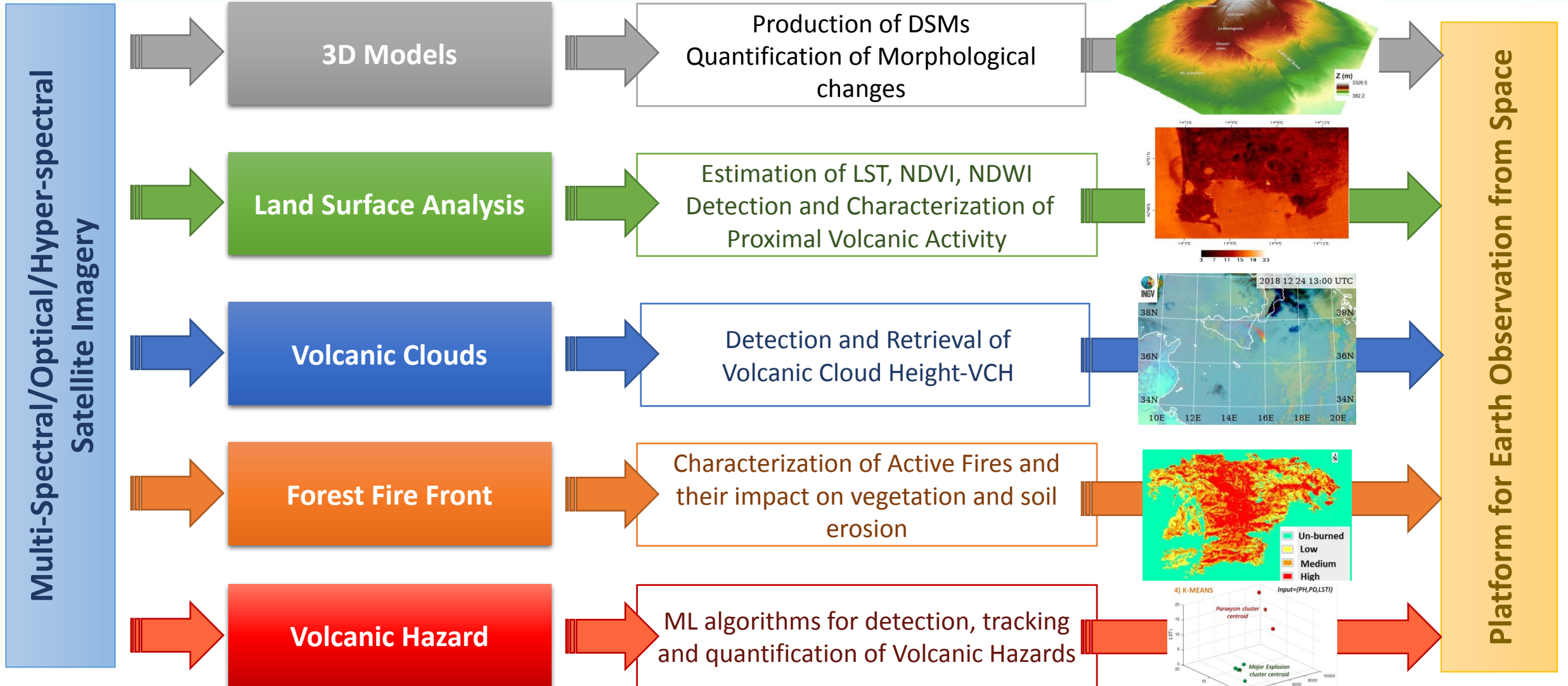
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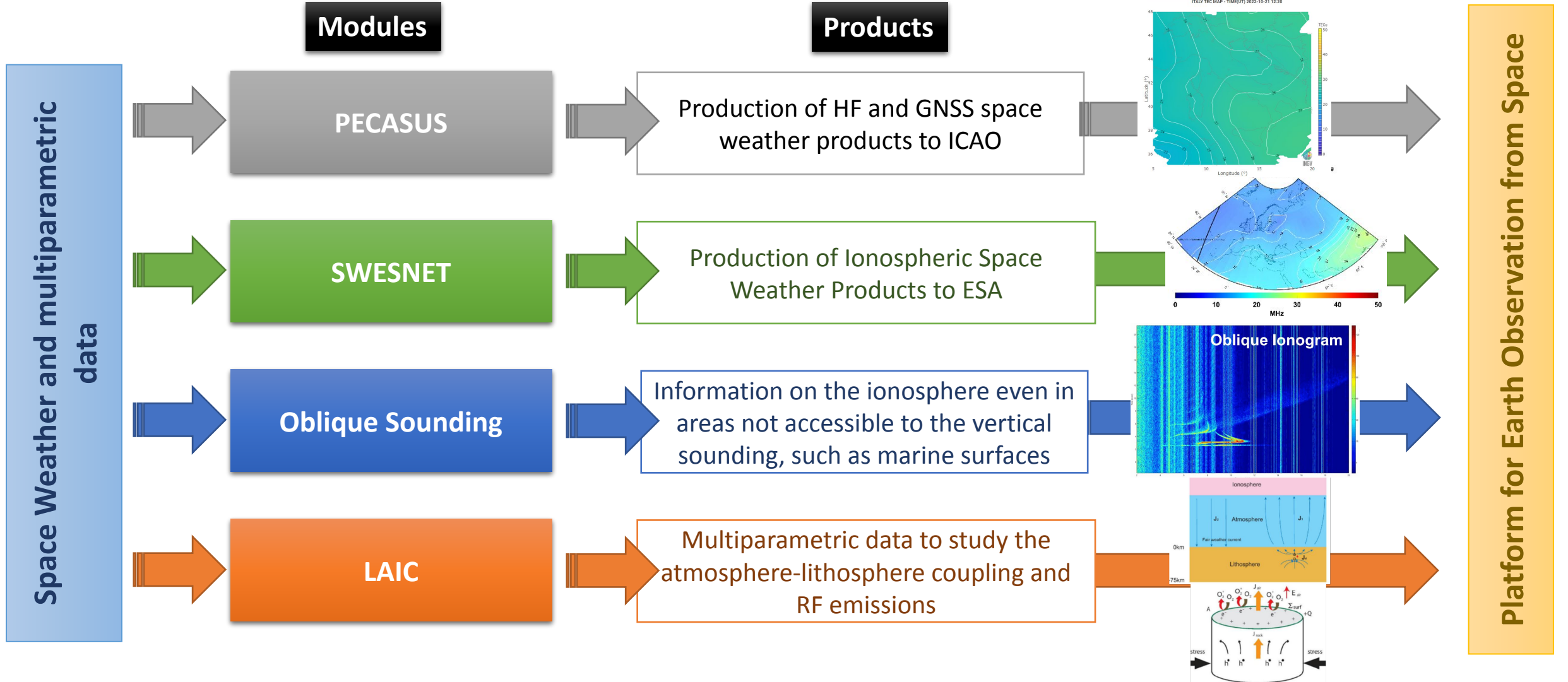


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Modules

Products

Visible and Thermal images/Field data/Spectroscopy and Lidar data

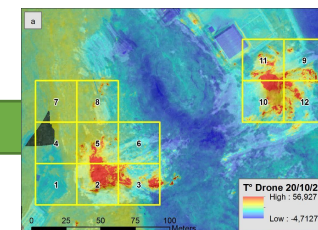
Legal procedures for UAS

Authorizations to fly with UAS even without a pilot on the field



UAS flights and Field surveys

Visible and thermal images; SO2 quantity and flow; properties of volcanic plumes



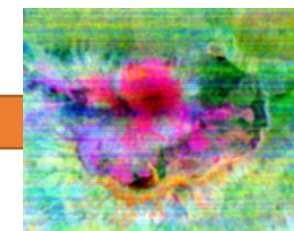
Laboratory activities

Engineering and implementation of payloads for aerial platforms or ground systems



Data comparisons

Calibration and validation of satellite products to improve their accuracy



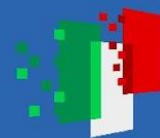
Platform for Earth Observation from Space



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Capacity Building
Workshops

Master in
collaboration with
Italian university

Training for
professional
stakeholders

October 2023 @ Broglio
Space Center, Malindi, Kenya

May 2023, INGV, Rome, Italy

September 2023, Catania,
Italy

September 2023, L'Aquila,
Italy

Capacity Building Workshop
on Space Weather and
Low-latitude Ionosphere

Mathematics for Signal
processing and Applications in
Geophysics and other fields

International Training School
on Convective and Volcanic
Clouds detection, monitoring
and modelling

International School of Space
Science on «Operational
Space Weather
Fundamentals»



UNIVERSITÀ
DEGLI STUDI
DELL'AQUILA

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INGV spin-off
SPACEARTH
TECHNOLOGY



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International Training School on
CONVECTIVE AND VOLCANIC CLOUDS (CVC)
detection, monitoring and modelling





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Item	Description	Amount (K€)
Personnel	5 Research Technologists - 1 Technician	648
Instrumentation	ICT instrumentation and observational strengthen	1.540
FAIR and Open Access	Services for Open Access and FAIR application	915
Training	Schools, Workshop and Master	244
Indirect cost		234
	Total	3.582



Current activities

- Participation to the Expoforum «New Space Economy» at Fiera di Roma 1-3 December
- Collaboration with the PNRR PhD program «Corso di Dottorato Nazionale in Space Science and Technology» - a.y. 2022/2023
- Collaboration with:
 - PNRR “Partenariato Esteso Spazio”,
 - PNRR “Centro Nazionale di Ricerca in High Performing Computing”,
 - PNRR “Geosciences IR”,
 - “Azione di Accompagnamento for IRIDE Constellation”
 - National and international organization (ASI, ENAV, CIRA, ESA, NASA, UN, COSPAR, URSI,...
- Participation to the Copernicus Italian User Forum
- Starting of critical procurement