

INTRODUCTION

CTS COS: M.F.Buongiorno, G.De Franceschi, G.Puglisi, S. Scollo, S. Atzori, V. Romano



WORKSHOP AGENDA JUNE 9-10

DAY 1, June 9 2021

WELCOME

09:15 09:25 **Welcome INGV President**

INTRODUCTION

09:25 09:40 **Opening INGV Department Directors**

09:40 09:50 **Introduction- M.F. Buongiorno & CTS**

INFRASTRUCTURE DEVELOPMENT

9:50 10:05 **C. Marocchi:** Towards an ITC infrastructure for the COS

SPACE WEATHER MODULES

10:05 10:20 **C. Cesaroni:** INGV contribution to the PECASUS activities

10:20 10:35 **C. Scotto, L. Perrone:** INGV contribution to ESA Space Weather Service Network Development and Pre-Operation - New method to retrieve thermospheric parameters

TECHNOLOGICAL DEVELOPMENTS MODULE

10:35 10:50 **G. Di Stefano, A. Iarocci:** Infrastructure for technological development of space Systems: The experience of the LNTS

SPACE GEODESY-EO MODULES

10:50 11:05 **R. Devoti :** GNSS archiving facility and standard geodetic products

11:05 11:20 **C. Bignami:** Damage Mapping

11:20 11:40 **M. Polcari, F. Guglielmino, V. Siniscalchi, S. Borgstrom:** SAR products

11:40 11:55 **S. Atzori:** From space geodesy to geophysical processes

11:55 12:10 **F. Guglielmino:** SISTEM integration

12:10 12:25 **A. De Santis:** Contribution to Lithosphere-Atmosphere-Ionosphere Coupling (LAIC) studies

12:25 13:00 **Discussion and Questions**

DAY 2: June 10, 2021

INTRODUCTION

9:15 09:25 **Summary Day 1**

EO-OPTICAL DATA MODULES

9:25 09:45 **L. Merucci, S. Corradini, F. Pardini :** Products for volcanic cloud monitoring

9:45 10:00 **C. Del Negro:** LAV@HAZARD: a satellite-driven modeling strategy for quantifying lava flow hazards

10:00 10:15 **M. Musacchio:** MeteoSAT Rapid Response Web Service (MS2RWS)

10:15 10:35 **M. Silvestri, G. Ganci, V. Romaniello.** Surface temperature observations from EO: Modules for volcanoes and environmental applications

10:35 10:55 **C. Spinetti, M. Bisson, G. Ganci** Digital Surface Models from EO data processing

10:55 11:10 **S. Amici:** Characterization of forest fires and burnt areas

CAL-VAL MODULES

11:10 11:25 **E. Marotta:** UAS based for CAL/VAL activities

11:25 11:40 **G. Salerno, T. Caltabiano:** Remote Ground-based observation of volcanic degassing

11:40 11:55 **A. Winkler:** Magnetic Methods for the Source Apportionment of PM

11:55 12:55 **Discussion and Wrap-up**

• COS STATUTE AND CONSTITUTION

The Center for Space Observation of the Earth (COS) was established in June 2020 and definitively started with the approval of its statute at the end of July 2020.

COS FUNCTIONS (from Statute)

The COS coordinates the INGV Space activities in agreement with the strategy of INGV Departments, namely Environment, Earthquakes and Volcanoes, and the INGV Sections / Observatories which, through monitoring, surveillance, research and services for the society, operate in the Space and Aerospace sector. The COS is the INGV structure dedicated to planning INGV activities related to Space and Aerospace sector. The COS favours the participation of researchers in the development of services and products for society and for external entities.

COS represents INGV in national working groups or committees operating in the Space and Aerospace sector, in particular those represented in the COMINT (interministerial Committee for policies relating to space and aerospace), MUR (Ministry of University and della Ricerca), ASI (Italian Space Agency), and internationally by ESA (European Space Agency), EU (European Union), ICAO (International Civil Aviation Organization), COSPAR (Committee on Space Research), United Nations and other Agencies Space (NASA-National Aeronautics and Space Administration, CNSA- China National Space Administration, JAXA-Japan Aerospace Exploration Agency, CONAE-Argentina National

• ROAD MAP FIRST IMPLEMENTATION OF THE STATUTE

COS first year Activity Plan:

- Represent INGV Space and Aerospace activities within COMINT and other institutions as indicated in ART. 2.
- Carry out the first survey of INGV activities, infrastructures and projects relating to Space and Aerospace sector.
- Identify the Operating Modules.
- Define a consolidated version of the organizational structure of the COS which will be sent to the Department and Section Directors, the Scientific Council, the General Director and the President of the INGV.
- Organize an internal workshop on INGV activities in the space and aerospace sector.
- Produce a summary report on the results of the activities and a plan of activities on a three-year basis with reference to current and future financial resources, sent to the Department and Section Directors, the Scientific Council, the General Director and the President of the INGV.

• ROADMAP & STATE OF THE ART

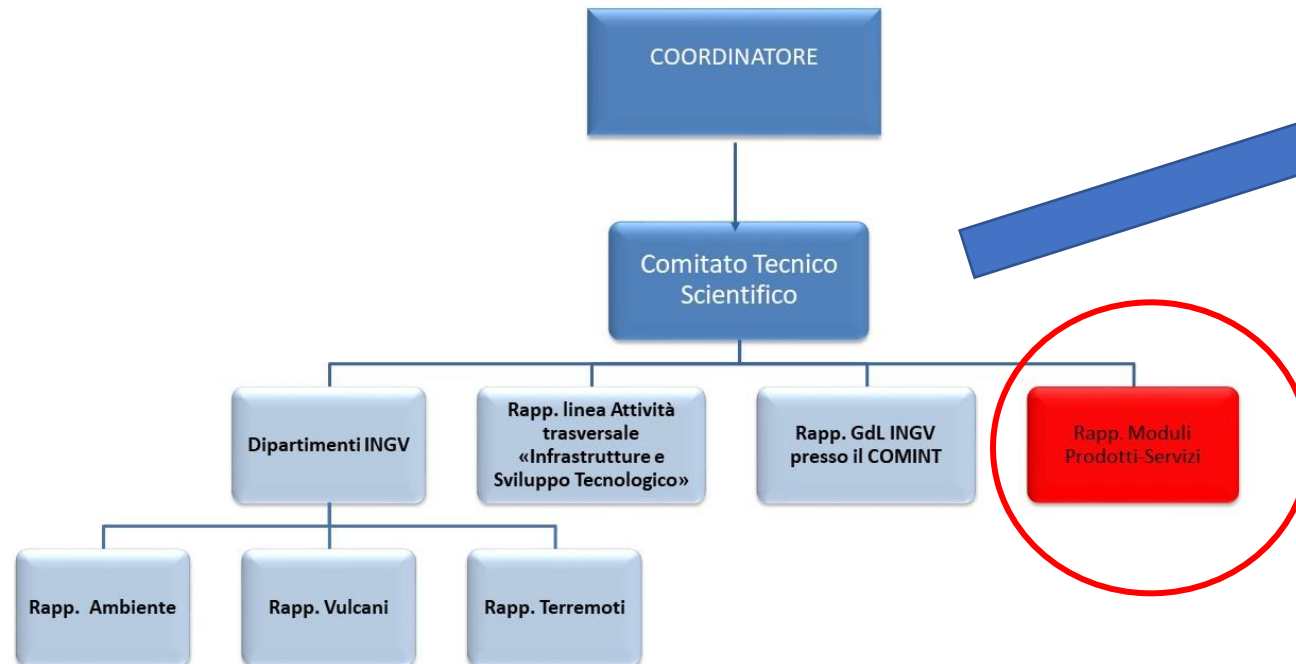
2020

- ✓ CREATION OF THE COS
- ✓ COORDINATION OF THE INGV ACTIVITIES WITHIN COMINT AND NATIONAL USER FORUM
- ✓ DEFINITION OF THE COS TECHNICAL-SCIENTIFIC COMMITTEE (CTS)
- ✓ ACTIVATION OF THE COS WEB PAGE
- ✓ PRESENTATION OF THE COS IN THE DAYS OF THE LdA ENVIRONMENT
- ✓ COORDINATION OF PARTICIPATION IN THE "NEW SPACE ECONOMY" EXPO 11-12 DECEMBER 2020
- ✓ COORDINATION FOR THE DEVELOPMENT OF PROMOTIONAL ACTIVITIES (DUBAI EXPO 2021)

2021

- ✓ INVENTORY OF INGV SPACE SECTOR ACTIVITIES AND DEFINITION OF OPERATIVE MODULES
- ✓ ANALYSIS OF THE RESULTS OF THE COS SURVEY
- ✓ ACTIVATION OF THE "ATTEMPT" PROJECT IN THE CONTEXT OF THE INGV "PIANETA DINAMICO" PROJECT
- ✓ SUBSCRIPTION OF THE AQ BETWEEN AM-INAF-INGV FOR THE DEVELOPMENT OF OPERATIONAL ACTIVITIES IN THE SPACE WEATHER SECTOR
- ✓ SUBSCRIPTION OF THE AQ WITH CIRA (Italian Aerospace Research Center)
- ✓ IDENTIFICATION OF THE FIRST OPERATIVE MODULES OF THE COS
- ✓ COS INGV WORKSHOP ORGANIZATION JUNE 2021
- ✓ IDENTIFICATION OF THE REFERENCE PERSON FOR MODULES IN THE COS CTS

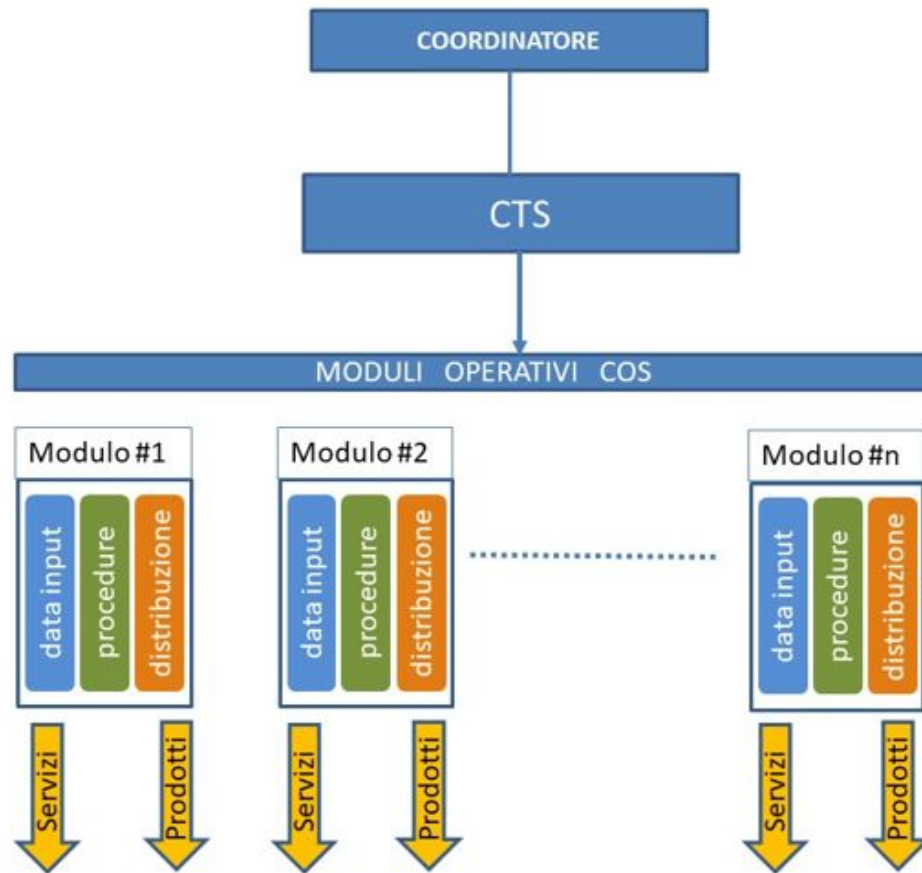
• • COS ORGANIZATION AND GOVERNANCE



Coord. COS	• M.Fabrizia Buongiorno
Rapp. Dipartimento Ambiente	• Giorgiana De Franceschi
Rapp. Dipartimento Terremoti	• Simone Atzori
Rapp. Dipartimento Vulcani	• Simona Scollo
Rapp. LdA Infrastrutture	• Vincenzo Romano
Rapp. GdL COMINT	• Giuseppe Puglisi

The COS Operational Modules Representative will be identified after the presentation of the Operational Modules proposed in the 2021

- PRELIMINARY FUNCTIONAL SCHEME OF COS



DEFINITION OF A GOVERNANCE SCHEME BETWEEN CTS AND OPERATING MODULES IS NEEDED

THE INTERNAL STRUCTURE OF EVERY MODULE MUST BE ANALYZED TO OPTIMIZE AND CONSOLIDATE PRODUCTS AND SERVICES AVAILABLE SYSTEMATICALLY

• RESULTS OF THE FIRST CENSUS COS

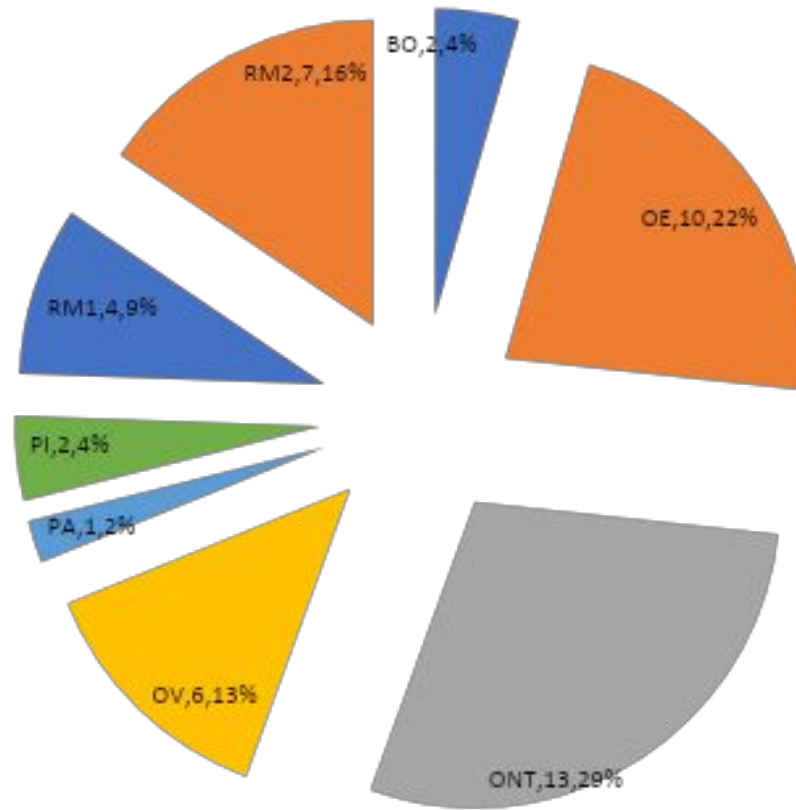
Nella pagina web del COS (<http://cos.ingv.it/>)
è attivo il Survey rivolto a tutti i colleghi INGV interessati per partecipare alla costituzione dei Moduli Operativi
del COS

IL Survey è rimasto attivo da metà Dicembre 2020 a Febbraio 2021

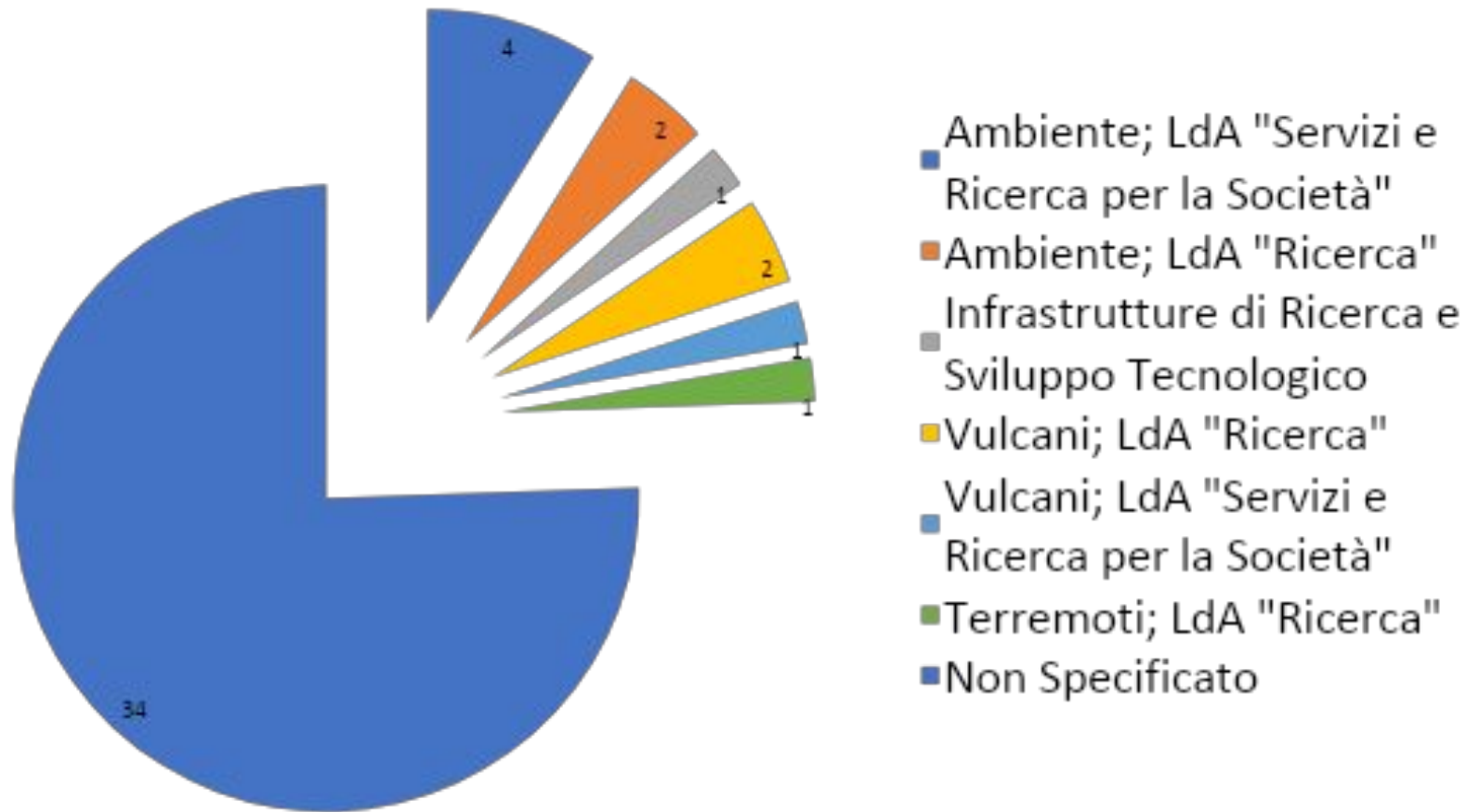


- N. TOTAL FORMS SUBMITTED : **45**
- N. FORMS PROPOSING MODULES: **31**
 - « ready operational modules»: **14**
 - «testing/ development procedures»: **11**
 - Level of maturity not defined: **6**

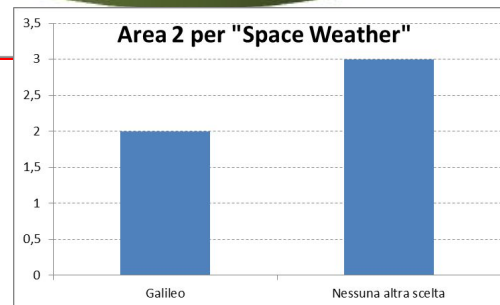
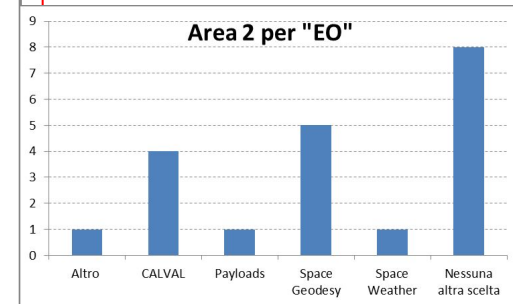
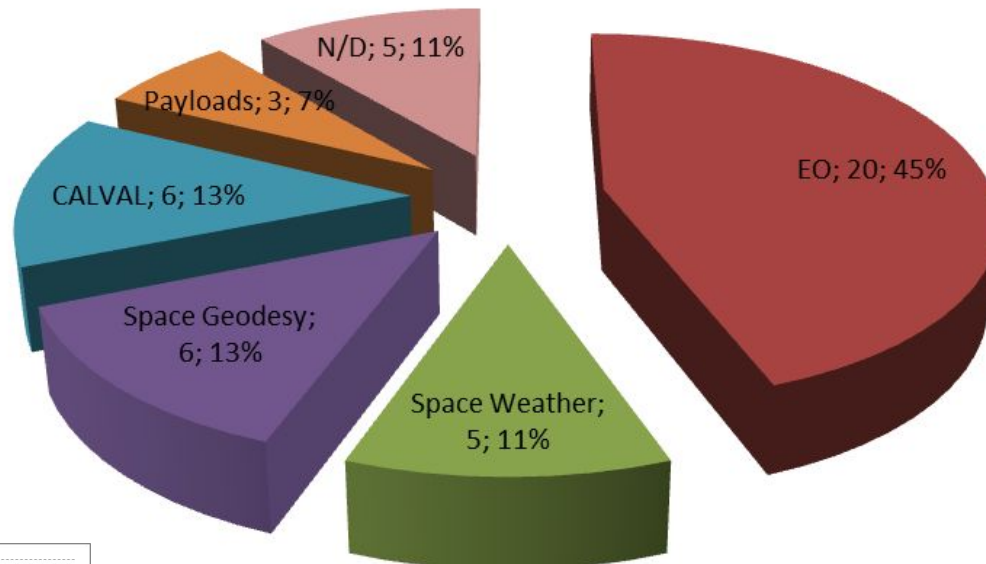
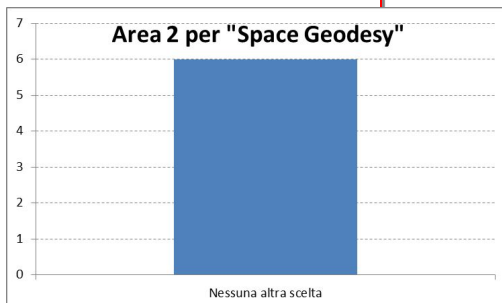
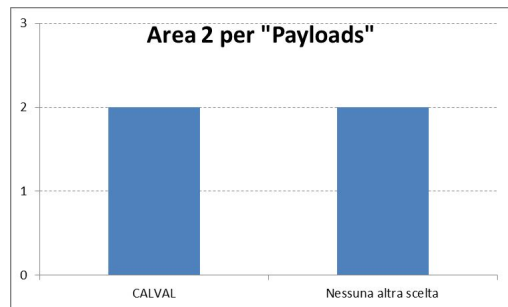
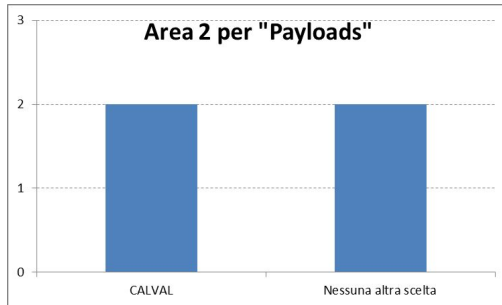
- FORMS DISTRIBUTION IN RESPECT TO INGV SECTIONS



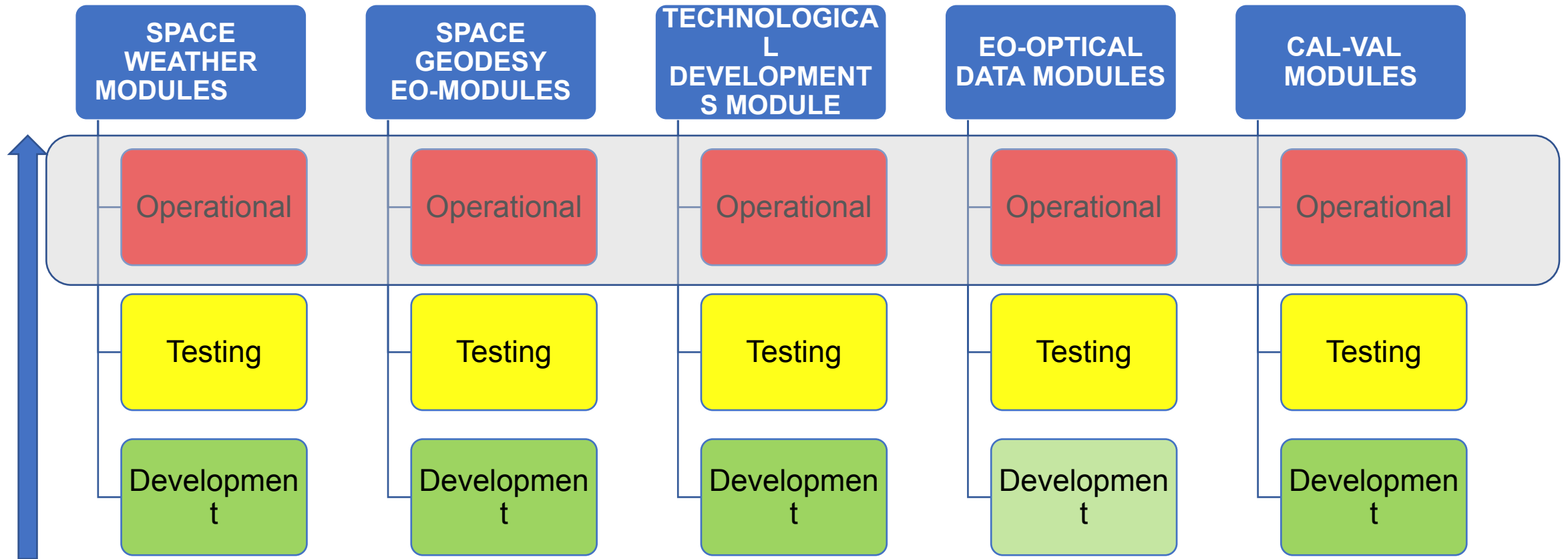
- FORSMS DISTRIBUTION IN RESPECT TO INGV



• FORMS DISTRIBUTION IN RESPECT TO APPLICATIVE



• APPLICATION AREAS AND MODULE DEVELOPMENT



• PROPOSED DISCUSSION POINTS AFTER DAY 1 AND DAY2

- Further study of the results of the survey and of the needs presented by the coordinators of the modules
- Institution of transversal infrastructure for the governance of modules and appointment of 1 contact person in the CTS? (after statute change)
- The Transversal or "common utilities" infrastructure should not collect data but the products, it will harmonize them, displays them in the appropriate way, disseminates them This infrastructure requires voluntary personnel and especially personnel with computer skills.
- interaction with UFN thematic tables of the various national and European tables and indications that have emerged in recent months during national and international meetings of the space sectors.
- identification of the contact persons for the modules as required by the Statute of First Implementation
- identification and appointment of a contact person for each thematic area for the CTS (after the amendments to the statute)
- annual call for new modules (?), the new proposed module should indicate if it is related to an already existent module or it is a completely new module
- Development of the COS page to access to products, databases, etc. (DOI activation?) both for internal and external use.