

# **FIM4R** at **ESRIN**



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### **ESA FACTS AND FIGURES**



- 50 years of experience
- 20 Member States
- Five establishments in Europe, about 2200 staff
- 4,3 billion Euro budget (2013)
- Over 70 satellites designed, tested and operated in flight
- Six types of launcher developed



## ESA/ESRIN Establishment







### Personnel on site: ~ 600

- **230 ESA staff** (including YGT, fellows and trainees)
- ➢ 370 contractors
  - Earth Observation
  - Vega Department
  - Corporate Informatics
  - Telecommunications
  - Contracts, Site, Personnel, Communication
  - ASI Science Data Centre
  - ESA Security Office

+ 60 international conferences,
36.000 visitors per year

# **Earth Observation at ESRIN**



## **Earth Observation functions in ESRIN**

- EO Payload Operation and Mission Management
- Multi-Mission Ground Segment Management
- Earth Science & Application Development
- GMES/Copernicus Space Office
- Disaster Charter Management
- Earthnet/LTDP Management
- CEOS and GEO activities
- EO User Helpdesk



### → THE EUROPEAN EARTH OBSERVATION PROGRAMME



#### Meteorological Missions driven

mainly by Weather forecasting and Climate monitoring needs. These missions developed in partnership with EUMETSAT include the Meteorological Operational satellite programme (MetOp), forming the space segment of EUMETSAT's Polar System (EPS), and the new generation of Geostationary Meteosat satellites (MSG & MTG satellites).

GMES Sentinel Missions driven by Users needs to contribute to the European Global Monitoring of Environment & Security (GMES) initiative. These satellite missions developed in partnership with the EC include C-band imaging radar (Sentinel-1), high-resolution optical (Sentinel-2), optical and infrared radiometer (Sentinel-3) and atmospheric composition monitoring capability (Sentinel-4 & Sentinel-5 on board Met missions MTG and EPS-SG respectively).

#### Earth Explorer Missions driven by Scientific needs to advance our understanding of how the ocean, atmosphere, hydrosphere, cryosphere and Earth's interior operate and interact

as part of an interconnected system. These **Research** missions, exploiting Europe's excellence in technological innovation, pave the way towards new development of future EO applications.

# **Payload Operations**

### ESRIN is ESA's Earth Observation Payload Operation Centre

The following missions are handled via ESRIN: ERS-1 (until 2000) ERS-2 (until 2011) Envisat (until April 2012) **GOCE** (until 2013) **SMOS** Cryosat-2 **PROBA-V** SWARM Sentinel-1a 3<sup>rd</sup> party missions

- The following missions will be handled in the future:
- ADM-Aeolus
- <u>EarthCare</u>
- Further Earth Explorer missions
- Sentinel-1b
- Sentinel-2a,2b
- Sentinel-3 land
- Further Sentinel missions











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# FIM Importance for ESA

Most ESA projects are characterised by:

- intense collaboration with different entities
- focused on offering data and services
- delivering to a demanding international user community

New ESA Challenges are comprised of Federated Services:

- Long Term Data Preservation (LTDP)
- **Copernicus Collaborative Ground Segment**
- Exploitation Platforms
- Federation of User Communities



Paper Type: Research pape Date of this version: 28 August 2013 Abstract rces of all org sence, to organ ial science & humanities, high-energy physics, atmospheric science, bioinformatics and fauio come together to discuss how to address these issues with the objective to defane a common polic work for Identity Management based on existing structures, federations and technologies. lescribe the needs of the research communities, the status of the activities in the FIM domain and c use cases. The common vision for FIM across these communities will be presented as well the roadmap and a set of recommendations interached to ensure its implementation.

Federated Identity Management for Research Collaborations

Keywords federated identity management, security, authentication, aut

FIM Importance for ESA

FIM is a key enabler for:

Federating user communities of different organisations to easily share data & services using cross authentication & authorisation

 $\rightarrow$  ESA wishes to play a major role in Federated Identity Management to improve the distribution and exploitation space data and services

 $\rightarrow$  ESA is also interested in the cost saving potential of FIM

 $\rightarrow$  ESA wants to contribute to the required mutual trust and understanding



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