

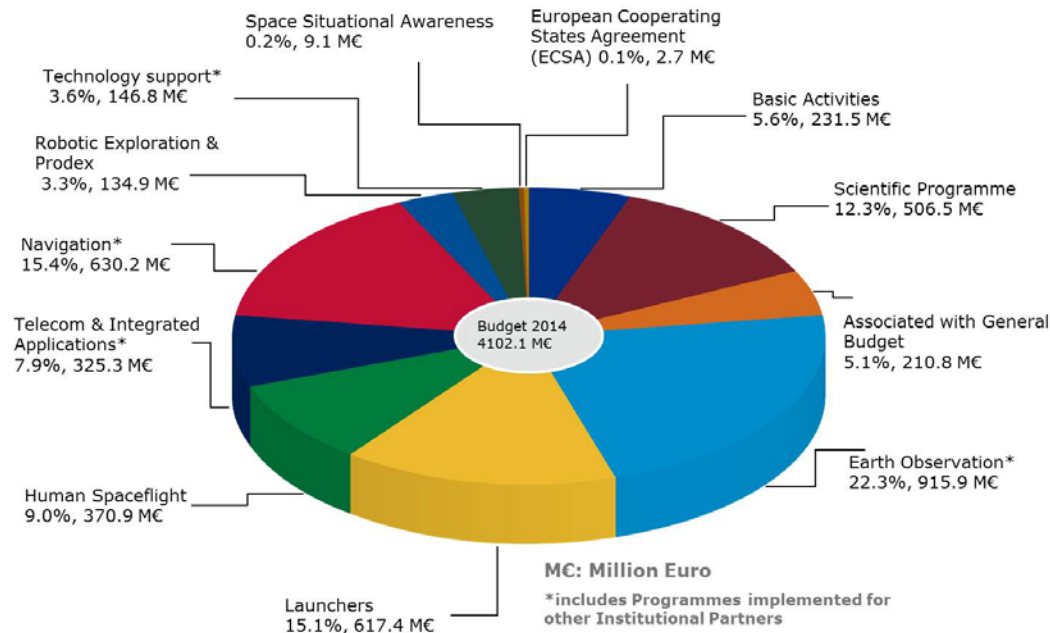


→ **ECSAT**  
**ACHIEVEMENTS AND**  
**PERSPECTIVES**

# The European Space Agency



- Over 50 years of experience
- 20 Member States
- Eight sites/facilities in Europe, about 2200 staff
- 4.1 billion Euro budget (2014)
- Over 70 satellites designed, tested and operated in flight, 18 scientific satellites in operation
- 85% of ESA's budget spent on contracts with European industry



## Diversity in activities

- Telecommunications & Integrated Applications
- Earth Observation
- Exploration
- Technology
- Business Incubator



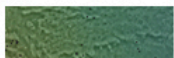
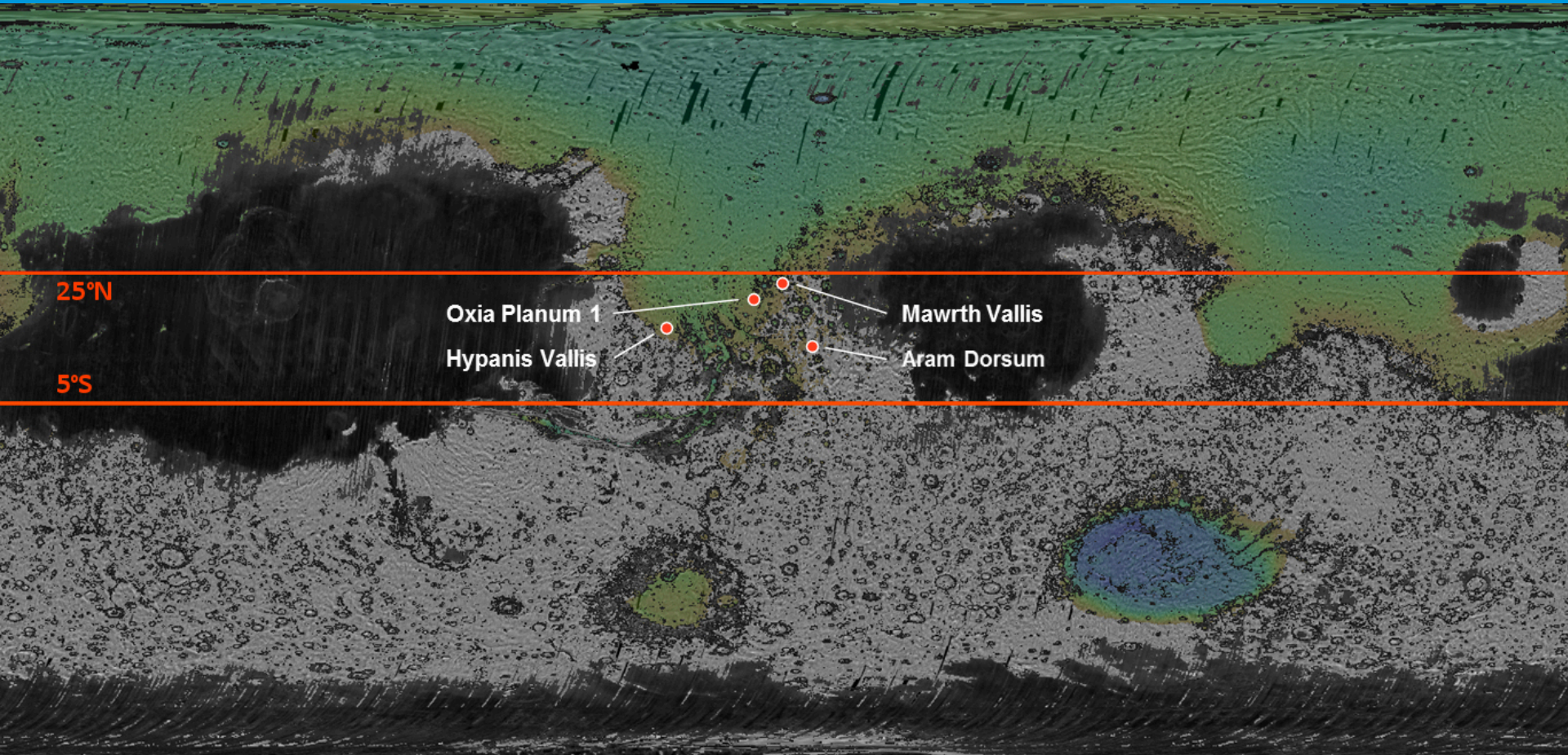
## Specific identity

- Development of world competitive space based products and services
- Development of downstream applications
- Spin-out of space into non space sectors

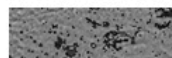
## Cooperations/Partnerships

- RAL Space, Catapult (@ Campus)
- Academia : Oxford University
- UK industrial community
- UK scientific community





Elevation is acceptable



Elevation is too high



Too much dust

## Key Enabling technologies:

**Autonomy**

**Nuclear Power Systems**

**Sample Curation**

Simulation and Modelling

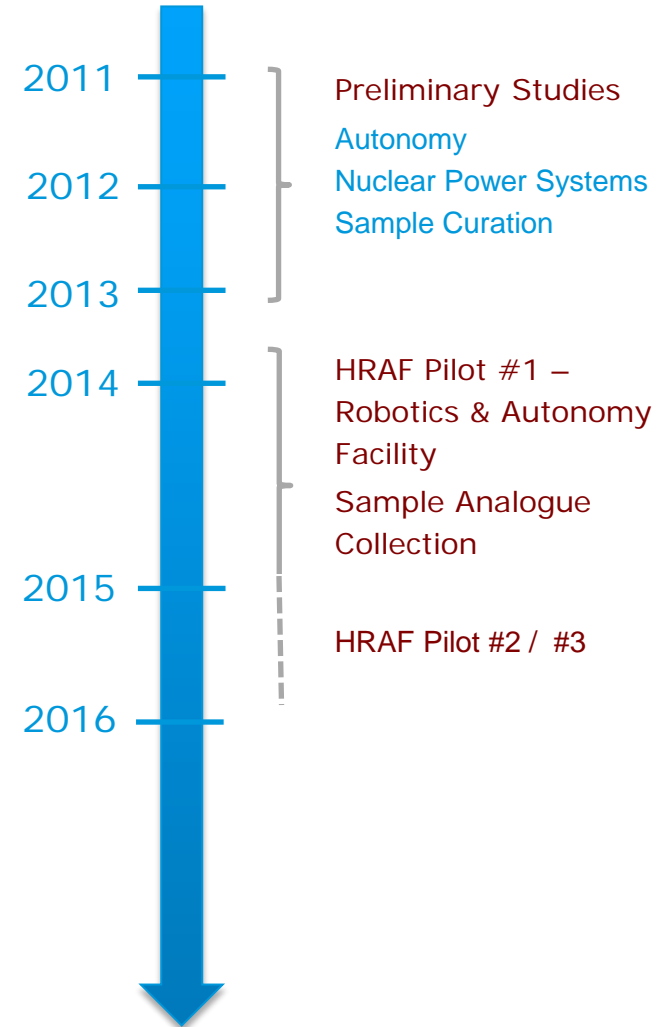
Field trials

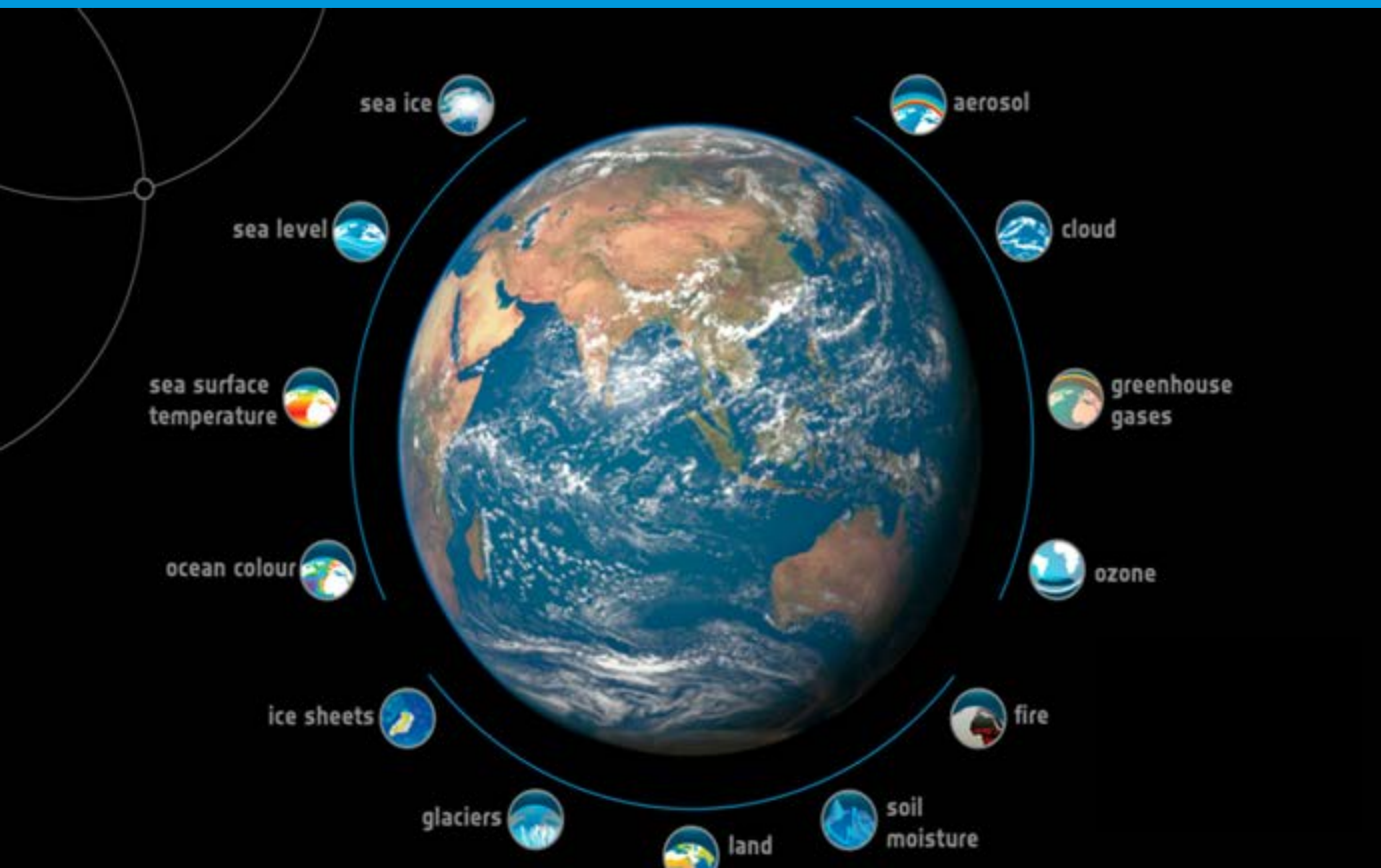
Virtual engineering lab

Data Archiving

European networking

Harwell Robotics and Autonomy Facility





# Climate Change – a worldwide issue



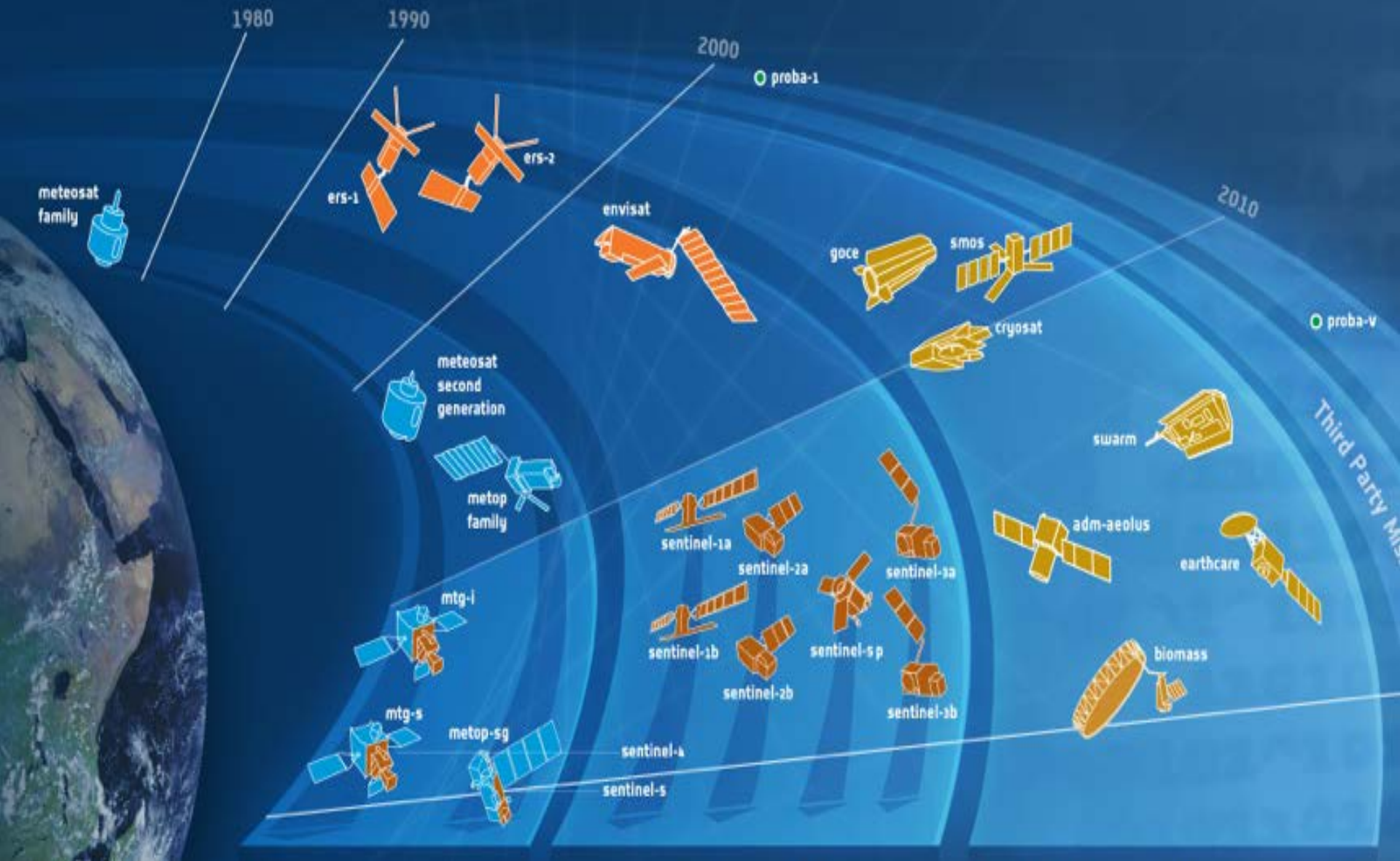
- Climate change is disrupting national economies – urge to reduce emissions and strengthen climate resilience
- Climate monitoring is the key for factualising discussions and checking progress
- Earth Observation data is a major source of information, with 40 years of data available worldwide
- Need to establish **standards for a Global Observing System for Climate** and to support the **development of climate services**
- The ESA Climate Office in ECSAT **coordinates** the work done by Member States and plays a major role in **international cooperations**



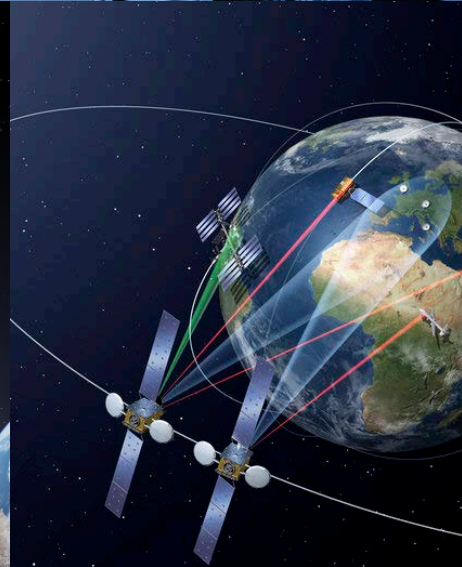
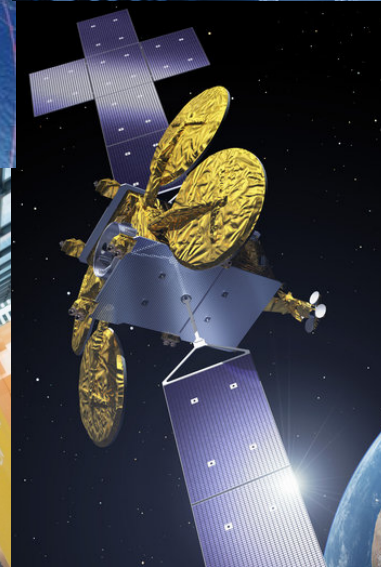
*Photos courtesy of United Nations*



# ESA EARTH OBSERVATION PROGRAMME



# Telecommunications and Integrated Applications



# Focus on world competitiveness and growth



Develop the competitiveness of the European industry in the world market **upstream sector**

- **NEOSAT ( Next Gen of large commercial GEO platforms )** : interface with UK industry
- **ARTES** : technology and product developments (system, payload, platform)

Promote the utilisation of space technology through development of innovative space based applications in the **downstream sector**

- Raising awareness about space
- Development of **coordinated** networks of technology brokers and of applications ambassadors
- Applications demonstrations projects
- Access to investment/third party (EIB,...) funds

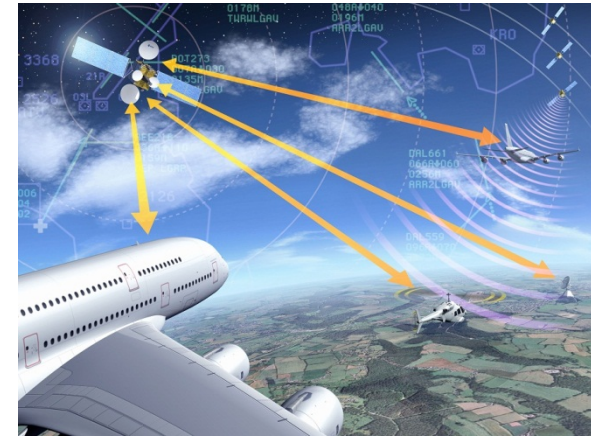


# 2014 Highlights industrial successes

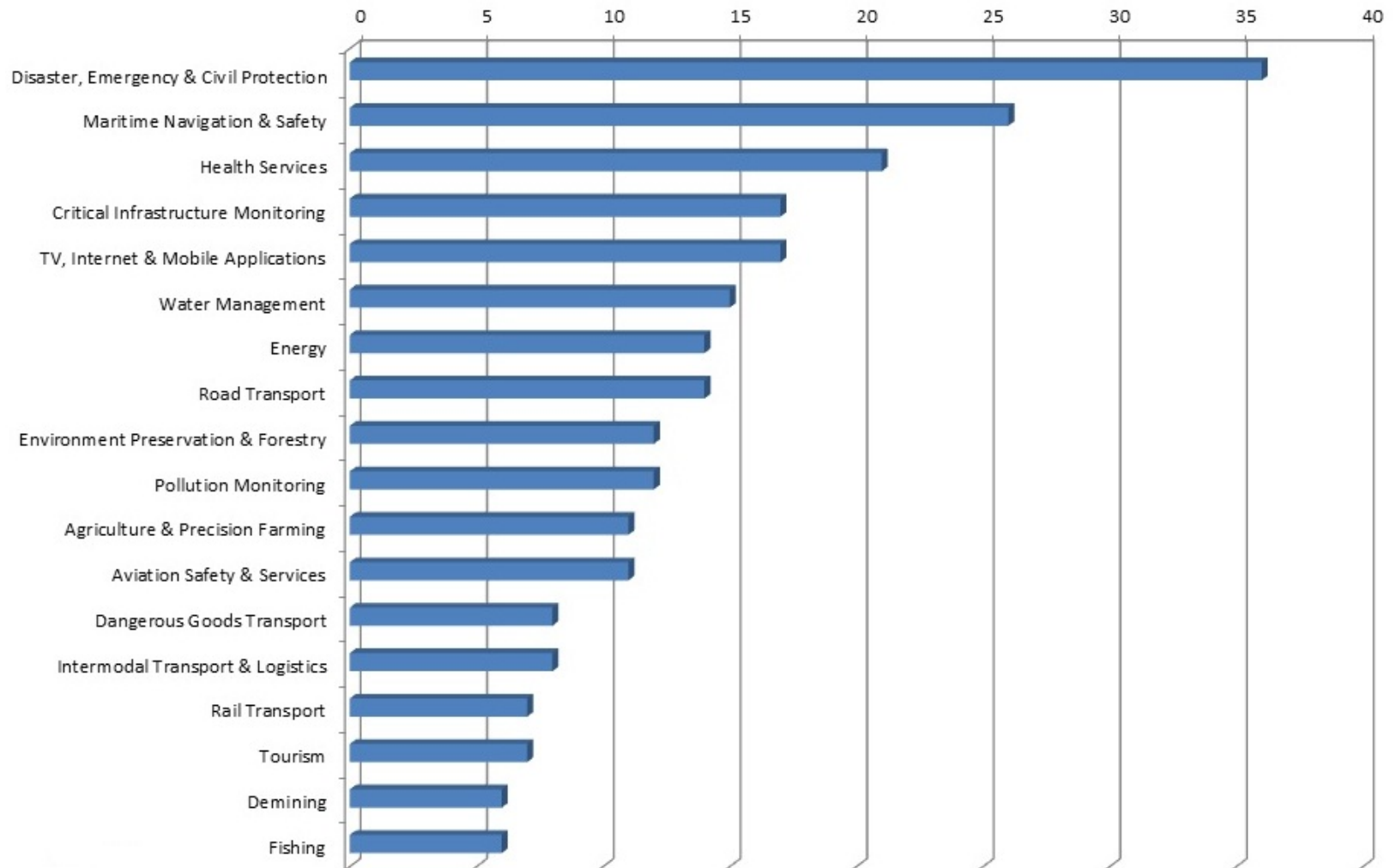
## Involving ECSAT or partners on the Campus



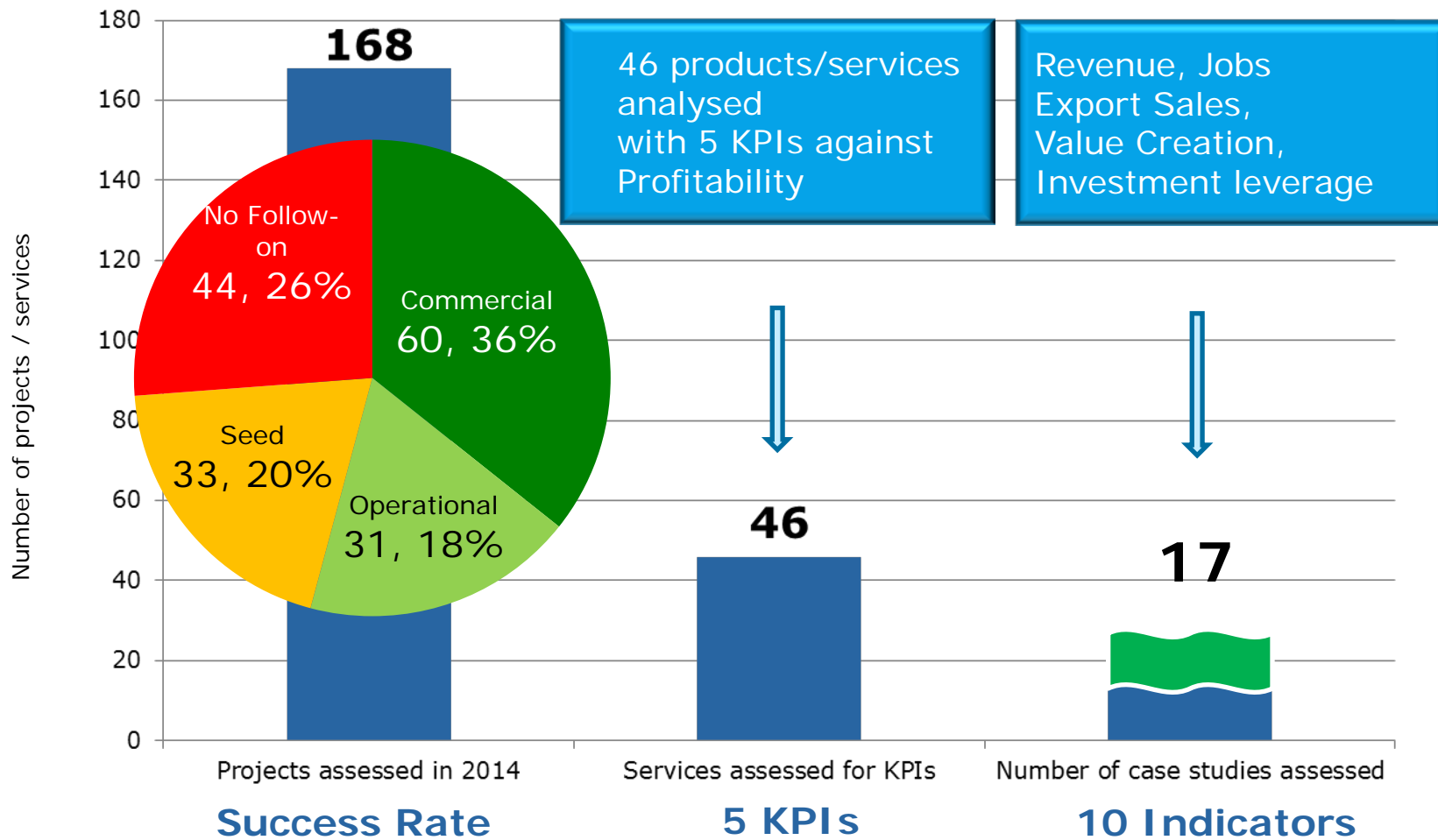
1. NEOSAT Phase B on going (contract signed in Feb 2014)
2. Sat-AIS micro-satellites constellation and maritime traffic surveillance applications development contracted (Luxspace/Exactearth) ; (contract signed in July 2014)
3. Construction in Harwell of the Ground Station to receive real time EO data via the GEO EDRS-A satellite (EDRS is developed and operated in partnership with Airbus D&S) (satellite to be launched early summer 2015)
4. Precursor aeronautical safety services contract signed in Nov with Inmarsat
5. New operational/commercial/profitable applications have been developed
6. Preparation of 2 new Projects in Partnership with operators involving high UK stakes. ( early studies and proposals to the C-Min 14)



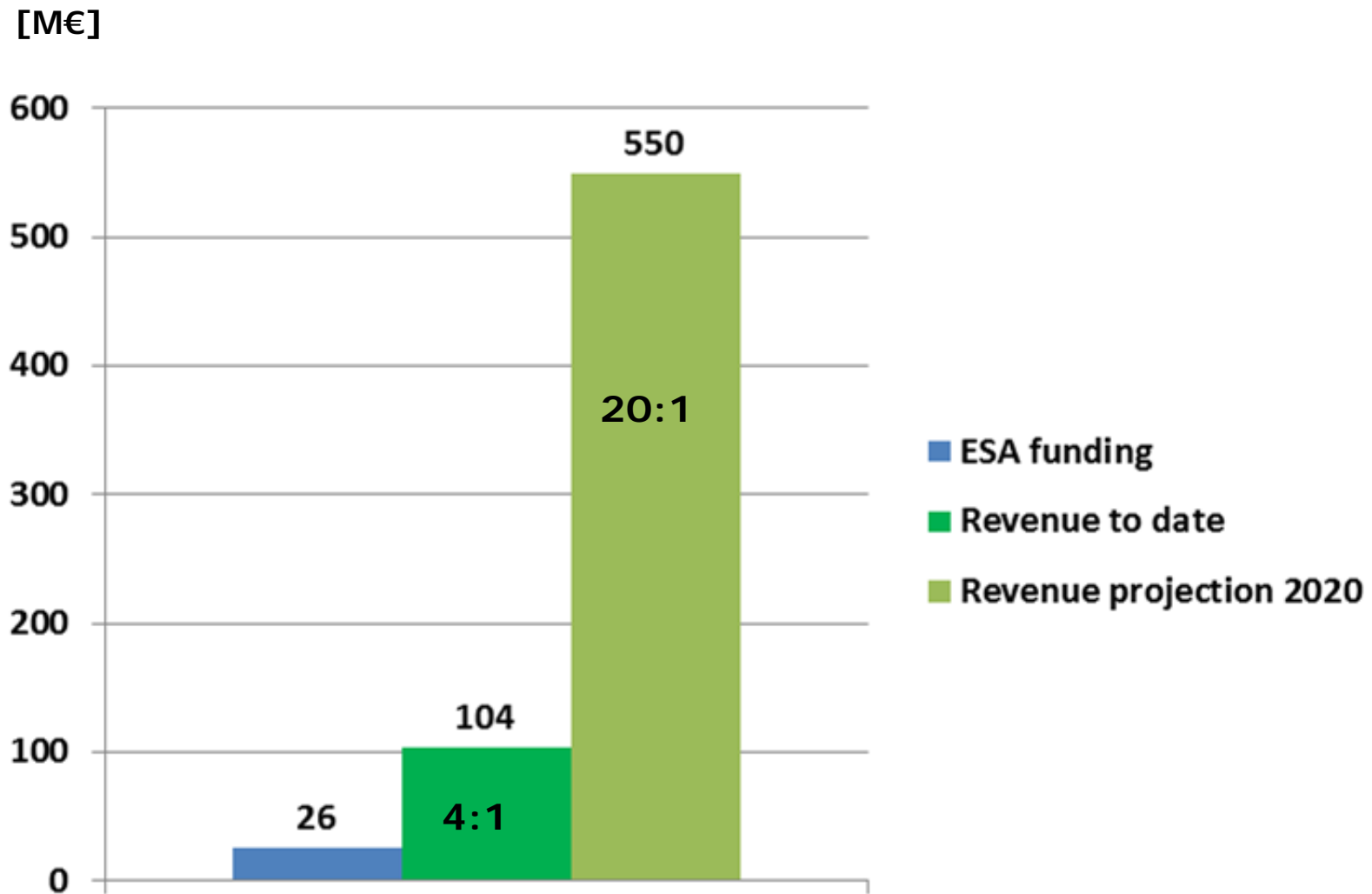
# IAP market sectors



# Case studies of projects with sufficient maturity and available data



# Revenue from 17 case studies



Within a very favorable environment in the UK

- a. Continuous growth of the sector
- b. Successes in the past and on-going projects and partnerships lead to new initiatives
- c. The C-Min 14 positive results allow further consolidation and development of ECSAT





→ SERVING EUROPEAN  
COOPERATION  
AND INNOVATION

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European Space Agency