



UK Earth Observation Ambitions

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UK Space Agency

UK Space Agency Vision

New Era and New Opportunities

Space Data and Growth

National Space Strategy



Value Proposition::

 Catalyse investment

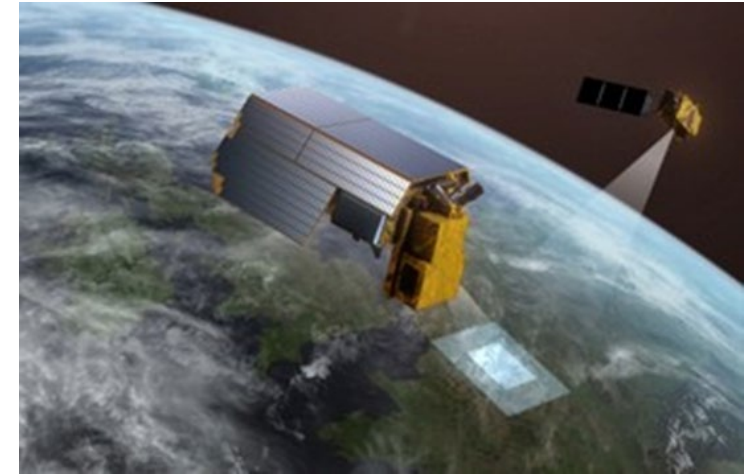
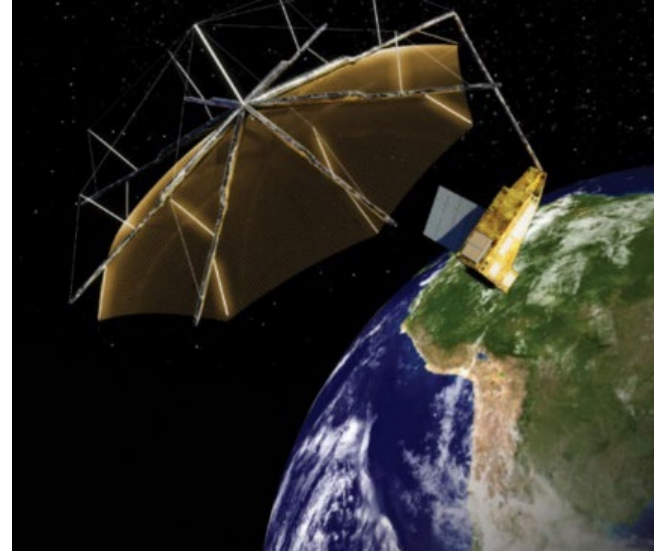
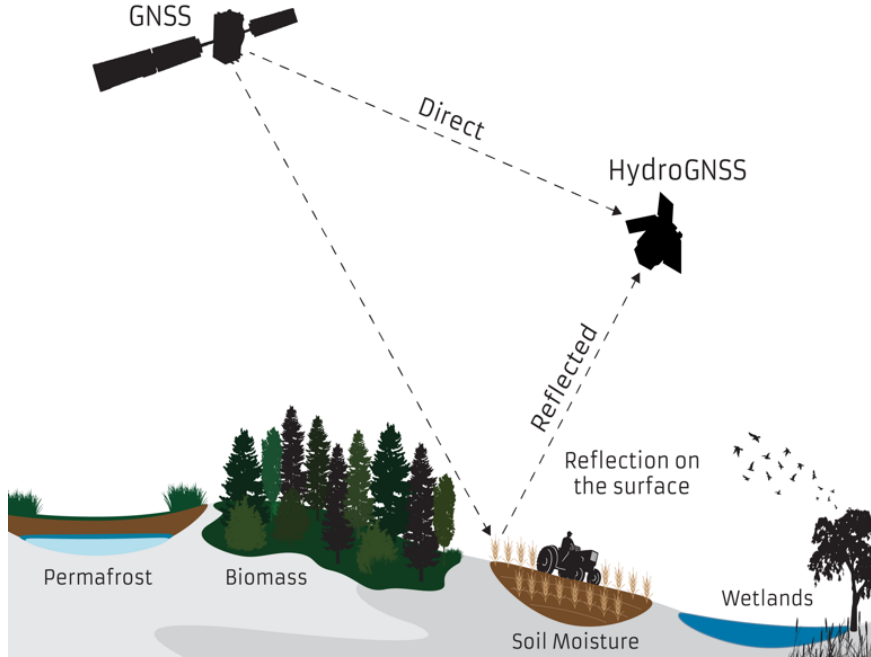
 Deliver space capabilities and missions

 Champion space

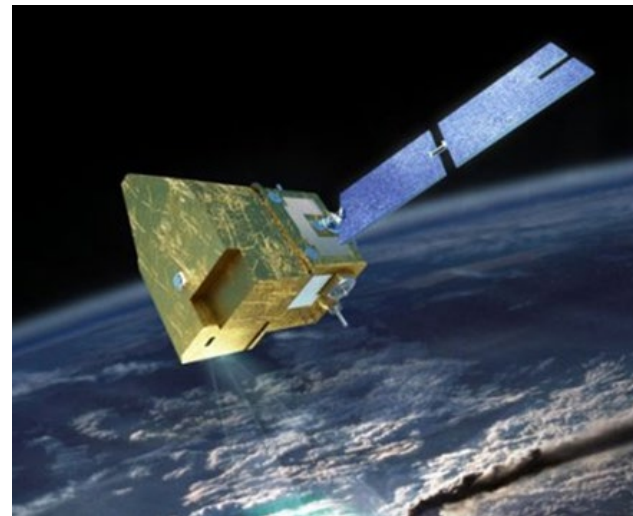
EO for Climate Action

BIOMASS

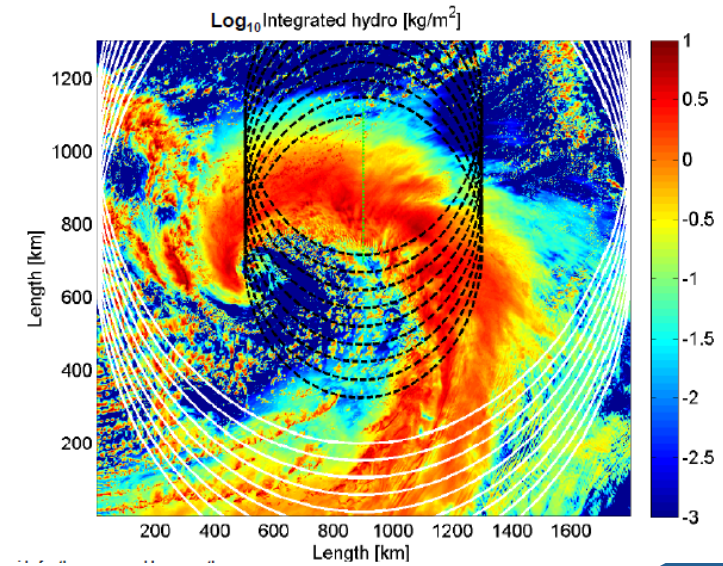
HydroGNSS



TRUTHS

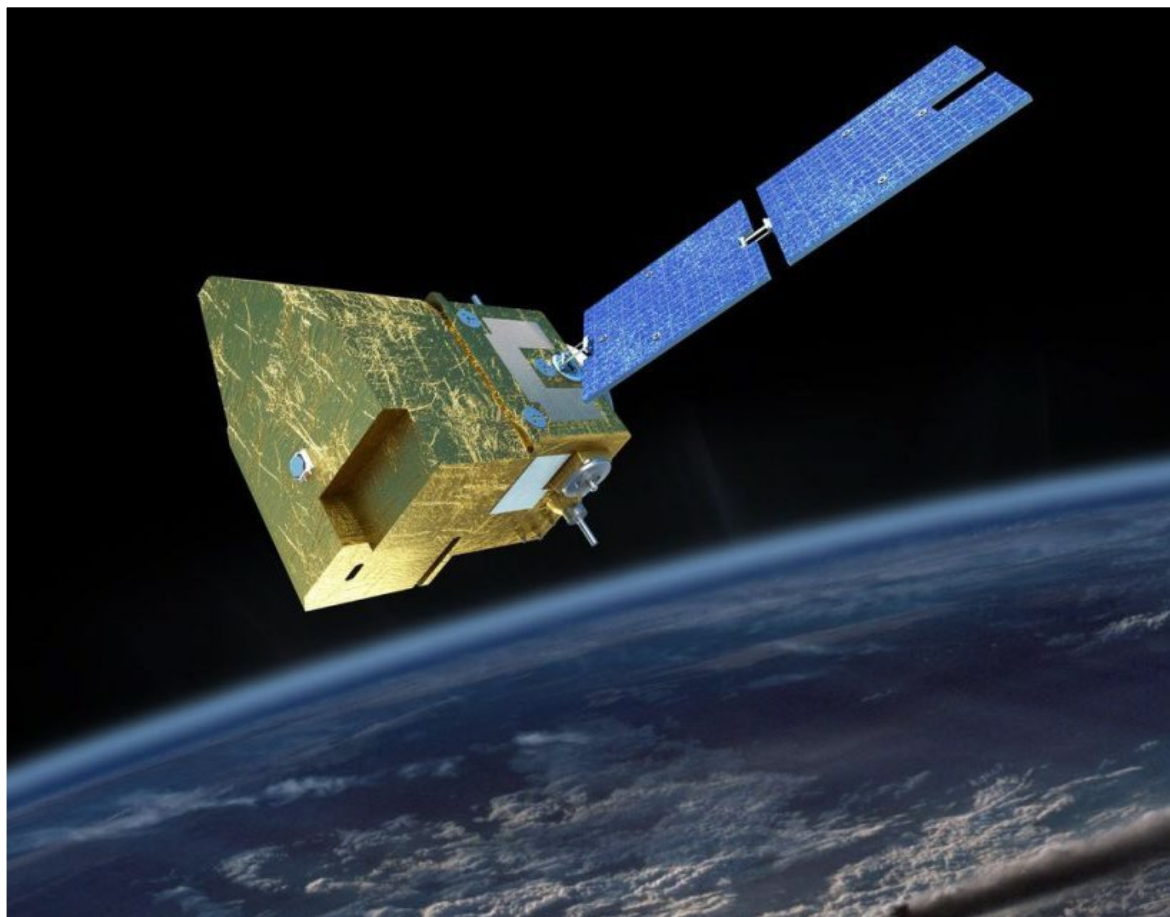


MicroCarb



Wivern

Microcarb



- New implementation arrangement signed at COP26
- Monitor for climate action
- first European satellite measuring CO₂
- Synergies exploiting EO data
- will translate atmospheric CO₂ observation into maps

TRUTHS (Traceable Radiometry Underpinning Terrestrial- and Helio-Studies)



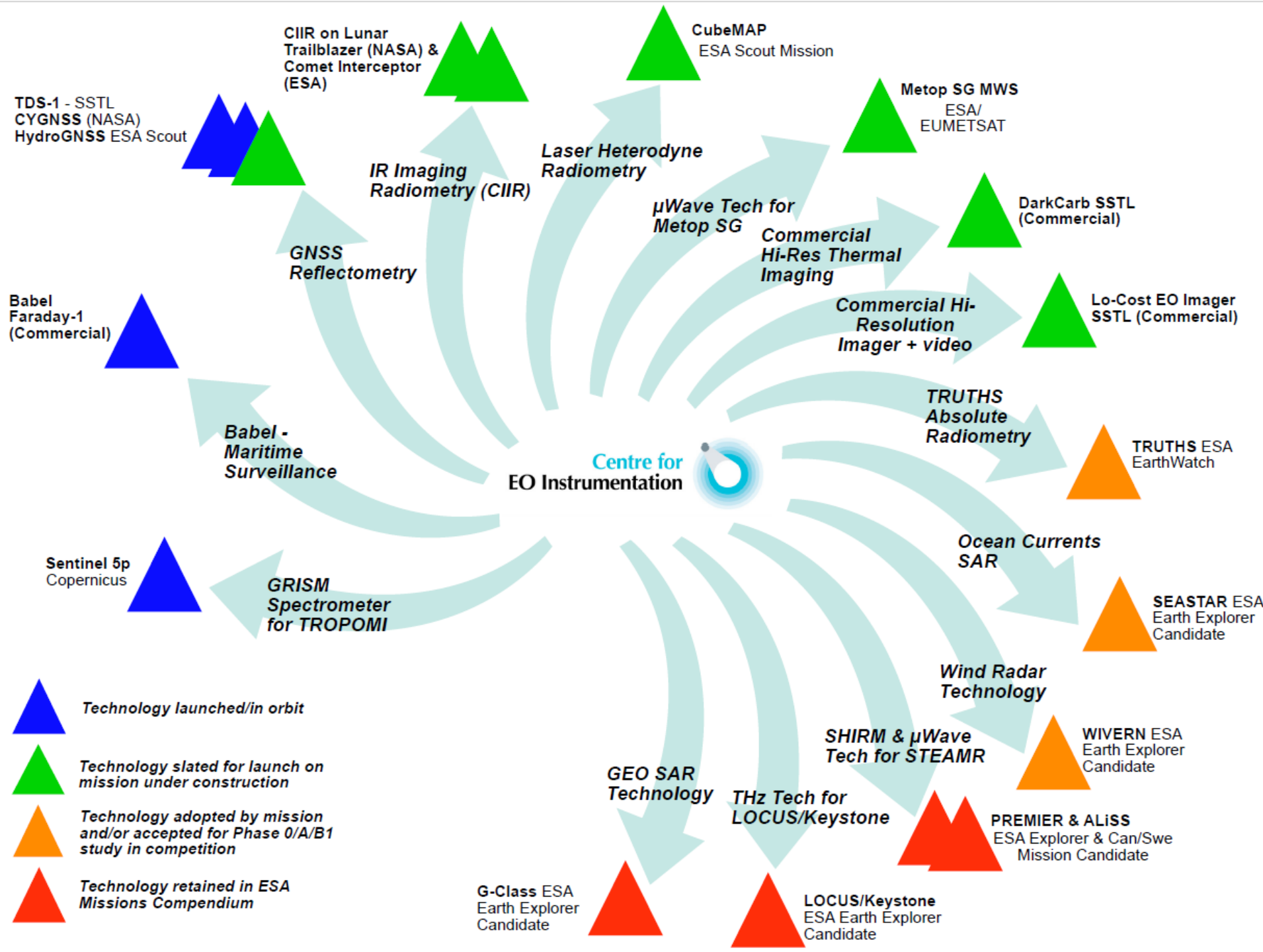
- UK led ESA mission
- Monitoring Climate Change
- ‘climate and calibration observatory in space’ which will reduce uncertainty in the Earth observing data
- Confidence in data and reducing uncertainties
- Now in detailed design phase

Centre for Earth Observation Instrumentation (CEOI)

- CEOI is a UKSA-funded consortium of industrial and academic EO specialists, led by Airbus Defence and Space in partnership with QinetiQ, University of Leicester and Rutherford Appleton Laboratory (RAL), part of the Science and Technology Facilities Council (STFC)
- CEOI oversees an Research and Development (R&D) grant programme which, with parallel investment from industry and academia, funds novel EO instrumentation projects to raise Technology Readiness Levels (TRL) to a level that allows contribution to major EO missions
- CEOI recently kicked off projects funded through the 14th Call



Technology project impact

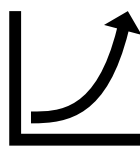


National Space Innovation Programme (NSIP)

- Created in 2020 to support the development of innovative space projects
- It supports projects that may be high risk but have the potential for high returns and a clear target market
- Several of these projects are focused on developing EO technology

EO Projects include:

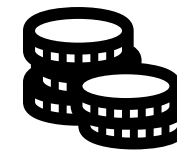
- TreeView: Precision Forestry to Tackle Climate Change (The Open University)
- High resolution thermal infrared space telescopes for globally monitoring the energy efficiency of buildings (University of Cambridge)
- Global Lidar Altimetry MISsion: GLAMIS (University of Edinburgh)
- Hyperspectral Microwave Sounder Constellation of Nanosatellites for Climate change And Mitigation (STFC RAL Space)
- GHGWatch (Geospatial Insight)



Supporting
growth in UK
space sector



Global
competition



Dedicated
funding

UNOOSA – UN Office for Outer Space Affairs

- UK is working in partnership with UNOOSA to address the information gap for space related climate actions
- Following its announcement at COP26 in 2021, UNOOSA is currently finalising the report of a UKSA funded Strategic Mapping Exercise related to existing international efforts using space technologies to support climate adaptation, mitigation, monitoring, and resilience
- Aim: develop a strategic view of organisations actively coordinating space and climate activities and, through this, increase coherence across the multilateral system and relevant international organisations such as:
 - Committee on Earth Observation Satellites (CEOS)
 - Earth Observing System (EOS)
 - Group on Earth Observation (GEO)
 - World Meteorological Organization (WMO)



International Collaboration

- ESA is a major partner
- CEOS & GEO collaborations
- UK/Australia Space Bridge
 - Signed in February 2021 a partnership focused on facilitating collaboration between the two countries' space sectors
 - Earth observation is a key priority for the UK and Australia, seeing particular merit in advancing joint capabilities in areas including remote sensing, calibration & validation and training/skills development



Summary

- EO is a priority and a growth area for the UK
- UKSA 'North Star lens' embraces new space and collaboration and partnership
- Climate is a major driver for technology development through to missions and applications
- We want to work in collaboration