

Earth Observation and Climate

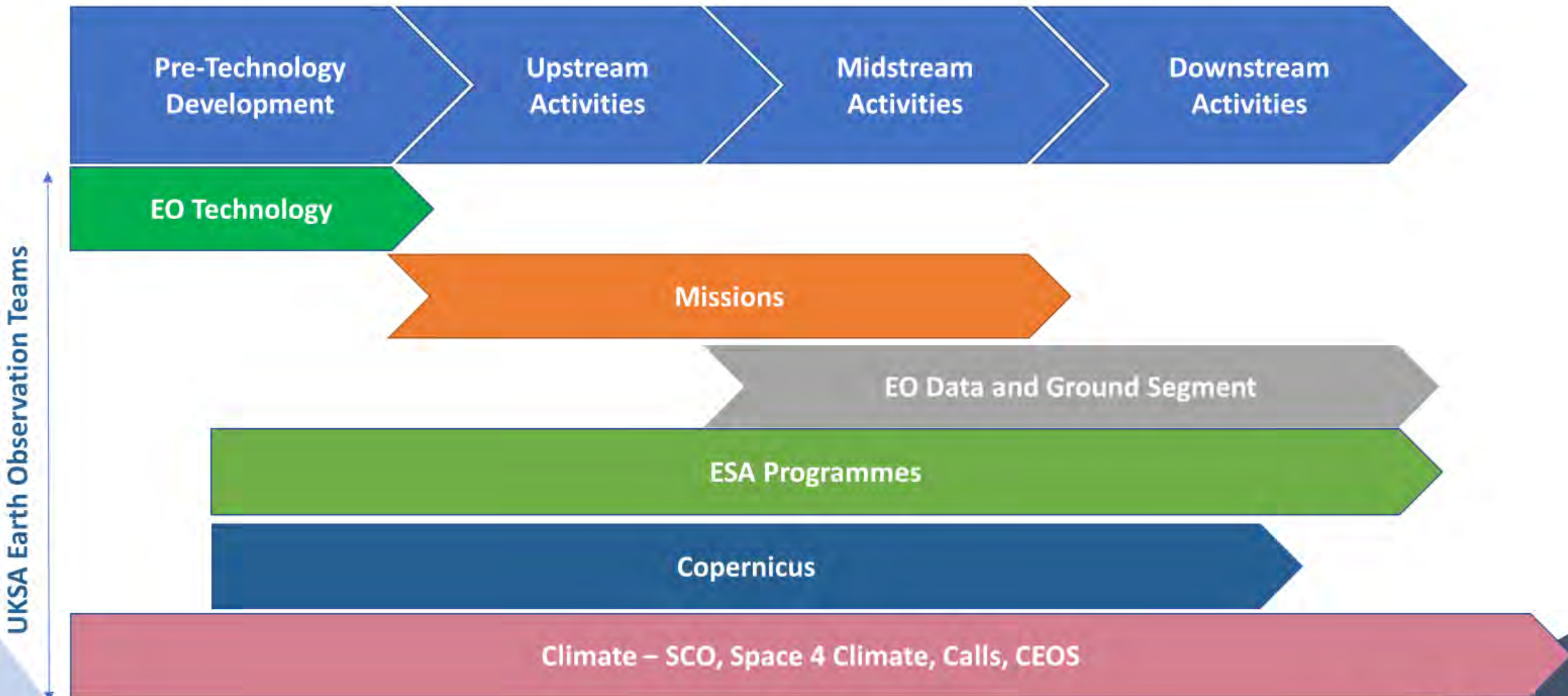
Emerging Technologies Workshop

Beth Greenaway

A message from
Harshbir Sangha,
UKSA Director of
Earth Observation,
Low Earth Orbit, and
Space Security and
Resilience



Current UKSA EO and Climate activities



Updates



LAUNCHES:

- We look forward to several major launches in EO this year, including EarthCARE (Q2) and Sentinel-2C (Q3).

COPERNICUS:

- UK is now a full participant of EU Copernicus.

TRUTHS:

- Work on a potential UK ground segment is underway. A recent RFI was sent to industry, ahead of ITT in July.

MicroCarb:

- AIT is now complete and the satellite is ready for launch. On 31st January it was shipped to France for safe storage until a launcher becomes available (estimated launch date June-August 2025).



Showcasing UK Technology at COP28

COP is a yearly United Nations climate focussed conference and last year it was hosted in Dubai, UAE.



The EO team and S4C had a stand in the Technology Pavilion, complete with PufferTouch system to demonstrate the uses of climate data.



Attended by 85,000 people, with staff and volunteers at the UK Green Zone stand speaking to hundreds of people with a wide range of backgrounds. Climate scientists, school children, to business executives and space industry professionals.



New workstreams and world stage responsibilities in Climate

- UK take over as CEOS Chair (Committee on Earth Observation Satellites) chair at end of 2024 and host CEOS meetings and plenary throughout 2025
- Leading the way with Methane Standards talks through workshops.
- Working closer with ESA Climate
- Supporting Space Climate Observatory projects with UKSA funding
- Continuing to fund and connect through Space4Climate which turns 10 this year!

S4C is a partnership linking industry, academia and government with the aim of facilitating key climate work and supporting large & small scale businesses to develop innovative climate space solutions. Through the S4C partnership we are able to expand our reach and ensure a seat at the table at all essential climate discussions. The globe photo shows the 'Puffertouch' an interactive tool used at events like COP 28.



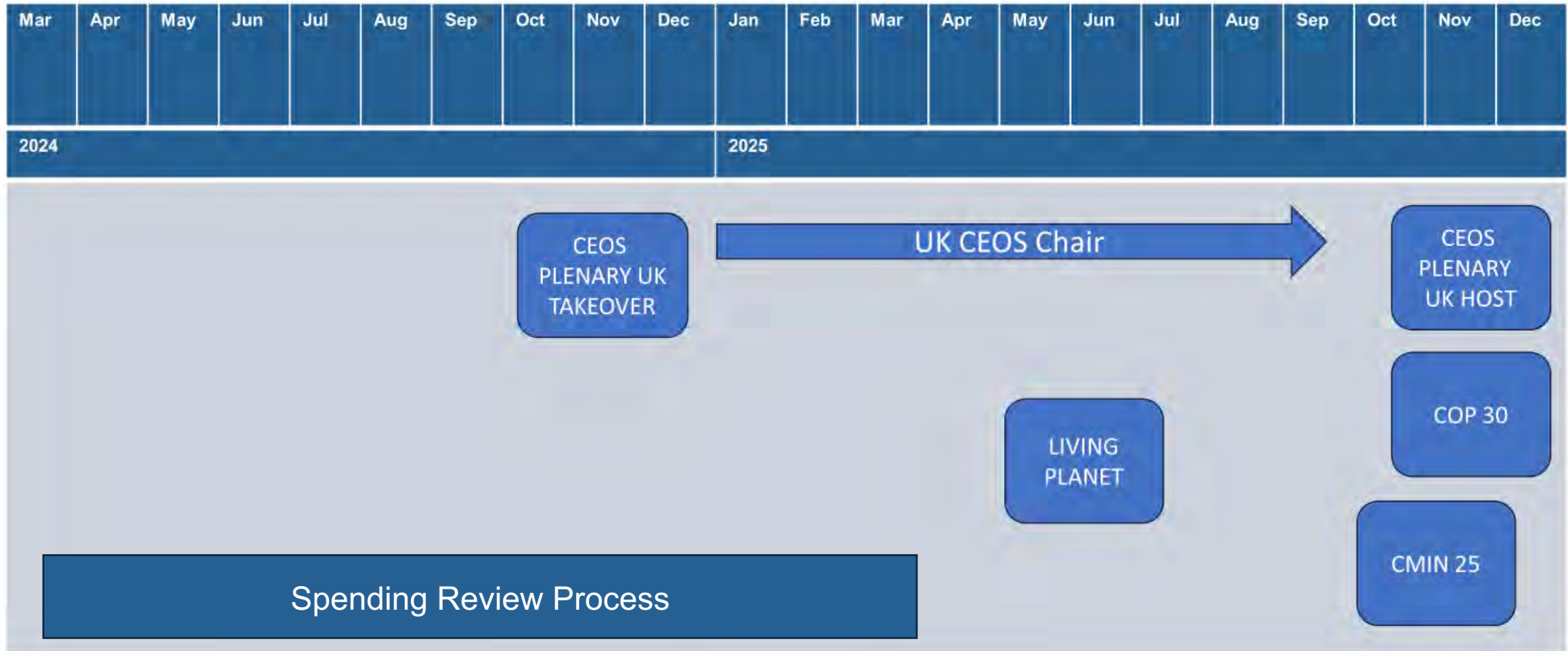
International Methane Standards Workshop



CEOI: More funding, less flexibility

- We are making an unprecedented investment in national EO technology, a 3x increase in the size of the programme over the current 3-year Spending Review period.
- Following peer review we have been able to fund a total of 12 projects from the 16th Call, totalling just over £9,000,000 in grant funding.
- However, we are now fully constrained by public accounting practices: we no longer have any ability to carry budget between Financial Years.
- We are therefore unable to accommodate any delays to CEOI projects which would cause them to span across financial years.

Our 2-year vision at a glance



Conclusion



- UK Space Agency is delivering a portfolio of activities across the EO Value Chain – in EOIP from April
- Copernicus participation now confirmed
- CEOS chair opportunity
- CMIN 25 – a brave new way for ESA EO?
- CEOI expanded – major grants awarded
- 5 launches this year – more to come in next few years

16th Call Flagships *(pending formal announcement)*

CAITDM Cold Atom Interferometry Thermosphere Drag Measurement	STFC-RAL, University of Nottingham, Metamorphic Additive Manufacturing Ltd	A cold atom interferometer to accurately measure the drag suffered by a 16U CubeSat
Unfolding Large-Aperture Telescope	SuperSharp Space Systems, In-Space Missions	A TIR large aperture telescope to produce images 4x sharper than conventional methods
TBC!	TBC!	TBC!
TBC!	TBC!	TBC!
TBC!	TBC!	TBC!
TBC!	TBC!	TBC!