

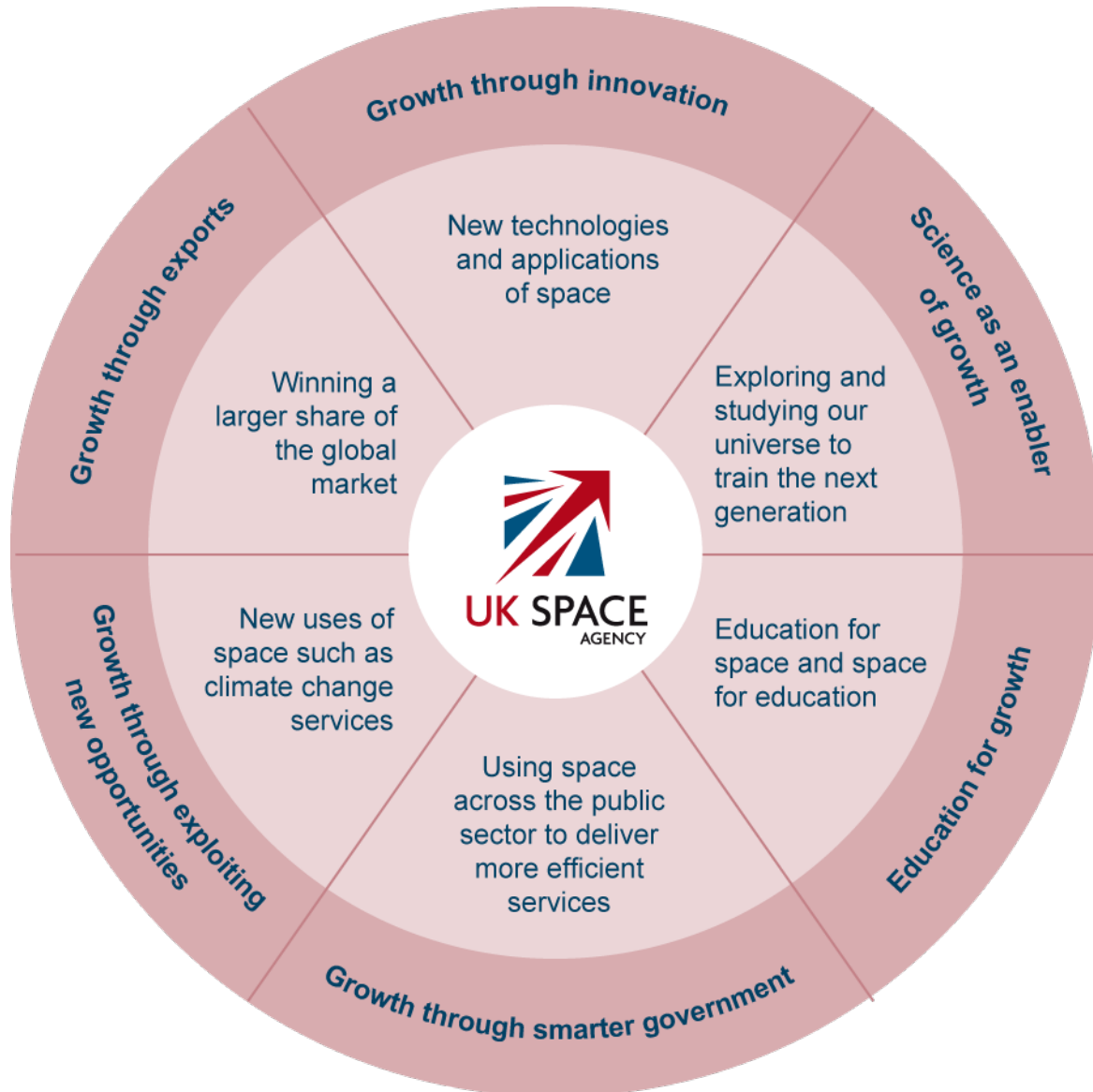


# The UKSA view on future EO direction

*Future Science, Needs & Missions*

*Maria Adams*

# Civil Space Strategy – six themes



## Goal:

£ 40Bn sector by 2030

## Key growth area:

Downstream applications: £ 37Bn  
Upstream: £ 3Bn

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Maturity of applications market will stimulate demand for new & improved space infrastructure

# EO – key role to play

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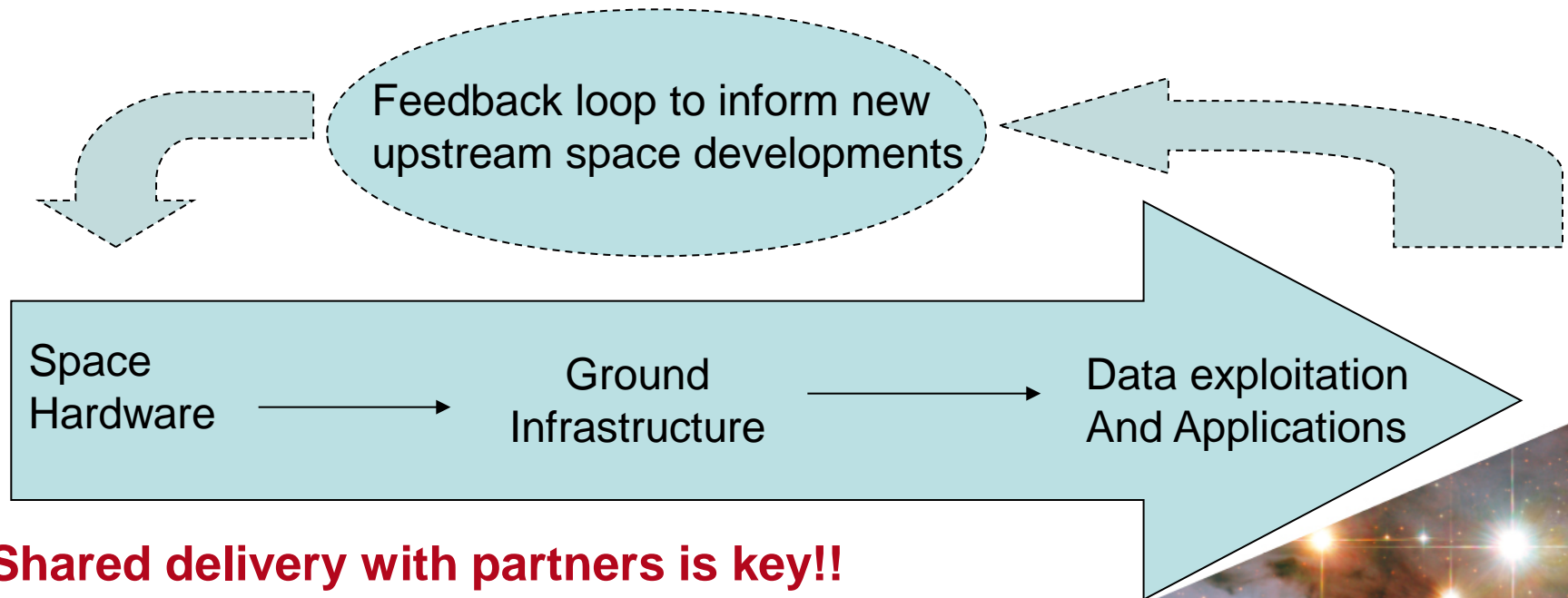
- Significant opportunity for growth in downstream market
- EO = ~30% of UKSA Budget
- Focussed applications programme in addition to European opportunities
- EO = one of the top 5 KPIs in the UKSA 15/16 Corporate Plan

## Re-energising Earth observation activities

- *Implementing the national EO strategy*
  - *new staff, closer alignment with wider space policy*
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# UK EO Strategy (2013-2016) – 4 pillars

- Maximise return on European programmes for academia, government and industry
- Build on leadership in processing, QA, modelling and visualisation of space data for environmental research & climate applications
- Leadership in radar technology and applications
- Increase leadership in small low cost missions



**Shared delivery with partners is key!!**

# Implementation plan

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- Clear action plan July 2015 – November 2016
- Priorities to be considered at the EO Town Meeting (18<sup>th</sup> June 2015)
- Strategy/implementation beyond 2016 will be driven by
  - the new government
  - the outcomes of this action plan
  - spending reviews and
  - ESA C-MIN 16 outcomes



# Future EO Missions - context

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## **Vision:**


to enable UK to be strategic and proactive, providing leadership in influencing future EO observations, instruments and missions

- Building on existing strengths (to reflect EO Strategic priorities):
  - UK has a wealth of knowledge and capability both on science, and mission instrumentation;
    - many areas of leadership, a reflection of past targeted investments
  - UK = International player: both institutional and commercial/export customers



# Institutional EO mission opportunities (1)

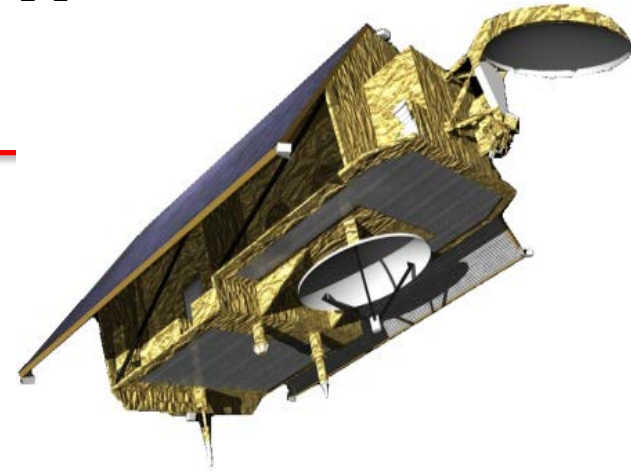
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- EO space investments currently channelled into ESA, EUMETSAT, EU
  - Technology budgets: TRP, GSP, GSTP + H20/20
  - Science Missions: EOEP-4:
    - BIOMASS,
    - EE-8 selection – September 2015 PBEO - UCM will take place on 15-16 September in Krakow (Poland)
    - Small Mission Initiative – implementation of SAOCOM CS?
    - Earth Explorer-9 Call – draft proposal to be discussed at September 2015 PBEO
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# Institutional EO mission opportunities (2)

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- Operational Missions:
  - EPS-SG/MetOp-SG
  - GMES/Copernicus: Sentinels 1, 2, 3 (C) & (D) units, Jason C/S
  - Next generations for post 2030?
- Technology demonstrators - H20/20





# National approach (1)

- To maximise return from European investments:
  - CEOI-ST (NSTP): national EO instrumentation technology programme
  - SSGP: national applications programme
  - Other space EO investments: Catapult, G/S...

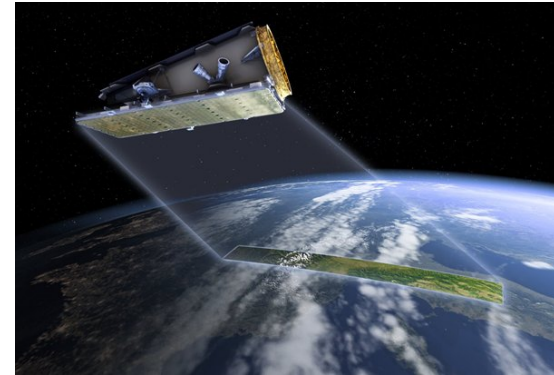


18<sup>th</sup> March 2015:

Signature of the ESA – UKSA agreement on the national collaborative ground segment

# National approach (2)

- No annual national EO missions space programme budget to support a strategic approach (cf: CNES, DLR...)
- Many opportunities to work with partners bilaterally
  - but no timely funding
- Political will is important: NovaSAR
- Funds can be allocated in government – we need to have options and cases ready when those opportunities arise
- Case-by-case approach = in addition to any national space budget settlement



# A strategic approach to bilaterals

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- Bilaterals: institutional & export
- UKSA and CEOI-ST team working together to identify and assess opportunities
  - EBOAT – country by country study to identify bilateral opportunities which enhance UK industrial and scientific capability
  - EOMAG – viability assessment and prioritisation of potential EO missions in accordance preparedness and potential flight opportunities
    - Initial recommendations supported by EOAC
  - Agency Space Programmes Review Panel assesses technical/programmatic viability (has supported NovaSAR)
  - Key Science advice from NERC /NCEO (dual key)



# EO missions: Way Forward

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- European institutional
  - Update of the ESA's Science Strategy:
    - importance for science to address societal challenges
  - Preparations for EE-9 –
    - game changing in terms of approach to mission implementation?
  - Update to the ESA EO strategy in discussion
  - Focus on C-Min 16 :
    - Review of EOEP & developing EOEP-5
  - Next Generations of operational missions
- National Bilateral : continuation of EOMAG activities





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