



The UK Space Agency

Overview for CEOS

September 2012

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The UK Space Agency

Replaced the British National Space Centre (BNSC) policy unit from April 2011. An executive agency of Department of Business Innovation and Skills reporting to Minister of Universities and Science

Leads on Civil Space Policy

Aims:

- Growth through new opportunities;
- Growth from export;
- Innovation supporting growth;
- Science to enable growth;
- Education for growth;
- Growth through smarter government



Dr David Williams

Chief Executive



ESA Ministerial November 2012

Council of Ministers - Sets budgets and remit of ESA for next few years (Mandatory and optional programmes)

Covers 11 areas from Space Science, Meteorological operations and Earth Observation Envelope Programme and GMES.

UK funding to be decided by Ministers/ Treasury in Autumn up to meeting date. Negotiation with ESA ongoing

Main Contact UKSA: Ruth Boumphrey / Maria Adams



The Space Innovation and Growth Strategy

- joint government, industry and academia 20-year vision and strategy for growth of the space industry.
- sets out the challenges and opportunities that will govern future value, competitiveness and hence growth.
- Recommendations for Britain to be world leader in space sector – revenue, jobs, value to economy
- 16 recommendations being implemented by joint industry and Agency teams



Space Innovation and Growth Strategy 'Re-Stack'

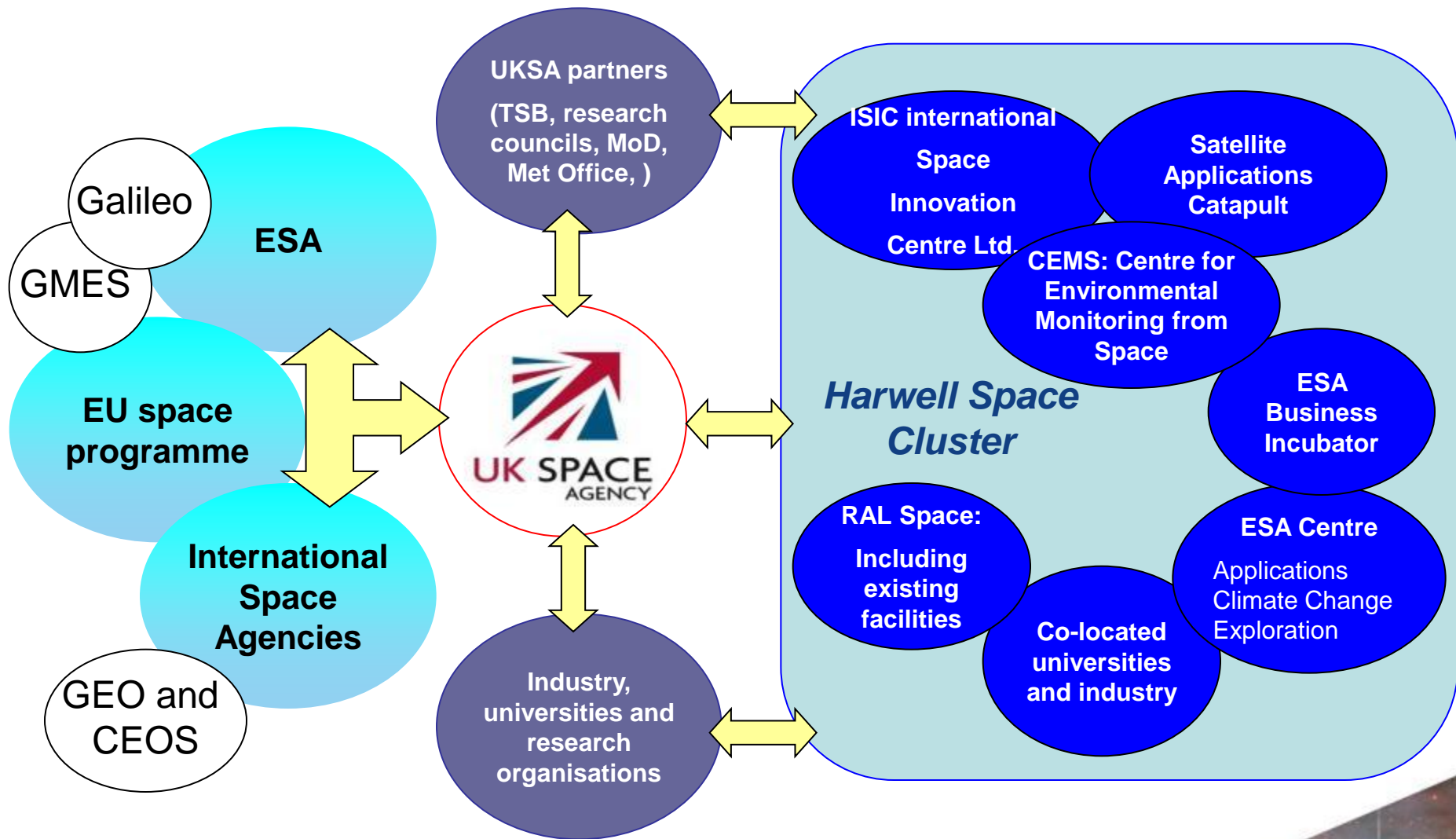
- Space IGS Published 2010 – now 3 years on
- Re-stack more substantial than a refresh:
 - continuity of vision and growth targets
 - close recommendations, acknowledge successes and drop those no longer relevant or deliverable
 - focus on medium-term growth – delivery over 5 to 8 years
 - new opportunities for UK in high growth markets and to meet societal challenges
 - practical & astute delivery plan
- Aim to improve original IGS strategy & analysis
 - where does UK need to be in 5, 10 & 15 years to meet 20-year growth horizon? How do we establish that direction of travel? And monitor progress?
 - improve the evidence base for new recommendations
- Build on recent initiatives
 - UK Civil Space Strategy
 - UK Government Growth Review & Industrial Strategy
 - Harwell 'cluster'



Space IGS 'Re-Stack' – Next Steps

- Plan to publish in June 2013 & review at UK Space Conference
- UK Space Agency advisory groups will lead key activities, e.g. satellite telecommunications & navigation, Earth Observation and technology.
- Open event on 14 November at Harwell
- Comments / ideas at any time to Robert Waters & Helen Roberts
- (robert.waters@ukspaceagency.bis.gsi.gov.uk and helen.roberts@ukspaceagency.bis.gsi.gov.uk)

Harwell and the wider UK space sector



Harwell facilities

Harwell Space Cluster

ISIC international
Space
Innovation
Centre Ltd.

Satellite
Applications
Catapult

CEMS: Centre for
Environmental
Monitoring from
Space

- [Operations Centre](#) satellite mission planning and control
- [Security & Resilience Unit](#) handling secure data and protecting against man-made threats and natural hazards to space systems
- [High definition Videowall](#),
- [3D HD Dual Projection Facility](#)
- [Applications Innovation Centre](#) state-of-the-art hi-tech facilities, including a mini-videowall, mobile devices, a touch table, and a 3D display.
- [Concurrent Design Facility](#)
- Flexible conference facilities

- Data – processing, integration, storing, and visualization techniques for large datasets from space and elsewhere
- High performance cloud based computers to enable self or assisted development or hosting of applications

PLUS

- *People and expertise in space solutions, technologies, IP issues, funding routes etc etc*



QA4EO Secretariat

- **UK has vision to play a lead role in the provision of climate and commercial EO services**
 - Knowledge of data quality is critical for climate and key enabler for operational EO services.
 - UK has strong heritage on the provision of Cal/Val and “reference quality” data e.g. ATSR + for SST
 - NPL and its Centre for Carbon Measurement provides a natural focus to support international QA efforts

<http://www.npl.co.uk/Carbon-measurement>
- **UKSA & NPL CCM jointly fund QA4EO secretariat for 2 yrs**
 - POC for QA4EO community queries,
 - Facilitate implementation team interactions
 - Development and maintenance of Website – community interface
 - Support to development and promotion of guidelines and case studies



NovaSAR

- Medium-resolution 'S'-band synthetic aperture radar
 - commercial programme
 - 6 metre resolution
 - multiple modes of operation – trade resolution for increased swath
 - optimum for maritime surveillance, deforestation and flooding, but also other applications
 - highly affordable satellites and data
- UK National mission that creates UK SAR capability
 - UK Space Agency investing in technology demonstration
 - SSTL mission prime & platform
 - Astrium SAR sensor
 - broad (and critical) supply chain in UK & Europe for NovaSAR technologies
 - successful technology & commercial demonstration leads to a constellation
 - high economic and technology value to the UK

NovaSAR

- Demonstration provides some data for Government use
 - security applications development & experimentation
 - data for companies to develop commercial applications, via the new Satellite Applications Catapult
 - data for the Climate and Environmental Monitoring from Space ('CEMS') centre at Harwell
 - science
- Programme
 - first NovaSAR mission launched late 2014
 - potential to fit AIS
 - potential early availability of representative SAR data from airborne demonstrations for developers
 - potential for annual 'drumbeat' of satellites for constellation from 2015

Applications -What's the UK vision?

- Growth – Space sector itself and use of space helps other sectors grow or public sector more efficient
- UK makes use of large investments in GMES and Galileo
-> National Space Applications Programme .. Linked closely to National Space Technology Programme NSTP

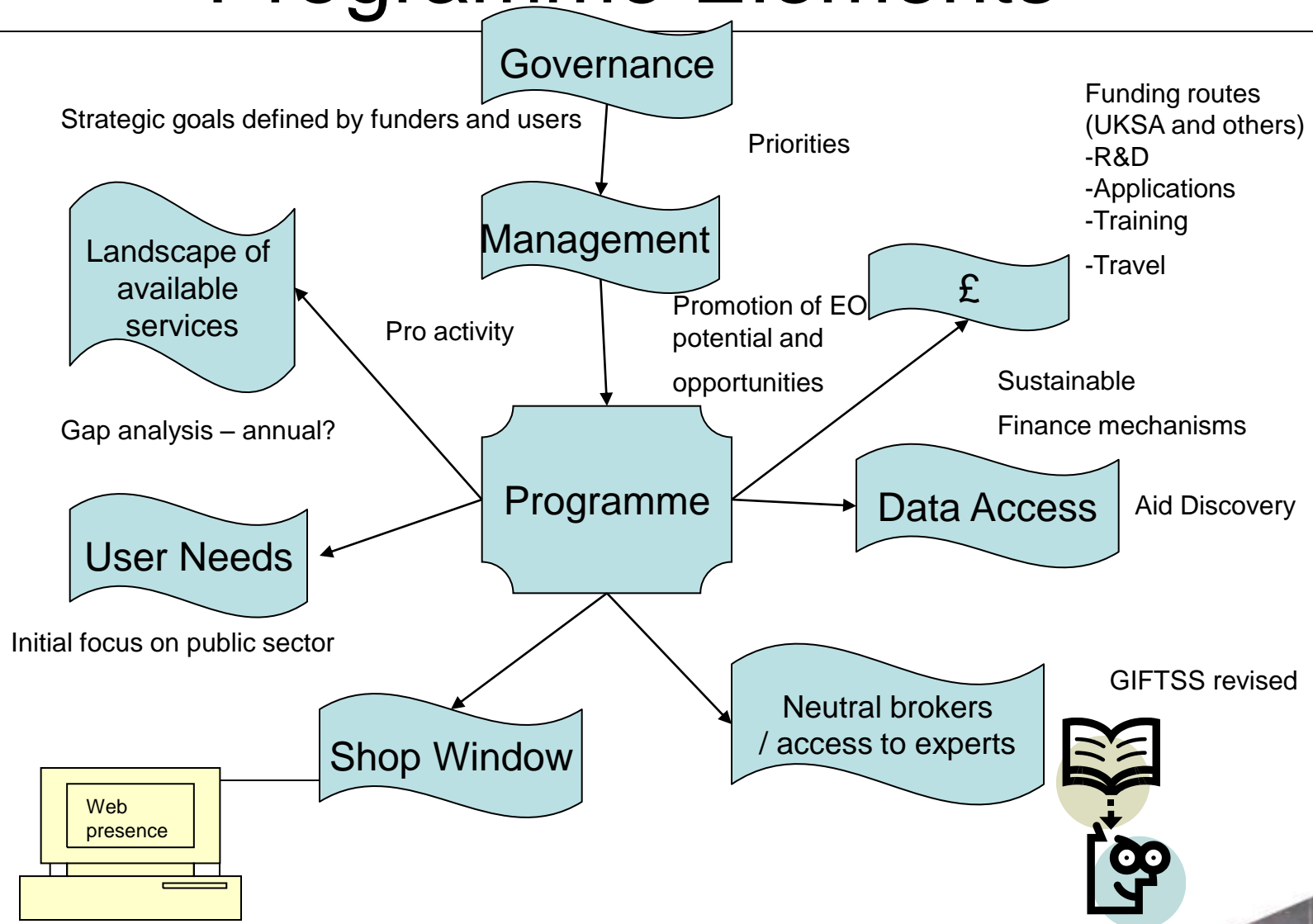


NSAP Goals: Key Outcomes: by 2015 (draft)

- Users of space (inc EO) increase and have improved access to data, services and experts
- GMES and Galileo services benefit the UK
- Public sector investment in space application development to be strategic, coordinated and value for money
- Issues and barriers to using key data sets in applications and services can be raised and addressed



Programme Elements



Ground Segment Preparation for GMES

- The availability of continuous quality data will have a significant and long-awaited impact on the development and growth of data services and information in the space down-stream sector.
- To maximise growth opportunities the UK needs to ensure that a framework enabling timely access to the data and exploitation is in place.
- The key enabler to ensuring the UK is ready to receive and make accessible this expected plethora of EO data from GMES and other sources, to its community, rests with the development of a UK Ground Segment Collaborative Centre.
- A first proposal for a UK Ground Segment Collaborative Centre has been developed in dialogue with other Member States and the European Space Agency within the context of GMES discussions, and in consultation with the UK community.



Earth Observation Advisory Committee EOAC

Established June 2012 to

**“ Provide advice to the UK Space Agency on the strategic direction
for UKs EO programmes and projects”**

Independent Chair John Remedios

Officials from other UK departments and ad hominen Members

Next meeting 21st Sept – issues to discuss

ESA Ministerial, EO Strategy, International Activities – CEOS/ GEO.

John Beddington Committee - Sustainable Finance Mechanisms

IGS Restack etc.

Overview of EO in the UKSA paper was produced for the first meeting





Thankyou

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