



GRACE



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# The UK Space Agency: An Update

Presented by Professor Terry Moore  
The University of Nottingham

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# The UK space sector has changed

- ✓ Formation of UK Space Agency
- ✓ Industry-led strategy to grow the sector over ten years ('Space IGS')
  - Goal to win 10% of £400B market in 2030
- ✓ Establishment of an ESA presence in the UK
- ✓ Creation of the International Space Innovation Centre at Harwell
- ✓ New businesses exploiting space



# Who is the UK Space Agency?

- Fully operational in April 2011
- Replaced the British National Space Centre (BNSC)
- Integrates space budgets from four organisations and policy responsibilities from others
  - more coherence and efficiency
  - a sweep of activities from basic science, through technology and on to applications
- An executive agency of the Department of Business Innovation and Skills (BIS)
- HQ in Swindon, Wiltshire
- Offices in London and Harwell, Oxford



**Dr David Williams**  
Chief Executive



# Purpose of UK Space Agency

- To meet national needs, the Agency is responsible for ensuring that the UK retains and grows a strategic capability in space-based systems, technologies, science and applications.
- The UK Space Agency will therefore enable sustained economic growth, scientific excellence and societal benefits from the UK civil space sector.



# **Our strategy *‘To lead and sustain the growth of the UK Space Sector’***

## **Growth through exports**

- Winning a larger share of the global market

## **Growth through innovation**

- New technologies and applications of space

## **Growth through exploiting new opportunities**

- New uses of space such as climate change services

## **Growth through smarter government**

- Using space across the public sector to deliver more efficient services

## **Education for growth**

- Education for space (the skills the industry needs to grow) and space for education (using space to attract young people into STEM)

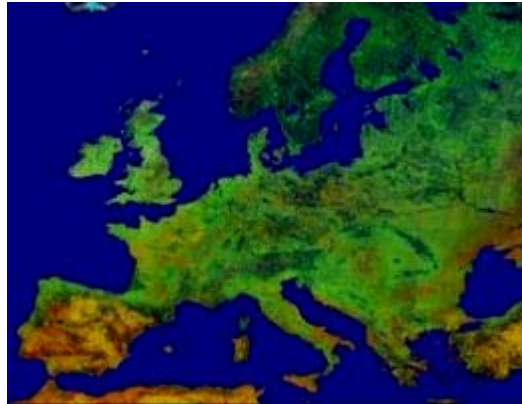
## **Science as an enabler of growth**

- Exploring space to gain new knowledge, train the next generation and create new technology

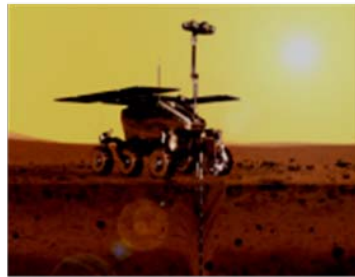


# Policy and Programme priorities

- European space policy
- Global partnerships
- Technology
- Education, Skills & Outreach



- Telecoms and navigation
- New applications for Government and business

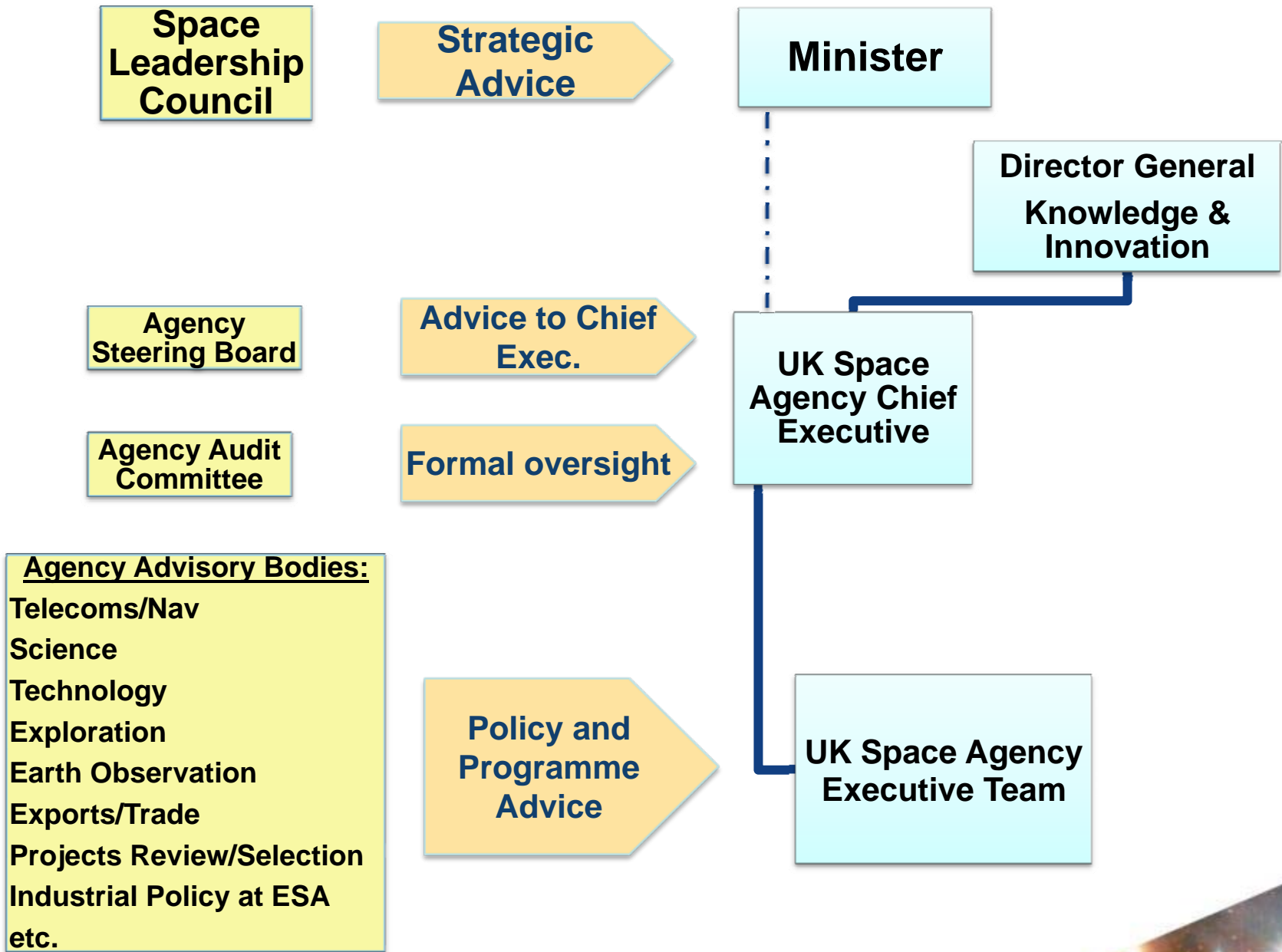


- ESA's Cosmic Vision
- Mars exploration for science, technology and inspiration
- UK in a global framework

- science using Earth observation techniques
- Global Monitoring for Environment and Security (GMES)



# Governance and Advice





# Working with our Partners: the Technology Strategy Board

## Formal agreement defines TSB role:

- Delivery partner of the UK Space Agency for telecommunications and navigation programmes
- Promoting business opportunities for the UK Space industry across other growth sectors
- Providing Technology Demonstration opportunities
- Knowledge Transfer to drive growth
- Open Innovation to accelerate R&D into business use

**Technology Strategy Board**

Driving Innovation





# National Space Technology Programme

A set of National Space Technology Roadmaps issued on April 8<sup>th</sup> 2011

Will inform a new National Space Technology Programme (new funding announced in March 2011)

Programme will be augmented by industrial funding

Plus partnership with Technology Strategy Board and the Research Councils

ISIC will be a key delivery mechanism

## Five NSTP Roadmaps

*Telecommunications*

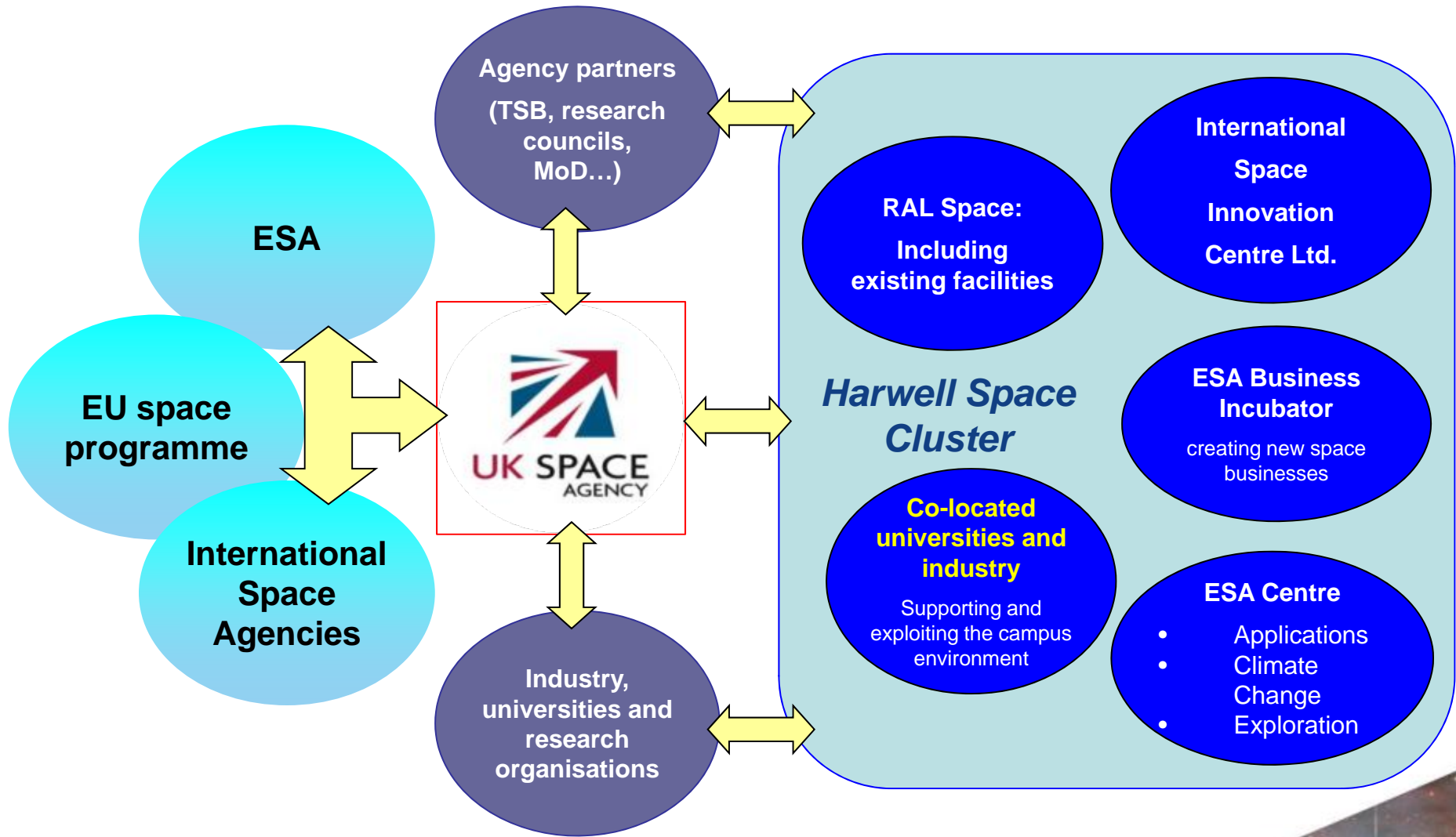
*Sensing*

*Position, Navigation & Timing*

*Exploration and Robotics*

*Access to Space*

# Harwell and the wider UK space sector



# International Space Innovation Centre

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- A new hub for the UK's space programme
- Located in Harwell alongside ESA
- UK Government, universities and industry can work alongside each other to create new space technologies, applications, businesses
- Access UK, European and global space programmes
- Links regional, national and international partners and stimulate further growth in the UK's space economy.



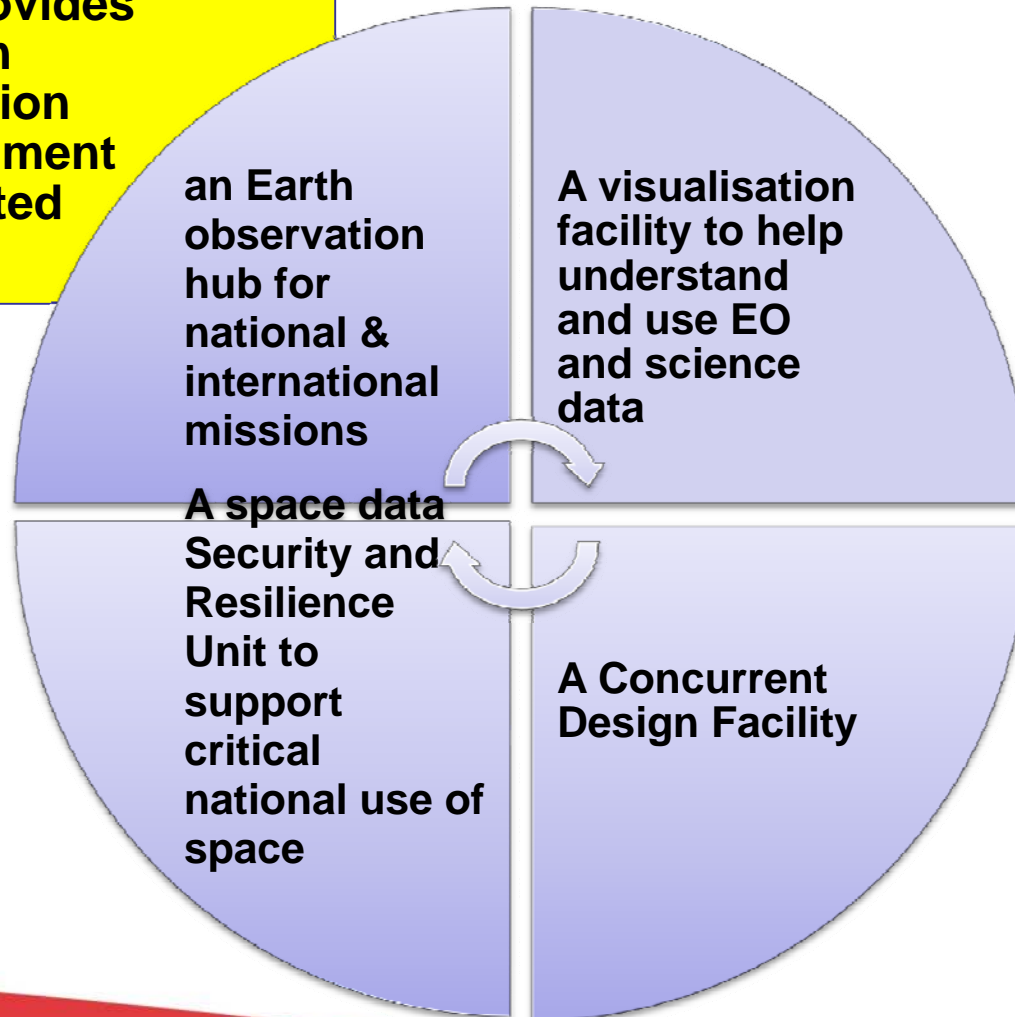
## What is ISIC?

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- ISIC is an independent entity
  - A not for profit company limited by guarantee
- It is owned and operated by its member organizations
  - Mixture of private and public sector
- A delivery mechanism to provide long-lead technology development and innovative applications
  - Intellectual property normally held by the relevant member



- **ISIC provides an open innovation environment supported by...**





Industry

Academia





# ISIC Hub and National Spokes

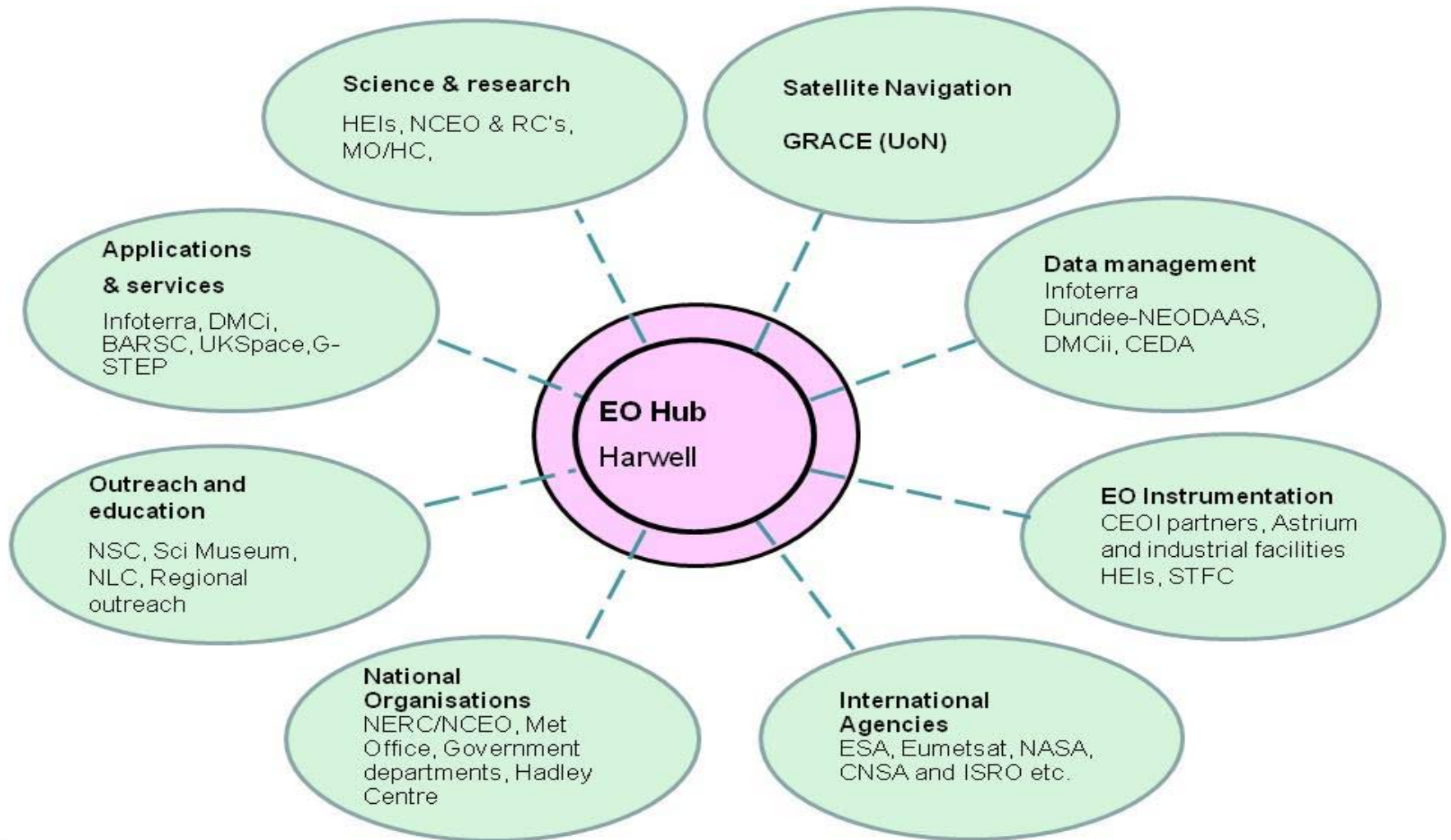


**Links to International Centres of Excellence**





# ISIC Hub and Spoke



# ESA at Harwell



*opened 22nd July 2009*

# The Vision for ESA Harwell

1. Home of ESA **'Innovation and Applications Centre'** working on telecoms, navigation and EO applications as well as IAP
2. Home of Climate Change Initiative programme
3. Home of space exploration facilities and competences not available elsewhere in ESA
4. Infrastructure and tools to promote innovation across ESA



# Technology & Innovation Centres

Business-focused centres that makes world-leading technical capability available to businesses to solve their technical challenges. Provides access to world-leading technical expertise, infrastructure, skills and equipment

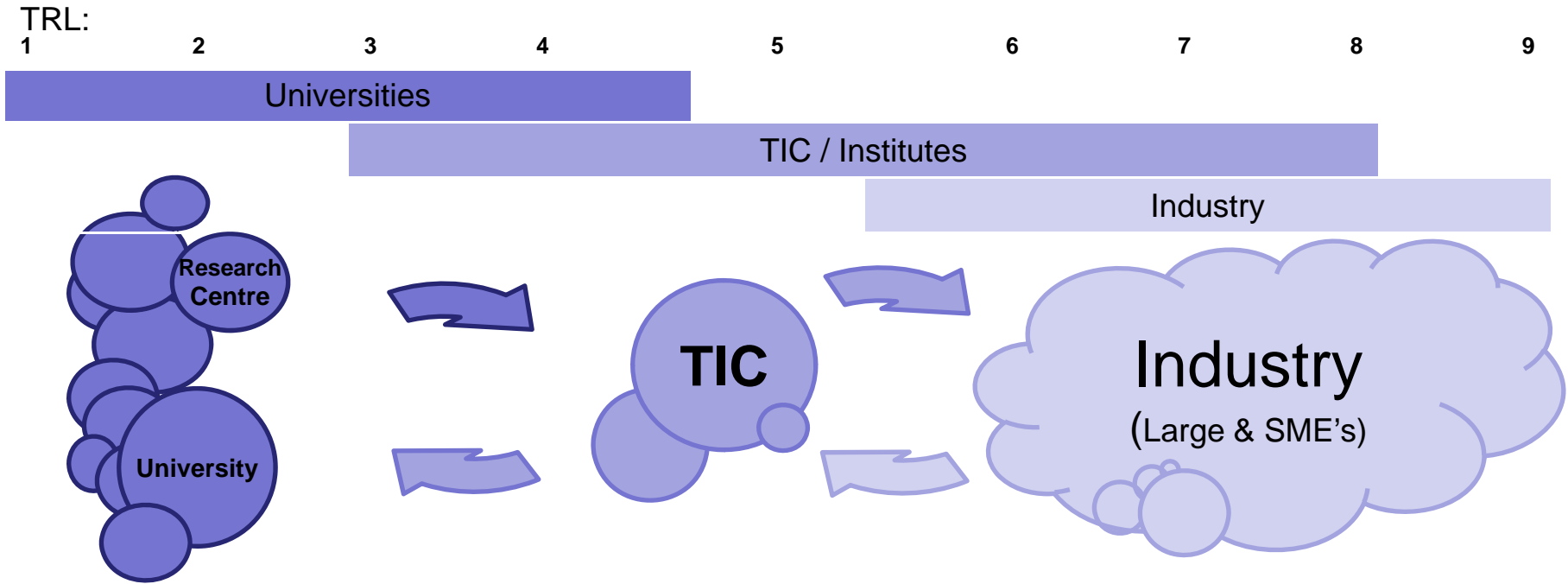
- Access to world-leading technology & expertise
- Reach into the knowledge base for world-class science
- Capability to undertake collaborative R&D projects with business
- Capability to undertake contract research for business
- Strongly business focused with a professional delivery ethos
- Create a critical mass of activity
- Skills development at all levels

**Technology Strategy Board**

Driving Innovation



# UK Landscape & Context



Research excellence	Research Centres	Technology & Innovation Centres	RTOs, PSREs, Science parks, etc	Industrial R&D Centres	Industry Commitment	UK Priorities
RCUK to identify	RCUK , charity & other centres and institutes (IMRC's IKC's EIT's etc)	RDA/DA centres, etc. - Existing - Proposed - Potential	Other organisations in the area.	Major R&D centres & incubators	-Opportunities for UK - Willingness to co-invest	- Low Carbon - Digital Economy - Energy - Health/Medicine

**Technology Strategy Board**  
Driving Innovation

# In summary



Manage the UK civil programme to explore and exploit space.

Provide international representation

Invest in the UK space industry.

The UK's approach to space is lean, agile and commercial

Harwell is a new focus for delivering our goals.

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