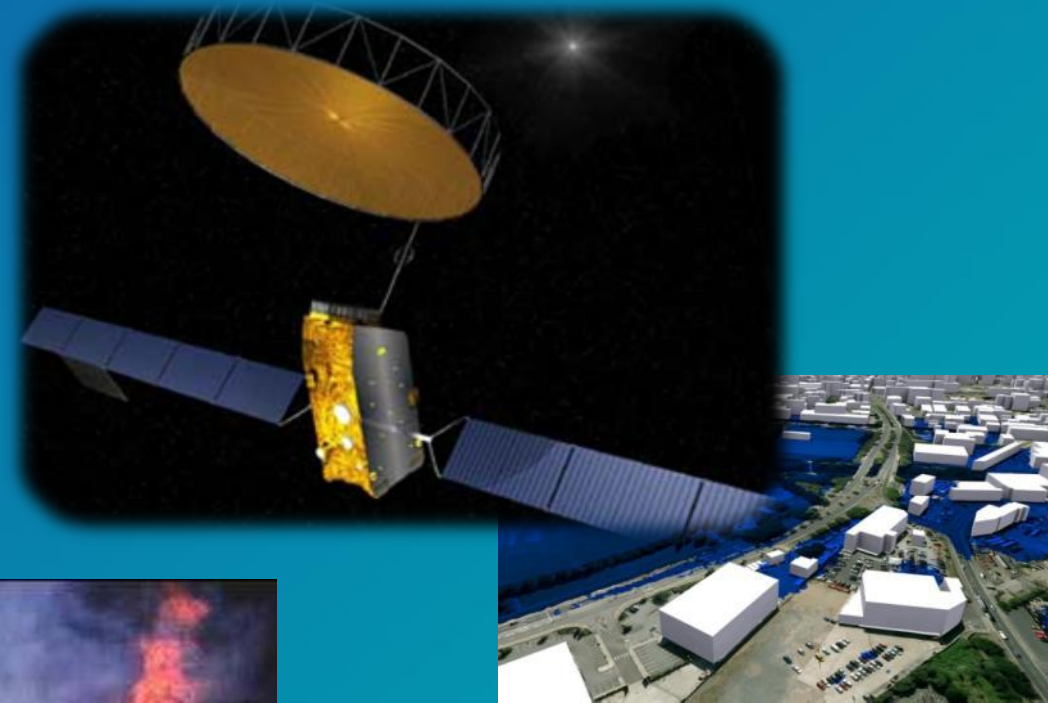


# The UK Satellite Applications Catapult centre – opportunities for new services, growth and collaboration

*Nick Veck*

*Presentation to  
NEREUS  
SPACE4YOU*

*28<sup>th</sup> February 2014*



Catapult is a Technology Strategy Board programme

**CATAPULT**  
Satellite Applications

# What is a Catapult centre?

Business-focused technology and innovation centre that makes world-leading technical capability available to businesses to solve their technical challenges.

Providing:

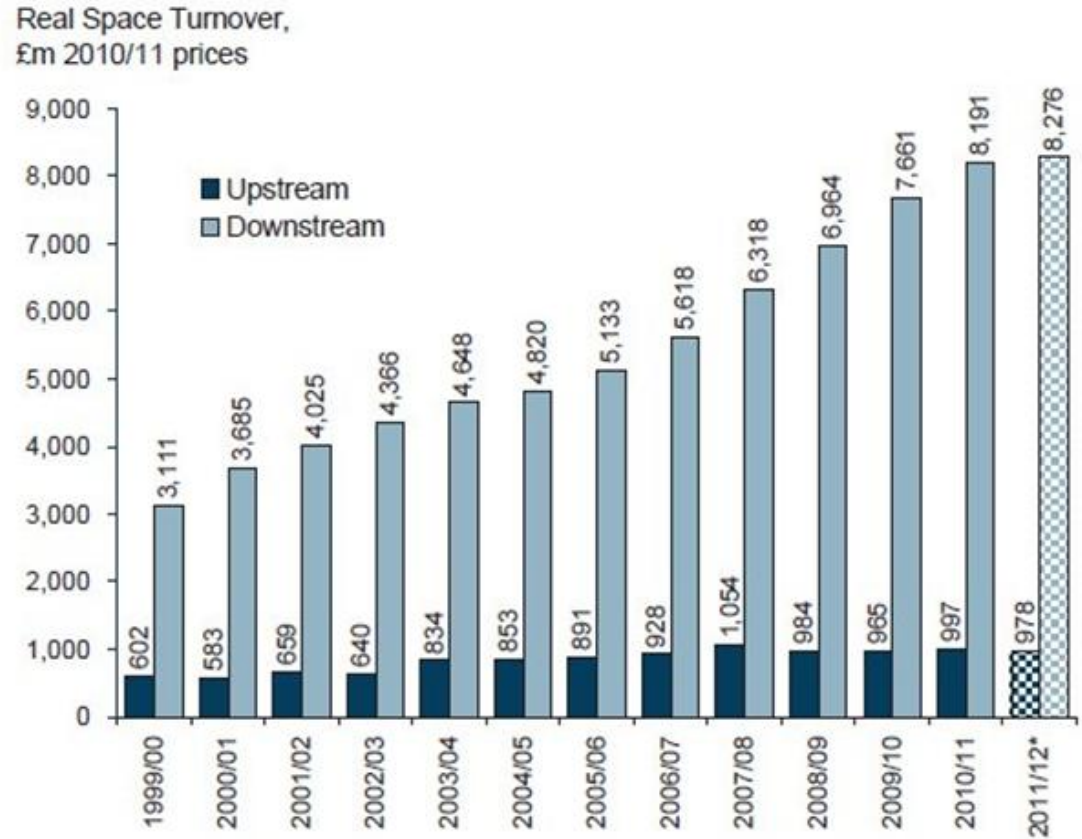
- Access to world-leading technology & expertise
- Reach into the knowledge base for world-class science
- Capability for:
  - collaborative R&D projects with business
  - contract research for business
- Strongly business-focused, with a professional delivery ethos
- Create a critical mass of activity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



# Choice of Technology Areas

## Broad criteria:

- Potential global markets worth £ billions
- UK world-leading research capability
- UK business has ability to exploit the technology and capture a significant share in the UK
- Centres enable UK to attract and anchor knowledge intensive activities of globally mobile companies
- Closely aligned with, and essential to achieve, national strategic technology objectives



Source : Oxford Economics

# Overview of the Business

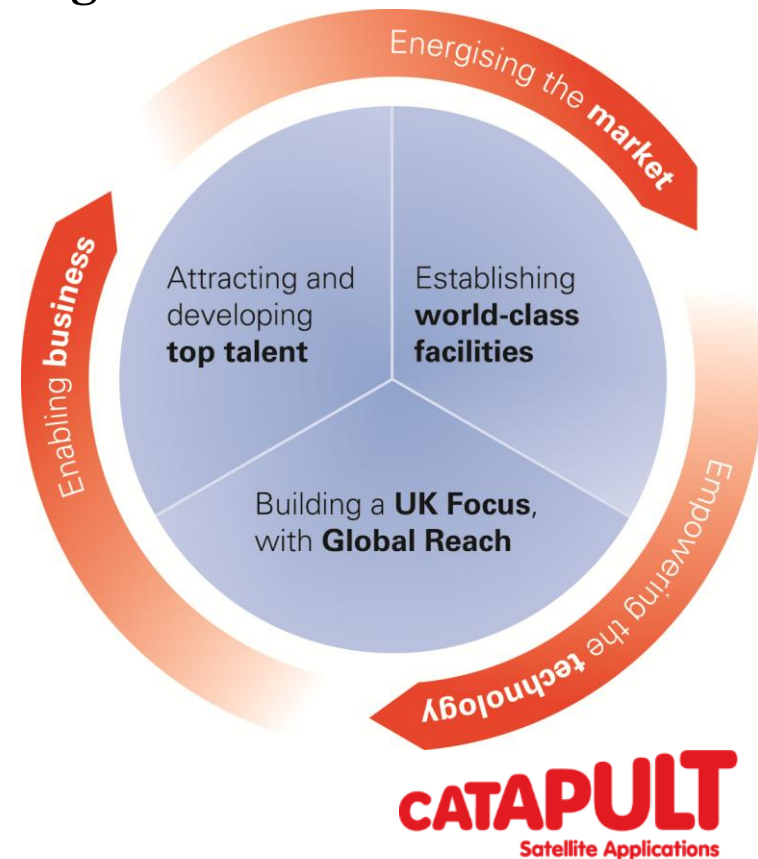
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## The Business

- Is a not for profit Research and Technology Organisation
- It will become a centre of excellence
- Provides a range of facilities
  - Implementing a range of projects

## Governance

- Oversight from Technology Strategy Board
- Independent Governance Board
  - Non Executive Directors
  - Catapult Advisory Group



# Global markets and UK Opportunity Mapping

	Satcoms	EO	GNSS
Distance learning and telemedicine	Orange	Red	Red
E-commerce, incl. home and remote working	Green	Red	Orange
Entertainment	Orange	Orange	Orange
Location-based consumer services	Red	Orange	Green
Traffic management, incl. fleet management	Green	Green	Green
Natural resources management, incl. energy, farming, food and fisheries	Green	Green	Green
Urban planning	Red	Green	Orange
Disaster prevention and management	Green	Green	Green
Meteorology and climate change	Red	Green	Orange
Security	Green	Green	Green
Financial services and insurance	Orange	Orange	Orange

# Programmes of Activity - the starting point: Consultation Process with the UK Space Community

	Satcoms	EO	GNSS
Distance learning and telemedicine	2	2	1
E-commerce, incl. home and remote working	4	0	0
Entertainment	1	1	0
Location-based consumer services	0	0	1
Traffic management, incl. fleet management	6	12	10
Natural resources management, incl. energy, farming, food and fisheries	5	21	11
Urban planning	2	6	2
Disaster prevention and management	3	11	1
Meteorology and climate change	1	17	3
Security	3	7	3
Financial services and insurance	0	2	2

# Further analysis: Initial Catapult Programmes for 2013-14

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		Market Growth	Community Interest
Market-led	Transport	Green	Green
	Security & Civil Protection	Yellow	Yellow
	Natural Resources, Energy & Climate	Yellow	Green
	Internet of Things	Green	Yellow

### Additional Criteria:

Opportunity for Catapult “value-add and potential for exploitation

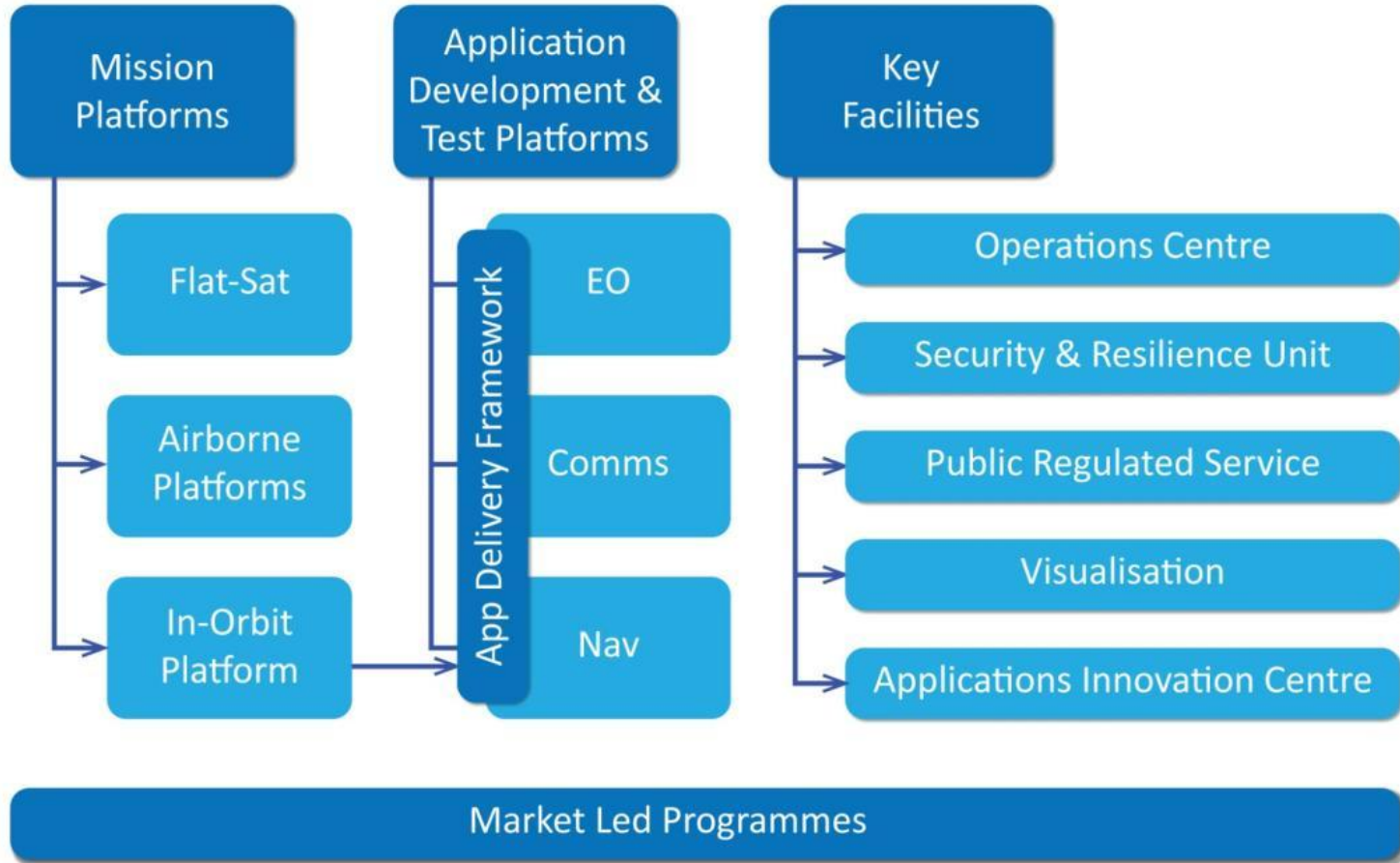
Addresses a Market-failure

UK National Interest

# Catapult Facilities:

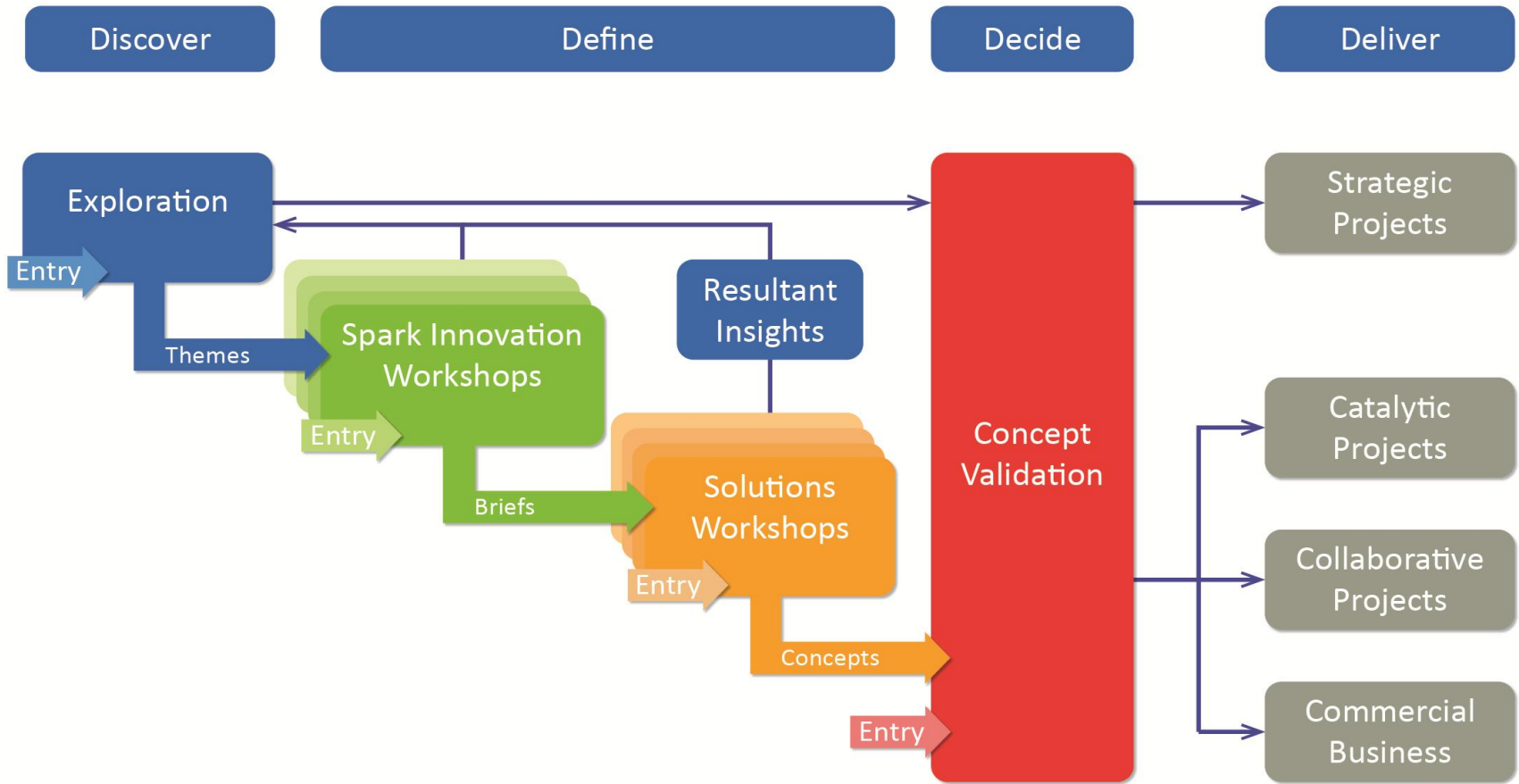
## For collaborative application development

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# How do we find projects? From Consultation to Project Delivery...



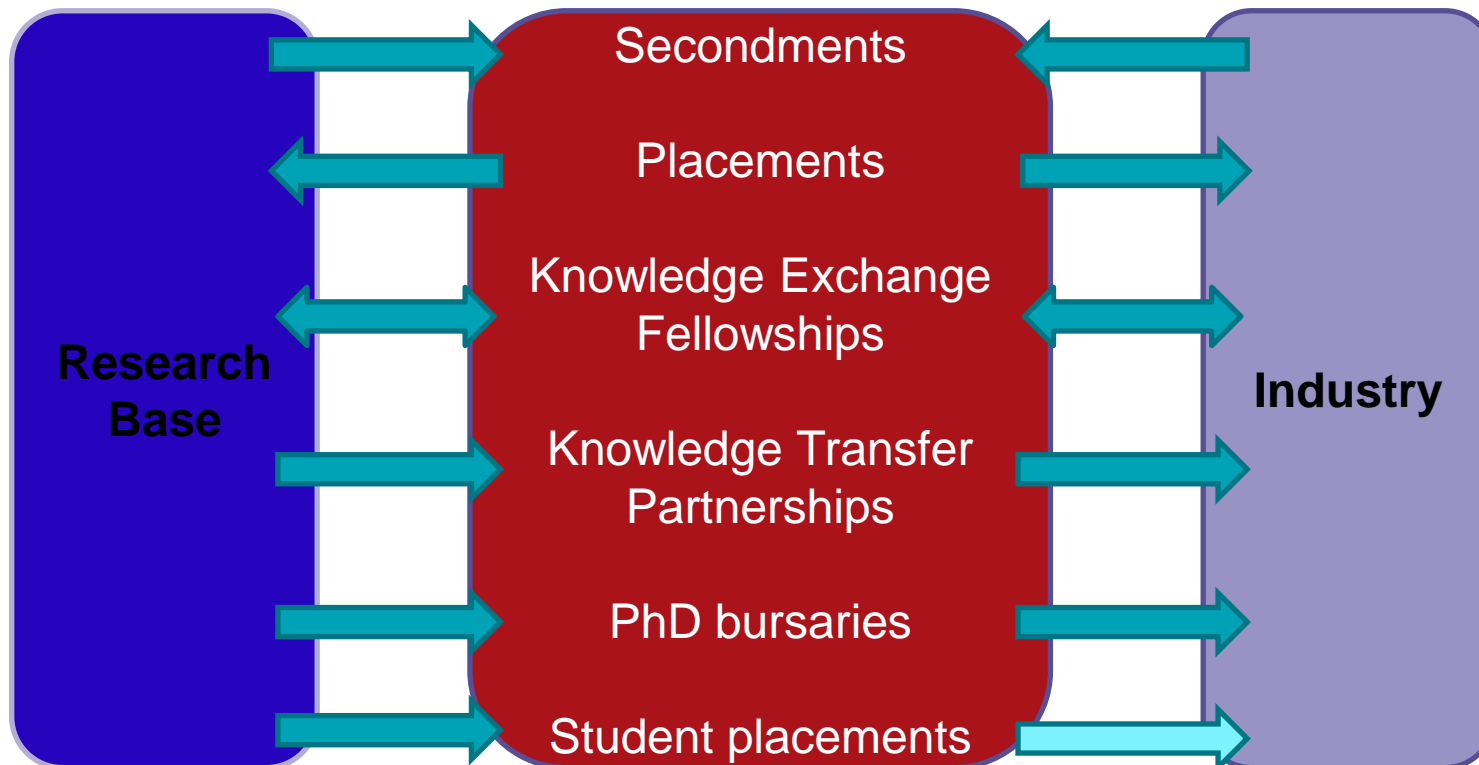
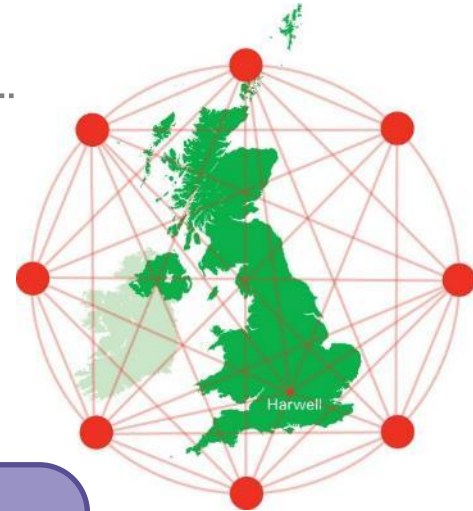
# Support for Knowledge Exchange

Promotion of expertise in the research base

Networking, events, training, collaborative projects

People exchange schemes

Regional Centres of Excellence



# Operational Situational Awareness

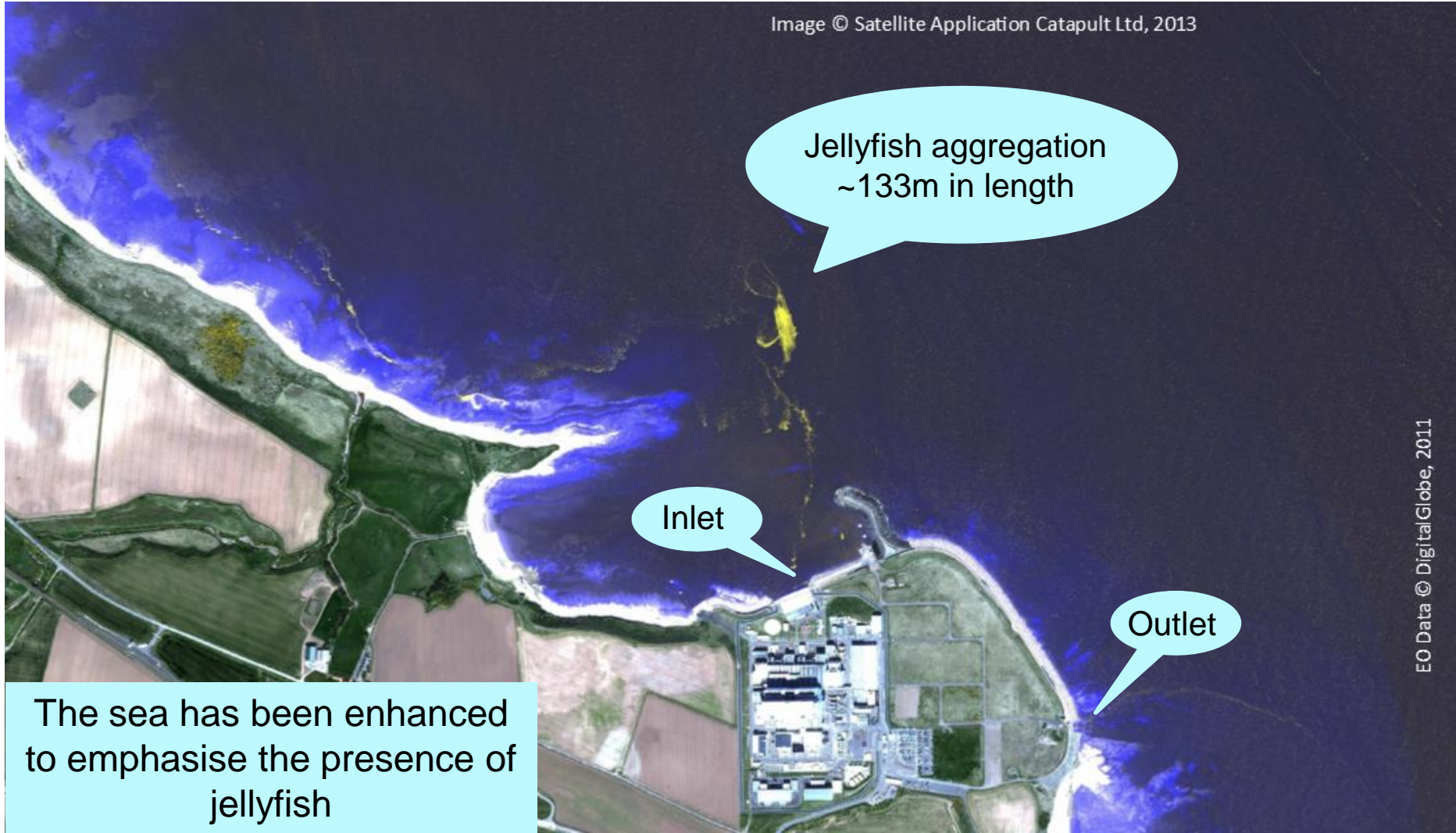
- Focus for 2014 is in Transport and Security applications
- A common theme across many Catapult projects:

- A general capability the Catapult is developing
- In collaboration with industry and academic experts
- The underlying platform for an Illegal, Unreported and Unregulated (IUU) Fishing demonstrator



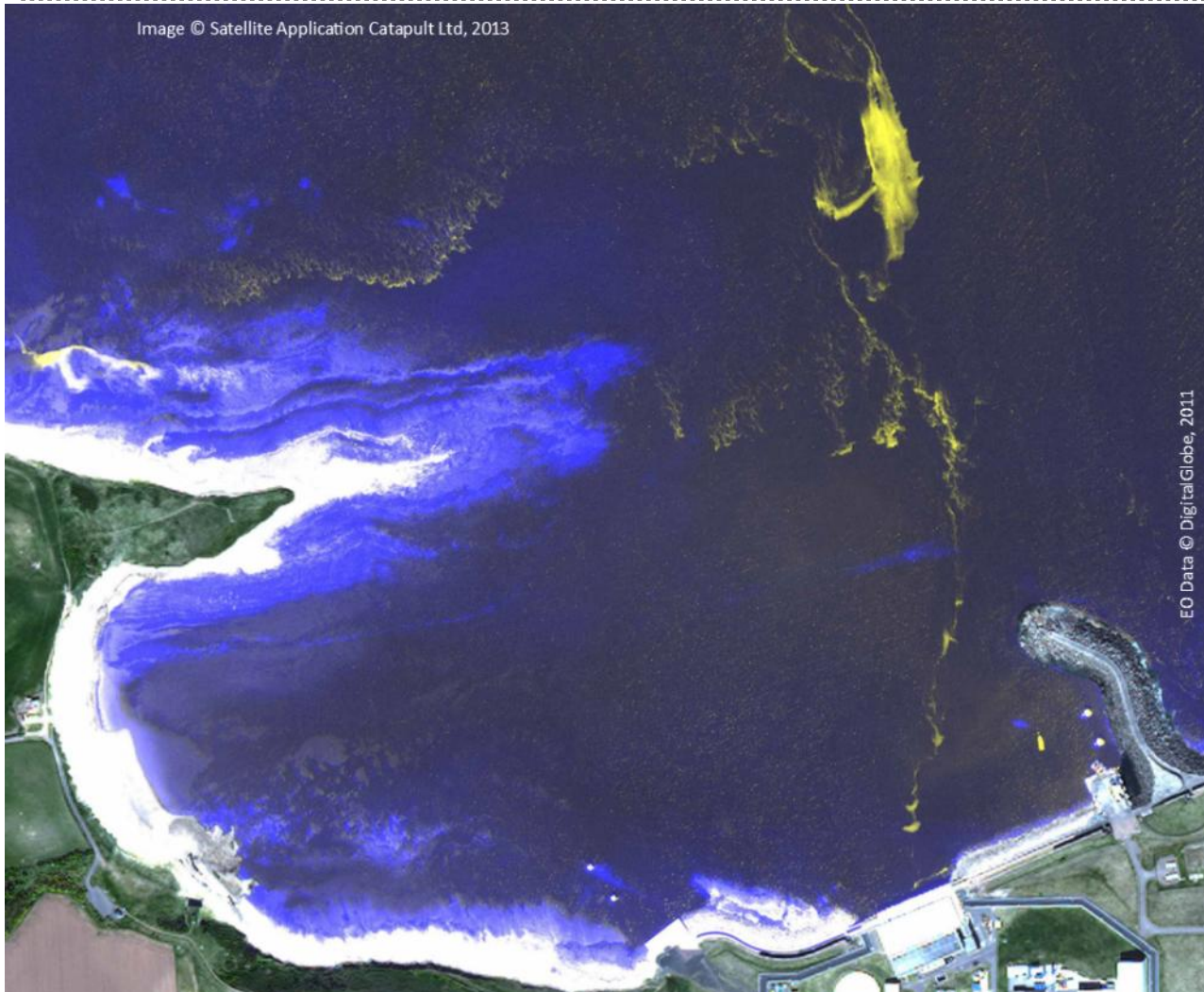
# Using high resolution imagery to identify jellyfish swarms

Image created by the fusion of 50cm data from WorldView 1& 2 satellite (28<sup>th</sup> June 2011)



Commercially Sensitive

# Power Station Cooling Inlet



Common jellyfish,  
also known as Moon  
Jellyfish

Adult size 15-40cm  
diameter

Tidal fronts and  
strong winds tend to  
aggregate jellyfish  
into visible patches

Commercially Sensitive

# Power Station Cooling Outlet



Predicting jellyfish blooms is seen as the Holy Grail

Useful parameters:

- hydrodynamic currents
- SST
- Tides
- weather conditions etc.

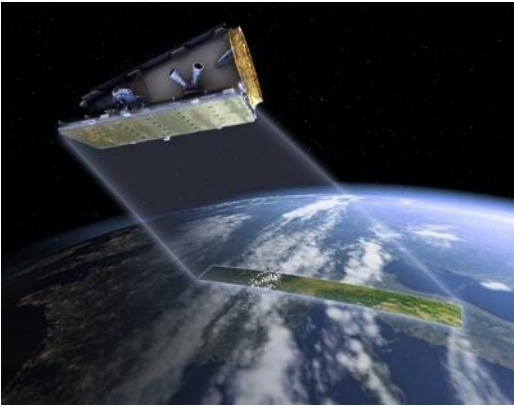
Commercially Sensitive

# Opportunities for international Cooperation

E-connectivity



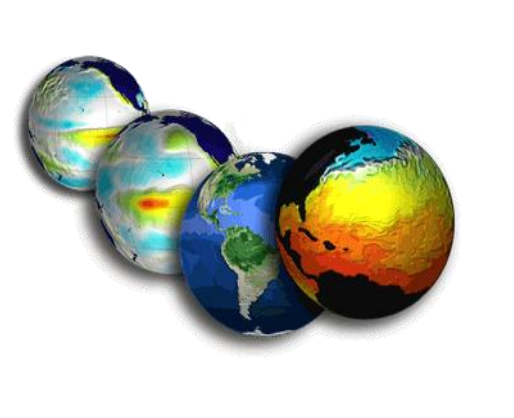
Security



Smarter Government



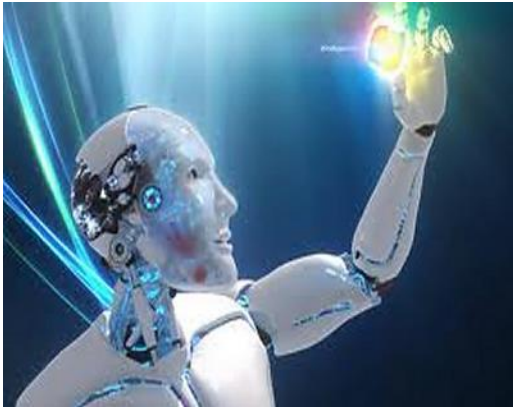
Climate Change



Disaster Management



Inspiration



# Thank-you

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Head of the CEO Office

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