

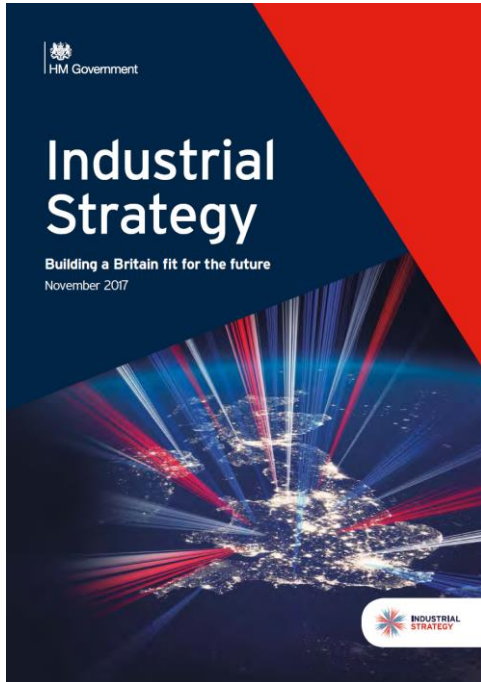
Space Applications in the Industrial Strategy Challenge Fund

Appleton Space Conference

6 December 2018

@TSB_AndyG

Creating an economy that boosts productivity and earning power throughout the UK



Our five foundations



Ideas

the world's most innovative economy



People

good jobs and greater earning power for all



Infrastructure

a major upgrade to the UK's infrastructure



Business Environment

the best place to start and grow a business



Places

prosperous communities across the UK



AI & Data Economy

We will put the UK at the forefront of the artificial intelligence and data revolution



Future of Mobility

We will become a world leader in the way people, goods and services move



Clean Growth

We will maximise the advantages for UK industry from the global shift to clean growth



Ageing Society

We will harness the power of innovation to help meet the needs of an ageing society

Satellite applications case study: Global vessel monitoring

- exactEarth Europe has grown to a turnover of £2M in 5 years
- It provides intelligence about ship movements to authorities across the globe
- Ships' position information from the company's own satellite AIS constellation are combined with satellite RADAR and optical images to identify suspicious vessels



Industrial Strategy Challenge Fund



- Delivers the science that business needs to transform existing industries and create new ones
- Accelerates commercial exploitation of the most exciting technologies the UK has to offer the world
- Ensures that scientific investment truly delivers economic impact, jobs and growth right across the country
- Industry-led and powered by multi-disciplinary research and business-academic collaboration



Industrial Strategy Challenge Fund objectives



- Increased UK business investment in R&D and improved R&D capability and capacity
- Increased multi- and interdisciplinary research
- Increased business-academic engagement on innovation activities
- Increased collaboration between younger, smaller companies and larger more established companies, connecting up value chains (or networks)
- Increased overseas investment in R&D in the UK



Wave 1 Challenges (c. £1bn)



Leading-Edge
Healthcare
Challenge
(including
Medicines Mfg)
up to £188m



Faraday
Battery
Challenge
up to £246m



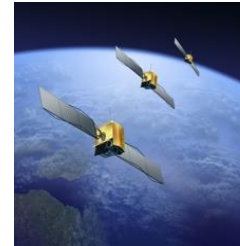
Robotics and
AI in extreme
environments
Challenge
up to £93m



Next Gen.
Affordable
Lightweight
Materials Mfg
(ATI projects)
up to £26m



Autonomous
Vehicles
(CCAV
projects)
up to £38m



National
Satellite
Test
Facility
up to £99m

Underpinning UKRI investments (Wave 1a) up to £283m

Wave 2 Challenges (up to £729.5m)



Audience of the future
(up to £33m)



Early diagnosis & precision med
(up to £196m)



Energy revolution
(up to £102.5m)



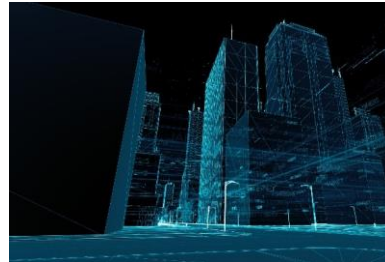
Healthy ageing
(up to £98m)



Next generation services
(up to £20m)



Quantum technology
(up to £20m)



Transforming construction
(up to £170m)



Transforming food production
(up to £90m)



Satellite applications case study: Food production

AgSpace and IPF have grown rapidly over the last 4 years

They bring together thousands of agronomists and farmers by providing shared digital tools - throughout the EU, Africa, Ukraine and China

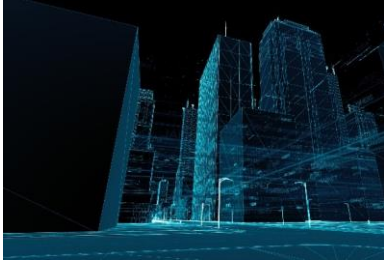
The use of SAR in crop growth models is a world-first, generating yield increase to the farmer



Wave 3 Challenges (up to £TBCm)



Quantum technology



Made Smarter

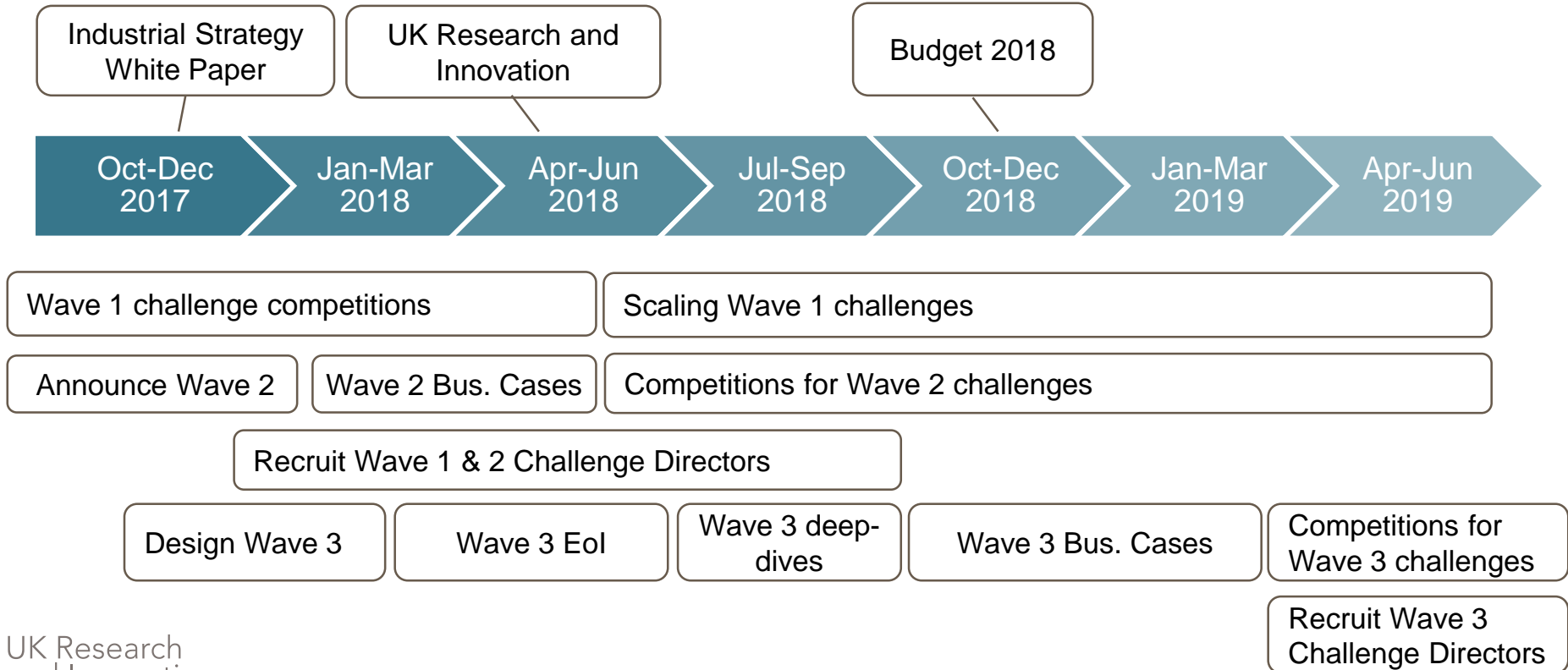


Stephenson



Other

ISCF timeline



Space Data Revolution



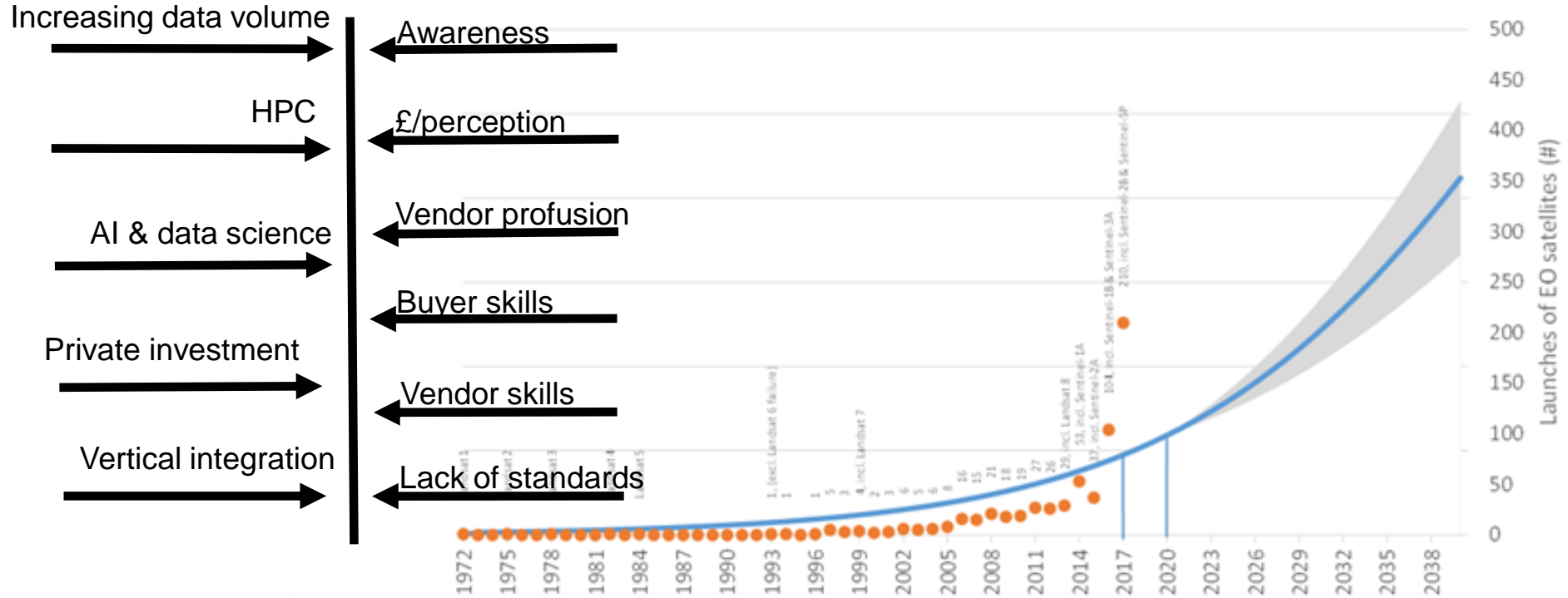
To create a dynamic, sustainable marketplace for space data

Unleashing the commercial potential of satellites observing the Earth will improve productivity and benefit society across:

- **Transport**
- **Energy**
- **Finance**
- **Construction**

...growing revenues 90-fold to £10B/pa in 10 years

SDR: barriers to unleashing potential

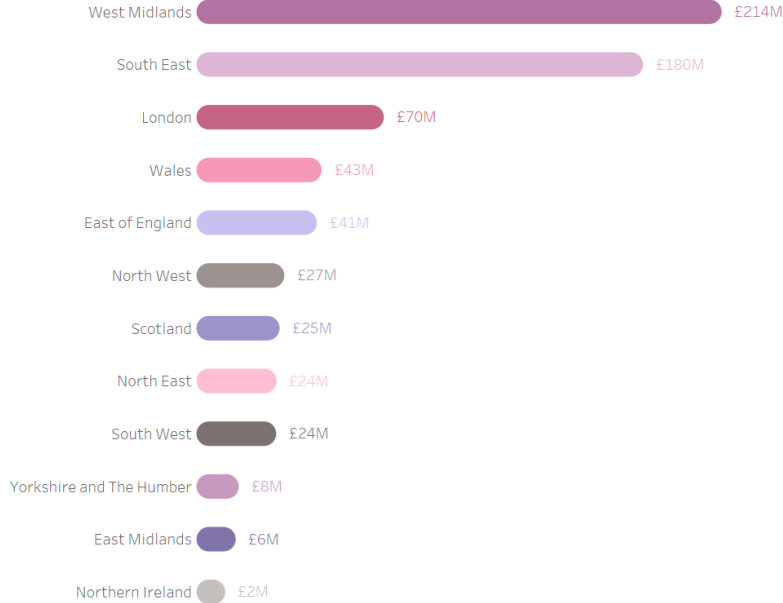


Source: London Economics analysis based on data obtained from: Union of Concerned Scientists (2017), UCS Satellite Database
 Available from: <https://www.ucsusa.org/nuclear-weapons/space-weapons/satellite-database>

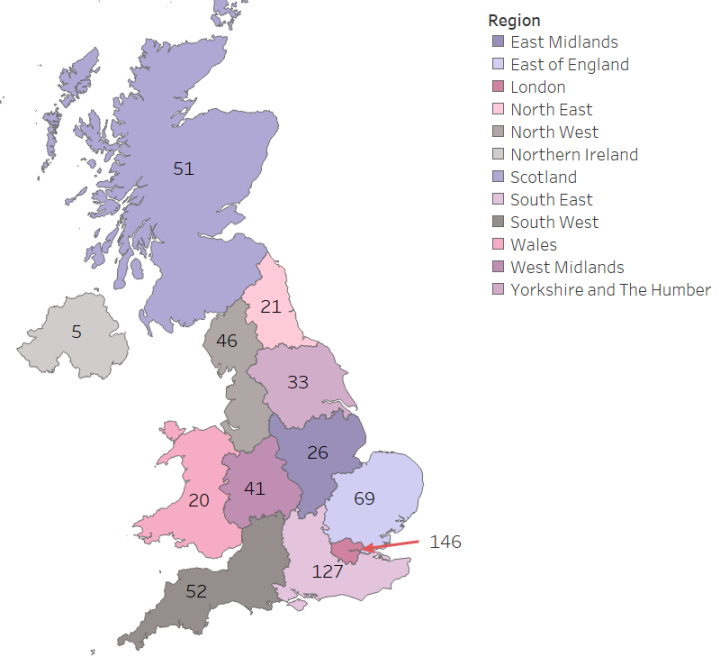
ISCF Funding by region



Value (£) of ISCF Grants: Regional Breakdown



Grant Awards Per Region





Opportunities everywhere

Work as one sector

Thank you
@TSB_AndyG