



International Initiatives Panel 47th Spaceport Summit

Matthew Austin
International Programme Policy Lead

25th February 2021



Agenda:

- Introduction to UKSA
- Strategic Ambitions
- The UK Space Sector
- National Capabilities
- Innovation Through National Space & Technology Programmes
- Global Collaboration
- Artemis Accords
- Current Priorities



How UKSA works

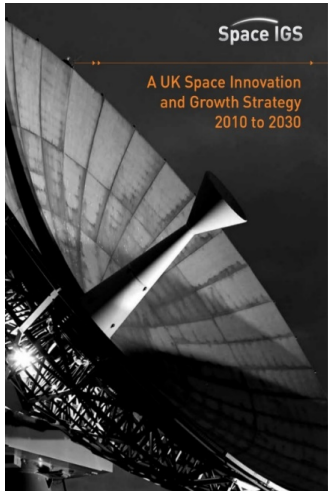
1. Embed space as a fundamental part of the **UK economy** and society, unlocking new markets and technologies for the benefit of everyone in the UK
2. Build a world where space tackles global challenges and is used responsibly, **safely and securely** by all
3. Work with partners undertaking **science** and discovery that helps us to understand our universe and our planet, and which inspires the next generation
4. Place the UK at the forefront of **international collaboration**, as a global partner with a compelling vision

Who we are

- CEO Graham Turnock, Chair Sally Howes
- c250 staff across 3 locations
- £556 million budget (2020/21)
- UK wide business support network
- Industrial and science focus
- Engaged with government departments and partner countries
- UKSA is an executive agency of BEIS – it delivers policy and programmes on behalf of the Secretary for State. The BEIS Permanent Secretary is the Principal Accounting Officer.

Our long-standing strategic ambition:

Capturing 10% of the global space market by 2030



2010 - the sector sets out ambitious plans to gain a 10% share of global space economy by 2030



2017 - Government's Industrial Strategy sets out how UK can thrive in commercial space age



2018 - The space industry outlines a bold partnership strategy 'Prosperity from Space'



Today – Government have established a National Space Council to oversee the development of a National Space Strategy.



"A new UK Space Strategy will establish a dedicated innovation programme to build the skills, technologies and supply chains that will put cutting-edge British innovation in robotics and satellites, including earth observation to tackle climate change, at the heart of the world's space economy and exploration." – UK R&D Roadmap, July 2020

The UK Space Sector

- **Space is part of our everyday lives.** Satellites support services the UK public, businesses and government rely on every day – from checking the **weather** forecast on the go to monitoring **farming** yields; and from **maritime** navigation to mobile **health** screening.
- In 2018 the UK space sector had grown by >60% since 2010/11. It generated an income of **£14.8 billion** p.a., employed **42,000 people** and supported **£300 billion** of economic activity through satellite services (Size & Health 2018).
- The UK's core strengths are **manufacturing small satellites** and creating **applications** for satellite data.
- There are 23,000 trackable objects in orbit. 2200 are working satellites and 183 are British. As companies like OneWeb plan to launch constellations of hundreds of satellites, the number of British satellites in orbit is expected to **more than triple** in the next few years.
- Majority of UKSA's annual budget for 20/21 (£547m) is invested in **scientific and industrial R&D**, through our subscription to the European Space Agency or National Programmes.
- Our new **National Space Council** will set the ambition for our future space endeavours and ensure that we have the capabilities we need as a space-faring nation.



Our National Capabilities

- Space is a part of our **critical national infrastructure**, and is an increasingly congested and contested environment which puts at risk our satellites and the systems that rely on them.
- We worked with the EU for essential national capabilities – such as the **Galileo** programme for satellite position, timing and navigation, the **Space Surveillance and Tracking** programme to monitor space objects for collision risks, and the **Copernicus** Earth observation programme to monitor climate change.
- Post-EU exit, we have agreed our engagement on these programmes.
- UKSA and the Ministry of Defence are scoping alternatives including a **UK Space based PNT Programme** and a **National Space Operations Centre** to track space objects.



Driving Innovation Through National Science and Technology Programmes

- For FY 20/21, we have funding for a **£15 million National Space Innovation Programme**, which will match-fund innovative industry projects in satellite communications and Earth observation. **£5 million** of this fund has been ringfenced for international bilateral partnerships.
- Our **Spaceflight Programme** aims to establish commercial launch from UK spaceports from the early 2020s. The Government has already passed the Space Industry Act 2018, and funded several industry-led projects including grants to establish vertical launch services from Scotland and horizontal launch by Virgin Orbit from Spaceport Cornwall.
- We have invested **£60 million** in the **SABRE** engine: a revolutionary new class of engine developed by Reaction Engines Ltd.



Our Global Collaboration

- Currently most significant space investments are made through the **European Space Agency (ESA)**, which is independent of the EU.
- In 2019 the UK subscribed **£374 million** p.a. (€436 million) to ESA programmes, giving us access to €6 billion of science, research and innovation output each year – including:
 - A mission to bring the first samples back from Mars
 - Satellite-enabled 5G connectivity
 - A UK-led mission to improve climate data (TRUTHS)





ARTEMIS ACCORDS

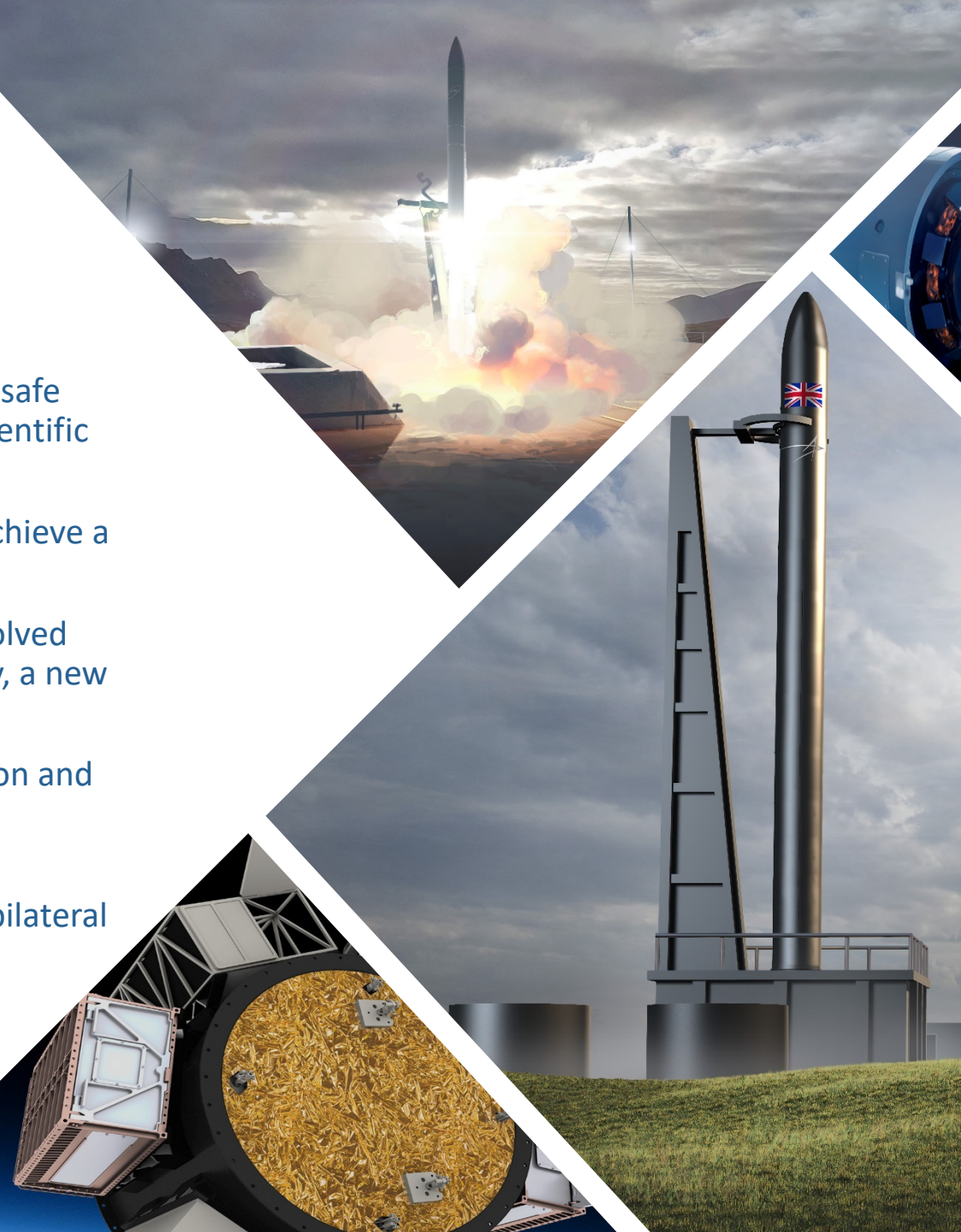
United for Peaceful Exploration of Deep Space



The UK signed the Artemis Accords along with NASA and other international Space Agency partners in October 2020.

The Artemis Accords

- The Accords are a set of principles which ensure a shared understanding of safe operations, use of space resources, minimising space debris and sharing scientific data.
- Focus on commercial and international partnerships and collaboration to achieve a sustainable presence on the lunar surface.
- UK will play a key role in this mission – businesses across the UK will be involved in building the service module and habitation module of the Lunar Gateway, a new space station orbiting the moon.
- International cooperation on Artemis is intended to bolster space exploration and enhance peaceful relationships between nations.
- UKSA will continue to contribute to the Artemis programme through our membership of the European Space Agency in addition to building further bilateral international partnerships.



Current Priorities and Upcoming Events

- **Space-Comm Expo**
7-8 July 2021 – Farnborough, UK
- **G7 Heads of Delegation Summit**
11-13 June 2021 - Cornwall, UK
- **72nd International Astronautical Congress 2021**
25-29 October 2021 - Dubai, United Arab Emirates
- **26th UN Climate Change Conference of the Parties (COP26)**
1-12 November 2021 – Glasgow, UK
- **36th Space Symposium**
22-27 August 2021 – Glasgow, UK





Thank you for your attention!

Matt Austin
International Programme Policy Lead
UK Space Agency

InternationalPolicy@ukspaceagency.gov.uk

