



# UK SPACE OUTLOOK

**2022**

A guide to the  
UK space sector



In collaboration with

**UKSPACE**  
THE SPACE TRADE ASSOCIATION

# UK SPACE SECTOR

The UK space sector is a world-leader in the production of small satellites and the use of space data to improve lives and better understand our planet.



£ **5.3** BN  
EXPORTS



£ **6.9** BN  
VALUE ADDED

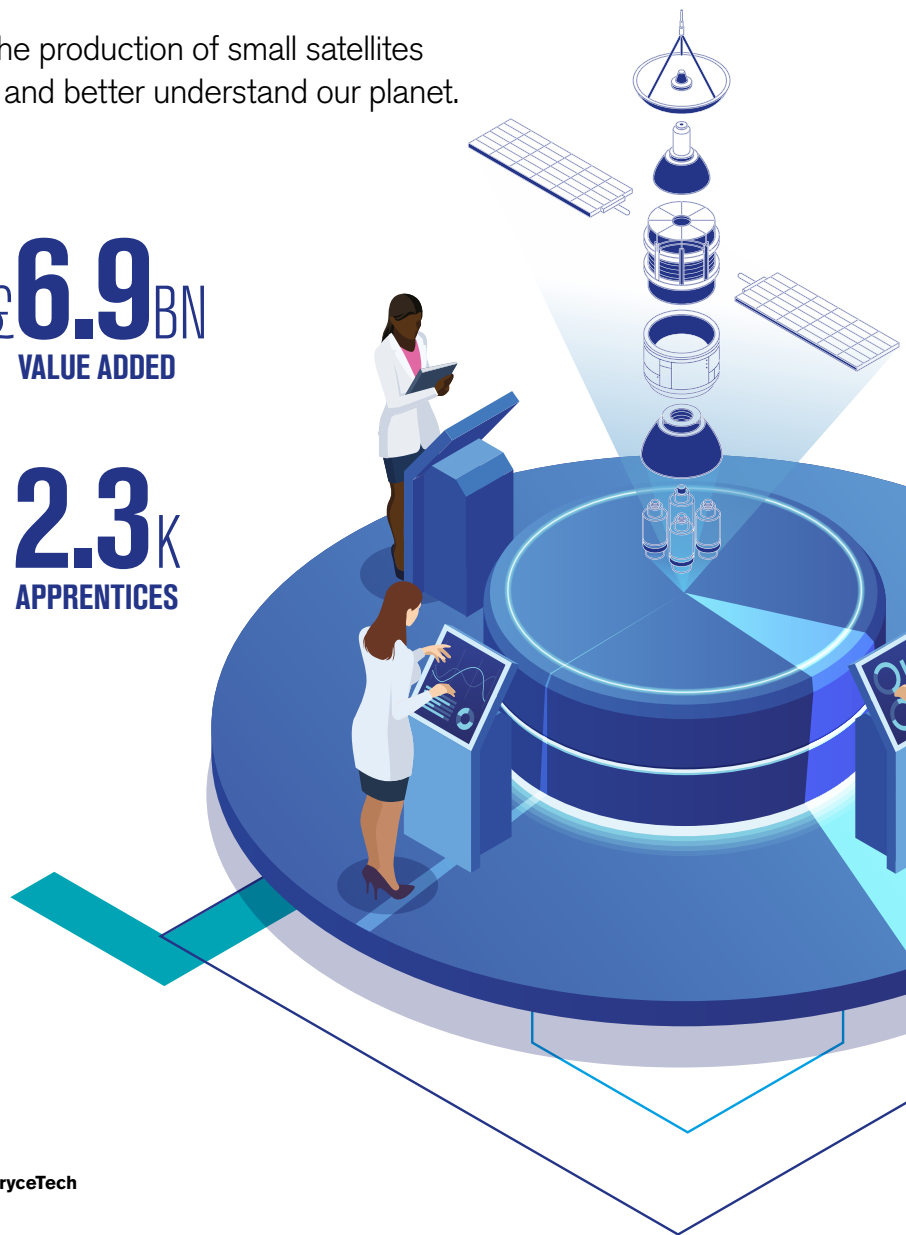


**47** K  
DIRECT  
EMPLOYEES



**2.3** K  
APPRENTICES

£ **16.5** BN  
TURNOVER



# BUSINESS OPPORTUNITIES

## IN-ORBIT SERVICING AND MANUFACTURING (IOSM)

- The capabilities that are being developed for In-Orbit Servicing and Manufacturing underpin a **future in-orbit economy**. Developing a UK skills base will generate jobs, inward investment and deliver innovative products, new services and provide opportunities for policy developments led by the UK government.
- Near-term commercial opportunities in satellite servicing and debris removal will catalyse larger future markets in the assembly of very large structures, **in-orbit maintenance, repair, operations and manufacturing** products for use in space and on Earth. Examples include mega-satellites for high-speed mobile communications, high performing alloys made in space, refuelling capability in-space, and generating energy from space such as solar power.
- **UK industry, government and academia can champion** this fast-growth sector with 'Space Sustainability' embedded in the UK's National Space Strategy ten-point plan. IOSM partners can leverage opportunities to **collaborate with adjacent sectors** like AI, robotics, and advanced manufacturing.
- The success of IOSM relies on **government working closely with industry and the Civil Aviation Authority** to review and update a **regulatory and licencing framework** that will encourage the responsible use of space and create a favourable in-orbit servicing and manufacturing environment that delivers value, jobs and capability across the UK economy.
- IOSM capabilities are essential to long-term space sustainability and pivotal to **protecting the space ecosystem, sustaining space business and maximising its benefits for lives on Earth**.

## EARTH OBSERVATION (EO)

- The UK has **cutting-edge capabilities in Earth Observation**, which **plays a critical role in monitoring the impact of climate change**, deforestation, rising sea levels and greenhouse gas emissions in the atmosphere.
- EO offers **significant potential to the UK economy, science and society** – coherent Government support and policy is essential to ensure this potential is achieved.
- The UK has long been dependent on foreign-owned satellites in this area. **For critical civilian and defence applications, we should be looking to develop serious future capabilities**.
- The **TRUTHS** (Traceable Radiometry Underpinning Terrestrial- and Helio- Studies) mission, led by the UK and delivered through the European Space Agency (ESA), will create a **space-based climate and calibration observatory** that will improve **confidence in climate change forecasts**. The mission is expected to **be worth hundreds of millions of pounds to British business** while supporting high value and skilled jobs across the country.

## LAUNCH

- The National Space Strategy identifies **UK launch as a core priority for industry** and it is planned that the UK will achieve the **first small satellite launch from European soil** this year.
- Government and industry are **investing to develop UK spaceports**, laying the groundwork for end-to-end UK services **building, launching, and operating small satellites**.
- The **UK's aim is to become the leading provider of commercial satellite launch** in Europe by 2030, and we will see advancements made in green launch to reduce the environmental impacts of launch.
- For UK launch to flourish, **government, industry and regulators must work in partnership** to implement a **modern regulatory framework** and create a favourable launch operating environment that delivers value through the wider UK sector and its partners.



# POLICY LANDSCAPE

## NATIONAL SPACE STRATEGY (10 POINT PLAN)

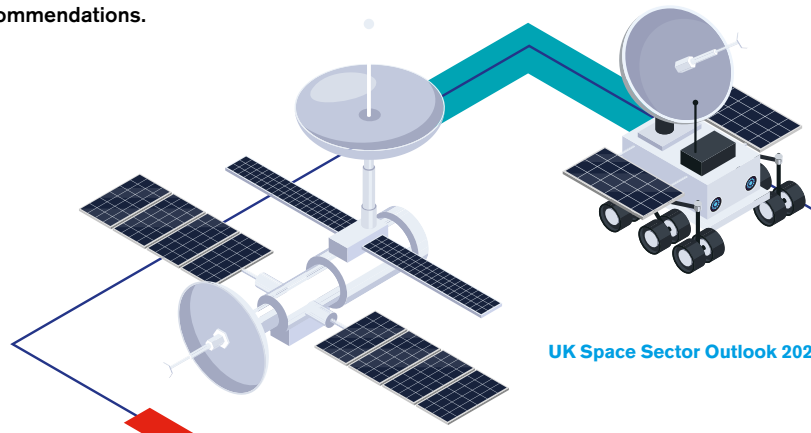
- Space presents significant opportunities; the **global space economy is projected to grow from an estimated £270 billion in 2019 to £490 billion by 2030.**
- The **10-point plan** showcases immediate **key interventions that the UK Government can make to have the highest impact opportunities** in the critical cross-cutting areas. The sector now **needs an implementation plan and policies to underpin the strategy** and drive delivery.
- To unlock growth in the UK space sector, collaboration with international partners and allies, including ESA and the UN, **is key to achieve common goals.**
- As the **UK grows as a science and technology superpower**, it will continue to **leverage its cutting-edge capabilities to participate in exciting research opportunities and programmes** and world firsts. Including returning samples from Mars to the Earth and monitoring the sun for space weather events like solar flares.
- The UK needs to consider its **ongoing and future requirements across all space capabilities**, and **use government procurement to best effect** to deliver resilient space technologies and services that will also help industry to capture more of the growing global space market.

## UK DEFENCE SPACE STRATEGY

- The **Defence Space Strategy**, linking in with the National Space Strategy, sets out a **vision for how the UK space domain will enable advanced future defence capability.**
- More than **£5 billion** has been announced to **enhance UK satellite communications capabilities**, and the **Defence Space Strategy commits a further £1.4 billion** in space over the next 10 years for novel technologies including military satcom, remote sensing and launch.
- Underpinned by a **strong space research and development programme**, the dual-use nature of space technology means that support to the defence programme also supports the commercial and civilian sectors.
- To further enhance UK space defence capability, the **Defence Science and Technology Laboratory (Dstl)** and the **UK Space Agency** will investigate ways to **collaborate more closely.**
- UKspace and GNOSIS, commissioned by the UK Space Agency, published a report with CGI in June 2022 on **Space Domain Awareness (SDA)** which looks at the UK's current SDA capabilities and includes a **proposed roadmap with eight recommendations.**

## SUSTAINABILITY AND CLIMATE CHANGE

- Trade associations ADS and UKspace, alongside our members, are working together to **support the Government's ambitions in reaching net zero** carbon emissions.
- The **UK plays a leading role** in this area through the **Government's Plan for Space Sustainability**, including the **Space Sustainability Standard** and the **Earth and Space Sustainability Initiative.**
- The plan also includes investment to support Phase 3 of the implementation of the UN Office for Outer Space Activities (UNOOSA) and Active Debris Removal (ADR) programme which will **receive £5 million funding** for its latest phase.
- Space technologies, capabilities, and services are **critical to combat climate change** through **science and understanding** as well as being able to **respond to natural disasters**, ensuring our national sustainability and security.
- The UK space sector has **export opportunities for NASA, JAXA and other space agencies** who are racing to develop their own national climate monitoring and security capabilities.



# PROGRAMMES AND FACILITATORS

## NATIONAL SPACE PARTNERSHIP

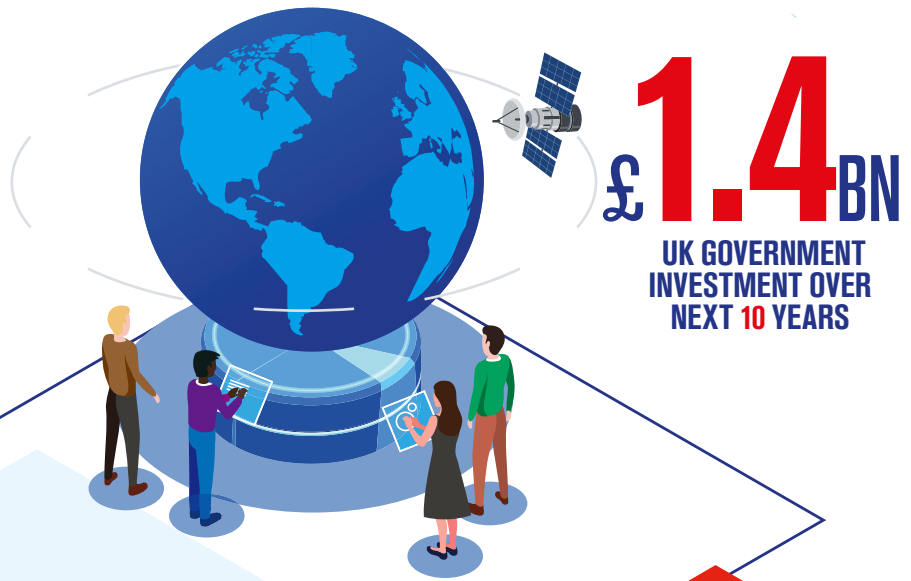
- ▀ The UK space sector is at the forefront of **exploring our universe, monitoring and understanding our planet, connecting and inspiring people, keeping citizens safe & enabling critical infrastructure.**
- ▀ Our success in space has been built upon a **strong track record of partnership working across industry, academia and government.**
- ▀ The **National Space Strategy** sets out the UK's ambitions in space, including **building one of the most innovative and attractive space economies in the world.**
- ▀ Industry, academia and government are actively exploring how we can **consolidate and build upon** the work undertaken in the **National Space Partnership pilot** to provide independent, expert advice and challenge, informed by open engagement with the sector.
- ▀ We look forward to a **focused and empowered partnership**, representing the whole breadth of the space sector, which will help **drive delivery of our shared goals.**

## UK SPACE AGENCY

- ▀ The UK Space Agency plays a **major role in delivering** the government's National Space Strategy.
- ▀ The UK Space Agency team helps to **catalyse investment** to support projects that drive investment and generate contracts for the UK space sector.
- ▀ They also **deliver missions and capabilities** that meet public needs and advance our understanding of the Universe, and **champion the power of space** to inspire people, offer greener solutions and support a sustainable future.

## CATAPULTS

- ▀ The **Satellite Applications Catapult** is at the **heart of the satellite services**, connecting industry and academia to **conduct research and bring new services to market**, with an aim to get the UK to a **10% share of the global space market by 2030.**
- ▀ The UK Space Sector Supply Chain Report 2022 confirmed that the **UK space supply chain has a range of capabilities and opportunities**, as well as a number of structural issues and threats.
- ▀ The report provides six key recommendations for the UK space sector supply chain to secure its long-term growth potential.



# SPACE SECTOR REGIONAL EMPLOYMENT



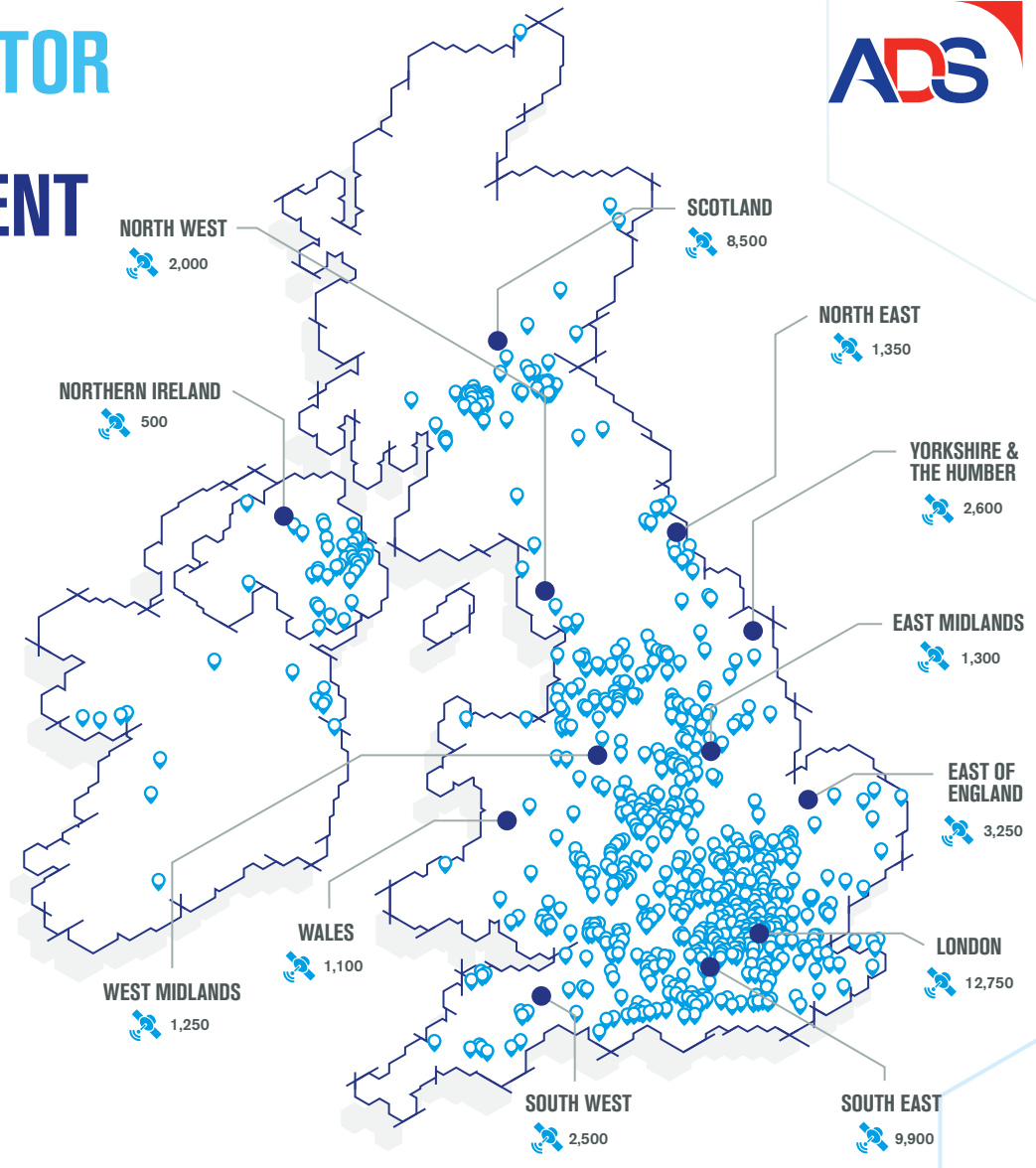
The space sector employs people in all regions and nations of the UK.

NUMBER OF  
DIRECT JOBS  
ACROSS  
INDUSTRY IN:



SPACE

INDICATES THE LOCATION OF AN ADS MEMBER WHICH IS ACTIVE IN THE AEROSPACE, DEFENCE, SECURITY OR SPACE SECTOR



UKspace is the trade association of the UK space industry and has been its leading voice for over 30 years. It promotes the interests of industry with the UK government, parliament, and national and international stakeholders.

UKspace represents a diverse membership across the industry, encapsulating both the upstream and downstream nature of the space sector, and works in conjunction with its members to achieve the best business framework to promote growth.

ADS is the trade association representing the UK's aerospace, defence, security and space sectors. ADS collaborate with government, industrial investors and innovators to shape and protect our sectors' interests by promoting best practice in our supply chains and help focus innovation on where it matters most. ADS promote UK advantage by enabling trade across the world, and believe in expanding our sectors across the UK as the best route to national advantage, lasting prosperity, clean growth, and a proud, secure country.

ADS Space Outlook 2022 uses data estimates from ADS own sources, data from the Office of National Statistics and Government publications. ADS and UKspace are working collaboratively for the betterment of the UK space industry.

For more information, visit [www.adsgroup.org.uk](http://www.adsgroup.org.uk)

Cover Image Credit:  
Goonhilly Earth Station Ltd.

For more information, visit [www.ukspace.org](http://www.ukspace.org)