

SPACE FOR GROWTH

#SCOTLANDISNOW

 SCOTLAND

WELCOME TO SCOTLAND

FÀILTE GU ALBA



WELCOME TO SCOTLAND; the small country making a big impact on the global space sector.

Where the world once looked to Scotland for our engineering excellence in trains and ships, today we are channelling our proud industrial heritage into spaceships and satellites. In a few short years, our nation has developed world-class capability in small satellite manufacturing, data analysis and earth observation. Scottish technology plays a vital role, from aiding missions to Mars to exploring deep space with the James Webb Space Telescope.

And our reputation as an international space destination is now taking off. Scotland is all set to become the next big commercial space launch nation. With multiple spaceports developing launch facilities, Scotland provides the low-risk, geographically advantageous conditions required to reach low earth orbit.

With launch capability, Scotland provides the ideal end-to-end 'new space' operating environment, with expertise up and down the supply chain. When you invest in Scotland, you will find a breadth of space services from one connected location, including the potential to design, test, manufacture and launch small

satellites and vehicles. What's more, we can also help you to bring value back down to earth by capitalising on the demand for space data.

You will find a thriving space community, the best space tech minds from our universities and a responsive government, collaborating alongside renowned global players, such as Spire, AAC Clyde Space, Orbex, Celestia, WL Gore and Mangata Networks, who have all recognised Scotland as the perfect location to stay at the forefront of the commercial space race.

You will also find a country working hard to reduce the impact of the space industry on its carbon footprint. From space junk recovery to satellite monitoring the health of our seas and forests, Scotland is using our growing space expertise to address climate challenges for the benefit of our environment, our people and our prosperity.

We'd love for you to join the many ambitious and forward-thinking companies that choose to locate, operate and grow here.

There is plenty of space in Scotland. So, what are you waiting for? Come and be part of our space success.



MANUFACTURING



LAUNCH



DATA

OUR VALUES

When you invest in Scotland, you are choosing to work with a country that prides itself on its values. Scotland's space community is committed to creating an inclusive, sustainable and resilient sector, as well as reducing our industry's impact on the planet.



INCLUSIVE PROSPERITY

You'll benefit from the long-term growth that comes from prioritising our people and our planet. The knowledge and technology we gain through space provides services for our everyday lives and helps us solve challenges both at home and overseas, improving our health, happiness, equality and sustainability.



FAIR WORK

Our commitment to create good, green, well-paying jobs means you'll have access to a range of resources, funding and tools to support your fair and flexible working objectives. We will help you to build a skilled and diverse workforce, ensuring the opportunities in space are open to all.



NET ZERO

By choosing to locate in a country with ambitious targets for Net Zero, you are sending a clear message to your customers about your own green credentials. You will be supported to develop green working practices and have access to ground-breaking research and technology used in the global fight against climate change.

SCOTLAND'S SUSTAINABLE SPACE FOCUS

By choosing Scotland, you are investing in a country that is pioneering a more environmentally conscious approach to space by protecting the orbital environment, as well as mitigating environmental impacts back here on Earth.

SCOTTISH SATELLITE DATA IS TRACKING ELEPHANT MIGRATION,

**CLASSIFYING
240 BILLION TREES**

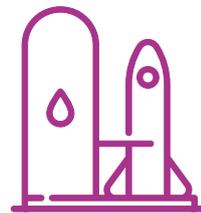
AND MONITORING
**BIODIVERSITY LOSS
AND GAS LEVELS**



SCOTTISH COMPANIES ARE USING

**"GREEN" ROCKET
FUELS**

THAT PRODUCE UP
TO **90% LESS
CARBON**



**CLEARING
THE
SKIES:**

SCOTTISH
RESEARCHERS
ARE FINDING
NEW WAYS TO
REDUCE SPACE
JUNK FROM THE
EARTH'S ORBIT



SPACE SUSTAINABILITY –
A ROADMAP FOR
SCOTLAND –

**WORLD-FIRST
STRATEGY ON A
SUSTAINABLE
SPACE SECTOR**

SPACE SECTOR
EMISSIONS WILL
BE CUT BY

**50% BY
2030**

WITH A GOAL TO
ACHIEVE NET
ZERO BY 2045

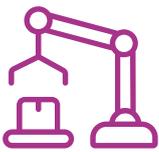


SUTHERLAND
SPACEPORT
AIMING TO BE

**WORLD'S
FIRST
CARBON
NEUTRAL
SPACEPORT**

SCOTLAND'S SPACE OPPORTUNITY

When you locate in Scotland, you'll find immediate investment opportunities and end-to-end capability across the full space value chain. Scotland is in the unique position to service all your space needs, from manufacturing and launch through to capitalising on the resulting space data.



MANUFACTURING

Scotland has a proud manufacturing heritage, with expertise and experience in defence, electronics, aerospace and subsea oil and gas engineering. These transferable skills, coupled with our natural flair for invention and manufacturing know-how, are being successfully channelled into our dynamic and fast-growing space sector.

SATELLITES

Despite its size, Scotland is a powerhouse when it comes to the manufacturing of small satellites. We are now one of the largest manufacturers of small satellites anywhere in the world and have attracted some of the world's most innovative satellite manufacturers to our largest city, Glasgow:



Manufacture and support of PocketQube satellites (<1kg).



Pioneers of the CubeSat revolution offering turnkey solutions.



Design, build and test their own nanosatellites entirely in Scotland.

These companies have benefited from Scotland's engineering expertise, as well as a robust supply chain with strengths in satellite components, cables and communications, sensors, photonics and CubeSat modules.

ROCKETS AND LAUNCH VEHICLES

Scotland has a growing knowledge and experience in the manufacturing of launch vehicles, with the potential to become the leading small satellite launch market in Europe. Pioneering companies have chosen Scotland due to the availability of skilled engineering talent, the proximity of launch services from our developing spaceports and also the opportunities to scale-up through access to Scotland's innovative funding and investment schemes.



Low-cost launch services company developing low carbon, high performance micro-launch vehicles.



Designs, manufactures and deploys rockets for small satellite manufacturers looking to access space.

GROUND STATIONS

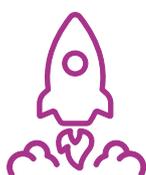
The high-tech start-up, **Celestia**, has benefited from its location in Edinburgh, collaborating with Heriot-Watt University's antenna research group to develop electronic scanning antennas based on active phase arrays for ground stations.

ADVANCED MANUFACTURING INNOVATION

Space companies can benefit from the latest advanced manufacturing research and technology from Scotland's network of innovation and R&D centres, which are continually working hard to make manufacturing faster, cheaper and smarter. The **National Manufacturing Institute Scotland (NMIS)**, and its specialist tech centre the **Lightweight Manufacturing Centre**, are key assets, bringing together the public and private sector to transform skills, productivity and innovation, as well as support to upskill staff.



SaxaVord Spaceport



LAUNCH

Scotland is at the forefront of launch capabilities in the UK – five locations across the country are developing launch plans and we will be home to one of the first orbital spaceports in Europe.

- Sutherland Spaceport
- SaxaVord Spaceport – Shetland
- Spaceport Machrihanish – Argyll
- Prestwick Spaceport
- Spaceport I – Outer Hebrides

These launch sites will complete the end-to-end capability to design, test and build small satellites in Scotland – ensuring that you have shorter supply lines, easier communications and reduced operational costs. Not only do we have three sites which offer a viable option for vertical launch, there is opportunity for horizontal launch too, providing even greater flexibility for operators.

The Highlands and Islands of Scotland offer a strategic location to easily reach low earth orbits using vertical launch. The rugged landscape benefits from wide, open areas, and proximity to the coast reduces the risk from launch vehicles.

Scotland is also the ideal choice for the development of your launch vehicle, with sub-orbital capability being identified at Spaceport 1 in the Outer Hebrides and engine testing capability in Kinross, Shetland and Machrihanish.

Scotland's relative size means it is easier to make connections and gain bespoke access to launch sites, so you can launch your satellites without the need for ride sharing and retain more control over where the satellite goes.



DATA

Edinburgh is the space data capital of Europe. Building on the city's world-renowned data science expertise, there is now an abundance of space data science companies located across the city and extending throughout Scotland.

When locating here, you will also be well supported by the world-class R&D work done by our universities:

Geosciences School at Edinburgh is one of the largest groupings of geographers, Earth and environmental scientists in the UK. Their innovative research in satellite observation and data modelling is making a big difference to informing local, national and international environmental policies.

Bayes Centre is the University of Edinburgh's innovation hub for Data Science and Artificial Intelligence, working to accelerate cutting-edge

space and satellite research into social and economic impact.

University of Edinburgh School of Informatics is the largest European centre of its kind with academics, researchers and students in artificial intelligence, cognitive science and computational linguistics. The School produces more world-leading research than any other university in the UK.

With the help of this university expertise, Scotland has created a global hub for space data applications – many of which align with our net zero ambitions.

So, whether you want to measure shrinking forests, monitor animal biodiversity or use satellite-driven intelligence to commercialise real time applications across the globe, Scotland's data sector has it covered.

THE RIGHT TALENT FOR YOUR BUSINESS

Want to attract and retain the right talent to skyrocket your business to success? Look no further than Scotland.

We often say that people are our greatest asset and as the most highly educated country in Europe, Scotland offers an experienced, flexible and tech-savvy labour pool, a strong output of world-class graduates and highly-skilled apprentices. This, combined with our famous work ethic, means that your company will benefit from a hard-working, dependable and diverse workforce, which in turn means stability and reassurance for your business.

By 2030 Scotland expects to increase the space workforce fivefold through our strong graduate pipeline, attracting global talent and upskilling people from adjacent sectors, unlocking new value from our well-established expertise.

By choosing Scotland, you'll have access to:



A highly-skilled talent pool renowned for its engineering and manufacturing expertise – Scotland contributes more **space sector employment** per capita than anywhere else in the UK.



19 world-class universities and higher education institutions are providing a steady stream of science, technology and engineering graduates, with strengths in space-related areas.



Further education colleges offering specialist training in STEM disciplines, ensuring a flexible talent pipeline.



Flexible funded apprenticeships developed by the space industry for the space industry.



Bespoke skills, education and training support from our national skills agency every step of the way, recognising your specific needs and ensuring you have access to the right skills at the right time.

FUTUREPROOFING THE SKILLS PIPELINE

You will also be able to tap into a range of flexible skills and learning initiatives which will help you to get the most out of your people and future-proof your workforce. We listen to your business, giving you the opportunity to influence skills, education and training provision to best suit your needs.



SPACE SCOTLAND

Industry-led activities focused on developing the talent pipeline for Scotland's space industry including schools outreach and transition courses for skilled graduates from other disciplines. Also working with industry to achieve a diverse and inclusive workforce through the Space Scotland New Voices group.



NMIS MANUFACTURING SKILLS ACADEMY

Offers in-demand advanced manufacturing training and development for individuals at all levels of their career and is transforming and diversifying the manufacturing workforce across the whole of Scotland.



DATA LAB

Scotland's innovation centre for data and AI is working to grow the supply of skills needed to take advantage of data-driven innovation, providing companies with the talent required to help them stay ahead of the game.

SCOTLAND'S SPACE COMMUNITY

Scotland's relatively small size lends itself to a connected infrastructure and ecosystem. Being part of Scotland's thriving space community ensures proximity to customers, industry and spaceports alike, making collaboration all the more convenient.

1 North of Scotland

North Coast Space Cluster aims to use the vertical launch site **Sutherland Spaceport** as a catalyst to develop a leading space cluster for the North of Scotland, already attracting significant investment from **Orbex** in Forres. **Enterprise Park Forres** provides a business space for manufacturing, engineering and technology businesses.

2 Shetland

The island of Unst is the UK's most northerly location, surrounded by open ocean and providing the optimal geography for **SaxaVord Spaceport**. Shetland has a long history of supplying complex industries such as oil & gas, meaning you will find the knowledge and experience needed to service your space launch requirements.

3 Edinburgh

Research from the **University of Edinburgh** and **Heriot-Watt** is world-leading and contributing to Edinburgh's emerging reputation as the 'space data capital of Europe'. Space companies locating here also benefit from proximity to innovation centres such as the **Bayes Centre**, the **National Robotarium** and **Higgs Centre for Innovation**. It is a flourishing ecosystem which attracts indigenous companies, such as rocket manufacturers **Skyrora**, and global investors, such as **Celestia**, alike.

4 Glasgow

Homegrown satellite manufacturers **Clyde Space** and **Alba Orbital**, as well as US leaders **Spire**, have made Glasgow a small satellite manufacturing powerhouse. The **Universities of Glasgow** and **Strathclyde** are hotbeds of space-related innovation and for R&D-focused operations seeking proximity to these campuses, the **Glasgow City Innovation District** and the **Tontine Business Accelerator** provide excellent co-location opportunities in the heart of Glasgow's city centre. The **Advanced Manufacturing Innovation District Scotland (AMIDS)** is based just 8 miles outside Glasgow.

5 Prestwick

Currently home to a strong aerospace cluster with global names such as **Spirit AeroSystems** and **Mangata Networks**. Space companies can take advantage of the complementary skills and technology on their doorstep, as well as access to the horizontal launch services of **Prestwick Spaceport**. Significant investment in the area will provide infrastructure for the space supply chain including fuel storage, payload processing and mission control, all in a highly-connected location accessible by air, road, train and sea.

You will also find clusters of activity around the vertical launch spaceport site **Spaceport 1** in **North Uist** in the Outer Hebrides and the former military airbase in **Machrihanish** in **Argyll**, as well as opportunities in our other major cities, such **Dundee** and **Aberdeen**.

No matter where you choose to invest in Scotland, you'll find a well-connected, dynamic community of like-minded businesses and support which will help you stay ahead of the game in the commercial space race.



A SUPPORTIVE BUSINESS ENVIRONMENT

Community is an important part of doing business in Scotland and we can easily connect you to the right people at the right time. The result is an accessible business environment where you'll find open doors, countless opportunities and solutions to problems at every turn.

When you invest in Scotland, you will have the backing of industry, academia and government, all working together to achieve a shared ambition under Scotland's Space Strategy to promote and grow the Scottish space sector.



INDUSTRY

Space Scotland – industry-led group promoting and growing the Scottish space sector.



ACADEMIA

Bringing together academics with space interests and research from across Scotland.



GOVERNMENT

Co-ordinating action across the public sector in support of the space opportunity.

EXPANDING YOUR HORIZONS

While Scotland's ambitions in space are primarily focused on developing its own rapidly-growing clusters of expertise in commercial, or 'new' space, it also benefits greatly from the wider ecosystem, heritage and support of the UK Space Agency and the European Space Agency.



UK SPACE AGENCY (UKSA)

Delivers value through activities that help meet the UK's needs and allow us to better understand our universe. The UKSA has a role in supporting innovation and investment, championing the UK's space capabilities and developing the next generation of scientists and engineers.



EUROPEAN SPACE AGENCY (ESA)

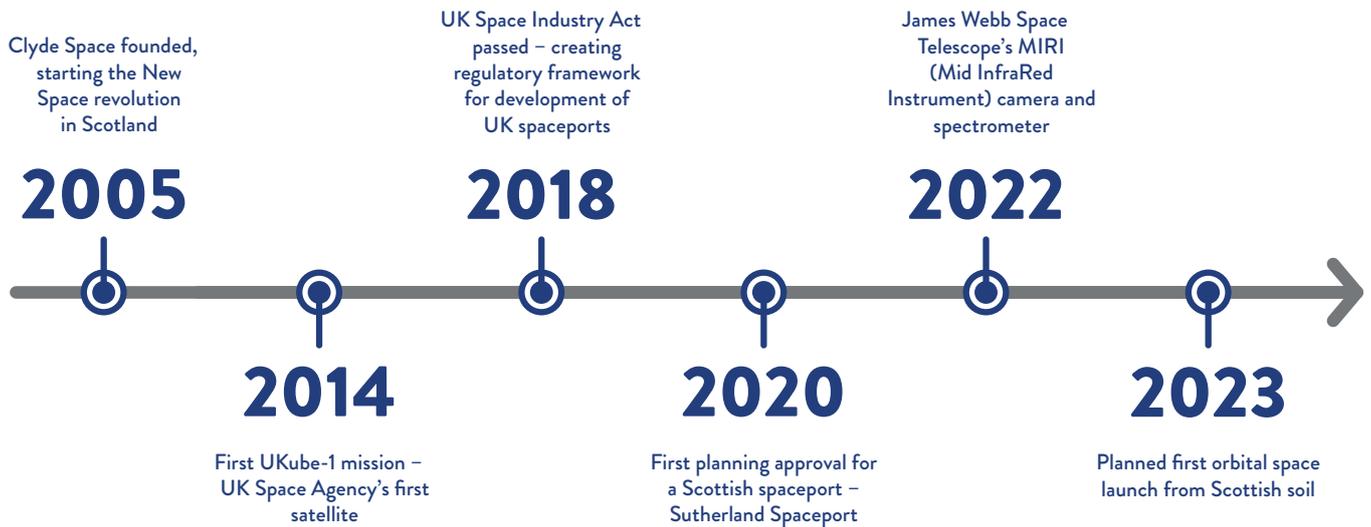
The UK is a founding member of the ESA which opens up opportunities to be part of space programmes and activities with organisations from throughout Europe and beyond. The UK is one of the most successful members of the ESA, leading the world in science outputs from the ESA missions and supporting more businesses through its ESA Business Incubation Centre and funding schemes.



A POWERHOUSE OF INNOVATION AND INVENTION

Join a community with innovation at its heart.

From initiating the use of radar to discovering the composition of Saturn's rings, Scotland's innovators continuously push boundaries and look to the future. This is typified by the performance of our space sector, which has built momentum and gained international attention with its widespread and rapid growth.



CENTRES OF EXCELLENCE

When you choose Scotland, you will join a space community that links academia and industry with cutting-edge research and technology, providing quick and efficient solutions to industry challenges.

Heriot-Watt University is developing novel front-end solutions for emerging satellite communication systems in a range of projects funded by the ESA and in partnership with leading European space companies.

The University of Strathclyde has a breadth of technical expertise in space technologies that can accelerate your business innovation, including small satellite technology and engineering, space mechatronics, and space sustainability.

Space Glasgow is an umbrella group for space activities at the University of Glasgow. Home to spaceflight and exploration laboratories focused on gravitational waves, spacecraft construction, plume-surface interactions and ground exploration.

The University of Edinburgh is a Space University, with researchers and staff working in an extraordinary range of related activities including space data analysis, EO, rocket fuels, space debris and science at extreme conditions.

This collaborative environment is supported by our strong ecosystem of innovation centres, incubators and accelerators across the country, which provide inspiring environments for businesses to spark ideas and find likeminded talent:



THRIVE IN SCOTLAND WITH ONGOING BUSINESS SUPPORT

Locating to a new destination can be a daunting task but Scotland's support doesn't end when you make the move.

Scotland's new space sector is rising faster than anywhere else in the UK, supported by close collaboration between government, industry and academia.

So, whether you need support identifying investment, upskilling your staff, accessing supply-chain contacts or connecting with ground-breaking research, you can rest assured that once you are here, Scotland's space community will provide you with the perfect launchpad to continue to thrive and grow.

Don't just take our word for it...



US-based Spire Global chose Scotland as the location for its European headquarters back in 2015, citing the speed and ease of setting up their operations, along with Scotland's eagerness to support innovative companies as a deciding factor. From a small office in Glasgow to a 40,000 sq ft premises with manufacturing and testing capability for their entire global satellite constellation, Spire's rapid expansion has been supported every step of the way.



UK launch company Orbex is developing launch capabilities from Sutherland Spaceport and has set up a rocket design and production facility and new headquarters in Forres, near Inverness. It was this proximity to the Spaceport and the abundance of skilled resource available which attracted Orbex to set up in Scotland. The new headquarters building is 2000m², combining a rocket design and integration facility, an operations centre and executive offices.



After choosing Scotland for its European R&D centre in 2020, US company Mangata Networks has been so impressed by the skills, local talent, culture of inclusion and valuable support they received in Scotland, that they are further expanding their operations. A new state-of-the-art engineering and operations hub for satellite manufacturing and operations is being constructed at the Prestwick International Aerospace Park in Ayrshire, ensuring that the site is a significant focal point and asset for the Scottish and UK space sectors, as well as a centrepiece for technology and innovation.



Mangata is passionate about connecting humanity all around the world. We saw this same spirit to serve among the Scottish people. They are so committed to helping each other. That drive is at the core of our shared values.

Juliette Neu, Chief Experience Officer,
Mangata Networks



Glasgow has been a fantastic location for us, with exceptional talent and people with a phenomenal 'can-do' attitude and true grit.

Peter Platzer, CEO,
Spire Global

GET IN TOUCH

WE'D LOVE TO WELCOME YOU

Scottish Development International has more than 30 offices throughout the world, and our global team is dedicated to helping you establish and grow your business in Scotland.

We'll support you before, during and after you set up in Scotland and can assist you with property searches, financial support, connections to academia and supply chain, talent and skills and professional advice.

To find out why **#SCOTLANDISNOW** for your company or to experience Scotland for yourself, get in touch and we will be happy to arrange this for you.

**NOW IS THE TIME TO INVEST IN SCOTLAND.
WE'D LOVE TO WELCOME YOU.**



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 **SCOTLAND**