

Space sector proposition

Intelligent – Networked – Innovative: The smart choice is Surrey.



UK overview

INVEST IN **SURREY**

UK overview

Reasons to choose the UK:

- UK space sector worth **£11.8 billion** and **growing by average of 8.6%** year on year since 2010. The sector **employs 37,000 people** and **supports over 115,000 jobs**.
- **UK Space Innovation and Growth Strategy** - industry, government and academia working in partnership since 2010 to develop, grow and exploit new space related opportunities.
- Collaboration across UK space sector has led to creation of [UK Space Agency](#), **Space Leadership Council** and the [Satellite Applications Catapult](#).
- UK government contribution to **European Space Agency** was **£300 million in 2015** (aim to increase to **£400 million by 2020**) - has led to increased private sector investment and international companies expanding UK activities.

UK overview

- Progressing in **5 important technology areas**:
 - telecommunications; sensing; position navigation and timing; exploration and robotics; and access to space.
- UK investing in exciting **new commercial scientific missions** e.g. development of ‘Quantum’ **small and flexible geostationary satellites**, and development and testing for the rover for **Europe’s 2018 ExoMars mission**.
- **Established supply chain** – UK has significant capabilities in satellite design and manufacture, global navigation satellite systems, space product testing, satellite telecommunications and space propulsion systems.

Why Surrey?

INVEST IN **SURREY**

Excellent connectivity

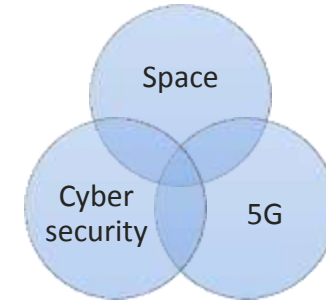


[London Gatwick](#) serves +200 destinations in 90 countries.
[London Heathrow](#) serves 185 destinations in 84 countries.

- **Immediate proximity to London**, without the high-cost.
- **Significant global assets** – borders UK's two largest airports, [London Gatwick](#) and [London Heathrow](#). ***London Gatwick serves 47 out of the top 50 European business destinations.***
- **Well connected** to the high-technology hub along the M4 corridor.

World-leading in space and satellite technology

- World-leading **academic cluster**, with unique links to leading-edge research and technology e.g. in [cyber security](#) and [5G](#).
- Significant assets in **skills and expertise**, including:
 - World-leading [Centre of Excellence in Space Engineering](#);
 - Largest university-based, space science group in the UK at the [Mullard Space Science Laboratory](#) (MSSL);
 - Dedicated [Space Incubator](#), with a proven track record in commercialisation;
 - Joint leadership of the [National Physical Laboratory](#) (in partnership with UK government and Univ. of Strathclyde);
 - Impressive cohort of highly skilled graduates and researchers.
- Home to the world's premier provider of operational and commercial satellite programmes – [Surrey Satellite Technology Ltd.](#)
- Located within a **highly-developed ecosystem** – 75% of UK space industry turnover is generated in the South East of England.



Case study – Surrey Space Centre

- [Surrey Space Centre](#) is a Centre of Excellence in Space Engineering and the world's leading research centre for small, low-cost space missions, generating leading research and bringing innovation to its spin-out company - [Surrey Satellite Technology Ltd](#) (SSTL).
- Offers advanced multidisciplinary small satellite and space system engineering techniques for Earth orbit and interplanetary space; innovative communications; remote sensing; robotics and space science payloads for small satellites; and enabling technologies for low-cost space exploitation and planetary exploration.
- Comprising 10 academic staff, 11 research fellows and 60 postgraduate researchers, the centre is well-placed to develop innovative technologies which are being exploited by industry partners and offers opportunities for rapid commercialisation through [SSTL](#).
- Cutting-edge facilities include: [Air Bearing Systems](#), [STAR Lab Facilities](#) and [VHF & UHF Ground station](#).

Case Study – The Mullard Space Science Laboratory (MSSL)

- The [Mullard Space Science Laboratory](#) (MSSL) is the largest university-based space science group in the UK. It has participated in +200 sounding rockets and +35 satellites and space probes since its foundation in 1956.
- From 2010, hardware built and/or tested at MSSL has been used on 16 spacecraft in orbit around the Earth, Venus, Mars and Saturn. [MSSL](#) has provided instrumentation to all of the major space agencies, including the European Space Agency (ESA), NASA and those of China, Japan and Russia – and continues to do so.
- [MSSL](#) offers a world-leading science programme supported by extensive technology capabilities applicable to space research. The Laboratory has also won a major 3-5 year contract to provide project management training to next generation of project managers at the European Space Agency.
- MSSL now offers two new world-class test facilities – [a magnetically screened plasma calibration vacuum chamber](#) and [optical vacuum chamber](#).

Commercial cluster

Surrey has a number of companies operating in the space and satellite sector, with the Guildford satellite cluster holding a strategic position within the well-established South East ecosystem.

Based at the [Surrey Research Park](#), Guildford:



The box contains six logos arranged in two columns. The left column includes Surrey Satellite Technology Ltd (with a satellite dish icon), dmc International Imaging (with a globe icon), and sen (with a camera lens icon). The right column includes Earth i (a black circle with a green border and a small 'i' in a green circle), BAE SYSTEMS (white text on a red rectangular background), isardSAT (with 'isard' in red and 'SAT' in black), and EOSense (with 'EO' in a grey box).

Wider Surrey and South East ecosystem:



The box contains eight logos arranged in two columns. The left column includes ThalesAlenia Space (with a blue arc icon), CGI (large red letters), CGC Satellite Ground Segments (with a globe icon), and COBHAM (large blue letters). The right column includes Airbus Defence & Space (white text on a dark blue background), QinetiQ (blue letters), TISICS Titanium Composites (white text on a dark blue background), and aerlikon (red letters).

Company logos used for illustrative purposes only.

Unique links to leading-edge technologies

5G will be the mobile generation with cyber security designed into the network, with the ability to integrate satellite communication along with terrestrial networks to provide seamless and secure connection even when travelling or in rural areas.

Cyber Security

Uniquely, Surrey is home to two Centres of Excellence in Cyber Security Research – the [Information Security Group](#) at Royal Holloway and [Surrey Centre for Cyber Security](#).

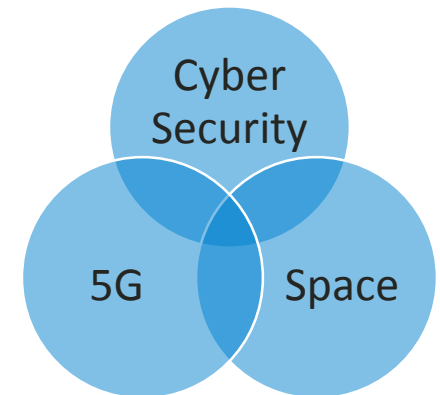
The [Surrey Centre for Cyber Security](#) is linked to the [Surrey Space Centre](#), offering security expertise for projects relating to:

- Satellite and mission control systems;
- Satellite constellations;
- Applications using satellite communications.

5G Innovation Centre

[The 5G Innovation Centre](#) at the University of Surrey is the UK's largest academic research centre dedicated to the development of the next generation of wireless and mobile communications, and offers access to an on-site 5G test bed.

5G will be a key enabling technology for the digital and high-tech sectors.

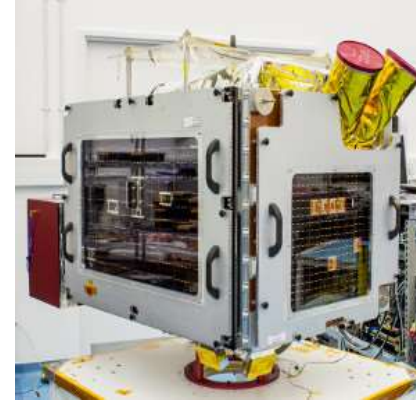


Case study – End-to-end space missions capability

KazEOSat-2 medium resolution Earth observation satellite for Kazakhstan

- Mission definition and satellite design
- Satellite manufacture
- Satellite testing
- Space mission training programme for 16 Kazakh engineers over an 18 month period
- Ground control segment and installation of ground station in Astana
- Launch vehicle procurement
- Satellite operations during commissioning phase.

KazEOSat-2 was launched in 2014.



Market success – Surrey Satellite Technology Ltd

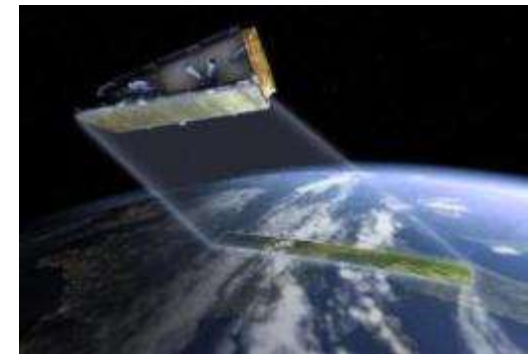
[Surrey Satellite Technology Ltd \(SSTL\)](#) is the world's premier provider of operational and commercial satellite programmes. Starting as a spin-out from the University of Surrey in 1985; today SSTL is an independent company within the Airbus Defence and Space Group.

Key facts:

- £100 million per annum business;
- Launched **47 space missions** and producing **22 payloads for Galileo**;
- Best delivery schedules in the world;
- Long-standing history of international collaboration;
- Delivered **over 40 satellites to international customers**.

Offer:

- Complete in-house design, manufacture, launch and operation of small satellites;
- Complete mission solutions for remote sensing, science, navigation and telecommunications;
- Space training and development programmes;
- Design and build remote sensing and communications payloads;
- Supply avionics suites and subsystems;
- Build and install ground infrastructure;
- Consultancy services.



Investment ready – Surrey Research Park, Guildford

The Surrey Research Park, Guildford GU2 7EF

- Opportunities for design and build facilities from 1858 sqm (20,000 sq ft) on two key sites: [Faraday Court](#) and [George Stephenson Place](#).
- Located within [one of the most prestigious science parks in the UK](#) - home to over 110 companies engaged in R&D and design activities.
- 10 miles from the M25 (JUNC. 10) and 1 mile from the A3 (T) road.
- 23 miles from London Heathrow and 35 miles from London Gatwick airports.
- 2 miles from Guildford mainline rail station, providing regular fast services to London Waterloo (35 mins) and Reading (30 mins).
- On-site facilities and easily accessible amenities include: 24 hr security, café / restaurant, 24hr Superstore, Hotel, new Surrey Sports Park with gym and swimming pool.
 - **Cost – available on request.**



For more information, visit: [Surrey Research Park website](#)

Or contact us at Invest in Surrey:

Email: investinsurrey@surreycc.gov.uk

Phone: (+44) (0)1483 685234

Surrey Space Incubator

- The [Surrey Space Incubator](#) is based at the heart of the ‘Guildford Satellite Cluster’, on the [Surrey Research Park](#) - a major centre of excellence in technology, science, health and engineering.
- Hosted by the [University of Surrey](#) which has a world-class reputation for research, innovation, knowledge transfer and skills development in the space industry and has played a central role in the launch of the Space Catapult.
- An established model of business incubation and acceleration, drawing on the expertise of the [Surrey tech incubator](#) for business support specialists and mentors, who have a proven track record of success - over 90% of businesses surviving over three years.
- Draws together academic research partners, international businesses and SMEs into an entrepreneurial ‘cluster’ to enable collaboration and real business engagement.

Offer:

- 200 sqm (2153 sq ft) of business incubation and laboratory space for SMEs and start-up companies specialising in space-related technologies, with access to highly-specialised space modelling software;
- Specialist business support and management consultancy for high growth, high-tech businesses;
- Support to gain funding: Intensive investment readiness training, private investment networks, including the [Surrey 100 club](#) and support with bid writing;
- Access to meeting and training facilities;
- Networking opportunities with key partners;
- Professional development and training;
- Links into the satellite and application national network.

The Centre is located in the Research Park's [Technology Centre](#).



Facilities include:

- Serviced reception
- On-site cafe
- Meeting rooms
- Videoconferencing
- Broadband
- Telecomms.

Address: Surrey Research Park, Guildford, GU2 7YG

For more information, visit:

<http://www.surreyspaceincubator.co.uk/>

Or contact us at Invest in Surrey:

Email: investinsurrey@surreycc.gov.uk

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How we can help

INVEST IN **SURREY**

How we can help

Invest in Surrey will:

- work with you to help you define your location / expansion needs;
- assist you with your planned move / expansion;
- undertake property searches and specific research to support your move / expansion;
- provide introductions and engagement with local networks and professionals, specific to your sector;
- facilitate meetings or provide other support to help your business navigate regulatory requirements.

Contact:

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