



UK Space Agency Civil Space Strategy

2012 - 2016



CIVIL SPACE STRATEGY 2012-2016

The UK Space Agency
To lead and sustain the growth of the UK Space Sector



Foreword

A strategy is more than simply words.

A strategy demonstrates that we are carefully considering the options available to us; that we have an eye on the long-term, and most importantly, that we are committed to action.

We are currently celebrating the 50th anniversary of the UK's first foray into space, recognizing the pioneers who first ventured into unknown scientific territory with the Ariel-1 satellite.

In the intervening half-century, space has become part of our lives. We use its technology to navigate our streets, access the internet and communicate around the globe. And UK space expertise has cemented Britain at the forefront of the exploration of our Universe. We have landed the Huygens probe on Titan, flown by Halley's comet with the Giotto mission, probed the mysteries of the Universe with Herschel and Planck, and advanced our understanding of planet Earth through the Envisat and Cryosat missions.

Today, space continues to be a key sector for Britain's future.

Its economic contribution to the UK economy is impressive. Total space-related turnover was £9.1 billion in 2010/11 (compared to £7.5 billion in 2008/09). This represents a real growth of 15.6% since 2008/09. The average annual growth rate over the last two years surveyed has been 7.5%. Together these growth rates suggest that the UK space industry has performed extremely well in difficult economic circumstances.

The UK Space Agency is tasked with fostering the growth of the UK space sector. I have no doubt it will continue to succeed. The UK model is well situated for the future, it has a substantial commercial sector, access to the City of London for finance, close links to academics and business and a nimble space agency. Promoting collaboration the UK Space Agency will work with the expertise of industry and researchers directly. Making those direct connections is important for unlocking new innovative services and technologies. We can use the Harwell cluster of ESA, ISIC, the business incubator and Satellite Application Catapult to foster drive new and innovative services, products and technologies. We will also continue to work with our partners in the European Space Agency and around the world.

The possibilities of the next fifty years represent something very inspiring for this country. Our pragmatic approach to private and public sector partnerships has helped pave the way for a new era of space activity in Britain, with the UK Space Agency leading the way.

So, a strategy is more than simply words. A strategy can shape the future.

That is why I am extremely pleased to be able to present this strategy for the UK's future in space.

A handwritten signature in black ink that reads "David Willetts". The signature is written in a cursive, slightly slanted style.

The Rt. Hon. David Willetts MP
Minister for Universities and Science

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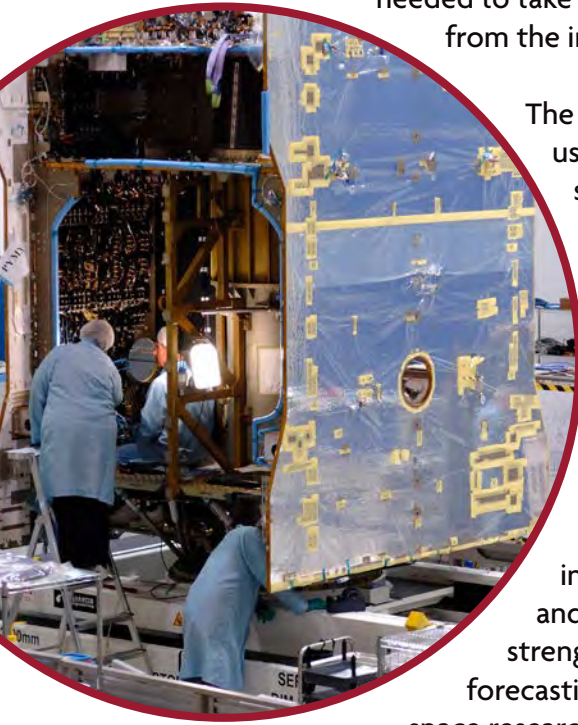
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UK Civil Space Policy

Challenges and Changes

Today our everyday lives depend on space technology: it is woven into the economy in a way unimaginable at the dawn of the space age, and still the global space scene is rapidly changing. The challenge now for UK civil space policy is to anticipate and react to developments being driven both by the emergence of ground-breaking technologies and by the needs of society.

The creation of the UK Space Agency allows the UK to embrace these changes and provide the leadership needed to take full advantage of the opportunities for the economy that will follow from the increasing commercial application of space.



The sector is already showing it can react quickly to change. Many more users are gaining access to space as small satellites deliver cost-effective services. Broadcast and communications satellites are becoming more powerful and flexible. New funding models are allowing businesses to be developed with shared private and government funding. Space can provide the tools needed to manage global challenges such as climate change; and the UK has the opportunity to be a leader in turning these tools into practical solutions. This strategy provides a framework for the Space community to contribute to UK growth as set out in the government Growth Review.

By satisfying demand in global markets that need space-based infrastructure, the UK's space industry provides important economic and social benefits for UK citizens. The UK's space sector already has strength in core space markets such as telecommunications, weather forecasting, navigation, and observation imagery. The UK also has a strong space research community, able to respond to the new scientific challenges, such as mapping the mysterious dark energy across the Universe and searching for places beyond Earth that could support life. These scientific challenges will help drive innovation and develop new skills.

UK companies manufacture and operate satellites, collect space data and provide services that generate high value. Continuing economic growth will depend on a strong UK presence in the fast-growing markets of the future - for example: satellite broadband; Earth observation; and applications that integrate space and terrestrial data for new high-value uses. The UK's space industry set out its determination to grow the UK's space sector in its Space Innovation and Growth Strategy. In particular, it set out an ambitious vision to seize 10% of the global market by 2030.

Our industry has been challenged to find new market opportunities and customer segments at home in the UK, within the European Union and around the world. With new opportunities from the increasing number of active space-faring nations, also comes new competition from the space industries that are developing in those same countries - many are receiving active support from their Governments.

These dynamics require the UK to continue to develop strategies and policies appropriate to its own circumstances if it is to work effectively in the changing international landscape. Complicating this ambition is the fact that more and more attention must be paid to the security and sustainability of space assets. Issues such as the impact of extreme space weather and space debris must be understood and addressed.

The UK Space Agency will continue to work nationally and internationally to represent the interests of civil space users in these issues, and to uphold the Government's obligations under the Outer Space Act.

The UK Space Agency

How We Will Deliver

Almost everything the UK does in space is cooperative.

We work in partnership with other countries, agencies or organisations to achieve our goals. By working with international partners, the UK can participate in a wider range of space activities than it could undertake alone.

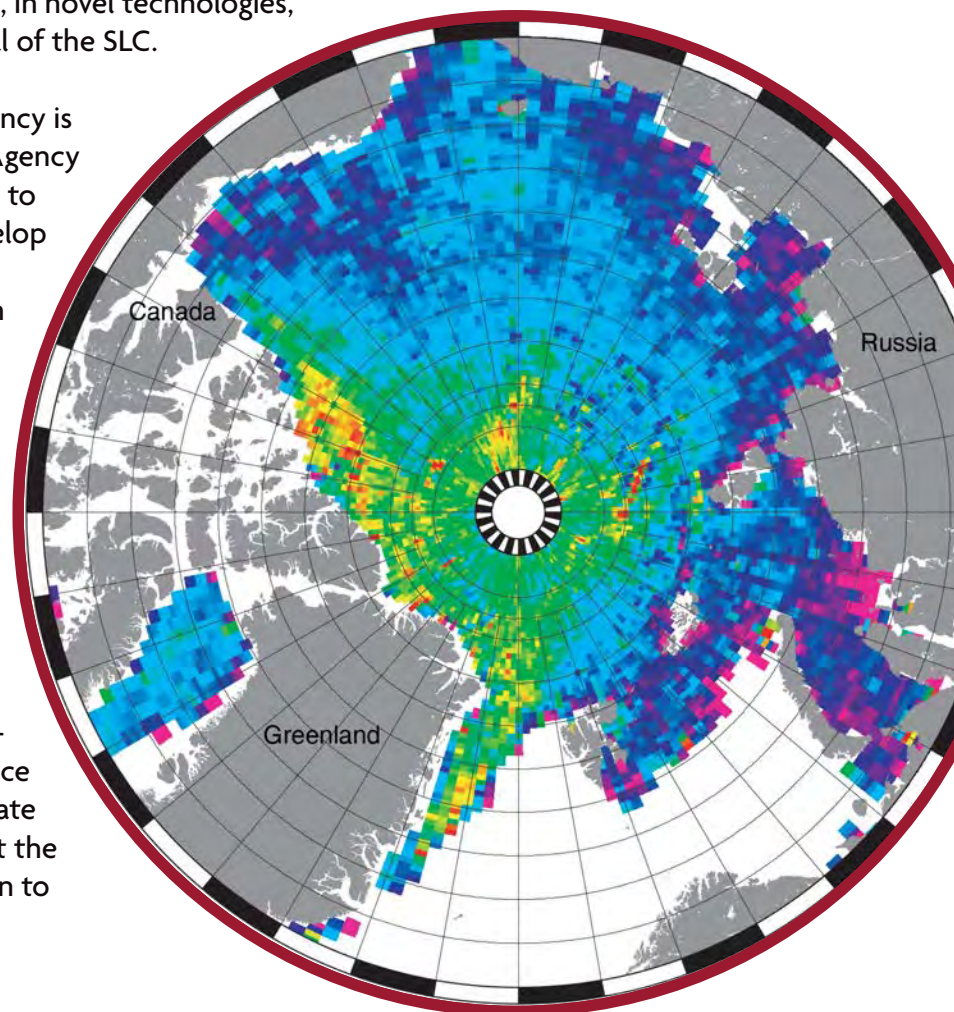
Following the creation of the UK Space Agency as an Executive Agency of the Department for Business, Innovation and Skills (BIS), it was given a clear mandate to lead a new strategic approach to the management and funding of civil space activity. The Agency will continue to broaden and deepen its relationships with the key organisations involved in space.

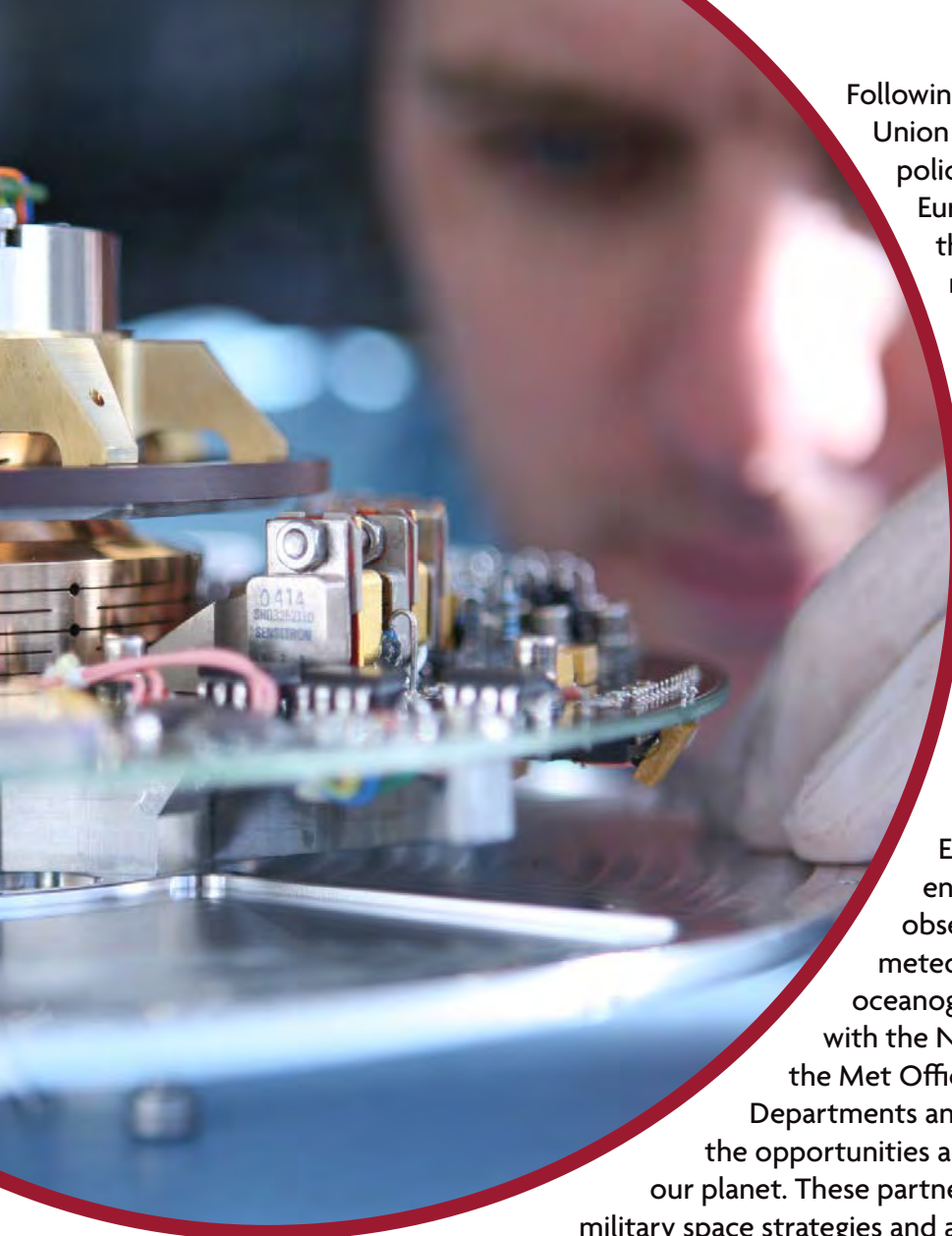
The Agency will work closely with its partners in industry, the Research Councils and with the Technology Strategy Board (TSB) to deliver economic growth and social benefits for the UK. It will offer clear lines of ownership and accountability for capturing issues important to industry, including working across sectors to take forward the Government's Growth Review objectives in the space sector.

The Space Leadership Council provides top level advice to Minister. It helps him to shape a view on the work plan and future direction of the Agency activities. Identifying those opportunities that will enable the UK to develop and maintain global leadership, in novel technologies, operations and exploitation is the key goal of the SLC.

Much of the investment made by the Agency is channelled through the European Space Agency (ESA) to enable UK industry and academia to work in collaboration with Europe to develop world leading technologies, services and science missions. ESA will remain our main delivery mechanism but we will continue to support bilateral space missions where this is in the UK's interest.

The Agency will strengthen the role of the ESA Centre at Harwell in order to anchor the UK in ESA; and ESA in the UK. We will reinforce the Centre's links with the wider UK space infrastructure particularly in key growth areas like space applications. The Agency will use the hub-and-spoke model of the International Space Innovation Centre as a key route to facilitate our growth objectives and we will support the community in exploiting the TSB's decision to develop a Satellite Applications Catapult.





Following the Lisbon Treaty the European Union is taking an increasing role in space policy. On behalf of Member States, the European Commission already manages the Galileo and GMES programmes. In response to these changes, the Agency has established a new EU focused team working to ensure that developments in European space policy and the EU space programmes have real synergy with UK national interests. We will work with Member States and the European Commission to ensure that the EU's programmes are managed effectively with the costs controlled, and that they are complementary to the activities of ESA.

The Agency will work with the Met Office, maximising benefits from EUMETSAT satellite programme and ensuring sustained access to data from observation systems servicing operational meteorology, climate monitoring and oceanography. The Agency will work together with the Natural Environment Research Council, the Met Office and with other Government Departments and public sector users to plan and exploit the opportunities arising from space-based monitoring of our planet. These partnerships will ensure that civil, security and military space strategies and activities are developed in a coherent and proactive way.

The UK already collaborates with many of the world's space agencies. We will continue to forge new international partnerships that provide access to launch opportunities, deliver science or develop new technology and services, while strengthening existing relationships. The Agency will be an active member of the Committee on Earth Observation Satellites and will support the Group on Earth Observation. The UK will remain active in the United Nations Committee for Peaceful Uses of Outer Space and with entities such as the UN Office for Outer Space Affairs promoting the peaceful exploitation of outer space, and will support actions to ensure the long term sustainability of space activities.

As a founding member, the Agency will participate in the International Space Exploration Coordination Group of space agencies. It will work with important professional and scientific bodies such as the International Academy of Astronautics, the International Astronautics Federation and the Committee on Space Research. The Agency will also strengthen links with UK trade associations, professional bodies and the general public through its outreach programme.

The Agency will work with Government, education organisations and experts to exploit the inspirational effect of space in delivering education and capturing and shaping the skills and imagination of the next generation of innovators and scientists. The European Space Education Resource Office (ESERO-UK) will help us deliver this vital goal.



Pathways to Growth

The following chapters set out the Agency's strategy for delivering growth as reflected in six themes:

GROWTH THROUGH NEW OPPORTUNITIES

GROWTH FROM EXPORT

INNOVATION SUPPORTING GROWTH

SCIENCE TO UNDERPIN GROWTH

EDUCATION FOR GROWTH

GROWTH THROUGH SMARTER GOVERNMENT

This document presents the approach the Agency will take, while detailed actions will be defined in our corporate plan and an annual delivery statement.

Growth from New Opportunities

Opportunities are open to offer space-based services to an increasing range of customers from individual consumers to international organisations.

New areas are likely to include the growth of:

- international telecommunications and navigation services and applications;
- provision of information systems to support carbon trading;
- systems for space surveillance to alert us to natural and man-made hazards which threaten critical space infrastructure;
- innovative launch systems; services to support space exploration; and space tourism.

Countries which recognise these new markets and invest early will reap the rewards.

Working with its partners at home and abroad, the UK Space Agency will:

- assist industry to build the new markets in line with the Government's Growth Review objectives;
- identify, and invest in, strategic opportunities to grow the UK's industrial capabilities and economic impact;
- carry out horizon-scanning activities with industry and researchers to identify emerging opportunities;
- invest in programmes that demonstrate new services;
- work with industry, the Technology Strategy Board, the European Commission and ESA to translate investment into down-to-Earth applications.

By bringing together industry, academia and government facilities, the Harwell Space Cluster (which includes the ESA Harwell centre, the International Space Innovation Centre and a space Business Incubator) will be a vital tool for delivering growth through new opportunities.





Case Study: The Facility for Climate and Environmental Monitoring from Space

The Facility for Climate and Environmental Monitoring from Space (CEMS) will provide data and computing services to stimulate growth in earth observation applications and climate services using satellite data. It provides a purpose built facility combining high performance computing, extensive data collections and various user services and software applications.

The facility gives academic, government and commercial users, including SMEs, access to internally hosted climate and EO data, alongside a wide range of associated services for data processing, analysis and visualisation.

The CEMS infrastructure will provide a cloud environment, allowing users to build and host applications and core framework services with access to 1.7 petabytes of key satellite data and leading edge high performance computing facilities. CEMS will also provide essential data quality and integrity tools to give users complete confidence in, and transparency of, its data, services and products.

When operational, CEMS will offer a number of services enabling users to process, manage and analyse data. These services will develop and evolve over time to reflect the full CEMS vision and will grow with the CEMS customer base. The initial investment in CEMS came through the UK Space Agency and will be owned and operated by ISIC plc on a not-for-profit basis.

CEMS will build on the UK's leading position in climate science, technology and services and will support the European Space Agency's Climate Office at Harwell. It will provide a focus for innovation and support the exploitation of important opportunities such as GMES data and services.



Growth from Export

To realise the UK's objective to grow its share of the global market to 10% by 2030, new services and products need to be turned into sales.

The UK Space Agency has a role to play in assisting the space sector to capture more business in all areas, but particularly the global commercial and security markets which are forecast to grow most strongly.

To achieve this, the UK Space Agency will promote export opportunities by:

- consulting with industry and academia to lead the definition of a UK space export strategy that fits within the existing overall UK governance framework and legislation for exports;
- working with industry in partnership with the Department for Business, Innovation and Skills, the Foreign and Commonwealth Office, UK Trade and Investment, the Ministry of Defence, the Science and Innovation Network and the Research Councils' overseas offices to deliver this strategy;
- reducing barriers to export growth such as excessive regulation, regulatory costs and differences in the international cost of capital, and working with industry to identify further regulatory reforms that can stimulate growth and ensure the UK remains and thrives as a competitive location for space companies;
- working with the Ministry of Defence in providing UK industry with clear guidance and signposting on the security aspects of space exports
- working with the space sector and the City to develop greater awareness of market opportunities and exploit expertise in financing in order to grow existing UK businesses and attract more businesses to set up in the UK;
- by building relationships with other international space agencies to enable collaborative endeavours which can open up markets for business.

Case Study: NovaSAR

In November 2011, Minister for Universities and Science, David Willetts, announced investment in a new British-built satellite constellation able to monitor maritime security, climate change and humanitarian disasters.

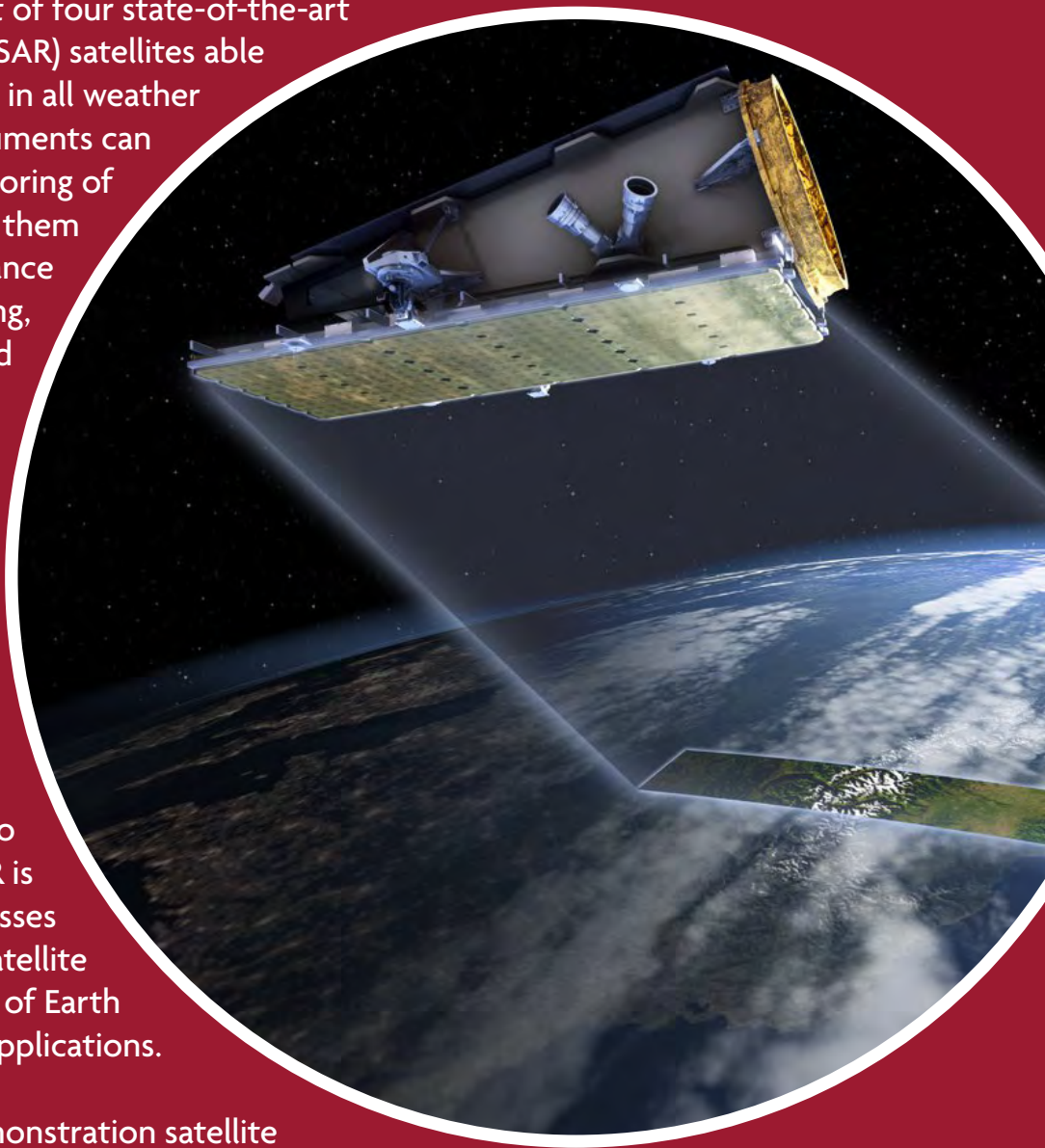
NovaSAR will consist of four state-of-the-art Synthetic Aperture Radar (SAR) satellites able to operate day and night in all weather conditions. These instruments can be used for regular monitoring of specific areas which makes them ideal for maritime surveillance of drug-trafficking, piracy and oil spills, and environmental monitoring of deforestation, flooding and glacial melts.

Government will provide £21 million to assist in the development and launch of the first satellite of the constellation. Success will unlock over £150 million of inward investment to the UK. Once NovaSAR is up and running, businesses will be able to use the satellite data to develop a range of Earth observation services and applications.

The first NovaSAR demonstration satellite will be built by UK-based company Surrey Satellite

Technology Limited with a payload provided by Astrium UK. This will be a technology demonstration on a much smaller spacecraft than traditional SAR satellites, dramatically reducing cost.

This project will provide the UK with a world-leading constellation of its own and is a clear signal of the Government's continued commitment to the UK space industry.



Innovation Supporting Growth

Space is at the cutting edge of technology, data processing and analysis. UK academia works in partnership with industry to deliver new missions, instrumentation and data analysis techniques. This innovation underpins the UK space sector growth. Benefits flow out into the commercial sector, for example delivering new types of data processing systems; advanced structures; and electric propulsion.

This know-how can be exploited by other industries from manufacturing to medicine and from energy to information technology. The Agency, working with the Research Councils, industry and the TSB, will lead an integrated approach to technology, stretching from 'blue skies' research through to technology demonstration, pulling ideas developed in the science base through to the stage where private sector will invest. The International Space Innovation Centre (ISIC) and the ESA Business Incubation Centre already play an important role in creating an open innovation environment where new technology, applications and services can flourish. A further step forward will see the creation of a national Satellite Applications Catapult.

The UK is playing a pivotal role in nurturing new applications which will assist with many critical global issues including: managing natural resources, understanding and managing our responses to the changing climate, planning and monitoring man-made infrastructure, security and defence. By also fostering innovation in service sectors, the Agency will support the growth of technically superior space applications.

Defining the range of key technologies that need enhancing or developing to improve the UK competitiveness and ability to exploit new opportunities is important.

To this end, the UK space community has developed a technology roadmap setting out key technologies that need to be developed, and the UK Space Agency will:

- use the technology road map to prioritise investment and identify high impact, paradigm-changing technologies;
- continue to invest in key areas for development via the National Space Technology Programme, co-funded with industry to deliver the National Space Technology Strategy;
- develop strategies to take technologies from concept to demonstration using national, ESA, EU or bi-lateral programmes as appropriate;
- partner other public funders to make the most effective use of resources by identifying common requirements;
- selectively join ESA optional programmes, engaging with them at an early stage and contributing at a meaningful level to influence the programme to meet UK priorities;
- facilitate exploitation of technology by encouraging academia-industry collaboration at all stages of the technology development cycle;
- work with partners to ensure transferrable technologies are taken up by other sectors;
- maximise private financing by assisting with risk reduction during the earliest phases of technology development.

Case Study: Hylas-1

HYLAS 1 is the first small geostationary communications satellite of the Old Street-based telecommunications firm Avanti Communications. Launched in November 2010, the satellite is focused on high-speed internet connectivity for the European market.

HYLAS 1 is an innovative mission put together in a new way: it is the UK's first public-private partnership resulting in a full satellite system.

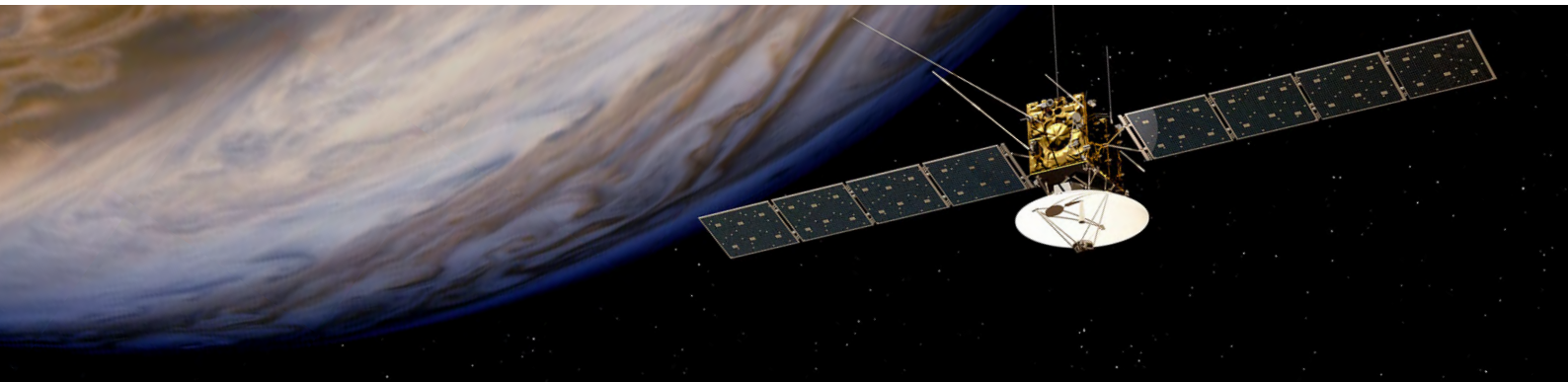
The UK Space Agency and Technology Strategy Board provided support for the development of HYLAS 1 through the UK subscription to the European Space Agency's ARTES programme. Avanti has capitalized on the initial investment to build the satellite infrastructure and developed a portfolio of services around the technology.

Operating across Ku- and Ka-band frequencies with advanced communication technology, HYLAS-1 can pipe broadband through the sky to hundreds of thousands of previously underserved users while simultaneously broadcasting multiple standard and high-definition TV channels.

HYLAS 1's wide Ku-band beam covers the whole of Europe, providing bandwidth for satellite television broadcasting. Its Ka-band antenna generates eight closely focused 'spot beams' for optimal frequency reuse, each of which provides coverage to a key European market. Bandwidth and power can be redistributed between beams to fulfil the changing needs of the market.

Joining forces with a commercial operator means that Europe's advanced telecommunications technologies can reach orbit more rapidly and economically than would be possible otherwise.





Science to Underpin Growth

The Agency believes in the intrinsic value of science as a national endeavour. History shows that sustained investment in basic science aimed at seeking new knowledge delivers tangible benefits. Our Earth observation programme allows us to understand our changing environment, including our own impact upon it. Space science answers questions about the birth and evolution of our Universe and the basic physics that underpins the behaviour of matter. Space exploration informs us about the possibility of life beyond the Earth and the potential to expand into the Solar System. The weightless environment of space offers the possibility of developing new materials, insights into human physiology and a laboratory for basic physics and life sciences.

A strong research community provides a technical and scientific knowledge base that feeds future developments both in the upstream industries (e.g. satellite manufacturers and software companies) and the downstream applications and services that use space data. This latter market, particularly in environmental services is seen as an important growth industry. Investment in science also ensures the UK has a strong academic base able to supply industry with skilled graduates and experienced researchers. And the spin out opportunities for technology developed for a space mission are important, with passive airport scanners being a good example.

To maintain the health of the science-base the UK Space Agency will:

- provide opportunities to participate in world class scientific missions, working primarily through ESA but also in bilateral collaborations;
- work with all the Research Councils to coordinate investments to maximise the scientific exploitation of UK investment in space;
- maintain excellence in Earth observation technologies, techniques and systems to provide the knowledge base to feed into commercial and public applications;
- support actions to foster effective knowledge exchange between academia, government departments, agencies and industry.



Case Study: Herschel Space Observatory

The Herschel Space Observatory is the largest infrared space observatory ever built. Its highly-advanced instruments collect radiation from some of the coldest and most distant objects in the Universe, helping us understand star formation and the origins of the Universe.

The UK led the development of one of the three instruments on board. The SPIRE (Spectral and Photometric Imaging Receiver) instrument was developed by an international consortium, and the assembly and testing of SPIRE took place at the STFC Rutherford Appleton Laboratory (RAL) in Oxfordshire. The scientific analysis is led by a Principal Investigator from Cardiff University.

The mission is proving to be a great success in all of these science areas, with over 300 refereed scientific publications in the first two years of operation, and has revolutionised our knowledge of the extragalactic and galactic skies in the far infrared and submillimetre. This observatory has helped understand one of the most iconic images in astronomy: the 'Pillars of Creation' an image originally taken by the Hubble Space Telescope in 1995. Herschel has helped to explain the processes occurring within the pillars, and the locations of stars that are forming throughout the surrounding area. The observations reveal how complicated star formation is.

Education for Growth

The future wealth of the UK will be dependent on developing a highly skilled technical workforce. Studies have demonstrated the value of space activities in attracting children into science, technology, engineering and mathematics (STEM) and encouraging them to excel.

An expanding space sector needs a supply of graduates and technicians with appropriate skills. The Agency has a role to both encourage the take up of STEM subjects for the benefit of the whole UK economy and to ensure that universities and colleges provide appropriate skills to meet the space sector's specific requirements. These twin themes of 'education for space' and 'space for education' are embodied in the Agency's Education, Skills and Outreach Strategy, which is published separately.

The UK Space Agency will:

- work with the Department for Education, further education and higher education authorities, industry, education organisations and career advisors to deliver the skilled staff that industry needs for growth and promote careers in the space industry;
- work with the Research Councils to maintain the UK's world leading space research community;
- work with space education and advocacy groups to tell the exciting story of the UK space programme and use it as a tool to encourage children to take up and excel at STEM subjects.



Case Study: National Space Academy

The National Space Academy programme of student masterclasses, teacher CPD and careers events is delivered by a network of outstanding teachers and project scientists that use the context of space to teach physics, chemistry, biology, mathematics, geography and applied science to GCSE, A-level and BTEC students and their teachers.

Part of the objective of the National Space Academy is to improve the size and quality of the UK science and engineering skills pool. Government, industry and academia have all expressed concern about student progression onto both academic and vocational pathways in STEM areas and the impact this will have on future economic growth and prosperity.

A three year pilot Space Academy programme run by the National Space Centre in the north east proved successful in boosting student attainment, teacher effectiveness and influencing course choices at A-level. And now, with a network of schools and teachers across England, the National Space Academy is already starting to make a difference.

Led by the National Space Centre, the programme is funded by the UK Space Agency, European Space Agency, Science and Technology Facilities Council and industrial/academic from the UK space sector.



Growth Through Smarter Government

Government will increasingly rely on satellite-derived services and data, because in many areas information gathered from space enables government to make better informed policy. Space can provide data on the environment, climate, weather, security, agriculture, coastal management and disaster mitigation – effectively utilising these resources will help to meet the current and future policy challenges in these areas.

The UK Space Agency will therefore support the development of ‘smarter’, more efficient government through the use of space data by providing strategic leadership, and by acting as the centre of expertise for government departments; working with them to identify applications and translate their needs into requirements for the space industry. By becoming an anchor customer, the public sector could enable service-providers to attract private investment, develop export markets and stimulate wider market uptake.

The UK Space Agency will work across government:

- to improve their capabilities and efficiency through increased use of space services;
- and with industry to create data services that meet public sector requirements;
- and with international bodies to identify how space services can assist the world’s poorest and most vulnerable people.

The burgeoning entrepreneurial climate within the space sector needs an appropriate regulatory framework that takes account of international obligations and national security. Regulation can be used as a tool to establish a competitive edge in the international arena. It can create an environment which attracts inward investment and encourages industry to develop new systems and services in the UK. It is also important that the Agency ensures that the international regulatory environment for orbit and frequency allocations facilitates growth of UK markets.

A responsibility of the Government is also to put in place strategies to protect important infrastructure. Space is becoming increasingly congested, competitive, and contested. Given the large number of space objects in orbit around the Earth, collisions and radio frequency interference is a real and growing threat. The Agency worked with the Cabinet Office who led a cross cutting project to develop a National Space Security Policy which was launched in summer 2012. The project was Chaired by the Minister for Universities and Science with the Minister for Defence Procurement as a first step towards ensuring the safety, stability and security of the space domain for years to come.

We will also:

- work with the Department for Transport and the Civil Aviation Authority to undertake a substantive review of potential space plane operations and certification in the UK
- consider responses to a public consultation on reforming the Outer Space Act before finalising any changes to the Act.
- work with OFCOM and international bodies to ensure appropriate radio frequencies and orbit slots are available for future space services and new ways of accessing space



Case Study: International Charter 'Space and Major Disasters'

The Disaster Monitoring Constellation is a unique international partnership formed by national governments and organisations that recognised the need for coordinated satellite imaging to assess and mitigate natural disasters with more up to date and timely information.

The first satellite in the series, UK-DMC, was jointly funded by the UK Space Agency and SSTL through the £15M MOSAIC programme. All of the Constellation satellites were designed and built by Surrey Satellite Technology Ltd.

By working together, the 5 members of the DMC consortium, run by DMC International Imaging (DMCii) in Surrey, provide a constellation capable of acquiring satellite images of anywhere on Earth at least once a day. This makes it possible to provide recent high-quality images of the affected area within the critical days following a disaster, improving the accuracy of maps and emergency response plans that are made.

The UK Space Agency and DMCii work together with the world's space agencies and the United Nations (UN) within the International Charter: Space and Major Disasters to provide multi-spectral optical imagery during natural disasters.

The constellation responds to disasters frequently and has played an important role responding to disasters such as Hurricane Katrina, the Japanese earthquake and tsunami in 2011, and the UK floods in recent years.

A New Strategy for a New Era

The role of space technology in the UK has changed dramatically in the last 50 years.

The creation of the UK Space Agency in April 2011; the publication of the Government Growth Review, the establishment of the International Space Innovation Centre, the Space Application Catapult Centre, and the presence of a European Space Agency facility at the Harwell Space Cluster are all part of the dynamic, new environment in which the UK space sector can flourish.

The UK Space Agency will invest in, lead and coordinate the UK's civil space programme. We will ensure that our central goal of growth becomes a reality and the potential of space to the twenty-first century economy will be both recognised and realised.

The Agency's investment in space will be targeted at areas that have the greatest potential for delivering economic benefits, scientific excellence and national security. We recognise that in some instances these benefits may be realised some years downstream. The added value of the Agency will be to provide coherence between investment in long-term basic research and in near-term applications, harnessing the skills and experience of universities, national laboratories and industry to grow a stronger UK strategic space capability.

Through the Agency's leadership of the space sector, we will build links between industry and the research community and also between Government users of space and organisations that contribute to creating capabilities in space, such as industry, the Technology Strategy Board, the Research Councils and the Harwell Space Cluster.

The Agency's work of promoting the space industry will assist in selling UK capability abroad in order to increase the UK's share of the world space market. Furthermore, we will act as champion in Government to provide a regulatory environment that promotes the space sector.

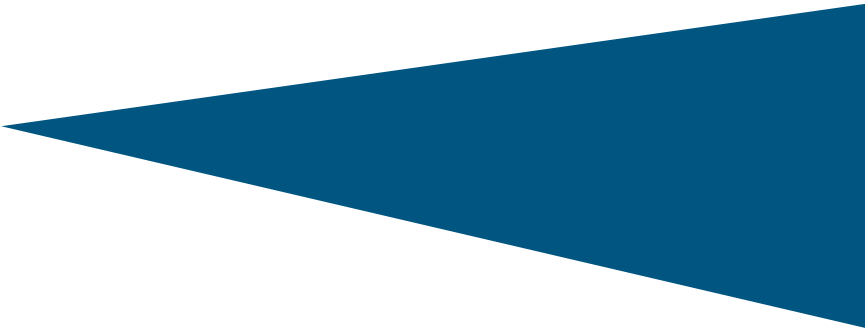
Last, but by no means least, the UK Space Agency will provide inspiration and discovery through its exploration of the Universe and its study of planet Earth. For the next generation, the growth of the UK space sector will create opportunities for rewarding careers and turn their imaginations towards the possibilities of tomorrow.

Through its corporate plan and website, the Agency will provide updates on the actions and timeline for implementation of this strategy.

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