



UK Space Agency Strategy 2011 – 2015

Consultation Document

1 April 2011

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UK Space Agency Strategy 2011-2015: Consultation

This consultation document seeks the views of stakeholders on what the UK Space Agency strategy should be for 2011-2015 towards the aim of leading and sustaining the growth of the UK space sector.

It is likely to be of particular interest to members of: (i) the UK space industry; (ii) UK space-related academia and users of space applications; and (iii) the UK public with an interest in UK space policy.

Issued: 1 April 2011

Respond by: 8 July 2011

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1. Foreword by David Willetts, Minister of State for Universities and Science

Fifty years ago, when the first UK satellite was being built, space was at the frontier of science and Cold War rivalry. 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. But the global space scene is changing rapidly. In response, UK civil space policy must 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 take full advantage of the opportunities that lie ahead.

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 markets of the future - for example: satellite broadband; Earth observation; and applications that integrate space and terrestrial data for new-high value uses.

With all the success to date, space is still an industry for the future. The UK Space Agency's strategy for civil space policy responds to the complex and rapidly developing landscape in order to answer the needs of industry, the research community and the citizen.

I therefore invite you to respond to this consultation document. It aims to set out the priorities for the UK Space Agency in a national civil space strategy which will replace the existing 2008-2012 strategy. Whether you are in the space community, or have an interest in space, please let us know what you think. We will consider your views carefully before finalising the strategy.

Thank you for your help.

David Willetts

2. How to respond

When responding, please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of an organisation, please ensure it is clear whom the organisation represents and, where applicable, how the views of members were assembled.

Please send responses to:

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We do not intend to acknowledge receipt of individual responses unless explicitly requested by respondents.

Any enquiries about this document may be sent to the same address. If enquiries are from a representative body, please summarise the persons or organisations represented.

Please see section on confidentiality and data protection below.

3. Additional copies

You may make copies of this document without seeking permission. Further printed copies of the consultation document can be obtained from the address above.

An electronic version can be found at on the UK Space Agency website at www.bis.gov.uk/ukspaceagency/who-we-are/strategy or on the BIS website at <http://bis.ecgroup.net/Publications/UKSpaceAgency.aspx>

We will arrange for alternative formats to be provided if necessary.

4. Confidentiality and data protection

Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information regimes (these are primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act 1998 (DPA) and the Environmental Information Regulations 2004). If you want other information that you provide to be treated as confidential, please be aware that, under the FOI, there is a statutory Code of Practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence.

In view of this, it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

The Department will process your personal data in accordance with the DPA and in the majority of circumstances this will mean that your personal data will not be disclosed to third parties.

5. Help with queries

Any comments or complaints about the conduct of this consultation should be addressed to:

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A copy of the Code of Practice on Consultation criteria is attached at Annex A.

6. The Consultation

Background

In the current economic climate it is important to show how the UK's support for research and innovation is of major importance to the UK economic growth and social infrastructure. Space is demonstrating a clear added value in this way across the economy as a whole. It is making a significant contribution in our scientific understanding of the Universe, our ability to manage and understand the climate and environment of our planet, to defence, and to economic services and products. Underpinning this is a leading edge technological and engineering capability in both industry and academia.

It is in this context that the Department for Business, Innovation and Skills (BIS) is launching a formal consultation on what the UK civil space strategy should be for 2011-2015 in order to deliver value for money and maximise the economic benefits of space activities. This consultation is without prejudice to any future spending decisions.

Your views are welcome on any or all of the strategy themes detailed in this document.

The UK Civil Space Strategy

The UK's current civil space strategy aims to support the Government's ambition of achieving excellence in science, supporting industry in key areas of wealth creation and encouraging innovation. This can be found at:

<http://www.bis.gov.uk/assets/bispartners/ukspaceagency/docs/ukcss2008-2010.pdf>

Given recent developments in the UK's civil space programme such as the formation of the Agency and the publication of industry's Space Innovation and Growth Strategy (IGS), there is an urgent need to update the document.

About The UK Space Agency

The UK Space Agency is at the heart of UK efforts to explore space, exploit space-based applications and technology and support our academic and industrial communities. The UK Space Agency was launched officially on 23 March 2010 and became an executive agency of BIS from 1 April 2011. The Agency is responsible for all strategic decisions on the UK civil space programme and provides a clear, single voice for UK space ambitions.

The UK Space Agency:

- co-ordinates UK civil space activity;
- supports academic research;
- nurtures the UK space industry;
- raises the profile of UK space activities at home and abroad;
- works to increase understanding of space and its practical benefits and;
- inspires our next generation of UK scientists and engineers.

The Draft Strategy

The draft strategy is markedly different in tone and style than previous versions. It is relatively brief and draws on the Space IGS for its inspiration by taking growth as the overarching theme. The strategy sets out six areas of focus and describes how each area is important to the growth agenda. The strategy also sets out what the UK Space Agency will do to achieve the ambition of each of these themes.

The areas the strategy sets out are:

1. Growth through new opportunities

Opportunities are opening to offer space-based services to an increasing range of customers, from the general public to multi-national organisations. Possible new areas include the 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.

2. Growth from export

To realise the UK's objective to grow its share of the global market to 10% by 2030 the 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.

3. 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 brings mutual benefits and underpins the UK space sector growth. These benefits flow out into the commercial sector, for example delivering new types of data processing systems; advanced structures; and electric propulsion.

The UK is playing a pivotal role in developing new applications which will assist with many critical global issues such as managing natural resources, understanding and managing our responses to the changing climate, planning and monitoring man-made infrastructure, security and defence.

4. Science to enable growth

Sustained investment in basic science aimed at seeking new knowledge also delivers tangible benefits. The UK's 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.

Scientific missions can inspire the next generation to explore, understand and use the tools of science, mathematics and engineering that underpin the modern economy.

Furthermore, a strong research community provides a technical and scientific knowledge base that feeds future developments both in the upstream industries and the downstream business.

5. Education for growth

The future wealth of the nation is 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 sectors requirements.

6. Growth through smarter government

Government will increasingly rely on satellite-derived services and data. In many areas, information gathered from space enables government to make better informed public policy decisions. For example, space can provide data on the environment, climate, weather, security, agriculture, coastal management and disaster mitigation. The UK Space Agency will support the development of 'smarter', more efficient government through the use of space data by providing the strategic leadership and acting as the centre of expertise for Government departments.

The full draft text of the strategy is attached at Annex B.

7. Consultation Questions

The primary issue the Government is seeking a response on is whether the draft strategy addresses the challenges and changes facing the space sector in a way which will support and encourage growth in the space sector.

To this end a set of questions is posed, which seek to ensure that any decision is made on the basis of maximum knowledge and input from all stakeholders. Responses are free to address all or a subset of the questions. You may express views on related issues not specifically addressed in the questions.

Question 1 – Does the draft strategy adequately address the space policy issues facing the UK?

Question 2 – In the current context, is the overarching theme of growth of the space sector the correct one?

Question 3 – Are there any space policy issues which are missing or not clearly addressed?

Question 4 – Are there critical organisations or interfaces which are not mentioned?

Question 5 – How should industry and other stakeholders best be involved in taking forward the strategy?

You may answer as many or as few questions as you wish.

We look forward to receiving your responses to the questions raised in this consultation.

ANNEX A

THE SEVEN CONSULTATION CRITERIA

Criterion 1 – When to consult

Formal consultation should take place at a stage when there is scope to influence the policy outcome.

Criterion 2 – Duration of consultation exercises

Consultations should normally last for at least 12 weeks with consideration given to longer timescales where feasible and sensible.

Criterion 3 – Clarity of scope and impact

Consultation documents should be clear about the consultation process, what is being proposed, the scope to influence and the expected costs and benefits of the proposals.

Criterion 4 – Accessibility of consultation exercises

Consultation exercises should be designed to be accessible to, and clearly targeted at, those people the exercise is intended to reach.

Criterion 5 – The burden of consultation

Keeping the burden of consultation to a minimum is essential if consultations are to be effective and if consultees' buy-in to the process is to be obtained.

Criterion 6 – Responsiveness of consultation exercises

Consultation responses should be analysed carefully and clear feedback should be provided to participants following the consultation.

Criterion 7 – Capacity to consult

Officials running consultations should seek guidance in how to run an effective consultation exercise and share what they have learned from the experience.

The complete code is available on the Department for Business, Innovation and Skills web site at: <http://www.bis.gov.uk/whatwedo/bre/consultation-guidance/page44420.html>

ANNEX B

UK SPACE AGENCY STRATEGY 2011-2015

'To lead and sustain the growth of the UK Space Sector'

UK Civil Space Policy: Challenges and Changes

Fifty years ago, when the first UK satellite was being built, space was at the frontier of science and Cold War rivalry. 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. But the global space scene is rapidly changing. In response, UK civil space policy must 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 take full advantage of the opportunities that lie ahead.

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.

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 markets of the future - for example: satellite broadband; Earth observation; and applications that integrate space and terrestrial data for new-high value uses. In February 2010, 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 stated its determination to seize 10% of the global market by 2030.

Our industry faces new market opportunities and types of customers such as the European Union; but also more competition from an increasing number of active space-faring nations. Many are providing active government support to grow their industries. The UK must develop strategies and policies to work effectively in the changing international landscape.

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 can also benefit from a clear articulation of civil, security and military strategies that enable us to work with international partners to secure our space infrastructure.

The UK Space Agency's strategy for civil space policy responds to this complex landscape in order to answer the needs of industry, the research community and the citizen.

The UK Space Agency: How We Will Make a Difference

The UK Space Agency provides the right government structure to respond to this new environment. Formed in 2010, the UK Space Agency is an executive agency of the Department for Business, Innovation and Skills. It oversees civil space activities and provides a more coherent approach to strategic funding and management than was achievable by the previous British National Space Centre.

The new Agency is placing growth at the centre of this strategy and this goal permeates all aspects of our programme. Consequently, the impact of the Agency's work is not limited to the space sector: knowledge and applications spill-out into other sectors, so acting as an engine of innovation for the wider economy. Crucially, the Agency acts as a focus for stakeholder engagement and negotiates on the UK's behalf at international bodies such as the European Space Agency (ESA).

Our over-arching objective is to maintain and improve the space sector's impressive growth rate and to increase revenues by more than six times by 2030 to £40B. The Agency assists in this by providing a coherent approach stretching from basic science through technology development and on to high value-adding services. Key ingredients in an environment which encourages innovation include a strong research base; the availability of skilled people; targeted government investment addressing market failure; proactive assistance in opening export markets; and the right regulatory framework.

The UK space sector has existing strengths but to foster growth it must acquire new capabilities and move into new markets. The Agency will therefore work with all players to explore new possibilities and set new priorities.

The following chapters set out the main themes of the Agency's strategy for growth. These are:

1. Growth through new opportunities;
2. Growth from export;
3. Innovation supporting growth;
4. Science to enable growth;
5. Education for growth;
6. Growth through smarter government.

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

1. Growth from New Opportunities

Opportunities are opening to offer space-based services to an increasing range of customers from the general public to multi-national organisations. Possible new areas include the 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 internationally, the UK Space Agency will:

- assist industry to build the new markets identified in the Space Innovation and Growth Strategy;
- 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.

2. Growth from Export

To realise the UK's objective to grow its share of the global market to 10% by 2030 these 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;
- Working with industry in partnership with the Foreign and Commonwealth Office, UK Trade and Investment, the Science and Innovation Network and the Research Council's 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;
- 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;
- and by building relationships with international space agencies world-wide to enable collaborative endeavours which can open up markets for business.

3. 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 brings mutual benefits and underpins the UK space sector growth. These 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 energy to information technology. The Agency, working with the research councils and the Technology Strategy Board will enable an integrated approach to technology development 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 Innovations Centre (ISIC) and the ESA Business Incubation Centre will play an important role in creating the open innovation environment where new technology, applications and services can flourish.

The UK is playing a pivotal role in developing new applications which will assist with many critical global issues such as managing natural resources, understanding and managing our responses to the changing climate, planning and monitoring man-made infrastructure, security and defence. By fostering innovation in service sectors the Agency will maximise technical superiority and uptake of space applications.

Inspired by the Space IGS, a set of technology 'roadmaps' have been developed by the space community, supported by the Space 'Knowledge Transfer Network' Special Interest Group. The UK Space Agency will:

- use these technology road maps to prioritise investment and identify high impact, disruptive technologies;
- launch a National Space Technology Programme co-funded with industry to deliver the National Space Technology Strategy;
- develop strategies to take priority technologies from concept to demonstration through national, ESA, EU or bi-lateral programmes as appropriate;
- work with other technology funders to make the most effective use of resources by identifying common technological requirements and dual-use capabilities;
- 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.

4. Science to Enable 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 also 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.

Scientific missions provide the most emblematic and visible part of our space programme. They can inspire the next generation to explore, understand and use the tools of science, mathematics and engineering that underpin the modern economy.

Furthermore, 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 business (applications and services that use space data). Finally, investment in science not only plays a vital role in taking forward new technologies and applications but also ensures the UK has a strong academic base able to supply industry with skilled graduates and experienced researchers.

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.

5. Education for Growth

The future wealth of the nation is 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 sectors 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.

6. Growth Through Smarter Government

Government will increasingly rely on satellite-derived services and data. In many areas information gathered from space enables government to make better informed public policy decisions. For example, space can provide data on the environment, climate, weather, security, agriculture, coastal management and disaster mitigation.

The UK Space Agency will therefore support the development of 'smarter', more efficient government through the use of space data by providing the strategic leadership and 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, Government 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 which balances international obligations and national security while encouraging enterprise and industry. Indeed, 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 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 problem. The Agency will support Government departments involved in space governance and work with international partners to establish a Space Security Strategy as a first step towards ensuring the safety, stability and security of the space domain for years to come. We will:

- work with the Civil Aviation Authority and the European Aviation Safety Agency to ensure the right regulatory framework is in place to facilitate UK launch capabilities and space tourism;
- reform the Outer Space Act by introducing an upper limit on liability for UK operators;
- 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
- provide UK industry with clearer guidance on the regulation of security aspects in export deals;
- support the Cabinet Office, Ministry of Defence and the Home Office activity in developing a Space Security Strategy that ensures that the relevant space infrastructure is identified and risk mitigation strategies are developed.

The UK Space Agency: How We Will Deliver

The UK Space Agency will seek advice on its policies and investment in an open and transparent way. We will work in innovative ways to deliver our responsibilities. An important role of the Agency is to explain to the public the relevance of, and benefits arising from, government investment in the space programme. In pursuit of this goal the Agency will hold an annual UK Space Conference.

The Agency is responsible for delivering the space infrastructure required by Government departments. Additional effort will be placed on building relationships across government, capturing their requirements and translating these into affordable programmes. Existing relationships with the Science and Technology Facilities Council (STFC) and the Natural Environment Research Council (NERC) - who are responsible for funding exploitation of our scientific missions - will be strengthened. New relationships with the wider family of Research Councils will be forged.

The Agency will continue to work closely with industry and the Technology Strategy Board 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 implement the Space IGS recommendations.

Almost everything the UK does in space is in partnership with other countries, agencies or organisations. By working with international partners, the UK can participate in a wider range of space activities than it could undertake alone. Much of the investment made by the Agency is channelled through ESA to enable UK industry and academia to work in collaboration with Europe to develop world leading technologies, services and science missions. ESA will continue to be 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, for example in areas such as applications which bring economic benefit to the UK. The Agency will use the hub-and-spoke model of the International Space Innovation Centre as a key route to delivering growth.

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 the future, it may become involved in Space Situational Awareness (SSA) and space exploration activities. The Agency will focus on ensuring that developments in European space policy are compatible with UK national interests. In particular, we will work with Member States and the European Commission to formulate new programmes so that they complement ESA.

The Agency will work with the Met Office to obtain maximum benefit from EUMETSAT's satellite programme, ensuring sustained access to data from observation systems servicing operational meteorology, climate monitoring and oceanography. The Agency will work together with the Met Office and the Natural Environment Research Council to exploit all the opportunities arising from space-based monitoring of our planet. The Agency will work with Cabinet Office, Ministry of Defence and the Home Office to 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 Group on Earth Observation and the Committee on Earth Observation Satellites. 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. The European Space Education Resource Office (ESERO-UK) will help us deliver this vital goal.

In Conclusion: A New Strategy for a New Era

The UK space scene has changed. The creation of the UK Space Agency, the publication of the Space Innovation and Growth Strategy, the establishment of the International Space Innovation 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 many 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 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 UK space sector will create opportunities for rewarding careers and turn their imaginations towards the possibilities of tomorrow.

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