

UK Space Agency Corporate Plan 2013-14



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#### **Foreword**

Set up as one of the recommendations of the 2010 Space Innovation and Growth Strategy (IGS), the UK Space

set a tremendous pace of change as it is vital that we take a strong, coherent and challenging role to ensure that the aspirations of Government and the whole space sector for the future are realised.

Agency is just two years old in 2013. The Agency has

The creation of the Agency reflected a political desire to maintain and grow a strategic capability to explore and exploit space for the benefit of the UK. This desire has been translated into the Agency's overarching goal to help grow the UK space sector to a £40 billion turnover by 2030. The Agency has four inter-related responsibilities. These are to:

- lead UK civil space policy within Government, providing informed and impartial advice to decision-makers and ensuring the UK's views are influential in the international space policy environment
- build a stronger national space capability encompassing scientific and industrial centres of excellence; national space facilities; and a growing, skilled UK space workforce
- deliver a range of national and international space programmes in cooperation with industry and academia; and
- regulate UK civil space activities to ensure compliance with international treaty responsibilities.

In 2012, we published the UK's Civil Space Strategy 2012-2016, containing six pathways to growth.

This Corporate Plan is the first edition of an annual statement which translates the broad goals of the Civil Space Strategy into more specific actions which will help deliver that strategy. These actions - alongside those of partners including industry, academia and other government

bodies – will drive progress along the six pathways. Further, this document includes corporate development actions to build a sustainable and cost-effective organisation. Our organisation must have the skills and tools to meet the needs of the sector while operating with maximum administrative efficiency and properly handling the public funds entrusted to us.

The primary audience for this document is the space sector community including our public and private sector partners at home and abroad. It should be read in conjunction with the UK Civil Space Strategy 2012-16 (available on the Agency's website).

It is intended that the overall structure of the Corporate Plan will remain broadly consistent from year-to-year, while the specific actions ('Key Performance Indicators' — KPIs) and their corresponding metrics will evolve in response to policy and programme need. In this way, the milestones in delivering the Civil Space Strategy will be marked off while we will be flexible in responding to new developments and opportunities. The document also explains how our people and resources are applied to our various goals. We will be transparent and open about our challenges and successes.

By combining our technical knowledge, programme management expertise and policy responsibilities, we have a varied and flexible toolbox to make a difference. Our relationship with the UK space sector continues to strengthen and we now have a complete set of advisory boards which engage dozens of specialists from industry, academia and other public sector bodies. We are

supporting the scientific and technical ambitions of the research community by funding a huge range of space technology and infrastructure ranging from shoe-box sized Cubesats to the International Space Station - the world's largest science and technology project. We're also working across government to create a wider policy framework for space and recognition of its role in supporting society as a whole.

The past year has been very busy, with several successful events and projects, including an influential Space Zone at the Farnborough Air Show, which brought together decision-makers from around the world to showcase the UK space sector. We worked with industry and Space Zone academia to establish a strong UK position at the European Space Agency (ESA) Council of Ministers in Naples in November 2012. At this meeting, important policy issues on the future evolution of ESA were discussed and the UK government decided to make major new contributions to an unprecedented range of programmes. These investments included a new generation of commercial telecom satellites and the next European weather satellite. All of these decisions will create growth opportunities for the UK.

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to get the most out of our investment, we partial are also working with ESA to transform go to its facility at the Harwell-Oxford comm

Space Cluster into the European
Centre for Space Applications and
Telecommunications (ECSAT).
This will create employment and
opportunities at this important hub
of space business. Together with
the Satellite Applications Catapult
supported by the Technology
Strategy Board, we are reinforcing the
message being transmitted globally
that the UK is the place to develop the
next generation of space technology and

applications.

We are especially proud of our education and outreach work which engages thousands of kids through actions such as Mission-X 'Train Like and Astronaut' and the National Space Academy. An exciting new opportunity to inspire and inform will come from the planned mission of ESA astronaut Tim Peake to the International Space Station in 2015.

After many years of hard work by the team at Reaction Engines Ltd the Government has decided to fund the next stage of development of the Sabre engine as this has great potential for the industry, supporting sectors and growth.

When you read this document, I hope you will gain a strong sense of the breadth of our business. The actions listed here can only partially illustrate what we are doing. Please go to our web site or join our twitter community to keep up to date.

Dan 11 RO

David Parker Chief Executive, UK Space Agency



#### Introduction

The UK Space Agency is an executive agency of the Department for Business, Innovation and Skills (BIS) and at the heart of UK efforts to explore and benefit from space. We were created on 1 April 2011, and for the first time integrated UK civil space policy and the majority of programme funding from across Government, the Research Councils and the Technology Strategy Board.

This Corporate Plan is focused on delivering our contribution towards the UK National Space Policy and particularly the six pathways to growth identified in the UK Space Agency Civil Space Strategy 2012-2016. Our mission is to lead and grow the UK space sector, building a space programme with maximum economic, scientific, and policy benefit for the UK. This Corporate Plan sets out what we will deliver in 2013/14 to advance the UK Space Agency's work and realise the Government's commitment to the Civil Space Strategy.

To help make the UK space sector a success, we have identified six intended outcomes of the Agency's work. These are:

- 1. We will have clear and established space policies and policy positions
- 2. UK space policies and policy positions will be effectively represented at a national and international level.
- 3. The UK will maintain and grow its national capability in space.
- 4. UK investment in civil space will be effective, targeted and will deliver tangible economic or scientific benefit.
- 5. The criticality and utility of the space sector to science, enterprise and economic growth will be increasingly understood by policy makers, commerce and the general public.
- 6. The UK Space Agency will have the operational capability, capacity and culture to deliver the Civil Space Strategy 2012-2016.

This document sets out the main actions we will take to progress these outcomes in 2013/14 for the understanding of our sponsors, staff, and stakeholders.

## **Purpose**

With a sector worth £9.1 billion to the economy, growing at a rate of more than seven per cent per annum, the UK Space Agency was established to lead and foster the growing UK space sector, delivering a world-class space-programme with maximum economic, scientific and social benefit. We drive the British contribution to collaborative European efforts on space, represent the UK sector on the international stage and work to inspire the next generation of space scientists and technologists. We are also responsible for the licensing regime under the Outer Space Act (1986) to secure compliance with international obligations on launching and operation of space objects. Taken together, we aim to create a dynamic environment in which the UK space sector can meet its ambition to grow by a factor of four between 2010 and 2030.

# **Strategic Overview**

The global space economy is changing rapidly, with strong government investments continuing alongside a vibrant commercial marketplace. A new generation of small satellites are delivering cost-effective Earth observation data and services; while the market for broadcast and communications satellites is driving innovation and cost reduction. The downstream sector of the space industry offers significant untapped potential which needs to be unlocked. New funding models are allowing services to be developed with much reduced public funding, while stronger public investment is being targeted to those areas where longer term growth is

and creative.

anticipated. The creation of the European satellite navigation capability (Galileo) and a long term Earth observation system (Copernicus) present new opportunities for creating novel applications built on the hugely increased amount of space data that will become available. The UK response must be agile

The work of the UK Space Agency is therefore aligned to deliver the UK Civil Space Strategy 2012-2016. The primary goal of the strategy is to foster the growth of the space sector and maximize the benefit of space activities for science, commerce, government and society. The central goal is to create a £40 billion sector in the UK by 2030 via six growth pathways:

- Growth Through New Opportunities
- Growth From Export
- Innovation Supporting Growth
- Science To Underpin Growth
- Education For Growth
- Growth Through Smarter Government

# **Our Approach**

Our actions are intended to drive progress along these six pathways towards the end goal. Investment is targeted at areas that have the greatest potential for delivering economic return, scientific excellence and societal benefit. We provide coherence between investment in long-term basic research and near-term applications in order to harness the skills of universities, national facilities and industry to create a strong national capability.

A key example of our leadership is provided by our balanced investment at the European Space Agency Council of Ministers in 2012. We maintained the UK's strong contribution to the science-led activities of ESA, including the outwards-looking exploration of the Solar System and Universe beyond; and the downwards-looking Earth Observation Envelope Programme. At the same time, we doubled our support to the commercial telecommunications programme which is co-funded with industry. We were able to contribute to the new weather satellite programme (MetOp 2G), which will bring repeat orders to UK industry. In addition, we

were able to join the third scientific programme of ESA which is concerned with life and physical sciences in space (ELIPS) and which has a strong applied science thrust.

We are building links between industry and the research community and also between government users of space and organisations that contribute to creating capabilities in space. These include industry, academia, the Technology Strategy Board and the Research Councils. The UK Space Agency works with UK Trade and Investment and the UK's global Science and Innovation Network to help the space industry sell UK capability abroad

and attract overseas investment. We work to provide a regulatory environment that promotes the sector. For example in 2013/14 we are working with the CAA to analyse the regulatory environment that will be needed to stimulate a space tourism and space plane industry.

Our space programme also provides 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. To this end, the UK Space Agency is working with partners to build a skilled space workforce.

## **Future Challenges**

In a challenging fiscal environment, the most critical challenge facing the UK Space Agency over the next three years is to capitalise on the success of the Agency's launch to support the UK space sector in meeting its ambitious growth targets. To do this, we must establish an Agency that is fit for purpose. In 2013/14, this work is focused around three main themes:

## **Policy**

Strengthening the Agency's policy leadership through national policy statements; establishing the UK's position in key EU-funded space programmes; and advancing our views on the evolution of the ESA/EU relationship.

## **Programmes**

Securing maximum scientific, commercial and technological value from our programme investments, both nationally and through ESA, by coordinating the Harwell-Oxford Space Cluster project and by working with ESA to deliver the transformation of the ESA Harwell office into the European Centre for Space Applications and Telecommunications (ECSAT).

#### **Professionalisation**

Following a complete Agency organisational review in 2012/13, implementing the outcomes though a change programme and by seeking continuous improvement of our delivery to customers and stakeholders.

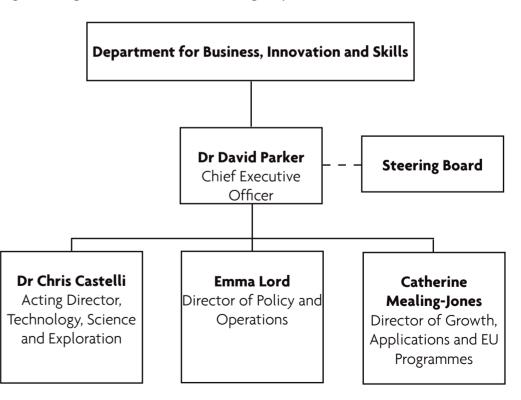
#### Who we are

Dr. David Parker was appointed Chief Executive of the UK Space Agency in January 2013. The Chief Executive Officer is advised by four independent members of the steering Board; currently Rob Douglas (Chair), Sally Cantello, Baljit Dhillon, Prof. David Southwood and Jeremy Clayton (the representative for the Department of Business Innovation and Skills). The UK Space Agency receives programme advice from the community via a set of advisory bodies that include representatives of industry, academia and cross-representatives from other public bodies such as the research councils, Technology Strategy

Board and other government departments including Defra, MoD, DECC and DfE.

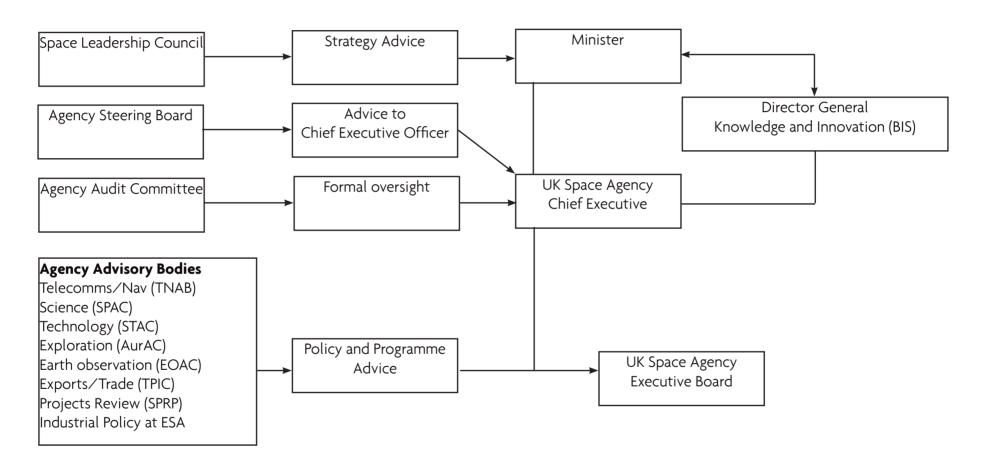
The UK Space Agency currently employs approximately fifty Full-Time Equivalent (FTE) staff with a range of specialist skills and knowledge in all aspects of the space sector. They are based primarily at the head office in Swindon, with two smaller units in Harwell (near Oxford) and London (at BIS). The UK Space Agency is currently organised into three directorates: Policy and Operations; Technology, Science and Exploration; and Growth Applications and EU Programmes (Figure 1). Part of the organisational review is to assess whether this business model should be revised to assist more effective delivery of the Agency's work. Figure 2 illustrates governance arrangements which are outlined further in Annex 1.

Figure 1: High level structure of the Agency



## Figure 2: Advice and governance for the CEO and Agency

The diagram below illustrates the advice and governance that the Agency receives. The Minister receives strategic advice from the Space Leadership Council. The CEO receives advice from the Agency Steering Board and governance from the Agency Audit Committee. The executive Board are advised through a suite of thematic groups.



#### **How We Work**

Partnership is at the heart of everything we do. We work with the public sector, industry, other space agencies, research organisations and other countries. Some funding for civil space activities remains within the Research Councils (for basic research, scientific exploitation of space missions and for post graduate training); the Technology Strategy Board (particularly for commercial applications); and the Met Office (for operational weather satellite data). The UK Space Agency has formalised relationships with these organisations.

The UK Space Agency works with other departments on security and military space policy (MOD and Cabinet Office); use of space for climate change monitoring (DECC) and land use applications (DEFRA); and space education issues with Department for Education (DfE). FCO is involved for foreign policy aspects; UKTI (export support) and the Science and Innovation Network for local representation around the world.

## **European Space Agency**

By working with international partners, the UK can participate in a range of space activities unaffordable by working alone. Around eighty per cent of investment by the UK Space 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 missions.

The European Space Agency (ESA) is an inter-governmental organisation of twenty member states and one associate (Canada). Ninety per cent of its work is delivered via hundreds of competitive procurements from industry within a 'juste retour' system whereby the overall contract volume is broadly proportional to each state's financial contribution. Member states choose to fund space projects through ESA in order to develop national capability and to deliver large scale projects. ESA is managed by its governing Council of Member States. The UK Space Agency Chief Executive is a vice-chair of the Council. Agency staff attend approximately sixty formal ESA meetings each year and many more informal meetings and technical workshops to advance the UK's position.

## **European Union**

Following the Lisbon Treaty, the EU is taking an increasing role in space policy. The EU's programmes are funded directly by Member States through the seven-year Multiannual Financial Framework (MFF). The total funding allocated to EU space activities by the Member States in the MFF 2014-2021 is approximately €12 billion. The UK Space Agency is working to influence the key legal documents through which these programmes are managed (the 'regulations'). We also promote the opportunities these programmes provide to the UK sector and - where needed - make corresponding national investments to maximise the exploitation of the space infrastructure being created (Galileo and Copernicus).

Agency staff attend boards and committees concerned with the EU space programme to advance the UK perspective. The UK is often influential in governance and security aspects. The EU is also planning to assign increased resources to space R&D via the Horizon 2020 programme and the UK Space Agency is identifying UK priorities and will promote the opportunities arising.

## Harwell Space Cluster and other national infrastructure

In 2008, the UK took a strategic decision to establish a focus for new national space infrastructure at the Science and Innovation Campus at Harwell, near Oxford. The UK Space Agency is responsible for coordinating the various initiatives underway to ensure coherence of the public and private sector partners. The cluster will work with partners across the UK, Europe and around the world and will be a key delivery vector for the UK Civil Space Strategy.

As a first step, and alongside the existing Space Science and Technology Department of STFC (known as RALspace), an office of the European Space Agency was established in 2009 focused on integrated applications, exploration and climate change science. Responding to a recommendation of the 2010 Space Innovation and Growth Strategy, a nationally-funded facility (ISIC) was established in 2010, focused on downstream applications and technology. Facilities created included data visualisation tools; a cloud computing system for climate and environment monitoring data; and facilities for exploiting national space missions. In 2013, this has evolved into a larger

Satellite Applications Catapult Centre, supported by the Technology Strategy Board. ESA and STFC have co-funded a space business incubator which has created a dozen new businesses on-site.

At the 2012 ESA Council of Ministers, the UK concluded a fresh agreement with ESA that will see the Harwell office grow rapidly from less than 20 to 100 staff by the end of 2015. Personnel will be housed in a new building and the HQ of ESA's telecoms satellite directorate will move to the UK. This facility will be ESA's European Centre for Space Applications and Telecommunications (ECSAT).

As a consequence of the UK's growth driven strategy for space, these decisions are attracting international attention. The Agency and its partners, including UK Trade and Investment (UKTI), are working to bring new space businesses the UK. Work is planned to coordinate national ground infrastructure to support the exploitation of space data, and fresh investments are occurring – for example a ground terminal for the European Data Relay Satellite System (EDRS). Requirements for other national infrastructure are emerging. The Agency will lead these discussions with the public and private sector.

## Managing our resources

Along with other agencies and Non Departmental Public Bodies, from 1 April 2011 the UK Space Agency had an administration budget which is part of the overall BIS administration budget. Administration budgets include all the costs of providing policy, funding and regulation functions. It also covers all the back-office costs associated with administering the UK Space Agency, such as HR, IT, finance, communications, and legal. At present, the UK Space Agency does not own any assets (e.g. property, plant) and pays rent on its accommodation. The UK Space Agency's activities in support of space research programmes — both national and international — are funded through the Agency's programme (resource) and capital allocations.

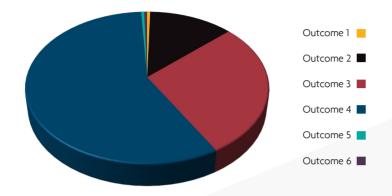
All the finance figures are subject to revision. The administration and capital budgets are not yet confirmed beyond year one of this Corporate Plan.

Table 1 - Income and Expenditure Plan for the remainder of the Comprehensive Spending Review 2010

| Allocation by DEL & AME                                  | 2013-14<br>£'000 | 2014-15<br>£'000 |
|--|------------------|------------------|
| Departmental Expenditure Limit (DEL) Resource Allocation | 193,722          | 180,083          |
| DEL Capital Allocation                                   | 110,000          | 129,000          |
| DEL Administration Allocation                            | 3,710            | 3,710            |
| Annually Managed Expenditure (AME)                       | 716              | 736              |
| Total  | 308,148          | 313,529          |
|  |                  |                  |
| Allocation by Expenditure Category                       | £'000            | £'000            |
| International Subscriptions                              | 250,864          | 237,221          |
| National Programme                                       | 52,858           | 71,862           |
| Other Costs  | 4,426            | 4,446            |
| Total  | 308,148          | 313,529          |

## Chart 1 - Pie chart to illustrate budget expenditure by outcome

This chart illustrates how we invest our budgets to deliver our Outcomes for space.

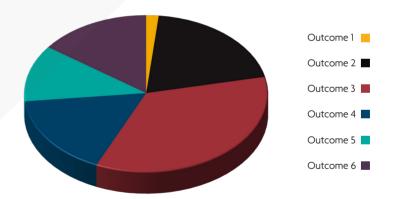


#### Staff resources

The table below shows staff resources aligned across our Outcomes. We have taken the necessary steps and difficult decisions concerning our staff resource to allow us to deliver the full set of ambitions in this Corporate Plan. We are seeking to maintain a flexible workforce through a combination of fixed term contracts, secondments and tight manpower controls.

# Chart 2 - Pie chart to illustrate how Full Time Equivalents (FTE) are deployed by Outcomes for space

This diagram is intended to illustrate the balance of staff resource investments by Outcome for space. Given the breadth of the activities to be undertaken, the specialist nature of our work, and size of the Agency, our staff will be working across a range of Outcomes.



## **Delivering our outcomes**

We work to achieve five primary outcomes:

### **Outcome 1**

We will have clear and effective space policies and policy positions.

#### Outcome 2

UK Space policies and policy positions will be effectively represented at a national and international level.

#### Outcome 3

The UK will maintain and grow its national capability in space.

#### **Outcome 4**

UK investment in space will be effective, targeted and deliver tangible economic or scientific benefit.

#### **Outcome 5**

The criticality and utility of the space sector to science, enterprise and economic growth will be increasingly understood by policy makers, commerce and the general public.

Our approach to achieving these outcomes is underpinned by a sixth outcome:

#### Outcome 6

The UK Space Agency will have the operational capability, capacity and culture to deliver the Civil Space Strategy 2012-2016.

We have clear objectives for our Outcomes and in this document we describe the Key Performance Indicators (KPIs) that will enable us to chart our progress towards the delivery of those outcomes. We also have a metric for each KPI, demonstrating how we will measure our performance against targets. This allows our staff to see how their personal effort contributes to outcomes and explains our progress to stakeholders, customers and our home department. The breadth of the Agency's work is so great that not every single action the Agency is making is listed here: instead, a representative suite of KPIs and metrics are presented.

# Outcome 1: We will have clear and effective space policies and policy positions

The UK Space Agency sets the tone and scope of the Government's space policy, and helps to secure strategic direction for the wider space sector. It is important that the policies and strategies we put in place are informed by the views of our stakeholders, have a real effect on the sector, and articulates the Government's priorities for space.

| Objectives  | KPIs   | Metrics (2013-14)   |
|---|--|---|
| 1.1 To develop effective UK national space policies to underpin actions   | 1.1.1 Translate the UK Civil Space Strategy 2012-16 into a corporate plan to guide the Agency's work.                                      | Corporate Plan 2013-14 issued by Quarter One.   |
| and investments in space.   | 1.1.2 Develop and implement a National Space Policy setting out the responsibilities of all actors.  | National Space Policy published with action plan for implementation by Quarter Four.  |
| To work in partnership with our stakeholders to develop policies, seeking wider advice as appropriate.  | 1.1.3 Support the development and implementation of a National Space Security Policy through engagement with Stakeholders.                 | NSSP published with action plan for implementation, by Quarter Four.  |
| To clearly articulate the Agency's role in delivering these policies.   | 1.1.4 Influence future relationship between ESA and European Union.  | Undertake analysis and stakeholder consultation leading to agreed UK position on ESA/EU evolution, by ESA Ministerial 2014 and/or EU Space Council in 2014. |
| 1.2 To develop and maintain an effective and up-to-date evidence base to inform our advice, activities,   | 1.2.1 Complete the 'restack' of the 2010 Space Innovation and Growth Strategy (IGS) working with industry, academia and across government. | Conclusions of Innovation and Growth Strategy 'restack' released, by Quarter Two.   |
| policies and decisions, strengthening the Agency's ability to undertake economic and market analysis, including the biennial 'Size and Health' study. | 1.2.2 Ensure strategy, policy development and investment is evidence based.  | Acquire skill base to undertake market and economic analysis and undertake business case work, potentially through industrial secondment, by Quarter Four.  |

## Outcome 2: UK Space policies and policy positions will be effectively represented at a national and international level

As the flagship organisation for space in UK, the UK Space Agency works for the Government and country's space sector, both at home and abroad. Effective representation requires the UK Space Agency to be engaged with a number of international organisations, to have the backing of our national partners and to work with Whitehall to ensure that the UK maintains a strong position internationally.

| Objectives  | KPIs  | Metrics (2013-14)   |
|---|---|---|
| 2.1 To influence the development of National, European and International emerging space policies and programmes.  | 2.1.1 Ensure effective delivery of European Space Agency (ESA) investments in both the mandatory and optional programmes. Be influential within ESA committees and boards in order to align the ESA programmes with national priorities and capabilities. | Achieve an overall geographical return factor of 1.0, by Quarter Four.  Establish project plan for ESA Council of Ministers 2014, by Quarter Four.  |
|   | 2.1.2 Ensure effective delivery of European Union space programmes. Be influential within EU space programme committees in order to align the programmes with national priorities.  | Ensure the UK is in a position to agree EU regulations for Galileo; Copernicus; Space Surveillance and Tracking; and space R&D (Horizon 2020) programme, by Quarter Four.                               |
|   | 2.1.3 Maximise the benefits of the National Space Programme in order to fully exploit our investments in ESA and EU programmes and develop complementary national capability.   | Complete a review and impact assessment of Phase 1 of the National Space Technology Programme (NSTP) and use the results to shape NSTP Phase 2 and underpin the case for NSTP Phase 3, by Quarter Four. |
| 2.2 To fulfil our statutory and international obligations on behalf of the UK. Providing an effective regulatory regime that meets international obligations whilst supporting the space sector and growth. | 2.2.1 All regulatory Outer Space Act 1986 (OSA) licence applications meet published deadlines.  | 90% of regulatory casework meets published deadlines by Quarter Four.   |
|   | 2.2.2 Reform Outer Space Act 1986 by introducing an upper limit on liability for UK operators.  | Government response to consultation published together with next steps during Quarter Three.  |
|   | 2.2.3 Support the funding and implementation of the International Charter on Space and Major Disasters (www. disastercharter.org).  | UK funding in place by Quarter One and data available to relevant UK and international organisations on demand (continuous).  |

## Outcome 3: The UK will maintain and grow its national capability in space

The UK Space Agency has a responsibility to nurture and encourage the growth of the UK space sector, from the industrial and academic partners to its highly-trained workforce and public sector users.

UK Space Agency investment in national capabilities should help to link the UK space sector to priority international programmes and ensure the UK remains competitive in the future. Policy levers should be used to create the right regulatory environment for growth, and the changing needs of the sector will be crucial in educating the scientists, engineers and professionals of the future will be crucial.

| Objectives   | KPIs  | Metrics (2013-14)   |
|--|---|---|
| 3.1 To ensure UK space companies, and companies exploiting space assets have the environment to foster growth. | 3.1.1. To work with industry to deliver the recommendations of the refreshed Innovation and Growth Strategy.  | Agree with stakeholders the priority actions arising from refreshed IGS, by Quarter Four.  Incorporate these actions in Corporate Plan for 2014-15.   |
|  | 3.1.2 Develop Spectrum (radio frequency) policy positions with stakeholders to ensure sufficient spectrum is available for space sector growth in order that space sector interests are reflected in UK brief for the World Radio Conference in 2015. | Complete spectrum requirement studies by Quarter Four.  Identify costs of space spectrum needs and inclusion in SR allocations, by Quarter Three.   |
|  | 3.1.3 Maintain and improve awareness of and resilience to extreme space weather events through relevant programmes and policy work on key UK government committees dealing with space weather impacts.  | UK priorities for ESA SSA Space Weather programme agreed with stakeholders, by Quarter Two.   |
|  | 3.1.4 Work with the Civil Aviation Authority and industry, to provide a framework for commercial space operations and identify need for a UK spaceport.   | Complete Space Collaborative Innovation Team Initiative (CITI) project on requirements for UK launch capability, by Quarter Three.  Complete review of the space plane operation and certification in the UK and propose next steps, by Quarter Four. |

| Objectives   | KPIs  | Metrics (2013-14)  |
|--|---|--|
| 3.2 To support public and private sector take-up of space-derived products and services. Provide early   | 3.2.1 Maintain and expand knowledge transfer activities in space and aligned industries through joint activities with ESA and other UK technology transfer initiatives.             | Work with STFC Innovations Ltd, Harwell Space Cluster team and other space incubators to establish plan for long term future of UK space business incubation, by Quarter Four.   |
| stage technology company business support.   | 3.2.2. Support uptake of space services and applications across the public sector, working closely with the Satellite Applications Catapult Centre.                                 | Complete NSAP (National Space Applications Programme) scoping project, by Quarter Four.  |
|  |   | Establish NSAP Help Desk by Quarter Four.  |
| 3.3 To use space as an inspiring tool to attract young people towards STEM subjects, to inform parents   | 3.3.1 Deliver an effective education skills and outreach programme for 2013/14 including support for ESERO; National Space Academy; Space for All; Mission-X; and ISU scholarships. | Engage over 80,000 people in space education, skills and outreach activities, by Quarter Four.   |
| and children about the role of<br>the UK in space industry and to<br>encourage and train young people<br>to contribute to the sector in the<br>future. | 3.3.2 Exploit the education and inspiration value of UK astronaut mission to the ISS in 2015.   | Prepare education and outreach plan and recruit manager to deliver programme, by Quarter Four.   |
| 3.4 To ensure UK space companies, and companies exploiting space assets, have access to international programmes and markets.                          | 3.4.1 Strengthen support to industry for exports and inward investments, working with industry and its membership organisations and across Government.                              | Establish coordination with United Kingdom Trade and Industry through an MOU, by Quarter Three.  Chief Executive and Industry team to have led one overseas trade mission, by Quarter Four.  Three international space companies to have decided to establish a new or expanded space presence in the UK, by Quarter Four. |
|  | 3.4.2 Develop bilateral relationships with other space agencies in order to develop programmes of mutual benefit aligned with UK priorities.  | Develop business case for one or more bilateral space programmes delivering scientific and/or commercial benefit by Quarter Four.  |
| 3.5 increase the National capability and infrastructure to enable UK organisations to research and compete in growing international markets.           | 3.5.1 Work with industry to support investment in new national space facilities needed to support growth agenda.  | Initiate national ground segment coordination group, by Quarter Two.  Produce prioritised national facilities roadmap, by Quarter Four.  |

## Outcome 4: UK investment in space will be effective, targeted and delivers tangible economic or scientific benefit

The UK Space Agency is responsible for ensuring that the Government's strategic investments in space, both via national investment and with international partners, provides real benefit. To make sure that the UK is receiving the best possible value from its investment in space, the UK Space Agency must manage the ESA contribution, as well as being a proactive partner with the European Commission.

Our national programmes complement this work.

| Objectives   | KPIs  | Metrics (2013-14)  |
|--|---|--|
| 4.1 To ensure UK investments in ESA, the EU and our national   | 4.1.1 Support expansion of ESA presence at Harwell Oxford space cluster towards goal of dedicated   |  |
| programmes are targeted and well managed.  Ensure that UK scientists, industry users, and other stakeholders | facility (ECSAT) with 100 staff, by end of 2015.  4.1.2 Delivery of the vision for the development of the Space Cluster at Harwell Oxford to employ at least 500 people in labs, facilities, agencies and | Implementation agreement concluded, by Quarter Three.  Agency project manager for space cluster in place by Quarter two.  Establish cluster strategy and plan for 'front office' by Quarter Four.  |
| benefit from these investments.  | businesses by end of 2015.  | In excess of 250 staff working at cluster, by Quarter Four.  |
| Provide vision and leadership for the development of the Harwell Space Cluster.                              | 4.1.3 Secure national projects/experiments on the International Space Station.  | Undertake workshops with Research Councils and community to define UK science priorities, by Quarter Three.  |
| Space Cluster.   |   | UK technology priorities for ISS established in agreement with ESA, by Quarter Three.  |
|  | 4.1.4 Deliver an excellent national space programme in science, Earth observation, exploration and technology.  | Determine UK contribution to JUICE mission by Quarter Two. Select projects under CREST-2, by Quarter 2.  UK elements of GAIA DPAC complete in time for launch, by Quarter Three.  Deliver UK elements of LTP for LISA PathFinder by Quarter Four.  Maintain progress against schedule on instruments for Solar Orbiter, Euclid, Insight and ExoMars, by Quarter Four.  Launch UKube-1, by Quarter Three.  Close-out NSTP Phase 1 Projects (Q3), by Quarter Four.  New management contract for CEOI let, by Quarter Three.  NovaSAR state aids cleared with EU and Agency funding agreed, by Quarter Two. |

| Objectives    | KPIs  | Metrics (2013-14)   |
|---------------|---|---|
| 4.1 Continued | 4.1.5 Align UK investment to capitalise on the opportunities offered by the EU space programme. | Sign hosting agreement with European Commission for Galileo Security Monitoring Centre (GSMC) in UK, by Quarter Two.      |
|               |   | Complete Phase 1 of Publicly Regulated Services (PRS) pilot projects by Quarter Two.                                      |
|               |   | Using NSTP Phase 2 funding, launch Phase 2 of the PRS Pilot projects, by Quarter Three for delivery by end 2014-15.       |
|               | 4.1.6 Manage delivery of new ESA Programmes at C-Min 2012 to secure UK goals.                   | Earth Observation Envelope Programme (EOEP) re-alignment complete and next Earth Explorer mission agreed, by Quarter Two. |
|               |   | UK lead of an instrument for Metop2G secured, by Quarter Two.   |
|               |   | ARTES 14 NeoSat platform definition agreed, by Quarter Four.  |
|               |   | Three new projects under GSTP technology funding agreed with ESA, by Quarter Four.  |

# Outcome 5: The criticality and utility of the space sector to science, enterprise and economic growth will be increasingly understood by policy makers, commerce and the general public

The ambition of the UK Space Agency is to become an established and recognised public institution in the UK, making valued contributions to society and the economy.

The UK Space Agency's communications and outreach activities should effectively represent the work the Agency and its partners are doing in the space sector, clearly relating the story of the UK in space. This story should be told to all audiences and stakeholders, through a variety of different channels and reinforced by partner organisations across the sector.

| Objectives  | KPIs  | Metrics (2013-14)  |
|---|---|--|
| 5.1 To clearly communicate the benefits arising from the UK space sector. | 5.1.1 We will support key space-related events and conferences for decision makers, the public, industry and academia and promote the exchange of knowledge and ideas on the role of space in society and commerce. | Over 600 people engaged through the UK Space Conference 2013, by Quarter Two.  Over 2000 people attend the Living Planet               |
|   |   | Symposium, by Quarter Three.   |
|   |   | Over 60,000 people engaged through the Big Bang event, by Quarter Four.  |
|   | 5.1.2 Deliver effective communications including maximising use of low-cost digital media.  | We will have engaged over 500,000 people through the Agency website, Twitter, LinkedIn, Facebook, Flickr and YouTube, by Quarter Four. |

# Outcome 6: The UK Space Agency will have the capability, capacity and culture to deliver the Civil Space Strategy

As a young organisation, the UK Space Agency is building an organisation that is fit for purpose and can deliver its ambitious portfolio.

Growing the organisation in a time of economic challenges means that the UK Space Agency has to be intelligent and measured about its future, and be agile to respond to evolving priorities.

| Objectives  | KPIs   | Metrics (2013-14)  |
|---|--|--|
| 6.1 To have motivated and empowered staff with the skills and resources to deliver current and future needs of their role, the Agency and the space sector.     | 6.1.1 Improve staff access and uptake of learning and development opportunities.   | 90% of staff that have undertaken learning or other development, activities by Quarter Four.   |
| 6.2 To have effective governance, planning, operational, robust risk management, internal control, security and financial systems to support the Agency's work. | 6.2.1 Complete the Agency organisational review and implement the recommendations.   | Change project (Arrow Programme) launched and on track including new business model and recruitment of key new staff, by Quarter Four. |
|   | 6.2.2. Migrate our back office functions to the Shared Business Service working to support the BIS Finance for the Future programme. | HR, finance and procurement Functions transferred to shared services, by Quarter Four.   |
|   | 6.2.3 Agency programme, capital and administration budgets are appropriately deployed to deliver corporate plan objectives.          | Effectiveness of in-year monitoring and end of year out-turn, by Quarter Four.   |
|   | 6.2.4 Timely completion of Annual Report and Accounts and laying before Parliament in line with HMT best practice guidance.          | 2012-13 annual report and accounts signed off, by Quarter One.   |
| 6.3 We will drive continuous improvement through our business.  | 6.3.1 The Agency listens to its stakeholders in order to gain insights to help refine our operations and ways of working.            | Undertake baseline stakeholder survey, by Quarter Four.  |

# **Reporting our performance**

We will measure and report on the impact we are making in implementing this plan through the key performance indicators ('KPIs') that we have defined for each outcome. We will monitor and report progress against KPIs on a quarterly basis at Executive Board and to the UK Space Agency Steering Board. We will also make available to the public on our website a summary of progress on these key measures. Our outcomes will continue to guide our activities over the medium term. We will undertake an annual review of these to update our objectives, KPIs and metrics to ensure consistency with available resources and government policy.

| Acronyms |  |  |
|----------|--|--|
| ARTES    | Advanced Research on Telecommunications Satellite Systems              |  |
| BBSRC    | Biotechnology and Biological Sciences Research Council                 |  |
| BGS      | British Geological Survey  |  |
| CAA      | Civil Aviation Authority   |  |
| CEMS     | Climate and Environment Monitoring from Space                          |  |
| CEOI     | Centre for Earth Observation Instrumentation Programme                 |  |
| CEOS     | Committee on Earth Observation Satellites                              |  |
| CITI     | Collaborative Innovation Team Initiative                               |  |
| CNES     | Centre National d'Études Spatiales, France (English: National          |  |
|          | Centre for Space Studies)  |  |
| CREST    | Collaborative Research in Exploration Systems and Technology           |  |
| CSR      | Comprehensive Spending Review  |  |
| DECC     | Department of Energy & Climate Change                                  |  |
| Defra    | Department for the Environment Food and Rural Affairs                  |  |
| DEL      | Department Expenditure Limit   |  |
| DfE      | Department for Education   |  |
| EC       | European Commission  |  |
| EDRS     | European Data Relay Satellite  |  |
| ELIPS    | European Programme for Life and Physical Sciences                      |  |
| EO       | Earth Observation  |  |
| EOEP     | Earth Observation Envelope Programme                                   |  |
| EPSRC    | Engineering & Physical Sciences Research Council                       |  |
| EPS-SG   | EUMETSAT Polar System - Second Generation                              |  |
| ESA      | European Space Agency  |  |
| GMES     | Global Monitoring for Environment and Security (Now called Copernicus) |  |
| GNI      | Gross National Income  |  |
| GNSS     | Global Navigation Satellite System                                     |  |
| HYLAS    | Highly Adaptable Satellite   |  |
| IAP      | Integrated Applications Promotion                                      |  |
| IGS      | Innovation & Growth Strategy   |  |
| ISS      | International Space Station  |  |
| JUICE    | Jupiter Icy Moons Explorer   |  |
| MFF      | Multiannual Financial Framework  |  |

| MoD  | Ministry of Defence                                    |
|------|--|
| MRC  | Medical Research Council                               |
| MREP | Mars Robotic Exploration Preparatory Programme         |
| MSSL | Mullard Space Science Laboratory                       |
| NATS | National Air Traffic Systems                           |
| NCEO | National Centre for Earth Observation                  |
| NEO  | Near Earth Object                                      |
| NERC | Natural Environment Research Council                   |
| NGP  | Next Generation Programme                              |
| NSTP | National Space Technology Programme                    |
| OECD | Organisation for Economic Co-operation and Development |
| SSA  | Space Situational Awareness                            |
| STEM | Science, Technology, Engineering, Maths                |
| STFC | Science & Technology Facilities Council                |
| STSE | Support To Science Element                             |
| TSB  | Technology Strategy Board                              |
| TTP  | Technology Transfer Programme                          |
| UKTI | UK Trade and Investment                                |
|      |  |

## **Annex 1 Corporate Governance**

The UK Space Agency is an Executive Agency of the Department for Business, Innovation and Skills (BIS). The UK Space Agency is accountable to the public through BIS and to Parliament for the funds it expends. Parliament monitors and influences the UK Space Agency through its Select Committees and the Parliamentary Ombudsman. The UK Space Agency working relationship and lines of accountability with its sponsor department, BIS, are defined through the UK Space Agency Framework Document, Corporate Plan and letter(s) of Delegated Authority which are subject to periodic review.

The UK Space Agency Executive Board is chaired by the Chief Executive Officer (CEO). The Steering Board and Audit Committee advise the Chief Executive. UK Space Agency's Chief Executive is supported in his role of Agency Accounting Officer by three corporate governance groups: the Steering Board, the Executive Board and the Audit Committee.

## **Steering Board**

The Steering Board provides advice and guidance to the Chief Executive Officer. In accordance with the HMG guidance, the external members are appointed by BIS for an initial term of three years, subject to a satisfactory assessment of performance, can be extended for a further three years. There are four Non-Executive Members who are independent; the remainder of the Board is made up of the Chief Executive (with Accounting Officer responsibilities), the Senior Information Risk Officer for the UK Space Agency, and a BIS internal appointment.

All external interests are listed in the Register of Members' Interests and in the Related Party Transactions laid out within notes to the annual accounts. The register of UK Space Agency Members' private, professional and commercial interests is maintained by the UK Space Agency which is reviewed for accuracy prior to each Steering Board meeting. This register, the Terms of Reference and summary minutes of the Board meetings are available on the UK Space Agency website: www.bis.gov.uk/ukspaceagency. The Steering Board was established in November 2011 and generally meets on a bi-monthly basis.

#### **Executive Board**

The Executive Board manages the day-to-day operations and activity of the UK Space Agency, including the provision of policy advice to BIS Ministers. The formal Accounting Officer role lies with the Chief Executive Officer.

The responsibilities of the Executive Board are to:

- deliver the UK Space Agency outcomes as detailed in its Corporate Plan by deciding overall programme priorities and resource allocation
- develop and maintain the mid-to-long term strategic direction and provided advice to ministers on civil space policy
- approve and implement effective financial (including Comprehensive Spending Review and subsequent estimates) planning
- have responsibility for the investment appraisal regime, including approving capital and revenue commitments under a threshold amount approved by BIS
- approve and implement robust and effective governance, including financial policies/procedures
- support and develop the appropriate advisory structures
- oversee stakeholder relationship management, including with government
- oversee effective succession planning and approve appointments below Director level
- define and cascade appropriate organisational culture and ethos
- make executive decisions on matters having a material impact on the organisation (including reputational, legal and regulatory) within the delegated authority granted by BIS
- approve legal and regulatory compliance policies, including Health and Safety
- approve HR policies
- oversee management of risk and the internal control framework.

The Chief Executive may delegate oversight of operational activity to Directors.

The Executive Board meets generally every week dependant on availability.

#### **Audit Committee**

The Audit Committee is a sub-committee of the Steering Board and provides guidance and assurance to the Chief Executive Officer to assist in fulfilling the Accounting Officer responsibilities. The Chairman of the Audit Committee reports to the Steering Board.

In accordance with the HMG guidance, the external members are appointed by BIS for an initial term of three years, subject to a satisfactory assessment of performance, can be extended for a further three years. All Non-Executive members are independent and all external interests are listed in the Register of Members' Interests and in the Related Party Transactions laid in the notes to the annual accounts. A register of UK Space Agency Members' private, professional and commercial interests is maintained by the UK Space Agency. This register, the Terms of Reference and summary minutes of the Committee meetings are available on the UK Space Agency website:

## www.bis.gov.uk/ukspaceagency

In addition to the Audit Committee members and internal and external audit representatives as ex-officio members, the remainder of the Executive Board and the Head of Finance attend. The Audit Committee generally meets on a quarterly basis but can meet more if required. Summaries of Steering Board and Audit Committee meetings are posted on the Agency website.

## **Advisory committees**

A set of stakeholder advisory committees provide scientific, technical and industrial advice to the UK Space Agency Executive. In addition, the Minister seeks advice via a high-level Space Leadership Council comprising representatives from industry, academia, and government.

The purpose of the UK Space Agency is set out in the Framework Document, which also sets out the Agency's governance arrangements, accountability and delegations. The Framework Document will be amended during 2013/14 in line with the Cabinet Office Governance Framework.

The UK Space Agency will continue to produce an Annual Report and Accounts which is audited by the NAO and laid before Parliament before the summer recess. Within this is an Annual Governance Statement which sets out the internal control procedures that have been operated by the UK Space Agency during the year in question, and details any improvement plans for the forthcoming year.

## **Annex 2 - Links to BIS Objectives**

On 31 May 2012, BIS published its Business Plan for 2012-2015 with the following five coalition priorities:

- 1. Knowledge and Innovation Promote excellent universities and research and increased business innovation
- 2. Skills Build an internationally competitive skills base and promote more opportunities for individuals in realising their potential
- 3. Enterprise Boost enterprise and make this the decade of the entrepreneur; and rebalance the economy across sectors and across regions
- 4. Trade and investment Stimulate exports and inward investment
- 5. Markets Create a positive business environment; and protect and empower consumers

The UK Space Agency contributes to all of these priorities and also to two of the three objectives for Knowledge and Innovation Group in 2013-14. These are:

- A research base that delivers maximum benefit for the UK
- World-class translation of knowledge and ideas into successful commercial and public service outcomes, increasing productivity, growth and quality of life

The Agency also contributes to wider BIS objectives that include:

- an internationally competitive skills base, helping business to grow and individuals to succeed
- a stronger entrepreneurial culture and business environment in which SMEs can access finance, information and advice they need to start up and grow
- the UK to be world-class in high-value manufacturing and services
- increased UK exports to high-growth and emerging markets
- the UK remains a top destination for high-quality, foreign direct investment projects
- a wider business environment that supports growth
- evidence based Government strategy that helps facilitate sustainable,

- balanced economic growth
- a positive regulatory environment for business resulting from the improved design and delivery of regulation
- increased private sector growth across the country

The UK Space Agency does this by:

- ensuring a cross Government mechanism to make decisions on space projects which reflect the collective priorities for the UK
- providing a clear mechanism to support industrial growth in space activities and to support government industrial policy
- working with industry and academia to maximise the role of space technologies in increasing economic growth in high tech services
- strengthening the UK position in EU, ESA and international discussions and decisions by drawing together UK space policy into a coherent vision with clear strategic direction
- addressing the transition of programmes from Research and Development to operations
- managing the interface with ESA to ensure a strong and unified UK approach towards making sure that ESA programmes which have UK support are delivered
- providing a clear voice for the scientific community in the decision making process and exploitation
- strengthening outreach and education activities by raising the profile of the UK space programme within the public domain, and by encouraging greater take up of STEM subjects
- enabling a basis for better coherence of existing resources via a national technology programme
- providing a clear approach for supporting operational missions where there has previously been no lead organisation or department



