

Annexes



ANNEX 1

PROGRESS ON INNOVATION NATION COMMITMENTS

Commitments are ordered as they were in *Innovation Nation* with cross references to the relevant sections of this report

Demanding Innovation

Each Government Department will include an Innovation Procurement Plan as part of its Commercial Strategy, setting out how they will drive innovation through procurement and use innovative procurement practices. [AIR section 6.1]

DIUS has been working with the Office of Government Commerce and public and private sector partners to develop the IPP concept and a plan for implementing it across Government. DIUS will be publishing guidance on the content of IPPs at the end of November 2008 and a toolkit to help Departments prepare their own IPPs will be developed in December 2008. In parallel, DIUS intends to publish its own IPP, setting out how DIUS and the bodies it sponsors will drive innovation through procurement. DIUS and OGC will continue to take this work forward to ensure that Government Departments have IPPs by April 2009.

DIUS and the CBI will work together to facilitate the interchange of innovation expertise between the private sector and Government Departments, for example through secondments and mentoring in innovative procurement and the design of services, products and processes.

DIUS has worked with the CBI and other public and private sector organisations to identify a number of opportunities where there is the potential for the public sector to benefit from the sharing of private sector expertise in procuring innovation. These involve several Government Departments and include companies from a range of sectors, such as construction, information technology, pharmaceutical, education and the professional services sector. A number of specific contacts have been established.

DIUS will reform the Small Business Research Initiative (SBRI), refocused on technology based research, prototyping this with the Ministry of Defence and the Department of Health and will extend the revised SBRI to all participating Departments by April 2009. [AIR Section 6.1]

The reformed SBRI will support technology development in companies at an earlier stage than, or in parallel with, commercial

venture capital. It will stimulate the public sector to procure technology development to meet its future needs, provide a mechanism for competition and involve early-stage companies who might otherwise not compete for Government R&D contracts. It complements other innovation and procurement programmes but is unique in funding 100% of development costs at the crucial stage of prototyping and demonstration.

Implementation of the reformed SBRI model has begun with the Technology Strategy Board taking a leading role, working closely with DIUS. The MoD prototypes focused on reducing the dependency of the military on fossil fuels and whole life cost reduction in the maritime sector were launched in August and the DH pilots focused on health care infections were launched in early October 2008. All competitions are being advertised on the Technology Strategy Board and Departmental websites. In addition, other Departments have recently been engaged for the roll-out of the reformed SBRI in April 2009 and several opportunities for high-quality technology-based programmes have been identified

DIUS and the Better Regulation Executive in the Department of Business, Enterprise and Regulatory Reform (BERR) will work with the Business Council for Britain and others to identify how regulation may promote or hinder innovation. DIUS and the Better Regulation Executive in BERR will use existing regulators' I to share experience on how their activities could promote innovation. [AIR section 6.1]

The emerging findings from a review of the existing evidence and initial discussions with many of the independent regulators have been used to develop a checklist of principles to help regulators

promote innovation. This checklist is published alongside this report and the supporting evidence is being published as a joint BERR/ DIUS Economics Paper

DIUS will publish a Science and Society Strategy in the Autumn, along with an implementation and delivery plan [AIR section 1.5]

The Science and Society consultation *A Vision for Science & Society* was completed in October 2008. It attracted a large response with over 400 organisations and individuals making a contribution. The analysis of the responses will culminate in a strategy and UK-wide implementation plan in 2009.

Supporting Business Innovation

The Technology Strategy Board will bring forward five new Innovation Platforms over the next three years, including developing technology demonstrators to show innovative solutions in action. [AIR section 3.2]

The Technology Strategy Board is in the process of doubling its portfolio of Innovation Platforms to ten by spring 2011. A new Platform, taking the number to six, was announced in October 2008: Detection and Identification of Infectious Agents. The Technology Strategy Board is consulting with business, the Regional Development Agencies, Devolved Administrations, Government Departments and Research Councils on priority areas for future platforms. As part of the Low Carbon Vehicles Innovation Platform, the Technology Strategy Board has announced a major demonstration competition which aims to see up to 100 innovative ultra low carbon demonstration vehicles on Britain's roads by the end of next year.

Over the English regions, at least 500 businesses will be given an innovation voucher to work with a knowledge base institution of their choice, with the aspiration that this would increase to at least 1,000 per year by 2011 as the vouchers were demonstrated to be effective for business. [AIR section 3.3]

Alongside AWM, the LDA, NWDA and SEEDA have rolled out their pilot innovation Voucher Scheme with more RDAs due to follow in the next few months. DIUS is developing with the RDAs a common evaluation framework from which the schemes can draw. AWM are continuing to implement their voucher scheme and have incorporated the learning from their first stage evaluation into subsequent stages as well as sharing it across the RDA network.

DIUS will work to ensure appropriate finance is available for all innovative businesses at all stages of their growth. This will be set out clearly in a “guide to innovation finance” based on the “No Nonsense Guide” on access to finance.

The *No-Nonsense Guide to Finance for High Growth Companies* will be reviewed and expanded to include Innovation Finance for publication in Spring 2009 on the Businesslink.gov website.

Also, BERR and DIUS have launched a review of the provision of risk capital to support innovative and high growth businesses. Building on the 2003 publication, *Bridging the Finance Gap*, the review will examine the supply and demand for risk capital and the results will be published in Spring 2009.

DIUS will take forward the Sainsbury Review recommendation to develop a national Proof of Concept specification to be delivered by the RDAs, which will provide access to facilities and have a strong focus on investor readiness.

A draft national Proof of Concept specification has been agreed with RDAs and will be finalised by December 2008. It will be implemented from April 2009 as part of the national roll-out of the “Solutions for Business” support product funded by Government. RDAs will use the specification to provide a tailored package of support that may include funding, access to facilities, networks and mentoring and help to become investment ready.

DIUS and the Technology Strategy Board working with partners will take forward the Sainsbury recommendation to double the Knowledge Transfer Partnerships, increasing their flexibility and applicability to a range of educational institutions including FE colleges. [AIR section 3.3]

The Technology Strategy Board has agreed plans with 18 Government sponsors of Knowledge Transfer Partnerships (KTPs) to double the number. In addition, a shorter KTP scheme is to be introduced to facilitate shorter, light touch collaboration and is being piloted in the West Midlands. There are also plans to increase the number of partnerships with FE providers.

DIUS will continue to work with BERR, Technology Strategy Board and NESTA to investigate innovation in service sectors.

In August of this year, BERR and NESTA with DIUS support published the *Innovation in Services* report which recognised

the importance of innovation in the service sectors to the UK economy. The recommendations are now being taken forward. The Technology Strategy Board has launched a Creative Industries Technology and Innovation Network and is in the process of establishing a financial services KTN.

DIUS will examine whether there is a role for Government in helping small firms obtain investment through better reporting of their intangible assets, by the end of 2008.

Extensive consultation has taken place with banks, business representative organisations, investors and accountants to examine the scope for improving access to investment. The consultation showed that having intangible assets was potentially an incentive for investment in innovation but that there was a need for better guidance for both business and financiers. DIUS will publish best practice guidance for business to assist their understanding of reporting intangible assets, and include reporting of intangible assets within the new diagnostic tool being launched by UK-IPO in early 2009.

By the summer of 2009 all UKTI export and Business Link advisors will receive training from the UK-IPO in advising businesses on IP management. UK-IPO will provide online support to help small businesses exploit their IP through licensing and other means which are increasingly important to innovative business. This network will be used to promote an awareness-raising programme on the importance and changing nature of intellectual property.

The roll out of UK Trade & International training sessions in all RDAs was completed in October 2008. In addition, online

training for Business Link advisors will be operational by December 2008 with the expectation that all relevant Business Link advisors will completed it by summer 2009. Further to the launch of guidance on IP licensing, *How licensing intellectual property can help your business*, the UK-IPO will develop an online toolkit for business-to-business licensing.

A Strong and Innovative Research Base

DIUS will maintain the growing investment in UK science and will broaden knowledge exchange between the research base and businesses into the arts and humanities and service sectors such as the creative industries.

DIUS remains firmly committed to the growing investment in UK science and research. Universities are showing a keen interest in engaging in knowledge transfer in a broad range of sectors – for example, the HEIF4 Institutional Plans show that of institutions expressing a sectoral focus, 81% specify the creative industries, 31% financial, business services and management and 18% hospitality and tourism. In the most recent round of the Public Sector Research Exploitation Fund over £1 million was provided to museums and galleries to help commercialise their research.

The UK-IPO will continue to develop the Lambert online toolkit of model university-business licensing agreements which cuts the cost and complexity of IP transactions. [AIR section 3.3]

The updated Lambert tool-kit was launched on the DIUS website in October by the Secretary of State. Its resources now include a set of model consortium agreements that provide for research

projects which may involve several parties a decision guide and interactive learning and training elements.

DIUS has commissioned a study to look at how universities should manage IP for their own benefit and for the benefit of the wider economy. [AIR section 3.3]

John Denham commissioned Professor Paul Wellings, Vice Chancellor of Lancaster University to look into this issue as one of a number of contributions to the HE Debate. Professor Wellings' report was published in November. It contains a number of recommendations that could improve IP commercialisation in universities, such as a hub and spoke model for technology transfer offices. The Government is seeking views on recommendations as part of the HE Debate.

NESTA will develop an Innovation Index to measure UK innovation drawing on input and expertise from partners such as the ONS, DIUS, BERR, TSB, AIM, the CBI and others. A pilot index will be published in 2009 with a fuller system in place by 2010.

Following a launch event in July, NESTA held a call for ideas on their Innovation Index between June and September and published reports from 8 mini-research projects in September. Further major projects are expected to be commissioned shortly.

DIUS, NESTA, ESRC and the Technology Strategy Board will create an Innovation Research Centre to ensure a steady supply of high quality innovation research into the UK innovation policy community.

The Innovation Research Centre has been implemented by the four funders as a long-term collaborative research programme worth £5 million over five years, consisting of a central strategic research core and knowledge exchange hub together with further funding to be allocated on a distributed basis during the lifetime of the initiative.

Following a competition, Cambridge University and Imperial College will host the core centre and the knowledge exchange hub. The centre will become operational in January 2009 and the first call for research proposals under the distributed funding mechanism is likely to be issued that month.

International innovation

DIUS will assume responsibility for leading and managing the FCO Science and Innovation Network (SIN). In the future, DIUS and FCO will co-fund this network and DIUS will host a management team of DIUS and FCO staff to oversee the network's operation. [AIR chapter 4]

The Science and Innovation Network (SIN) was established by the FCO. From 2009/10 it will become a joint FCO/DIUS funded resource (75/25 in 2009/10 and 50/50 in 2010/11). There are over 90 staff (UK officials and locals) in 39 posts in 25 countries and territories. They bring scientific, diplomatic, policy-making and administrative skills to achieve our objectives in science collaboration, innovation, influencing international policy and best practice in science and innovation policy. The International Science and Innovation Unit in DIUS, which includes FCO and DIUS staff, brings together the responsibility of managing that

network with the policy responsibilities for international science and innovation issues.

During 2008, DIUS will produce an international strategy, which will draw together inter-related policies within DIUS' remit, encompassing higher and further education, skills, research and innovation. [AIR chapter 4]

DIUS is engaged in a number of areas which link global perspectives on education, research and innovation and these will be presented in DIUS's forthcoming international strategy. Major themes will include: the development of partnerships with key countries and their institutions to enable collaboration in education, skills, research and innovation; the improvement of the UK position as a destination for international students and researchers and encouraging our own students to gain experience abroad; assisting FE and HE providers to build a strong global dimension into students' learning; ensuring that the UK plays its part in addressing global challenges such as sustainable development, climate change and security; and focusing on the EU economic and social reform agenda on policies that will have maximum benefit on the EU and its citizens (Lisbon Agenda).

Significant progress has been made in integrating these themes within a single international strategy. Ministers are currently reviewing this work with a view to finalising the document by the end of the year, or in early 2009.

The Technology Strategy Board will develop, as part of its international strategy, a marketing plan to help deliver a step change in the ability of UK business to compete for grants in EU Framework Programme 7. [AIR chapter 4]

The Technology Strategy Board has consulted with a wide range of organisations including CBI members and Government stakeholders on the support required by business. The Technology Strategy Board is taking this forward by enhancing the national support currently delivered through the FP7UK website and the National Contact Points for which it has responsibility, with a new service to be launched in April 2009. This will ensure greater co-ordination of European support activities across the UK.

DIUS will work with BERR on implementing the European Commission's lead market initiative so that innovative UK companies within the selected pilot sectors can take advantage of the European single market and of new technology-driven global markets.

Action plans agreed by the EU Competitiveness Council have been published for the initial six lead markets: ehealth, protective textiles, sustainable construction, recycling, bio-based products and renewable energies. Public procurement networks will be established in due course. In response to pressure from the UK and other Member States the Commission's Innovation Policy Group held its inaugural meeting in October to discuss implementation with Member States and improvements on a range of aspects were agreed. The EU will review the lead markets initiative by the end of 2009 with a final report published in 2011.

The Technology Strategy Board will advise Government on the opportunities which may arise from the adoption of EU regulations to stimulate business innovation including, where appropriate, building these into the design of Technology Strategy Board programmes.

The Technology Strategy Board through its priority technology and application areas is already using future EU and national regulation and guidance as a stimulant for innovation through its programmes. The longer term direction of travel indicated by regulation and guidance often provides business with a better basis on which to invest. The Technology Strategy Board is looking to identify regulations at least five years before implementation so that it is able to align its activities to enable UK business to better respond to the opportunities.

Innovative people

DIUS will drive implementation of the Leitch Review of Skills to raise the nation's skill levels and enhance opportunities for innovation, building implementation of the Sainsbury review recommendations into its wider strategies for FE reform.

In response to the Leitch Review the Government set out a range of measures and targets; progress to date is set out below;

Leitch ambition	2020 Target	2011 Indicator	Progress to date	Comment
Literacy Level 1		597,000	See footnote ²¹	
Numeracy Level 1		390,000	See footnote ²²	

²¹ Progress will not be measured until 2008/09 – current achievements indicate that we are on track

²² Progress will not be measured until 2008/09 – current achievements indicate that we are on track, but will need a step trajectory to 2011

²³ Lord Leitch added that there should be a commitment to extend the level 2 target to 95% as soon as possible after 2020

²⁴ A very stretching target but we expect to see an upturn in take up of Train to Gain

²⁵ Following a slow start we expect to see an upturn in take up of Train to Gain following the introduction of a free entitlement for 19 to 25-year-olds

Leitch ambition	2020 Target	2011 Indicator	Progress to date	Comment
Level 2	90% ²³	79%	70%	See footnote ²⁴
Level 3	68%	56%	50%	See footnote ²⁵
Level 4	40%	34%	31%	

DIUS will pilot a revenue based FE Specialisation and Innovation Fund to build the capacity of the FE sector to support businesses to raise their innovation potential. Through a small number of targeted pathfinder projects, DIUS will seek to unlock the talent of the FE workforce to drive business innovation through partnership and knowledge exchange. [AIR section 3.3]

Innovation Nation emphasised the strong potential role of the Further Education sector in driving business innovation and announced work to develop the capacity of specialist FE networks to support businesses through **knowledge and technology transfer**. A competition for pathfinder projects over the summer attracted over 130 entries, far exceeding expectations, and revealing the scale of the sector's innovation potential. Five pathfinder projects were announced on 1 December.

Resources permitting, DIUS will establish at least one National Skills Academy (NSA) in every major sector of the economy and is actively encouraging bids from innovative

industries, space and the environment. Government is interested in seeing plans for a National Enterprise Academy and a NSA for the environment develop. Government is working with Peter Jones to develop plans for a National Enterprise Academy and with James Dyson to launch the Dyson School for Design Innovation. [AIR chapter 5]

NSAs are innovative employer led, sector-based education and training organisations. They are designed to transform the supply of skills, enable high levels of employer involvement and attract significant employer sponsorship and investment. There are now 16 NSAs. The four new academies, announced on 7 October, Enterprise, Power, IT and Social Care, now proceeding to the business planning stage, will add to the existing network of twelve NSAs, ten of which are operational and two others are in business planning. The Government target was to have 12 NSAs by the end of this year. It is the Government's aspiration to have one NSA in each major sector of the economy, resources permitting. We will need to await the outcome of detailed funding discussions within DIUS before we are able to state whether there will be a further bidding round for NSAs.

DIUS will shortly publish a Higher Level Skills Strategy. This will provide the overall framework for driving up the higher level skills that contribute to innovation in business. [AIR chapter 5]

This was published through a consultation document – *Higher Education at Work- High Skills: High Value-* in April 2008. This set out the goals of generating more and more employable, graduates and raising the skills and capacity for innovation and enterprise of those already in the workforce. The consultation closed in July and resulted in over 200 responses from a range of

employers (and their representative bodies) and higher education institutions. The responses^{xxxii} confirm a broad endorsement of the direction Government is taking and DIUS will shortly set out its next steps for building on the consultation.

Government will continue to grow the Train to Gain programme and the Apprenticeship programme.

Train to Gain (TtG) is the Government's flagship service to support employers in England to improve the skills of their employees, unlock talent and drive improved business performance. Government investment through TtG will rise to over £1 billion by 2010/11. Five sector compacts have been agreed to tailor TtG support in key sectors such as £127 million in funding for the advanced manufacturing and process sectors. Additionally, skills brokerage will be integrated into wider Business Link service by April 2009.

HEFCE supported the launch of a training Gateway hosted by the University of York which is working with Business Link and Train to Gain to ensure their brokers can work effectively with UK HEIs in the procurement of high level skills training to meet business needs.

Apprenticeship completion rates have reached an all time high in 2006/7 of 63% compared to 24% in 2001/2. The 2008 Apprenticeships Performance Indicator of 75,000 framework completions is on course to be met and exceeded – this is an increase of 75% over 2002/3 levels.

Reformed Sector Skills Councils will look to identify skills gaps which inhibit innovation.

All 25 SSCs will be assessed on their performance to determine whether they should be relicensed. The two key SSC relicensing documents were launched in July 2008. To achieve relicensed status each SSC must demonstrate the confidence, support and influence of employers within their sector. The assessment and relicensing process will be completed for the whole network by December 2009.

The new UK Commission for Employment and Skills will pursue work on High Performance Working practices to increase value added in business.

Work is underway with a steering group in place. A project to look at the next stages including secondary analysis of existing survey data on the subject, case studies of high performance working in context and potential policy recommendations is being tendered by UKCES for completion by March 2009.

The UK Commission has also begun work on the scope for simplifying the skills system in England to give employers and individuals easier and clearer access. It is hoped that initial outcomes from this work can be announced soon.

The Government will develop a framework for the further expansion and development of Higher Education and has asked the Higher Education Funding Council for England (HEFCE) to consult on how the 20 new HE centres can unlock human potential and drive regeneration.

HEFCE's consultation elicited 27 initial expressions of interest in supporting new HE centres. Government's ambition is that 20 will be opened or committed over a six year period.

DIUS will work with BERR and the National Council of Graduate Entrepreneurship to develop regionally-based University Enterprise Networks. [AIR chapter 5]

With BERR and DIUS support the National Council for Graduate Entrepreneurship (NCGE) is engaged with a number of RDAs, universities and prospective corporate sponsors interested in supporting the development of University Enterprise Networks. In particular, discussions are progressing around a network focused on promoting enterprise and innovation within STEM subjects backed by funding from Microsoft UK and others with support from universities and RDAs in the South and East.

DIUS will work with the Department for Children, Schools and Families (DCSF) to promote greater take-up of STEM subjects at school, college and university. [AIR chapter 5]

DIUS works closely with the DCSF on the science, technology, engineering and maths (STEM) skills agenda, primarily focusing on enriching and enhancing the curriculum delivered by DCSF. Such activities include support (through STEMNET) of the 20,000 strong Science & Engineering Ambassadors programme and the WISE (Women into science, engineering and construction) campaign which collaborates with industry and education to encourage UK girls of school age to value and pursue STEM or construction related courses in school or college and move on into related careers.

The aims of the work are to increase attainment in STEM subjects and promoting careers, develop graduates and post graduates and improve school and college workforce recruitment and development. Workforce recruitment and retention is being

tackled and specific targeted initiatives to increase A level mathematics and triple science GCSE take-up.

From September 2007 all pupils in England have had an entitlement to study at least two sciences at GCSE and from September 2008, those who achieved above average Key Stage 3 results have been able to take separate sciences.

In 2008 91% (92 % in 2007) of pupils at the end of key stage 4 took at least one science GCSE and 50% of pupils achieved two or more grade A*-C at GCSE or equivalent in science.

In 2008 10% (8% in 2007) took physics GCSE; 10% (8% in 2007) took chemistry; 11% (8% in 2007) took biology; and 1% (2% in 2007) took another science eg astronomy and geology.

Diplomas in engineering became available for students in September 2008.

In 2008 – A level entries were: biology 48,430 (46,797 in 2007); chemistry 36,360 (35,077 in 2007) ; physics 24,700 (23,887 in 2007); and other science 3980 (3,920 in 2007).

The number of applicants accepted for entry to first degree courses in 2008/9 is up on the previous year by 6.0% in Physics; 5.1% in Chemistry; and 8.3% in Maths; and engineering subjects by 6.5%.

DIUS will lead a cross- Government project on labour market needs for STEM skills and adjust policies in the light of its findings. [AIR chapter 5]

DIUS has been leading a study, in collaboration with BERR, DCSF and the Prime Minister's Strategy Unit, to analyse the demand for STEM skills from all employers with a view to improve our understanding of prospective employer and research base needs for STEM graduates. This work will inform STEM skills strategy and policy development.

Public sector innovation

In order to assist policy makers in understanding the acceptable levels of risk in pursuing innovative policies, the NAO will conduct a study that will explore the role of risk in stimulating or stifling innovation in the public sector. [AIR section 6.2]

The NAO have started a review to assess how central Government Departments and agencies are managing innovation. Research was carried out over the summer and has included a survey, online focus groups and interviews with key stakeholders. The NAO will publish their findings and recommendations in February 2009.

The Sunningdale Institute will work with partners to create a Whitehall Innovation Hub, a new partnership of organisations to capture and disseminate learning about public sector innovation. [AIR section 6.2]

The hub will:

- Create a culture of expertise about public sector innovation
- Provide opportunities for establishing dialogue and reflection across Departments and with key stakeholders in the public services

- Contribute to thought leadership on public sector innovation
- Build a capability for innovation in the public sector

The Sunningdale Institute has launched networks to shape work on the Hub and has commenced research on *Leading for Innovation, Innovation at a Local Level and Governance Models for Innovation* which will culminate in a series of seminars for senior policy makers. It is also working with those delivering commitments from Innovation Nation to capture and disseminate learning. The Hub will launch formally in December and publish a guide to how it will support central Government in managing innovation.

NESTA will establish a Public Services Innovation Laboratory. Working as appropriate with partners such as the Young Foundation, The Innovation Unit, IDEa, Design Council and Innovation Exchange, the Laboratory will trial new methods for uncovering, stimulating, incubating and evaluating the most radical and compelling innovations in public services.
[AIR section 6.2]

The Lab will experiment with new ways of generating and spreading original ideas, providing support and risk capital and testing them through practical projects in contexts where fresh thinking is needed. There will be a programme of facilitated learning to share lessons in what works. NESTA is currently consulting with stakeholders and plans to launch the Lab in early 2009.

DIUS will convene a Network of Whitehall Innovators to demonstrate commitment at a senior level of Government.
[AIR section 6.2]

The Whitehall Innovation Group was launched in May 2008 and is a group of 25 senior officials with an interest in innovation. The Group shares best practice and has advised DIUS officials on taking forward commitments in *Innovation Nation* and refining the vision for a public sector innovation strategy. Members of the WIG have peer-reviewed the contributions of case study material submitted to DIUS for this report. The WIG will consider how the self-assessment of Departmental innovation capability published in this AIR can be developed.

The Design Council will develop and trial an innovation-enabling programme of designing demand for practitioners in the public sector, along the lines of the existing private sector model.
[AIR section 6.2]

The Design Council is developing a transformational support programme – Public Services by Design – aimed at enabling public sector managers to better manage innovation. It will seek to embed a proven approach to managing creativity and innovation within the context of service delivery and improvement based on the principles and approach of the successful Designing Demand business support programme. A series of development projects launched both at a local and national level – including with the new Adult Advancement and Careers Advice Service – will be completed by September 2009. They will be supported by research and workshop activities with designers and the public sector to underpin and co-develop the programme.

DIUS will consider, with the Cabinet Office, the value of an extended “power to innovate”, enabling front line staff to explore new ways of delivering high quality services.

DIUS have held exploratory conversations with DCSF on the Power to Innovate (PtI). So far, 1,700 applications for the PtI have been made to DCSF though only 24 awards have been granted. This is largely because the remaining applications were already permitted under existing education regulations, but applicants were unaware of this. The role of the PtI team has therefore been primarily to advise schools and local authorities on how to make best use of the freedoms and flexibilities they already have. The key benefit of the Power to Innovate has been in providing “permission”, information, advice and guidance for innovators and there seems to be limited value in extending the model in its original form but instead DIUS is working with partners to explore how innovators can be better supported by communicating a “permission to innovate”.

Innovative places

DIUS will sponsor New Partnerships for Innovation that will bring together venture capital, universities, business and regional government to align efforts and develop innovative solutions to local and regional challenges. DIUS will publish a prospectus for New Partnerships in Autumn 2008. [AIR chapter 7]

DIUS has been in discussion with interested organisations on the potential, scope and nature of New Partnerships for Innovation. There has been considerable interest in the concept as a mechanism for local delivery – bringing together the knowledge base, business and public sector in the regions but it has not yet been possible to finalise the prospectus – it is anticipated that it will be published early in 2009.

The Technology Strategy Board and RDAs will work to align their strategies and funding for technological research, demonstrators and Innovation Platforms and achieve the £180 million aligned funding commitment [AIR chapter 7]

The RDAs and the Technology Strategy Board have made significant progress against this commitment to align £180 million of collective RDA resource over the three year CSR period. This work is on track and some important collaboration is already in place. The RDAs have produced regional prospectuses of current and planned investments which have been used to shape this exercise. Although not formally committed to aligning with the Technology Strategy Board, the Devolved Administrations are actively collaborating and jointly investing in projects.

Examples of collaboration include delivering on the joint commitment to double the number of Knowledge Transfer Partnerships, where RDAs have been exploring the use of ERDF to supplement the programme, and regional capital investments and facilities to support the Technology Strategy Board business investment in technology such as PETEC in the North East and major collaborative R&D projects such as the Next Generation Composite Wing. The Technology Strategy Board is also working with Government, the RDAs and Research Councils to simplify the process for accessing public sector investment in major (£10+ million) collaborative R&D projects.

As part of its work to develop an Innovation Index, NESTA will work with RDAs and DAs and the Innovation Research Centre to explore the scope for regional or sub-national innovation measures that capture spatial innovation patterns. [AIR chapter 7]

Following a launch event in July, NESTA held a call for ideas on their innovation index and published reports from eight mini research projects in September. Further major projects are expected to be commissioned shortly.

DIUS will work with RDAs, the Technology Strategy Board, the Devolved Administrations, local authorities and other partners including business and universities to align national and regional innovation programmes and, where appropriate, to use multi-area agreements to promote innovation across the administrative boundaries of local authorities. [AIR chapter 7]

The first Multi-Area Agreements (MAA)s were announced in July covering Greater Manchester, Leeds, Tees Valley and four other areas. They provide a framework for local authorities to come together to focus on their economic challenges and opportunities at the sub-regional level. MAAs are a flexible, innovative response to issues such as transport, housing and skills that cut across administrative boundaries. They aim to remove barriers to economic growth and give groups of local authorities a formal means of proposing innovative ways to tackle complex problems.

Other Commitments

BSI will undertake an analysis of the role of standards within the service sectors (as part of the wider commitment on services innovation)

BSI have started work to review the role of standards within the service sectors and have formed a cross Whitehall senior officials advisory group. In addition, BSI has collaborated with BERR to explore the potential of standards to support the service sectors.

BSI will produce a revised standard on the management of innovation

BS 7000-1:2008 Design Management Systems; a guide to managing innovation was launched in April 2008 and aims to enable organisations to plan products, services and processes a significant time into the future. BS 7000-1 takes the form of guidance and recommendations covering the total experience and benefits of innovating as well as the application of general principles and techniques to the management of innovation. It applies to all organisations (especially SMEs that seek to grow) in manufacturing, process, service and construction industries as well as in the public and not-for-profit sectors.

A new project is being carried out to investigate the demand for the development of an innovation capability standard.

DIUS will produce technology road-maps for the NMS programmes and publish a new strategic plan to identify and address the metrology barriers to innovation

DIUS will publish technology road-maps for the eight measurement research programmes. They will chart the development of the programmes, typically over the next ten years and will guide new work by setting out the measurement science and capability that will be needed to produce benefits in line with the priorities of Government and business.

Next spring DIUS will produce a Strategic Plan for the NMS for 2009 – 2012. The Plan will set out the focus of the NMS and the means by which its programmes will provide benefit. The emphasis will be on alignment with the priorities of the Technology Strategy Board, as metrology and standards are key enablers of innovation.

UK-IPO will seek progress in relation to a European Patent Court as a step towards the longer term goal of a single community patent

UK-IPO will work towards mutual recognition of work between IP offices to improve the efficiency of the global patent system making it quicker for applicants to get patents. It will also continue to work with European partners towards creating a more efficient and affordable European patent system with a single European Patent Court and Community patent helping applicants more effectively protect their inventions in Europe.

DIUS will work with RDAs, BERR and CLG to achieve a better understanding of the different patterns of innovation and ensure that action on innovation is taken at an appropriate spatial level and scale to ensure that innovation is recognised as a key element of the new integrated regional strategies

DIUS will commission a scoping study in 2009 for an analysis of the geographies of innovation.

As part of the NHS Next Stage review, DH and DIUS will work together to ensure that research, teaching and clinical practice at all levels can be brought across health and social care systems to further energise innovation in health delivery

One of the actions from the Darzi review is that a designation process will identify a limited number of Academic Health Science Centres to bring together excellence in research, patient care and education.

Research funded by the National Institute for Health Research will provide an important underpinning to the work of the Academic Health Science Centres.

ANNEX 2

PROGRESS ON RECOMMENDATIONS FROM *THE RACE TO THE TOP: A REVIEW OF GOVERNMENT'S SCIENCE AND INNOVATION POLICIES,* LORD SAINSBURY OF TURVILLE, 2007

RECOMMENDATION	PROGRESS
Chapter 2 – The Innovation Ecosystem	
2.1 – The Review strongly recommends that the Government:	
<ul style="list-style-type: none"> continues to fund increases in basic science in line with the 10 Year Framework; 	We have agreed with HMT that this should remain “on track for future implementation” until any SR09 settlement for the ring fenced science budget. Only with a successful outcome in SR09 will we meet the 10 Year Framework commitment (which runs until 2014)
<ul style="list-style-type: none"> increases the funding of the Technology Strategy Board; 	Over the Spending Review period, the Technology Strategy Board’s budget will increase by over 35% to £263 million
<ul style="list-style-type: none"> and that civil departments and the MoD are encouraged to seize the opportunities to improve their performance by raising the level of their R&D. 	GO-Science has completed a survey of departmental plans within this CSR period and found that overall R&D funding is increasing slightly over the period in the context of very tight departmental settlements. This includes MoD, where spending plans increase after a small dip this year. See also recommendation 8.4.

RECOMMENDATION	PROGRESS
<p>2.2 – Research into the structure and dynamics of value chains should be supported across the Research Councils. The capability to integrate stages globally may be a major opportunity for the UK to draw on its traditional strengths in innovation and its international outlook.</p>	<p>ESRC are taking this forward with the Technology Strategy Board following the publication of the TSB’s strategy in May. In July ESRC ran a workshop with TSB on the outstanding research challenges. The Government’s manufacturing strategy included the announcement of a new research programme on value systems.</p>
<p>2.3 – Flexible integrated mechanisms such as IKCs and IMRCs should be deepened and strengthened, as they help match developments in products and services with developments in science and technology.</p>	<p>The Innovative Manufacturing Record Centres (IMRCs) are up and running. The EPSRC Integrated Knowledge Centre (IKC) is a pilot project which issued a call in Nov 2005. Funding for the new centres awarded will end in 2012.</p>
<p>2.4 – The Technology Strategy Board should work with the Research Councils to identify the complex, high-value-added production technologies that current and emerging industries require and which are likely to flourish in high-cost economies. Research and the development of skills in these technologies can then position the UK to be a leader in these fields.</p>	<p>Over the Comprehensive Spending Review period, the Research Councils have committed £120 million for collaborative work with the Technology Strategy Board and have identified areas of priority activity. An early outcome of this collaboration has been a £23 million call for Collaborative R&D proposals in High Value Manufacturing Technologies, and more recently, £3 million of a further £24 million call for research central to high value manufacturing, allocated to work in the Value Systems area, which the EPSRC and ESRC will also support.</p>
<p>Chapter 3 – Technology Strategy Board</p>	
<p>3.1 – The Technology Strategy Board should be given a new leadership role, with more formal relationships with the RDAs, Government Departments and Research Councils.</p>	<p>Formal relationships are already in place between the Technology Strategy Board and the RCs and the RDAs. More formal relationships are also being developed across Government, in some instances building on previous successes.</p>

RECOMMENDATION	PROGRESS
<p>3.2 – One of the Chief Scientific Advisors (CSA) should be actively involved with the Technology Strategy Board, attending regular meetings. This should typically be the CSA of the Ministry of Defence, given the size of the Department’s R&D budget, but he/she would also represent views from other CSAs.</p>	<p>There are regular meetings between the Technology Strategy Board (at CEO and Director level) and Professor John Beddington, the Government Chief Scientific Adviser and also a range of CSAs. Whilst agreeing with Lord Sainsbury’s recommendation, the optimal approach would be to have a rolling programme of engagement with relevant CSAs, including through the Chief Scientific Advisers’ network. In light of the role played by Departmental CSAs in identifying and developing Innovation Platforms, there are good opportunities to have an affective relationship.</p>
<p>3.3 – Regulators should be involved from an early stage in Innovation Platforms, so that they better understand the impact of their regulations on innovation, and can bring valuable knowledge to the members of the Innovation platforms. Early indications suggest that regulators would be keen to do so.</p>	<p>Regulators are already engaged in Innovation Platforms such as Low Impact Buildings</p>
<p>3.4 – The Technology Strategy Board should encourage the production of technology road maps by all fast-growth, high-tech industries as a way to raise their level of innovation and to align technology capability with consumer demand.</p>	<p>The Technology Strategy Board has taken a lead in creating roadmaps in a number of areas – Low Impact Buildings and Bioscience are being developed and work to create roadmaps for other areas is being considered. Strategies in key technology and application areas are being published. Each strategy will identify priorities where the Technology Strategy Board will focus its resources. These priorities will be identified through the use of technology roadmaps and through discussions with business and government partners. The process of identifying technology priorities is an ongoing one and therefore Technology Strategy Board will look to develop roadmaps on an ongoing basis as and when priorities are identified.</p>

RECOMMENDATION	PROGRESS
<p>3.5 – A flexible, short-term Knowledge Transfer Partnership (KTP) scheme should be developed and KTP's be extended more widely into the further education sector, as described in Chapter 4.</p>	<p>Opportunities for FE KTPs are available and a KTP growth plan is in place for increasing the flexibility of KTPs. Short-term KTPs will be available early in 2009.</p>
<p>3.6 – The Technology Strategy Board's activities should be extended into those service sectors where technological innovation is important. The TSB has already started work with the creative industries and there is considerable scope for it to extend its work to other areas.</p>	<p>A £10 million call for collaborative research proposals in the Creative Industries has been undertaken, with a focus on the application of digital technologies and a Creative Industries KTN established. A review of high value service sectors with an initial focus on financial services has highlighted areas for Technology Strategy Board activity, an early outcome of which is the launch of a competition to identify a consortium to help set up and manage a new Financial Services KTN to help deliver technology-enabled innovation in the financial services sector.</p>
<p>3.7 – The Technology Strategy Board should be made the repository for information about technology's role in the competitive strategies of different industries and should be responsible for providing this when it is needed by other organisations.</p>	<p>The Technology Strategy Board has been building up its knowledge base including developing strategies in its priority technology and application areas. Each strategy, developed in conjunction with a wide range of stakeholders, is underpinned by market data and analysis. The Technology Strategy Board recognises the important leadership role it has to play in setting the national agenda for technology and innovation in the UK and is in the process of recruiting business analyst and economic staff to further support this area of work. The Technology Strategy Board is also in discussion with the RDAs and DAs with regards to the Technology Strategy Board taking a lead role in co-ordinating technology and innovation consultancy advice, for example in nuclear energy and hydrogen technology, to better link national and regional views and to ensure better value for money.</p>

RECOMMENDATION	PROGRESS
<p>3.8 – The process of evaluation for support from the Technology Strategy Board should cover both the technical and business merit. The backgrounds of evaluation within the Technology Strategy Board should be expanded to include technical specialists with strong commercial backgrounds. As in the Defence Advanced Research Projects Agency (DARPA), a proportion of staff in the Technology Strategy Board should be secondees from industry or academia, with an emphasis on selecting high calibre candidates whose careers will be enhanced by spending two to four years in the Technology Strategy Board.</p>	<p>The Technology Strategy Board already has secondees from industry and makes use of external expertise to evaluate both business and technical merit. Large projects in particular require detailed business plans and due diligence is conducted</p>
<p>3.9 – The Technology Strategy Board should take over support from DIUS for the Eureka programme, and offer advice and guidance on Framework Programme 7 to encourage more UK businesses to take advantage of the significant European research funds available. (See Chapter 10 on Global Collaboration).</p>	<p>The Technology Strategy Board has taken over from DIUS the support functions for the EUREKA programme and the National Contact Points service for FP7 as well as the FP7UK website and helpline. The Technology Strategy Board has recently made a commitment to support the UK business participation in Eurostars, a joint initiative between EUREKA and the Framework Programme</p>
<p>Chapter 4 – Knowledge Transfer</p>	
<p>4.1 – The review believes that there are four ways to strengthen our performance in knowledge transfer:</p> <ul style="list-style-type: none"> • more support through HEIF to business-facing universities, incentivising them to perform more knowledge transfer with small and medium-sized enterprises; • drive up knowledge transfer activities of Research Councils; • increase the number of Knowledge Transfer Partnerships; and • encourage further education colleges to undertake more knowledge transfer. 	<p>The Department agrees with these statements.</p>

RECOMMENDATION	PROGRESS
<p>4.2 – Universities should initiate pilots with HEIF money for senior industry professionals to be embedded into departments to act in a similar manner to the Principal Scientists in MIT, acting in parallel to the scientific leader of major projects.</p>	<p>HEFCE have (in conjunction with DIUS) disseminated information on the MIT programme, including through an event for HEIs in June 2008 hosted by the Cambridge-MIT Institute. Decisions on whether to undertake such pilots will be for the HEIs to make.</p>
<p>4.3 – HEIF4 funding should be allocated entirely on the basis of a formula, and the formula should be constructed so that the money that last time was allocated on the basis of a competition this time goes largely to business-facing universities.</p>	<p>In December 2007 DIUS announced the new budget for HEIF4 and that it would be fully formulaic. HEFCE have allocated HEIF4 funding, based on the Sainsbury recommendations, and every institution has had a HEIF4 Institutional Strategy approved to release that funding which will be for the three academic years 2008/9 to 2010/11. An overview of the Institutional Strategies is available on the HEFCE website</p>
<p>4.4 – Specific targets in each of the five areas of knowledge transfer should be agreed between each Research Council and the Director General of Science and Innovation as part of the Research Council Delivery Plans. RCUK should take responsibility for common branding and alignment across the schemes ensuring this branding fits with Business Support Simplification Programme (BSSP).</p>	<p>1) Research Councils have made commitments to Knowledge Transfer activities in their Delivery Plans published 11 Dec 2007. Specific targets to be included on scorecards will be agreed with the DG of Science and Innovation as part of the RC performance management system and be effective from April 2008. 2) RCUK completed a project (Oct 2007) which assessed the alignment of KT schemes across Councils and identified where schemes could be harmonised. This work will be taken forward in the next six months. A project has now begun to implement the delivery of harmonised KT schemes. 3) A KT portal, providing a single website point of access to all Research Council KT schemes will be launched early in 2009.</p>

RECOMMENDATION	PROGRESS
<p>4.5 – Based on the BSSP, the Government should build on the success of the KTPs by doubling their number. Responsibility for the KTP scheme was transferred to the TSB from July 2007, but the roll-out and funding of KTPs should be led by the RDAs (see Chapter 9).</p>	<p>The Technology Strategy Board is in discussion with a number of key partners such as the RDAs and Research Councils on the detail of implementing the expansion of Knowledge Transfer Partnerships including the doubling of their number over the CSR period (through a gradual ramping up of activity) and an increase in their flexibility.</p>
<p>4.6 – Based on the BSSP, a standard nationwide mini KTP scheme should be introduced in all regions to facilitate shorter, light-touch collaboration (3-12 months). For some time there has been a demand for shorter, less expensive min-KTPs, and we believe that they could perform a useful function. They may also be of particular interest to the creative industries, service sectors and SMEs.</p>	<p>Shorter term KTPs will be available early in 2009.</p>

RECOMMENDATION	PROGRESS
<p>4.7 – DIUS should develop a strategy to promote and support knowledge transfer within the wider FE reform agenda. Aligned with the BSSP, it should include:</p> <ul style="list-style-type: none"> • encouraging and supporting staff secondments to and exchanges with businesses as part of the FE workforce reform programme; • funding further FE knowledge transfer projects and initiatives through the Regional Development Agencies; • incorporating knowledge transfer capacity building in the criteria for the new employer responsiveness standard for Centres of Vocational Excellence; • encouraging increased FE participation in Knowledge Transfer Partnerships; • raising business awareness of FE knowledge transfer potential through Business Links and other business support routes; • promoting FE’s knowledge transfer role in advice from regional Development Agencies and Regional Skills Partnerships to local employment and skills boards; • using existing FE networks to share best practice in knowledge transfer and business support. 	<p><i>Innovation Nation</i> set out a stakeholder-led strategy for unlocking the talent of the FE workforce to deliver business innovation through knowledge transfer. A Prospectus was published by the Learning and Skills Council on 28 July 2008 with a deadline for bids by 17 September. There was a huge response with over 130 expressions of interest received. The assessment process identified 17 strong bids for the selection panel shortlist. Of these, 5 were approved by Ministers and announced on 1 December. These 5 projects will cover a range of networking arrangements in different parts of the country and work will begin in December. They will be funded for 12 months but run for 2 years drawing on mainstream funding sources during the second year. The outputs from the 2008/9 pathfinders will be delivered in September 2009, with interim findings delivered in March 2009.</p>

RECOMMENDATION	PROGRESS
<p>4.8 – The Government should continue to support PSRE commercialisation. To increase the impact of the PSRE Fund, the Government should require PSREs with strong track records of commercialisation to lever in additional funding from other sources. The then Office of Science and Innovation (OSI) consulted the community on this proposal and it has their support.</p>	<p>Further support for the commercialisation of research carried out by organisations in the public sector in another round of funding under the Public Sector Research Exploitation Fund was announced earlier this year. For the first time, applicants to the fund were required to raise co-funding from other sources. A total of £68 million was allocated to commercialisation of research in Public Sector Research Establishments including £38 million from co-funding.</p>

RECOMMENDATION	PROGRESS
<p>Chapter 5 – Intellectual property, standards and metrology</p>	
<p>5.1 – Government and business should be encouraged to make greater use of the enormous amount of technical information contained in patent databases to further innovation, avoid duplication of research and support informed decision-making. It is also recommended that UK-IPO should continue to develop its expertise in patent informatics to provide information that can aid government and commercial bodies in strategic planning.</p>	<p>UK-IPO is continuing to develop its expertise in the field of patent information and analytics. This expertise is made available to stakeholders via the Patent Informatics Team, who are working closely with the Technology Strategy Board and Knowledge Transfer Networks in the analysis and evaluation of emerging technologies. The Team have used patent mapping techniques to develop a toolkit of probable “success indicators”, which could be used to spot new and emerging technologies with disruptive market potential, and to feed into the TSB’s Emerging Technologies strategy. A technology landscape analysis project is underway for the Environment KTN; the Team delivered a seminar at a Nanotechnology KTN summer school and has agreed to deliver a follow-up analysis of the UK nanotechnology landscape. The Team also have relationships established with patent attorneys and private sector companies seeking to improve their commercial intelligence and market awareness.</p> <p>The Patent Informatics Team has completed two commercial projects with another two pending, in addition to responding to requests from other Government bodies and for internal policy decision making.</p>
<p>5.2 – DIUS should fully endorse the setting up of a new, world-class incubator facility on NPL’s Teddington site (AIMtech) to help measurement and instrumentation start-ups.</p>	<p>A DIUS-funded feasibility study on the potential for an incubator facility on NPL’s Teddington site was completed in November 2008. Recommendations on how best to proceed will be made in the light of this.</p>

RECOMMENDATION	PROGRESS
<p>5.3 – In developing its strategy for supporting the development and dissemination of key technologies, the Technology Strategy Board should systematically consider the role of metrology and standards as part of its portfolio of targeted interventions and ensure that this strategy is widely communicated through the relevant KTNs. In allocating resources to these activities, the Technology Strategy Board will clearly wish to develop management metrics of successful outcomes and maximum impact.</p>	<p>This is already the case in developing the Technology Strategy Board strategy, and the communication options are likely to go wider than just KTNs</p>
<p>5.4 – Working with the Technology Strategy Board, DIUS should take a more proactive approach towards the development of European and international standards in areas of UK strength.</p>	<p>This recommendation requires further discussion. The DIUS Innovation Delivery team will work with the Technology Strategy Board to ensure appropriate representation for standards and standardisation on their co-ordinating committee. The Technology Strategy Board is working towards the establishment of a more formal co-ordinating committee. This recommendation will also be considered by the Cross Whitehall Standards Policy Committee (now renamed Taking Standardisation Forward).</p>
<p>5.5 – An Emerging Industries Co-ordinating Committee should be established by DIUS to bring together representatives from the Technology Strategy Board, the Research Councils, NMS, UK-IPO, and BSI to co-ordinate support for emerging industries, such as regenerative medicine, building on the work that has been done with the nanotechnology industry.</p>	<p>The Technology Strategy Board will deliver this recommendation as part of the Emerging Technologies and Industries work stream and is progressing these discussions with interested parties. The Technology Strategy Board is working towards the establishment of a more formal co-ordinating committee early in 2009.</p>

RECOMMENDATION	PROGRESS
<p>Chapter 5 – The supply of venture capital</p>	
<p>6.1 – the condition of the EIS scheme concerning the time constraints for the start of trading and the expenditure of money should be reviewed.</p>	<p>HM Treasury recently carried out a public consultation on the Enterprise Investment Scheme (EIS) in collaboration with HMRC. It offered those who use, or seek to use, the scheme an opportunity to comment on these requirements. A range of suggestions was received on how they may be refined to better address the issues facing small businesses. HM Treasury and HMRC are currently reviewing these suggestions, taking into account the pressures felt by small businesses when raising finance, and the need to ensure ongoing investment in the UK economy.</p>
<p>6.2 – Consideration should be given by Government to utilising the Young Innovative Enterprises (YIE) definition to provide targeted support for investment in new high tech businesses.</p>	<p>The Government has announced the ‘Solutions for Business’ package – a streamlined portfolio of 30 publicly-funded business support products and services that will be accessed via Business Link. The Solutions are focused on generic market failures and are well defined to provide cost effective support to innovative businesses. There will not be a specific Young Innovative Enterprises (YIE) product as this would preclude support to more established businesses. Instead, business support providers using the generic product set may target their support towards this group.</p>

RECOMMENDATION	PROGRESS
<p data-bbox="170 240 1054 355">6.3 – A nationally agreed specification for proof-of-concept funds should be developed, drawing on current best practice. It should cover:</p> <ul data-bbox="170 405 1002 1002" style="list-style-type: none"> <li data-bbox="170 405 1002 480">• rigorous project management and budget control over funded projects; <li data-bbox="170 523 1002 560">• well-defined outcome and objectives from the fund; <li data-bbox="170 603 1002 678">• carefully specified application criteria and independent assessment of commercial potential; <li data-bbox="170 721 1002 842">• a strong focus on strengthening “investor readiness”; for example, access for entrepreneurs to managerial and investment expertise through a dedicated mentor; and <li data-bbox="170 885 1002 1002">• awards to bring access to facilities (e.g. linked to Enterprise Hubs and centres of Excellence) to support concept development. 	<p data-bbox="1150 240 2076 678">DIUS is working with key stakeholders to define a national proof-of-concept specification. Significant progress has been made in defining the products that underpin proof-of-concept as part of the Business Support Simplification Programme (BSSP). The specification will take this a step further by establishing a framework for integrating elements of these products into a coherent offer which may include, as appropriate: funding; access to facilities; mentoring; and help to become investment ready. The specification will be introduced from March 2009 in line with the BSSP timetable.</p>

RECOMMENDATION	PROGRESS
<p>Chapter 7 – Educating a new generation of young scientists and engineers</p>	
<p>7.1 – Progress in achieving this plan is monitored by the Department for Children, Schools and Families on an annual basis and corrective action is taken if it looks as if the targets will not be met. This Review recommends that this could include financial incentives being offered to teachers during their first five years to address critical retention issues.</p>	<p>The 2007 Secondary School Curriculum and Staffing Survey (SSCSS) indicates positive progress towards the 25% physics target with the proportion of science teachers with a physics specialism at 22% in 2007 compared to 19% in 2005. In chemistry, the SSCSS indicates 22% of science teachers were chemistry specialist, a fall from the 2005 level of 25%. In mathematics the SSCSS survey indicates that 84% of lessons were delivered by mathematics teachers with relevant A level qualifications. Whilst the figures for chemistry and mathematics are disappointing there is much action being taken to improve the numbers of teachers in both subjects as well as physics, and which were introduced too late to have any impact on the 2007 SSCSS survey. This is being done by strengthening existing approaches to recruitment, and considering other incentives: exploring new ways to boost supply, including accredited CPD, to turn existing and potential teachers without a relevant specialism into specialists; and improving the quality of subject teaching through better CPD and better support for mathematics and science teachers through the recruitment of a new cadre of high level teaching assistants.</p>
<p>7.2 – The national roll-out of a mentoring scheme along the lines of the IoP scheme (Institute of Physics case study) to increase support for Newly Qualified Science Teachers. This Review believes that the relevant professional bodies would be keen to support such a programme.</p>	<p>The TDA have drawn up a specification for a mentoring scheme to be piloted from September 2009 and which has now been put out to tender.</p>

RECOMMENDATION	PROGRESS
<p>7.3 – This Review supports the recommendation of the STRB (School Teachers Review Body), and recommends that financial incentives should be introduced to encourage the take-up of conversion continued professional development (CPD) courses to help meet stretch targets for teacher recruitment.</p>	<p>The value of the incentive was announced in October 2007. The first cohort of teachers complete their courses in July 2008. DCSF are working towards paying the first incentives in autumn 2008.</p>
<p>7.4 – this Review suggests that the self-evaluation form that schools complete prior to inspection should prompt schools to set out any difficulties in recruiting and retaining staff, with specific reference to mathematics and science teachers. This will allow Ofsted inspectors to have more informed discussion with head teachers to agree how to tackle any shortages.</p>	<p>Completed</p>
<p>7.5 – This Review recommends that DCSF commits to the long-term funding of the network, that the National Science Learning Centres should be given a leadership and co-ordinating role for the network, and that resources are made available so that the pilot bursary schemes to pay for supply cover costs for schools can be extended to schools that have a shortage of science teachers or whose science teachers lack experience. Industry and the professional scientific institutes, as well as the Wellcome Trust, are keen to provide support for the network of Science Learning Centres, and we also recommend that a Board is set up to run the network. Industry, the professional scientific institutes and teachers should be represented on it as well as Government and the Wellcome Trust.</p>	<p>The National Science Learning Centre will manage the contract for the network of regional science learning centres. Project Enthuse has been developed by the Wellcome Trust to enable science teachers to experience high quality professional development, at the National Science Learning Centre, in contemporary science over the next five years. It will be a partnership between the Trust, industry and the Government.</p>

RECOMMENDATION	PROGRESS
<p>7.6 – The Review welcomes this decision (entitlement for those achieving level 6 at KS3 to do triple science) and recommends that the Government should continue its drive to increase the number of young people studying the three sciences as separate GCSEs.</p>	<p>The DCSF has contracted with the Learning and Skills Network to deliver the triple science support programme over the next three years.</p>
<p>7.7 – The school profile, which provides valuable information for parents, and the accompanying guidance should be amended to encourage schools to provide information about whether they offer triple science.</p>	<p>Completed</p>
<p>7.8 – STEM careers advice should be built into the school curriculum. To support this, teachers need to be given greater support in delivering careers advice and therefore we further recommend that careers advice is built into CPD for teachers.</p>	<p>The National Science Learning Centre were awarded the contract for the network of regional science learning centres at the beginning of the 2008/9 financial year. The work will include careers related CPD courses for teachers.</p>
<p>7.9 – When the National STEM Careers Co-ordinator takes up the new post in April 2008, he or she should be attached to the Science Learning Centre network and be responsible for driving forward the careers advice agenda and co-ordinating activities to ensure that a uniform approach, which is accessible to all, is adopted.</p>	<p>Kate Bellingham has been appointed as the National Stem Careers Coordinator. The main elements of the STEM Choice and and Careers programme are to:</p> <ul style="list-style-type: none"> • Lead and coordinate a campaign to promote STEM careers awareness among students, parents, teachers and Information, Advice and Guidance (IAG) professionals. • Make available high quality information about STEM careers, linked to subject and qualification choice, from the beginning of KS3 through a variety of agents including subject teachers.

RECOMMENDATION	PROGRESS
<p>7.10 – The policy advice from the DfES to schools should indicate the sort of careers advice and timing that students should expect to receive.</p>	<p>Kate Bellingham has been appointed as the National Stem Careers Coordinator. The main elements of the STEM Choice and Careers programme are to:</p> <ul style="list-style-type: none"> • Lead and coordinate a campaign to promote STEM careers awareness among students, parents, teachers and Information, Advice and Guidance (IAG) professionals. • Make available high quality information about STEM careers, linked to subject and qualification choice, from the beginning of KS3 through a variety of agents including subject teachers.
<p>7.11 – To support this framework of schemes, the Review recommends that the Government should support an infrastructure including:</p> <ul style="list-style-type: none"> • the network of national and regional Science Learning Centres; • STEMNET, with its team of Science and Engineering Ambassadors; • the National Centre for Excellence in Teaching Mathematics (NCETM); • the science and mathematics strands of the National Strategies; • the network of Specialist Schools with STEM specialisms; • the STEM Community Portals. 	<p>The Government is already supporting all of these organisations.</p>

RECOMMENDATION	PROGRESS
<p>7.12 – DCSF and DIUS, in partnership with stakeholders in other sectors, should adopt and develop the framework of ten schemes and the associated framework.</p>	<p>Subject to detailed evaluation of the pilot science and engineering clubs, we would like to see a science and engineering club in all secondary schools within the next five years.</p>
<p>7.13 – A National Science Competition should be established as part of Science Week, bringing together existing contests to maximise their impact, with a well-publicised (ideally televised) final taking part during Science Week. All school clubs should be eligible for entry.</p>	<p>Competition co-ordinator appointed by the British Association for Advancement of Science which was launched on 10 September 2008</p>
<p>7.14 – All pupils who would benefit should have the option to study the second mathematics GCSE and schools should find ways to make it available to them.</p>	<p>The QCA, as part of their current GCSE subject criteria consultation for English, mathematics and ICT, are seeking views on the way forward for a second GCSE in mathematics. The consultations ended on 30th September.</p>
<p>7.15 – The remit of the Strategic and Vulnerable subjects Advisory Group should be extended to include responsibility for publishing an annual report which describes the trends in the subjects that undergraduates are taking, the jobs and the salaries they are getting when they leave university and the subjects in which employers and government departments believe that there are, or are likely shortly to be, shortages of graduates with key skills. This Review welcomes the extension of the groups membership to include an industry and a STEM business representative.</p>	<p>A review chaired by Professor Sir Brian Follett discussed these issues in the context of HEFCE's work in promoting and sustaining strategically important but vulnerable subjects. The review was published on 21 October and has been welcomed by the Government.</p>
<p>7.16 – SEMTA, the Science, Engineering and Manufacturing Sector Skills Council, should liaise with subject associations to ensure that messages about science employment needs and prospects are communicated to students.</p>	<p>DIUS has finite influence over SEMTA, to whom this recommendation is addressed.</p>

RECOMMENDATION	PROGRESS
<p>7.17 – A working group of experts from academia and industry should be established and co-ordinated by the Royal Academy of Engineering to review current approaches to engineering education and to develop, with a number of leading engineering universities, an experience-led engineering degree which integrates technical, operational and business skills.</p>	<p>DIUS has commissioned the Engineers for Enterprise study (nearly £200,000), the principal objective of which is to identify options for encouraging and enabling universities to develop engineering courses to increase the quality and quantity of engineering graduates to meet diverse industry requirements. The top priorities for engineering graduate skills are practical application, theoretical understanding, creativity and innovation. The study will investigate more effective interaction between industry and the HE sector to provide experience of real-life industrial challenges, giving students exposure to realistic, open-ended problems, teaching them relevant skills, and motivating them towards careers in industry. It will also investigate regulation and maintenance of standards, which should be designed to encourage and enable change rather than inhibit it. The study will report in late Autumn 2009.</p>
<p>Chapter 8– Government Departments</p>	
<p>8.1 – Business people should play a major role in the new business support management body. This body will evaluate, endorse and manage the business support products, according to government criteria on the proper expenditure of public money.</p>	<p>The formal government response to its consultation on ‘simplifying business support’ in December 2007 acknowledges this point. The role and membership of a management body for the business support portfolio will be defined by April 2009, at which stage it is anticipated that it will be up and running.</p>
<p>8.2 – The Director of Innovation in DIUS should be tasked each autumn to produce an Innovation Report on the innovation activities of DIUS, including the Technology Strategy Board, other government departments and the Regional Development Agencies.</p>	<p>This first Annual Innovation Report responds directly to this recommendation.</p>

RECOMMENDATION	PROGRESS
<p>8.3 – Innovation should be made a core part of the mission statement of each government department, and embedded in Departmental Strategic Objectives. Progress in stimulating innovation should be measured in the annual Innovation Report produced by the DIUS.</p>	<p>This first Annual Innovation Report describes progress on policies to help embed an innovation culture in the public sector, including within Government Departments, and on developing metrics for public sector innovation. For example, the Whitehall Innovation Group will consider how the self-assessment of Departmental innovation capability published in this AIR can be developed. The incorporation of innovation into Departmental missions and DSOs will be considered as an element of this.</p>
<p>8.4 – A more robust mechanism should be put in place to identify and protect departmental R&D budgets. Chief Scientific Advisors should work closely with their departments and HM Treasury spending teams early on in the Spending Review process to agree amounts and priorities for R&D spend. Once this has been agreed, a department should consult with the Government CSA and HM Treasury if it wishes to reduce its level of spend, and the latter should expect to see sound justification before agreeing to any reduction.</p>	<p>The approach to addressing this recommendation will be set out in the Government’s forthcoming strategy for science in Government. There will also be a review of departments’ R&D budgets and plans by the new Cabinet Committee for Science and Innovation.</p>
<p>8.5 – The Chief Scientific Advisors’ Committee (CSAC) should identify cross-cutting areas of research on an annual basis and appoint a Chief Scientific Advisor to each of the priorities to co-ordinate resources and funding across relevant departments.</p>	<p>New GCSA has established a CSAC Issues Group (CIG), which has identified several priority issues and established sub-groups of departmental CSAs to address those challenges. This will be a continuous development. CIG meets quarterly.</p>
<p>8.6 – Other government departments should follow the MoD’s example in focusing some of their R&D spend on encouraging innovation in the companies with which they interact.</p>	<p>This recommendation is largely being addressed within the reformed Small Business Research Initiative (SBRI) being led by the Technology Strategy Board. Pilot competitions have been launched by MoD aiming to reduce the dependence of the military on fossil fuel based energy sources (August) and by DH on reducing health care infections (October)</p>

RECOMMENDATION	PROGRESS
<p>8.7 – Government should urgently press ahead with the Transforming Government Procurement agenda to improve procurement capability. This would require the OGC to develop an “outcome based approach to procurement” and to ensure that innovation procurement is placed at the heart of government purchasing decisions. It would also place a responsibility on the OGC to raise the level of capability of government purchasing.</p>	<p>The Procurement Capability Review programme has been developed to help departments drive up procurement capability in order to meet the standards required to deliver Transforming Government Procurement. The review takes a strategic look at departments capability based on a robust model containing a standards framework against which departments are assessed. The model does cover the department’s approach towards innovation – in particular whether they have a robust sourcing strategy, their approach to making and managing markets, and the alignment between procurement and the broader policy goals of the UK Government. Published alongside this Report is guidance for preparing Innovation Procurement Plans (IPP) which all Departments have committed to in their commercial strategies during 2008/9; DIUS’ own IPP is also being published alongside this Report</p>
<p>8.8 – Government departments should consider using forward procurement programmes like the Grand Challenge and the Competition of Ideas to stimulate innovation. Early discussions with some government departments have indicated that there is an appetite to do this.</p>	<p>A consultant has been engaged to help DIUS design and launch the first phase of a forward commitment procurement competition. The competition is on schedule to be launched at the end of November. This programme is designed to create a portfolio of FCP projects which will be meaningful in themselves and capable of use as exemplars, and a base of public sector leaders and professionals who understand and can promote FCP approaches to sustainability and innovation.</p>

RECOMMENDATION	PROGRESS
<p>8.8 – The SBRI should be reformed, adopting the following principles of the US SBRI scheme: departments should focus on active engagement with innovative businesses and act as intelligent customers to fulfil their departmental objectives; departments should specify up front, in simple and standard format, and update on a fixed and regular basis, the technological areas in which they would like to see projects in a simple and standard format; SBRI contracts should adopt a two phase structure, tendering a second, larger award after successful completion of a smaller, early-stage development so as to minimise risk associated with innovation; SBRI awards must take the form of contracts, not equity loans or grants – this will ensure that departmental objectives are clearly identified and met and will enable the award of an SBRI contract to act as a “seal of approval” reassuring future investors and customers of the firm’s value; SMEs should retain the intellectual property associated with any new technology, boosting incentives for high-quality small business bids for SBRI awards; and to maximise the SBRI’s effect, award availability should be restricted to products and services meeting HM Treasury’s R&D tax credit criteria. This would exclude humanities and social science research and consultancy; for which the scheme was never intended.</p>	<p>The reformed SBRI programme (see above) is responding to these points</p>

RECOMMENDATION	PROGRESS
<p>8.9 – In order to ensure this time that the new SBRI scheme achieves its objectives this Review recommends that a central administrative role be given to the Technology Strategy Board. Government departments should be required twice yearly to notify the Technology Strategy Board in a standard form of those technological areas where they would like to support projects. The Technology Strategy Board would then be responsible for publishing twice a year, at fixed dates, a list of those projects notified to it by government departments so that SMEs are readily able to find them. The awarding contracts should also be administered by the Technology Strategy Board, with assessments of proposals being made jointly with the relevant government departments.</p>	<p>As above</p>
<p>8.10 – SBRI targets for extramural departmental R&D should build up over three years, from 1.5% in the first year to 2% in the second year and 2.5% in the third year.</p>	<p>As above</p>
<p>8.11 – Regulators should review their policies to ensure that the appropriate level of emphasis is given to innovation in their decision-making in the price regulated sectors, to protect the interests of both current and future consumers. We would like consideration to be given to how innovation could be incorporated into their duties.</p>	<p>A DIUS/BRE/BERR project has analysed the ways in which regulation impacts on innovation through a literature review and workshop discussions with the major UK regulators. Initial discussions have been held with the CBI and EEF. This work together with a checklist of issues for consideration by regulators is published alongside this Report for comment.</p>

RECOMMENDATION	PROGRESS
Chapter 9 – The Science and Innovation Strategies of the Regional Development Agencies	
<p>9.1 – The Review is aware of other opportunities which exist to create major science and innovation campuses in the medical and defence fields, and we recommend that these are actively pursued.</p>	<p>MoD established a Centre for Defence Enterprise on 29th May 2008 at the Harwell Science and Innovation Campus. Subject to an imminent Review of the CDE this first pilot activity may be expanded or rolled out at other Campus locations. The HSIC was itself the subject of an announcement on 14th August when the Joint venture between STFC, UKAEA and Goodmans was formed to take forward the development of the HSIC. The Prime Minister announced plans for UK Centre for Medical Research and Innovation (UKCMRI) in December 2007. The Lyons case for development in London has been accepted and land purchased by the four partners, MRC, UCL, Wellcome Trust and Cancer Research UK at a site behind the British Library. We are awaiting further development of the business case before review and a decision on earmarking of funds from the LFCF, expected early 2009.</p>
<p>9.2 – To raise the impact on the economic performance of their regions, RDAs should shift their resources towards activities which support science and innovation, and that, using business support schemes being developed through the Business Support Simplification programme they concentrate their efforts on four main areas: user driven collaborative R&D; knowledge transfer; cluster development; and the start up and growth of new businesses.</p>	<p>The portfolio of business support products was announced on 23 October and covers the four areas in the recommendation. The RDAs are in the process of implementing the delivery of these products and they will be available to business no later than April 2009.</p>

RECOMMENDATION	PROGRESS
<p>9.3 – The RDAs, TSB and SICs will collaborate to support innovation priorities that deliver the national technology strategy and Regional Economic Strategies. Utilising the single pot and European funds, each RDA will earmark investments to match fund TSB programmes on a case-by-case basis or as part of a regional prospectus. This will lead to a total investment from the RDA network of £180m over three years, starting in 2008, subject to appropriate projects being identified that benefit the regions.</p>	<p>This recommendation requires an alignment of funding over the CSR period and completion of this recommendation will be when the investments have been made – March 2011. Work on alignment is progressing well and RDAs have completed detailed prospectuses proposing programmes for alignment. TSB Lead Technologists are meeting RDAs and other key partners to take forward alignment in specific technology areas. An example of this is the recent announcement that the North East RDA has joined Advantage West Midlands in the Low Carbon Vehicles Integrated Delivery Programme, taking the initial public investment for the Innovation Platform to £100 million.</p>
<p>9.4 – RDAs should increase their support for the KTP scheme, and invest in and support the new mini-KTP scheme, which will allow for shorter placements and hence increase the flexibility of the programme.</p>	<p>RDAs are working with the Technology Strategy Board (TSB) to help meet the national KTP commitment, within this they are considering the use of ERDF funding. Advantage West Midlands is working with the TSB in piloting mini-KTPs with a view to wider roll-out across the UK</p>
<p>9.5 – Drawing on the success of the CONNECT scheme in San Diego (see box), RDAs should support services for high-technology entrepreneurs in our world class universities similar to the CONNECT service.</p>	<p>RDAs have reviewed the principles of the CONNECT scheme during their regular best-practice sharing session, alongside existing regional schemes for supporting entrepreneurs. The RDAs will look at CONNECT in more detail with representatives of a CONNECT scheme. The review of CONNECT will include the market failure being addressed, value for money and fit with the BSSP guidelines.</p>

RECOMMENDATION	PROGRESS
<p>9.6 – RDAs should review the strength of their high technology clusters and Science Cities around the world class research universities in their regions. They should then support them with funds as necessary and make certain there are no barriers to their growth.</p>	<p>RDAs review their regional strengths in developing their regional economic strategies and we will look for this to continue as they move towards Integrated Regional Strategies. The RDAs draw on the breadth of innovation research available and their best practice group meets regularly with DIUS where we have facilitated discussions on the Community Innovation Survey, NESTA and The Work Foundation.</p>
<p>9.7 – RDAs should establish proof-of-concept funds making use of nationally agreed specifications and ensure compatibility with the national specification when proof-of-concept funding already exists.</p>	<p>A new specification for proof of Concept will be introduced from March 2009. RDAs will use the specification to provide a tailored package of support for proof of concepts projects. The support will draw together elements of a number of products including, as appropriate, funding, access to facilities, mentoring and help to become investment ready.</p>

RECOMMENDATION	PROGRESS
<p>9.8 – Building on the success of Designing Demand <i>Innovate</i>, and subject to the BSSP, RDAs should consider how to support and expand the scheme to include the provision of specialist design support for Higher Education Institutes within key technology clusters. The new element of the programme could be developed and piloted by the Design Council in partnership with selected RDAs and would provide:</p> <ul style="list-style-type: none"> • design training for technology transfer staff and intermediaries, delivered by a national training institute for technology transfer such as PRAXIS; • quality assured Design Associates to advise selected clients on issues such as idea generation, product development, user research, testing and prototyping; and 	<p>The Design Council is leading on the implementation of this recommendation. Good progress has been made in raising awareness amongst Higher Education Institutes about how design could support their commercialisation activities and the potential benefits of the Designing Demand Innovate programme. The evaluation of the Oxford University pilot is now complete. It shows evidence that the design service has been valuable in developing technology projects at the University’s Technology Transfer Office, ISIS. Participants in the ISIS pilot have reported that as a result of the design support they received, they are successfully integrating design into their work programmes and also more widely in their consultancy work with other TTOs. Building on the pilot, the Design Council is developing a competition for TTOs to “win” access to design advice.</p> <p>The aim of the competition is to further raise awareness amongst HEIs of the value of design to the development of and successful commercialisation of their technology projects. DIUS has agreed to provide funding for the competition, which will be launched early in 2009.</p>
<p>Chapter 10 – Global Collaboration</p>	
<p>10.1 – Research Councils UK (RCUK) should streamline its presence overseas into single points of contact in key countries.</p>	<p>RCUK has established offices in China (Oct 2007), the US (Nov 2007) and India (Jan 2008).</p>

RECOMMENDATION	PROGRESS
<p>10.2 – The Royal Society, with support from other National Academies, and Research Councils, should establish a new fellowship scheme to attract the best researchers to the UK from overseas and should run an alumni scheme.</p>	<p>The three National Academies and RCUK have in partnership developed the Newton International Fellowship Scheme, with an associated alumni engagement programme. The new scheme was launched on 4 June. The first call for proposals attracted over 700 applications, with strong responses from China, the USA and India in particular. 20% of applications are in engineering, 25% in the arts, humanities and social sciences, and 55% in the natural and physical sciences. Applications are being assessed and the first Newton Fellowships will start in 2009. The second call opened on 15 October and will run for 3 months.</p>
<p>10.3 – The Technology Strategy Board should develop an international strategy that considers support for the European EUREKA programme and Framework Programme 7 initiatives.</p>	<p>The Technology Strategy Board’s International Strategy was outlined in its strategy, ‘Connect and Catalyse’, launched in May. The details of the International Strategy will be published early in 2009.</p>
<p>10.4 – The Science Bridges scheme should be extended to China and India, and to other key high-tech innovative countries.</p>	<p>The Science Bridges scheme has been extended to India and China as agreed as part of PM’s summits in January 2008.</p>
<p>10.5 – The Director General of Science and Innovation in DIUS should work with the US science funding bodies to solve the double jeopardy issue for scientists.</p>	<p>This is continuing to be taken forward by Research Councils. There are currently nine joint programmes between Research Councils and NSF and five additional joint programmes are planned. NSF is due to publish a revised statement on international funding (which will address double jeopardy) imminently.</p>
<p>10.6 – A campaign of information should be launched by DIUS through embassies abroad to highlight the UK’s role as a global leader in science and innovation.</p>	<p>Promotional material will be revised and re-printed following the move of science policy and the Science and Innovation Network from the FCO to DIUS with web pages on the DIUS website due to be live in December 2008.</p>

NOTES ON DEPARTMENTAL FINANCIAL DATA

Departmental expenditure and procurement data

Primary Data Source: HMT 2008, *Public Expenditure Statistical Analyses 2008*, TSO

http://www.hm-treasury.gov.uk/pespub_pes08.htm

Departmental expenditure

Departmental expenditure is calculated by adding:
Resource and Net Capital Departmental Expenditure Limit (DEL)
+ Resource and Capital Annual Managed Expenditure (AME).

The values are in real terms. The deflators used are detailed in Appendix F of the HMT report, with 2006/7 as the baseline.

Departmental procurement

Procurement expenditure is calculated from current procurement expenditure + gross expenditure on fixed assets. The figures in the HMT source tables are cash values and have been converted to real terms using the same deflators as for the Departmental allocations above.

Notes

- 2007/8 figures – estimated outturn
- 2008/9 figures – planned
- Departmental expenditure data source: HMT 2008 Public expenditure statistical analyses, real terms, tables 1.13, 1.6 and 1.11.
- Departmental expenditure figures comprise Departmental resource and net capital DEL, Departmental resource and capital AME.
- Real term figures are the cash figures adjusted to 2006/7 price levels using GDP deflators. Deflators are calculated using data from Office for National Statistics (March 2008) as detailed in the data source.
- Departmental Procurement: *HMT 2008 Public Expenditure Statistical Analyses*, real terms, table 2, 2.2 & 2.3.
- FCO: procurement figures have been provided by FCO from their annual report.
- Chancellor's Departments comprise HM Treasury, National Savings and Investments, Government Actuary's Department, HM Revenue and Customs, National Investment and Loans Office, Royal Mint, Office of Government Commerce, Crown Estate Office.

R&D Expenditure

Data source: ONS: (2008) SET Statistics – Science, Engineering and Technology indicators
<http://www.berr.gov.uk/dius/science/science-funding/set-stats/index.html>

These data have been compiled from a variety of sources and have been categorised according to Frascati definitions to allow comparability with other countries. It is recognised that this treatment can result in an overestimate of Departmental R&D spend.

Notes

- R&D expenditure from SET Statistics, Table 3.2 Net Government expenditure on R&D by departments in real terms.
<http://www.berr.gov.uk/dius/science/science-funding/set-stats/index.html>
- DCSF figures include data from DFES (prior to machinery of Government changes).
- BERR figures use data for DTI (excluding Office of Science and Innovation budget and Launch Investment).
- DIUS figures use data for Office of Science and Technology (prior to machinery of Government changes)

Small Business Research Initiative (SBRI)

SBRI data are collated annually by DIUS using data supplied from Government Departments.

They are published on the SBRI website and available via the Parliamentary Library.

<http://www.berr.gov.uk/dius/innovation/sbri/index.html>

The data have been corrected from cash values to real terms using the deflators above.

Notes

- Small Business Research Initiative <http://www.berr.gov.uk/dius/innovation/sbri/index.html>.
- Baseline R&D budget (£ million) available under SBRI is the R&D budget potentially available (but not ring-fenced) to SMEs under the SBRI programme.
- Value (£ million) of R&D contracts won by SMEs under SBRI - the value of R&D contracts actually won by SMEs under the SBRI programme.
- DCSF figures presented are from DfES pre-machinery of Government changes.

- DCSF is not able to supply actual expenditure for all R&D as development spend is not recorded as a separate element. SME figures are based on research budget spend only and do not accurately represent the Department's true SME spend.
- The Home Office does not have a baseline budget for research and has provided estimated spend figures. However, the estimate supplied includes all main items of R&D expenditure and provides a reliable indication. The Home Office also does not have a baseline figure for SBRI and its use of the "total extramural R&D spend" figure in this column represents the total potential funding available to SBRI.
- MoD R&D expenditure for the SBRI survey is compiled using the defence contracts expenditure database from which data is available at company level. Although this database captures the majority of MoD expenditure, there are items that cannot be captured from this source and which are not available at company level. Work that an SME obtains via prime contracts will also not show in this analysis. The figures provided do, however, capture the bulk of all R&D coded expenditure and the relatively small missing element is unlikely to have any adverse impact on the recorded percentage spend with SMEs. There are some R&D coded payments within the contracts database for which the individual contractor name is not available. An amount of approximately £90 million in relation to this was included in the 2005/6 total SME spend figure. For 2006/7 and future years this expenditure is excluded from SME total spend as the SME status cannot be determined.
- DH figures represent the total value of contracts awarded. Data is derived from the National Research Register. The proposed baseline for SBRI excludes the Health Technology Devices programme as state aid rules are applicable.

GLOSSARY

AIR	Annual Innovation Report
AWM	Advantage West Midlands
BERR	Department of Business, Enterprise and Regulatory Reform
BSSP	Business Support Simplification Programme
CIO	Chief Information Officer
CEMEP	Commission on Environmental Markets and Economic Performance
CO	Cabinet Office
CRUK	Cancer Research UK
CSA	Chief Scientific Adviser
CSR	Comprehensive Spending Review
DA	Devolved Administration
DCLG	Department of Communities and Local Government
DCMS	Department of Culture, Media and Sport
DCSF	Department for Children Schools and Families
DECC	Department of Energy and Climate Change
Defra	Department for Environment Food and Rural Affairs
DfID	Department for International Development

DfT	Department for Transport
DH	Department of Health
DIUS	Department for Innovation Universities and Skills
DSO	Departmental Strategic Objective
DWP	Department of Work and Pensions
EEDA	East of England Development Agency
EIS	Enterprise Investment Scheme
<i>emda</i>	East Midlands Development Agency
EPSRC	Engineering and Physical Sciences Research Council
EU	European Union
FCO	Foreign and Commonwealth Office
FCP	Forward Commitment Procurement
FDI	Foreign Direct Investment
FE	Further Education
FP7	Seventh Framework Programme for Research and Technological Development
FTSE	Financial Times Stock Exchange
GO-Science	Government Office for Science

GVA	Gross Value Added
HEFCE	Higher Education Funding Council for England
HEI	Higher Education Institution
HEIF	Higher Education Innovation Fund
HMG-RISC	Her Majesty's Government
HMRC	HM Revenue and Customs
HMT	Her Majesty's Treasury
HO	Home Office
ICT	Information and communication technology
IP	Intellectual Property
JISC	Joint Information Systems Committee
KTN	Knowledge Transfer Network
KTP	Knowledge Transfer Partnership
LDA	London Development Agency
LHC	Large Hadron Collider
MAA	Multi Area Agreement
MBO/MBI	Management Buy Out/Buy In
MIT	Massachusetts Institute of Technology
MoD	Ministry of Defence
MoJ	Ministry of Justics
MRC	Medical Research Council

MRSA	Methicillin Resistant <i>Staphylococcus aureus</i>
NCGE	National Council for Graduate Entrepreneurship
NDA	Nuclear Decommissioning Authority
NERC	Natural Environment Research Council
NESTA	National Endowment for Science Technology and the Arts
NHS	National Health Service
NIC	National Innovation Centre
NMS	National Measurement System
NPL	National Physical Laboratory
NSA	National Skills Academy
NWDA	Northwest Development Agency
OECD	Organisation of Economic Cooperation and Development
OGC	Office of Government Commerce
ONE	One Northeast
P&G	Proctor and Gamble
PtI	Power to Innovate
PSA	Public Service Agreement
PSRE	Public Sector Research Establishment
R&D	Research and Development
RAL	Rutherford Appleton Laboratory
RCUK	Research Councils UK

RDA	Regional Development Agency
SABIP	Standing Advisory Board on IP
SEEDA	South East England Development Agency
SET	Science Engineering and Technology
SME	Small and Medium Enterprise
STEM	science technology, engineering and mathematics
STFC	Science and Technology Facilities Council
SWRDA	South West Regional Development Agency
TSB	Technology Strategy Board
TtG	Train to Gain
UEN	University Enterprise Network
UK-IPO	UK Intellectual Property Office
UCL	University College London
UKTI	UK Trade and Investment
UNCTAD	United Nations Conference on Trade and Development
VAT	Value Added Tax
VC	Venture Capital
YF	Yorkshire Forward
YIE	Young Innovative Entrepreneur