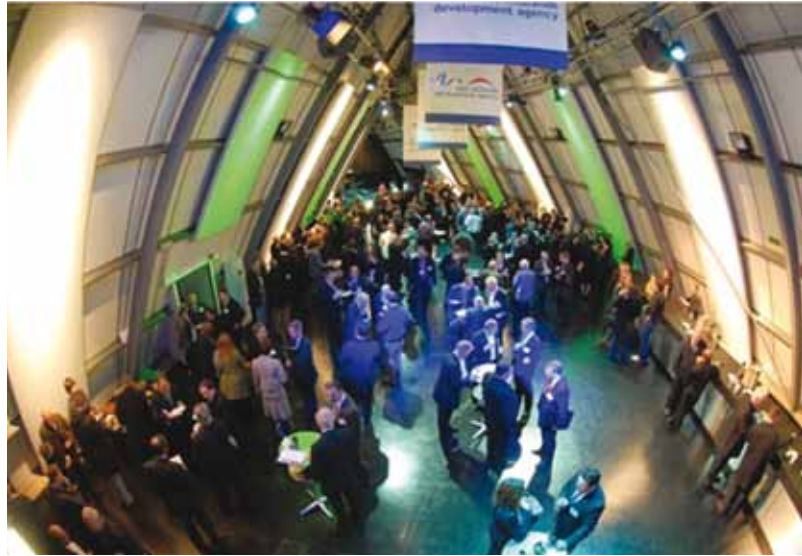


The UK Strategic Investment Fund

Interim Report





Contents

Foreword	3
1. Supporting UK innovation and growth	4
2. A globalised British economy	6
3. The approach to investment	8
4. Investing across the UK	10
5. Next steps	11
6. Where investments are being made	12
6.1. Advanced Manufacturing	12
6.2. Low Carbon Energy	16
6.3. Ultra-Low Carbon Vehicles	18
6.4. Life Sciences	19
6.5. Digital Britain	20
6.6. UK Innovation Investment Fund	21
6.7. UKTI	22
Annex A – List of publications with SIF announcements	24



Foreword



The £750 million Strategic Investment Fund was created at Budget 2009 to invest in the UK's basic capabilities for industrial innovation, job creation and growth in a highly competitive global economy.

In the six months since its creation, the Strategic Investment Fund has committed to investments in a range of emerging industrial strengths in Britain, including low carbon vehicles, wind and wave power and renewable chemicals. It is providing seed capital for a growth fund for high-tech companies and investing in the swift rollout of high speed broadband in the UK.

The Strategic Investment Fund is not about national ownership of companies or direction of industries. Instead it has identified areas where targeted intervention by government can unlock viable technological development or help get good ideas off the drawing board. It is an important part of our commitment to actively preparing Britain's economy for a balanced and sustainable recovery.

This report sets out the principles behind the Strategic Investment Fund and details of the investments that it has committed to in 2009.

Peter Mandelson



Supporting UK innovation and growth

In Budget 2009 the UK government established the Strategic Investment Fund (SIF) to support a range of targeted investments across the UK economy intended to strengthen its capacity for innovation, job creation and growth.

The Strategic Investment Fund is a two year time-limited fund set at £750 million. Since its creation it has made a wide range of commitments to a diverse range of projects. These include support for low carbon technologies, advanced manufacturing, British digital infrastructure and UK export promotion.

While it is not a fund that has been open for bidding from organisations or businesses to fund their specific projects, officials from the Department for Business, Innovation and Skills have been working with other government departments and agencies, business, the Technology Strategy Board, the Regional Development Agencies and Scotland, Wales and Northern Ireland to identify suitable investments. In many cases, SIF projects have taken the form of joint investments with some of these key stakeholders, most notably the low carbon projects which have been joint investments with the Department of Energy and Climate Change. This report sets out in detail the projects and technology areas that have already benefited from SIF support. These include:

- A range of new advanced manufacturing technologies, including printable electronics and industrial biotechnology;
- A range of low carbon energy technologies, including funding for some of the world's most advanced facilities for testing new wave and tidal energy technologies;
- The world's largest demonstrator programme of its type for ultra-low carbon vehicles;

- A new growth capital fund for high-tech companies – the Innovation Investment Fund;
- Investment in the swift rollout of high speed broadband to almost every home and business in Britain within a few years;
- Strengthening our support to UK exporters, especially in the emerging economies.



A globalised British economy

The UK economy that emerges from the current downturn will continue to be defined by globalisation, which will create huge opportunities for British businesses, although it will also bring new competitive pressures.

Increased competitive pressure from emerging economies mean that the comparative advantages of UK firms will continue to be focused in high-value goods and services based on sophisticated knowledge and skills. The fragmentation of global supply chains means that British firms are likely to increasingly produce and trade in intermediate goods rather than finished consumer products.

They will also be responding to a number of broad global trends:

- **Rising global incomes**, especially in the emerging economies, will drive consumer demand for sophisticated, higher value-added products;
- **Increased demand for environmental goods and services**, both a general function of rising incomes and a general global shift. This will be reinforced by international agreements to reduce carbon emissions which will drive up demand for more low carbon goods and services;
- **New technologies** will drive the development of new products. The strength of global demand for products which offer new functionality, entertainment or luxury to both consumers and businesses will remain considerable, even as the life cycles for these products shorten;
- **Ageing populations** will also impact on consumer demand. Over the next twenty years the ratio of elderly to the working age population is expected to increase by 40-60% in the advanced economies. In contrast, emerging economies will see an increase in the number of people under 25.

An objective assessment of the UK’s core strengths in this global economy suggests that the UK has a comparative advantage in many services sectors, in particular high value added professional services such as financial services, computer & information services and other business services, but also strengths in manufacturing sectors such as medical and pharmaceutical products (Figure 1).

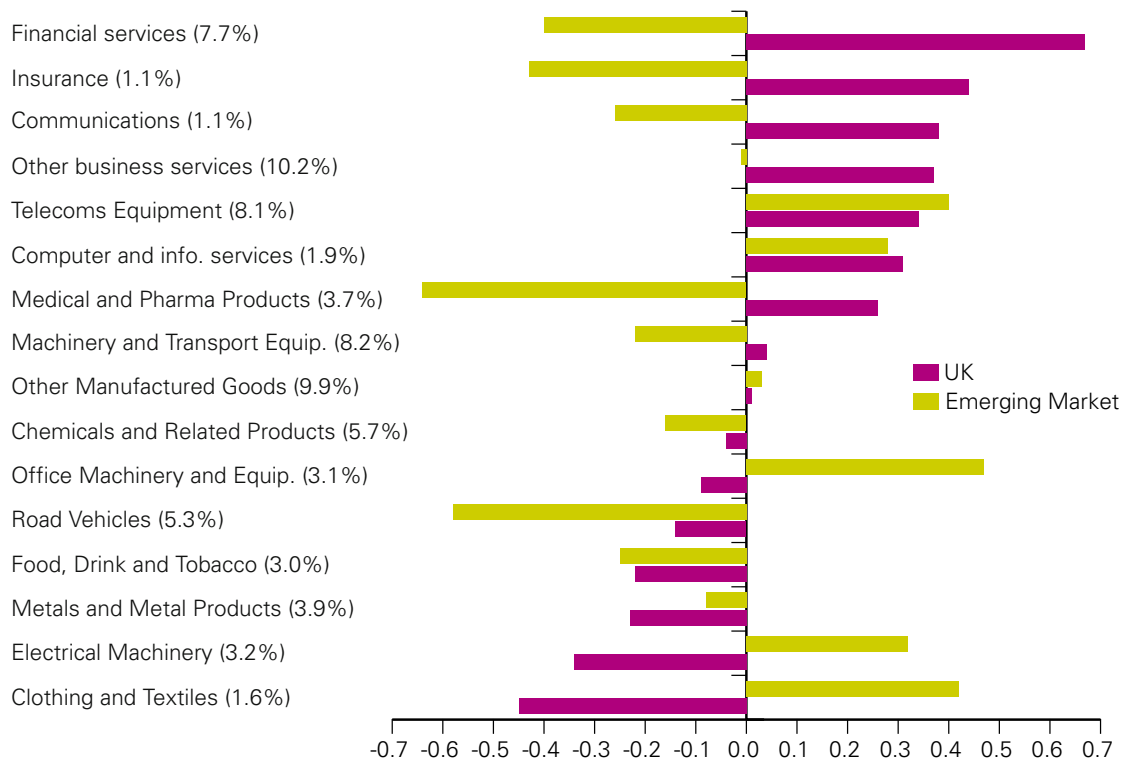


Figure 1: UK and Emerging Market Revealed Comparative Advantage
 Source: BIS Calculations based on UNCOMTRADE and IMF Balance of Payments data, 2006

Investments made by the Strategic Investment Fund reflect the opportunities arising from the wider global trends and aim to build on the UK’s core strengths.



3

The approach to investment

The Strategic Investment Fund is administered on the basis of a number of core principles:

- **The government is not substituting itself for the market.** Investments do not support projects that are ultimately unsustainable in the long term in an open competitive market. They are targeted at specific market failures that are preventing otherwise viable developments. Where possible, the Strategic Investment Fund will reinforce business or expert-led bodies such as the Technology Strategy Board in determining what is commercially viable.
- **The basic criteria for investments are the opportunity that exists in a particular area and the impact that government intervention would have.** Investments are not a reflection of a sector's relative importance to the UK economy, but a reflection of where government investment can have the greatest benefit.
- **The Strategic Investment Fund targets a diverse portfolio of investments across a range of sectors** (Figure 2) but also geographically, to ensure widespread benefits across the economy.

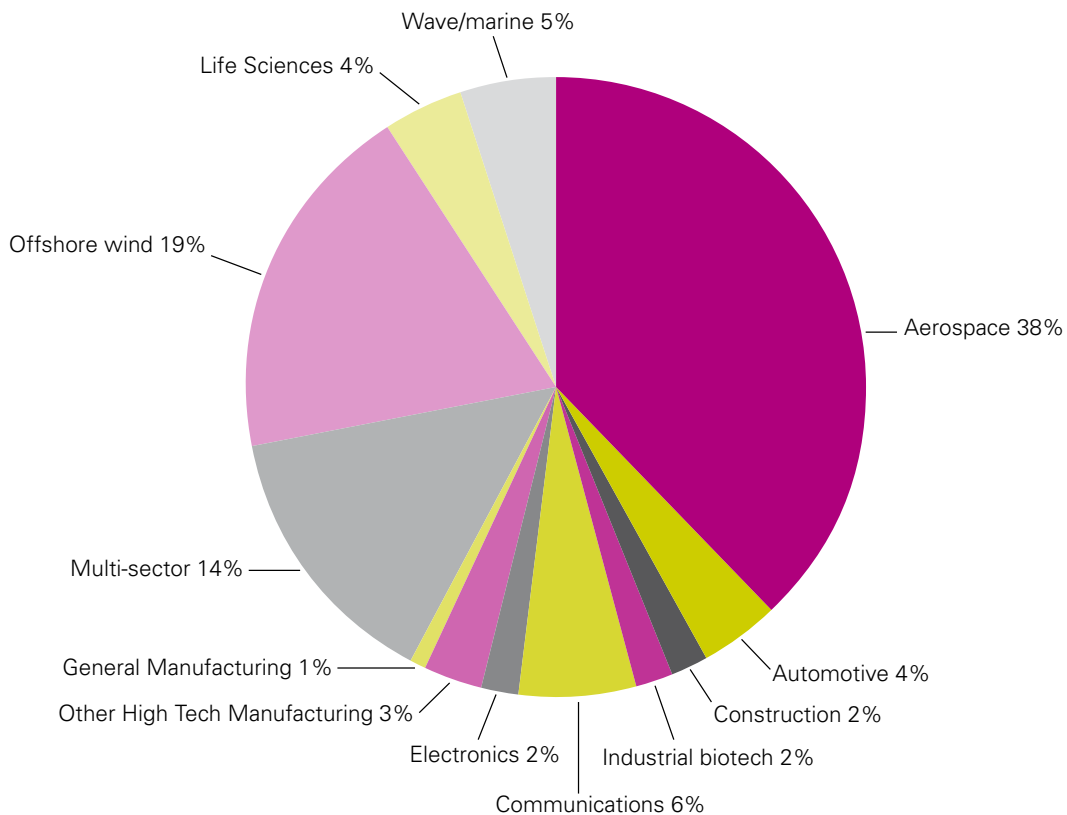


Figure 2: SIF investment portfolio, by sector¹

Source: BIS

- **Investments target measures that are non-sector and non-product specific as well as sector specific.** For example, SIF funding for the Technology Strategy Board enables it to invest in pre-commercial technologies across a wide range of sectors and the UK Innovation Investment Fund, managed by an experienced Fund of Funds Manager, will provide venture capital for a diverse range of high-tech firms. The SIF has provided support for a number of national centres for demonstration and research for pre-commercial technologies.
- **All investments are consistent with Treasury Green Book principles** and will be monitored carefully to determine their effectiveness. While these investments will primarily be made over 2009/10 and 2010/11, the full impact of them will last into future years, with the aim of lasting impacts on the UK economy in recovery.

¹ Note these are not SIC classifications of sectors, but a high level breakdown of SIF spend so far.



4

Investing across the UK

Each investment is part of the SIF portfolio designed to have benefits across the UK economy, ranging from the UK Innovation Investment Fund to sectoral investments to support specific projects. Although some projects are physically located in particular places, they are designed to provide support to businesses across the UK and will have wide-reaching benefits to supply chains across the whole of the UK.

A significant amount of the funding is being invested jointly with key delivery partners. For example, the Technology Strategy Board has an important role in stimulating innovation in those areas which offer the greatest scope for boosting UK productivity and growth. Funding across its portfolio of programmes will be allocated on the basis of UK capability, market opportunity, impact and leverage. These programmes are well aligned to delivering the vision set out in the detailed policy statements that government has made, for example in Life Sciences, Digital Britain and the UK Low Carbon Transition Plan.



5

Next steps

This is an interim report and not all of the Strategic Investment Fund has been allocated to projects. BIS continues to work on a number of proposals for investing these funds and will make further announcements in the near future.

BIS officials are working with partners, including in other government departments, the Technology Strategy Board, the private sector, Regional Development Agencies and in Scotland, Wales and Northern Ireland, to ensure successful delivery.



6

Where investments are being made

The rest of this document sets out the specific projects and sectors that are being supported by the SIF of the £750 million that has been allocated so far. Annex A lists the documents where these announcements have been made in recent months.

6.1 Advanced Manufacturing

In July, a £150 million package of targeted investments, with major new measures to help Britain's advanced manufacturing base create competitive advantage for future growth was announced². These measures are to help UK manufacturers seize the opportunities provided by emerging technologies.

Advanced manufacturing describes businesses which use a high level of design or scientific skills to produce technologically complex products and processes, usually of high value. The measures taken by the government aim to expand access to information, encourage the take-up of new technologies and address specific challenges faced by different sectors within advanced manufacturing. The SIF is providing support to a number of projects within this:

Tim Bradshaw, the CBI's Head of Enterprise and Innovation, said:

"It is good the government is recognising the value of advanced manufacturing, and we hope this package of measures will spur the development of the UK's hi-tech base... Investing in these technologies now will give the UK a competitive edge, and create an important market for high value exports in the future."

² <http://www.berr.gov.uk/files/file52374.pdf>

- Investment of £45 million, through the Technology Strategy Board collaborative R&D delivery programme, to support research and technology critical to the development of low carbon aircraft engine technology. The Technology Strategy Board is considering a number of projects, to be led by Rolls-Royce, under the heading of SILOET (strategic investment in low carbon engine technology);

TUC General Secretary, Brendan Barber said:

'High value manufacturing should be at heart of plans to get the UK out of recession. Measures announced recently, such as the £45 million investment in low carbon technology at Rolls-Royce, will create jobs and boost growth across the country.'

- A £12 million expansion of the Printable Electronics Centre. Printable electronics focus on cutting edge processes that allow circuits to be printed into flexible surfaces, unlike traditional silicon chips. The centre was formally opened in March 2009 focusing on display technology. The expansion, supporting growth in low carbon products, will enable it to offer capability in the manufacturing of ultra-efficient lighting and photovoltaics and contribute to the low carbon agenda. Over the next four years, the facility will focus on exciting new display technologies, stimulating the creation of up to 250 jobs in the North East and up to 1,500 jobs nationally by 2014;
- An additional £5 million for collaborative R&D as part of the Technology Strategy Board's High Value Manufacturing competition. This is in addition to the £24 million invested earlier this year in projects that have the potential to bring about a step change in the competitiveness of participating companies by making improvements in the range of 25-50% relative to current performance on, for example, overall manufacturing costs; product performance, durability and reliability; or, time to market. The scope of this funding could lead to a range of improvements for example, in resource efficiency and sustainable processes, design and innovation processes, or collaboration within value chains.
- An £8 million expansion of the highly successful Manufacturing Advisory Service over 2009/10 and 2010/11. £4 million will enable a wider range of businesses to improve efficiency and increase orders. A further £4 million will provide more specialist advice to manufacturers on competing for low carbon market opportunities.

- £2 million investment (joint with the South West RDA with a £0.5 million contribution from the SIF) to support the development of a Centre of Excellence for Silicon Design. Silicon electronics is the design, development and manufacture of extremely small electronic devices on wafers of single-crystal silicon that consume very little electric power. The investment will support innovative activity as well as skills development and networking in the sector.
- £12 million of support for an Industrial Biotechnology demonstrator and a £2.5 million fund (via the Technology Strategy Board) to enable small and medium sized companies to access demonstration facilities. These investments reflect the importance of industrial biotechnology in advancing our capabilities in the chemicals and chemistry-using sectors. Regional Development Agency One North East has earmarked up to £1.5 million to help strategic partners in the region to access the facilities. This funding will help many sectors of the economy access the opportunities industrial biotechnology presents.

Dirk Carrez, EuropaBio’s Director, Industrial Biotechnology said:

*“A competitive European Knowledge-based Bioeconomy can only be realised when the European Union **and** the member states put a coherent policy framework in place. What has been done in the UK will motivate industry to continue investment in this emerging and innovative industrial sector”.*

Box A: Industrial Biotechnology Demonstrator

The £12 million investment is building on existing facilities in the North East which have already provided support to businesses from across the UK since 2007. Industrial biotechnology (IB) is not a true sector, as it is technology based and as such that technology can be applied across sectors. The UK has significant strengths in IB development, with key operations spread across the UK. Demand for the new facility indicates that it will benefit the industry by providing access to new facilities and expertise to IB companies as well as companies from the chemicals and chemistry-using sectors. Considerable interest has already been expressed from a range of IB companies as well as companies operating in the chemicals and chemistry-using sectors, located across the whole of the UK. These include pharmaceuticals, personal care, coatings, food processing and beverage companies, as well as businesses operating in other sectors such as energy, automotive and aerospace, and have an aggregate output of some £1150 billion and an added value of over £550 billion.

Box B: Airbus Launch investment

In August 2009, Government announced agreement to provide £340 million of repayable launch investment to Airbus for the development of the A350 XWB.

The support, drawn partially from the SIF, will ensure the UK plays a leading role in the development of the A350 XWB, with world leading capability in wing, landing gear and fuel integration systems technologies.

This Airbus investment builds on HMG's track record of support for earlier Airbus programmes, such as the A380 in which we invested £530 million from 2000. In total, since 1997 HMG has provided around £1.5 billion of support for strategically important civil aerospace programmes and received repayments to date of £1.7 billion.

6.2 Low Carbon Energy

The widescale development and deployment of renewable and low carbon energy is a key aspect of the UK's transition to a low carbon economy. Government has a vital role to play in supporting business in developing these new technologies and incentivising investment in the UK. This is why the SIF and the additional £155 million allocated to DECC in Budget 2009 for the Environmental Transformation Fund, are supporting a range of investments in renewable energy and low carbon technologies. These investments by government will support business in making the most of low carbon opportunities, access to facilities for R&D, and reducing costs of manufacturing in the UK³.

TUC General Secretary, Brendan Barber said:

'By leading the way and not simply leaving the shape of the UK's greener future to the whims of the market, ministers have shown how they intend to help firms and the UK workforce move into the new low carbon era.'

The UK has already demonstrated considerable strengths in some aspects of renewable energy, notably the development and testing of wave and tidal technologies.

This is why a number of investments have been focused on ensuring that research and development facilities for wave and tidal are world-class. The Low Carbon Industrial Strategy announced up to £60 million to help accelerate the development and deployment of wave and tidal energy in the UK.

This new funding will support Wave Hub – a groundbreaking project in the South West of England creating the UK's first offshore facility for the demonstration of wave energy generation devices (see Box C); testing facilities at the New and Renewable Energy Centre (NaREC) and the European Marine Energy Centre (EMEC) and a Marine Renewables Proving Fund to support testing and demonstration of pre-commercial renewable devices. Together these facilities will help accelerate the development and deployment of wave and tidal energy, building capabilities in the UK and cementing our current position as a global leader in this sector.

³ More information on the supporting low carbon economic analysis can be found in BIS Economics Paper No 1, *'Towards a low carbon economy: economic analysis and evidence for a low carbon industrial strategy'*

Tom Delay, Chief Executive of the Carbon Trust said:

'These announcements are very welcome because they significantly reduce investment risk, make some clear choices on UK technology advantage, and tackle some of the key barriers to deployment. But the true test of this new clean tech industrialism is how this new policy framework drives the action and investment needed from business.'

Box C: UK-wide benefits of Wave Hub

There is scope for marine and tidal energy to contribute significantly to the UK's renewable energy mix. This represents a significant economic opportunity for the UK.

These new investments will provide Britain with unparalleled marine energy testing, development and demonstration infrastructure which will reduce the technical and financial risks associated with the development of these technologies.

The investments will bring benefits across the UK, with the manufacture and development of these facilities providing opportunities throughout the supply chain.

For example, the Wave Hub investment in the South West will use suppliers from across the country. One of the first major contracts awarded by South West RDA has been secured by the Littleport based JDR Cable Systems to manufacture the cable and hub assembly for Wave Hub from their new manufacturing facility in Hartlepool. All cables including fibre optics will be subject to rigorous integration testing drawing on JDR's wealth of experience in the design and manufacture of subsea cable and umbilical systems.

In addition, the government is supporting investment in offshore wind, with up to £120 million being made available to support a step change in the development of the offshore wind industry in the UK. This includes funding for new offshore wind manufacturing facilities in the UK; investment in the development of next-generation and near-market offshore wind technologies through large scale demonstration; and examining how to improve the UK's capability in integrated

offshore wind testing. We have launched a second round of the offshore wind demonstration scheme to support the accelerated commercialisation of this technology.

Further to the investments around renewable energy, the Government has also announced provision of up to £15 million support for capital investment to establish a Nuclear Advanced Manufacturing Research Centre. It will be led by a specialist university working with manufacturers from the UK nuclear supply chain on the development and production of high quality nuclear components and to achieve the necessary accreditation, skills and capabilities to supply the civil nuclear market. Rolls-Royce will play a leading role in this work, building on its longstanding capability in nuclear manufacturing.

Further support in the development of the low carbon economy is focusing on reducing energy demand. Funding is being provided to make our domestic and industrial building stock more energy efficient. £10 million is being invested by the Technology Strategy Board in its Low Impact Buildings Innovation Platform. This will result in increased support for the 'Retrofit for the Future' programme which will help develop and demonstrate solutions for refurbishment of entire homes that deliver deep cuts in energy use and carbon emissions.

6.3 Ultra-Low Carbon Vehicles

The development of ultra-low carbon vehicles presents a huge opportunity for the automotive industry and for the UK. There are many technologies which can potentially contribute to decarbonising road transport. While these are in various stages of development and take-up, there is potential for the UK to take a leading role in commercialising, demonstrating and manufacturing these new technologies.

There is a diverse range of technologies being developed to deliver ultra-low carbon vehicles, although plug-in hybrid electric and all-electric vehicles are expected to have a significant presence in mass markets.

The UK Government is already providing support for the development of low carbon, including electric, vehicles, for example through the Technology Strategy Board's Low Carbon Vehicles Innovation Platform. Funding is also being provided to support the deployment of enabling infrastructure needed to support them and also a programme to incentivise consumers to take-up the new vehicles.

With the success of programmes supported so far, the Government has committed additional funding of up to £10 million for accelerated deployment

of electric vehicle charging infrastructure in the UK and up to £14 million to expand support for the Low Carbon Vehicles Innovation Platform, including the demonstrator programme which has now resulted in a combined investment with other funders of £25 million. The programme will see over 340 low emission vehicles trialled on UK roads in the next 6-12 months – the largest trial of its kind in the world.

Paul Everitt, Chief Executive at SMMT said:

“Ultra low carbon vehicles are now mainstream business for the motor industry. The Technology Strategy Board’s competition provides the ideal incentive to develop and demonstrate new technologies in the UK and the beginning of an important new phase in the development of the UK motor industry.”

6.4 Life Sciences

The UK is a world leader in life sciences (pharmaceuticals, medical biotechnology and medical technology). It is a key high-tech industry that will play a vital role in driving future growth and prosperity as well as meeting future challenges such as an ageing population.

Industry has a vital role in the future UK life sciences growth and Government has a key role in supporting industry by shaping the conditions in which UK businesses operate.

This is why the Strategic Investment Fund has provided additional support to the work on Life Sciences (see Box D for more detail) with the Technology Strategy Board investing up to £11 million in life sciences – including contributions towards its £18 million of support for regenerative medicine and scoping work in partnership with the MRC to explore the case for developing a new Innovation Platform in stratified medicine.

In addition, £12 million from the SIF, alongside funding from the East of England Development Agency, the Technology Strategy Board, the Wellcome Trust and GlaxoSmithKline will be invested to create a unique drug development bio-incubator. This will be located in Stevenage, Hertfordshire and, in its first phase, it will be home to around 25 companies with long-term plans to expand the available space 5-fold. It is looking to attract inward investments, spinouts and start ups. It will provide access to specialist equipment and services and knowledge sharing on drug development.

Box D: Life Sciences

The Office for Life Sciences (OLS) was set up in January providing an example of Government's active approach to industrial policy in the life sciences. The Life Sciences Blueprint, published on 14 July 2009 sets out a package of measures to transform the UK environment for life sciences companies. The actions fall in four key areas:

- The NHS as an innovation champion;
- Building a more integrated life sciences industry;
- Access to finance and stimulating investment;
- Marketing the UK life sciences industry overseas.

More details can be found in the Life Sciences Blueprint:
http://www.dius.gov.uk/innovation/business_support/ols

6.5 Digital Britain

The Digital Britain Report⁴ (published June 2009) sets out the Government's vision for:

- Ensuring the country has the modern communications infrastructure we need;
- Enabling Britain to be a global centre for creative industries in the digital age;
- Ensuring people have the capabilities and skills to flourish in the digital economy; and,
- Making sure we modernise and improve our own service to the taxpayer through use of digital technology.

The Digital Britain Report sets out a comprehensive list of actions in pursuit of these goals.

The SIF is funding some key elements of this, contributing to delivering universal availability of broadband (with joint funding of around £200 million

⁴ http://www.culture.gov.uk/what_we_do/broadcasting/6216.aspx

from the SIF and money allocated to the help scheme for Digital Switchover in television) and work on digital test beds. The Universal broadband commitment is intended to ensure areas which have not benefitted from private investment in broadband networks are provided with a good level of service. This will be added to by private sector investment, levered through competitive contract (ie subsidy offered on a 'reverse auction' basis); and contribution from other public sector organisations in the Nations and Regions. In addition, the Technology Strategy Board will invest up to £10 million to expand work in support of the Digital Britain agenda with a particular focus on Digital Test Beds and improving the competitiveness of creative content businesses.

6.6 UK Innovation Investment Fund

The Government is also addressing problems faced by small, high growth technology-based companies in accessing equity-finance through development of a commercial Fund of Funds. This will be set up with a cornerstone investment of £150 million from government (with contributions from the SIF, the Department of Energy and Climate Change and the Department of Health). The Fund will be managed by an experienced Fund of Funds Manager with a proven track record in technology investing. Investments in underlying technology funds will ultimately be a commercial decision for the Fund of Funds manager and the government investment will leverage in funds from the private sector with the aim of creating a £1 billion fund over 10 years.

6.7 UKTI

Reasserting the UK's worldwide business reputation is central to economic recovery. UKTI's strategy is to market the economic strengths of the UK and the innovation, creativity and expertise of Britain in high value sectors. This attracts potential investors to the UK and helps our exporters sell themselves more effectively as international partners of choice.

The value of this strategy was confirmed in the 2009 Budget, with £10 million of the Strategic Investment Fund being channelled into UKTI, to be spent on events to promote UK sector expertise both in the UK and abroad. The funds are to help UK businesses better showcase their strengths to overseas customers and markets. All projects must meet the following criteria:

- High value and visibility to UK business;
- Early impact with strong legacy which the private sector can run with;
- Directly related to the *New Industry, New Jobs* strategy;
- Leverage multiplying effects from partners to reach the widest possible audience.

Commitments in 2009/10 include:

- Up to £1 million (with potential to leverage £0.3 million from the private sector) for a major security sector event in February 2010, building on the success model offered by the Farnborough International Air Show;
- A further package of up to £2.8 million for events across the spectrum of NINJ sectors (advanced engineering, creative industries, energy, low carbon, construction, ICT and financial services) kicking off in September 2009 with London Fashion Week and the London Design Festival. Other events include a showcase for the advanced engineering sector in Brazil in October, Technology World in Coventry in November and a consumer electronics show in the USA in January 2010;
- As part of the suite of actions being coordinated by the Office for Life Sciences, an investment of up to £1 million over two years to promote UK life sciences and the NHS at flagship events in the UK and overseas. UKTI will hold a new high-level technology partnering event later in 2010 that will bring life sciences decision-makers to the UK;

- Enhanced showcase marketing of up to £1 million to support the sectors events and extend the Take it to the World campaign which encourages UK businesses to export;
- Other projects being developed include a global network of around 1000 influential voices to promote the reputation of the UK for innovation and creativity, and an enhanced foreign direct investment (FDI) aftercare service in key sectors and across the English regions to nurture opportunities for further FDI;
- Beyond this, in 2010/11, a further package of up to £2.5 million for sector based showcase events.



Annex A – List of publications with SIF announcements

Advanced manufacturing: Building Britain's Future

<http://www.berr.gov.uk/files/file52374.pdf>

UK Low Carbon Industrial Strategy

<http://www.bis.gov.uk/strategy-for-low-carbon-businesses-to-benefit-british-jobs>

The UK Low Carbon Transition Plan

http://www.decc.gov.uk/en/content/cms/publications/lc_trans_plan/lc_trans_plan.aspx

Government response to the Biotechnology IGT

<http://www.berr.gov.uk/files/file51891.pdf>

Digital Britain Report

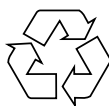
<http://www.culture.gov.uk/images/publications/digitalbritain-finalreport-jun09.pdf>

Building Britain's Future (UK Innovation Investment fund)

http://www.hmg.gov.uk/media/27749/full_document.pdf

Life Sciences Blueprint

<http://www.dius.gov.uk/~media/publications/O/ols-blueprint>



Printed in the UK on recycled paper containing a minimum of 75% post consumer waste
Department for Business, Innovation and Skills. www.bis.gov.uk
First published October 2009. © Crown copyright. 10/09/NP URN 09/1365