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Department

for Business Innovation & Skills

Innovate UK

See more information about this Policy paper

Policy paper

2010 to 2015 government policy: research and development

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This is a copy of a document that stated a policy of the 2010 to 2015 Conservative and Liberal Democrat coalition government. The previous URL of this page was https://www.gov.uk/government/policies/investing-in-research-development-and-innovation. Current policies can be found at the GOV.UK policies list.

Issue

The UK excels in research, development and innovation, and innovative companies are an important contributor to economic growth. We want to use our talent to make the UK the best place in the world to run an innovative business or service.

Actions

We are:

- protecting the £4.6 billion per annum funding for science and research programmes in cash terms during the spending review period
- trying to be smarter and more strategic in how we <u>procure goods</u>, <u>works</u>
 and services to encourage innovation
- helping researchers, developers, innovators and businesses <u>bring</u>
 together specific knowledge, skills, technical resources and financial

capital

- getting <u>business to work more closely with universities and research</u>
 <u>institutions</u> to create more opportunities to commercialise their research
- making taxpayer-funded research accessible and free of charge to use through open access
- making it easier for England's businesses that have ambition and potential to improve and grow through the <u>Business Growth Service</u>
- setting up a pilot scheme to create <u>University Enterprise Zones (UEZ)</u>, aimed at encouraging greater university-business interaction to increase innovation and growth

National Academies

We are also responsible for government funding of important programmes run by the UK's 4 National Academies These include research fellowships that allow the most capable academics to work full-time on research. This in turn helps maintain excellence in the UK research base and secures future economic returns from our investment in science and research.

Royal Society — the UK's national academy of scienceBritish

Academy — promotes the humanities and social sciencesRoyal Academy

of Engineering — the UK's national academy of engineeringAcademy of

Medical Sciences — promotes medical sciences and its translation into

benefits for society

Background

We published the latest <u>science and innovation strategy in December 2014</u>. One of the main aims of the strategy is to support business research and development in areas where the UK excels.

Appendix 1: GrowthAccelerator and the UK Innovation Investment Fund

This was a supporting detail page of the main policy document.

GrowthAccelerator

We are investing nearly £200m in GrowthAccelerator because there is clear evidence that fast-growing small businesses contribute to economic growth.

GrowthAccelerator is a new government-backed programme to help 26,000 of England's most promising businesses achieve high growth – 70% increase in turnover or employment.

This will create £2 billion in additional economic growth and up to 70,000 new jobs.

Between 2009 and 2012 around half of the net growth in employment was generated by just 11,000 businesses, the majority of these being small to medium sized enterprises (SMEs).

The same research also found that 74% of SME employers wanted to grow, but only 33% actually did.

GrowthAccelerator will help these SMEs grow using business experts to help them with:

- securing finance
- commercialising innovation
- strategic business development
- developing leadership and management skills

Businesses will also receive support through:

- specialist coaching for their specific needs
- grants towards the cost of leadership and management training
- fast access to suppliers of support (for example UK Trade and Investment, Innovate UK and the Design Council), and investor support

UK Innovation Investment Fund

We have invested £150 million creating the UK Innovation Investment Fund (UKIIF). We have also raised £180m in private investment, giving the fund a total of £330 million to invest in businesses.

The UKIIF is a venture capital fund that invests in growing small businesses, new businesses working in digital, life sciences, clean technology and advanced manufacturing.

Rather than investing directly in companies, the UKIIF pays into a fund that is used by venture capitalists who have the expertise to invest in business.

Appendix 2: science and research funding

This was a supporting detail page of the main policy document.

Science and research is at the heart of the UK's growth, prosperity and wider wellbeing. Public investment in science and research is an investment in the nation's future, ensuring that the UK has a productive economy, healthy society and contributes to a sustainable world.

Public sector funding for science and research is organised via the Dual Support System into two main channels:

- the Research Councils provide grants for specific projects and programmes
- the higher education funding bodies provide block grant funding to universities

The budget for science and research funding is allocated by BIS. In 2010 we published Funding plans for science and research for 2011/12 to 2014/15.

The science budget is ring-fenced against future pressures during the spending review period.

Research councils

The 7 research councils are the main public investors in fundamental research in the UK covering a wide range of disciplines:

- Arts and Humanities Research Council (AHRC)
- Biotechnology and Biological Sciences Research Council (BBSRC)
- Engineering and Physical Sciences Research Council (EPSRC)
- Economic and Social Research Council (ESRC)
- Medical Research Council (MRC)
- Natural Environment Research Council (NERC)
- Science and Technology Facilities Council (STFC)

As publicly-funded bodies, the research councils are held accountable to Parliament for their investments in research.

Research Councils UK

Launched on 1 May 2002, Research Councils UK (RCUK) is a strategic partnership of the 7 UK Research Councils. RCUK work scientifically, strategically and operationally alongside BIS to champion research, training and innovation in the UK.

UK higher education funding bodies

The 4 higher education funding bodies in the UK provide block grant funding to support the research infrastructure and enable institutions to undertake ground-breaking research of their choosing:

- Higher Education Funding Council for England (HEFCE)
- Higher Education Funding Council for Wales (HEFCW)
- Scottish Funding Council (SFC)
- Department for Employment and Learning, Northern Ireland (DELNI)

UK Space Agency

The <u>UK Space Agency</u> was established as an executive agency of BIS on 1 April 2011. It consolidated funding for space programmes from across government, the Research Councils and non-departmental public bodies, to encourage the continued growth of the UK space sector.



National academies

BIS is also responsible for government funding of key programmes at three of the UK's independent National Academies:

- the Royal Society : the UK's national academy of science
- the <u>British Academy</u> which promotes and champions the humanities and social sciences
- the Royal Academy of Engineering

Haldane principle

Public research funding in the UK operates under the long-standing 'Haldane principle'. Following this principle the government identifies strategic priorities, and the scientific community selects projects within relevant fields on the basis of scientific merit, as assessed by peer review. The government published a statement of the principle alongside the science and research funding allocations in 2010.



Appendix 3: using government purchasing power to stimulate innovation

This was a supporting detail page of the main policy document.

The government spends billion of pounds each year buying goods, works and services. We want to use this huge purchasing power to encourage

companies to develop and advance new technology-based products and services.

Main programmes

Small Business Research Initiative (SBRI)

SBRI is a programme that uses open competitions from government departments and public bodies to find innovative solutions to public sector problems.

Winners are awarded a staged, fully funded research and development contract to develop new commercial products or services. Any organisation can submit an application for a SBRI competition, although they are especially suitable for small to medium sized enterprises (SMEs). You can find out more and sign up for new competition alerts on the innovateuk website .

Forward Commitment Procurement (FCP)

FCP encourages the public sector organisations to engage with suppliers by providing credible information about their future requirements and purchases.

It lowers the risk of failure for companies in their most risky period – between developing a product or service and selling it – this encourages them to be innovative rather than safe.

<u>Innovative Solutions publication</u> and the <u>Forward Commitment</u>

<u>Procurement - Practical Pathways to Buying</u>

and the <u>Forward Commitment</u>

<u>Procurement Know How programme</u> provide more detailed information.

Joint public-private procurement compacts

BIS and the <u>Prince of Wales UK Corporate Leaders Group</u> have launched 3 low carbon procurement compacts. Compacts are partnerships between government and the third sector that commit us to be a customer for low carbon products and services. They are an invitation to suppliers of all sizes, particularly SMEs, to seize the opportunities available

The compacts are in the areas of:

- heat and power from renewable biomethane
- low carbon transport
- zero carbon catering

The initiative aims to significantly reduce UK emissions and demonstrate to other organisations that low carbon solutions can work.

EU innovation procurement projects

The UK is a lead partner in a number of new projects that support networks

of procurers across Europe
around a common theme, such as
healthcare or transport. Public sector procurement is used to create markets
for innovative, more environmentally sustainable products and services
while raising the quality of public services.

Projects include developing demonstration pilots that will test and develop the tools created and enable the spread of best practice.

Appendix 4: making published taxpayer-funded research accessible

This was a supporting detail page of the main policy document.

Free and open access to taxpayer-funded published research helps raise its profile, encourages its sharing, and makes it more likely that business will innovate and possibly commercialise developments using the research.

Open Access

The government wants the results of publicly funded published research to be freely accessible to all as stated in the <u>Innovation and research strategy</u> <u>for growth</u>. Government's policy position on Open Access was outlined in an <u>open letter</u> to the Chair of the working group on Expanding Access to Published Research Findings (the 'Finch Group').

We are now in a transition period working with public research bodies, research-funders and stakeholders to move to Open Access for publicly funded published research findings. There is no new money but public research funders will pay for the move from their existing budgets.

Further information on Open Access developments in the UK can be viewed on the Research Information Network <u>website</u> .

Research Council's Gateway to Research

Gateway to Research was officially launched on 4 December 2013. It is an online portal through which all UK Research Councils' and Innovate UK's funded research can be readily accessed in a consistent, usable format. Its main aim is to supply information to innovative small and medium enterprises (SMEs), but, as a web based information service it is globally available to the general public.

Information includes:

- The who, what, where of research funded by the 7 UK Research Councils and Innovate UK
- The results of Research Council funding with links to existing open access data

Further information on open access

- Open access: economic analysis of alternative options for the UK science and research system which analyses the cost effectiveness of policy options for increasing open access to UK research publications.
- HEFCE statement on open access ____ setting out the UK Funding Councils' commitment to supporting increased public access to research findings.
- Publishers' Association paper to clarify the UK publishers' position on including a summary flow chart of UK open access open access policy.
- Access to Research (A2R) a complementary free service for public library users in the UK launched by the Publishers Licensing Society and its partners on 3 February 2014. A2R enables users in participating UK libraries to access over 1.5 million globally sourced research papers available through free library terminal searching of over 8,400 journals produced by participating publishers.
- Research Sector Transparency Board (RSTB) is now addressing the challenge of Open Access to Research Data.

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For further information please contact Tim Higginson at Tim.Higginson@bis.gsi.gov.uk or Philip Walker at philip.walker@bis.gsi.gov.uk.

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Appendix 5: business and academia working together

This was a supporting detail page of the main policy document.

Business-university collaboration

UK universities received £3.3 billion from working with businesses in 2011, more than double the sum for 2001. We want this to grow by 10% over the next 3 years.

To encourage business and universities to work together:

- we are bringing in legislation to make all researchers say how they will share their results with those who might use it
- we will recruit recently-qualified experts from universities to work on particular projects, providing important knowledge, technology or skills
- Innovate UK ___ will continue to support Collaborative R&D ___ projects bringing together businesses and academic partners on projects to develop new products, processes and services
- Innovate UK has recently launched an <u>Innovation Vouchers</u> scheme to enable small businesses to work with universities and other innovation advisers
- we have commissioned the <u>Wilson review of business-university</u>
 <u>collaboration</u> which has made a number of recommendations on how we can improve collaboration between business, academia and students

Business-Research Council collaboration

To encourage stronger links between academic researchers and business, we will build on the work Research Councils already do to support collaborative research and training, proof-of-concept funding and the exchange of researchers between academia and business.

Examples of how we are doing this include:

- investing £67 million in the <u>Biotechnology and Biological Sciences</u>
 <u>Research Council Doctoral Training Partnership</u> which will give the next generation of researchers an opportunity to take an internship in business
- the Engineering and Physical Sciences Research Council (EPSRC)
 has awarded 4 fellowships to scientists making the move from industry to academia, who will each lead a 5-year £1 million research programme with commercial potential
- 12 university-based <u>EPSRC Centres for Innovative Manufacturing</u> will bring together internationally recognised academic groups to help solve UK industry's problems with manufacturing
- Research Councils are closely involved in <u>Catapult</u>

Appendix 6: bringing together knowledge, skills, technical resources and capital

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This was a supporting detail page of the main policy document.

The government wants to make the UK the best place in the world to run an

innovative business or service. To be successful in this we need to make sure we get value for money when investing in the things that contribute to innovation.

Things we are investing in include:

- world-leading science
- a strong financial sector
- a strong supply of high-level skills
- a strong track record in creating intellectual property

Innovate UK

Innovate UK is the UK's innovation agency. It's our main way of supporting business-led technology innovation and helping businesses of every size to convert ideas into products, technologies and services.

The range of programmes and activities Innovate UK supports include:

- Catapult centres
- Small Business Research Initiative (SBRI)
- Collaborative Research and Development
- Knowledge Transfer Networks (KTNs)
- Knowledge Transfer Partnerships
- Smart
- Launchpad
- Innovation Vouchers

Catapult

Innovate UK is developing a network of 7 <u>Catapult centres</u>, each specialising in a specific technology.

They will allow businesses to access equipment and expertise that would otherwise be out of reach, as well as conduct their own in-house research and development.

Catapults will also help businesses access new funding and will make them aware of new technology and its potential.

The High Value Manufacturing Catapult is open for business and another 6 have been announced.

Small Business Research Initiative (SBRI)

<u>SBRI</u> aims to provide business opportunities for innovative companies whilst solving the needs of government departments.

The programme provides business with public sector contracts to research and develop new products and services that meet the future needs or policy objectives of public bodies.

Collaborative Research and Development

<u>Collaborative research and development</u> brings together businesses and academic partners for projects that can lead to successful new products, processes and services.

Knowledge Transfer Networks (KTNs)

A <u>Knowledge Transfer Network</u> is a single national network of more than 70,000 members working across a variety of technology fields that are important to the UK's continuing economic growth. Members include in business people, academics and researchers, technologists, policymakers, financiers and public sector employees. Together, this community stimulates ideas, helps to solve challenges, accelerates the take-up of new ideas and charts the future in specific technology fields.

They aim to stimulate innovation through sharing information and new opportunities. There are currently 15 KTNs.

Knowledge Transfer Partnerships

<u>Knowledge Transfer Partnerships</u> help companies to get knowledge, technology or skills which they consider to be importance to the business from universities.

The partnership involves the company recruiting a recently qualified person to work on a project to help with technology or skills.

Smart

<u>Smart</u> offers funding to small and medium enterprises to work on research and development projects from which from successful new products, processes and services could be made.

Launchpad

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<u>Launchpad</u> supports the development and supporting clusters of high-tech companies in specific technology areas and geographical locations.

Launchpad provides funding through dedicated competitions for approved research and development projects. This also helps the companies behind the projects attract more investment.

Innovation vouchers

Innovation vouchers ____ are grants that help small businesses work with universities and other advisers to gain new knowledge and help the businesses to innovate, develop and grow.

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Appendix 7: University Enterprise Zones

This was a supporting detail page of the main policy document.

University Enterprise Zones (UEZs) are specific geographical areas where universities and business work together to increase local growth and innovation. Each UEZ will be supported by a partnership between a university, Local Enterprise Partnerships (LEPs) and others.

We are providing £15 million in capital funding between 2014 to 2017 to fund 4 pilot UEZs. For every £1 of government funding, the universities will raise £2 of match funding.

See the Chancellor George Osborne's announcement about the 4 successful bids for pilot UEZs. These sites are:

- Bradford (Leeds City Region)
- Bristol
- Liverpool
- Nottingham

The pilots will be fully evaluated at the end of the scheme.

The zones aim to:

- encourage universities to strengthen their roles as strategic partners in local growth to engage with LEPs, building on existing capabilities and partnerships
- stimulate development of incubator or 'grow-on' space for small businesses in locations that encourage businesses to interact with universities and to innovate

UEZs will have access to business support packages and the specialist facilities and expert knowledge offered by universities. They will also work with <u>UK Trade and Investment (UKTI)</u> to promote inward investment.

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