



Department
for Business
Innovation & Skills

**BRITISH INVENTION: GLOBAL
IMPACT**

The Government's Response to
Sir Andrew Witty's Review of
Universities and Growth

MARCH 2014

“There is nothing in my report that doesn't happen somewhere in Britain... it just doesn't happen everywhere in Britain.”

Sir Andrew Witty, NCUB Annual Lecture, November 2013

Foreword by David Willetts



The UK is a scientific and research superpower. Our universities have an outstanding global reputation for science and research. While the UK represents just 1% of global population, 4% of researchers and 3% of Research & Development (R&D) expenditure, it accounts for 6% of global journal articles, 12% of citations, and 16% of the world's most highly-cited articles.

But other nations are biting at our heels. The UK must keep innovating to stay ahead and remain a destination of choice for business R&D investment and top researchers. So the Government is grateful to Sir Andrew for bringing his experience to this area and recommending ways to improve our performance.

Sir Andrew's review commended the Government's approach to building a whole-of-Government, long-term Industrial Strategy based on sectors and technologies. We share his objectives of identifying the technologies with the greatest potential for the UK and then supporting them – in a way that both joins up better across the funding system and simplifies it for researchers and innovators. So we will work with partners to agree how to make reality of Sir Andrew's Arrow Projects vision. The system has many parts, many of which already work well towards these aims. So it is essential that we engage funding bodies and user groups in deciding what needs to change for the next Parliament.

The review recommended a new advisory capability so that Government, Local Enterprise Partnerships (LEPs) and others can better ensure that local research and innovation proposals are based on sound assessment of comparative advantage, and so that best practice is shared. We will create a new Advisory Hub for Smart Specialisation¹, facilitated by experts and drawing together contributions from bodies with relevant roles.

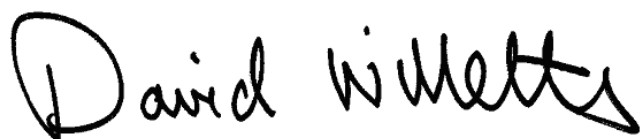
Sir Andrew's review also highlighted the significance of university knowledge exchange funding. Government is committed to a long-term and fully rounded approach to funding

¹ See page 11 for explanation of Smart Specialisation

all forms of knowledge exchange. The Higher Education Funding Council for England (HEFCE) is to look at ways to support engagement with small and medium sized enterprises (SMEs) further. We have also asked HEFCE to consider how best to address universities' need for stability in planning, as highlighted by the Review, bearing in mind the desire to reward up-to-date performance in knowledge exchange.

This response explains how Government is rising to Sir Andrew's challenge through:

- Making a long term commitment to supporting universities in a third mission to deliver economic growth;
- Drawing our national successes through to the local level by strengthening Local Enterprise Partnerships and helping universities to support the SME agenda.
- Taking forward Sir Andrew's Arrow Projects concept to secure the potential of the technologies of the future;
- Aligning Government's delivery partners and connecting the judgements about support for different scientific fields with the priorities that are developed for technologies and sectors in the context of the Government's Industrial Strategy.



David Willetts

Minister for Universities and Science

March 2014

This document addresses the UK economy as a whole and statistics are UK wide, unless stated otherwise. However, many of the issues covered are devolved and therefore the content in related commitments is primarily specific to England. We expect this document to be of interest to the Devolved Administrations owing to our common interest in universities and growth. Where used, the term "Government", however, refers to the UK Government and is not speaking on behalf of the Scottish Government, the Welsh Government and the Northern Ireland Executive.

“Universities already have a key role in the economy. I want to give them an even bigger role to better focus them and in doing so make sure we can pull our national capabilities together so we punch our weight on the international stage.”

Encouraging a British Invention Revolution:

Sir Andrew Witty’s Review of Universities and Growth

Universities contribute to economic and social development. The Government encourages Universities wherever appropriate to make contributing to economic growth a key third mission, alongside teaching and research.

Universities have told us how important funding, such as HEFCE’s Knowledge Exchange (KE) funding through the Higher Education Innovation Fund (HEIF), is to them, and how it enables them to bring the “third mission” into the core of their activities. We hear and understand this and make a long-term commitment to supporting Universities in a third mission to help deliver economic growth. We are committed to a fully rounded approach to funding all forms of knowledge exchange, with all forms of partner, including recurrent funding for KE through HEIF. We have asked HEFCE to consider the issue raised in the Review on providing long-term fixed allocations to universities that allows stability in institutional planning. The counter-balance to this, however, is the need for allocations to be made to reward up to date performance and to support dynamic changes. HEFCE will need to consider the best approach to meet both these considerations.

We already collect useful information that illustrates the third mission, including the sector-wide Higher Education - Business Community Interaction (HE-BCI) survey, which showed that universities in the UK contributed £3.4bn to the economy in 2011/12 through services to businesses and others. We do not wish to add to the regulatory burden on universities and so have asked UUK to convene an annual university stakeholder event, possibly through UUK’s Employability, Business and Industry Network, to consider the successes of HE third mission activity as well as the impediments. Their findings will be presented to Government and we will be responsible for responding.

Universities and SMEs

It is not always easy for businesses, especially SMEs, to engage with universities. Some 90% of all English universities surveyed indicate that they have a single point of entry for businesses; however feedback to Sir Andrew’s “Call for Evidence” suggests that improvement is still needed in the extent, nature and visibility of SME contact points. We will encourage universities to ensure that a single point of entry for SMEs continues to be developed. Business Schools have a very important role to play in increasing the contact between SMEs and Universities, and in sharing their skills and expertise, as Lord Young emphasised in his report “Growing Your Business”², published in May 2013, where he calls Business Schools “Anchor Institutions”. Universities play a key role in the wider business support landscape in local areas, often providing unique expert support to SMEs. We welcome the fact that many universities are already playing an active role in their

² https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/198165/growing-your-business-lord-young.pdf

growth hubs, locally driven entities which bring together local partners offering coherent and consistent businesses support to SMEs, and we encourage this across the country.

We are encouraged by the commitment of the Association of Business Schools to this agenda. In their response to the Witty Review, they state “we need to position business schools as ‘translators of invention’, as agents of innovation and growth in the business and policy communities”. Their agreement to deliver the Small Business Charter shows the importance they place on getting business schools to work with local businesses.

We have provided seed funding to the Association of Business Schools to deliver the Small Business Charter, which will be launched in early 2014. We intend that those business schools in receipt of a Charter Award should gain a role in the delivery of Government support schemes such as Growth Vouchers and Start-Up Loans. This, alongside their role in growth hubs, will help to cement them as core players in the local economy and business support landscape.

University Enterprise Zones supporting greater business engagement locally

In December 2013 the Prime Minister announced funding of £15m to pilot University Enterprise Zones. The Government's existing Enterprise Zones programme provides support to 24 locations across England to develop new hubs of sustainable growth. While many universities are already involved in Enterprise Zones, Government is keen to promote this type of collaboration further.

The aims for University Enterprise Zones are to:

- Encourage innovative businesses to engage with universities, and universities to engage even more with business
- Encourage universities to increase their direct engagement with Local Enterprise Partnerships in driving innovation and growth at a local level
- Provide Government assistance to investing in buildings providing office, workshop and laboratory space for small firms (“incubator” and “grow-on” space). Many science parks tell us that there is little or no appetite in the private sector to invest in providing this space for small firms. These firms cannot commit to taking space a long way in advance of need, so the property market sees a high degree of risk in this kind of speculative investment, especially since the financial crisis. These firms are important to future economic growth, however, and there is a clear argument for public support.

BIS has now launched a competition for the pilots, linked to the development of LEPs' Strategic Economic Plans.

Key features of the pilot are:

- A partnership between the university, LEP and others around a zone which will provide a focus for activities to increase interaction with business
- Funding for incubator and grow on space which will support high tech start ups and businesses, to be supported by 2:1 co-funding from local partners and European funds

- International investment – UK Trade & Investment (UKTI) will work with universities, LEPs and other key local partners to agree a proposition for inward investment for each zone

In addition, universities, LEPs and Local Authorities will be expected to offer the following:

- Appropriate planning simplification within each zone
- Local Authorities’ co-operation with development at the zones
- Collaboration – expectation on the university and/or local innovation partners to support the zone by offering access to relevant experts and facilities
- Finance for innovation – expectation on the university and/or local innovation partners to facilitate engagement between local businesses and networks of investors

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“...a clear understanding of how LEPs can best operate is yet to develop, and a mechanism for LEPs to be able to adopt best practice and establish an operating model that supports greater collaboration not only with universities but also with other LEPs is still to appear.”

Encouraging a British Invention Revolution:

Sir Andrew Witty’s Review of Universities and Growth

Sir Andrew’s Review recognised both the core role and potential of Local Enterprise Partnerships in enabling local economic growth, and saw their dependence on the active participation and resources of key partners including local authorities, business and universities themselves.

The Government agrees and has moved to devolve a much greater share of local growth resources to the LEPs, working with these local partners, with universities seen as key to the success of the partnerships.

In June 2013, in response to Lord Heseltine’s report “No Stone Unturned”, the Government announced that it would place more resources under the control of LEPs through the Local Growth Fund (LGF), guaranteeing at least £2 billion a year over the period of the next Parliament. This is a very clear signal of Government’s commitment to growth being driven at local level. Government will agree a Growth Deal for every place by July 2014, based on each LEP’s Strategic Economic Plan. This puts the business-led LEPs, working with local partners, at the heart of promoting economic growth through locally identified solutions. In return, the Government expects evidence of real commitment from LEPs to the growth agenda, including the development of ambitious, multi-year Strategic Economic Plans (SEPs). Early draft SEPs show a real appetite from LEPs for putting innovation at the heart of the strategies that will drive local economic growth.

The Government also announced notional allocations to each LEP from the £5.3 billion of European Structural & Investment Funds (ESIF), for the period 2014-2020. Around £660 million (c. €800 million) will be directed towards supporting innovation. LEPs are designing and delivering evidence-based strategies setting out how they will use this funding, in line with the overarching priorities outlined by the EU. EU funding must be matched by other sources on at least a 1:1 basis, and LEPs have a responsibility for ensuring that outcomes are delivered by working with a range of local partners, such as universities, networks, and other appropriate stakeholders to benefit SMEs and drive economic growth.

LEPs submitted their ESIF strategies in January 2014. The important role of universities in delivering growth through innovation is reflected in these investment strategies, and we are pleased to see the very wide and active involvement of universities in preparing them, particularly through leadership of innovation subgroups, which report to LEP Boards. We are encouraging the Higher Education Funding Council for England (HEFCE) to further support universities in their LEP engagement, recognising the important role universities play in gaining project funding for ESIF and other EU programmes, and building on the work they have started with the Technology Strategy Board (TSB), Research Councils UK (RCUK) and Universities UK (UUK).

We share Sir Andrew's belief that there are economic gains to be made in effective collaboration between universities and LEPs and across LEP boundaries. The ESIF strategies indicate that LEPs acknowledge the added value that collaboration across geographic boundaries can bring, and are at the early stages of developing cross-boundary activity.

LEPs are already developing and delivering Regional Growth Fund and Growing Places Fund initiatives, agreeing City Deals, progressing Enterprise Zones and working with universities, businesses and other partners across various sectors and technologies and with their supply chains. They are putting initiatives in place across England that provide local solutions to help businesses grow and local skills needs to be met.

We agree that universities should sit on LEP Boards and provide thought leadership into LEP strategic thinking, and also engage in relevant sub-groups, where there is a university presence in the LEP area. LEPs and universities have responded positively to this recommendation, resulting in an increase of university membership on Boards and sub-groups since the publication of the Review.

All LEPs with an established university in their area now have university Board membership. As Sir Andrew acknowledged in his Review, university engagement is tailored to the individual circumstances of the LEP areas. The two LEPs that do not have established universities in their areas both have highly respected Board members who represent Further Education and Higher Education.

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“...the right starting point for economic development policy is sectors and technologies. The soundest basis for competing successfully is strengths within the sectors and technologies of the future.”

Encouraging a British Invention Revolution:

Sir Andrew Witty's Review of Universities and Growth

Through Industrial Strategy we are removing barriers and making it easier for British businesses to grow; creating high-quality jobs for the future, and fuelling economic growth. We are investing in Eight Great Technologies where the UK has the research expertise and business capability to become a world leader. Sir Andrew is right that these priorities should not set in stone our current perception of key future sectors and technologies. For example, the Witty Review highlighted the potential of quantum technologies, stating that future investment would be required to keep pace with international investments and ensure the UK remains at the forefront of this rapidly expanding domain. The Government recognised this potential in the Autumn Statement. The Chancellor said: *"Science is a personal priority of mine. That is why we are providing £270 million worth of investment in Quantum technology, an area of cutting-edge scientific research that has the potential to deliver huge benefits for the British economy. This Government will continue to prioritise the long-term investments that are needed to compete in the global race."* The funding will be used to support the development of a National Network of Research Centres, postgraduate skills, research and infrastructure and an innovation programme.

We will take up the challenge set by Sir Andrew, in his **Arrow Projects** proposal, to bring together all the necessary players to advance an area of research or technology in the most effective way, maximising national capability to land a punch internationally. But we do not need to start from first principles.

We have identified the Eight Great Technologies by bringing together a number of analyses from the Research Councils, the Technology Strategy Board and the Government Office for Science's Foresight team. They have become a powerful framework for articulating the range and potential of technologies to drive new applications and market growth for the UK. At Autumn Statement 2012, Government announced an additional £600m capital investment through Research Councils, the Technology Strategy Board, National Measurement Office and UK Space Agency, for the development of these technologies, and good progress is being made in delivering these investments on the ground.

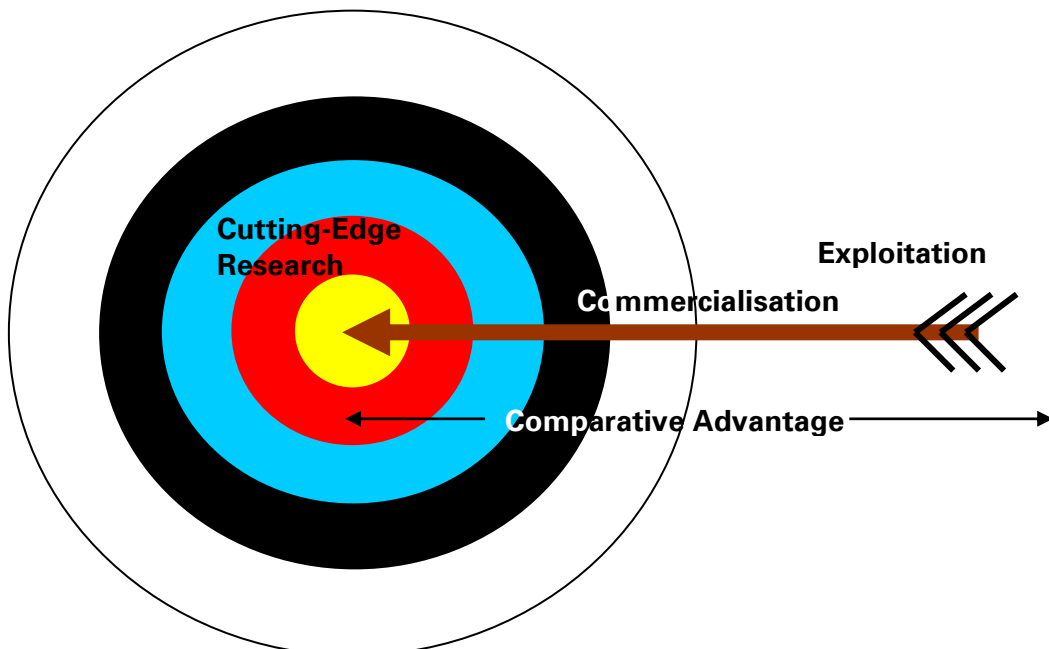
Collaboration across funding bodies and funding streams has improved substantially in the last few years. For example the UK Strategy for Life Sciences, published in December 2011 launched the Biomedical Catalyst, a joint programme between the Medical Research Council and the Technology Strategy Board, to fund the best ideas across the so called "valley of death" between academic research and business-led commercialisation. The Biomedical Catalyst has been extremely popular and heavily over-subscribed, as a result of which it will be continued in 2015/16. The model has been used to design new Catalysts for Agricultural Technologies and Industrial Biotechnology, both jointly managed by the Technology Strategy Board and the Biotechnology and Biological Sciences Research Council.

Nevertheless, we accept Sir Andrew’s conclusion that more can be done to simplify the funding landscape for businesses and researchers. To develop proposals on how to do this while preserving the key strengths of our existing funding structures, BIS will facilitate discussions between RCUK, HEFCE, the Technology Strategy Board, UKTI, representatives from universities, the British Business Bank and the LEP Network – all of whom have a role in identifying, nurturing, growing and delivering on our comparative advantages with public funding. The discussions will:

- focus on improving the operating models for connecting or adapting the policies and funding streams that enable accelerated commercialisation of key technologies, and for systemising the process of identifying, supporting and monitoring new, emerging technologies;
- consider how best to identify further technologies that need support while reducing focus, over time, on those that no longer have the same potential for the UK. This should connect the judgements about support for different scientific fields that are taken at arm’s length from Government with the priorities that are developed for technologies and sectors in the context of the Government’s Industrial Strategy.

The discussions will seek to learn lessons from existing projects with some of those characteristics, and also from the recent investments in the Eight Great Technologies, about what works best in terms of the approach to funding and the decision making process. The Devolved Administrations will also be involved where appropriate.

Arrow Project



As part of this, we aim to support better access to, and better provision of, information:

Access to Research and Expertise

The Government is committed to ensuring that publicly funded and published research outputs should be accessible free of charge to the user. We have already taken steps, in partnership with the Research Councils and Funding Councils, towards making research findings more accessible. The Government's Open Access (OA) policy, published in July 2012 in response to the Finch Group's report of June 2012 refers (see <https://www.gov.uk/government/news/government-to-open-up-publicly-funded-research>). In addition, in December 2013 the RCUK Gateway to Research was officially launched. Gateway to Research (<http://gtr.rcuk.ac.uk/>) provides a single entry point of access to information on what and whom we fund, and the outcomes of that research, in an accessible way that benefits users. The website has been designed to be of particular interest to innovative SMEs enabling easy access to information about current research projects and outcomes of past projects. We hope that through the development of the Gateway to Research and by working closely with others such as the Technology Strategy Board and National Centre for Universities and Business (NCUB) this information will become increasingly useful to users and contribute to productivity, economic growth and quality of life.

HEFCE is also considering how to use information from the Research Excellence Framework (REF), and in particular the impact case studies, and how to make this information as accessible and useful as possible. The four UK funding bodies' policy on open access is that material submitted to REF 2020 will, wherever possible, be freely accessible.

However, we feel that making information available online does not go far enough. As Sir Andrew notes, the research landscape presents greater opacity for some businesses, especially small businesses; it is important to address their absorptive capacity to discover and interpret this information. We are pleased that NCUB, working with the Research Councils, HEFCE and the Technology Strategy Board, is developing a collaborative online platform which joins up university research and expertise with the needs of business. These intelligent brokering services, using online tools to pair up local businesses with the institutions and researchers that can support them, offer a potentially clear and simple way for businesses to access the research and expertise that can drive forward their growth. In addition, the Centre for Cities is progressing a study that will more effectively map the whereabouts of knowledge-based clusters in the UK, due to report in September 2014.

Smart Specialisation Advisory Hub

Like Sir Andrew, we are keen to understand where comparative advantage lies. We will develop a capability which will take the form of an Advisory Hub, with a focus on Smart Specialisation³. To that end, the Advisory Hub will gather evidence and help to improve

³European Investment Structural Funds require Member States to develop smart specialisation strategies before funds for investment are released. Government has adopted Sir Andrew's definition of smart specialisation: '*[It] seeks to ensure that proposed actions are based upon **sound evidence** that properly reflects the comparative advantages of the physical & human assets of particular places in the global economy. It emphasises the need to ensure that activities are fully **integrated in the local economy & its supply and value chains**. It helps to build **connections** of ideas, finance and trade with similar activities elsewhere. It **promotes also the use of enabling technologies** that can transfer and add value between related sectors*'.

the use of it; it will share and disseminate best practice, improve connections between different partners, advise on compliance with ESIF procedures and, through this, support LEPs in delivering stronger collaborative propositions. The Devolved Administrations have expressed interest in widening the geography of the Advisory Hub beyond England, and we are discussing this with them.

The advisory capability of the Hub will be built on existing networks and initiatives, with complementary functions, ensuring the mechanism is kept light touch and low cost. Organisations that may wish to play a role include NCUB, Technology Strategy Board, the LEP Network, the What Works Centre for Local Economic Growth, the Horizon 2020 National Contact Points and the Enterprise Europe Networks.

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“...national organisations supporting research, innovation and growth, can be better aligned to deliver to their full potential for the Industrial Strategy and for local growth.”

Sir Andrew Witty’s Review of Universities and Growth: Preliminary findings

The Government has made significant changes to the innovation landscape of the UK since 2010. Sir Andrew’s review recognises the excellence-driven approach taken by the Government to supporting research and development activities and agrees that funders should not be constrained by geography. However, the review describes concerns about the fragmentation and complexity of funding arrangements. To succeed in the global race, we need to up our game by doing more, being more aligned, more co-ordinated, and more focused. The organisations below all play a key role in this, and agree that closer alignment is a critical part of enabling the country to perform to its full potential. The Arrow Project discussions will form an important part of this.

The Higher Education Funding Council for England (HEFCE)

The Witty Review captured the extensive role that HEFCE plays in facilitating higher education/business collaboration. A notable feature of HEFCE (and funding bodies in Scotland, Wales and Northern Ireland) is that it funds research, teaching and knowledge exchange, and hence supports the full range of universities that can make contributions to innovation and growth. The inclusion of impact in the Research Excellence Framework, which is managed by HEFCE, and inclusion of incentives in HEFCE’s research funding for working with business, such as business-related QR (Quality-related Research), are all important drivers for research/business engagement. The UK Research Partnership Investment Fund is making a significant contribution to development of research and innovation infrastructure, as well as deepening major research-business links. The HEFCE Catalyst Fund, which responds to opportunities identified by universities with partners on the ground, has already made investments to support wide-ranging local and national partnerships for growth.

HEFCE's funding for knowledge exchange through HEIF was seen by Sir Andrew as particularly valuable in enabling universities to respond flexibly to the opportunities from businesses, LEPs/ESIF and other partners, and to get maximum synergies with other public funding streams, such as from Technology Strategy Board and RCUK. We are committed to a long-term and fully rounded approach to the funding of knowledge exchange.

Research Councils UK (RCUK)

The role of the seven Research Councils in facilitating collaboration between the research base and business was discussed less in the Review. Working together as Research Councils UK, they have a clear role in helping to shape this agenda and exploring with BIS and other partners how best to join up existing provision in the spirit of the Witty review to support the Research Councils' mission of excellence with impact. RCUK can help in supporting the research intensive universities that receive the bulk of Research Council funding to contribute to local high-tech clusters and SMEs, and with other partners, including the wider set of higher education institutions working with a wider range of businesses in their regions.

Research Councils have funding schemes to help support universities' best researchers to deliver greater R&D collaboration with industry and other end users, bridge the gap between the research base and the marketplace and facilitate entrepreneurship. The support includes devolved funds to allow rapid and flexible decision-making, and larger individual grant awards tailored to the innovation needs of different sectors.

Technology Strategy Board

The Government established the Technology Strategy Board as its national innovation agency with a mandate to accelerate economic growth by stimulating and supporting business-led innovation. It has a suite of products aimed at meeting the varying needs of companies as they innovate and grow. The products support companies to gain investment, network and partner with others, and access advice, facilities and government contracts through schemes such as Smart grants for research and development, SBRI to help engage with the public sector by providing solutions to complex problems and Knowledge Transfer Partnerships, to bring businesses, academics and graduates together around a defined project. Some of the products were described in the Review and all can be accessed via www.innovateuk.org.

The Technology Strategy Board is already playing an important role in supporting the development and implementation of the Government's Industrial Strategy and the 8 Great Technologies, through activities such as participation in Sector Leadership Councils and joint initiatives with the Intellectual Property Office and Growth Accelerator. This involvement will continue, to ensure that its activities are aligned with national priorities. The Technology Strategy Board is extensively engaged in national economic and business policy making, working closely with BIS and other parts of Government, as well as with the Devolved Administrations of Scotland, Wales and Northern Ireland.

UK Trade and Investment (UKTI)

UKTI established the Science and Innovation Unit to work across government and innovation organisations, including universities, to develop a simple, compelling statement

of the UK science and innovation offer and to support this internationally – with a particular focus on the Eight Great Technologies.

UKTI has been encouraging universities to link better with exports and inward investment, and has gone some way to achieve this. UKTI will align resource with university excellence to drive innovation and growth. Specialists will link university expertise with existing and new inward investors. They will also link companies into export support and other business support that may be relevant. UKTI will monitor the success of these initiatives and be prepared to adapt where the best impact and value are being added.

UKTI will share customer data with the Technology Strategy Board for a more streamlined and effective customer experience for joint missions and events (such as Innovate UK) and joint working on international strategy – particularly regarding Catapult centres.

UKTI will undertake a project with HEFCE and the UK Higher Education International Unit to describe UK universities' international innovation activities and their impacts, and to suggest mechanisms to further the scale and effectiveness of government interaction with the university system on trade and investment, as well as boosting the wide range of UK-international university-business links. UKTI Education, a joint BIS and UKTI initiative, supports universities in working together and with other UK education sector stakeholders to target high value opportunities in the education and training sector overseas.

UKTI has also established the Venture Capital Unit to increase the funding available for UK entrepreneurs and start-ups, including those spun out of universities, through connecting them with overseas sources of venture capital investment.

Recommendations and Responses

This response is supported by an accompanying table detailing the 10 recommendations that Sir Andrew made following his review, and the Government's response to each.

Witty Review Recommendations	Government Response
<p>Recommendation 1: Universities have extraordinary potential to enhance economic growth. Incentives should be strengthened to encourage maximum engagement in an enhanced Third Mission alongside Research and Education, and universities should make facilitating economic growth a core strategic goal. Universities should report their Third Mission activity, for inclusion in an annual report to the Government which also identifies impediments to this activity, with recommendations as to where Government should act to remove these. Each year the Government should publish its response to these reports and recommendations.</p>	<p><i>Current position:</i> There is a range of publicly-funded mechanisms aimed at incentivising the Higher Education (HE) sector to increase engagement with businesses and wider users, such as: the Higher Education Funding Council for England's (HEFCE) knowledge exchange (KE) funding through Higher Education Innovation Funding (HEIF); the Technology Strategy Board's Knowledge Transfer Partnerships and Innovation Vouchers; Research Councils' programmes, including Pathways to Impact and Impact Acceleration Accounts; Universities' Enterprise teaching; and through HEFCE's Quality Related Research funding, which from 2015 will also reflect the assessment of impact of excellent research through the Research Excellence Framework (REF). Income from knowledge exchange activity – a proxy for impact on the economy and society – across all English HE, stood at £2.8bn in 2011-12.</p> <p>Currently, most universities have a strategic aim around a broadly defined 'third mission' objective. While in some institutions this takes the form of economic impact the Government values institutions taking a broad definition since the societal/civic impact of this objective is often as important as the economic impact. A 2009 report⁴ concluded that in 79% of UK HEIs, third mission activity was embedded, and there is good evidence that the remaining institutions are making good progress. We encourage universities, wherever appropriate, to make helping to grow the UK economy a core strategic goal.</p> <p><i>What we will do:</i></p> <ul style="list-style-type: none"> - Universities have told us how important funding, such as HEIF, is to them, and how it enables them to bring the "third mission" into the core of their activities. We hear and understand this and make a long term commitment to supporting Universities in a third mission to help deliver economic growth. - We already collect useful information that illustrates the state of play on the third

⁴ Evaluation of the effectiveness and role of HEFCE/OSI third stream funding: Report to HEFCE by PACEC and the Centre for Business Research, University of Cambridge (2009)

	<p>mission, including the sector-wide Higher Education-Business Community Interaction (HE-BCI) survey. We do not wish to add to the regulatory burden on universities and so we have asked UUK to convene an annual university stakeholder event to consider the successes of HE third mission activity as well as the impediments. Their findings will be presented to Government and we will be responsible for responding.</p> <p>- We will invest £15m in establishing 3-4 pilot University Enterprise Zones to encourage innovative businesses to engage with universities, and universities to engage even more with businesses, to encourage universities to engage directly with Local Enterprise Partnerships (LEPs) in driving innovation and growth at a local level and to address the widespread issue affecting science parks that there is little or no appetite in the private sector to invest in buildings providing office, workshop and laboratory space for small firms (“incubator” and “grow-on” space). BIS launched a competition for the pilots in January 2014. The competition will be linked to the development of LEPs’ Strategic Economic Plans.</p>
<p>Recommendation 2: Prospective investors in research should have online access to as much information as possible as to where there is research strength. This should include identifying research by sector and technology, and where possible by the businesses and charities funding it. It should also include further development of indicators such as citation-based measures of research strength by sector.</p>	<p><i>Current position:</i></p> <p>The Government is committed to ensuring that publicly funded and published research outputs should be accessible free of charge to the user. We are already taking steps to make research findings more accessible. The Research Council UK (RCUK) Gateway to Research⁵ provides a single entry point of access to information on what and whom we fund, and the outcomes of that research, in an accessible way that benefits users.</p> <p>HEFCE is also considering how to use information from the REF, and in particular the impact case studies, how to make this information as accessible and useful as possible within these developments. The UK Funding bodies’ policy on open-access is that material submitted to future REF exercises will, wherever possible, be freely accessible.</p> <p>However, we feel that making information available online does not go far enough. As Sir Andrew notes, the research landscape presents greater opacity for some</p>

⁵ <http://gtr.rcuk.ac.uk/>

	<p>businesses, especially small businesses; it is important to address their absorptive capacity to discover and interpret this information.</p> <p><i>What we will do:</i></p> <ul style="list-style-type: none"> - We will seek to further develop the indicators described in the review such as citation-based measures of research strength by sector, and consider whether there is value in regularly updating the heat maps created for the Witty Review. - We will encourage development of the Gateway to Research, through RCUK closer working with others such as the Technology Strategy Board and National Centre of Universities and Business (NCUB), to ensure that this information will become increasingly useful to users. - The NCUB, working with the Research Councils, HEFCE and the Technology Strategy Board are developing a collaborative online platform, which joins up university research and expertise with the needs of business. These intelligent brokering services, using online tools to pair up local businesses with the institutions and researchers that can support them, offer a potentially clear and simple way for businesses to access the research and expertise that can drive forward their growth. We will work with NCUB and partners to do more to actively encourage businesses to seek out research. <p><i>What others will do:</i></p> <ul style="list-style-type: none"> - The Centre for Cities has been commissioned by Lord Sainsbury to map the whereabouts of knowledge-based clusters in the UK, and will report in September 2014.
<p>Recommendation 3: The Government should establish a funding stream worth at least £1 billion over the life of the next Parliament available to Arrow Project consortium bids where:</p> <ul style="list-style-type: none"> • there is a credible prospect of technology offering the UK comparative advantage in international markets 	<p><i>Current position:</i></p> <p>We accept Sir Andrew's conclusion that more can be done to simplify the funding landscape for businesses and researchers.</p> <p><i>What we will do:</i></p> <ul style="list-style-type: none"> - To develop proposals on how to do this while preserving the key strengths of our existing funding structures BIS will facilitate discussions between RCUK, HEFCE, the Technology Strategy Board, UKTI, representatives from

<ul style="list-style-type: none"> • the collaboration includes the key research centres, their LEPs or devolved equivalents, and private sector partners, with funding from the latter two • there are robust research/development/economic outcome metrics. <p>Funding for bids should be decided through independent assessment by a panel of leading figures from industry, academia and government. Most weight should be given to proposals which advance the Industrial Strategy.</p>	<p>universities, the British Business Bank and the LEP Network – all of whom have a role in identifying, nurturing, growing and delivering on our comparative advantages with public funding. The Devolved Administrations will also be involved where appropriate. The discussions will:</p> <p>(i) improve the operating models for connecting or adapting the policies and funding streams that enable accelerated commercialisation of key technologies and for systemising the process of identifying, supporting and monitoring new, emerging technologies.</p> <p>(ii) consider how best to identify further technologies that need support while reducing focus, over time, on those that no longer have the same potential in the UK. This should connect the judgements about support for different scientific fields that are taken at arm’s length from Government with the priorities that are developed for technologies and sectors in the context of the Government’s Industrial Strategy.</p>
<p>Recommendation 4: In order to strengthen the incentives on Universities to engage with SMEs the Government should make an explicit long-term - commitment to HEIF, which should increase to £250 million a year. It should be adjusted so that:</p> <ul style="list-style-type: none"> • Institutions’ HEIF strategies show how all local SMEs that could benefit from working with an HEI are enabled to do so • The five-year allocation period does not entail excluding institutions which do not qualify for more than a year. <p>The method of determining institutions’ allocations should be reviewed to sharpen</p>	<p><i>Current position:</i></p> <p>As stated in our response to Recommendation 1, we understand the importance of HEIF to universities and are committed to making a long-term contribution to supporting Universities in knowledge exchange. In the current tight fiscal environment, however, we are unable to commit to raising the level of HEIF funding at present. Nonetheless, it is clear that despite wider economic uncertainty KE funding through HEIF has had enormous economic impact and leverage and a recent review by independent experts suggests that every £1 of HEIF funding generates £6.30.</p> <p><i>What we will do:</i></p> <p>- We are committed to a long-term and fully rounded approach to funding all forms of knowledge exchange, with all forms of partner, including recurrent funding for Knowledge Exchange (KE) through HEIF. We have asked HEFCE to consider issues raised in the Review, in balance with BIS priorities. HEFCE will examine methods to further support SME engagement. The present focus on</p>

<p>the incentive to engage with innovative SMEs</p> <p>The impact weighting in the Research Excellence Framework should be increased to 25% in the next REF, strengthening the incentive on Universities to achieve effects such as benefits to local businesses</p>	<p>rewarding KE performance, including the de minimis cut-off to allocations [at an appropriate level], is important, but we have asked HEFCE to consider how dynamic change in improvement in performance can be rewarded.</p> <p>- We have asked HEFCE to consider the issue raised in the Review on providing long-term fixed allocations to universities that allows stability in Institutional planning. The counter-balance to this, however, is the need for allocations to be made to reward up to date performance and to support dynamic changes. HEFCE will need to consider the best approach to meet both these considerations.</p> <p><i>What others will do:</i></p> <p>- All four UK Funding Bodies are considering carefully the recommendation to increase the contribution of the impact element in future iterations of the Research Excellence Framework to 25%. They have already commissioned RAND Europe to examine the costs and benefits to HEIs of the impact element of the current REF, and this evidence, together with feedback from the assessment of impact in the current REF, will inform future implementation.</p>
<p>Recommendation 5: Universities should put in place a single point of entry for SMEs that triages their needs and directs them to the relevant part of the University. This point of entry should also look to drive up SME demand and engagement, and work with external partners across the locality, as well as within the University. University Business Schools should be incentivized to prioritize working directly with local business on workable solutions to practical problems.</p>	<p><i>Current position:</i></p> <p>Universities recognise the need to make it easier for businesses to make contact with them and most make great efforts to do that. It is not always easy for businesses, especially SMEs, to engage with universities due to their size and complexity. Some 90% of all English universities surveyed through the annual HE-BCI survey indicate that they have a single point of entry for businesses wishing to draw on their expertise; however some feedback to Sir Andrew's "Call for Evidence" suggests that improvement is still needed in the extent, nature and visibility of operations of SME contact points.</p> <p>We are encouraged by the commitment of the Association of Business Schools to this agenda. In their response to the Witty Review, they state "we need to position business schools as 'translators of invention', as agents of innovation and growth in the business and policy communities". Their agreement to deliver the Small Business Charter shows the importance they place on getting business schools to</p>

	<p>work with local businesses.</p> <p><i>What we will do:</i></p> <ul style="list-style-type: none"> - We will encourage Universities to ensure that a single point of entry for SMEs continues to be developed and we encourage Business Schools to be involved in this single contact point. We will monitor progress through the annual HE-BCI survey and the annual stakeholder meeting. - We have provided seed funding to the Association of Business Schools to deliver the Small Business Charter, which will be launched in early 2014. We intend that those business schools in receipt of a Charter Award should gain a role in the delivery of Government support schemes such as Growth Vouchers and Start-Up Loans. This, alongside their role in growth hubs, will help to cement them as core players in the local economy and business support landscape. - We welcome that many universities are already playing an active role in their growth hubs and we encourage this across the country. Growth hubs will bring together local business support and give SMEs a single place to get help. - We also encourage university business schools to use the national information, services and resources available when advising businesses in order to offer a holistic service (e.g. GOV.UK, and national programmes such as Growth Accelerator, MAS, UKTI, TSB etc). Use of these resources provides value for money and efficiency, and reduces duplication and complexity for businesses seeking support.
<p>Recommendation 6: LEPs have up to €1 billion of European Structural and Investment Funds to invest in innovation. They should look to direct a large share of innovation funding towards excellent universities and research centres in order to nurture sustainable growth founded in comparative advantage, including through</p>	<p><i>Current position:</i></p> <p>At the local level, Local Enterprise Partnerships (LEPs) are key players in steering support for innovation, and their role is growing. Sir Andrew's recommendation that LEPs invest heavily in innovation provides impetus to a direction of travel that the Government has been pursuing. Many LEPs already have a track record in developing and delivering Regional Growth Fund and Growing Places Fund initiatives, agreeing City Deals, progressing Enterprise Zones and working with</p>

universities supporting innovative SMEs in their localities. LEPs should do this within frameworks which relate funding to economic outcomes. They should collaborate, and support university collaborations, beyond their own areas wherever these will deliver an economic or research benefit.

Universities, businesses and other partners across various sectors and technologies and with their supply chains. Initiatives are taking off across England and are putting in place local solutions to help businesses grow and local skills needs to be met. LEPs are building these relationships further in developing their EU Strategic Investment Frameworks (ESIFs) and Strategic Economic Plans (SEPs), and we are working with them to maximise the support to innovation.

We would like to see LEPs directing a large share of their European Structural and Investment funds (ESI) towards innovation, and we are discussing this with them as they prepare their strategies.

What we will do:

- As part of assessing LEP ESIFs and SEPs **we are taking account of the role of Universities in driving economic growth, in terms of their leadership role within the LEP, and the identification of areas of comparative advantage**, particularly in Industrial Strategy Sectors and the 8 Great Technologies.

- We are encouraging **HEFCE to further support universities in their LEP engagement, recognising the important role Universities play in gaining project funding for ESIF and other EU programmes**, and building on the work they have started with TSB, RCUK and UUK.

- We will propose to LEPs that **innovation is a central theme at the next LEP Network Conference**, at end March 2014.

What others will do:

- LEPs will **develop their ESIFs and SEPs with increasing involvement of Universities** in terms of strategic thinking and project delivery.

- Universities will **take a leadership role in identifying areas of comparative advantage and embedding these** appropriately within LEP strategies to maximise their impact.

- the **Technology Strategy Board and LEPs are holding discussions on how to make the most of ESI funds** through collaboration and alignment, and informing the process going forward.

Recommendation 7: Ministers should write to the chairs of all LEPs with universities in their areas setting out the expectation that these LEPs should have a university presence on the Board. Where a LEP is participating in an Arrow Project led by a university in its area then it may well be appropriate for the university to provide co-chairmanship of the LEP. University members should be prominent in, and may often chair, LEPs' Innovation or R&D and Innovation sub-committees.

Current position:

We agree that universities should sit on LEP Boards and provide thought leadership into LEP strategic thinking, and also engage in relevant sub-groups, where there is a university presence in the LEP area. LEPs and universities have responded positively to this recommendation, resulting in an increase of university membership on Boards and sub-groups since the Review was published.

All LEPs with an established university in their area now have university Board membership. As Sir Andrew acknowledged in his Review, university engagement is tailored to the individual circumstances of the LEP areas and the two LEPs who do not have an established university in their patch both have strong, highly respected Board members who represent Further Education and Higher Education.

What we will do:

- We will work **with the LEP Network to agree how to encourage LEPs to share models of good practice**, so they can learn from each other.
- We will **encourage Universities to play a strong leadership role** within LEPs, contributing their intellectual and analytical capabilities to LEP strategy development.
- We will **encourage LEPs and Universities to together champion arrow projects**
- We will invite the **LEP Network to join Arrow Project** discussions, with BIS, Research Councils, HEFCE, Technology Strategy Board, UKTI, representatives of Universities and the British Business Bank.

What others will do:

- **LEPs and Universities can continue to deepen their relationships**, through University Board/subgroup membership, thought leadership, secondments and joint activity to drive economic growth.

<p>Recommendation 8. The Government should ensure that all the funds available to LEPs to invest in Innovation and R&D are spent on these areas. It should establish an authoritative advisory capability to advise it and LEPs and other relevant decision-takers on how strongly LEP proposals are based in a sound assessment of comparative advantage, and to identify and communicate the best practice of the most effective of LEPs so that the Government and LEPs can work to bring all LEPs up to the level of the best.</p>	<p><i>What we will do:</i></p> <ul style="list-style-type: none"> - Like Sir Andrew, we are keen to understand where comparative advantage lies. We will create an Advisory Hub for Smart Specialisation, which will share and disseminate best practice, improve alignment connections between different partners and support LEPs in delivering stronger collaborative propositions through a better coordinated and informed capacity. The Devolved Administrations may be interested in widening the geography of the Advisory Hub beyond England, and we are discussing this with them. - The hub will be light touch, low cost, have strong bottom-up ownership from its users and will be facilitated by advisory experts. Organisations that may be interested in playing a role include NCUB, TSB, the LEP Network, the What Works Centre for Local Economic Growth, the Horizon 2020 National Contact Points and the Enterprise Europe Networks. - The hub will provide sources of advice and support to LEPs and other sub-national players, accessing peer review and other research capabilities and be provider of support themselves with specialist capabilities in sharing and learning from best practice, benchmarking/peer review, compliance with ESIF procedures.
<p>Recommendation 9: The objectives of the Technology Strategy Board should include advancing national strategic economic priorities so that its contribution to the Industrial Strategy, to Arrow Projects and to the growth priorities of the devolved administrations is central to its accountability for its performance. This role should include...building awareness on innovative capability within each LEP area and sharing its knowledge to help strengthen LEP plans.</p>	<p><i>Current position:</i></p> <p>Sir Andrew rightly says that there is a commonality of purpose in the Government's Industrial Strategy and our policy of local growth, and that the Technology Strategy Board's objectives should reflect this. We are pleased that the Technology Strategy Board is prioritising its relationship with LEPs as a central element of its objective to improve connections between the national and local innovation landscapes. The Technology Strategy Board recognises that LEPs are well placed to encourage business innovation at local level and are keen to make more of connecting these local initiatives with national activities and programmes. This will build on their existing engagement in national economic and business policy making, where they work closely with BIS and across wider Government, including with the Devolved Administrations of Scotland, Wales and Northern Ireland.</p> <p>In response to requests received from several LEPs, the Technology Strategy Board has already launched an open access database "Where Innovation</p>

	<p>Happens". This provides all LEPs, and the Devolved Administrations, with a detailed and individual breakdown of numbers of projects and planned investments that are being supported in their areas, broken down by the Technology Strategy Board programme/activity and technology, and this data will be refreshed every quarter. LEPs have been given a direct link to the data so that they can explore it further, if they wish. LEPs have reported that the data has been extremely useful and they have used it in preparing their ESIF investment strategies and their Strategic Economic Plans.</p> <p><i>What the Technology Strategy Board will do:</i></p> <ul style="list-style-type: none"> - The Technology Strategy Board will join the Arrow Project discussions and work with BIS, Research Councils, HEFCE, UKTI, representatives of Universities, the British Business Bank and the LEP Network to develop Arrow Projects. - The Technology Strategy Board will work in collaboration with LEPs and the Devolved Administrations to maximise the UK's EU funding opportunities for innovation including ESIF and Horizon 2020, involving HEFCE, RCUK and Universities UK as appropriate. An early example of this is the Task & Finish Group, with LEP membership, to discuss how the Technology Strategy Board and LEPs could work together to maximise England's ESIF activity, with discussions going beyond the ESIF submission date of 31st January 2014 - The Technology Strategy Board will continue to play an important role in supporting the development and implementation of the Government's Industrial Strategy and the 8 Great Technologies, through activities such as participation in Sector Leadership Councils.
<p>Recommendation 10: UKTI's objectives should include advancing national strategic economic priorities so that its contributions to our national SME export performance, to the Industrial Strategy, to Arrow Projects and to the growth priorities of the devolved</p>	<p><i>Current position:</i></p> <p>UKTI deploys significant resource to support the UK's national SME export performance, the Industrial Strategy and other initiatives in this space. UKTI's regional network of more than 400 International Trade Advisors across the 9 English regions work closely with Universities and associated science parks – in many cases co-locating close to these innovation assets to support spin-out</p>

administrations are central to its accountability for its performance, with associated metrics relating to exports and/or overseas investment. It should assign dedicated resources to these priorities, in each case located so as best to work alongside the key businesses and universities.

companies in accessing international markets. UKTI's sector teams and local partnership managers work similarly, and resource is expanding through 2014 to ensure even closer working with Universities to help develop commercial-ready propositions for use in relevant overseas' markets. UKTI also works closely with the Devolved Administrations and their agencies.

UKTI has established links with the research and innovation ecosystem and is broadening and deepening those links through a range of initiatives including "Investment Organisations", which have been set up in the Industrial Strategy sectors with the most potential to attract inward investment or support innovative UK businesses. UKTI has been encouraging universities to link better with exports and inward investment, and has gone some way to achieve this.

In parallel, UKTI has established the Science and Innovation Unit to work across government and innovation organisations, including the Technology Strategy Board, Research Councils and universities, to develop a simple, compelling statement of the UK science and innovation offer, and to promote this internationally – with a particular focus on the Eight Great Technologies. UKTI has also established the Venture Capital Unit to increase the funding available for UK entrepreneurs and start-ups, including those spun out of universities, through connecting them with overseas sources of venture capital investment. UKTI Education, a joint BIS and UKTI initiative, supports universities in working together and with other UK education sector stakeholders to target high value opportunities in the education and training sector overseas.

What UKTI will do:

- **UKTI will join the Arrow Project discussions** and work with BIS, Research Councils, HEFCE, the Technology Strategy Board, representatives from Universities, the British Business Bank and the LEP Network to develop Arrow Projects.

- UKTI has **introduced a set of nine quantitative and non-quantitative KPIs**

over the last 12 months to help the UKTI Board evaluate its performance and to support the overall shift to high value trade and investment. Alignment with the UK's Industrial Strategy and Eight Great technologies as well as value, jobs created and their skills levels, is integral to the performance measurement framework.

- Subject to resources, UKTI will **begin aligning resource with university excellence to drive innovation and growth**. Specialists will link university expertise with existing and new inward investors. They will also link companies into export support and other business support that may be relevant. **UKTI will monitor the success of these initiatives and be prepared to adapt where the best impact and value are being added.**
- UKTI will use its refreshed partnership agreement **with the Technology Strategy Board to share customer data for a more streamlined and effective customer experience for joint missions** and events (such as Innovate UK) and joint working on international strategy – particularly on Catapult centres.
- UKTI will work with HEFCE and the UK Higher Education International Unit to **describe UK universities' international innovation activities and their impacts**, and suggest mechanisms to further the scale and effectiveness of government interaction with the university system on trade and investment, as well as boosting the wide range of UK-international university-business links.

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