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BIS | Department for Business
Innovation & Skills

HIGHER AMBITIONS

The future of universities in
a knowledge economy

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Foreword

In the last ten years our higher education policy has combined huge new public investment with reform, both of the level of student contribution and the way in which universities engage with the wider economy. This has been a great success. We no longer fear a brain drain – indeed our research universities are competing successfully with the best in the world. No British Government – especially not this Government – will allow that asset to be devalued or destroyed.



**Peter Mandelson
Secretary of State for Business,
Innovation and Skills**

We have also successfully expanded educational opportunity far further than it has ever previously reached in Britain, without affecting its quality. Some think wider opportunity is the enemy of excellence: the last decade has proved them wrong. The post 1992 universities have confounded the sceptics, with many justifiably able to claim a badge of excellence for what they do – especially in widening routes to higher skills and providing a new focus for civic pride and urban economic renewal. However, as a society that aspires to offer equal opportunity to all irrespective of social background, we still need to do much more to make access to higher education wider and fairer.

The question we face now is how we continue to widen access and sustain and improve standards of university excellence in an increasingly pressured international context and in a more constrained public spending environment. Some will argue we will have to choose between excellence and opportunity. This Government rejects the need to make this choice. *Higher Ambitions – The future of universities in a knowledge economy* sets out how we can continue to deliver wider participation and drive up excellence even in a time of rising competition and tighter public funding constraints.

This framework makes it clear that the Government will not relent on its commitment to wider participation and fair access to our universities. Higher education equips people with the skills that globalisation and a knowledge economy demand, and thereby gives access to many of this country's best jobs. Everyone, irrespective of background, has a right to a fair chance to gain those advantages. This is vital not just as a question of social justice and social mobility but also for meeting the economy's needs for high level skills.

So we need stronger ladders of opportunity through vocational and work-based routes into Foundation Degrees, including advanced apprenticeships and new technician qualifications. We need new partnerships between schools, colleges and universities, where schools will identify pupils with the ability and aptitude to reach for the top well before GCSEs, with proper support in setting their sights on university. This is not about social engineering – it is about ensuring that there are no artificial caps on talent in Britain.

This framework also commits us to consolidating the global excellence of research in our universities. But we will also ensure that we better understand and exploit the ways in which research can make greater economic and social impact. As a developed country we are operating at the knowledge frontier. We no longer have the choice in the globalised world to compete on low wages and low skills. We compete on knowledge – its creation, its acquisition, and its transformation into commercially successful uses. Although universities have a much civic, cultural and intellectual role, they are central to this process.

We will need to focus on resources where they can have the greatest return in excellence and social and economic benefit. In all likelihood that will mean more research concentration where institutions are strongest. It should also drive a greater insistence on the value of diversity in the mission statements of our universities. It is a key premise of this framework that a healthy higher education sector places as much stress on institutions capable of excellent service to their local and regional communities as it does on institutions capable of recruiting the world's best research talent.

The framework also sets out how we will strengthen both general teaching excellence and the teaching programmes that will best prepare students for the jobs of the future. That means focusing on the key subjects essential to our economic growth, and boosting the general employability skills expected of all graduates. We will enable universities to compete for funds to provide courses in subjects relevant to Britain's economic future, working in partnership with business. Institutions unable to meet such strategic needs can expect to see their funding reduced to provide resources for those who can.

These are big ambitions for our university sector. The question is how we pay for them. This framework proposes some simple answers.

First, business and employers need to contribute more. They will do this through joint research programmes, vocationally oriented courses that they part-fund, sponsorship of students and much greater use of universities for management and leadership training. Universities will need to market their capacity to provide these services both domestically, and in an increasingly global market for higher education and distance learning through the internet.

Second, universities themselves will have to be more efficient and effective. Universities already need to be rigorous in withdrawing from activities of lower priority and value, so that they can invest more in higher priority programmes. That will need to intensify. By requiring course content and outcomes to be more transparent, students and employers will be enabled to make informed choices that increase competition between institutions. No student should ever be misled into believing that a course will deliver employment outcomes that it will not. Universities will also need to take a more professional and focussed approach to attracting donations and growing endowments.

Finally, it is necessary to look afresh at the contribution who benefit from higher education –taxpayers, students, and the private sector. Following the launch of these proposals, the Government will commission an independent review into this question. The review will explicitly weigh the cost of education to the individual against the priorities set out in this framework, including the need to ensure that the cost of a university education remains no bar to the widest possible access to higher learning for all those with the talent and motivation to benefit.

At the centre of this framework is a vision of higher education for the future. It is based around autonomous institutions with diverse missions all delivered to excellent standards, backed by a mixture of state and private funding. Not all institutions are the same, and the test for the future is not to ensure that they become the same. What unites all our universities is the need to continue to equip this country to prosper in a rapidly changing world.

A handwritten signature in black ink, appearing to read "Peter Mandelson".

Executive Summary

British higher education is a success story. Over the last decade we have pursued the twin objectives of supporting excellence and widening access, and these have proved to be complementary and mutually reinforcing.

The UK is home to a disproportionate share of the world's leading research universities. With one per cent of the world's population the UK achieved 12 per cent of the world's scientific citations in 2007/08. The UK arts and humanities community published 33 per cent of the world's output in the period 2006 to 2008.

This research excellence has been accompanied by a sustained increase in student numbers. In 1997 921,000 students in all categories entered higher education. In the current year that figure has risen to over 1.1 million. Within that total there has been a particularly noticeable increase in the number of mature students, most of whom have had the chance to experience higher education for the first time.

This progress has been supported by a sustained increase in investment. By 2010-11, total funding for institutions will have doubled from 1997 levels.

Investment in higher education has paid significant dividends. Even during the current global downturn, university graduates are more likely to be employed than non graduates; and graduates earn substantially more over their lifetime than non-graduates¹. Higher education is a successful sector

of the economy, in which we enjoy competitive advantage over developed and developing nations. The most recent estimate is that UK universities' economic output is £59 billion a year, and amounts to 2.3 per cent of UK GDP². The sector is expanding its role as a provider of education to a growing world market consisting of hundreds of millions of new learners who wish to study in English.

The success of the last decade is not simply the achievements of the ancient institutions and the leading research centres. Many of the most encouraging developments have come in new and transformed institutions which are pursuing excellence in particular fields and building creative links to local communities and businesses around the country.

Our success in higher education is rooted in a commitment to institutional autonomy within a framework of shared values and goals. Freed to define their own strategies for achieving core national priorities, our universities and colleges have innovated and adapted to new ways of serving students and contributing to our national life.

¹ "Over their working life graduates earn, on average, comfortably over £100,000 more than an individual whose highest qualification is 2 or more A-levels, net of taxes and in today's valuation", based on a number of analyses undertaken inside and outside BIS..

² *The impact of universities on the UK economy, UUK 2009*

The challenge is to maintain the progress we have made. In a knowledge economy, universities are the most important mechanism we have for generating and preserving, disseminating, and transforming knowledge into wider social and economic benefits.

They are crucial, too, as the providers of life chances for individuals in an environment where skills and the ability to apply those skills are essential preconditions for employment.

The demand for higher education continues to grow but our participation rate, though improved over the last decade is still below that of many other developed economies. Access to higher education remains significantly correlated with parental income and wealth. Too many people with the ability to benefit from higher education are still not entering the system.

Meeting these challenges is made all the more important by the current economic circumstances and the need to renew our economic base. Universities have a vital role to play in that process. But the constraints on public finances will make it impossible to sustain the growth in public spending on universities seen over the last decade.

This is by no means the only change in circumstances which universities face. Demography, advances in technology, the increasing importance of knowledge and intellectual property and the increasingly international nature of so many activities including education itself are all altering the nature and form of higher education. Universities within the UK are already part of numerous European and global networks and we have much to gain from the continued development of such links.

That is the context which shapes the proposals contained in *Higher Ambitions*.

Our proposals

In this document we set out our strategy for sustaining the strength of higher education in this increasingly demanding and competitive environment.

We set out proposals in six main areas.

How we will ensure that all those who have the ability to benefit can get access to higher education

This challenge was framed by Alan Milburn's recent report³, and *Higher Ambitions* is an important part of the Government's response. Because higher skills significantly influence life chances and earning potential, wider and fairer access to higher education is a question of basic social justice. It is in the interests of our society that there are no caps on talent in Britain. Our universities have succeeded in widening access to poorer students over the last decade, but this progress has been uneven across the system, with our most selective institutions seeing only modest increases. Fairer access for educationally disadvantaged but able UK pupils has to remain a key part of how our world class universities see their missions.

Since 1998 the UK participation rate for higher education has slipped from 7th in the OECD to 15th. This is because although we have grown, others have grown faster⁴. The Government remains committed to the goal that at least 50% of young people should enter higher education. However, this has never meant that 50 per cent of the population should enter higher education directly from school to study on a conventional three year degree programme. We aim to widen participation through the expansion of the number of adults at university and by promoting a broader range of course models alongside the three year degree. This has been a problem in the past: the number of students on sandwich courses, for example, has fallen by four per cent since the middle of the last decade during a period when overall student numbers have increased by around 32 per cent, an outcome that is not in the long-term interests of either students or employers. In order to attract a greater diversity of students, more part-time study, more vocationally-based foundation degrees, more work-based study and more study whilst living at home must be made available. This is a core aim of these proposals, and our wider skills strategy.

³ *Unleashing Aspiration: The Final Report of the Panel on Fair Access to the Professions* Milburn 2009

⁴ *Education at a Glance 2009*

This goal reflects some basic realities about the UK's demographic and labour market profile. Around three quarters of the UK workforce of 2020 have already left compulsory education⁵. The UK retains a large pool of just under six million workers with qualifications at level three (equivalent to A-levels in standard) but no experience of higher education⁶. Raising the potential of our workforce must involve drawing more of these people into higher education, while also strengthening the skills pipeline that helps young people and adults gain skills and qualifications at every level. Widening access means building new stronger ladders of opportunity from apprenticeships to advanced apprenticeships and new technician qualifications into foundation degrees and other vocational higher education programmes. There should be more bridges between further and higher education.

This requires a major change in the culture of our higher education system where the focus of expansion has hitherto been in three year full time degree courses. Reflecting demand from learners and employers, those courses will continue to play a central part. However, the next phase of expansion in higher education will hinge on providing opportunities for different types of people to study in a wider range of ways than in the past. The focus will therefore be on a greater diversity of models of learning: part-time, work-based, foundation degrees, and studying whilst at home.

⁵ BIS analysis of Government Actuary's Department population data 2007

⁶ Labour Force Survey, Q2 2009

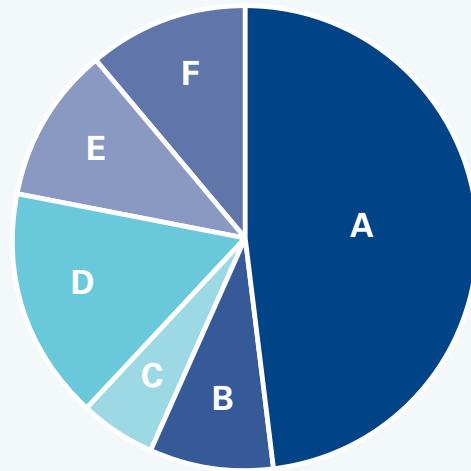
We propose four key changes in this area:

1) We will improve the advice and encouragement that students receive earlier in their education with respect to setting their sights on university.

Universities are increasingly involved in shaping the ambition and personal performance of young people who have had no family experience of higher education, and in improving the way in which schools themselves bring out the best in their pupils. Good advice is crucial: the availability of study and training options and the choices pupils make can affect their later course options and life chances. We will strengthen our partnership with the Department for Children, Schools and Families, (DCSF) building on the strategy published by DCSF in October 2009 to guarantee that all young people get advice that encourages them to strive for challenging goals, and that teachers have ambitious expectations for them.

We announced in the New Opportunities White Paper a guarantee that high performing pupils from low income backgrounds will have a structured package of assistance to help them progress to higher education. Schools and colleges working in close partnership with higher education institutions are key to delivering this commitment. We will publish, early in 2010, our plans for delivering this commitment.

Student by mode and level of study



A First degree full-time	1,108,685
B First degree part-time	198,155
C Other undergraduate full-time	123,320
D Other undergraduate part-time	374,810
E Postgraduate full-time	248,380
F Postgraduate part-time	252,755

2) Many universities are developing new ways to use contextual data in their admissions procedures to assess the aptitude and potential to succeed of those from poor backgrounds. We believe this is a valid approach and hope that all universities will consider it.

In assessing candidates, universities already expect to look not only at what individuals have achieved, particularly through their exam grades, but also at their aptitude and potential to succeed. While the principle of university autonomy means that Government does not interfere with any university's admissions procedures, we believe that the use of appropriate contextual criteria could help to ensure that high-potential candidates are not missed by the system.

3) We are asking Sir Martin Harris, the Director of Fair Access, to consult Vice Chancellors and advise the Government by Spring 2010 on further action that could be taken to widen access to highly selective universities for those from under privileged backgrounds – and to ensure that measures for wider access are prioritised most effectively and do not suffer in a time of greater fiscal constraints. His report will be available in time to influence the conclusions of the Fees Review.

Working with universities, he will look at how best individual universities can set and achieve targets for themselves. He will advise on how best to promote the partnership of schools and universities to identify and mentor the most talented young people from an early age. He will also advise on whether the money currently used by universities under access agreements, mainly spent on bursaries for their students, can be better targeted in order to give more effective support to fair access.

4) We will expand new types of higher education programmes that widen opportunities for flexible study for young people and adults and reflect the reality of the modern working lives.

We will give priority to growing a diverse range of models of higher education. These include options such as part-time and workplace-based courses aimed particularly at mature students or those from non-conventional backgrounds. We will also encourage the further expansion of the successful foundation degree, a vocational qualification completed in two years designed jointly between employers and higher education; and more opportunities to progress from Apprenticeship programmes and vocational qualifications at Technician level into higher education. There will be an important role for further education colleges as well as for universities in such provision – a role that will be set out in detail in our forthcoming Skills Strategy⁷. We are committed to the enhancement of locally accessible higher education that can create new opportunities for individuals and their communities. This will be achieved, as resources allow, through innovative partnerships between universities and further education colleges, and by support for new local higher education centres under the New University Challenge initiative.

⁷ National Skills Strategy to be published by BIS later in 2009

How we will support universities in making an even bigger contribution to economic recovery and future growth

Alongside its social and cultural role, higher education is, and will continue to be, central to this country's economic performance in the twenty first century. It is the key mechanism through which knowledge is generated, preserved and passed on. It equips people for the increasingly complex challenges of the modern workplace by teaching skills and instilling intellectual curiosity and self-confidence.

This process of knowledge generation and stewardship is a public trust and important in its own right. However it is vital that universities use it to contribute to economic growth, both through the commercial application of the knowledge they generate and through preparing our people for the world of modern work. Building new partnerships with business and industry will provide an important channel for generating the financial resources universities need to fund further investment. And greater use of cutting edge university research will improve our public services and public policy.

We propose four key changes in this area:

5) We will ask the Higher Education Funding Council for England (HEFCE) to devise new funding incentives to develop higher education programmes that deliver the higher level skills needed

We will give new priority to the programmes that meet the need for high level skills, especially for key sectors including those identified in the New Industries New Jobs strategy of April. This will mean enhanced support for the 'STEM' subjects – degrees in the sciences, technology, engineering, and mathematics – and other skills that underwrite this country's competitive advantages. There will be a greater element of competition between universities for funding, with the winners being those universities who can best respond to these evolving economic challenges. We will invite the Funding Council to consult on how these changes should be implemented. We accept that the effect of these changes in HEFCE's approach to contestable funding will vary between universities: increasing funding for some and reducing it for others. To allow funds to be diverted to courses that meet strategic skills needs they will be diverted away from institutions whose courses fail to meet high standards of quality or outcome.

6) We will bring together universities, employers, HEFCE and the UK Commission for Employment and Skills (UKCES) to identify and tackle specific areas where university supply is not meeting demand for key skills, and will expect all universities to describe how they enhance students' employability

There can be no room in the system for vocational programmes that do not constantly evolve to meet changing business needs. There will be a new central role for the UK Commission for Employment and Skills to advise on areas where there is an insufficient supply of graduates in particular disciplines, and also cases where university programmes are failing to reflect changed business requirements or the priorities articulated by employer-led bodies such as Sector Skills Councils (SSCs) and Regional Development Agencies (RDAs).

We will ask all universities to publish a statement on how they promote student employability. Universities must be free to define what works best for students in different courses and different institutions. But it is a top concern for business that students should leave university better equipped with a wider range of employability skills. All universities should be expected to demonstrate how their institution prepares its students for employment, including through training in modern workplace skills such as team working, business awareness, and communication skills. This information should help students choose courses that offer the greatest returns in terms of graduate opportunity.

7) Our expectations of business will continue to rise: they need to be active partners with universities, not passive customers.

As the key definers of the skills needs of our economy and the key beneficiaries of the skilled workers produced by higher education, businesses have a crucial role in the funding and design of programmes, in the sponsorship of students, and in offering work placements and practical experience for students. The majority of businesses that invest in high level skills do not make enough use of higher education. This should change: businesses should tap the resources available in universities more effectively, and universities should become more flexible in providing for business demand. We welcome the commitments made by business in the CBI's recent report on higher education⁸. The role that business people play as members of University Boards of Governors, as members of University Advisory Councils and in influencing course provision through employer led Sector Skills Councils is of great importance and will become greater in future.

8) We will conclude a review into the future of postgraduate provision.

Postgraduate qualifications, both from taught and research courses, are increasingly a necessity for careers in the public and private sectors alike. As part of our New Industry, New Jobs strategy, we need to strengthen the flow of skills at the highest level into key sectors of the economy. Today's postgraduates are also tomorrow's leading academics. Increasing fee income from overseas postgraduate students is of crucial importance to the financial planning of many institutions, as well as enriching our international networks. All of this makes postgraduate provision a critical strategic issue for the sector and the country. Professor Adrian Smith is working with leading figures in the sector to review postgraduate level higher education, to ensure that it meets both the sector's and the economy's needs for skills at the highest levels. The independent review of student fees will have access to this review's findings before it finalises its own conclusions.

⁸ Stronger together: Business and universities in turbulent times, CBI 2009

How we will strengthen the research capacity of our universities, and its translation into economic impact

After a decade of unprecedented investment, our universities are among the best in the world for research. Since 1997, the Government has doubled investment in the research base, with the Science and Research budget due to rise to unprecedented levels of almost £4 billion by 2010/11. Ring fencing of the Science and Research budget has created a climate of confidence in our research base. Our challenge now is to reinforce this strength and to develop further our capacity to translate this scientific excellence into economic benefits. There will be no question of compromising our position in pure research, and we recognise that the way in which research drives commercial development is often unpredictable.

We make three key proposals in this area:

9) In a more challenging climate for research, with tighter fiscal constraints and increased competition from other countries, we will need to carefully protect the excellence of our research base. This will require a greater focus on world-class research and greater recognition of the potential benefits of research concentration in key areas.

Excellence must remain the defining basis for allocating research funding. Especially in areas such as advanced science, limited resources mean that public investment in the UK must be prioritised on strengthening research

centres with world-class capability. This will include further development of multidisciplinary centres bringing together many areas of expertise, and building relationships between teams in universities and industry.

We must use scarce resources well. In future this should mean more research concentration, not less, especially in the high cost scientific disciplines. In a diverse higher education system, not every institution should feel that maximising its success in the research assessment exercise or recruiting doctoral students is central to its mission. There are pockets of research excellence across a very wide number of institutions, but a more sustainable model for the future may involve new forms of collaboration between universities so that the best researchers can cooperate rather than compete against each other for scarce funds.

10) We are establishing strong new incentives to increase the economic and social impact of research.

The new Research Excellence Framework⁹, which will drive HEFCE's allocation of the research block grant, will for the first time explicitly assess the impact of past research on the economy and society. Those institutions that can demonstrate a track record of delivering impact from their research will be rewarded. It will also encourage greater mobility of researchers between academia and industry. This will help us understand and reinforce over time the way in which different funding choices are creating economic impact.

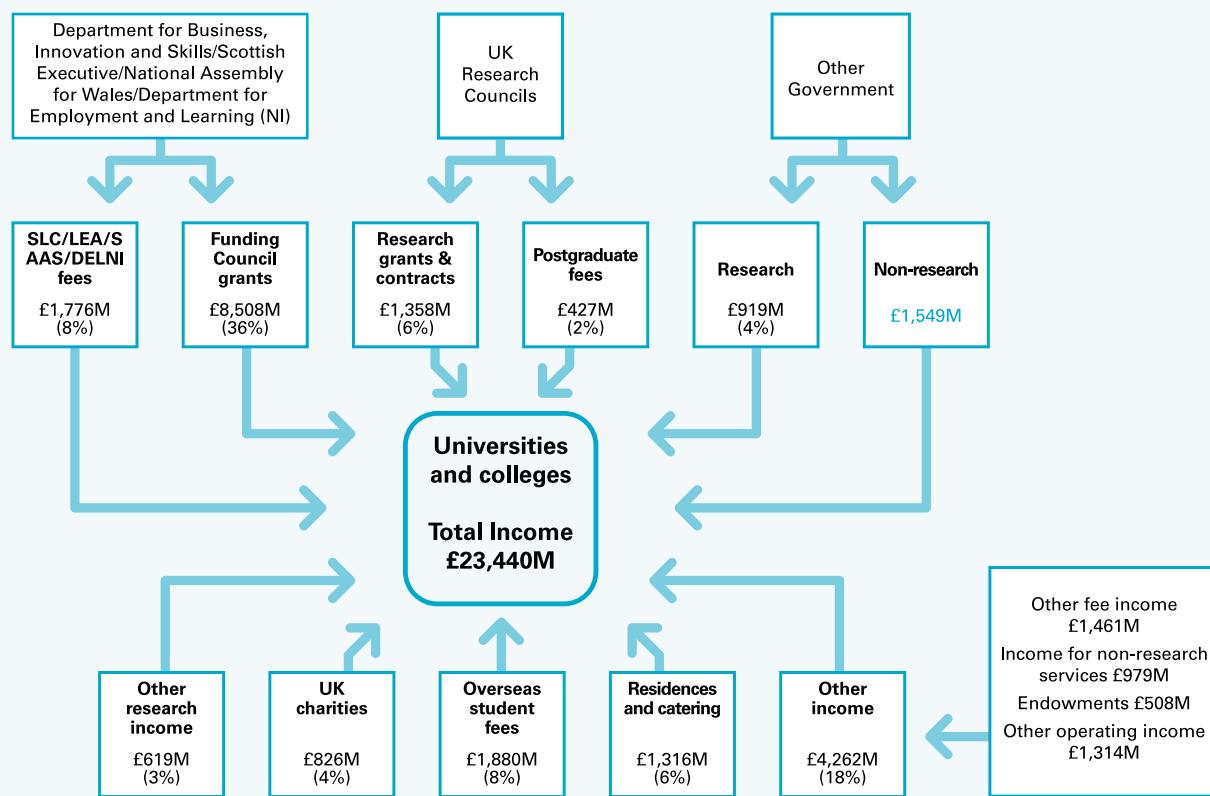
⁹ The Research Excellence Framework (REF) is the new system for assessing the quality of research in UK higher education institutions (HEIs). The first REF exercise is due to be completed by HEFCE in 2013.

11) We will support stronger long term relationships between business and universities.

Interaction between universities and business has increased significantly over the last decade. We will build on this with continued investment in collaborative research via the Research Councils and the Technology Strategy Board. We will also build on the success of the HEFCE Higher Education

Innovation Fund which has supported the development of links between business and universities. Our primary motivation for supporting this research commercialisation and knowledge exchange is to generate economic and social benefits for the nation, not simply to raise revenue for institutions. We will encourage universities to seek greater use of shared services for managing and commercialising their intellectual property.

Sources of finance for UK universities and colleges 2007–08



How we will promote excellent teaching for all students in higher education, with universities competing to attract students on the basis of the excellent service they provide

The quality of the higher education provided by our universities stands comparison with the best in the world. However, there are a number of ways in which it could be further improved to ensure the best possible student experience, particularly through maintaining high quality teaching. The Government's proposals were set out in our October 2009 response to the report from the Innovation, Universities, Science and Skills Select Committee, Students and Universities. Excellence in teaching should be recognised and rewarded. Alongside excellence in research, we welcome the trend in increasing numbers of universities of recognising excellence in teaching – for instance through the appointment of teaching professors.

We take very seriously any public concern over the quality of the student experience in higher education. A poor quality service to students by any institution should not be tolerated and we support a more active and transparent approach to investigating complaints about standards. There will be the opportunity for all involved to examine how best to develop and simplify the existing quality review process as the current cycle comes to an end. It is also important to ensure that potential students have the best possible information on the content of courses and on the value in academic and employment terms of specific qualifications.

We propose two key changes in this area:

12) All universities should publish a standard set of information setting out what students can expect in terms of the nature and quality of their programme.

This should set out how and what students will learn, what that knowledge will qualify them to do, whether they will have access to external expertise or experience, how much direct contact there will be with academic staff, what their own study responsibilities will be, what facilities they will have access to, and any opportunities for international experience. It should also offer information about what students on individual courses have done after graduation. The Unistats website will continue to bring together information in a comparable way so that students can make well-informed informed choices, based on an understanding of the nature of the teaching programme they can expect, and the long-term employment prospects it offers. We will invite HEFCE, the Quality Assurance Agency for Higher Education (QAA) and UKCES to work with the sector and advise on how these goals should be achieved.

13) We will support universities' work to strengthen the role of the external examiner system.

The external examiner system is a key component in ensuring consistent standards across the sector. Sector-led plans to reinforce its authority and role will help guarantee confidence that no one institution is devaluing the currency of the degree award and will provide a stronger assurance of the quality of the education being provided.

How we will further strengthen the role of universities at the heart of our communities and shared intellectual life, and as one of the key ways in which we engage with the wider world

Universities have a vital role in our collective life, both shaping our communities and how we engage with the rest of Europe and the wider world. They play a huge role in our communities through the provision of cultural and sporting amenities and in passing on and preserving a set of shared societal values, including tolerance, freedom of expression and civic engagement. They have the capacity to provide intellectual leadership in our society, in areas such as the transition to a low carbon economy.

14) We will build on the contribution that universities have made, in partnership with Regional Development Agencies and local business, to regional economic development

To sustain the role of universities in urban renewal and regeneration, the Government will protect the freedoms that higher education institutions currently enjoy, within the framework of existing capital and investment approval processes, to devise their own business plans and borrow commercially to fund new developments. The Government supports the role that Regional Development Agencies play to provide capital for university schemes that they judge to be of high economic value to the locality and region. The Government also believes that RDAs have a key role to play in working with business at local and regional level to support knowledge transfer activities and deepen university links with local and regional businesses: this is crucial to improving the quality of management in Britain and Britain's future success as an innovation economy.

All universities are major contributors to the regions where they are located. They are large employers and the students they attract bring revenue to local businesses. Many universities also see themselves as important civic institutions in their city and region: this role is to be praised and should be enhanced. The Government welcomes the role that universities play in engaging their local business community and strengthening the quality of local civic leadership. They are usually active contributors to the economic development strategies of Regional Development Agencies and local authorities, supporting the creation and growth of local businesses. Their building programmes can be integral to wider regeneration programmes. The projects supported by HEFCE's Economic Challenge Investment Fund illustrate the many ways that universities can help their areas get through the economic downturn.

Local engagement is also crucial to the university function of extending access to higher education among social groups and in areas where it is unacceptably low. Public funding has already supported the creation of new universities in parts of the country, like Cornwall and Cumbria, where no university previously existed. The Government also welcomes higher education provided by and with FE colleges and other providers as a means of promoting easier and wider access.

Universities are one of the key ways in which people from outside Britain engage with us, and through which we engage with the world. Our universities need to be strongly committed to internationalism; attracting students from abroad; collaborating with institutions overseas; and bringing their expertise to bear on global challenges. They should instil a sense of internationalism in students by teaching European and global perspectives and encouraging language learning and study abroad.

15) We will champion the international standing of our universities.

UK higher education is well regarded internationally. We attract high quality students, researchers and university staff from around the world. Currently there are 340,000 foreign students in the UK from 239 different countries; the UK is second only to the USA as a destination for such students. One sixth of our academic staff are from outside the UK, and 90 per cent of our universities have international research links. The net annual contribution to the UK's national income made by international (non EU) students in higher education is estimated at £5.5bn.

Individual institutions have built strong partnerships with China, India, and other countries. However, the strength of the international market for higher education means that many other countries are competing with us. To retain their position, our universities need to demonstrate strengths in research and knowledge transfer as well as student recruitment, growing long-term strategic partnerships in key countries.

Different institutions will pursue their own priorities, but the Government can help communicate a strong “UK Higher Education” brand, and align it with the Government’s diplomatic and cultural agenda, and with our international trade strategy led by UKTI. We have just established a new International Education Research Advisory Forum, chaired by the Minister of State for Higher Education, to bring together Government departments and agencies, the UK’s devolved administrations, and universities. Its purpose is to strengthen links between the British Council, UKTI, the Research Councils, and BIS’ own Science and Innovation Network, so that the UK presents its strongest possible story to potential international partners.

16) We will empower our universities to be world leaders in the growing market in transnational education based on e-learning

We will support the new task force led by Lynne Brindley, Chief Executive of the British Library, to help UK higher education remain a world leader in online learning, and grow its market share by 2015. The task force will identify opportunities for investment and innovation within and between universities and colleges, and with the private sector, in the development of online learning, including the building of critical mass. Through HEFCE, we will be prepared to provide seedcorn funding on a competitive basis for university-private sector partnerships which will strengthen our market position.

We believe that in a rapidly expanding global market, institutions based here have a unique opportunity to provide education in many different forms. The UK’s advantages in both research and teaching are supported by our established strengths in both accreditation and educational publishing. The potential to develop international education through partnerships with broadcasters and internet service providers is considerable, and in our view will shape and strengthen the higher education sector over the coming decade.

How we will ensure that our universities continue to maintain excellence, even under tighter public financial constraints

Our challenge is to nurture a higher education system, responsive to the demands of both undergraduate and postgraduate training, embedded and integrated in a wider education and skills framework and capable of equipping all students with the capabilities and confidence to prosper.

We must achieve these goals in an economic environment that has been transformed by the banking crisis and the downturn. Britain must rebuild its economic growth and invest in the skills and competitive strengths that will underwrite a sustainable recovery and a balanced future economy with a strong mix of services and modern manufacturing. It will have to do this in an environment of fiscal constraint.

Universities have enjoyed a benign financial climate over recent years. Growth based so heavily on state funding cannot continue and this confronts government and universities with a series of challenges. Maintaining excellence in both teaching and research is key. We recognise that per capita funding is important but also that in the current circumstances maintaining that level through public expenditure alone will be extremely difficult. That is why the development of a diverse set of funding streams is important if the quality of higher education is to be maintained and improved.

Our universities need to continue to benchmark themselves against the best in the world, and the highest expectations of their localities and regional economies. Our world class universities are unique national assets, and must be recognised as such. Along with this recognition come reciprocal responsibilities. We need to treat these world class institutions for what they are, and the institutions themselves need to recognise their own obligations to UK undergraduates, in terms of excellent teaching and fair access on merit and potential, regardless of family background.

The rest of the sector contains many examples of excellence of a different kind. Sustaining a diversity of excellence through a period of increased competition and public spending constraint will require each institution to develop its own distinctive mission, and for funding to be focused on investing in and nurturing excellence. Universities may need to withdraw from activities in which they cannot achieve excellence in order to focus on the areas where they can. The Government will need to direct funding more strategically if the resources provided are to achieve public policy goals. In future, new priorities will be chiefly supported by redistribution of existing funds and leverage of private investment rather than provision of new money. We acknowledge HEFCE's role in actively monitoring the financial health of institutions and offering support where necessary.

The universities that succeed best are likely to be those with strong leadership that has the confidence to challenge vested interests. Universities will need to control costs, including pay. They will need to be more flexible in their pay arrangements, to respond to local conditions, promote career paths that span business and academe, and compete for top talent in the international arena.

Universities will need to seek out other sources of funding, from overseas sources as well as domestic ones. The experience of the last decade suggests there is considerable capacity to do this: public funding for higher education increased by 25 per cent in real terms, while total university income has increased by over 50 per cent¹⁰. This new money has come from creating greater economic benefits from the knowledge they generate or the teaching expertise they provide and from philanthropic sources of income and increased international earnings. It is also the result of the Government's decision to introduce variable fees, which has generated an additional £1.3bn of income into the sector, without any apparent negative impact on access¹¹.

In future the burden of financing higher education's diversity of excellence will need to be more equitably shared between employers, the taxpayer, and individuals.

17) Following the publication of these proposals we will launch a review of the fees structure in English universities, as promised at the time of the establishment of variable fees for full time undergraduate students in 2004.

Higher Ambitions will provide important context for the work of the independent review. The focus of the review will be the objectives of sustaining genuinely world-class institutions and fair access to universities, while ensuring value for money for the taxpayer.

¹⁰ HESA data, 2009

¹¹ HESA figures on participation in 2007/08 and UCAS figures for 2008/09 show record numbers of students participating in higher education, including record numbers from lower socio-economic groups.

Conclusion: The heart of a knowledge economy and a civilised society

Britain's universities are fundamental to our character as a country and to our standing in the world.

A strong university system is essential to a country's economic success and the vibrancy and depth of its intellectual and cultural life. Universities embody both our values and our aspirations. They play a huge role in our communities through the provision of cultural and sporting amenities and in passing on and preserving a set of shared societal values, including tolerance, freedom of expression and civic engagement. They shape how we engage with the rest of Europe and the wider world. At a time when public institutions are under intense criticism, universities have an important role in restoring the standards of our public life and in the renewal of trust in the workings of a democratic society.

The aim of these proposals is to build a new national consensus between individuals, government, and employers as to how our higher education system should be supported, adapted and expanded. We can only hope to achieve this through effective partnerships with universities themselves. Indeed, while we have pointed to a number of things that Government can do, either directly or working with the funding bodies, the responsibility for success lies principally with higher education institutions themselves. The chief role of Government is to empower them to deliver.

1. Wider and fairer access to higher education

This chapter argues that because higher education is both a unique and valuable preparation for life and work, and, as such, central to this country's resilience, adaptability and competitive potential in the decades ahead, the question of access to higher education is one of both social justice and economic success. This chapter sets out the Government's commitment to:

- Raising the participation rates in higher education of young people from poorer backgrounds and those facing disadvantages. This includes recognising that the advice and guidance that young people receive and the choices they make at age 14 to 16 are critical to their subsequent experience in higher education;
- Raising aspirations so that those with the potential to succeed at the highest levels are encouraged to aim high, whatever their background;
- Continuing to increase the range of routes into higher education: widening part time study and workplace-based courses to ensure that higher skills can be accessed at a wide range of points during a working life

Why focus on access to higher education?

1 The challenge here was framed by Alan Milburn's recent report¹², and Higher Ambitions is an important part of the Government's response. Because higher skills significantly influence life chances and earning potential, wider and fairer access to higher education is a question of basic social justice. It is in the interests of our society that there are no caps on talent in Britain.

2 A university education can be an entry ticket to the best paid employment and a preparation for a globalised world of work (Fig 1). Those with higher level qualifications are more likely to be in work and less likely to be unemployed than those qualified at lower levels. They are in a stronger position to weather the economic downturn and take advantage of the recovery¹³.

¹² Unleashing Aspiration: The Final Report of the Panel on Fair Access to the Professions, Milburn (October) 2009

¹³ Recent data, from quarter 2 of the 2009 Labour Force Survey shows that those with a level 3 qualification have an employment rate of 75% and unemployment rate of 7%, while those with Levels 4-6 as their highest qualification have an employment rate of 85% and an unemployment rate of 4%.

- 3 As this implies, educational attainment is strongly linked to social mobility. Work done by the Centre for Market and Public Organisation (CMPO),¹⁴ and other academics, has concluded that the imbalance of access to higher education was a powerful driver of the decline in intergenerational mobility that occurred for the birth cohorts from 1958 to 1970. This makes access to higher education for those from less privileged backgrounds a question of elementary fairness in our society. Those who go to university are much less likely to be poor in adulthood: so wider access to higher education is an effective way of breaking intergenerational cycles of poverty.
- 4 But the wider access agenda has another rationale. The need to raise the levels of skills in the UK economy as a whole also challenges us to create new pathways into higher education throughout professional lives and in a way that reflects the challenge of studying alongside full or part time work. We cannot respond to the global economic challenges if we do not develop the potential of all our people.

Fig 1: Employment rates and unemployment rates according to highest qualification



Source: Quarter 2, 2009 Labour Force Survey

Employment rates are expressed as % of the whole population. Unemployment rates are expressed as a % of economically active i.e. excluding inactive individuals

¹⁴ Explaining intergenerational persistence: non-cognitive skills, ability and education, Blanden, Gregg & Macmillan, CMPO Working Paper 06/146 (2006)

- 5** Other countries are investing strongly in higher education. Since 1998 the UK participation rate for higher education has slipped from 7th in the OECD to 15th. This is because although we have grown, others have grown faster¹⁵. For this reason, we remain committed to our goal that **at least 50 per cent of young people (aged 18 to 30) should enter higher education**, and we will continue to work towards this over the period covered by Higher Ambitions.
- 6** It is important to recognise that this ambition does not imply that half of all school-leavers should continue immediately to university to study on a conventional three year degree programme. The traditional pattern of three year, campus-based honours degrees is not the only route to higher skills, nor the only way to prepare successfully for modern economic life.
- 7** We already recognise that, if we are to achieve the ambition set out in the 2006 Leitch report for more than 40 per cent of the adult population to be qualified to level four or above by 2020¹⁶, we must encourage more adults to enter higher education. The majority – around three quarters – of the UK workforce of 2020 have already left compulsory education. The UK retains a large pool of just under six million workers with qualifications at level three but no experience of

higher education. They will require access to higher education through routes other than transferring directly from school or college. In addition, demographic change and an ageing population in Britain will reduce the size of the school-leaver cohort. So growing the number of people with high level skills will mean drawing more mature students into the system.

- 8** We therefore aim to widen participation through the expansion of the number of adults at university and by promoting a broader range of course models alongside the three year degree. This has been a problem in the past: the numbers of students on sandwich courses, for example, has fallen by 4 per cent since the middle of the last decade during a period when overall student numbers have increased by around 32 per cent, an outcome that is not in the long-term interests of either students or employers. In order to attract a greater diversity of students, more part time study, more vocationally-based foundation degrees, more work-based study, more fast-track degrees, and more study whilst living at home must be made available. This improved flexibility of study will help those who have previously found it difficult to access higher education, such as parents with young children, to improve their skills.

¹⁵ *Education at a Glance*, OECD (2009)

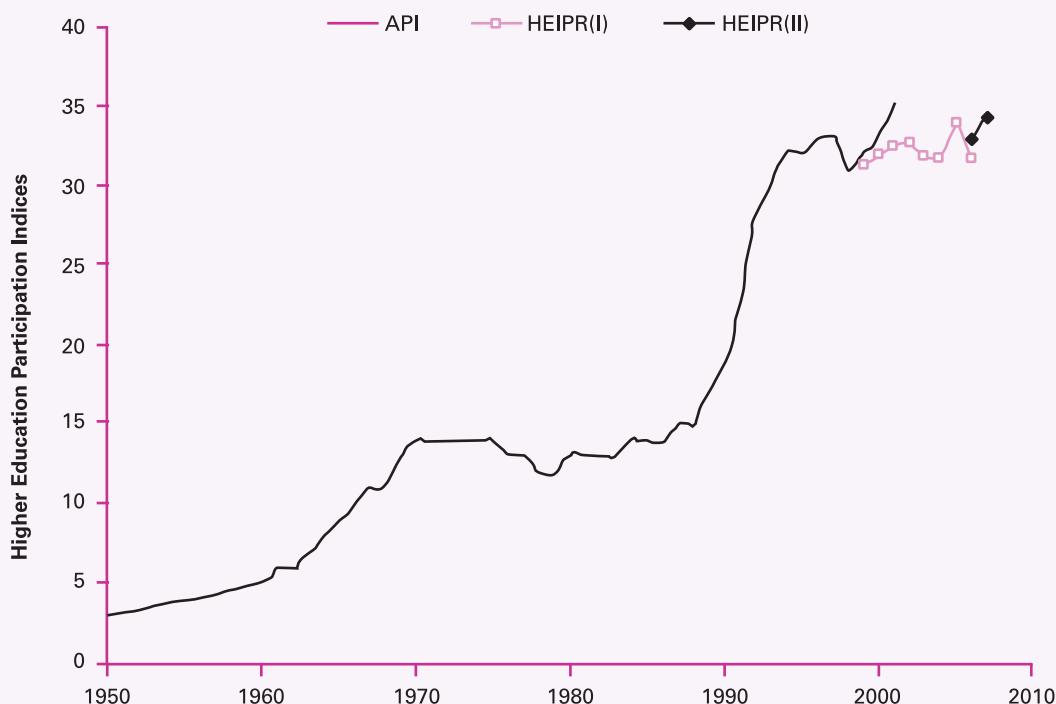
¹⁶ *Leitch Review of Skills: Prosperity for all in the global economy – world class skills*, HMT (December 2006)

Wider and fairer access to higher education: the recent experience

9 Although the UK is far from achieving social balance in access to the benefits that higher education offers, significant progress has nonetheless been made. Higher education in this country is no longer the preserve of a small minority. Since the 1950s the opportunities to go to higher education institutions have grown enormously. In the 1950s, the Higher Education Initial Participation Rate in Britain was 5 per cent. For the same group now, the equivalent participation rate is 34 per cent.¹⁷

10 Over the last 10 years we have made progress on all widening participation indicators. The number of students going to university from lower socio-economic groups is rising, with a record 63,700 in 2007/08 – almost 10,000 more young people from lower socio-economic groups entering higher education than in 2002/03. UCAS figures indicate that even greater numbers of young people from the poorest homes were going to university in 2008/09 than ever before.

Fig 2: Higher education participation rates over time



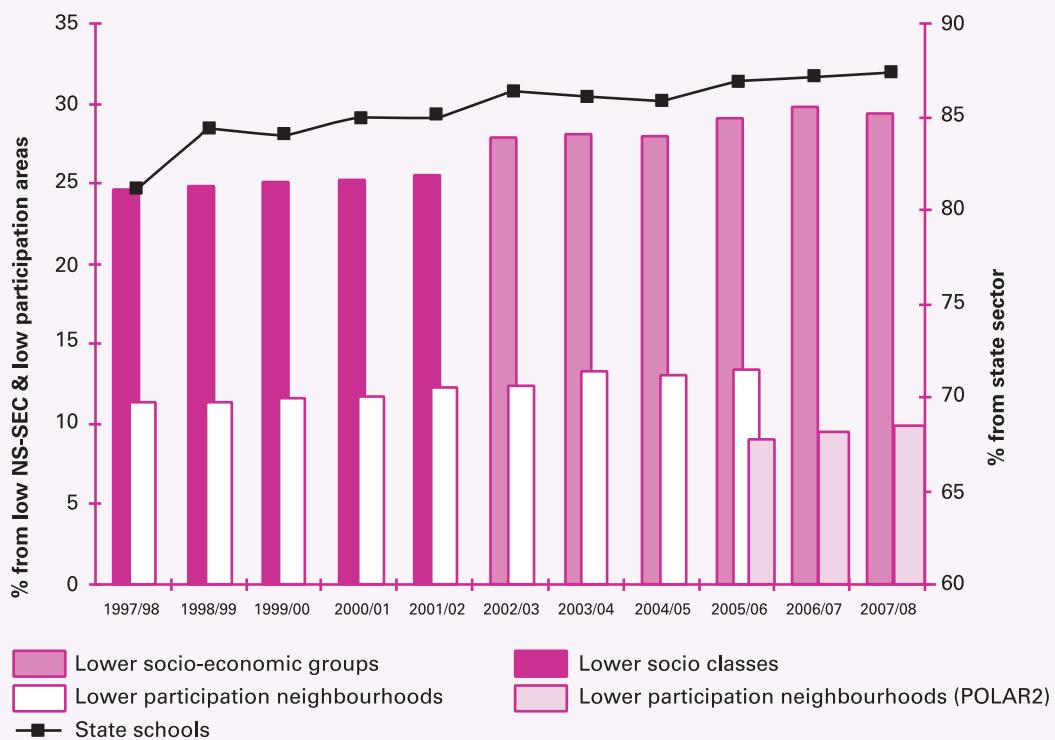
¹⁷ Definitions of participation rates are: For a wider age group (up to 30 years) it is now 43% (Fig 2).

API: The number of home-domiciled young (under 21) initial entrants to UK higher education, expressed as a proportion of the averaged 18 and 19 year old population of Great Britain

HEIPR (I): The Higher Education Initial Participation Rate is the sum of the initial HE participation rates over ages 17-30 for English-domiciled first-time participants in UK higher education

HEIPR (II): HEIPR with improved adjustment for prior experience of higher education

Fig 3: Performance indicators on progress in widening participation to higher education



Source: "Performance Indicators in Higher Education," HESA (2009)
<http://www.hesa.ac.uk/index.php/content/category/2/32/141/>

- 11 The percentage of UK domiciled young entrants to full-time first degrees in England who are from state schools, lower social groups, and low participation backgrounds has also increased, with more students from state schools, from lower socio-economic classes and from low participation neighbourhoods going on to university than a decade ago

(Fig 3)¹⁸. The difference between the first time higher education participation rates of higher and lower social classes has gradually fallen over the past six years. It reduced by seven percentage points between 2002/03 and 2007/08 (Fig 4).

¹⁸ Participation of students from state schools has increased from 81.0% in 1997/98 to 87.4% in 2007/08. Participation among those from lower socio-economic classes has increased from 27.9% in 2002/03 to 29.4% in 2007/08. Participation among those from low participation neighbourhoods rose from 11.4% in 1997/98 to 13.5% in 2005/06, and from 9.2% in 2005/06 to 9.9% in 2007/08

Fig 4:Trends in Participation by Socio-Economic

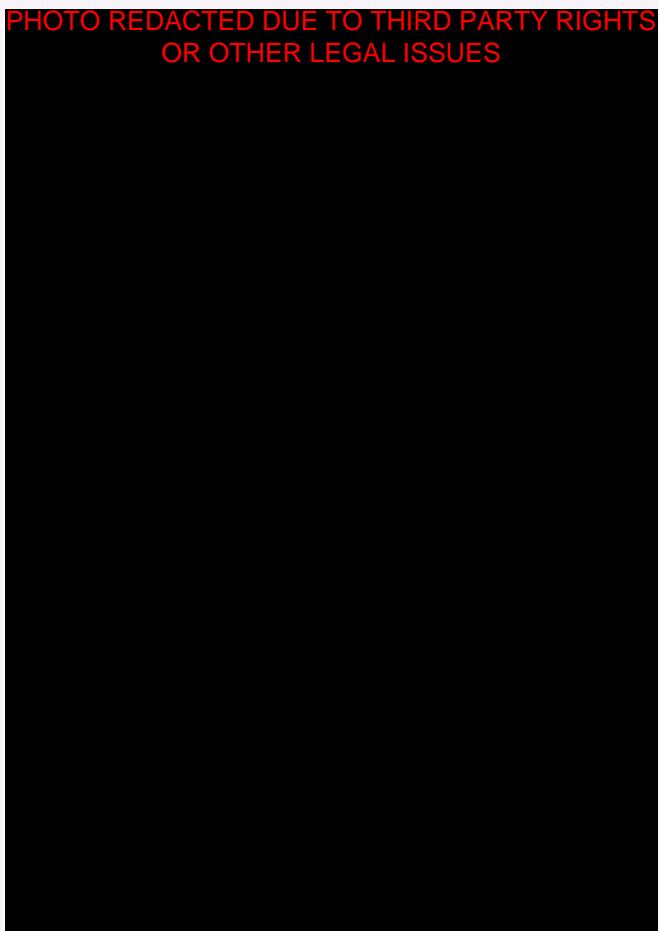


Source: "Full-time Young Participation by Socio-Economic Class 2009 update", BIS (2009)

- 12 There is a wealth of data collected in this whole area, but the overall picture can be confusing. We will ask the relevant bodies to collate meaningful information on student background and work on creating a robust means of measuring and presenting the data in a fair, transparent, and accessible way through HESA.
- 13 Universities have actively pursued recruitment from non traditional students. In 2004 government, together with partners in the higher education sector, formed a unified Aimhigher programme. This has seen schools, colleges, and universities working together to raise the aspirations of young people from poorer backgrounds to progress to higher education. This year we are rolling out nationally the Aimhigher Associates mentoring scheme, following a successful pathfinder phase in 2008.

- 14** Universities themselves also undertake outreach to recruit young people from non-traditional backgrounds, supported through an allocation within the main HEFCE teaching grant. Additionally, this year universities have been required by HEFCE to produce *Widening Participation Strategic Assessments*. These Assessments will include each university's Access Agreement with the Office for Fair Access; its admissions policy; and the broad level of resources that institutions will commit to widening participation and the measures and targets by which they will judge success.
- 15** In response to the need to create new routes into higher education for mature students, universities have developed a range of flexible study models. Patterns of access are continuing to change, with fewer than 60 per cent of entrants being 'traditional' students coming straight from school with A levels and studying full-time¹⁹. More people are choosing to study part-time and combine study with work; and more provision is being delivered outside the traditional campus setting, including on employer premises.
- 16** Foundation degrees – workbased programmes, designed with and for employers – have seen a year-on-year increase in enrolments since we introduced them in 2000, and with approximately 87,000 students enrolled by December 2008 they are now an established part of the higher education landscape. Some foundation degree programmes, in particular those supporting workforce development, feature flexible and workplace-delivery. Many universities provide continuing professional development courses and non-credit bearing skills development for professionals and those wishing to retrain. This is a very important role and a means of quickly re-skilling and up-skilling the workforce.

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¹⁹ Alternative routes into and pathways through higher education, BIS Research Paper 4 (2009)

Fair Access

- 17 But despite this improving performance the difference across social classes in participation in higher education still remains too large. The higher social classes have almost twice the participation rate of lower social classes. As Alan Milburn's report observed. 'It is not ability that is unevenly distributed in our society. It is opportunity.' Of those in the top 20 per cent of performers at age 11, young people amongst the 20 per cent most materially deprived were around two thirds as likely to attend university by age 19 as the 80 per cent *least* materially deprived.²⁰
- 18 In addition, our universities have succeeded in widening access to poorer students over the last decade, but this progress is not equally reflected in all parts of the higher education sector, especially in our most selective institutions²¹. Fairer access for educationally disadvantaged but able UK pupils has to remain a key part of how our world class universities see their missions. This remains a huge and pressing challenge for this country.

- 19 We now need to reinvigorate social mobility in this country by making the benefits of higher education open to all who have the talent and motivation, whatever their background. We want to see widening participation supported by all those with a role to play. This includes: schools and colleges in relation to raised attainment and higher rates of progression post 16 and post 19; professional bodies in respect of their own widening participation and equality commitments; universities, since all students gain from the widest possible diversity on campus; and wider groups who have an educational or community ethos such as museums, galleries and the third sector.

Helping students set their sights on university

- 20 We know that performance at school continues to be the strongest indicator of entry to higher education. Our long term challenge is to reduce the large and persistent gap in achievement between pupils from disadvantaged backgrounds and their peers. The Department for Children, Schools and Families published *Breaking the link between disadvantage and low attainment*²² in March this year. It sets out a framework for school and local authority action which includes broadening pupils' experiences and raising their aspirations.

²⁰ Widening Participation in Higher Education: analysis using linked administrative data, IFS (2008)

²¹ HESA Performance Indicators (2009)

²² Available at <http://publications.dcsf.gov.uk/>, reference DCSF-00357-2009

21 It is not just a matter of performance but of ambition and aspiration. We will improve the advice and encouragement that students receive earlier in their education with respect to setting their sights on university. DCSF have recently published their strategy for young people's information, advice and guidance (IAG) 'Quality, Choice and Aspiration'²³. This has been developed in alliance with BIS, and demonstrates the Government's recognition of the importance of high quality and impartial IAG in encouraging progression, including to higher education. A cross-departmental ministerial group will oversee the implementation of the strategy. The strategy:

- introduces a new IAG guarantee for pupils and their parents, setting out what all young people have a right to expect from their schools and colleges, and from wider IAG services;
- stresses raising aspiration amongst young people with the talent to achieve at the highest levels but who, because of their background, lack the opportunities;
- emphasises the critical role of parents, business and the wider community in supporting young people's choices;
- provides £10m funding to support new approaches to broadening horizons for young people, including opportunities to explore higher education

- sets out plans to appoint a champion from the higher education sector, alongside a business champion, to lead the drive for more mentors;
- strengthens the accountability arrangements for IAG through the School Report Card and an enhanced role for Ofsted.

22 We expect all those who deliver careers education and information, advice, and guidance to do so impartially. We have issued statutory guidance to schools²⁴ to reinforce their statutory duty to give impartial careers education and we are ensuring that the school workforce has guidance on the opportunities available to young people, including on higher education, through the DCSF support programme and resources from the Training and Development Agency for Schools and the Qualifications and Curriculum Development Agency. In this way we are reaching deeper into the school system to improve the advice and guidance given to pupils about higher education, and overcoming the assumptions and expectations about which pupils should aim for which universities which some teachers may hold (research into teachers' attitudes to raising young people's aspirations to go to higher education²⁵ found that some teachers did not promote progression to higher education effectively).

²³ *Quality, Choice and Aspiration: A strategy for young people's information, advice and guidance*, DCSF (October 2009).

²⁴ *Statutory Guidance: Impartial Careers Education*, DCSF (October 2009)

²⁵ *Raising Young People's Higher Education Aspirations: Teachers' Attitudes*, DIUS (January 2009)

- 23** The National Council for Educational Excellence has made a number of recommendations, to Government and the education sector, to raise aspiration and awareness, as part of long term, sustained partnerships between schools, colleges, and universities. These are now being implemented. We will continue to encourage strong structural links between universities and schools, particularly those where pupils face particular disadvantage, to help raise the attainment and aspiration of those young people. In addition the two Departments will build stronger links between the DCSF programmes supporting progression by disadvantaged gifted learners to competitive higher education; and the BIS programmes to strengthen the support that universities provide for those learners.
- 24** The Department for Children, Schools and Families is currently developing pilots of two types of innovative 14-19 institutions, Studio Schools and University Technical Colleges (UTCs), which will enable young people to develop specialist technical, vocational and entrepreneurial skills through strong links with local businesses, further education and higher education. As well as teaching core curriculum subjects, UTCs will specialise heavily in one or two curriculum areas, particularly those which require access to specialised equipment such as engineering, manufacturing with product design, construction or agriculture.
- 25** The involvement of universities would ensure access to top quality teaching skills and cutting edge facilities, and build a visible route for progression into higher education. We will encourage universities to become involved, building on their increasing involvement in sponsoring local academies. Aston University is already actively engaged, sponsoring the Birmingham UTC pilot which will provide specialist engineering provision in the heart of the city.
- 26** Strong and sustainable links between schools, colleges, and universities are critical to ensuring that young people have access to the full range of opportunities to fully develop their particular talents. There are many local partnerships already in existence, including those funded by HEFCE, such as Aimhigher partnerships, and those supported by universities themselves. HEFCE are piloting a brokerage system linking primary schools with universities through the Aimhigher partnerships whilst also examining how partnerships' existing links with secondary schools can be used to reach local primary schools. We look forward to the results of these pilots.

Case Study:

The University of Plymouth *Aiming Higher Scheme*

An innovative model of higher education/schools liaison was developed to enhance opportunities for disadvantaged pupils. It involves providing information and guidance direct to pupils, and the development of the whole school workforce through close links between the Faculty of Education and schools.

The major aspect the University of Plymouth tested was an innovative scheme using students as 'buddies' for children aged 11 and 14 in Plymouth schools. The students were specially trained, committed to maximising opportunities and spent one month attached to individual classes and 'buddying' individual pupils one-to-one.

The effects were dramatic with a substantial increase in the expectations of the pupils involved. In response to the question 'I think most pupils in my class expect their education will last until they finish University' there was a near 22 percentage point rise in those answering 'yes' (from 24.4 – 46.2%) for the younger pupils and a rise from 13.6 to 23.5% for the older pupils.

27 In support of this, HEFCE have invited universities to undertake research that will provide evidence of effective practice in models of these links. Eleven projects have been awarded funding to research and evaluate models of links between higher education institutions and schools, academies, trusts, and colleges. The projects are evaluating the nature, scope, and cost effectiveness of sustainable models of school-higher education links. Evaluation will be shared across the higher education sector so that individual institutions can select and then apply those aspects that are most appropriate to their needs and strategic priorities.

28 As part of The New Opportunities White Paper published in January 2009, we announced a guarantee that high performing pupils from low income backgrounds will have a structured package of assistance to help them progress to higher education. Schools and colleges working in close partnership with higher education institutions are key to delivering this commitment. This will be reflected in the detailed proposals for implementation we shall publish early in 2010.

29 Social mobility is not simply a question for the educational sector. There need to be stronger links between the professions, universities, colleges and schools, through which the professions themselves help to raise the aspirations of bright but disadvantaged students and encourage them to set their sights on university. The Government will work with the Gateways to the Professions Collaborative Forum and the higher education sector to promote this involvement.

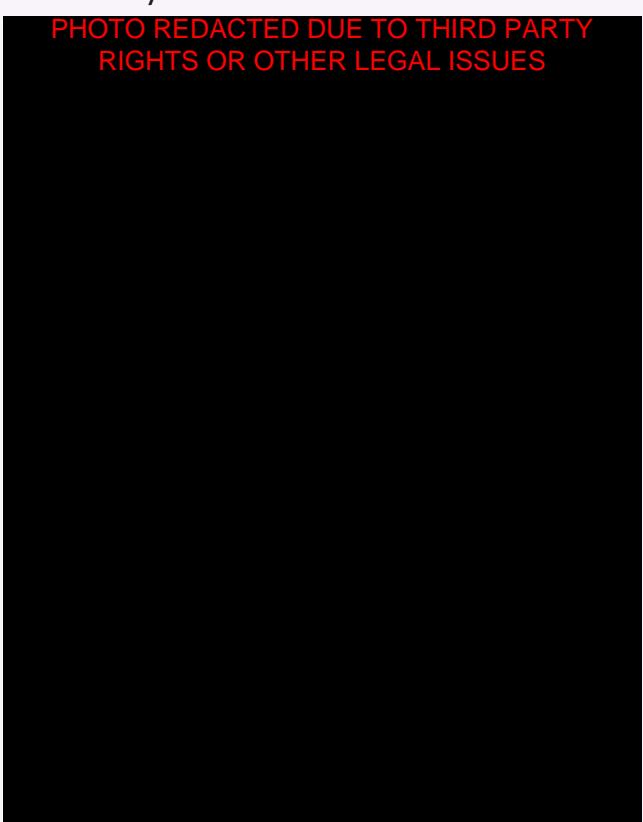
Recognising capability

30 We will continue to support and encourage all universities to seek out those with the potential to succeed on their courses no matter what their background, taking into account the educational and social context of pupils' achievements in their admissions process. Admissions decisions are a matter for each university but it is in every university's best interest to attract students with the greatest potential. There is much good practice and evidence in this area emerging across the sector and we will look to Supporting Professionalism in Admissions (a programme established in 2006 to support institutions in the development of fair admissions) to help share and communicate that more widely.

31 **Many universities are developing new ways to use contextual data in their admissions procedures to assess the aptitude and potential to succeed of those from poor backgrounds. We believe this is a valid approach and hope that all universities will consider it.**

In assessing candidates, universities already expect to look not only at what individuals have achieved, particularly through their exam grades, but also at their aptitude and potential to succeed. While the principle of university autonomy means that Government does not interfere with any university's admissions procedures, we believe that the use of appropriate contextual criteria can help to ensure that high-potential candidates are not missed by the system.

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Case Study:

The use of contextual data: Nadia, an applicant to the University of Leeds

Nadia applied through the University's special admissions scheme, Access to Leeds, and received special consideration from the School of English. She was eligible for the scheme as she was in the first generation of her family to enter higher education, in receipt of Education Maintenance Allowance (EMA) and had attended a school where fewer than 60% of pupils achieved five A to C GCSE passes.

Her studies had been severely disrupted by events in her life, and due to caring responsibilities at home her only higher education option was to attend a local university. As she was only taking two A2 qualifications due to disrupted schooling she was offered entry grades of AB at A2 (with the A specified in English) and A at AS instead of the standard offer of AAB at A2.

The school was willing to make this offer because they were impressed with her overall application. Her performance in the assignment was such that her potential shone through and even after missing the offer she was accepted. She went on to achieve an upper second class degree. She says she has benefited from the university experience: "Incredibly, I am not the same awkward, unsocial, helpless young person I used to be."

Widening access to our most selective universities

32 We are asking Sir Martin Harris, the Director of Fair Access, to consult Vice Chancellors and advise the Government in the next four months on further action that could be taken to widen access to universities for those from under privileged backgrounds – and to ensure that measures for wider access are prioritised most effectively and do not suffer in a time of greater fiscal constraints. His report will be available in time to influence the conclusions of the Fees Review.

33 Working with universities, he will look at how individual universities can best set and achieve targets for themselves.

He will advise on how best to promote the partnership of schools and universities to identify and mentor the most talented young people from an early age. He will also advise on whether the money currently used by universities under access agreements, mainly spent on bursaries for their students, can be better targeted in order to give more effective support to fair access.

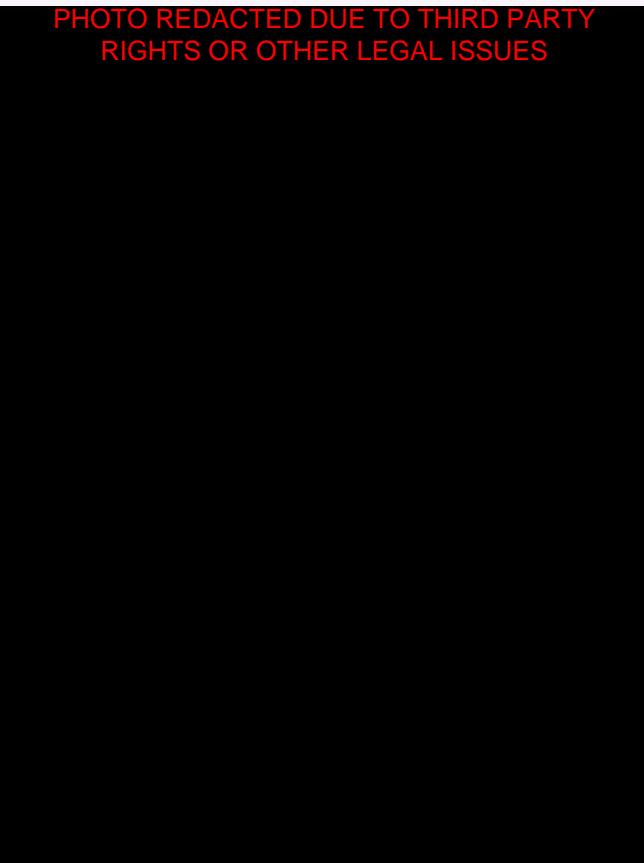
More flexible routes into higher education

- 34 Full-time honours degrees will continue to be a popular mode of study over the next 15 years. But we can expect part-time study to increase, and as Christine King argued in her contribution to our higher education debate, it is important that part-time provision is not seen by universities as something to be bolted on to a core model of full-time teaching²⁶. Part-time study can be organised around work, reducing student support costs, building practical employability skills, and fostering links between students and their employers. It is vital, therefore, that we have appropriate provision for flexible study.
- 35 Universities are already making good progress with increasing the flexibility of provision. We will ask HEFCE to build on the sorts of responsive (or tailored/bespoke) higher education which has been developed through employer co-funding pilots²⁶ and the Economic Challenge Investment Fund, including short credit-bearing courses, rapidly developed, and flexibly delivered.
- 36 **We will give priority to growing a diverse range of models of higher education most attractive to non-traditional students.** These include options such as part-time and workplace-based courses aimed particularly at mature students or those from non-conventional backgrounds. Adults in the labour market who do not have higher education qualifications deserve a second chance to improve their own and their family's economic position. We will also encourage the further expansion of foundation degrees, higher education level apprenticeships and more opportunities to progress from Apprenticeship programmes and vocational qualifications at Technician level into higher education.
- 37 There will be an important role for further education colleges as well as for universities in such provision – a role that will be set out in detail in our forthcoming Skills Strategy²⁷. We are committed to the enhancement of locally accessible higher education that can create new opportunities for individuals and their communities. This will be achieved, as resources allow, through innovative partnerships between universities and further education colleges, and by support for new local higher education centres under the New University Challenge initiative.

²⁶ HEFCE Employer Engagement projects support co-funding and related activities. To date there are 69. See Annex C for a full list of contributions commissioned for the debate on the future of higher education.

²⁷ National Skills Strategy to be published by BIS later in 2009

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- 38 The 2009 Grant Letter also asked HEFCE to consider whether further models for different modes of provision are needed. Without compromising broader aims of widening participation, universities need to rise to the challenge of opening up new revenue streams through this sort of provision by working more closely with business and industry to tailor and customise teaching. As universities respond to the needs of students and employers, provision should increasingly become available throughout the year as, for example, the current pilots of two year degree programmes are demonstrating. We want to see distinctions between part-time and full-time labels becoming increasingly irrelevant.

Case Study: **Foundation Degrees for the Nuclear Sector**

The National Skills Academy for Nuclear is working with the University of Central Lancashire (UCLan) and Portsmouth University to jointly develop and deliver the Foundation Degrees that are needed by the nuclear sector to address the Vocational and Technical challenges facing employers.

The universities have worked closely with the Skills Academy and employers to develop Foundation Degrees for school leavers, new entrants and existing employees. The partnership has led to the development of an employer driven Foundation Degree in Engineering with optional units in Nuclear. The Skills Academy has worked with the Universities on a strategy to deliver this Foundation Degree on a franchise arrangement through the Skills Academy network of Quality Assured Providers, to ensure a consistent approach for employers in curriculum content and delivery. This builds on the excellent work undertaken by UCLan and Gen II in partnership with Sellafield to develop and deliver Foundation Degrees to support recruitment into the nuclear sector.

39 Following the recommendations of the Burgess Group²⁸, the sector has produced a credit framework for higher education in England. The use of academic credit supports flexibility in access to higher education, including portability – the ability of students to move on to a new institution to study new modules with formal recognition of what they have already achieved. The Government would like to see its adoption continue to grow in response to demand. Universities can already claim funding for credit-bearing courses, and the Higher Education Credit Framework for England highlights the potential roles for credit in supporting progression into and within higher education, and transfer between programmes²⁹. Short, credit-based courses are already popular with employers. It may take longer for businesses to adapt recruitment processes to take credit into account, but this can only be bolstered by examples of good practice such as the approach taken by the Open University, which is in the vanguard of the credit system.

Conclusion

40 The investment that has been made in widening participation over the last ten years has given us a strong platform on which to build. As autonomous institutions, universities have shown creativity and enterprise in addressing the question of wider and fairer access. However, progress has fallen below the Government's ambition, and is highly uneven across the higher education sector, especially at our most selective institutions. We are still falling far short of a higher education system that offers fair access to all on the basis of their talent and potential. The whole education sector needs to take greater responsibility for identifying and supporting those with talent and potential and ensuring they can access higher education not just as school leavers but at any point in their working life. The alternative is a loss of talent and potential that this country cannot afford, economically or socially.

²⁸ *Proposals for national arrangements for the use of academic credit in higher education in England*, Measuring and Recording Student Achievement Steering Group (2006) http://www.universitiesuk.ac.uk/Publications/Documents/Burgess_credit_report.pdf

²⁹ <http://www.qaa.ac.uk/england/credit/creditframework.asp>

2. Equipping Britain's workforce for a global economy

This chapter argues that in a globalised knowledge economy such as Britain's, the university system plays a critical role in equipping people with the skills they need to prosper. In such an economy, there is a premium on sophisticated skills, intellectual confidence and employability, so these must be among the key returns from higher education. This chapter sets out the Government's approach to a number of important challenges:

- Ensuring that individuals and businesses recognise the premium offered by higher skills and invest accordingly. Prospective students also need good information so they can reflect on how different learning choices will affect their career prospects;
- Ensuring that the higher education system develops programmes that deliver the higher skills that the economy needs, especially in key areas where shortages of skilled workers are putting growth at risk;
- Ensuring that businesses work more closely with universities both to communicate their skills needs, and to fund programmes from which they benefit in the form of more specialist staff;
- Raising the level of employability of our graduates by ensuring they have the important generic skills in team-working, reasoning and communicating that are required for many modern careers;
- Addressing the specific challenges facing postgraduate education which is critical both for producing the academics of the future, but also in training for an increasingly wide range of modern jobs.

The skills for a knowledge economy

- 1 Britain is a knowledge economy. Its competitive advantages in the global economy are all built on sophisticated skills, high levels of creativity and intellectual confidence. This is true for sectors as diverse as financial services, the creative industries and advanced manufacturing. Tertiary education directly contributes to productivity in such economies. An OECD study in 2003 found that a 1 per cent increase in tertiary human capital stock is associated with a 1.1 per cent rise in GDP growth rates³⁰. A 2006 Department of Trade and Industry (DTI) study found that enterprises classed as “innovatively active” have roughly twice the share of employees educated at degree level than non-innovatively active companies³¹.
- 2 This is the background to the creation of the new Department for Business, Innovation and Skills (BIS) in June 2009. The creation of BIS signals the central role that the Government envisages for higher education in contributing to our economic strength and competitive potential. It does not mean that the Government believes that higher education only matters for its economic contribution. The process of knowledge generation and stewardship is a public good,

and important in its own right. Research and learning in universities have intrinsic value aside from any economic consideration. But it does mean that we are determined that no stone should be left unturned in maximising the economic potential of higher education for this country.

- 3 Our universities already do an excellent job of helping people develop skills and capabilities. Businesses report high levels of satisfaction with graduates. Over their working lives, graduates earn, on average, comfortably over £100,000 more than an individual whose highest qualification is two or more A-levels (net of taxes and in today's valuation)³². This premium has been maintained even during a period of substantial growth in the overall number of graduates.
- 4 Higher education has become better attuned to the needs of employers over the past decade. From a standing start in 2000, the number of enrolments on foundation degrees, co-designed with businesses and public sector employers, grew to almost 90,000 by the end of 2008. Universities have also begun to deliver programmes that are co-funded with employers.

³⁰ B.Sianesi & J. van Rees (2003). The Returns to Education: Macroeconomics, Journal of Economic Surveys, Vol.17.

³¹ Occasional paper No 6, *Innovation in the UK: Indicators and Insights*, DTI (July 2006)

³² Department for Business, Innovation and Skills BIS internal analysis

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- 5 But although their general view of the quality of our graduates is a positive one, employers continue to report skills shortages, particularly in science, technology, engineering, mathematics and other key skills that underwrite some of our most competitive sectors. They also report a lack of 'employability' skills in graduates such as business awareness and self-management³³. Both of these deficits are holding back our economic prospects.
- 6 The point is not that universities have become weaker performers, or that graduates are less able than they were. It is that businesses are making increased demands of their employees, including at new entrant level. As competition increases, technologies develop at speed, and product life cycles become more cramped and volatile, the demands on new graduates in the workplace are increasing. This truth affects businesses, universities, and students equally.

The premium on higher skills

- 7 We believe it is vital that individuals and employers have a strong understanding of the way in which higher education can support them in their careers and in their business success respectively. Individuals will inevitably and rightly take a variety of considerations into account when choosing their own higher education provision. But it is increasingly important that they consider how their programme of study will affect their long term employment prospects.
- 8 Employers need to do more to help potential students understand the importance for their own future prospects of acquiring high-level skills. As recommended by Alan Milburn's report, they should offer prospective students information about what sorts of jobs and future opportunities are available in a particular sector, the skills needed to get those jobs, and how those skills might be gained. Employers also need to ensure they provide opportunities for students to acquire the necessary skills through work placements, sandwich course years or support for employees who are studying. All this should be underpinned by close working with universities on course design.

³³ Confederation of British Industry (CBI) Skills Survey (2009)

- 9 It is sometimes suggested that a number of popular subjects are of little value. Stereotypes about what courses offer the best employment prospects are often wrong. Graduates in some subjects, popularly thought to confer poor employment prospects, are actually found to have good rates of employability. For example, six months after graduating 74 per cent of those qualifying in Media Studies in 2007/08 were in employment. And for Marketing and Sociology graduates it was 76 per cent and 70 per cent respectively, compared with an overall average of 70 per cent. Furthermore, the data on employment and further study outcomes at six months show a spectrum of performance in each of the university mission groups, with new universities such as Edge Hill (95 per cent) and Nottingham Trent (93 per cent) demonstrating that excellence is not the preserve of a select group of institutions³⁴.

Supplying the right skills for growth industries

- 10 We need skilled people to enter those industries which have the potential to drive future growth in our economy. This includes the key sectors and markets in which our companies exercise a competitive advantage such as sophisticated services, biosciences, advanced manufacturing, low carbon, the creative industries and indeed higher education itself. And future graduates, as well as the existing workforce, need to be able to deliver the resource efficiency that will need to underpin all business practices to achieve environmental sustainability.

Case Study: University of Salford supporting growth sectors

The University of Salford has established “The Digital Cluster” which is a centre of excellence combining high quality research, academic enterprise and teaching in areas of informatics, digital media, and new and convergent technologies. Salford has just been awarded Skillset Media Academy status. The University’s School of Media, Music and Performance will be working with industry partners to develop new curricula, progress teaching and world-class research, and help students to become more employable in the media sector.

³⁴ Destinations of Leavers from Higher Education Survey, Higher Education Statistics Agency (2007/08)

- 11 We want higher education capacity to grow quickly in these priority areas. This has been a prominent message from the various consultations which the Government has conducted with business, including through *Higher Education at Work*³⁵ and business panels convened by Ministers. While the normal operation of the market will produce the incentives to develop many of these skills, we know from Sector Skills Councils (SSCs) and others that there are also areas where the skills market is underperforming.
- 12 There can be no room in the system for vocational programmes that do not constantly evolve to meet changing business needs. **There will be a new central role for the UK Commission for Employment and Skills (UKCES) to advise on areas where there is an insufficient supply of graduates in particular disciplines**, and also cases where university programmes are failing to reflect changed business requirements or the priorities articulated by employer-led bodies such as SSCs and Regional Development Agencies (RDAs). Short-term high-level skills needs will also continue to be picked up in a range of ways: by universities working with their partners in industry; by employers and their representative bodies; by SSCs; by RDAs gathering intelligence from their business support work; and by specialists including the forthcoming NHS Centre for Workforce Intelligence. Responsibility for deciding on action will continue to rest with universities and businesses.
- 13 Working with employers, the higher education and further education sectors, and other partners, UKCES will also produce a strategic skills audit. This will analyse the current and longer-term trends on skills that are critical to the sustainability and development of key industries and public services supporting economic growth and employment, as well as setting out current unmet skills requirements. It will draw on the RDAs' new role of determining a regional Skills Strategy as part of the integrated Single Regional Strategies: (one aspect of the RDAs' new role is to determine economic need, especially in the key sectors and markets identified in the *New Industries, New Jobs* strategy paper; and the mismatch between need and supply, both within and across regions. The report will be factual and take a balanced approach drawing on the most up-to-date data and horizon scanning/forecasting material available in the UK and more widely, aiming to help Government not only to anticipate future requirements but also to shape them. An initial report will be produced in January 2010, with annual autumn reports thereafter.

³⁵ Higher Education at work High skills: high value, Department for Innovation, Universities and Skills (DIUS) (2008)
<http://www.bis.gov.uk/he/higherskills>

- 14** Where demand-led pressures from employers and students do not stimulate the provision of important skills in a timely and appropriate way, funding levers will be used to ensure supply can meet demand.
- We will ask the Higher Education Funding Council for England (HEFCE) to devise new funding incentives to develop higher education programmes that deliver the higher level skills needed.** We will give new priority to the programmes that meet the need for high level skills, especially for key sectors including those identified in the *New Industries, New Jobs* strategy of April. This will mean enhanced support for the 'STEM' subjects – degrees in the sciences, technology, engineering, and mathematics – and other skills that underwrite this country's competitive advantages. This will be in addition to the £20m national higher education STEM programme HEFCE have developed which aims to deliver a sustained increase in STEM graduates, focussed specifically on under-represented groups.
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- 15** There will be a greater element of competition between universities for funding, with the winners being those universities who can best respond to these evolving economic challenges. We will invite the Funding Council to consult on how these changes should be implemented. We accept that the effect of these changes in HEFCE's approach to contestable funding will vary between universities: increasing funding for some and reducing it for others. To allow funds to be diverted to courses that meet strategic skills needs they will be diverted away from institutions whose courses fail to meet high standards of quality or outcome
- 16** In this process we would expect HEFCE to act on the information from UKCES and others about short- and long-term skills needs and their analysis of strategic priorities. We also expect them to work very closely with those SSC which can demonstrate strong employer commitment.
- 17** We recognise and reaffirm the importance to universities of a stable core funding environment. As we say in chapter six, higher education funding should continue to be based, as at present, on a simple system whereby the majority of resource is distributed to institutions on a formula basis, in line with their success in recruiting and retaining students. This has proved a strong and successful model.

- 18 The supply of high-quality STEM graduates depends not just on university provision, but also on the pipeline from schools and colleges through universities and on into employment. We will seek to support work already underway by the Department for Children, Schools and Families in raising STEM participation. With around half of STEM graduates going into non-STEM employment³⁶ employers also have a role to play, ensuring that their businesses offer career prospects that are attractive to the skilled individuals the system already produces.
- 19 There are a number of other funding levers which we will use to ensure the supply of quality graduates in areas of highest economic impact, including STEM:
- We will ask HEFCE to ensure that the funding system does not create disincentives for universities to offer STEM provision. This will involve a review of the HEFCE “fee assumption”³⁷, with a view to making it more equitable for subjects which attract higher rates of HEFCE funding.
 - We will ask HEFCE to make the system for supporting Strategically Important and Vulnerable Subjects (SIVS) more proactive, expanding it to support the kinds of priorities identified in the *New Industry, New Jobs* strategy paper. This includes areas where there is a major

mismatch between supply and demand, and subjects which are not yet vulnerable but are at risk of becoming so. We will monitor the balance between supply and demand in strategically important subjects, to maximise the capacity in the system to provide for qualified applicants.

A stronger partnership between universities and businesses

- 20 The relationship between universities and employers is critical for both parties and the future prosperity of our country. The capacity of the higher education system to equip people for the modern world of work depends on this relationship being productive and based on mutual understanding. We expect universities and businesses to work together to anticipate, shape, and respond to demand for skills in the economy. This starts with both playing a role in the skills forecasting system set out above and supported by a wide range of sectoral and bilateral partnerships. These partnerships should cover the full range of economic activity, including innovation, knowledge transfer, and jointly developing centres of excellence between businesses and universities.

³⁶ *The Demand for Science, Technology, Engineering and Mathematics Skills*, DIUS (2009)
http://www.dius.gov.uk/consultations/-/media/publications/D/Demand_for_STEM_Skills

³⁷ When HEFCE calculate how much funding to allocate to an institution for teaching, they make an assumption about the tuition fee income that the institution might be expected to receive, at sector average rates. This is known as the fee assumption.

Case Study:

University of York in partnership with high-tech business at the York JEOL Nanocentre

The York JEOL Nanocentre represents a major long-term collaboration between the University of York, Yorkshire Forward, the European Union, and JEOL who are world leaders in electron optics. The centre is a world-class research facility with a critical mass of nanoscience workers with specialised facilities in electron microscopy and nanolithography, coupled to the existing activities in surface analysis, magnetic materials and devices. The Nanocentre is an open access, industry facing and “industry first” facility.

The Nanocentre will offer a range of short courses which will form part of the full and part time higher degree programme as well as providing hands-on training for scientists in industry.

21 We welcome the recent Confederation of British Industry (CBI) report on higher education which committed British business to a higher level of engagement with universities³⁸. Our expectation that businesses should play an active role in the higher education system will continue to rise. As Alan Milburn suggested, **they need to be active partners with universities, not passive customers**¹². As the key definers of the skills needs of our economy and the key beneficiaries of the skilled workers produced by higher education, businesses have a crucial role in the funding and design of programmes, in the sponsorship of students, and in offering work placements and practical experience for students.

22 The majority of businesses that invest in high level skills do not make enough use of higher education. This should change: businesses should tap the resources available in universities more effectively, and universities should become more flexible in providing for business demand. The role that business people play as members of University Boards of Governors, as members of University Advisory Councils and in influencing course provision through Sector Skills Councils is of great importance and will become greater in future.

³⁸ Stronger together: Businesses and universities in turbulent times, CBI (2009) <http://highereducation.cbi.org.uk/uploaded/CBIHETaskforcereport.pdf>

¹² Unleashing Aspiration: The Final Report of the Panel on Fair Access to the Professions, Milburn (October) 2009, Recommendation 39

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23 Employers need to ensure that prospective students understand what employers' skills requirements are, including the numbers of graduates they are likely to need and the specific skills those graduates should have. One way they can do this is to work with Sector Skills Councils so that they can provide this information to prospective students on a sectoral basis, together with information about what to look for, and what to avoid, in vocational courses. They also need to offer salaries and career prospects which will be attractive to graduates, and the opportunity for employees to upgrade their skills to enable them to progress.

24 We will ask HEFCE to use part of its funding to incentivise collaborative work between higher education institutions and Sector Skills Councils to develop new programmes, new modes of delivery, and new centres of expertise around agreed strategies for priority sectors and markets. For example, we are beginning to see the results of the Information Technology Management for Business programme developed jointly with e-skills UK, and with the participation of the RDAs³⁹. If evidence demonstrates that this kind of programme can meet employer needs in a financially sustainable, cost-effective manner, we will extend the model to other important sectors and markets such as those identified in *New Industry, New Jobs*. The RDAs can add value here through their role in supporting business-critical infrastructure, which will help to maximise the direct economic benefits of such collaborations.

25 We will focus some strategic intervention by HEFCE and research councils to encourage and sustain long-term capacity and relationships across sectors, building on examples of good practice such as the University of Leicester University and De Beers, and the University of Sheffield University and Boeing.

³⁹ <http://www.e-skills.com/itm>

- 26 The Government has already invested £148 million since 2008 in supporting partnerships between institutions and business to grow the market for workforce development in high level skills co-funded by employers. This investment is targeted on transforming the way universities engage with employers.
- 27 In strategically important sectors, we will bring together higher education institutions, employers, Sector Skills Councils and sectoral experts in High-Level Skills Market Teams to focus customer demand, and to accelerate the response from universities to meet that demand. These teams will look strategically at a sector, determining whether publicly funded higher education provision supplies graduates with the right skills to work within that sector; how that provision may need to develop in the future to achieve a better match with employers' skills needs; and identifying where employers are prepared to meet the extra costs of tailored provision.
- 28 Investment of public funds in the skills of the workforce and of potential entrepreneurs is available to employers in England through Train to Gain which forms part of the simplified business support portfolio called Solutions for Business. It is important that higher education institutions let RDAs and their Business Link Providers know what they can offer so that Business Link Advisers can support their business clients by making appropriate employee referrals to higher education institutions.
- 29 Strong partnerships between universities and business are not only important in building relationships with companies already based in the UK, but are also a key factor in attracting inward investment in Britain. International businesses report that the availability of highly skilled individuals is a key factor in their decision about where to invest. The creation of the Department for Business, Innovation and Skills means that responsibility for promoting this inward investment through UK Trade and Investment (UKTI) now rests with the same Department as higher education policy. BIS will be an active ambassador for the strengths of our universities as a resource for businesses wanting to invest here.

Giving graduates the best possible start

- 30 A key issue for employers in all sectors is the supply of graduates with generic "employability" skills⁴⁰. For example, most graduates in any sector need skills in Information and Communication Technologies (ICT) and team-working skills⁴¹.

⁴⁰ *The Employability Challenge*, UKCES (2009), <http://www.ukces.org.uk/tags/employability-challenge-full-report>

⁴¹ See, for example, *Beyond Known Unknowns: a further exploration of the demand for higher level skills from businesses*, CFE (2009) http://www.cfe.org.uk/uploaded/files/CFE_Beyond%20Known%20Unknowns.pdf

- 31 The CBI/UUK publication *Future Fit*⁴² showed how we can build on the good work already underway across the sector on employability by spreading the successful approaches of a number of universities and businesses in areas such as sandwich courses and foundation degrees, and by building in employability skills as a core component of every undergraduate and post-graduate course. The UK Commission for Employment and Skills has also published a report on employability as the first stage of a major review of the issue across further and higher education.
- 32 Many universities already build employability skills and work placements and projects into their courses, and fund this through current HEFCE teaching costs. Although we recognise that a one-size-fits-all approach would be inappropriate, we believe examples of excellent practice could be more widely diffused throughout the sector.

Case Study:

Employability skills at Liverpool John Moores University

Liverpool John Moores University's World of Work® (WoW) initiative aims to ensure that every student is equipped with the skills they need to successfully engage in the world of work, either because they possess skills which are highly valued by employers or because they are well equipped to set themselves up in their own business.

The programme, developed and delivered collaboratively with employers, identified the need for higher level skills most valued by employers covering Self Awareness, Organisational Awareness and Making Things Happen. It also identified eight graduate transferable skills as being essential for employment: analysing and problem solving, team working and interpersonal skills, verbal communication, written communication, personal planning and organising, initiative, numerical reasoning, information literacy and IT skills. All students are encouraged to develop these key skills within their subject and also at the purpose-built Graduate Development Centre.

These employability skills are developed and recognised through the WoW® Certificate which comprises a skills gap analysis, workshops and a filmed one-to-one interview with an employer and the "Ready for Work" Programme of group sessions, employer master classes and student profiles demonstrating skills attainment. The programme also encompasses conventional careers advice and guidance.

⁴² Future Fit: Preparing Graduates for the World of Work, CBI (2009) http://highereducation.cbi.org.uk/uploaded/HRE_091_Future%20Fit%20AW.pdf

- 33** We will therefore ask all universities to produce a statement on how they promote student employability, setting out what they are doing to prepare their students for the labour market, and how they plan to make information about the employment outcomes of their provision available to prospective students. Universities must be free to define what works best for students in different courses and different institutions. But it is a top concern for business that students should leave university better equipped with a wider range of employability skills. All universities should be expected to demonstrate how they prepare their students for employment, including through training in modern workplace skills such as team working, business awareness, and communication skills. This information should help students choose courses that offer the greatest returns in terms of graduate opportunity. These strategies should be in place in time for applicants for 2011/12 to refer to them.
- 34** We are working with HEFCE and the UKCES to provide enhanced data on employability and graduate destinations. From September 2009, this information has been available on the Universities and Colleges Admissions Service (UCAS) website.
- 35** We will also work with RDAs, Sector Skills Councils and Universities UK to ensure that businesses are effectively communicating the opportunities in their sectors and regions, and the specific skills that students will need to take those opportunities.
- 36** The skills and confidence that support entrepreneurship form an important subset of employability skills. International comparisons show that the UK economy is likely to benefit if more of its graduates go on to set up and grow successful businesses⁴³. As well as being an important source of economic growth, entrepreneurial skills will be vital to the public, private, and voluntary sectors as they develop responsive and personalised services. We will work with the National Council for Graduate Entrepreneurship and RDAs to increase the opportunities for higher education students to develop business start-up skills, and to enhance their prospects of success.

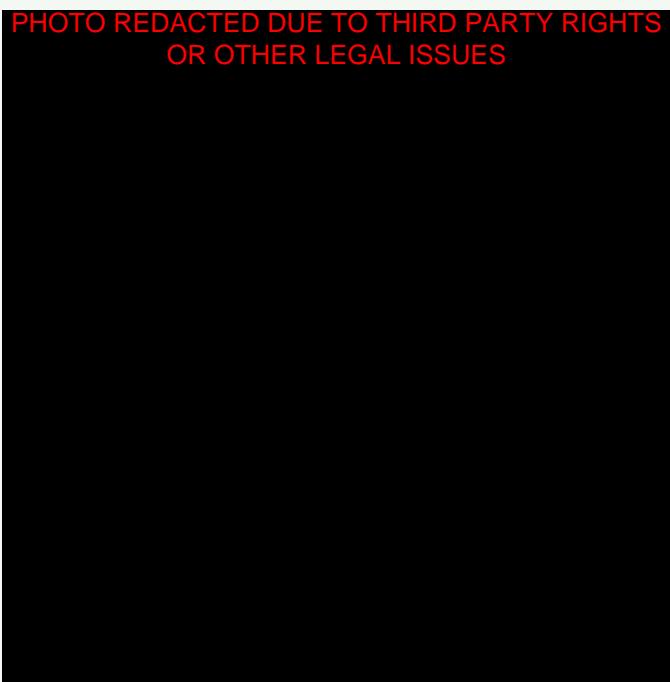
⁴³ Department for Business, Enterprise and Regulatory Reform (BERR) economics paper no. 3: *High growth firms in the UK, Growth Challenges for SMEs: A UK-US Comparative Study*, Kingston (2008) and analysis by BIS.

Postgraduate education

- 37 Postgraduate qualifications, both from taught and research courses, are increasingly a necessity for careers in the public and private sectors alike. As part of our New Industry, New Jobs strategy, we need to strengthen the flow of skills at the highest level into key sectors of the economy. Today's postgraduates are also tomorrow's leading academics. Increasing fee income from overseas post graduate students is of crucial importance to the financial planning of many institutions, as well as enriching our international networks. All of this makes postgraduate provision a critical strategic issue for the sector and the country.
- 38 Postgraduate policy in this country has evolved over many years. It is timely to look at developing a clearer strategic direction. In July, the Secretary of State announced⁴⁴ that he was launching¹⁸ a **review of postgraduate provision** to be led by Professor Adrian Smith, Director General of Science and Research within the Department for Business, Innovation and Skills. The review's principal areas of investigation are:

- To assess the competitiveness of UK institutions in the global market for postgraduate education. This should consider the factors which influence the attractiveness of the UK as a location for overseas postgraduates and those which influence UK students to pursue postgraduate study in UK institutions.
- To assess the benefits of postgraduate study for all relevant stakeholders.
- To assess the evidence about the needs of business and other employers for postgraduates, whether taken from taught or research-based courses. Patterns of provision by institution and discipline will be examined for their impact on the effectiveness of the research environment.

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⁴⁴ "Higher Education and Modern Life" speech by Lord Mandelson at Birkbeck University 27 July 2009

- To examine levels of participation, in terms of who undertakes postgraduate study, and whether there are barriers affecting the diversity of participation and reducing the availability of high-quality entrants. This will include an assessment of the extent to which postgraduate (especially taught Masters) degrees are seen as the minimum qualification for entry to certain professions, and the extent of co-funding by employers.
- 39 The review is taking into account the earlier contributions to the debate on the future of higher education, in particular the issues identified by Nigel Thrift and Paul Wellings . Its recommendations need to be consistent with the current context of the public finances in the coming years. Its findings are likely to form an important part of the evidence taken by the Fees Review, to enable future postgraduate provision to develop within the longer-term funding landscape.
- 39 The review is taking into account the earlier contributions to the debate on the future of higher education, in particular the issues identified by Nigel Thrift and Paul Wellings . Its recommendations need to be consistent with the current context of the public finances in the coming years. Its findings are likely to form an important part of the evidence taken by the Fees Review, to enable future postgraduate provision to develop within the longer-term funding landscape.

Conclusion

- 41 Alongside its social and cultural role, higher education is, and will continue to be, central to this country's economic performance in the twenty-first century. It is the key mechanism through which knowledge is generated, preserved, and passed on. It equips people for the increasingly complex challenges of the modern workplace by teaching skills and instilling intellectual curiosity and self-confidence.
- 42 In a globalised economy the skills required by both individuals and businesses are increasingly complex and sophisticated. Acquiring them, and being able to deploy them quickly and effectively, will be a determining factor in Britain's growth and prosperity. For this reason, it is important to take a strategic approach to the provision of these skills, identifying the gaps in our skills base and ensuring that graduates are equipped to enter the world of work, both as employees and as potential employers of others. This requires a close working partnership between higher education institutions, employers and employer organisations so that higher education institutions can better understand the needs of employers and of the economy.

⁴⁵ See Annex C for a list of contributors to the debate on the future of higher education

3. Research, innovation and knowledge exchange

This chapter argues that the knowledge that universities produce and the way that it is harnessed to create practical benefits is critical to our economic future. The doubling of the UK's Science and Research budget over the past ten years has cemented our leading position as a research nation. The challenge over the next ten to fifteen years is to consolidate our world-leading performance and to further deepen its contribution to our wider economic prosperity.

This chapter sets out the Government's commitment to:

- Supporting and protecting our strongest, world-leading centres of research. In the future it is likely that there will need to be a greater focus on the highest levels of research excellence, and recognition of the benefits of research concentration in key subjects;
- Ensuring the higher education sector is equipped to demonstrate research excellence and to innovate across a broad range of disciplines, with a high level of knowledge exchange between research and users and clear economic impact for the wider economy and society;
- Maintain and enhance a research base made up of world-class, multidisciplinary institutions which support the critical mass of leading researchers, and state of the art facilities, which in turn will attract the very best investment and research collaboration;
- Establish closer and longer-term partnerships between researchers and global companies, local and regional business, and public services and policymakers. Researchers should move more freely between academia and the public, private, and third sectors.

Britain's research base: a world-class asset

- 1 Investment in science and innovation is not an intellectual luxury for a developed country. It is an economic and social necessity, and an indispensable ingredient of economic success. Our universities form the core of the UK's publicly-funded investment in science and innovation. They are the foundation of our knowledge economy⁴⁶. Research and knowledge exchange⁴⁷ are fundamental strengths of the UK's higher education sector and provide the essential underpinnings of a thriving innovation environment.
- 2 Since 1997 the Government has doubled investment in the research base. The Science and Research budget will rise to a record level of almost £4 billion by 2010/11. Over the same period, quality-related research funding and research capital funding for universities has risen to some £1.8 billion. This investment in the research base has reinvigorated its physical infrastructure through the Science Research Investment Fund (SRIF), created a critical mass of professional capacity in knowledge exchange through the Higher Education Innovation Fund (HEIF), and put research funding on a financially sustainable footing for the future.
- 3 Despite international competition, the UK is second only to the US across a broad range of research disciplines. The UK has the most productive research base in the G8. We produce more publications and citations per researcher and per pound of public funding than any of our major competitors. We are responsible for 8 per cent of world publications, and we have increased our global share of the most cited papers to 14 per cent⁴⁸. The 2008 Research Assessment Exercise (RAE) revealed much world-class research activity in universities. Over half of all the research submitted was classified as "world-leading" or "internationally excellent"⁴⁹.
- 4 The number of PhD students rose by 22 per cent between 2002 and 2007. In 2007/08 there were over 500,000 postgraduates studying at UK universities⁵⁰. This is leading to the availability of more highly skilled people in a range of roles and sectors.
- 5 Investment in research has significantly strengthened the UK's ability to innovate. Investments in health, energy technologies, ICT, nano and biotechnology, materials and environmental science are now being commercialised. UK universities are spinning out hundreds of innovative new companies every year⁵¹, seeding the knowledge-intensive business sectors of the future.

⁴⁶ This document focuses on the role of higher education institutions, but the publicly funded research base also includes a range of other research institutes, which often focus on specialist areas.

⁴⁷ The term "knowledge transfer" is often used, but here we use the term "knowledge exchange" to highlight that this is a two-way process.

⁴⁸ International comparative performance of the UK research base, Evidence Ltd (2009) <http://www.bis.gov.uk/researchperformance2009>

⁴⁹ <http://www.rae.ac.uk/news/2008/results.asp>

⁵⁰ DIUS analysis of HESA data.

⁵¹ Higher education business and community interaction, HE-BCI survey 2007/8, published on HEFCE website: <http://www.hefce.ac.uk/econsoc/buscom/hebci/>

- 6 The UK's research base is attracting major international investments. International companies including Pfizer, Microsoft, Philips, Roche, Toshiba, and Boeing invest in research in the UK. In their Inward Investment Annual Report, UK Trade and Investment (UKTI) say that they have used the strength of the research base to attract more than 200 Research and Development (R&D) investments to the UK during 2008/09 alone⁵².
- 7 This increased investment has also provided resources for the Research Councils and the Technology Strategy Board (TSB) to collaborate on an unprecedented scale in sectors where the UK has world-leading capability. Examples of this include Rolls Royce's SAMULET⁵³ programme and Low Carbon Vehicles. The Regional Development Agencies (RDAs) have contributed to these programmes so as to increase their impact on the ground and through the supply chain. More generally the RDAs and the TSB work together at both the strategic and operational levels bringing together national and regional priorities. They have agreed over £400m of aligned funding over the current three year Comprehensive Spending Review period, described in a set of regional prospectuses. This alignment creates a powerful innovation programme that not only supports major companies, but

which the RDAs are able to link to the small and medium sized businesses that are difficult for national programmes to engage with.

- 8 There has been increased commitment in universities to engaging with businesses to collaborate in research projects, share the benefits of those projects, and stimulate wider innovation in the development of business processes, products and services. Through knowledge exchange programmes and partnerships, innovation networks and clusters, and continuing professional development courses, universities have made the research knowledge base much more accessible to business communities.
- 9 Research can inspire, entertain and attract new talent. 40 per cent of all adults visit a museum or gallery each year, where they see the fruits of research into the arts and humanities⁵⁴. Project Bloodhound – to build a 1000mph car capable of breaking the World Land Speed Record – is being followed in schools across the UK. The development of the Motorsport Academy at Oxford Brookes, with state of the art technology part-funded by the RDAs, is using the attraction of motorsport to get students into advanced engineering.

⁵² UKTI Inward Investment Annual Report, UKTI (2009)

⁵³ Strategic Affordable Manufacturing in the UK with Leading Environmental Technology

⁵⁴ Leading the world: The Economic Impact of Arts and Humanities Research, Arts and Humanities Research Council (2009)

- 10 University research also underpins our society's ability to address the great public policy issues of our times, such as the impact of an ageing population, the effects of exponentially faster technological change, and climate change. The ability of universities to bring together often diverse scholarly disciplines is very important to this. Cross-Research Council programmes such as "Living with Environmental Change" and "Ageing" are good examples that will continue to receive strong backing from the Government.
- 11 The focus on economic impact does not imply a shift away from fundamental research towards applied research. Indeed, we reject the idea that fundamental research should be cut to provide extra

support for applied research. The outcomes of research pathways are often impossible to predict with any precision and research can take a long time to generate economic impact. For example, the cryptography that allows transactions to be made online securely has its roots in mathematical research that at the time was pursued for its own intrinsic interest. It is not possible to predict whether, how, and when advances in knowledge will lead to practical applications. The point is that we need to harvest every possible economic and social benefit from research that has been done and to be far more conscious of the links between funding decisions and our long-term national economic interest.

Case Study: **University Research and Sustainable Energy**

The UK Energy Research Centre (UKERC)⁵⁵, funded through the cross-Research Council Energy Programme, provided analytical insight for the Government's 2007 Energy White Paper, using models to test future energy scenarios. The Centre continues to provide evidence to government on a number of contentious energy issues. These include how the UK could cope with the intermittent nature of renewables, policies aimed at changing people's transport behaviour, and 'peak oil' or energy efficiency 'rebound effects' – for example, people buying fuel efficient cars only to drive further in them. In addition, UKERC's Energy Research Atlas, which shows energy research activity across the UK, assists policy makers and researchers in reviewing the status of UK energy research and development. The backdrop of climate change and demand for scarce energy resources highlights the key role of this Centre in informing government energy policy. It is a focal point for sustainable energy and promotes cohesion within the overall energy research effort.

⁵⁵ www.ukerc.ac.uk/

Protecting the excellence of the research base

- 12 In a more challenging climate for research, with tighter fiscal constraints and increased competition from other countries, we will need to carefully protect the excellence of our research base. This will require a greater focus on world-class research and greater recognition of the potential benefits of research concentration in key areas.**
- 13 Protecting Britain's excellent reputation for basic research starts with attracting the best people to build research careers in this country, especially in the face of tough competition from universities abroad. Progress has been made in implementing the Roberts Review⁵⁶ to improve the attractiveness of research careers, but there is room for further improvement.**
- 14 Professor Nigel Thrift's⁵⁷ contribution to the debate on the future of higher education set out a range of recommendations for Government, for Research Councils and funders, and for universities to improve research careers in the UK. The Government is committed to implementing these recommendations. Research Councils UK, working with Universities UK and other funders**

and employers of researchers, have developed a Concordat for the career development of researchers.⁵⁸ The Concordat also seeks to improve the quantity, quality and impact of research itself. Support and management of research careers will be inextricably linked with the development of a postgraduate strategy (see Chapter two).

- 15 A key asset in attracting researchers and maintaining the critical mass of our research activity is our clear public commitment to science and research. Stable Government funding and support provides an essential foundation for our science and research base to plan and grow. The current standing of the UK's research base bears testament to the effectiveness of the current funding structures, but the Government continues to look for ways to increase their efficiency and sustainability.⁵⁹ The introduction of full economic costing has improved universities' ability to cover the costs of their research and moved them further towards long term financial sustainability⁶⁰.**
- 16 The Government will maintain its commitment to the dual support system of research funding in universities. The Higher Education Funding Council for England (HEFCE) provide funding to support an excellent, sustainable research**

⁵⁶ *SET for success*, Sir Gareth Roberts HMT, DTI, DfES (2002)

⁵⁷ See Annex C for a full list of contributions commissioned for the debate on the future of higher education.

⁵⁸ *The Concordat to Support the Career Development of Researchers* (2008) <http://www.researchconcordat.ac.uk/documents/concordat.pdf>

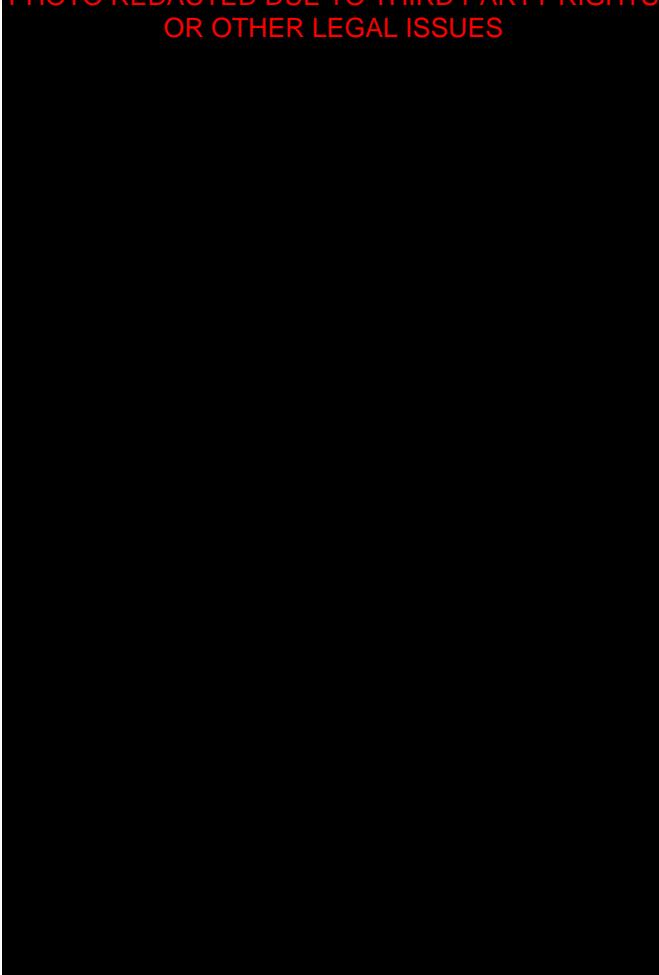
⁵⁹ *Science & innovation investment framework 2004-2014*, HMT, DTI and DfES (2004)

⁶⁰ *Monitoring financial sustainability – higher education institutions*, Funders Forum (2008)

capability that has the freedom to support universities' needs and researchers' curiosity, and the flexibility to respond to the future needs and challenges of society. Research Councils fund specific world class research projects and institutes, support research training, and ensure UK presence in major international projects.

- 17 The Government will continue to fund institutions to maintain research infrastructure on a sustainable basis via the Research Capital Investment Fund (RCIF), and will continue to monitor the capital needs of the sector.

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- 18 In the future, in what is likely to be a more challenging climate for research, we will need to support and protect our world-class research centres. Excellence must remain the defining basis for allocating research funding. Especially in areas such as advanced science, limited resources mean that public investment in the UK must be prioritised on strengthening research centres with world-class capability. This will include further development of multidisciplinary centres bringing together many areas of expertise, and building relationships between teams in universities and industry.
- 19 We must use scarce resources well. In future this should mean more research concentration not less, especially in the high cost scientific disciplines. In a diverse higher education system, not every institution should feel that maximising its success in research assessment exercises or recruiting doctoral students is central to its mission. There are pockets of research excellence across a very wide number of institutions, but a more sustainable model for the future may involve new forms of collaboration between universities so that the best researchers can cooperate rather than compete against each other for scarce funds. This could also provide a stronger environment for research students.

- 20 The concentration of a significant proportion of our research strength in a relatively small number of universities has helped to ensure that we have four of the top six global universities and 18 of the top 100⁶¹. Excellence is found throughout the university system, and must remain the defining basis for allocating research funding, but this will need to be coupled to strategic investment in leading research centres which will enable them to invest and develop over time.
- 21 As an example of this, the Engineering and Physical Sciences Research Council (EPSRC) focuses a large part of its training portfolio in critical mass centres, and in 2009 established 45 Centres for Doctoral Training. These multidisciplinary centres bring together many areas of expertise, building relationships between teams in universities and with industry.
- 22 We do not, however, intend formally to designate research and non research institutions. It must remain possible for well-led institutions to improve their research standing, and impossible for others to rely on past achievement. But in the diversity of our higher education system, not every institution should feel that maximising its success in the Research Assessment Exercise/Research Excellence Framework or recruiting doctoral students is central to its mission.

Increasing the economic and social impact of research

- 23 The challenge for our universities is to continue to increase the economic benefits to the wider economy of the exceptional asset represented by our research base. Encouraging closer ties between the UK's growing pool of scientific and engineering researchers and industry and private investors is now key to ensuring that we are able to benefit economically from groundbreaking science.⁶²
- 24 With increased public funding for science and research comes a responsibility to demonstrate the benefits to the taxpayer of such investment. The economic impacts of excellent research can be derived through many routes, be it increasing the supply of skilled people, improving performance of businesses and public services, creating new businesses, improving public policy making, attracting inward investment, public engagement, or broader social benefits.
- 25 As *Innovation Nation*⁶³ set out, innovation is essential to the UK's future economic prosperity and quality of life. To raise productivity, meet the challenges of globalisation and to live within our environmental and demographic limits, the UK must excel at all types of innovation. Promoting innovation

⁶¹ Times Higher Education world university rankings (2009) <http://www.timeshighereducation.co.uk/Rankings2009-Top200.html>

⁶² *New Industry New Jobs*, BERR (April 2009): paragraphs 3.9 and 3.10

⁶³ *Innovation Nation*, DIUS (2008), <http://www.bis.gov.uk/innovationnation>

- throughout business and public services is a key objective of the new Department for Business Innovation and Skills. University research has a key role in the UK's innovation infrastructure. Strong links and knowledge exchange between researchers and users are often the key to the transformation of research into innovative products or services. But although this research is important in its own right, its benefits cannot be harnessed without strong links between researchers and users. This is why knowledge exchange is so important.
- 26 Government support for knowledge exchange through programmes such as HEIF has driven a culture change in university-business interactions, with increasing levels of engagement between universities, business and other users. One measure of the level of such interaction is universities' external income, which rose to £2.8 billion in 2007/08 – a 50 per cent increase in real terms since 2001⁶⁴. Evidence suggests that both the amount of knowledge exchange in the UK and our ability to measure it are well developed and compare favourably with the US and Canada⁶⁵.
- 27 The culture change in universities is demonstrated by the fact that three quarters of universities now make knowledge exchange an integral part of their institutional strategies, and more than half use it in their criteria for career advancement⁶⁶. Each Research Council will publish an economic impact baseline against which their impact can be monitored. New partnerships such as the Office for Strategic Co-ordination of Health Research (OSCHR) have already identified the future impact of each of their initiatives⁶⁷.
- 28 BIS will continue to work with HEFCE and the sector to develop a range of measures, including both metrics and qualitative evidence, to evaluate the whole range of knowledge exchange activities. We will work with HEFCE and the sector to benchmark the UK's performance and effectiveness internationally. We will also work with RDAs to find more explicit ways for them to recognise and nurture the regional and sub-regional knowledge exchange role of universities, focusing particularly on those markets and sectors with the potential for growth.

⁶⁴ Higher education business and community interaction, HE-BCI survey 2007/8 published on HEFCE website: <http://www.hefce.ac.uk/econsoc/buscom/hebci/>

⁶⁵ Metrics for the Evaluation of Knowledge Transfer Activities at Universities, Library House (2009)

⁶⁶ Higher Education Innovation Fund round 4 Institutional Strategies: overview and commentary, HEFCE (2008)

⁶⁷ Chairman's First Progress Report, Office for Strategic Co-ordination of Health Research (2008)

Case Study:

University incubated spinout company helps fight against swine flu

Since 2003, the University of Southampton's SETsquared Business Incubation Centre has established itself as a vital support mechanism to the local high-tech community, providing business support to university spinouts and other high-tech, high-growth start up companies through a mentorship programme, business planning advice, management team development, and support with raising finance as well as office space and facilities.

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One such venture is **PrimerDesign Ltd** which was set up by academics from the University of Southampton in 2005 and began operating from the Incubation Centre. PrimerDesign Ltd develops DNA test kits, and in May 2009 were the first company in the world to produce test kits for the Mexican H1N1 Swine flu.

The company has benefited from its links with the University Incubation Centre through access to in-depth business review panels which include Business Link, UK Trade and Investment, and mentors from both a large pharmaceutical company and other life science start-ups, to undertake rigorous reviews of their business plan.

- 29 Universities' role in driving innovation goes beyond the immediate application of their own research:
 - They have been important in leading and contributing to collaborative and open innovation networks which not only foster knowledge exchange between universities and business, but also stimulate collaborative innovation between businesses;

- Their role in creating spin-out companies has helped to develop strong networks of investors, business services, and experienced management, and has increasingly connected them with university alumni;
- They provide incubation facilities that can build a critical mass of high-tech companies which can benefit from close proximity to each other and to university researchers;

- Universities are increasingly able effectively to support their students to start their own businesses with almost 2000 graduate start-ups created in 2007/08⁶⁸;
- Universities are also beginning to create social enterprises, which often take innovative approaches to tackling social and environmental challenges.

30 In order to continue to drive forward the economic and social impact agenda, in the future we will want to do more to incentivise institutions to think strategically about the impact they generate, and the way they organise their research programmes, and their researchers' careers. We also want to encourage institutions to go further both to broaden and deepen their links with business and users. These ambitions will be reflected in the development of the Research Excellence Framework (REF), which the Government has asked to:

- Take better account of the impact research makes on the economy and society;
- Continue to incentivise research excellence;
- Reflect the quality of researchers' contribution to public policy making and to public engagement;
- Not create disincentives to researchers moving between academia and the private sector.⁶⁹

31 This means that for the first time, **research assessment will explicitly assess the impact of past research on the economy and society**. Those institutions that can demonstrate a track record of delivering impact from their research will be rewarded. Users of research will be strongly involved in this assessment of impact. The REF will take account of a broad range of impacts: for example, translation of research into new products and services; collaboration between academia and business; and how research has supported innovation in public services, such as the health service. It will also encourage greater mobility of researchers between academia and industry. This will help us understand and reinforce over time the way in which different funding choices are creating economic impact.

32 This will complement the continuing focus of the Research Councils in driving up the economic impact of the research base. For example, grant applicants to all Research Councils now have to describe explicitly the potential impact of their proposed work.

⁶⁸ *Innovation Nation*, DIUS (2008), <http://www.bis.gov.uk/innovationnation>

⁶⁹ HEFCE grant letter 2009-10: <http://www.hefce.ac.uk/news/HEFCE/2009/grant/letter.htm>

- 33 HEFCE are currently consulting on proposals for the REF⁷⁰. They will also be carrying out a pilot exercise to test their proposed approach to the impact assessment. HEFCE plan to announce the outcomes of the consultation in Spring 2010, with the impact pilot concluding in mid 2010. The assessment phase of the first REF exercise will take place during 2013, but its incentive effects on the higher education sector are likely to be felt much earlier.
- 34 Professor Paul Wellings' contribution to the debate on the future of higher education⁷¹ recommended that HEFCE should seek annual reports from universities showing how each institution sets out to maximise the economic, social and environmental benefits to the UK from their research. HEFCE are piloting this approach. 25 higher education institutions have volunteered to participate in the pilot. They will be producing a publishable statement of their benefits for a wide range of external stakeholders, and providing information on their policies and procedures to maximise benefits.

The relationship between universities and the users of research

- 35 Interaction between universities and business has increased significantly over the last decade. We will build on this with continued investment in collaborative research via the Research Councils and the Technology Strategy Board. We will also build on the success of the HEFCE Higher Education Innovation Fund which has supported the development of links between business and universities. Our primary motivation for supporting this research commercialisation and knowledge exchange is to generate economic and social benefits for the nation, not simply to raise revenue for institutions⁷². We will encourage universities to seek greater use of shared services for managing and commercialising their intellectual property.

⁷⁰ Consultation is available at <http://www.hefce.ac.uk/research/ref/develop/> with a deadline of 16 December 2009

⁷¹ See Annex C for a full list of contributions commissioned for the debate on the future of higher education.

⁷² There have been calls for the Government to make a clear statement on its primary purpose for supporting research commercialisation and knowledge exchange activity, *Saraga Report: Streamlining business-university interactions*, Funders' Forum, (2007), Paul Wellings Contribution to the debate on the future of higher education.

- 36** Close and long-term relationships between universities and business benefit both business and universities, and our wider society and economy. The relationships between universities and businesses can take a variety of forms, but they are at their most effective when they are collaborative and long term, and thus permeate organisations and create greater opportunities for two-way learning. Such strategic relationships could span teaching, recruitment, research and knowledge exchange.
- 37** A lack of demand from business for such services has been a long-standing challenge in this area⁷³. The Government is keen to catalyse business innovation and for businesses to demand and better utilise the knowledge and expertise of the UK's knowledge base. The Government welcomes the recognition in the CBI's recent report on higher education that business should do more to tap this exceptional resource.

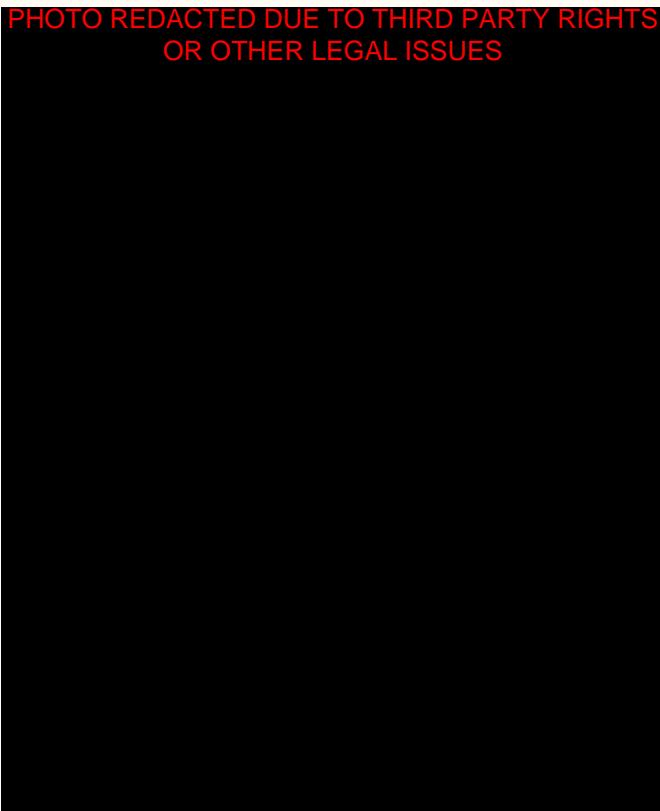
Case Study:

Research Collaboration with the Retail Sector

The Sustainable Consumption Institute (SCI) is a research institute, started in 2007 with a £25m grant from Tesco, run by the University of Manchester. It is a "multidisciplinary centre of global excellence researching major national and international issues associated with sustainability in the retail sector and encouraging consumers to adopt more sustainable lifestyles". It aims to draw on expertise from across all of Manchester's four faculties, providing a hub to bring together global expertise and provide focal points for the training of the next generation of researchers, policy makers and advisors in the public and private sectors. Its research focuses on four themes; sustainable consumer behaviour and lifestyle, sustainable production and distribution, climate change and carbon and making development more sustainable.

⁷³ This issue was raised in the *Lambert Review of business-university collaboration*, HMT (2003) – see also more recently *Innovators and the Research Base An Exploration using the 4th Community Innovation Survey (CIS4)* DIUS (2009)

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38 We will support stronger long term relationships between business and universities. At a local and regional level RDAs will be a key channel for aggregating and articulating demand from business through Science and Industry Councils, Science Cities, and business bodies, and helping universities recognise and respond to it, particularly in the key priority *New Industry New Jobs* sectors. The RDAs are working across regions to identify the key areas of expertise and excellence in the regions that support the NINJ sectors. Bodies like the Advanced Manufacturing Centres will also have an important networking and catalysing role in this respect.

- 39** A key development to enable this has been the establishment of the business-led TSB, which operates across all important sectors of the UK economy to stimulate innovation in those areas which offer the greatest scope for boosting UK growth and productivity.
- 40** The TSB is working closely with the Research Councils and the RDAs so that UK business is better able to access the most relevant support available. Recent examples of the TSB's work to drive innovation include:
- Its Innovation Platforms in areas such as Low Carbon Vehicles and Assisted Living, which address a major societal challenge and incentivise business investment in R&D and innovation;
 - The Low Carbon Vehicle Innovation Platform supports eight regional demonstrator projects, with co-funding from the RDAs, to create a UK-wide trial involving 340 vehicles. The RDAs have also engaged local partners to help drive innovation into the supply chain and infrastructure;
 - A research programme and a network for knowledge transfer to support the creative industries, funded by the TSB (in accord with the Solutions for Business portfolio) and the Arts and Humanities Research Council (AHRC);
 - Innovation Vouchers delivered by the RDAs, and Networks that build the links between business and the knowledge base. Using the Business Link access channel, these

networks are better able to draw in “hard to reach” businesses. Together with Innovation Infrastructure, such as campuses and Science Parks, these knowledge exchange interventions have been shown to be effective with each £1m of RDA spend resulting in £8m added to regional economies.

- 41 HEIF has been successful in developing universities’ capacity to undertake knowledge exchange, both in business development and more specialised research commercialisation, but in the future, as these activities mature, we will need to make them more efficient and effective. Some means to do this are suggested here, such as those from the report by Paul Wellings below, but we must continue to look for more.
- 42 One area of recent public interest is the negotiation of collaborative research agreements between universities and business. There are concerns that when negotiating, higher education institutions sometimes have unrealistic expectations about the value of Intellectual Property (IP). There can be protracted negotiations over rights to income from IP exploitation when the real prize is doing the research collaboratively. We should consider how we avoid universities seeking to maximise their income to the point where that prevents potentially mutually beneficial collaborative relationships with business, or the creation of new enterprises that would benefit society.

- 43 The generation of university revenue can be an important and legitimate, but secondary, consequence. The Government recognises that receiving a share of the benefits from knowledge exchange activities is one of the key spurs to greater collaboration, and that such income can be a valuable source of additional funding for universities. But the Government encourages university management to consider whether their negotiation teams sufficiently consider the broader benefits of research agreements.
- 44 After a period of rapid growth in technology transfer activities in Britain, there is a need to develop more specialised research commercialisation functions. Professor Paul Wellings’ report highlighted that not all institutions require their own dedicated capacity for IP management and commercialisation. In the future, universities will be encouraged to look for more effective ways to handle the specialist research commercialisation function – particularly with regards to opportunities for shared and common services for managing and deploying their intellectual property. As autonomous bodies this is a matter for universities themselves. Future HEIF funding should support effective capacity organised in this way.

- 45 Although there has been a positive culture change in universities' attitudes to the economic impact agenda and knowledge exchange activity⁷⁴, there is still a concern that many academics are reluctant to take time away from the 'publication treadmill' to work more closely with, or spend time working in, organisations in the private, public, or third sector that use research, because they believe it will jeopardise their prospects for career advancement. This is particularly true for early career researchers⁷⁵.
- 46 The Government will seek to remove barriers to this kind of interaction. Changes within research funding systems will also provide incentives for wider engagement: both the REF and the Research Councils' grant application process will explicitly recognise working with business and users to generate an economic impact from excellent research. HEFCE's REF proposals will reward departments that have engaged effectively with businesses, policymakers, or other research users in their research activity. In assessing the research outputs of a department, due credit will also be given where individual researchers had spent time away from their department for reasons including working in businesses or with other users of research and might not have published during that period.
- 47 An essential area of knowledge exchange is between the research community and government. This represents a challenge for both sides. Policy makers will need a better appreciation of the potential value of advice from academia, while academia will need to recognise more clearly the importance of prompt provision of relevant advice to policy makers. We welcome the contribution made by the Council for Science and Technology (CST) report *How Academia and Government can Work Together*⁷⁶ and the British Academy report *Punching Our Weight: the humanities and social sciences in public policy making*⁷⁷ to consideration of how to promote these changes. The Government accepts the recommendations made by the CST report.
- 48 There is already a range of activity in this area – for example the Economic and Social Research Council (ESRC) currently funds around 50 "placement fellowships" to allow social science researchers to spend time in Government. There is scope for more. The Government has published an action plan⁷⁸ focusing on a number of tangible steps that will lead to delivery of the CST recommendations. We are confident that implementation of the CST report recommendations will result in strengthened engagement between academia

⁷⁴ Evaluation of the Effectiveness and Role of Third Stream funding, PACEC/CBR (2009)

⁷⁵ Overcoming barriers to collaboration to enable richer University-Industry Links: A paper from the BCB, Business Council for Britain (2009)

⁷⁶ See Annex C for a full list of contributions commissioned for this document.

⁷⁷ Punching our weight: the humanities and social sciences in public policy making, British Academy, (2008)

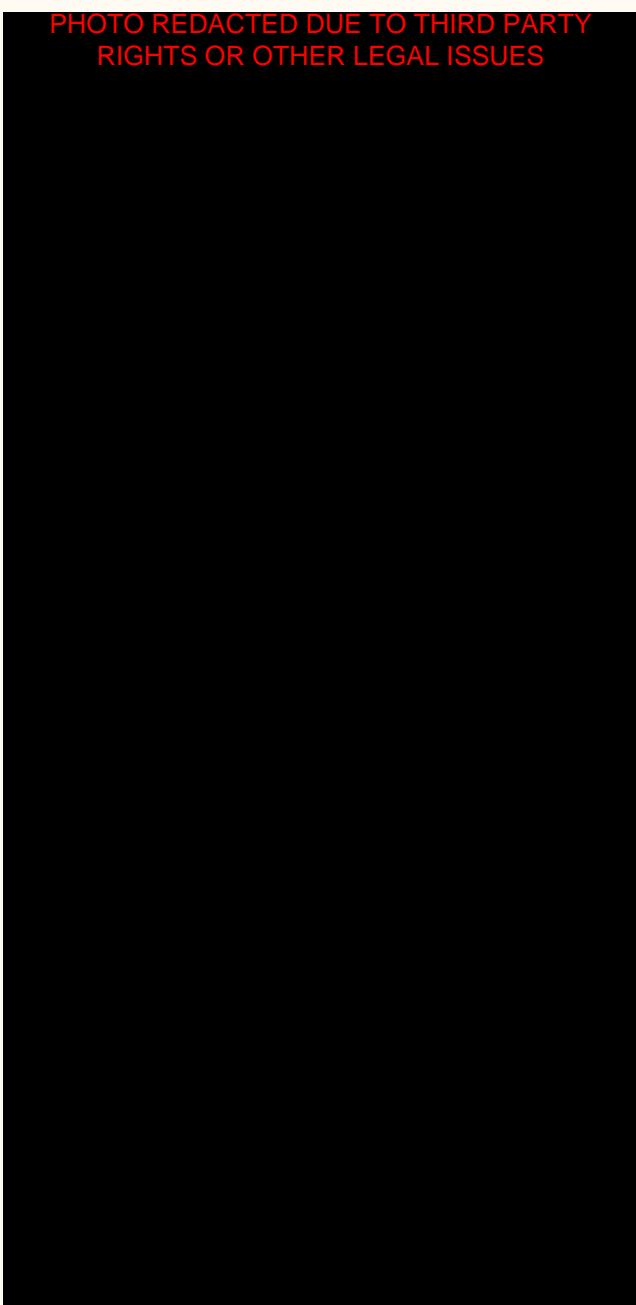
⁷⁸ <http://www.bis.gov.uk/he/engagement>

and Government, but also recognise that this is a long-term agenda and it will take time to realise the benefits of change.

Conclusion

After a decade of unprecedented investment, our universities are among the best in the world for research. Since 1997, the Government has doubled investment in the research base. Unequivocal support for public investment in research has created a climate of confidence in our research base. Our challenge now is to reinforce this strength and to develop further our capacity to translate this scientific excellence into economic and social benefits for the UK. There will be no question of compromising our position in fundamental research, and we recognise that the way in which research drives commercial development is often unpredictable. However, by better understanding and reinforcing the relationship between research pathways and wider economic and social impacts, strengthening the long term collaborative ties between universities and the private and public sectors, and continuing to focus resources on developing concentrations of world class research excellence in the UK, we will ensure that public investment in research is producing demonstrable and substantial gain for our society and economy as a whole.

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4. The student experience of higher education

This chapter argues that, as the most important clients of higher education, students' own assessments of the service they receive at university should be central to our judgement of the success of our higher education system. Their choices and expectations should play an important part in shaping the courses universities provide and in encouraging universities to adapt and improve their service. But these choices must themselves be well-informed by objective information about what different courses involve, and their implications for future career prospects.

This chapter sets out the Government's commitment to:

- Ensuring that students are better informed about what their higher education choices will involve in terms of course content, mode and place of learning, their own study responsibilities, and subsequent career progression;
- Ensuring that this greater knowledge allows students to lead improvement and change in universities, by demanding better service;
- Ensuring that rigorous and responsive quality assurance processes are maintained and effectively communicated, to secure student and public confidence in high quality and standards.

The most important clients of higher education

- 1 Expectations of higher education are changing. The introduction of variable fees for students has rightly sharpened attitudes to the value for money higher education represents as a personal investment. As set out in Chapter one, there is also greater demand for flexible learning, as students from a more diverse set of backgrounds and stages of life aim to pursue higher education around work or other obligations. New technologies make possible new approaches to distance teaching

and learning. Businesses are becoming increasingly involved in the design, delivery and funding of courses. High public confidence in the quality and standards of higher education is essential.

- 2 UK higher education has a strong reputation. Evidence of this comes through the number of international students who choose to study here, good employment outcomes for graduates, and high levels of student satisfaction. The National Student Survey (NSS) was introduced in 2005 and there have been overall satisfaction ratings of

80 per cent and over from 2005 to 2009.⁷⁹ There is significant evidence of the impact of the NSS and institutions' own student feedback mechanisms in changing behaviour at institutional and departmental level. Nevertheless, the sector recognises it was slow to respond to negative stories that appeared in the press in 2008 about the quality of university provision. Any accusations of poor quality can have a lasting public impact both at home and internationally, and two reviews have been undertaken to establish if there was evidence to support concerns raised in the media.

- 3 The Quality Assurance Agency for Higher Education (QAA) carried out enquiries and has published its report and recommendations.⁸⁰ The QAA's report shows that the higher education system is fundamentally sound but suggests some areas which would benefit from further work.
- 4 Simultaneously, the Higher Education Funding Council for England (HEFCE) established a special sub-committee of its Teaching, Quality and the Student Experience Committee (TQSESC) which published its report on 1 October 2009.⁸¹ The TQSESC also found no evidence of a systemic failure in quality in English higher education. But it too has recognised that improving public confidence is

vital and has made a number of recommendations to improve and update quality assurance arrangements.

- 5 We welcome the sector's commitment to safeguard high quality and standards and its recognition that all the bodies with responsibilities in this area need to work together to make the whole quality infrastructure more active and transparent. There will be the opportunity for all involved to examine how best to develop and simplify the existing quality review process as the current cycle comes to an end.
- 6 The system needs to be more public facing and responsive to the needs of students, and sufficiently flexible that it can respond to the changing modes and models of higher education provision. There is no evidence of widespread poor quality in higher education, but it is absolutely right that there should be rigorous, demanding, transparent systems for identifying and tackling poor quality, and incentives on all universities to strive for continuous improvement. Our proposals and thinking were set out in more detail in our October 2009 response to the report from the Innovation, Universities, Science and Skills Select Committee, *Students and Universities*.⁸²

⁷⁹ National Student Survey – <http://www.hefce.ac.uk/news/hefce/2009/nss.htm>.

⁸⁰ <http://www.qaa.ac.uk/standardsandquality/thematicenquiries/FinalReportApril09.pdf>

⁸¹ http://www.hefce.ac.uk/pubs/hefce/2009/09_40/

⁸² <http://www.publications.parliament.uk/pa/cm200809/cmselect/cmduis/170/170i.pdf>

Case Study: Responding to student feedback

The University of Leeds has responded to the challenges of the National Student Survey by working collaboratively with the student body at both institutional and School level to better understand the issues raised and how they might best be addressed.

In response to discussion with students around personal development and feedback, the University has developed 'Leeds for Life' (<http://www.leeds.ac.uk/leedsforlife>) to better prepare students for their future by inspiring them to get the most out of their academic and co-curricular experiences. In addition to a single point of access to skills development opportunities, Leeds for Life has at its heart a Leeds model for effective personal tutoring. Structured one-to-one meetings with their personal tutor run throughout a student's degree and focus on their academic, wellbeing and professional development, helping them become confident, articulate individuals well prepared for life beyond university.

Each School has worked with its staff and students to reflect on the NSS headlines and develop detailed action plans addressing key issues. These action plans are available to all students through the School's consultative forum and on a University website – 'Responding to your feedback' (<http://www.leeds.ac.uk/respondingtoyourfeedback>).

In direct response to NSS findings on assessment and feedback, the University has funded various projects, including 'MARK' (Making Assessment Relationships Known), led from the Institute of Psychological Sciences and involving five other disparate disciplines. MARK aims to enhance the assessment experience for staff and students by making the relationship between marking criteria, grades and feedback more transparent.

Professor Michael Arthur, Vice-Chancellor and former Chair of the NSS steering group, commented, 'This is what the NSS was designed to do – to take independent feedback from students and use it to enhance the quality of our educational provision. I am very proud that our staff have responded in depth to the issues that the NSS has identified and are working with our student body to improve feedback and support'.

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- 7 The Students' Union is now a central, democratic, and progressive element of the higher education landscape, and in the vast majority of instances it provides an overwhelmingly positive contribution to both student welfare and representation within institutional governance, enhancing the student experience. The action which many individual student unions and the NUS itself have taken in recent years to modernise and reinvigorate their own governance – to increase accountability and become more representative bodies for students – marks a particularly significant step forward. We welcome the recent report of the Student Forum and its recommendations that students should be an 'equal partner' in their education from start to finish. The student voice will be one of signal importance in contributing to the coming fees review and we expect the NUS to fully play its part in submitting evidence.

Higher quality through greater awareness of choice

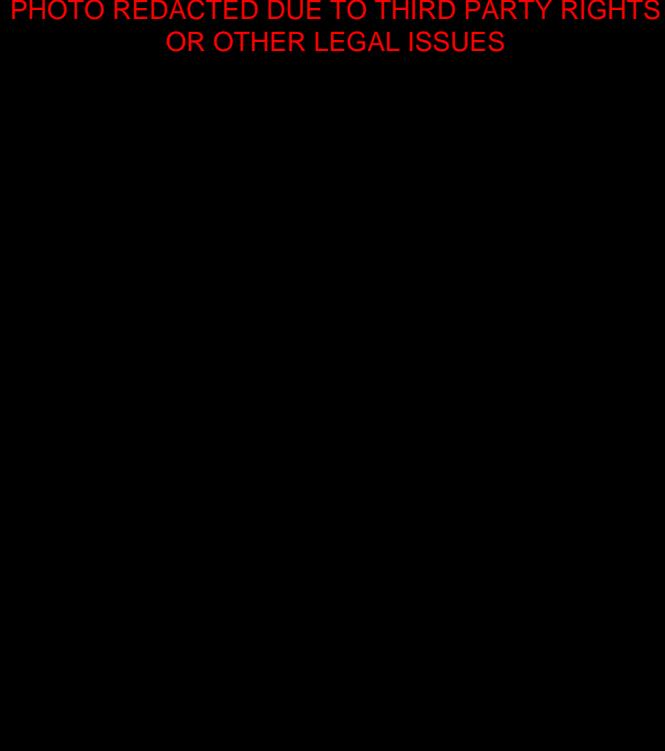
- 8 We know from the National Student Forum (2008 annual report) that students themselves are looking for improved information, advice and guidance. They want this prior to university, in choosing courses at school or college, and then an appropriate higher education programme and institution. And they want it while they are at university, so they can make well-informed choices about what modules to study, how to enhance their employability, and how best to use the myriad opportunities that the modern university experience affords.⁸³
- 9 It is also clear that not all students or members of the public understand enough about differences between study at school and study at university, and the workload and independent learning that characterise higher education⁸⁴. Universities must ensure that students embarking on programmes do not have misguided expectations about how they will be taught. Equally, students must be supported to become independent learners in higher education, especially where their backgrounds may not have fully prepared them for the challenges of higher study.

⁸³ http://nationalstudentforum.com/NSF_annual_report_2008.pdf

⁸⁴ *Teaching and the student experience*, Paul Ramsden (contribution to the debate on the future of higher education, 2009)

- 10 The Government agrees with the National Student Forum's view that each institution needs to provide "a clear understanding of what it will feel like to study subject x at institution y". This greater access to information is an essential means of enabling students to choose between courses, and in doing so to signal their expectations of higher education and drive course modification and improvement.
- 11 To do this, students need comparable sources of information that will allow them to make informed decisions and choices. This information should include clear signposting for students who want to progress through more vocational pathways, or study more flexibly, by varying the length or the intensity of study, studying remotely, and using the latest technology.

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- 12 Universities also need to be clear with students how a course will improve their employability and what those courses marketed as vocational will lead to, especially whether the student will gain a professionally recognised qualification. This must be easily available to both potential applicants and then, in greater detail, to students who have accepted a place and are due to begin their learning.
- 13 All universities should publish a standard set of information setting out what students can expect in terms of the nature and quality of their programme. This will set out how and what students will learn, their own study responsibilities, what that knowledge will qualify them to do, whether they will have access to external expertise or experience, and what facilities they will have access to. The Unistats website will continue to bring together information in a comparable way so that students can make informed choices. Students should have clear information both about the opportunities for international experience, and how new technologies are integrated into their programmes. The aim is a system in which students can make genuinely informed choices about study, based on an understanding of the nature of the teaching programme they can expect, and the long-term employment prospects it offers. We will invite HEFCE, QAA and UK Commission for Employment and Skills (UKCES) to work with the sector and advise on how these goals should be achieved.

- 14** In support of this, HEFCE is undertaking research into the information needs of prospective students, as well as other key stakeholders such as parents and employers, to find out what information they want and how they would prefer to access it. In addition, HEFCE will work with the sector to ensure greater transparency about what and how students will learn. This will ensure access to clear, comparable information such as: the typical number of contact hours for each course; the amount of personal learning which will be required; and the academic support which will be available from staff.
- 15** HEFCE, and others across the sector, will also be undertaking a review of Teaching Quality Information (TQI). TQI, an important element of the Quality Assurance Framework, is the publication of information about quality and standards, to help potential students make choices about where to study. TQI consists of a standard set of subject-level data, including student continuation rates, employment destinations, and results of the National Student Survey. It is published on www.unistats.com. We are also asking UCAS to examine improvements to its course search facility to help students access information more easily.
- 16** The Higher Education Academy⁸⁵ has a key role to play in enhancing the quality of the student learning experience through its support to higher education institutions, departments, and staff. The Academy's support includes the production of national and subject specific resources, sharing effective practices, and direct work with institutions and students.
- 17** The Academy promotes the professionalisation of the teaching workforce by gathering evidence and research on developments in pedagogy, and by disseminating good teaching practice. The Academy's support for subject communities in considering how courses prepare students effectively for graduate employment has been valuable⁸⁶. We want to see this work made more visible. We will be discussing with HEFCE and with the Higher Education Academy how its profile in quality enhancement can be raised, and how the strengths identified in a recent review of the Academy can be further developed.

⁸⁵ Higher Education Academy supports higher education institutions with strategies for the development of research and evaluation to improve the learning experience for students.

⁸⁶ This has been achieved in partnership with Sector Skills Councils and with Professional, Statutory and Regulatory Bodies

Case Study:

Students as agents of change in learning and teaching

The University of Exeter has developed an innovative and exciting student-led action research project which brings students and staff together as partners in higher education.

Students from ten subject areas across the University have been engaged as a pilot project (2008-09) in a variety of action research activities – with the purpose of improving learning and teaching within their Schools. This is a collaborative project involving Education Enhancement and the Guild of Students, with student representatives from Staff-Student Liaison Committees (SSLCs) taking responsibility for promoting evidence-based change.

Student-selected research topics include: assessment and feedback; the quality of seminar provision; shared learning spaces; peer mentoring for language teaching; inter-campus teaching; and employability. Data have been collected via focus groups, informal interviews of staff and students, and questionnaire surveys (paper and on-line) all designed by students with support from Education Enhancement.

Findings were presented in original ways via presentations at a student-led conference in June 2009, with an audience from across the institution and beyond, including senior managers and future SSLC representatives.

SSLCs and programme managers are expected to take responsibility for embedding recommendations for change into strategic planning and action. Hence the project is about more than ‘students as researchers’ or about ‘listening to the student voice’, but about enabling students to engage formally with the processes of change.

Addressing public confidence in quality and standards

- 18 Maintaining high quality and standards is a key requirement for everyone involved in the provision of higher education. HEFCE has a specific remit in legislation to ensure strong arrangements for assessing the quality of education in the institutions that it funds. HEFCE currently delivers that role through its contract with the QAA.
- 19 The role of the QAA will develop in three ways. First, it will have a greater focus on the student experience and the service delivered to the student. We want to see more student unions and individual student involvement in the audit process. A proactive and effective quality system also needs clear, transparent, fair, and effective mechanisms for handling student complaints and appeals at an institutional level, so fewer students feel the need to resort to the national independent adjudicator. The QAA Code of Practice sets out clearly the principles which institutions should address here⁸⁷.
- 20 Second, the QAA will have a greater responsibility for the public assurance of quality and standards in higher education. We want the QAA to adopt an enhanced role in ensuring and communicating information about how quality and standards are maintained. This information needs to be easily accessible and presented in a way that students, parents and others with an interest can readily understand.
- 21 Third, the QAA will have a more proactive role in ensuring that complaints about standards are properly investigated, and either upheld and enforced or demonstrated to be unjustified. This capability will need to be built into the sector's development of the new quality assurance arrangements which will follow the current cycle of institutional audit (which will end in the 2010/11 academic year). The sector will be consulted on the principles of the new arrangements over the Winter of 2009/10.
- 22 **We will also support universities' work to strengthen the role of the external examiner.** As a result of the recommendations emerging from the HEFCE and QAA reviews, described in paragraphs three and four, the sector will be undertaking a review of the external examining arrangements which form a key part of a fair and rigorous quality assurance system. The external examiner process is a strength of UK higher education, but there have been recent concerns that in some cases external examiners have not been allowed to play their full role in assuring standards. Sector-led plans to reinforce its authority and role will help guarantee confidence that no one institution is devaluing the currency of the degree award, and will provide a stronger assurance of the quality of the education being provided.

⁸⁷ *Code of practice for the assurance of academic quality and standards in higher education* <http://www.qaa.ac.uk/academicinfrastructure/codeofpractice/>

- 23 Plagiarism attracts significant media attention and is damaging to public perceptions of higher education. Expectations of students with respect to the originality and referencing of their work must be clear and unequivocal, and guidance about what constitutes plagiarism must be instilled early in students. The higher education sector rightly takes this issue seriously and institutions will need to continue to develop their policies for dealing with plagiarism, building on the significant work already underway. The Higher Education Academy/Joint Information Systems Committee (JISC) Academic Integrity Service provides guidance and practical support to higher education institutions and helps promote a culture of academic integrity in UK higher education. The sector should publicise the actions that it takes to address, detect and penalise plagiarism.
- 24 Since its introduction in 2005, we believe that the Office of the Independent Adjudicator for Higher Education has established itself as an essential part of the higher education world, and must continue to play an important role. It provides a mechanism of last resort for the small number of students who have exhausted their institutions' complaints and appeal procedures and are still dissatisfied. It also helps the higher education sector as a whole to learn from good practice, through the dissemination of case summaries and through its programme of policy seminars.

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Digital learning

- 25 Chapter one stressed the Government's commitment to greater flexibility in access to higher education. That includes making the best use of digital technology and e-learning. This can also play a role in improving quality and the overall learning experience. Technological advancements are providing opportunities to enhance contacts and two-way feedback between students and academic staff. Digitisation has the potential to increase the range of information and content available to all students, through developments such as open course/learning materials. The potential of communications technologies to extend the reach of our universities is one of the most exciting aspects of our higher education today. Students should leave university with a competent mastery of these modes of communication and information transfer.

26 As Ron Cooke's contribution to the debate on the future of higher education⁸⁸ pointed out in 2008, there is some leading edge practice in our universities, but it is rather isolated. The use of new learning technologies is too often left solely to individual pioneers striving for progress in their departments. This will perhaps always be a more powerful force for change than institutional strategies, but nonetheless we support Professor Cooke's call for university leaderships to take responsibility for driving the use of new technologies throughout institutions. Information about how such technologies are used in each course will be available to students as they choose their options, and a digitally self-confident generation of school leavers will know what to look for – and what to avoid. Well-informed student choice will be the most powerful force for change over the next decade.

Conclusion

27 The quality of the higher education provided by our universities stands comparison with the best in the world. However, there are a number of ways in which it could be further improved to ensure the best possible student experience. We take public concern over the quality and transparency of services to students extremely seriously. Too often there is insufficient information for potential students about what a university course involves and how it qualifies them both academically and professionally. And the sector can appear complacent in its response to public concern. This needs to change. The measures set out here will create tough new expectations of universities to increase the transparency of the services they offer to students, and will strengthen two key means of assuring those standards: the QAA and the external examining system. Our aim is a system that is genuinely driven by student choice, so that student expectations are increasingly reflected in the way that universities design and market courses.

⁸⁸ See Annex C for a full list of contributions commissioned for the debate on the future of higher education.

5. Engaging with our communities and the wider world

This chapter argues that universities have a pivotal role at the heart of our communities and shared intellectual life, and as one of the ways in which we engage with the world, and the world engages with us.

This chapter sets out how the Government will continue to support universities in:

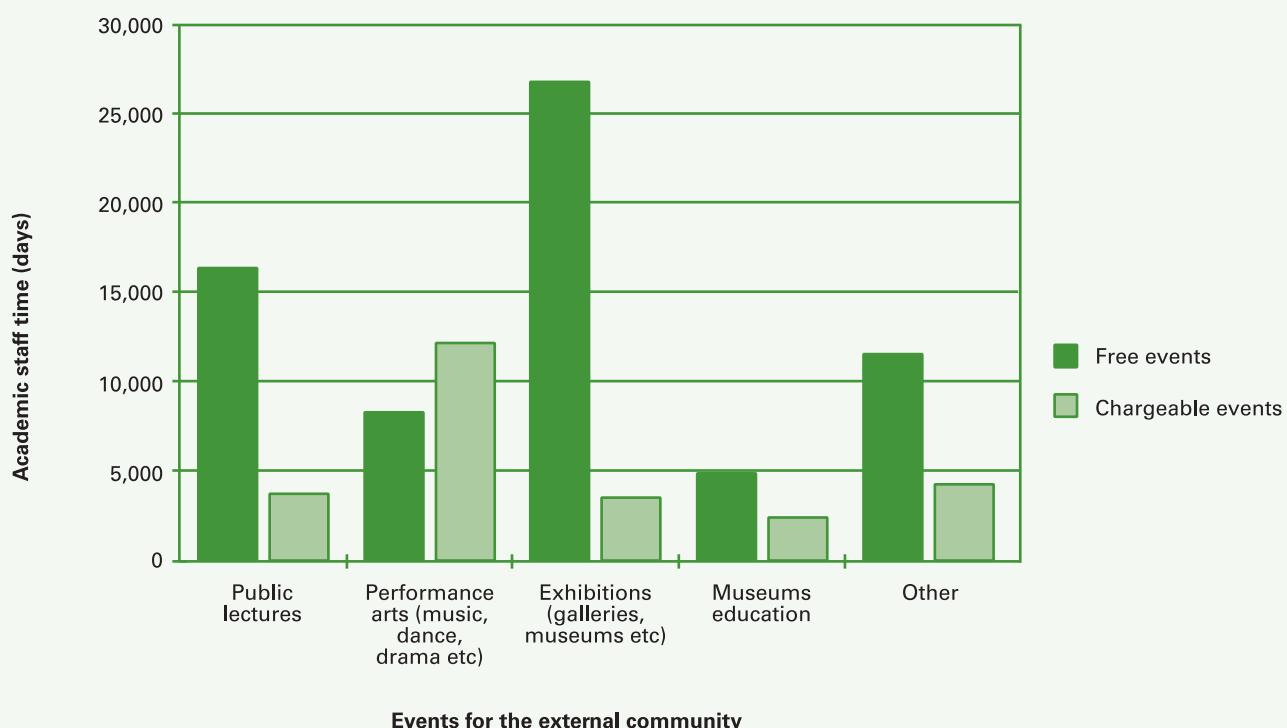
- Encouraging a vibrant cultural and sporting life in their communities, and acting as a check against intolerance and extremism;
- Acting as an important agent in the transition to a low carbon economy, both by setting their own ambitious strategies for decarbonisation and also by acting as a source of public debate, engagement, and leadership on climate change;
- Embedding internationalisation at the core of their missions, in the way they engage with the rest of Europe and the world through collaboration, recruitment, teaching students a global perspective, and encouraging language learning;
- Continuing to strengthen the UK's reputation as one of the world's best providers of e-learning, both for those who study here and students based outside the UK.

A stimulus and challenge

- 1 Around 80 per cent of people pass through either further or higher education at some point in their lives. This makes this process far more than just one of teaching, learning and research. It is an initiation into our shared culture and civic life, and a means to foster our shared values.
- 2 Universities are a stimulus and opportunity for their local communities and a key asset for our shared intellectual and social lives. All universities are major contributors to the regions where they are located. They are large

employers and the students they attract bring revenue to local businesses. Many universities also see themselves as important civic institutions in their city and region: this role is to be praised and should be enhanced. Universities enrich local life through the provision of cultural amenities such as art, music, and theatre. Over 90,000 academic staff days are spent every year on events designed for the external community and many of these events are free. Beyond this, there are the social benefits of the life-long learning courses provided by many universities and the significant voluntary work that universities and their students undertake every year.

Fig 5: Wider community activities of academic staff

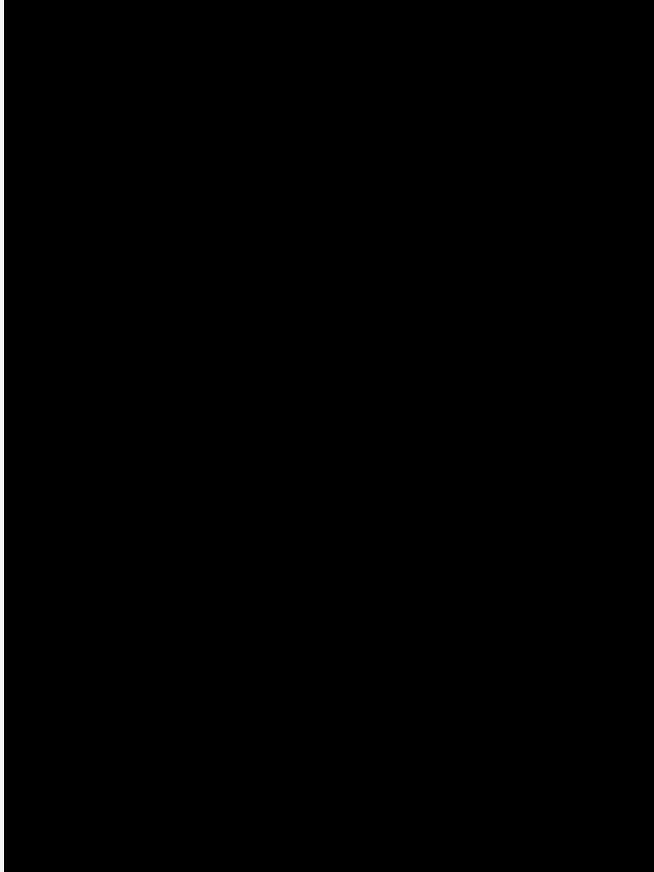


(Source: HEFCE HE-BCI, 2007-08)

- 3 The higher education sector also makes a significant contribution to improving the physical health of students and the wider community. Universities enable students and staff to engage in sports activities and offer sports programmes to local schools and colleges. They can be enablers of community participation through encouraging the wider use of facilities at non-peak times. They are often able to extend the opportunity to join in physical exercise to hard to reach groups, with hugely beneficial consequences.
- 4 This impact of the sector has been recognised by Sport England. The organisation has developed a strategy to get one million more people engaged in sport as a legacy of the 2012 Olympics, and has identified higher education as a key contributor. Sport England has already built a relationship with British Universities and Colleges Sport, to support higher education to develop and deliver more high quality sporting opportunities both for students and the wider community.
- 5 A Higher Education Stakeholder Group has been established, Sport England has created a dedicated HE/FE team, and a Higher Education and Community Sport Partnership Plan was published in July 2009. Sport England is also providing funding to British Universities and Colleges Sport to support higher education to grow student participation, sustain community sport through increased opportunities and enhance the student and staff contribution to running community sport through coaching, volunteering, officiating and facility usage.
- 6 By promoting a culture of free debate, objective inquiry, and tolerance, universities play a vital role in challenging ignorance and extremism. We know universities take seriously their responsibilities for promoting cohesion and good relations between all groups of students and staff. It is in the interests of any reputable higher education institution to promote tolerance and respect. We also acknowledge the very significant contribution students' unions often make in this respect. Institutions should model, in microcosm, the attitudes and behaviours that underpin a well-functioning civic society. Given their significance as local employers and providers of services, a university or college has the power to influence large numbers of people who are neither students nor academics. Universities have the capacity to provide intellectual leadership in our society, in areas such as the transition to the low carbon economy.

7 Too often these crucial roles for universities at the heart of their communities are underappreciated. Without that recognition, people will undervalue the benefits we all receive from society's investment in higher education. There is a challenge for institutions to take collective responsibility in communicating to the wider public the opportunities they offer and the contribution they make. Universities should look amongst their peers for examples of success and positive interaction and seek to share their expertise and experience with one another.

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The economic contribution of universities to their communities

8 We have discussed in other parts of this document the overall contribution of universities to the economy. But the impact of universities can perhaps be seen most clearly in their local communities. Universities create jobs, attract investment and generate wealth. For example, the nine higher education institutions in the East Midlands have a combined revenue of £1.38bn. This in turn generates £1.93bn across the whole economy, £1.56bn of which remains within the region. More generally, for every £1 million of university output, £1.38 million is generated by other sectors of the economy. For every 100 full time jobs created within universities, a higher number is created by other employers. Universities can provide a geographical area with large numbers of highly skilled graduates who are more likely to have higher levels of employment, health, productivity and civic engagement.⁸⁹

⁸⁹ *The impact of universities on the UK economy*, UUK Report (November 2009)

- 9 Universities are already forming effective alliances with Regional Development Agencies (RDAs) to boost regional economic development. We propose to build on this.** To sustain the role of universities in urban renewal and regeneration, the Government will protect the freedoms that higher education institutions currently enjoy, within the framework of existing capital and investment approval processes, to devise their own business plans and borrow commercially to fund new developments. The Government supports the role that RDAs play in providing capital for university schemes that they judge to be of high economic value to the locality and region. The Government also believes that RDAs have a key role to play in working with business at local and regional level to support knowledge transfer activities and deepen university links with local and regional businesses: this is crucial to improving the quality of management in Britain and Britain's future success as an innovation economy.
- 10** Universities are usually active contributors to the economic development strategies of RDAs and local authorities, supporting the creation and growth of local businesses. Their building programmes can be integral to wider regeneration programmes. The projects supported by the Higher Education Funding Council for England's (HEFCE) Economic Challenge Investment Fund illustrate

the many ways that universities can help their areas get through, and indeed emerge stronger from, the economic downturn.

- 11** Local engagement is also crucial to the university function of extending access to higher education among social groups and in places where it is unacceptably low. We welcome higher education provided by and with further education colleges and other providers as a means of promoting easier and wider access. Public funding has already supported the creation of new universities in parts of the country, including Cornwall and Cumbria, where no university previously existed.

The challenge of climate change

- 12** Climate change implies radical changes to the way the economy and society will work over the next 20-30 years. The Government has set the higher education sector targets, requiring an 80 per cent reduction in emissions against 1990 levels by universities by 2050 – in line with the requirements of the Climate Change Act 2008. Many universities demonstrate excellent practice on sustainable development. Most incorporate sustainability into their corporate plans and 68 UK institutions are engaging in carbon management programmes with the Carbon Trust. The Funding Council's oversubscribed Revolving Green Fund aids this good practice by providing repayable grants for projects that reduce greenhouse emissions.

- 13 As the wider challenges of the transition to low carbon become more widely understood, universities need to establish themselves further as intellectual and practical leaders on environmental sustainability, and to articulate their role in combating climate change.

Sustainable development at the University of Gloucestershire

The University of Gloucestershire (UoG) is “embedding sustainability in its DNA”, and has a vision to be acknowledged as an exemplar for innovation and sustainability in its education, research and partnerships.

UoG has an ambitious sustainability strategy *Promising Futures* (2008-2015), which embraces sustainability as a concept concerned with shifting mind-sets, as well as changing unsustainable practice. Students not only learn through engaging with sustainability in the classroom, but also experience it throughout the campuses, and through volunteering opportunities. The strategy includes:

- Embedding sustainability literacy and capabilities across learning programmes,
- Improving the employability of students through work-placements in sustainability fields, for example through the Graduate Challenge programme,
- Providing opportunities for students to experience sustainability through a student allotment, an edible community garden, and campus Biodiversity Action Plans,
- Adopting low carbon technologies and sustainable procurement striving for zero carbon buildings so that students can learn from practice.

The University is continually working to extend its partnerships and share learning and practice in sustainability, engaging with the world beyond the campus walls and with a wide range of community needs and interests. Gloucestershire’s regular threat from flooding is an example of a pressing local issue where the University’s expertise supports local partners in raising awareness and developing solutions.

UoG engages with a range of private, public and community organisations to share good practice in environmental management, corporate responsibility and leadership for sustainability. It hosts RCE Severn, a Regional Centre of Expertise in sustainability education initiated by the United Nations University to build capacity across the West Midlands and South West.

We expect institutions to collaborate with each other and local and regional partners to spread good practice. This is particularly significant in the engagement with employers to help provide the skills required by the developing low carbon economy. Government, through HEFCE, will assist in providing opportunities for universities to lead in the implementation of sustainable solutions, harnessing the commitment of students and the potential for greater energy efficiency at campus locations.

- 14 Through the Higher Education Academy and the Leadership Foundation for Higher Education, we will encourage universities to develop capability amongst curriculum designers and institutional leaders to embed sustainability into all areas of the curriculum. This does not simply mean technical skills, important though these are. If we are to confront successfully the economic and social challenges implied by sustainable development, the future leaders of society will need wide perspectives and mental flexibility. These are fitting priorities for any higher education curriculum.

Engaging with the wider world

- 15 Our universities are a gateway through which we, as individuals and as a society, can engage with the world outside our borders. University study and research collaboration are also routes into UK culture and society for many from overseas. **We will champion the international standing of our universities.**
- 16 Our higher education sector is well regarded internationally. Culturally it is very diverse both in terms of staff and students. We currently play host to 340,000 students from 239 different countries; the UK is second only to the USA as a destination for such students. In 2007/08, 17 per cent of permanent academic staff were from outside the UK, but 27 per cent of those newly appointed in that year were non-UK⁹⁰. A study carried out in 2008 found that 75 per cent of universities reported funded international research collaboration, with nearly 90 per cent having international research links.⁹¹ Because internationally collaborative research is demonstrably of higher quality than UK-only research⁹² this is to be strongly encouraged.

⁹⁰ HEFCE internal analysis (2009)

⁹¹ *International Research Collaboration in UK Higher Education Institutions*, DIUS (2008)

⁹² *International comparative performance of the UK research base*, Evidence Ltd (2009)

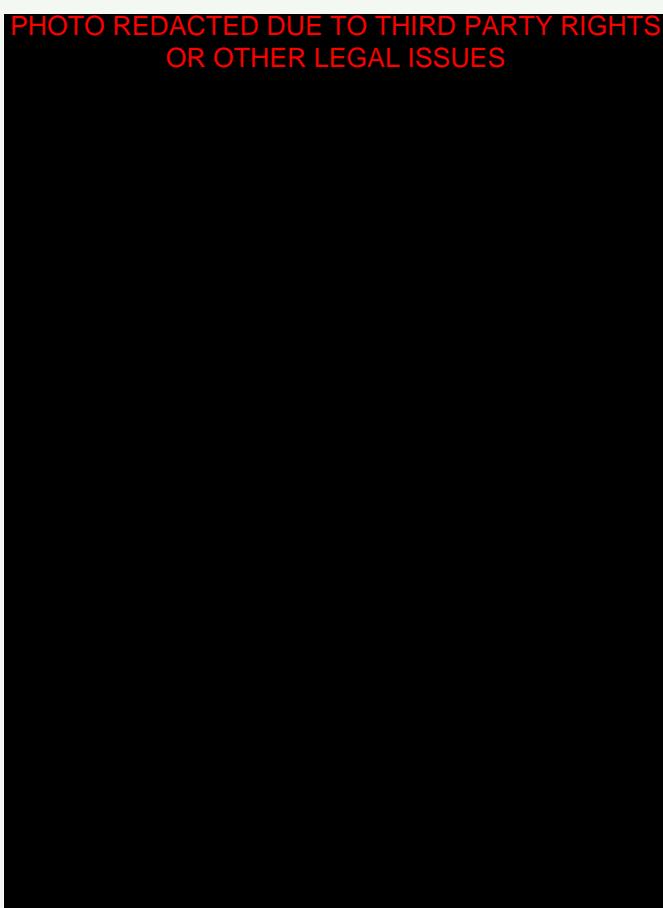
- 17 UK universities are widely recognised as world leaders in transnational education (TNE), where the learner is located in a different country from where the awarding institution is based. Around two thirds of UK higher education institutions are involved in TNE⁹³, with almost 200,000 foreign students currently taking UK qualifications from 112 higher education institutions, just over half of them taking distance learning courses⁹⁴.
- 18 All this makes higher education an important UK export. In 2007/08 gross export earnings were estimated at £5.3bn and non-EU students provide nearly £1.9bn in fees alone. A challenge over the next ten years will be to enhance the higher education experience for international students. We know from surveys such as the National Student Survey that the level of satisfaction of EU and international students with their overall experience of studying in England is high. They appreciate good quality information, advice, and guidance about studying in the UK and they need to be better integrated into our campuses so that they are able to play a full part in university life.
- 19 The Government will continue to work with universities and the British Council through Phase two of the Prime Minister's initiative for international education (PMI2) to enhance the experience for international students, and to support international collaboration. Over 200 partnership projects are being supported through the PMI2 programme and tools such as the international student calculator have been developed to help international students with their budgeting. BIS will continue to work with the UK Border Agency and the higher education sector to ensure that our immigration system facilitates the entry of genuine students, staff, and researchers that are such an important part of the higher education landscape.
- 20 Although international students represent an important source of income for universities, the international activities of our higher education institutions cannot be primarily motivated by commercial self-interest, or they will wither. Much more powerful and long-lasting are the impulses of scholars to work with stimulating counterparts anywhere in the world and to share their knowledge and skills with all who can benefit.

⁹³ *Transnational Education and Higher Education Institutions*, DIUS (2008)

⁹⁴ HESA Press Release 133 (16 April 2009) <http://www.hesa.ac.uk/index.php/content/view/1398/161>
The impact of universities on the UK economy, UUK Report (November 2009)

21 The institutions which will rise to the challenge of internationalisation most effectively will be those which are prepared to work in collaboration with other UK institutions, and through developing international strategic partnerships with universities in other countries across a range of activities, including research and knowledge transfer. To get maximum benefits at the institutional level, these collaborations are likely to be fewer, but deeper, and will complement the array of international links which exist between individual researchers and academics. There are good examples to draw on in work that UK higher education has done with China, India, and other countries.

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22 They will also leverage the opportunities provided to UK universities by the European Research Area (ERA) and the EU Framework Programme, both of which are enhanced by the increased mobility of researchers within the EU. Universities need to work with the Research Councils and others to help identify what research priorities the UK should push for and make full use of the opportunity to influence early thinking on Framework Programme 8 (FP8) which will take effect from 2014. As we move towards the end of the first decade of the Bologna process and the focus shifts to its future development, we need to continue to play a leading role and ensure that our influence is brought to bear, both at government and institutional level, so that the UK can reap the benefits of a modernised European Higher Education Area. The UK is also well placed to help build higher education capacity in emerging economies and the developing world.

University of Bradford

The university recently opened an office in Dubai. The decision was based on a perceived need to develop new and deeper strategic partnerships across the Middle East region. The office will act as a focal point for all the University's activities in the region, provide support to its corporate clients and proactively develop new partnerships in teaching, research and knowledge transfer. This reflects a wider internationalisation strategy.

University of Northampton

Has developed a Postgraduate Certificate in Enhancing the International Student Experience. Running from January 2010, the course aims to enable participants to operate as reflective practitioners in an internationalised environment and to develop a systematic understanding of knowledge and a critical awareness of complex issues relating to internationalisation and globalisation of further and higher education at different levels.

University of Hertfordshire

The University sees study abroad as an important enriching experience, giving a university education 'added value' of international experience, which helps both in terms of personal development as well as future job prospects. The University therefore encourages its students to think about study abroad within their courses, and additionally now offers summer schools in Korea, Singapore and the USA (the first two with PMI2 funding) for students who may not wish to take a semester or year long exchange.

The number of students at the University taking up study abroad has increased threefold in the last five years, with a growth in mobility to Europe on the Erasmus programme, but more recently and significantly to destinations beyond Europe. The University is actively growing its choice of destinations with new partners in Brazil, Chile, Japan, Korea, Russia and Thailand.

A global perspective for British students

- 23 There is a vital role for universities in helping to internationalise the experience of British students, so that they emerge from higher education with a clear sense of Britain's European and global context. Spending even a short period abroad as a student helps individuals to develop new perspectives.
- 24 This is dependent in part on increasing the numbers of students learning other languages. Language learning, whether at degree level or taken in addition to the student's main course, is important not only for enhancing students' employability but in giving deeper understanding of other ways to think and express ideas. The encouragement to learn a language and to study abroad needs to start in schools, by making it clear to students that in choosing where and what to study, they should take into account the international opportunities available.
- 25 As part of the Government's National Languages Strategy the higher education sector is working closely with schools through the Routes into Languages programme to raise the numbers of students wanting to study languages at university. Good progress has been made towards meeting the primary language entitlement by 2010, and languages will be compulsory in primary schools from 2011.

In higher education, increasing numbers of students are choosing to learn a language outside their degree course.

- 26 Universities can further this progress in a range of ways, for example by including language learning modules in a wider range of courses and programmes. Some institutions are already revising their curricula to ensure that a period of mobility can be incorporated as a full part of the programme and count towards the final assessment. Those higher education institutions with campuses or established partnerships with institutions abroad could provide places for students from other institutions to enable more students to experience study abroad. This could be extended to include joint programmes and joint degrees.
- 27 Recent years have seen small increases in the numbers of UK students taking part in the EU's flagship Erasmus exchange programme. The Government has also funded summer schools in China and India which have been highly successful and oversubscribed. More remains to be done if we are to achieve the vision agreed in April 2009 by the higher education ministers of the 46 Bologna Process countries that by 2020 20 per cent of those graduating in the European Higher Education Area should have had a period of study or training abroad. There is scope for making greater

- use of credit frameworks, and the common “language” for describing achievements provided by the Diploma Supplement, to ensure that students’ achievements while studying overseas are properly recognised.
- 28 Finally, employers and businesses, who regularly say they need more graduates with foreign language skills to compete for business overseas, could send clearer signals to potential students about the importance they attach to this expertise.
- A new commitment to internationalism**
- 29 Internationalisation offers clear economic benefits to the UK. It provides an avenue for spreading UK and European values overseas. It increases our ability to influence a wide range of agendas. It helps us to achieve our domestic policy goals, not just for higher education but across a range of fronts. Over the next decade, the Government expects that many, if not all, universities will incorporate internationalisation into their senior management structures and take a more strategic approach to internationalisation. We acknowledge the helpful contribution to the higher education debate on internationalisation produced by Professor Sir Drummond Bone and have drawn heavily on his analysis and conclusions here⁹⁵.
- 30 Different institutions will pursue their own priorities, but the Government can help communicate a strong “UK Higher Education” brand, and align it with the Government’s diplomatic and cultural agenda, and with our international trade strategy led by UK Trade and Investment (UKTI). To enhance our strategic coordination we have set up an International Education and Research Advisory Forum, chaired by the Minister of State for Higher Education, to bring together Government departments and agencies, the UK’s devolved administrations, and universities. Its purpose is to strengthen links between the British Council, UKTI, the Research Councils, and BIS’ own Science and Innovation Network, so that the UK presents its strongest possible story to potential international partners. The committee met for the first time in summer 2009 and will meet every three to four months.
- 31 The Advisory Forum will be building on solid foundations. Our overseas network of Embassies and High Commissions, including our Science and Innovation Attachés, the overseas offices of RCUK, UKTI, and the British Council provide the UK with a national asset second to none. A shared marketing strategy with explicit articulation of what is distinctive about UK higher education will be important both to students seeking to come to the UK to study, and to those wanting to study for British qualifications overseas.

⁹⁵ See Annex C for a full list of contributions commissioned for the debate on the future of higher education.

32 Alumni networks also have a part to play, with graduates of British universities acting as ambassadors for the UK when they return home or – for those whose studies were at distance through TNE – both during and after they have completed their studies. British students undertaking study abroad are our envoys and can create a positive image of the UK abroad. How international alumni networks are managed is an issue that the Advisory Forum will consider – in particular, exploring the potential for separate networks to collaborate effectively together.

e-learning

33 The continuing development of e-learning is a vital element in supporting improvement of teaching and the student experience and in enabling the personalisation and flexibility that students and employers expect. **We will empower our universities to be world leaders in the growing market in transnational education based on e-learning.**

34 Whilst the performance of our institutions in transnational education and online distance learning is already impressive, we need to build on this to ensure that we remain a global leader. Our aspiration is to ensure that UK courses are the first choice for international students who want to study but who do not want or are unable to travel. We will therefore build on the international reputation of the overall “British Brand” of higher education, and on distance learning at institution level, to ensure our strategic investment in digital higher education supports this existing area of strength.

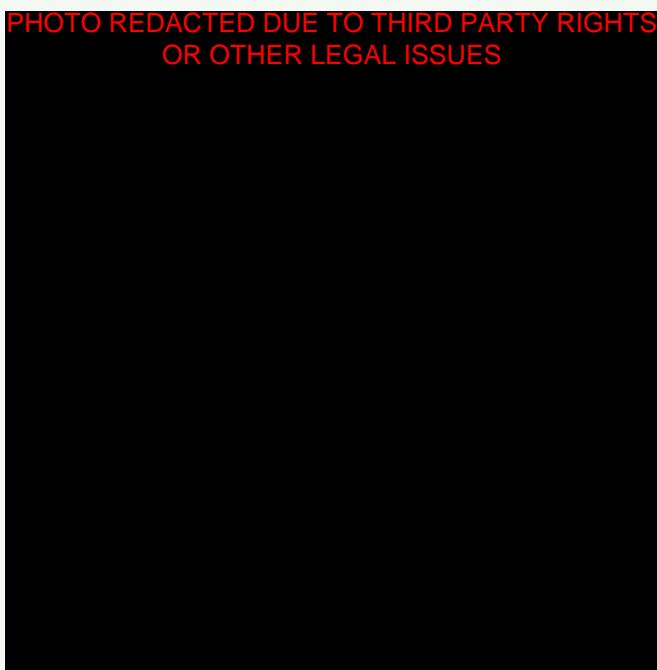
35 HEFCE have established an impressive taskforce to help take forward the aim of helping UK higher education remain a world leader in online learning and grow its market share by 2015. The Task Force is chaired by Lynne Brindley, Chief Executive of the British Library, with representatives at senior level from the private and public sector, including Microsoft, Apple, the British Council, HEFCE, Joint Information Systems Committee (JISC), and Universities UK. The BBC has agreed to advise the task force as and when appropriate. The taskforce met for the first time in September 2009.⁹⁶ It will identify opportunities for investment and innovation within

⁹⁶ The members of the taskforce are: Dame Lynne Brindley (Chair), Chief Executive, British Library; Professor Martin Bean, Vice-Chancellor, Open University; Steve Beswick, UK Director of Education, Microsoft; Professor Philip Garrahan, Pro Vice-Chancellor, Sheffield Hallam University; Professor Sharon Huttly, Professor and Dean of Studies, London School of Hygiene and Tropical Medicine; Sir Alan Langlands, Chief Executive, HEFCE; Mike Munn, Director for Higher Education for UK and Ireland, Apple; Don Olcott, Chief Executive, The Observatory on Borderless Higher Education; Professor Sir Tim O’Shea, Principal, Edinburgh University and Chair of JISC; Professor Gilly Salmon, University of Leicester; Professor Rick Trainor, Principal, Kings College London; Kevin Van-Cauter, Higher Education Adviser, British Council; Martin Williams, Director, Higher Education, BIS; Professor Caroline Gipps, Vice-Chancellor, University of Wolverhampton; Richard Halkett, Director of Strategy and Research, Cisco; Subroto Mozumdar, President of Higher and Professional Education, Pearson Education Ltd; Aaron Porter, Vice President (Higher Education), National Union of Students; John Widdowson, Principal, New college Durham and Chair of Mixed Economy Group. Advisor: Judith Nichol, Knowledge Partnerships Manager, BBC

and between universities and colleges, and with the private sector, in the development of online learning, including the building of critical mass. Through HEFCE the Government will be prepared to provide seedcorn funding on a competitive basis for university-private sector partnerships which will strengthen our market position.

- 36 We believe that, in a rapidly expanding global market, institutions based here have a unique opportunity to provide education in many different forms. The UK's advantages in research and teaching are supported by our established strengths in both accreditation and educational publishing. The potential to develop international education through partnerships with broadcasters and internet service providers is considerable, and in our view will shape and strengthen the higher education sector over the coming decade.

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Conclusion

- 37 Universities have a vital role in our collective life. They shape our community life and are one of the key ways in which people from outside Britain engage with us, and through which we engage with the rest of Europe and the wider world.
- 38 They have the capacity to play a huge role in our communities through the provision of cultural and sporting amenities and in passing on and preserving a set of shared societal values, including tolerance, freedom of expression, and civic engagement. They have the capacity to provide intellectual leadership in our society, especially in areas such as the transition to a low carbon economy, where raising public awareness of the challenges we face is now critical.
- 39 British universities need to be strongly committed to internationalism: attracting students from abroad; collaborating with institutions outside the UK; bringing their expertise to bear on global challenges; and instilling a sense of internationalism in British students by teaching European and global perspectives and encouraging language learning.

6. Supporting a world class system

This chapter argues that maintaining world class excellence in our universities in a period of rising international competition and severely constrained public investment means consolidating wider sources of income for universities alongside public investment.

This chapter sets out how the Government will support universities in:

- Benchmarking themselves both as individual institutions and as a collective whole against the best in the world – in ways that take account of an increasing diversity of missions and specialisations;
- Developing the institutional funding model to include a greater degree of contestability, and to reward institutions for success in their areas of strength;
- Seeking greater income from collaboration with other organisations, fundraising, and resource efficiency;
- Reviewing the contribution made by student fees to the funding of higher education through the work of an independent review which will report in 2010

Benchmarking against the best in the world

- 1 The five previous chapters have dealt with the ends of higher education policy. This final chapter focuses on means. It considers how approaches to the funding of higher education and the shape and structure of our higher education system may evolve, so that the objectives set out earlier can be achieved.
- 2 We make an important distinction between these two areas. Public funding is a matter for Government to determine, and we have signalled in these proposals that we shall expect to tie public funding more

closely to the delivery of key public policy benefits. So far as the shape and structure of our higher education system is concerned, Government can facilitate significant structural changes. This happened in the early 1990s when the former polytechnics were offered and seized the opportunity to become universities, and again five years ago when the criteria for university title were changed. We have no plans for action here, but equally would not want to stand in the way of change which institutions themselves are initiating.

- 3 Our challenge is to nurture a higher education system, responsive to the demands of both undergraduate and postgraduate training, embedded and integrated in a wider education and skills framework, and capable of equipping all students with the capabilities and confidence to prosper.
- 4 We must achieve these goals in an economic environment that has been transformed by the banking crisis and the downturn. Britain must rebuild its economic growth and invest in the skills and competitive strengths that will underwrite a sustainable recovery and a balanced future economy with a strong mix of services and modern manufacturing. It will have to do this in an environment of fiscal constraint.
- 5 Universities have enjoyed a benign financial climate over recent years. Growth based so heavily on state funding cannot continue and this presents government and universities with a series of challenges. Maintaining excellence in both teaching and research is key. We recognise that per capita funding is important but also that in the current circumstances maintaining that level through public expenditure alone will be extremely difficult. That is why the development of a diverse set of funding streams is important if the quality of higher education is to meet new expectations.

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- 6 Our universities need to continue to benchmark themselves against the best in the world, and the highest expectations of their localities and regional economies. Our world class universities are unique national assets, and must be recognised as such. Along with this recognition come reciprocal responsibilities. We need to treat these world class institutions for what they are, and the institutions themselves need to recognise their own obligations to UK undergraduates, in terms of excellent teaching and fair access on merit and potential, regardless of family background.

- 7 The rest of the sector contains many examples of excellence of a different kind. Sustaining a diversity of excellence through a period of increased competition and public spending constraint will require each institution to develop its own distinctive mission, and funding to be focused on nurturing excellence. Universities may need to withdraw from activities in which they cannot achieve excellence in order to focus on the areas where they can. The Government will need to direct funding more strategically if the resources provided are to achieve public policy goals. In future, new priorities will be chiefly supported by redistribution of existing funds and leverage of private investment rather than provision of new money. We acknowledge the Higher Education Funding Council for England (HEFCE)'s role in actively monitoring the financial health of institutions and offering support where necessary.
- 8 The universities that succeed best are likely to be those with strong leadership that has the confidence to challenge vested interests. Universities will need to control costs, including pay. They will need to be more flexible in their pay arrangements, to respond to local conditions, promote career paths that span business and academia, and compete for top talent in the international arena.
- 9 Over the next decade, we expect that more universities will face up to hard choices about identifying the areas where they can really achieve excellence, and specialising in those. Very few English universities will be able to achieve excellence across the full range of university activity. Success in some chosen areas, or success as a member of a group pooling its collective resources, may be more achievable goals. However, that will require new levels of sophisticated inter-institutional cooperation. This is a genuine challenge given the understandable focus of each institution on its own needs and success.
- 10 Universities will need to seek out other sources of funding, from overseas sources as well as domestic ones. The experience of the last decade suggests there is considerable capacity to do this. New money has come from creating greater economic benefits from the knowledge they generate or the teaching expertise they provide and from philanthropic sources of income and increased international earnings. It is also the result of the government's decision to introduce variable fees, which has generated an additional £1.3bn of income into the sector, without any apparent negative impact on access⁹⁸.

⁹⁷ HESA data, 2009

⁹⁸ HESA figures on participation in 2007/08 and UCAS figures for 2008/09 show record numbers of students participating in HE, including record numbers from lower socio-economic groups.

- 11 We believe that higher education's total share of GDP needs to rise further over the next 15 years, if our relative international performance is to be maintained. But in future the burden of financing higher education's diversity of excellence will need to be more equitably shared between employers, the taxpayer and individuals.
- 12 A more constrained fiscal climate will make achieving value for money even more important for universities. For public policy makers there is the less obvious but equally serious challenge that a focus on institutions at risk of failure can divert support and capacity away from the most entrepreneurial and imaginative. In general, our position is that the role of state funding should be to facilitate change, not to hold it back. It should be to reward successful innovation, rather than to underwrite institutions that have not been able to embrace change successfully. And it should go to match fund those who are successful in unlocking other sources of finance, rather than to compensate those who fail to do so.

The financial foundations of higher education

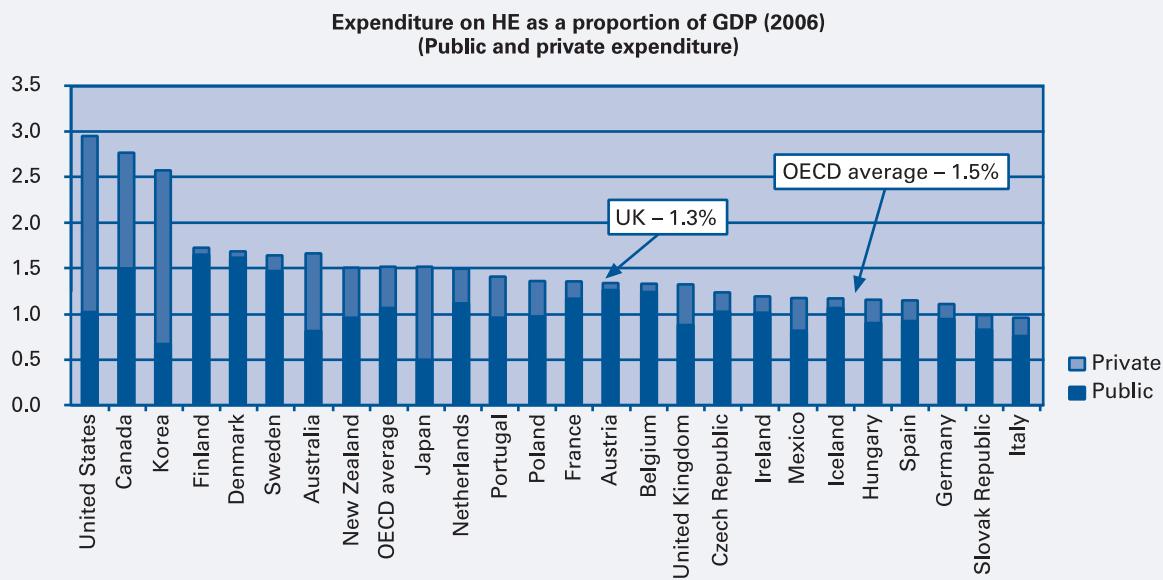
- 13 Despite the large growth in student numbers, UK spend per student continues to be above the OECD average. This level of investment has meant that our system has been able to maintain a level of quality and effectiveness which has not been compromised by the sector's expansion⁹⁹, in sharp contrast to the early 1990s lack of investment which accompanied expansion of student numbers.
- 14 In the past decade universities' income has grown rapidly. In 2007/08, the income of English higher education institutions was just over £19.4 billion – an increase of over 10 per cent from the previous year and more than double its 1997/98 level. Between 1997-98 and 2008-09 in England, public funding for higher education increased by 25 per cent in real terms. The proportion of GDP spent on higher education is also rising: it increased from 1.0 per cent to 1.3 per cent between 2000 and 2006, and the variable fee reforms have increased it further since that date – bringing an extra £1.3bn of income, in steady state, into the sector.

⁹⁹ *Education at a Glance*, OECD (2009)

15 But the diversification of income has been at least as important as growth. Private sources of revenue have grown more quickly than public sources. In 2006, private funding accounted for 35 per cent of our national investment in higher education, compared to 32 per cent in 2000 and only 20 per cent in 1995.¹⁰⁰ This aggregate figure covers major differences between the performance of individual institutions. The median average is 43 per cent but about ten institutions receive over 60 per cent, while a similar number receive less than 20 per cent.¹⁰¹

16 While universities are more secure financially than for many years, they do not have strong private reserves by the standards of top US institutions. Despite considerable growth in recent years, with many universities becoming involved in fund raising for the first time, only two per cent of the sector's income is derived from endowments and investments.¹⁰²

Fig 6: Expenditure on HE as a proportion of GDP (2006) (Public and private expenditure)



¹⁰⁰ Education at a Glance, OECD (2009)

¹⁰¹ Patterns of higher education institutions in the UK – 9th report, UUK (2009)

¹⁰² Patterns of higher education institutions in the UK – 9th Report, UUK (2009)

Fig 7: Spend per Student (2006)

C35, Expenditure on educational institutions per student: Tertiary education (including R&D), annual figure in US\$, converted using PPPs. Based on full time equivalents, 2006 (Source: OECD, EAG2009, Table B1.1a)

Notes: 1 = Public institutions only.

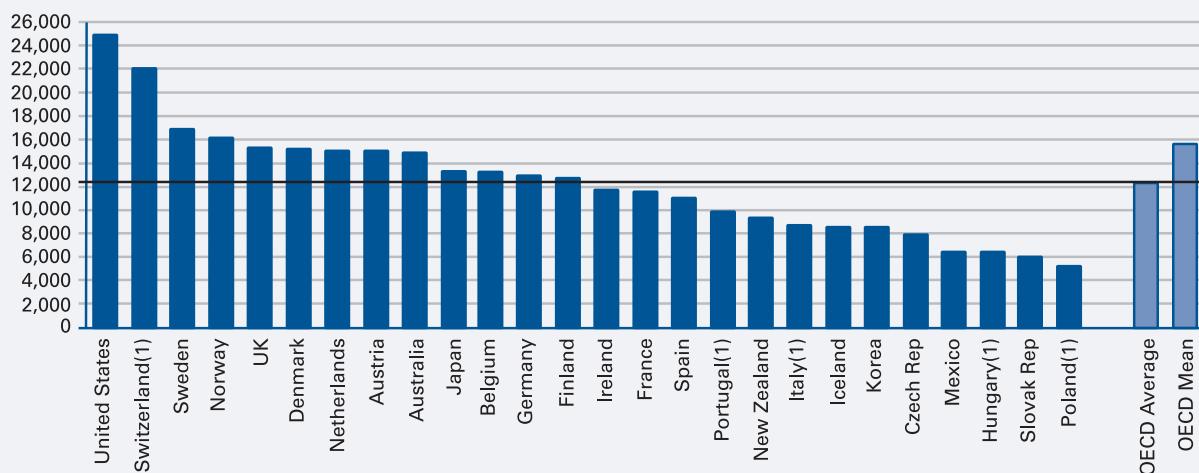
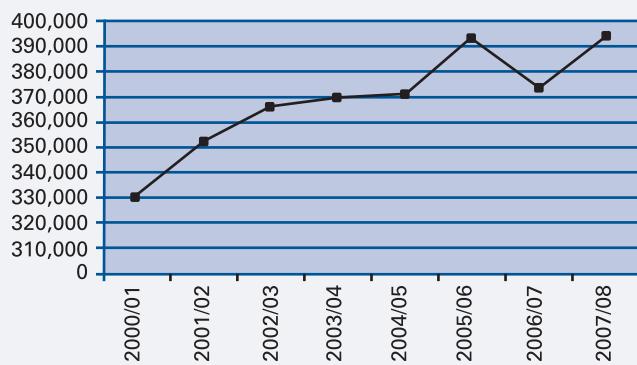


Fig 8: Increasing numbers of students

Full-time UK entrants to UK HE



(Source: HESA)

Fig 9: Funding council income as a percentage of total income by institution (2007/08)

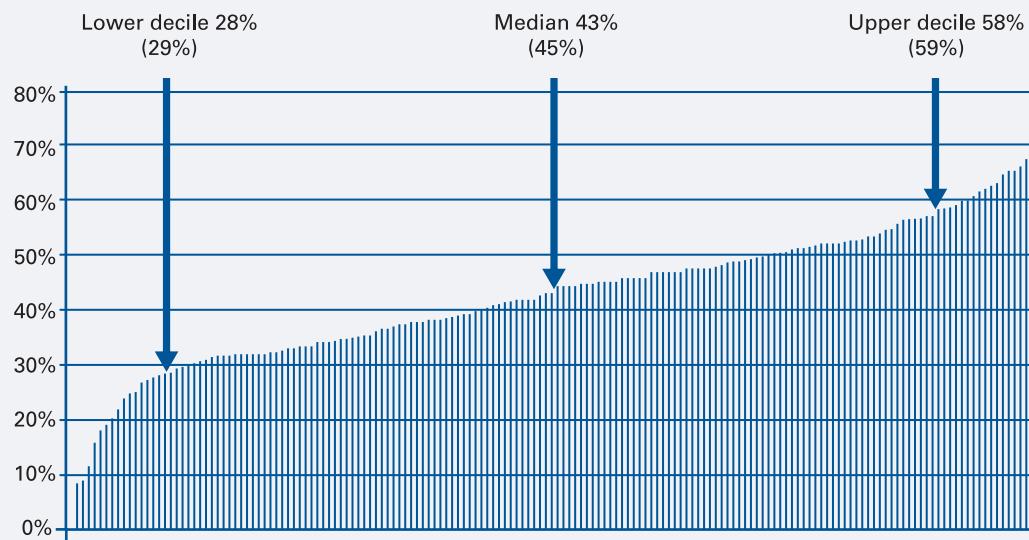
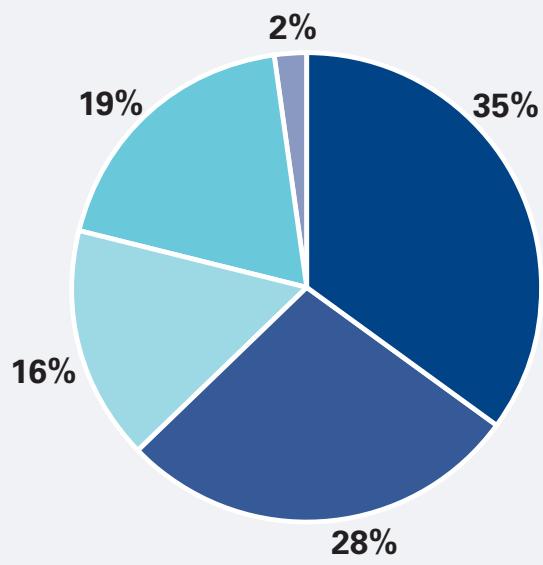
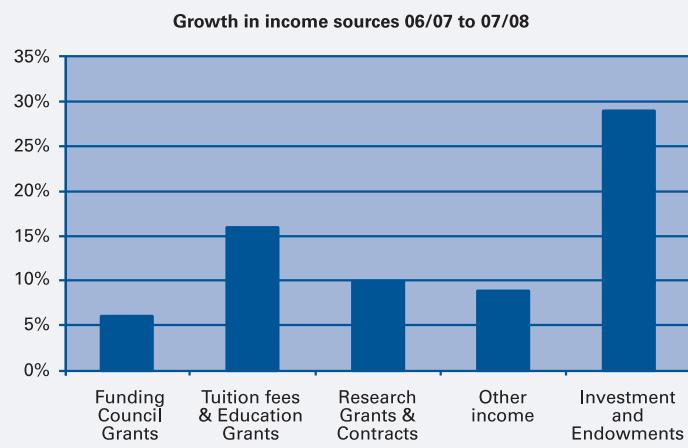


Fig 10: Income from Major Sources (England 2007/08)



- Funding Council Grants
- Tuition Fees and Education Grants
- Research Grants and Contracts
- Other Income
- Investments and Endowments

Fig 11: Growth in Income Sources 06/07 to 07/08



Developing the Institutional Funding Model

- 17** The current systems of funding both teaching and research essentially work well. As set out in Chapter three, we remain committed to the system of dual support for research funding. We also remain committed to public funding of teaching being channelled through an independent Funding Council overseen by a diverse and experienced Board.
- 18** The current system for allocating funds for teaching has many strengths. It is clear and transparent. It enables universities to plan ahead with reasonable confidence. It lets universities decide what subjects and courses to offer – they are best judges of where their strengths lie and of the demand they face from students and businesses. Higher education funding should be based, as at present, on a simple system whereby the majority of resource is distributed to institutions on a formula basis, with a residual sum used to fund strategic developments. We will not abandon this model.
- 19** But this document has set out the case for adjustments at the margins, to meet current challenges, especially with respect to the strategic skills that our economy relies on, and the continuing widening of routes into higher education for those from any and all backgrounds. We need a funding system to create the right incentives for universities to engage with employers; to support an increasingly diverse mix of students by age and by mode and length of study; and to support growth in the programmes that best support national needs, especially those that equip students for success in key sectors of the economy. The system should reward dynamism, innovation, and entrepreneurial activism.
- 20** For these reasons, we favour a shift towards greater contestability in the way the public purse funds universities. Of course, some public funding and all private funding is *already* contestable. Broadly, our policy is that an institution should only be able to *grow* on the back of taxpayer-funded support if it does so by successfully competing for strategic funds. This will enable the strongest universities to grow and innovate rapidly, with a more fluid redistribution of public funding between institutions. This would also require strategic funds to be available at sufficient levels to underpin this policy, and we will consider with HEFCE whether the balance between formula funding and discretionary funding needs to shift at the margins according to national need.
- 21** We also hope and believe that some institutions will want to respond to changing conditions by considering alternative funding models. As public funding becomes tighter, and the numbers of 18 year old school leavers start to decline after 2010, new options may become worthy of serious consideration.

This could mean institutions with different specialisms being funded in different ways. One prototype for such an approach was provided by the Government's scheme to match fund voluntary giving, where institutions chose for themselves which of three alternative funding tiers to join, with different balances of risk and reward. We will ask HEFCE to lead a debate with institutions about such alternative funding options.

Wider sources of support: collaboration and endowments

22 Greater world-wide investment in higher education remains a major opportunity for our institutions, with their established reputations, proven systems of delivery, openness to the world, and ability to move quickly. Collaboration will be hugely important to future success. Closer long term partnerships with industry, government, and other organisations with expertise that complements their own are important not just to performance, but to income.

- 23 Collaborations between our institutions and their international counterparts are growing rapidly. They will need to grow more quickly still. Government will stand ready to help and facilitate these initiatives, but it cannot mandate them. The strength of this approach is that working collaboratively in pursuit of a greater good is a familiar part of the ethos of higher education in this country.
- 24 The higher education sector needs to adopt a more active and professional approach to fund raising and endowment building, exploiting the opportunities established by our £200 million matched giving fund. Strategically, in the next 15 years higher education needs fully to establish itself as a legitimate cause for charitable giving, especially from alumni. We know from experience in the US, Canada, Hong Kong, and South Korea that charitable giving can make a vital contribution to turning a good institution into an excellent one. Our matched giving fund is now supporting institutions to improve their capacity to contact their own alumni and gain experience in asking for support in the right way. The effects on the internal organisation and thinking of universities should be as beneficial as the actual extra money.

Case Study:

The Matched Funding Scheme in Action: Birkbeck College and University of Brighton

Birkbeck, University of London

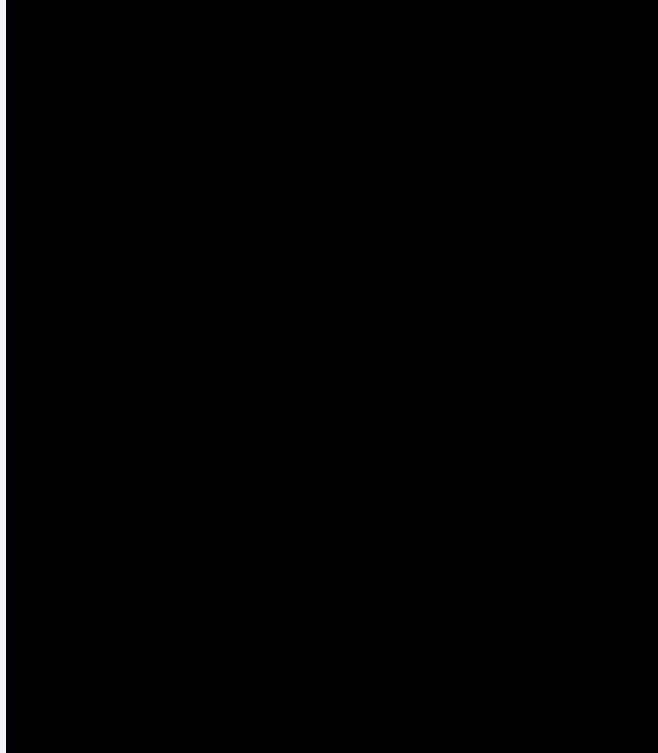
Birkbeck has a relatively new Development operation, but they have built momentum and their fundraising activity has been successful. They entered tier 2 of the Matched Funding scheme, but found that by the end of year 1, they had already reached the cap of £1.35m, in pledged and actual donations. Major gifts and increased regular giving through their annual fund have contributed to this: in 2008/09 their annual fund raised more than £106,000, (£65,000 in 2007/08), with the number of donors increasing from 800 to 1100 (37.5 per cent). One specific occasional donor who was interested in making a legacy gift to Birkbeck, on hearing of the Matched Funding scheme and how it would benefit the institution by leveraging more funds, took out her cheque book and wrote a cheque for £50,000.

The University of Brighton

The University of Brighton established its Development and Alumni office in August 2008, coinciding with the launch of the Matched Funding scheme. The combination of the two helped raise awareness and increase understanding of the university's longer-term commitment to the function and encouraged departments to share information with the Development and Alumni office regarding existing donations. The university decided that the 'match' would follow the donation, so this incentivised academics to share information about new instances philanthropy and in turn has appealed to external donors seeking to create leverage through their giving.

The university also launched *The University of Brighton Ambassadors* in summer 2009 due to the opportunity offered by the Matched Funding scheme. This is a new leadership giving group, with membership set at £1,000 donated per annum, and Brighton has been able to offer three options for membership. It has already attracted 20 members and it is led by the Vice-Chancellor and board of governors, with its inaugural meeting taking place at the House of Lords in January 2010.

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- 25 Alongside the development of our publicly funded universities and colleges we also see an important role for fully private providers over the next 10-15 years. The Government has made it possible for such providers to obtain degree awarding powers. We see no reason why this type of provision should not grow in the future and provide greater choice for students and employers, adding to innovation and diversity in the range of HE options available.
- 26 Indeed, more generally we believe in a diverse ecology for our higher education. Universities will inevitably be the most prominent part of any higher education system.

- 27 But not all higher education is delivered in universities. There is a long tradition of delivery of higher education by further education colleges. This will continue, especially in areas dominated by vocational and strategic skills. Further education colleges are not universities and should not aim to be. But they are a valuable part of the higher education landscape. We have no view on what proportion of higher education learners should be taught in further education colleges. That should be the outcome of learner and employer choices, not an administrative target. As we made clear in our 2006 White Paper¹⁰³, the focus of higher education provision in further education colleges should be on skills, and on qualifications up to and including foundation degree level. But wherever higher education courses are delivered through further education colleges the highest standards must be assured.
- 28 We also want to celebrate the role of this country's University Colleges. We do not propose further changes to criteria for university status. We will continue to regulate the use of the word university both in its own right and in conjunction with other terms, because of the intrinsic value of the well-recognised university and university college brands.

¹⁰³ *Raising Skills, Improving Life Chances*, Department for Education and Skills (2006)

Resource efficiency

- 29 Private funders will, as much as government, be a spur to greater resource efficiency over the next decade. Fee payers, business customers, and donors will expect to see a causal relationship between what they pay and outcomes attained. We will expect to see a greater use of benchmarking by universities to drive down costs. There is considerable scope for further efficiency savings through, for example, more effective approaches to procurement. Government cannot mandate such efficiencies, but it can and will fund on the basis that such efficiencies are being achieved.
- 30 Resource efficiency often means playing to institutional strengths. It is more important to do this than to cover all the bases. This means institutions withdrawing from activities where they are less strong, which can involve painful and locally controversial decisions. The Government does not take a view on the merits or otherwise of individual decisions to close departments, and we will not do so in future. Clearly no university will withdraw from activity lightly or in response to short-term and possibly transient changes in demand. But the universities which are prepared to make difficult decisions will be more successful over the next decade than the ones that hold back.
- 31 In other sectors of the economy with a large number of providers, a future of increased but diversified opportunities coupled with pressures on revenue streams would lead to significant merger activity. It is more likely that the number of universities will decrease than increase. The Government will not force mergers, but we do not oppose them, and in some cases there may be a case for public investment to support mergers. It will be for the Funding Council to decide whether special funding to facilitate any merger proposal represents good value for the taxpayer. It is more likely that there will be public value in such funding to support merger between high performing universities, than in rescuing a weaker university.
- 32 It will be particularly important for universities to take a responsible approach to pay and other benefits. There have been strong, above-inflation pay increases in recent years which have seen the long-term backlog in academic and non-academic pay addressed. The Universities and Colleges Employers Association (UCEA)¹⁰⁴ has identified a number of areas where working conditions in higher education are favourable in comparison with other sectors including a 30 per cent pay increase for all staff in higher education since 2001, major improvements to equal pay, as well as good annual leave allowances, maternity and flexible

¹⁰⁴ 'Where are we now?' the benefits of working in HE, Universities and Colleges Employers Association (Summer 2008)

working entitlements. In recent years, universities have developed increasingly sophisticated pay/reward and career structures which are tailored for their individual contexts. This is something that the Government will continue to support.

Leadership and governance

- 33 The willingness of universities to embrace change successfully will depend to a great extent on the effectiveness of those leading them. In 2004 we established the Leadership Foundation for Higher Education (LFHE), to provide programmes to equip leaders of modern universities for success. This has now become an established feature of the landscape. 131 serving Vice-Chancellors have participated in Leadership Foundation programmes, 80 per cent of the total.
- 34 We also believe that universities should have strong governing bodies. A strong governing body is one that is not so large that decision making becomes unwieldy; one that contains student union or individual student and staff representatives but is not dominated by them. It should have external members able to articulate the wider community, business and general public interests that the university serves. Above all it must have the competence and confidence to

develop, implement and review strategic plans and to hold the senior management team to account. Working with the Committee of University Chairs in recent years, we have seen good progress, especially in reducing the average size of public bodies and in increasing the influence of external members. There is still progress to be made in equipping governing bodies to get to grips quickly with difficult issues at their universities, and in increasing the diversity of governing body membership.

- 35 University leaders are responsible for a large and valuable workforce. There were over 306,000 members of staff employed in higher education in England in the academic year 2007-08. There has been an increase in the numbers of staff from non-white ethnic backgrounds and from non-UK nationals and the gender disparity is being redressed, particularly at senior levels¹⁰⁵.
- 36 Research¹⁰⁶ shows that the sector-wide initiatives, including the Rewarding and Developing Staff Initiative (R&DS), the Framework Agreement for Modernisation of Pay, and the formation of sector bodies including the LFHE and the Equality Challenge Unit have had a positive impact on higher education institutions' abilities to develop effective practices across a range of people management priorities. The public investment of £888

¹⁰⁵ Staff Employed at HEFCE-funded HEIs: An update (2008,26), HEFCE (2008)

¹⁰⁶ Evaluation of the impact of public policy and investments in human resource management in HE since 2001 Oakleigh Consulting Ltd (2009)

million in R&DS has enabled the sector to invest in and build up its capacity to modernise human resource management practice at an accelerated pace¹⁰⁷.

- 37 The challenge for the future will be for higher education institutions to strategically plan their workforce to respond flexibly and rapidly to a more dynamic and competitive environment in the next 10-15 years. HEFCE will be examining these issues in more detail in their forthcoming Higher Education Workforce Framework Report

The future of student fees and student support

- 38 Following the publication of these proposals we will launch a review of the fees structure in English universities, as promised at the time of the establishment of variable fees for full time undergraduate students in 2004. This framework will provide important context for the work of the independent review. The focus of the review will be the objectives of sustaining genuinely world-class institutions and fair access to universities, while ensuring value for money for the taxpayer.

Conclusion

- 39 Sustaining a world class system of higher education through a period of increased competition and public spending constraint will require a close focus on well-defined but diverse mission statements and on investing in and nurturing excellence. The resources to do this will have to come from an increasingly wide range of sources. While public funding will continue to be important, our universities have thrived not just through state support but by exercising their independence and initiative in seeking out alternative sources of funding. This can be achieved through deepening the economic impact of the knowledge they generate and the training they provide, through accessing international research funding, marketing their services to students abroad or to businesses, or through a more concerted and professional approach to endowment building. It also demands an even tighter focus on resource efficiency. It inevitably requires that we assess the contribution of students and employers to the cost of the education, from which they benefit, while ensuring that the cost of a university education remains no bar to the widest possible access to higher learning.

¹⁰⁷ KPMG Evaluation RDS1, (2005)

Annex A:

Timeline of key developments

Timing	Proposal in the framework and related action
From September 2009	Enhanced information on employability and graduate destinations available on the UCAS website.
Autumn 2009	The higher education sector will be undertaking a review of the external examining arrangements which form a key part of a fair and rigorous quality assurance system.
Autumn 2009	We will launch an independent review of the fees structure in English universities, as promised at the time of the establishment of variable fees for full time undergraduate students in 2004.
Every 3-4 months	The International Education and Research Advisory Forum, chaired by David Lammy MP will meet.
Late 2009	Interim report from Professor Adrian Smith on postgraduate provision.
Winter 2009/10	The higher education sector will be consulted on the principles of the new quality assurance arrangements which will follow the current cycle of institutional audit (which will end in the 2010/11 academic year).
January 2010	Initial report on the skills audit to be undertaken by UKCES, working with employers, and the higher and further education sectors.
Early 2010	BIS and DCSF will publish plans for delivering the commitment that high performing pupils from low income families will have a structured package of assistance to help them progress to higher education.
Spring 2010	HEFCE to announce outcomes of consultation on reflecting university links with business and users in the REF.
Spring 2010	Final report from Professor Adrian Smith on postgraduate provision.

Spring 2010	Sir Martin Harris, the Director of Fair Access, will advise on further action that could be taken to widen access to universities for those from underprivileged backgrounds.
Summer 2010	The independent review of fees will report.
Mid 2010	HEFCE's impact pilot on reflecting university links with business and users in the REF to conclude.
Autumn 2010	First annual report resulting from the skills audit to be undertaken by UKCES, working with employers, and the higher and further education sectors.
Autumn 2010	The task force, chaired by Lynne Brindley, Chief Executive of the British Library, to help UK higher education remain a world leader in online learning, and grow its market share by 2015 will report.
By 2010/11	HEFCE will link capital funding to actual performance against emissions.
2013	Assessment phase of first REF exercise to take place.

Annex B:

Recommendations from 'Unleashing Aspiration: The Final Report of the Panel on Fair Access to the Professions' in *Higher Ambitions*

Recommendation	Reference	Relevant material in Framework
Recommendation 29: Universities and the Government should actively promote a range of entry points through an all-year academic calendar in order to allow learners to enrol on, and undertake, courses at more flexible times throughout the year.	Chap. 1 paras 36, 38	A choice of start dates is becoming more common across the higher education sector. A range of entry points is particularly important as we increase access for those studying part-time, meshing their study patterns with work and family responsibilities. We have asked the funding council in previous grant letters to encourage new approaches to provision, and this is a core theme of the first chapter of this document
Recommendation 30: Universities and the Government should develop a transferable credit-based learning system to recognise student achievement in discrete modules or mini-courses, building on the findings of the Burgess Report.	Chap. 1 para 39	We welcome the sector's development of a credit framework, and its adoption by the great majority of institutions. This will support further growth in the possibilities for students wanting to transfer from one institution to another comparable one, carrying with them the credits they have accumulated, and we will encourage this.
Recommendation 31: The Government, working with the Higher Education Funding Council for England, should prioritise investment in e-learning infrastructure to extend the possibilities of remote and online learning.	Chap 4para 25-26; chap 5 para 35-36	A new task force led by Lynne Brindley, Chief Executive of the British Library, is now working on how we can be world leaders in distance learning. The goal is to help UK higher education remain a world leader in online learning, and grow its market share by 2015. This will underpin the best use of digital technology and e-learning for home students, including as a tool for widening access
Recommendation 32: The Government, working with the Higher Education Funding Council for England, should examine how to remove the artificial and increasingly indefensible division between part-time and full-time higher education in relation to funding, regulatory and student support frameworks.	Chap 6 para 38	Government accepts that this is an important area and will look to the independent review of variable tuition fees to examine the issue further. The independent review will be launched later in 2009.

<p>Recommendation 35: Universities and colleges, working with the Government, should make the concept of 'Higher Education within Further Education' one that is universal across the country so that many more mature students, in particular, are able to study for a degree.</p>	<p>Chap 5 para 11; and Chap 6 para 27</p>	<p>The Government, through HEFCE, is seeking to grow local higher education through initiatives such as University Centre Suffolk, the University Campus in Southend and the Universities of Cornwall and Cumbria. We reiterate our recognition that higher education offered in further education colleges is a valuable part of the HE landscape. We are committed to the enhancement of locally accessible higher education that can create new opportunities for individuals and their communities. This will be achieved, as resources allow, through innovative partnerships between universities and FE colleges, and by support for new local higher education centres under the New University Challenge initiative.</p>
<p>Recommendation 36: Sustainable, concrete links should be established between individual schools, particularly those with low progression rates, and local universities, including specialist help to increase the number of pupils achieving five GCSEs at grades A*-C (including English and mathematics). All universities should offer a representative to join the governing bodies of such schools. And, as we propose in recommendation 4, all universities should enlist students to act as role models and mentors for pupils in local schools.</p>	<p>Chap 1 paras 23, 28</p>	<p>The Social Mobility White Paper guaranteed that by 2012 high performing pupils from low income backgrounds will receive support to pursue HE. We will publish our plans for delivery on this commitment early in 2010.</p> <p>The Government also accepted the National Council for Educational Excellence's recommendations for strengthening partnerships between schools, colleges and universities last year, and these are now being implemented.</p> <p>Whether HEI staff join school governing bodies must be a matter for the HEI concerned.</p>
<p>Recommendation 37: All universities should work with schools to ensure that higher education related information, advice and guidance, and outreach and mentoring programmes are provided from primary school level onwards.</p>	<p>Chap 1 para 26</p>	<p>HEFCE and Universities themselves support a range of outreach activity to widen access. HEFCE are piloting a brokerage system linking primary schools with HEIs through the Aimhigher partnerships. HEFCE will examine how partnerships' existing links with secondary schools can be used to reach local primary schools.</p> <p>DCSF published their IAG strategy on 26th October 2009, which also addresses this recommendation.</p>
<p>Recommendation 38: The Government should redirect an element of widening participation resources into supporting these local partnerships.</p>	<p>Chap 1 para 26</p>	<p>There are excellent local partnerships in existence, including those funded by HEFCE, such as Aimhigher Partnerships, and those supported by universities themselves. These should continue to receive funding, and we and HEFCE continue to consider how funds can be best targeted.</p>

<p>Recommendation 39: Each profession should develop partnership compact arrangements with university faculties. These arrangements might include linking up recent professional entrants as personal mentors with young people in schools, and issuing guidance about the profession and how to get into it.</p>	<p>Chap 1 para 29</p>	<p>The Government will work with the Gateways to the Professions Collaborative Forum and the Higher Education sector in developing an approach to promote this involvement.</p>
<p>Recommendation 40: The Higher Education Statistics Agency should publish information on student admissions at university, college and course level, with more detail on pupils' backgrounds. This should be published annually, with year-on-year progress tracked. It should be provided in a format that enables a transparent assessment of the effectiveness of widening participation expenditure at the individual university level.</p>	<p>Chap 1 paras 12, 14</p>	<p>We will ask the relevant bodies to collate meaningful information on student background and work on creating a robust means of measuring and presenting the data in a fair, transparent and accessible way through HESA.</p> <p>HEFCE has also recently asked each university to produce Widening Participation Strategic Assessments. A review of these will be published later this year which should contain summaries of these details, where students have agreed to provide them.</p>
<p>Recommendation 41: By law it is for universities to determine their admissions procedures but we hope that all universities will take into account the educational and social context of pupils' achievement in their admissions process.</p>	<p>Chap 1 para 31</p>	<p>Many universities are developing new ways to use contextual data in their admissions procedures to assess the aptitude and potential to succeed of those from poorly performing schools. We believe this is a valid approach and hope that all universities will consider it.</p>

<p>Recommendation 43: The Government should use the opportunity of its review of the impact of variable tuition fees to consider a radical reshaping of the student support system. It should initiate a national debate on the trade-offs between higher fees, growing student places and increasing financial support for students. It should consider fairer financial support for those undertaking postgraduate and part-time courses, more targeted packages of financial support for students from average and less well-off families, and new support for students living and learning at their local university, including 'fee-free' higher education.</p>	<p>Chap 6 para 38</p>	<p>Government accepts that this is an important area and will look to the independent review of variable tuition fees to examine the issue further. The independent review will be launched later in 2009.</p>
<p>Recommendation 44: The Government should work with universities to develop proposals to integrate a flexible element of professional experience into all higher education courses.</p>	<p>Chap 2 paras 12, 33</p>	<p>This document asks Universities to publish an employability statement. It is a top concern for business that students should leave university better equipped with a wider range of employability skills. All universities should be expected to demonstrate how their institution prepares its students for employment, including through training in modern workplace skills such as team working, business awareness and communication skills. We are clear that there can be no room in the system for vocational programmes that do not constantly evolve to meet changing business needs. There will be a new central role for the UK Commission for Employment and Skills to advise on areas where there is an insufficient supply of graduates in particular disciplines, and also cases where university programmes are failing to reflect changed business requirements or the priorities articulated by employer-led bodies such as Sector Skills Councils and Regional Development Agencies.</p>
<p>Recommendation 45: The Government should support universities to collect and publish a rounded picture on student destinations, building on the existing leaver surveys. The Government should reflect on the merits of linking data to financial incentives and may wish to redirect some of the Widening Participation funding to this end.</p>	<p>Chap 2 para 34</p>	<p>From September 2009 information on employability and graduate destinations has been available on the UCAS website. We are working with HEFCE and the UKCES to enhance this information.</p>

Annex C:

Commissioned contributions to *Higher Ambitions*

We are grateful to all the individuals and organisations who contributions have helped to shape our proposals in this document

Contributions from the higher education Sector:

- Professor Sir Drummond Bone, former vice-chancellor of the University of Liverpool: Internationalisation of higher education
- The Council for Science and Technology: How academia and Government can work together
- The Higher Education Funding Council for England: Understanding institutional performance
- Professor Christine King, vice-chancellor of Staffordshire University: Part time study in higher education
- Professor Paul Ramsden, Chief Executive, Higher Education Academy: Teaching and the Student Experience
- Professor Nigel Thrift, vice-chancellor of the University of Warwick: Research careers in the UK
- Universities UK: Demographic change and its impact on the higher education sector in England
- Professor Paul Wellings, vice-chancellor of Lancaster University: Intellectual property and research benefits
- Professor Sir Ron Cooke, former Chair of Joint Information Systems Committee Board: On-line innovation in higher education

Contributions from users of higher education:

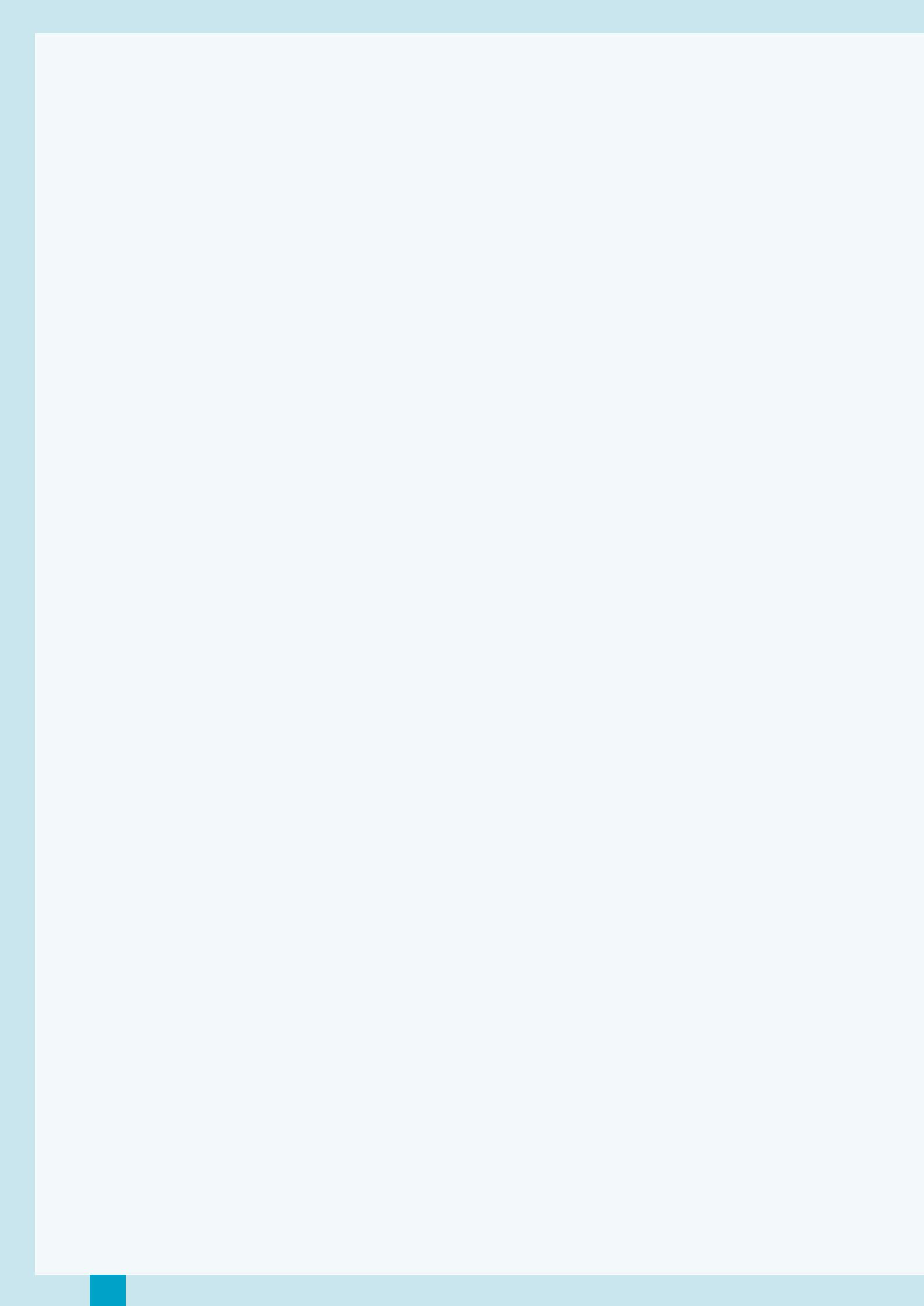
- Nicholas Hytner, Director of the National Theatre
- Tom Russell, London Development Agency
- Sir John Chisholm, Chair of Qinetiq and the Medical Research Council
- Professor Ann Close, National Clinical Advisor to the Healthcare Commission
- Dame Marjorie Scardino, Chief Executive of Pearson plc
- John Griffith-Jones, UK Chairman of KPMG

All contributions are available to view on the BIS website.

Annex D:

Glossary of terms

AHRC	Arts and Humanities Research Council	OFSTED	Office for Standards in Education, Children's Services and Skills
BIS	Department for Business, Innovation and Skills	OSCHR	Office for Strategic Co-ordination of Health Research
CMPO	Centre for Market and Public Organisation	QAA	The Quality Assurance Agency for Higher Education
CSR	Comprehensive Spending Review	R&D	Research and Development
CST	Council for Science and Technology	RAE	Research Assessment Exercise
DCSF	Department for Children, Schools and Families	RCIF	Research Capital Investment Fund
DIUS	Department for Innovation, Universities and Skills	RCUK	Research Councils UK
EMA	Education Maintenance Allowance	RDA	Regional Development Agency
EPSRC	Engineering and Physical Sciences Research Council	REF	Research Excellence Framework
ERA	European Research Area	SME	Small and medium sized enterprise
ESRC	Economic and Social Research Council	SRIF	Science Research Investment Fund
HEFCE	the Higher Education Funding Council for England	SSLC	Staff-Student Liaison Committee
HEIF	Higher Education Investment Fund	STEM	Science, Technology, Engineering and Maths
HEIPR	Higher Education Initial Participation Rate	TDA	Training and Development Agency for Schools
HESA	Higher Education Statistics Agency	TNE	Trans-national education
IAG	Information, Advice and Guidance	TQI	Teaching Quality Information
ICT	Information and Communications Technologies	TQSESC	Teaching, Quality and the Student Experience Committee
IP	Intellectual Property	TSB	The Technology Strategy Board
JISC	Joint Information Systems Committee	UCAS	The Universities and Colleges Admissions Service
NSF	National Student Forum	UCEA	Universities and Colleges Employers Association
NSS	National Student Survey	UKCES	UK Commission for Employment and Skills
OECD	Organisation for Economic Co-operation and Development	UKERC	The UK Energy Research Centre
		UKTI	UK Trade and Investment
		UUK	Universities UK



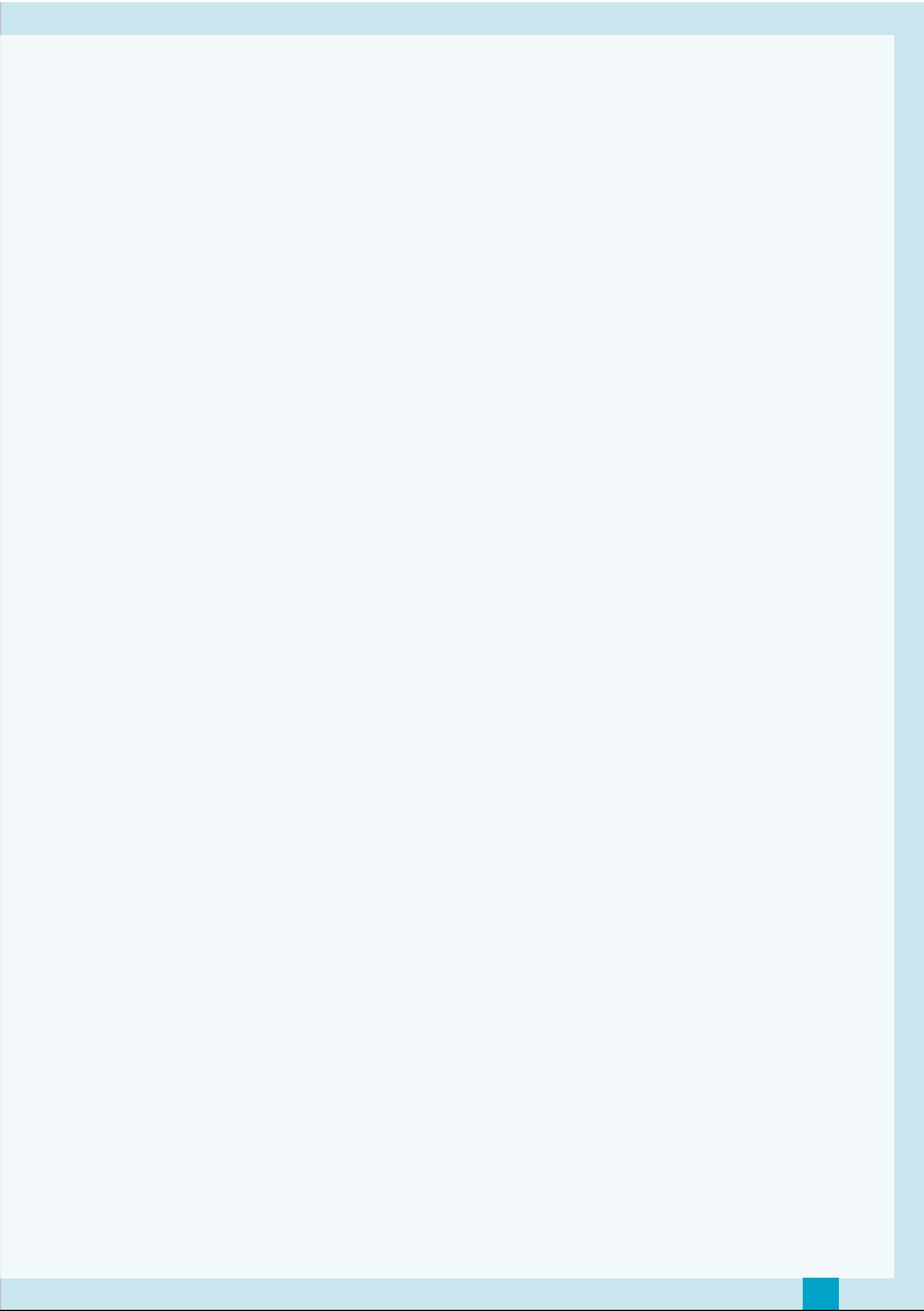


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