



Innovation Nation and the role of Universities

UK Government Policy on Science and
Innovation

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The overall context

- Science and Innovation as the bedrock of UK success – economic and social
- Key element in Labour Government policy
- Built on sustaining UK science and technology excellence and relevance to users
- Continued increases in funding for both University science base and interaction with business – in line with trend growth in UK economy

Sequence of Government Reports

- Knowledge Economy White Papers DTI, *1998 and 2001*
- Excellence and Opportunity – a science and innovation policy for the 21st century *DTI 2002*
- Lambert Review of Business University Collaboration *Report to HM Treasury December 2003*
- Lord Sainsbury's Innovation Report December 2003
- Lord Sainsbury's Report "The race to the top" *Report to HM Treasury Oct 2007*
- Innovation Nation White Paper *March 2008*

Common themes

- Role of Government in creating frameworks for successful innovation
- Science and technology as key enabler – but alongside other policies eg
 - finance and entrepreneurship,
 - standards, design, intellectual property
 - clusters and regional innovation
 - Sectors and (not) “picking winners”
 - STEM skills
 - government procurement
- Role of Universities
 - research priorities
 - exploitation and technology transfer
 - spin outs and IP
 - incentive structures for institutions and individuals

Some examples...

The Sainsbury Report Oct 07.....

- The Race to the Top – high value add manufacturing and services
- Key role of Government investment in science base, TSB and wider infrastructure eg IP, KT, standards
- The role of Venture Capital
- STEM skills
- Government Departments and RDAs
- The UK as a Global leader in S&I -
 - “....more successful at innovation than generally supposed.....”

... and Innovation Nation March 08

- New focus on demand side instruments – linking demand pull with supply push
 - regulation and procurement
 - innovation vouchers
 - using the Technology Strategy Board to link action across Government
- Some other challenges for DIUS
 - Measuring wider innovation and strengthening our understanding
 - Influencing non innovation policies
 - Public sector innovation
- Hidden innovation and the UK R&D investment paradox

Universities and business - Key interventions

- Lambert Report -recommendations
 - Culture change in Universities
 - Third stream funding
 - Knowledge transfer office
 - IP - Lambert agreements
 - Venture capital seed funds, spin outs
- University Technology Centres – eg in aerospace, pharma
- Capability building - HEIF rising to £150m pa
- Individual incentives - RAE and research excellence

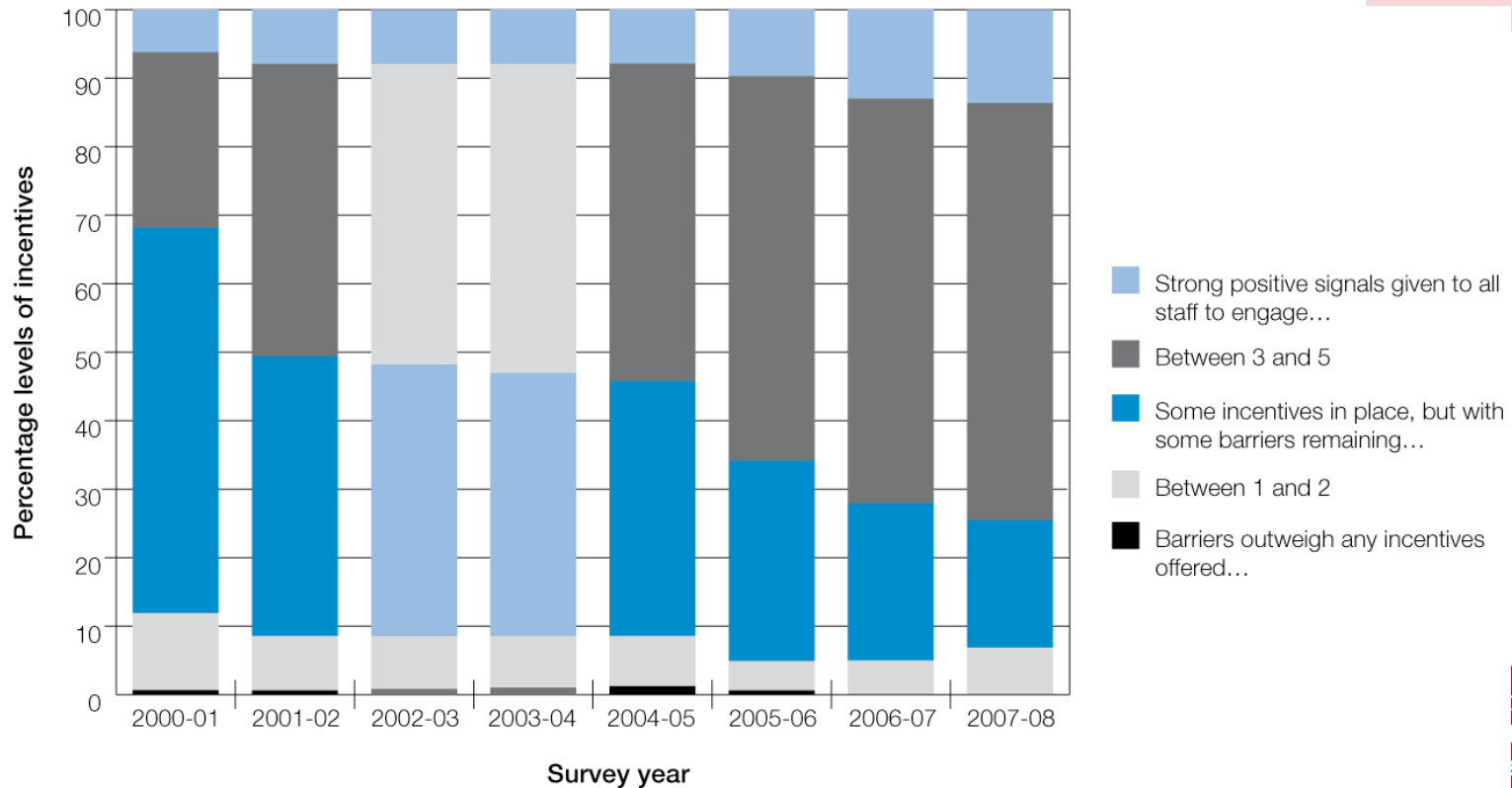
UK Universities and business interactions-results

Indicator		2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	%Change
Number of patents granted		250	199	377	463	711	579	647	159%
Number of licensing agreements		728	615	759	2154	2,099	2,707	3286	351%
Income from licensing of intellectual property	£m	18	47	37	38	57	58	58	222%
Number of spin-outs		248	213	197	161	148	187	236	-5%
Income from business consultancy contracts	£m	104	122	168	211	219	242	288	177%
Income from business contract research	£m	262	328	289	577	617	651	782	198%

Source: Annual Innovation Report - DIUS 2008

Department for
**Innovation,
Universities &
Skills**

Results: Individual incentives



Source: HECBI Survey 2008



Annex: Details of Innovation Nation policies and UK Strengths and Weaknesses

Policy proposals covering -

- Demanding innovation
- Business innovation
- Research base international role
- People
- Public sector
- Places and regions

Demanding Innovation

- Innovative Procurement
 - Departmental procurement plans
 - Spreading good practice and learning from business experts
 - Refocusing SBRI to support research on new products and services
- Regulation
 - Working with BRE to understand how regulation can best stimulate innovation
 - Learning from independent regulators
- Science and Society strategy to support confident users

Supporting business innovation

- Technology Strategy Board support role
 - New Innovation Platforms
 - Knowledge Transfer Partnerships
 - Service sector innovation
 - Leadership of others
- Finance for innovation
 - Working with BERR/RDAs
 - Innovation vouchers
- Standard on management of innovation
- Intellectual Property research and training for BL advisers etc

A strong and innovative research base

- Maintain investment in the science base and delivering on Sainsbury eg HEIF
- Intellectual Property
 - Helping universities manage IP - Wellings study
- Measurement of innovation
 - NESTA Innovation Index
 - Innovation Research Centre

International Innovation

- DIUS to lead the FCO Science and Innovation Network
- EU innovation –
 - TSB role to improve business engagement with FP7 and other EU support and
 - Use opportunities from EU regulation
 - Working with EU's lead market initiative
- EU patents – improved access for business

Innovative people

- Delivering on Leitch review and workforce development programme
 - Train to Gain
 - Reform of Sector Skills Councils
 - National Skills Academies
 - UK Commission for Employment and Skills
- FE Specialisation and Innovation Fund
- Higher Level Skills
 - Strategy
 - NCGE regional network
- STEM skills – understanding needs

Public Sector Innovation

- Overall framework for risk and innovation – work with NAO – study and conference
- Capacity in Whitehall Departments
 - Whitehall Innovation Hub
 - NESTA Public Services Innovation Laboratory
 - Network of Whitehall Innovators
 - Trial of Designing Demand for public sector
- Work with Cabinet Office to examine extension of “Power to Innovate”

Innovative places

- Alignment of National and regional activities
 - Business Support Simplification Programme
 - TSB/RDA budget alignment
 - Develop regional innovation indicators
- Work with BERR to create new regional University Enterprise network under NGCE
- Prospectus in Autumn for new Partnerships for Innovation

UK strengths and weaknesses

STRENGTHS

- Strong science base
- Strong technology and non technology sectors
- Good competition and regulatory framework
- Finance and business services

WEAKNESSES

- Skills
- Capacity and capability for innovation in public and some business sectors
- Lack of evidence (services, users, public sector)

Strengths and weaknesses - business

Strengths	Weaknesses
Open economy and effective framework conditions for innovation	Insufficient demand for innovative solutions from procurement and regulation
Some successful high tech sectors and a sizeable population of high tech SMEs	Significant minority of non-innovating businesses
Strong non technology based innovation in high value added sectors	Rate of business start-up and SME growth still lag behind US
One of world's leading financial and business services centres	Variability in innovation performance and capability across the UK

Strengths and weaknesses - research base

Strengths	Weaknesses
Substantial public investment in high quality UK research base	Business investment in R&D (but possibly due to sector mix)
Increased exploitation of publicly funded research although limited technology diffusion from the research base	

Strengths and weaknesses - people

Strengths	Weaknesses
Excellent universities with rising participation	Low business demand for skills in some parts of the economy
Strengthened public engagement	Overall skill levels of the UK population lag behind international leaders
	Increasing overall supply of STEM skills but concerns over numbers coming through in some disciplines
	Management skills and practices

Strengths and weaknesses – public sector innovation

Strengths	Weaknesses
Some world leading examples of new delivery of services and policy making	Incentives often work against innovation
Builds on strong culture of public management and efficiency	Insufficient skills to innovate successfully
	Weaknesses in spreading good practice