



Integrated Power-point Presentations



The 6th SEAMEO RIHED Study Visit Programme on University Research Management in the UK:

> Learning Best Practices at the World-class Universities

> > 14-21 October 2012



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The 6th SEAMEO RIHED Study Visit Programme in University Research Management in the UK: Learning Best Practices at the World-class Universities 14-21 October 2012

PROGRAMME

Date/Time	Activities	Remarks
Sun 14 Oct	- Forward journey	For Thai
(Day 1)	 Arrive London (suggest arriving before 07:00 am, Sunday 14 October) 	participants, flight with Thai Airways TG910, depart from
	Programme Begins	Bangkok on 00:25 am. arrive at
	- Culture visit @ Blenheim Palace	London on 07:15 am, Sunday 14
	- Lunch @ Paddyfields Restaurant	October
	- Culture visit @ Christ Church	
	- Dinner @ Kings Arms Restaurant	
	Check in and Overnight at The Oxford Hotel, Oxford	
Mon 15 Oct	- Breakfast @ the hotel	
(Day 2)	- Depart for University of Oxford	University of Oxford
08:45	Arrive at New College.	(Based on New College)
09:45	Session 1: Introduction to the programme, UK higher	Address:
	education system, comparison and contrast of UK	Holywell Street
	universities and universities in Southeast Asia Ashok Naidu	Oxford, OX1 3BN
	Director, EDS	
11:00	- Coffee Break	
11:30	Session 2: Governance, leadership and management in	
	contemporary higher education	
	Sir David Watson	
	Principal, Green Templeton College, University of Oxford	

SEAMEO Member Countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Vietnam

SEAMEO Associate Member Countries: Australia, Canada, France, Germany, Netherlands, New Zealand, Norway and Spain

13:00	- Lunch @ the Dining Hall, New College, University of Oxford
14:00	Cultural Visit: Oxford Open Bus City Tour
18:00	- Dinner @ Pierre Victorie
	Overnight at The Oxford Hotel, Oxford
Tue 16 Oct	- Breakfast @ the hotel
(Day 3)	- Depart for University of Oxford (8.15 hrs)
09:00	Session 3: Technology Transfer from the University of Oxford Dr Sarah Macnaughton
	Project Manager
	ISIS Innovation, University of Oxford
10:30	- Coffee Break
11:00	<u>Session 4: Developing strategy in a university context</u> Professor Michael Shattock Professor of Higher Education Management, Institute of Education, University of London
12:15	- Lunch @ the Dining Hall, New College, University of Oxford
13:15	<u>Session 5: Walking tour at New College</u> David Palfreymen Director, Oxford Centre for Higher Education Policy Studies, New College, University of Oxford
14:30	<u>Session 6: Managing a university research strategy</u> Professor Michael Shattock Professor of Higher Education Management, Institute of Education, University of London
15:00	- Coffee (arranged by EDS)
16:30	Session 7: The Ashmolean Museum and its role in education, teaching and research (and short tour of the Museum) or Punting at Oxford
18:00	- Dinner @ Eastgate Townhouse Restaurant
	Overnight at The Oxford Hotel, Oxford

Wed 17	- Breakfast @ the hotel	Oxford Brookes
Oct		University
(Day 4)	- Check out of Holiday Inn Oxford	Address:
		Oxford Brookes
	- Depart for Oxford Brookes University (8.30 hrs)	University,
		Headington
09:00	Welcome	Campus, Gipsy
	Arrival and tea and coffee	Lane, Oxford OX3
		0BP, UK
09:15	Session 8: Introduction in Promoting Excellence in Research	
	Prof Alistair Fitt,	Contact person:
	Pro Vice-Chancellor Research and Knowledge Transfer	Ms. Loredana
	Oxford Brookes University	Faraon
		Email:
10:00	Session 9: Introduction to Oxford Brookes University and	lfaraon@brookes.a
	Partnerships	c.uk
	Mr Richard Side	Tel: +44 (0) 1865 48
	Assistant director, Oxford Brookes International	8774
	Oxford Brookes University	Mobile: +44 7971
		31639
10:30	- Coffee break	
10:45	Session 10: Research capacity and capability	
	Mrs Sarah Taylor, Research Support Manager	
	Oxford Brookes University	
11:30	Session 11: Graduate Office and Faculties	
11.50	Ms Jill Organ, Assistant Academic Registrar (Head of Graduate	
	Office)	
	Oxford Brookes University	
	Child Brookes Chiversity	
12:15	Session 12: Rehabilitation Research	
	Professor Helen Dawes: Research Lead Department of Sport	
	and Health Sciences	
	Oxford Brookes University	
13:00	- Lunch @ Oxford Brookes University (Sandwich)	
13:45	Session 13: Management and Innovation in Universities	
	Professor Sean Wellington, Strategy and Development in	
	Faculty of Technology, Design and Environment	
	Oxford Brookes University	
14:30	Session 14: Research and Commercialisation in Technology	
	Professor Ray Ogden,	
	Associate Dean Research and Knowledge Transfer, Oxford	

	Brookes University	
	brookes oniversity	
15:30	- Depart for Coventry	
18:00	- Dinner @ Bear Inn Restaurant	
Thu 18 Oct	Check in and Overnight at Holiday Inn, Coventry	lluinensitu of
(Day 5)	- Breakfast @ the hotel	University of Warwick
(Day 5)	- Depart for University of Warwick (8.30 hrs)	Address:
		The University of
09:15	Arrival Reception, International Digital Laboratory	Warwick
	Mrs. Sarah Patrick	Coventry CV4 7AL,
	Senior Liaison Officer (Institutional Relations), International	UK
	Office.	
		Contact person:
09:30	Session 15: Tour of Digilab International Digital Laboratory	Mrs. Sarah Patrick
	Mr. David Mullins	Senior Liaison
	Director of External and International Relations, WMG	Officer(Institutional
10:00	Welcome Address	Relations), International Office
10:00	Prof. Stuart Croft	Email:
	Pro-Vice-Chancellor, University of Warwick	sarah.patrick@war
	The vice enancement, enversity of warmer	
10:20	Session 16: Research Management at the University of	Tel: +011 44 247
	<u>Warwick</u>	652 2647
	Dr. Peter Hedges	
	Director, Research Support Services, University of Warwick	
11:00	- Coffee Break	
11:30	Session 17: University Campus Tour	
12:00	- Lunch @ University of Warwick (Buffet)	
13:30	Session 18: Research Management at Warwick Business	
	<u>School</u>	
	•	
	warwick Dusiness School	
14:00	Session 19: Campus Tour of Warwick Business School	
	Pamela Pinski	
	External Relations Officer (International), Warwick Business	
11:00 11:30 12:00 13:30	Dr. Peter HedgesDirector, Research Support Services, University of Warwick- Coffee BreakSession 17: University Campus Tour- Lunch @ University of Warwick (Buffet)Session 18: Research Management at Warwick BusinessSchoolLecture Theatre M2, Teaching Centre, Warwick BusinessSchoolStephen BrammerAssociate Dean for Research and Professor of Strategy, Warwick Business SchoolSession 19: Campus Tour of Warwick Business SchoolPamela Pinski	

	School	
15:00	- Visit to the Transport Museum Coventry	
18:00	- Dinner @ The China Red Restaurant	
	Overnight at Holiday Inn, Coventry	
	overnight at holiday init, coventry	
Fri 19 Oct	- Breakfast @ the hotel	
(Day 6)	- Check out Hotel in Coventry	Universities UK Address :
		Woburn House, 20
06:00	Depart for Universities UK	Tavistock Square,
09:30	Session 20: UK Higher Education Developments	London, WC1H 9HQ
	Will Hammonds, Policy Researcher,	
	Universities UK	Contact person:
10:30	Session 21, UK Higher Education Internationalization and	Mr. Will Hammonds
10:30	Session 21: UK Higher Education, Internationalisation and South East Asia	Email:
	Andy Heath	william.hammonds
	Policy Officer for Asia	@universitiesuk.ac.
	UK Higher Education International Unit	<u>uk</u>
12:30	- Lunch @ The Durhan Ox Restaurant	Mr. Andy Heath
14:30	Cultural Visit @ Greenwich	Email: andy.heath@intern
14.50	Royal Observatory, Meridian Line and National Maritime	ational.ac.uk
	Museum	
18:00	- Dinner @ Thai Break Restaurant	
	Check in and Overnight at Thistle Marble Arch Hotel, London	
Sat 20 Oct (Day 7)	- Breakfast @ the hotel	
(Day 7) 8.30	Cultural Visit in London	
	London City Tour, Tower of London, Buckingham Palace	
12:00	- Lunch @ New World Restaurant	
13:00	Relax in London	
	Oxford Street	
18:00	- Dinner @ Devonshire Restaurant	

	Programme Ends	
19:00	Depart for Airport (fight at late night)	
	For Thai participants:	
	Flight with Thai Airways	
	TG917, depart from London on 21:30 pm., Saturday 20	
	October	
	For Malaysian participants:	
	- Personal arrangement	
	- Flight with Malaysia Airlines	
	MH1, depart from London on 22:00 pm., Saturday 20	
	October	
Sun 21		
Oct- Mon	Return journey	
22 Oct		
	For Thai participants:	
	arrive at Suvarnabhumi Intl Airport on 15:15 pm., Sunday 21	
	October	
	For Indonesian participants:	
	Flight with Singapore Airlines	
	SQ 0319, depart from London on 18:30 pm., Monday 22	
	For Malaysian participants:	
	- Flight with Malaysia Airlines on Monday 22	
	- arrive at Kuala Lumpur on 17:25 pm., Sunday 21	

The 6th SEAMEO RIHED Study Visit Programme on University Research Management (URM) in the UK: Learning Best Practices at the World-class Universities

Brief Summary

The 6th SEAMEO RIHED Study Visit Programme on University Research Management in the UK: *Learning Best Practices at the World-class Universities* was successfully held on 14-21 October 2012. This trip organised visits for 20 university executives from Indonesia, Malaysia and Thailand to University of Oxford, Oxford Brookes University and University of Warwick. In addition, the visit provided sessions with Universities UK (UUK) and UK Higher Education International Unit. The delegation took this opportunity to learn URM in the UK's higher education context, to draw on experiences as well as to share knowledge and to seek potential collaboration with universities and institutions in the UK.

Higher education has a fundamental value in itself and universities in the UK are, in many ways, world-class: in research, in attracting international students, and in contributing to the development of the country's economy. Britain considers its higher education as a major contributor to the economic success and social well being of the country. Higher education is one of its national assets, whose excellence in teaching and researching is world recognised. As higher education in the UK is experiencing reform nowadays, The visit was a great opportunity to look at higher education policy reforms, meanwhile, study responses from higher education institutions (HEIs) regarding research management.

The first two days of the programme were based on New College, University of Oxford. Guest speakers were invited from several HEIs:

- Mr. Ashok Naidu, Director of Education & Development Strategies International provided a brief introduction to the programme, summarised some similarities and differences between UK universities and Southeast Asian universities.
- Sir David Watson, professor of Higher Education Principal, Green Templeton College, University of Oxford, gave a presentation on Governance, leadership and management in contemporary higher education.
- Dr. Sarah Macnaughton, project manager, ISIS Innovation, Universitiey of Oxford, took ISIS as an example, demonstrated good practices on commercializing university research regarding aspects of technology transfer, research funding flow, research innovation and spin-outs strategy, etc.
- Professor Michael Shattock, Professor of Higher Education Management, Institute of Education, University of London, presented strategic management and strategy on managing university research.

On the third day, the visit was organised to Oxford Brookes University (OBU), which has strong partnerships with institutions, organisations, businesses and industries both locally and around the world. OBU believes that through the development of partnerships, they can widen access and improve student experience, foster links with business and industry, continue to develop their professional associations and provide a platform for pursuing research excellence. Presentations at OBU included:

- Professor Chris Cooper, Pro Vice Chancellor and Dean of Business Faculty, Oxford Brookes University, briefed OBU's university strategy on promoting excellence in research with the highlights on research capacity building, research support and promotion, knowledge transfer and commercialisation, as well as challenges the university is facing.
- Mr Richard Side, Assistant Director, Oxford Brookes International, Oxford Brookes University, provided a snapshot on OBU with the emphasis on its partnerships.
- Mrs Sarah Taylor, Research Support Manager, Oxford Brookes University, shared OBU's Research and Knowledge Transfer Strategy. She further elaborated support for research, especially the structure and supports from Research and Business Development Office (RBDO).
- Ms Jill Organ, Assistant Academic Registrar, Oxford Brookes University, briefly presented the Graduate Office and its role in University's Research Degree Programmes.
- Professor Helen Dawes, Research Lead Department of Sport and Health Sciences, Oxford Brookes University, shared a rehabilitation research, which has produced 10 publications and 1 patent as of 2012. She demonstrated how their research group collaborates with industries, charity, private donations and research councils. At the same time, it involves communities to work jointly.
- Dr Sean Wellington, Associate Dean of Strategy and Development, Faculty of Technology, Design and Environment, Oxford Brookes University, gave and overview of Faculty of Technology, Design and Environment. In addition, he took four examples to elaborate their innovations in teaching, research, enterprise and partnership working.
- Professor Ray Ogden, Associate Dean of Research and Knowledge Transfer, Oxford Brookes University, drew attention to research and commercialization in technology. He emphasised the involvement of commerce and industry in terms of increasing focus, fundings and competencies.

Next day, the delegation visited the University of Warwick which was ranked seventh overall in the UK in the 2008 Research Assessment Exercise. The programme began with a tour in Digilab International Digital Laboratory, which followed a Welcoming address by Professor Stuart Croft, Pro Vice-Chancellor for Research, University of Warwick. Two presentations were given during the rest of the day:

- Dr Peter Hedges, Director of Research Support Services (RSS), University of Warwick, showed the overview of RSS, and its functions and achievements in sourcing and creating funding opportunities as well as developing proposals and plans to secure funding for research.
- Professor Stephen Brammer, Professor of Strategy, Associate Dean of Research, Warwick Business School (WBS), University of Warwick, introduced research activities

going on in WBS, the emphasised issues related to building and maintaining research environment. He further elaborated the way they support and develop research excellence at multiple levels.

The last day, the programme provided a platform for the delegation to interact with guest speakers from the Universities UK (UUK) and UK Higher Education International Unit:

- Mr Will Hammonds, Policy Researcher, UUK, provided a holistic picture on UK higher education developments and shared the role of UUK.
- Mr Andy Health, Policy Officer for Asia, UK Higher Education International Unit, introduced his organisation with an enlarged picture on research achievements and potential collaboration with ASEAN countries.

The reforms of UK's higher education policy and their impacts on institutions and universities were reflected in most of the presentations during the visit. This reveals a clear picture for all the participants in terms of how UK HEIs strengthen their research management, maintain a leader position in the international educational arena and identify appropriate agenda for the future.

A comparison and contrast of UK & South-East Asian Universities, Introduction to the Program & **Inter-disciplinary Research** Colin Flint OBE Ashok Naidu

EDS UK

UK / Britain

- England
- Scotland
- Northern Ireland
- ♦ Wales
- Britain
 UK
 Population ~66 million



Number of universities



South-East Asia



♦ 400+

Private universities

UK

South-East Asia

1 (another soon to start)
 Buckingham University

(but all universities act commercially)

♦ Many

New universities?

UK

 Several in recent years, including former Polytechnics South-East Asia

 Several in recent years, including Rajabhat Universities, Nottingham

Oldest university

UK

South-East Asia

 Oxford University 1190?

 2nd oldest =
 Cambridge University 1206? Chulalongkorn University, Thailand ~1917 University of Indonesia 1851

Types of UK universities

- Ancient (Oxford, Cambridge)
- Old (e.g. Edinburgh, Durham)
- "Red-brick" (e.g. Birmingham, Manchester, Leeds, Liverpool)
- New
 - (a) 1960' s
 - (e.g. York, Lancaster, Sussex)
 - (b) **former polytechnics** (e.g Oxford Brookes, Huddersfield)

Government Policies and their evolution

Number of students in each university



♦ 5,000-30,000

South-East Asia

♦ 5,000-30,000

 Open University 180,000 inc 25,000 overseas Open Universities many students

Number of foreign students

UK

South-East Asia

Many ~12%
 (and increasing)

 Some, more in Malaysia UK



♦ Bachelors

- Masters
- Doctorate
- Professional
- Vocational

South-East Asia

- Bachelors
- Masters
- Doctorates
- Some Vocational

Doctorate

UK

South-East Asia

- Little taught input
- Research focus
- Students independent
- 3 year full-time
- ♦ 6 years part-time

- Considerable taught input
- Students supported
- Time =

Expectations that students will...

UK

South-East Asia

 Question, debate and challenge



University academics

UK

South-East Asia

- <u>Not</u> civil servants
- <u>Not</u> government employees
- Employed by the university

Mixture Visiting Scholars

UK

"Style"

South-East Asia

 All have both teaching and research role (but will change?)
 Increasingly working with Industry

- Mainly teaching universities, with some research
- Industry participation selective

Key issue in UK universities currently Increase in student fees

 $2011 \text{ starters} = \sim \pounds3,000 \text{ per year}$ $2012 \text{ starters} = \sim \pounds9,000 \text{ per year}$

Student loans

Universities can set fee up to maximum of £9,000; most have chosen £9,000

 Interdisciplinary Research
 We define interdisciplinary research as occurring where the contributions of the various disciplines are integrated to provide holistic or systemic outcomes

Why Inter-disciplinary Research

- Need driven by demand for quicker innovation
- the nature of the subject is interdisciplinary (e.g. transport, environment)
- Sharing resources and optimisation
- Wider investigative base
- Increased attraction to funders

The Process

- Iterative steps with strategies and criteria
- Investigative framework and questions
- Identifying relevant disciplines, theories, methods, phenomena, literature
- Evaluating disciplinary insights
- Reconciling and integrating disciplinary insights
- Reflecting, communicating, testing

The Value

- Strategic value
- Bringing together disciplinary methodologies
- Structured & Shared Goals
- Seeks to integrate diverse insights
- Increased commercialization
- relevant to policy making in complex areas
- Faster delivery

Skills needed by interdisciplinary researchers

- flexibility, adaptability, creativity
- curiosity about, and willingness to learn from, other disciplines
- an open mind to ideas coming from other disciplines and experiences
- good communication and listening skills
- an ability to bridge the gap between theory and practice
- A good team worker



Governance, leadership and management in UK higher education

Sir David Watson Professor of Higher Education Principal, Green Templeton College, Oxford Workshop for South-east Regional University Senior Executives (SEAMO) New College, 15 October 2012

Outline

(1)HE Leadership from the "outside-in"

(2) HE Leadership from the "inside-out"

(3) Governance, Leadership and Management

(4) Testimony from the front line



(1) "Outside-in" perspectives: living with ambiguity

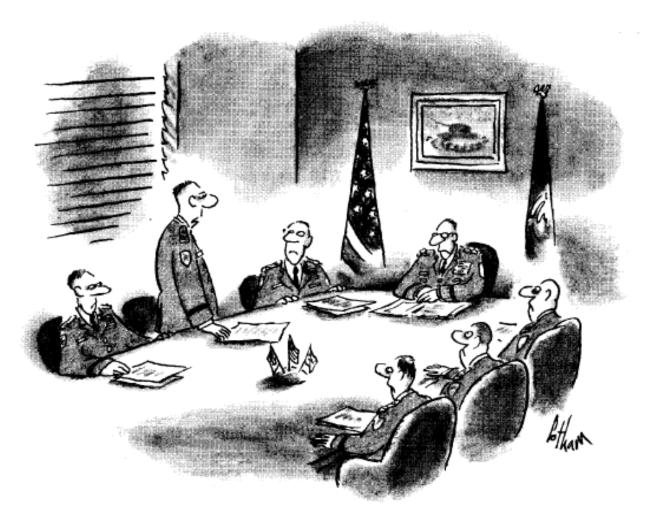


The University and Society: expectations

- Conservative and radical
- Critical and supportive
- Competitive and collegial
- Charitable and commercial
- •Autonomous and accountable
- Excellent and equal

- •Entrepreneurial and caring
- Certain and provisional
- •Short and long term
- •Ethical and Technical
- Traditional and innovative
- •Ceremonial and iconoclastic
- Local and international
- Private and public





"Tve decided to pursue a military career in the private sector."



World-classness

What counts:

What doesn't count:

- Research
- Media interest
- Graduate destinations
- Infrastructure
- International "executive" recruitment
- Teaching quality
 Social mobility
 Services to business and the community
 Rural interests
- Other public services
- Collaboration
- The public interest



(2) "Inside-out" perspectives: the question of morale



HE "exceptionalism"

- Stability
- "Flatness:" professionally argumentative communities
- Public purpose/social business



Academic membership: the "psychological contract"

- Honesty (inc. scientific procedure)
- Reciprocity
- Manners
- Self-motivation
- Discipline
- Respect for the environment
- Collective agreement



The question of civility

- "bullying does not occur exclusively in formal hierarchical relationships between managers and their line reports, although this is the most commonlyobserved relationship...bullying is also reported as occurring between peers, subordinates, line managers and external customers or clients" (CMI, 2008, Bullying at Work 2008: the experience of managers. 3.6).
- Sims, D. (2005) "You Bastard: a narrative exploration of the experience of indignation within organisations." Organization Studies 26 (11), 1625-1640.
- Twale, D.J., and De Luca, B.M. (2008) Faculty Incivility: the rise of the academic bully culture and what to do about it. San Francisco: Jossey Bass.



(3) Governance, Leadership and Management: boundaries and relationships



Governance

Governance is mainly about stewardship or trusteeship. This entails safeguarding the assets of the institution, including not only money and property but also values and intellectual capital. Above all governors exist to provide direction and reassurance – inside and outside the university – about the good sense and security of the mission.



Leadership

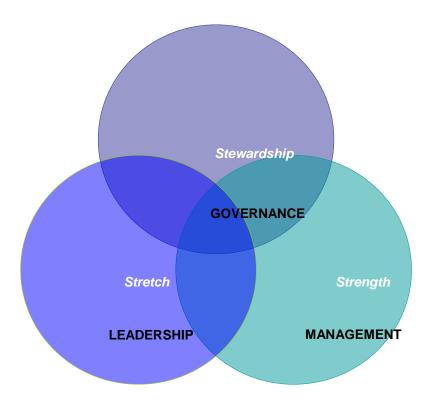
Leadership is subtly different from governance. It involves extending the vision of the university and pressing its performance, so that the university is as good as it can be. It is exercised at all levels of the institution, but in an especially visible way by the senior management team. They have to get the balance right between "ambition and realism;" to challenge the members of the institution, but also to retain their confidence.



Management

Management is about making the systems work. This is not just about low-level functions (although they matter). It is about having high quality, responsive systems for academic programmes, for research projects, for people, for finance, and for facilities and estates (to name just a few).







What is strategy?

- •The bigger picture
- The longer look
- Using evidence
- •A fad?



"Strategic planning: who needs it?"

"The problems of strategic planning are essentially three-fold: futurology is a (very) inexact science; who owns and implements the strategy in strategic planning; and how inflexible it is."

Adrian Furnham, Management and Myths, pp.131-34



Setting strategy: some headlines

- •Getting the money right
- The "zone of freedom of action"
- Performance indicators (getting things in proportion)
- Understanding granularity
- Bench-marking (including league tables)
- Dealing with the counter-intuitive
- Reassuring stakeholders
- Ambition and realism

David Watson, Organisational leadership, management and strategic planning in UK HE.



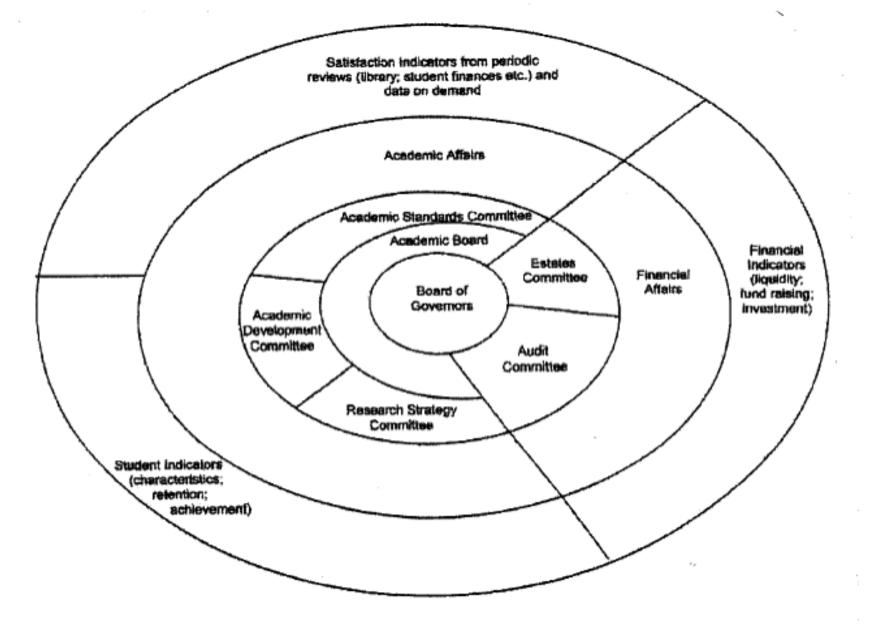


Figure 3.1 Self-study at the University of Brighton: roles and responsibilities

~

(4) From the front line



Implications for leadership

- End of the "cult of the CEO"
- Successful leaders know "where the organisation is heading; what is going on; who they are; and how to build a strong team"
- Richard Reeves and John Knill, *The 80-minute MBA*, pp. 43-68

- Reflective pragmatism
- Emotional intelligence
- Strategic "humbition" (Kaufman)
- Self-knowledge
- A "grown-up" culture

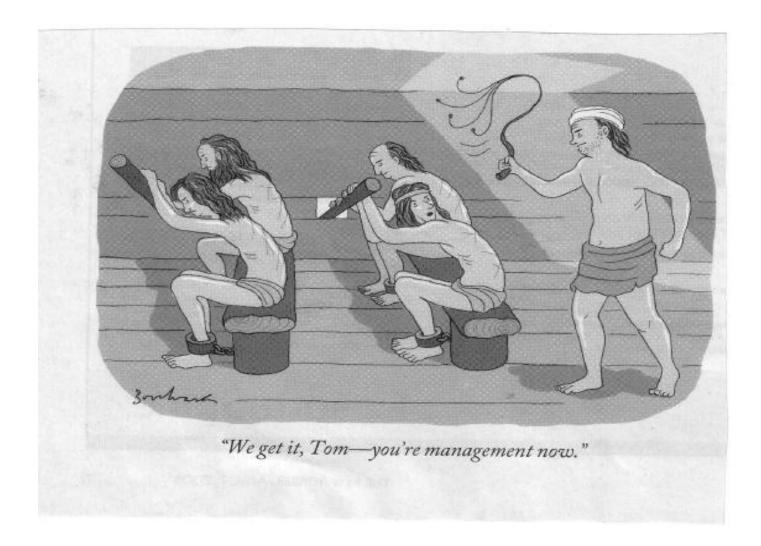


"A grown-up culture"

"The leadership priority seems to be to create and preserve a grown-up internal culture, where emotionally intelligent interactions predominate, which neither over-claims nor over-blames, and which has a good, research-informed, sense of itself, its possibilities, and its position in the scheme of things"

Guest Editorial, *HEQ*, 62:4, 319-22







"Work-life balance" or "self-care"

- [Work-life balance] "is based on three flawed assumptions: life is good, work is bad, and they are divisible" (Richard Reeves and John Knell, *The 80 Minute MBA*, p. 81)
- "We often lead a split role; we own all of our skills in the role of therapist but forbid ourselves to use them in the role of employee" (Gerhard Wilke, AUCC Journal, 2000, 4, quoted in David Watson, The Question of Morale, p. 130-31)



The duty of self-care

- The zone of self-management
- Lines in the sand
- Officers of last resort
- Families and tribes
- "Third-space professionals"

(Celia Whitchurch, Professional Managers in UK Higher Education)



Manfred de Vries on "the healthy leader"

- "Healthy leaders":
- •Can work through their own anxiety and ambivalence.
- •Their lives are in balance and they can play.
- •They can acknowledge their depression and work it through.
- •Those who accept the madness in themselves may be the healthiest leaders of all."

Harvard Business Review (2005)



The Checklist Manifesto (2010) Based on WHO "Safe Surgery Saves Lives" Program

Definition of professionalism..

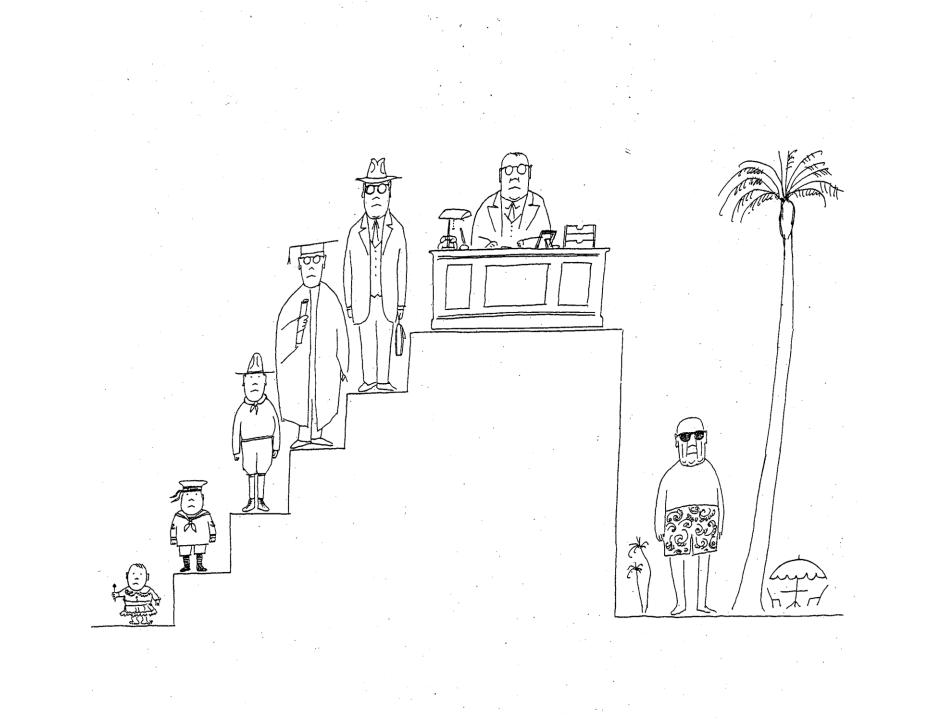
- •First is an expectation of selflessness: that we who accept responsibility for others...will place the needs and concerns of those who depend on us above our own.
- •Second is an expectation of skill: that we will aim for excellence in our knowledge and expertise.
- •Third is an expectation of trust-worthiness: that we will be responsible in our personal behaviour towards our charges.
- •Aviators, however add a fourth expectation, discipline: discipline in following prudent procedure and in functioning with others (USAir Flight 1549, 19 January 2009).

(Pp. 182-83)

The Vice-Chancellor's checklist (after Gawande, 2010)

- 1. Do you have a surplus on in-year financial transactions?
- 2. Can you modify your long-term financial commitments within five years?
- 3. Have any major cross-subsidies existed for more than three years?
- 4. Have you had a one-on-one conversation with each member of the governing body during the last year?
- 5. Can you tell me something in detail about six (or more) individual students?
- 6. Could you tell me the names of five of the last ten members of staff you met in the university?
- 7. Could you stand (in reasonable detail) behind every statement made on behalf of the university in its undergraduate and postgraduate prospectuses?
- 8. What do you have to say to the university about your own academic work?





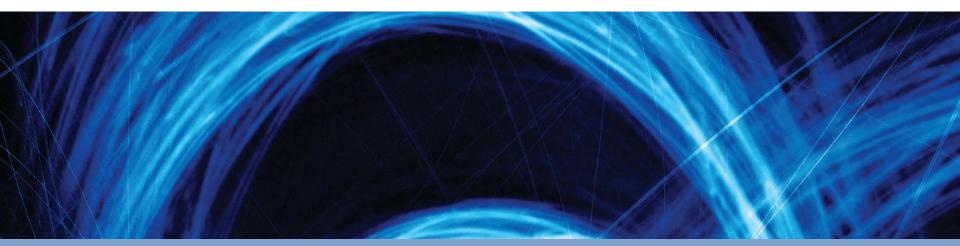
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- Watson, D. (2000) *Managing Strategy* Maidenhead: Open University Press, 2000
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Discussion







Technology Transfer from the University of Oxford

May 12



Oxford University & Isis Innovation Ltd

- Oxford University is the oldest university in the English-speaking world (founded c.1188), and a leader in learning, teaching and research
- Today Most Powerful UK Research University
 - Research Fortnight, December 2008 Research Assessment Exercise
- Highest University Research Spend in UK
 - £501 million (2010/2011)



Christ Church, Oxford

- Isis Innovation Ltd is a company 100% owned by the University of Oxford, established in 1987
- Isis *helps* researchers *who wish to* commercialise the results of their research
- A world-class Technology Innovation business
 - Isis 9th highest British filer of PCT patent applications (WIPO Data, 2010)
 - Highest European University PCT applicant (WIPO Data, 2010)



Ewert House, Oxford



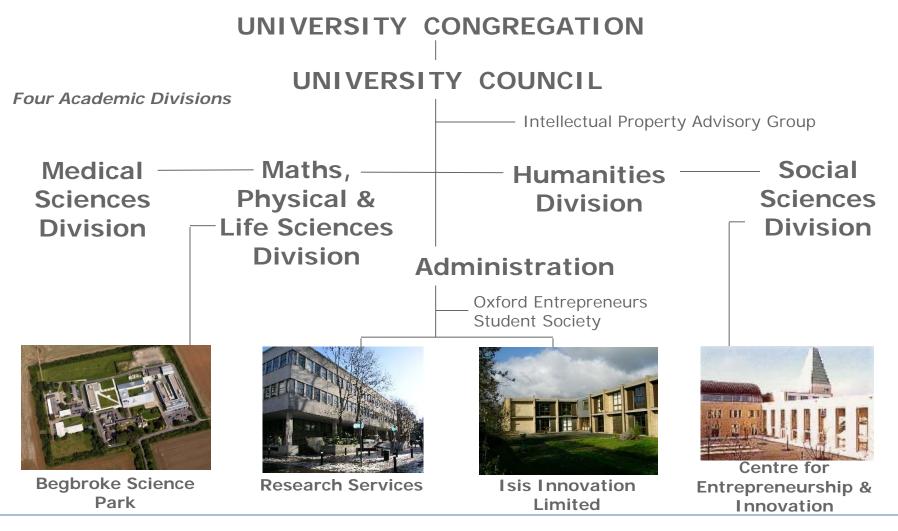
University of Oxford: Research Themes

Medical Sciences	Maths, Physical & Life Sciences	Social Sciences	Humanities
Cancer	Chemistry for Biomedicine	Global Governance	World Religion
Infectious Diseases, Immunology, Pathogens	Computational Biology	Global Public Health Issues	Applied Ethics
Diabetes, Endocrinology, Metabolism	Climate Prediction, Science of Energy & Environment	Energy: Policy and Society	Post-Colonial Literature
Cardiovascular Disease	Biomedical Engineering	Environment and Business	Latin America: Culture, Language and Literature
Genomics	E-Science	Politics & International Relations	Oriental Studies: Korea, Japan, India, Middle East
Musculo-skeletal Science (joint & bone)	Bio-Nanotechnology	Area Studies: China, South Asia, India	Modern Chinese & South Asian Studies
Neuroscience	Quantative Finance	Evolutionary & Cognitive Anthropology	Philosophy of Cognitive Science & Neuroscience
Reproduction & Development	Quantum Information Processing	Poverty & Refugee Studies	Ethnomusicology
			TO ST



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Resources to Support Commercialisation





Isis Return on Investment to the University

- University Investment in Isis for Protecting Oxford IP
- Financial Returns
 - Distributions of royalties back to University
 - Research Funding from spin-outs to University
 - Research Funding from Translation Awards to University
 - Hefce Third Stream Government Funding
 - Spin-outs Cash
 - Spin-outs Value
 - Oxford University Challenge Seed Fund
 - New Patents
 - Strategic IP Deals eg: Chemistry, IBME
- Other, non-financial, benefits to the University
 - Transferring technologies to improve lives
 - Promoting good news stories from University
 - Contributing to the 'Impact' of the University
 - University staff recruitment & retention
 - Managing Oxford Innovation Society
 - "Oxford again way out at the top for spin-outs" UK Life Science Report 2010









Isis Innovation Ltd

A profitable company 100% owned by the University of Oxford







Oxford Expertise Consulting, Services



Isis Consulting Business Technology Transfer and Innovation Management



Isis Innovation Staff

Managing Director

Tom Hockaday

Administration (14) **Business Support**

HR **Carolyn Hall** Alex Allan Viv Parry Marketing Simon Gray **Barney Cullum** Renate Krelle Dr Fiona Story Accounts Gemma Allnutt Legal Paresh Jasani

Central Administration

Office Manager **Jenny Bailey** Systems Administrator Nelson Sa Facilities Jane Tarry Reception Isabel Lavis

Technology Transfer Group (36) Head of Group Linda Naylor

Technology Transfer Technology Transfer Teams Teams

Evert Geurtsen

Roy Azoulay Dr Manjari Chandran-Ramesh Dr Nikolaos Chalkias Chim Chu Dr David Churchman Dr Jamie Ferguson Dr Andy Robertson Brendan Spillane **Dr Paul Ashley** Dr Angela Calvert Dr Matthew Carpenter Dr Sarah Deakin Andy Self Dr Weng Sie Wong **Dr Carolyn Porter** Seed Investment Manager Andrea Alunni

Operations Manager Dr Mairi Gibbs Administrator

Jan Newell

PhD's: 37

Dr Susan Gale Dr Ruth Barrett Dr Alex Marshall Dr Brijesh Roy Dr Natasha Tian Dr Richard Reschen Dr Gayatri Sharma Dr Rakesh Roshan Dr Jon Carr Dr Mark Gostock Dr Martin Procter Dr Bharti Ranavaya Dr Christine Whyte Dr Louis Pymar Patent & Licence **Admin Manager** Steven Bayliss **Post-Deal Admin** Kate Spanchak

Patent Administrator Zuzana Weberova

MBA's: 18

Oxford University Consulting (6) Head of Group **Andrew Goff**

Project Managers

Susan Clark Gurinder Punn Dr Josef Walker

Administrators

Kerry Antcliffe Katie Bromfield

Isis Enterprise (21) Head of Group

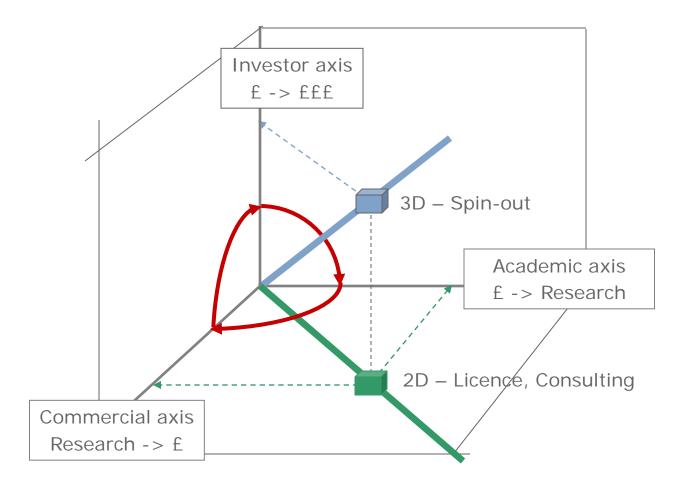
Dr David Baghurst (Asia) Consultants

Ya-hsin Shen (Hong Kong) Terry Pollard Kenji Aiba (Japan) **Dr Chris Moody** Robert Swerdlow **Dr Costas Chryssou** Dr Roger Welch Dr Giles Kimminau Gaurav Misra Dr Wenming Ji Dr Sarah Bond **Dr Steve Cleverley** Dr Sarah Macnaughton Elena Andonova Dr Viraj Perera Dr Robin Carter Eva Baltar (Spain) Manuel Fuertes (Spain) **Administrators** Shelagh Harrison, Chloe Cairns

Staff: 77

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Acting as Multi-dimensional Intermediaries





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Intermediaries - International



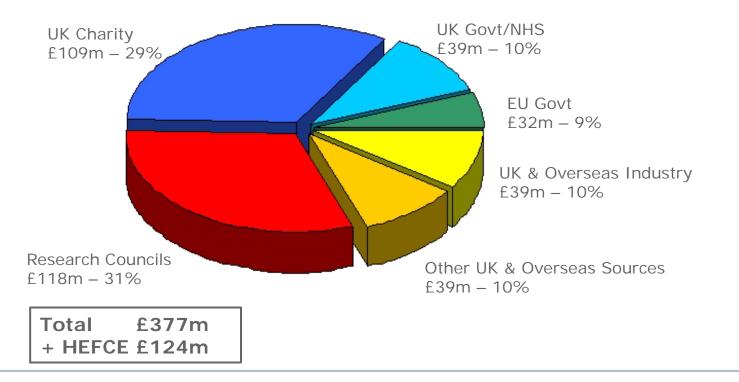


ATTACK

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Oxford Research Funding 2010-2011 £501million

- Highest University Research Spend in UK
- 4,700 researchers and 8,700 postgraduate students
- R & D Spend by UK Companies, Oxford would be ranked 9th 2009 EU Industrial R&D Investment Scoreboard
- Most Powerful UK Research University 2008 Research Assessment Exercise Research Fortnight



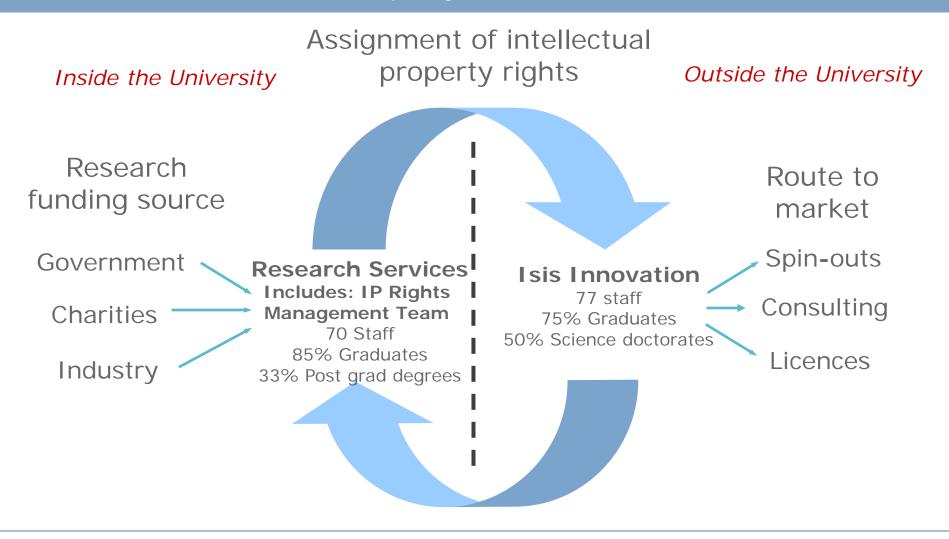


Intellectual Property Policy (from October 2000)

- University claims ownership of all employees' and students' IP rights resulting from University research activities
- The University assists those researchers who wish to commercialise their research
 - by patenting, licences, spinout companies & consultancy
- Researchers share the benefits
 - Royalty shares from licences
 - Equity in spinout companies
 - Income from personal consultancy

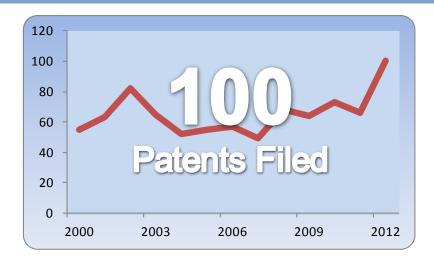


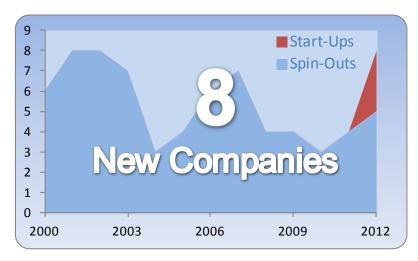
Transfer of Intellectual Property



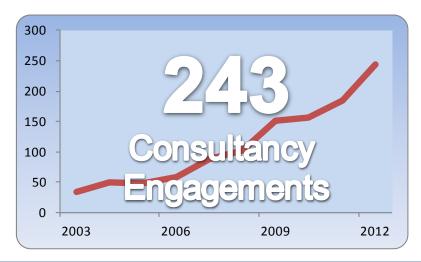


Isis Innovation, year-ending March 2012



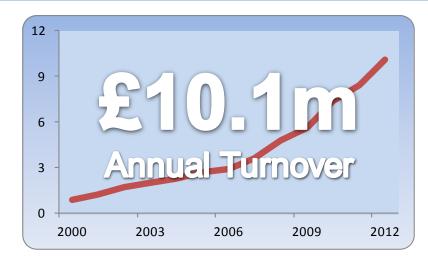


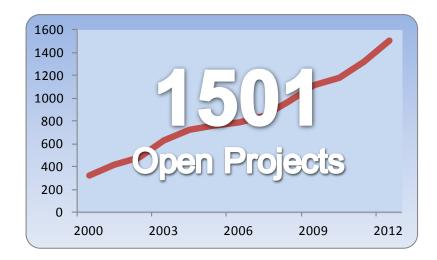


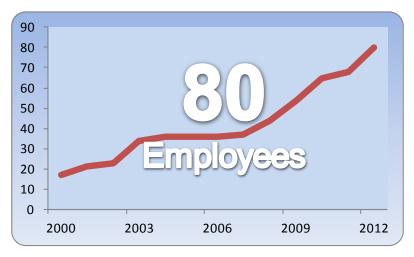


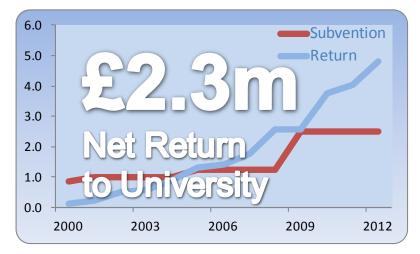


Isis Innovation, year-ending March 2012











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Technology Licensing

- Licensing out of University of Oxford Intellectual Property Rights
- Isis currently manages 1,320 Patents & Patent Applications; and 330 active licensing deals
- Technologies marketed to Oxford Innovation Society Members and then other companies
- Licence partners selected on
 - Resources and intent to develop technology to market
 - In healthcare, awareness of access of final products to developing countries
- Exclusive & Non-exclusive, Geographical Territory and Technology Field controls
- Fees, milestones, running royalties appropriate to technology and marketplace
- Royalties
 - Patent budget £2.5m per annum & royalties
 - Isis pays patent costs & recovers these from royalties

Total net revenue	Researchers personally	University General Fund	Department Funds	Isis Innovation
to £72k	60%	10%*	0%	30%
to £720k	31.5%	21%	17.5%	30%
over £720k	15.75%	28%	26.25%	30%

* pays National Insurance employment tax



Oxford Spin-outs (pre 2000)

1959		Oxford Instruments *
1977		Oxford Lasers
1988		Oxford Glycosciences *
1989		Oxford Molecular *
1992		Oxford Asymmetry *
1994		PowderJect *
1995		Oxford Gene Technology
1996		Oxford Biomedica *
1997		Oxagen
1998	5	Opsys, Synaptica, Prolysis, Celoxica*, Sense Therapeutic
1999	6	Medigene(Avidex)*, Oxxon Pharmaccines, Dash, Oxonica*, AuC Sensing, OMIA
		*Stock Exchange Listing



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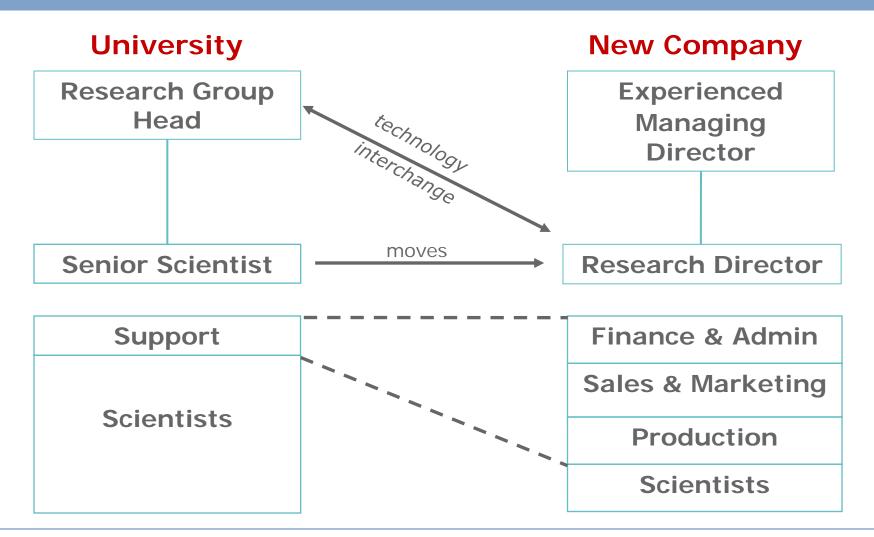
Oxford Spin-outs (post 2000)

2000	7	Third Phase, Mindweavers, Oxford BioSignals, Oxford BioSensors, TolerRx, OXIVA, Pharma DM
2001	7	OxLoc, Oxford Bee Co, Oxford Ancestors, Novarc, Oxford ArchDigital, Natural Motion, Inhibox
2002	9	Pharminox, Minervation, Oxford Biomaterials(Spinox), Zyentia, Oxitec, Oxford Immunotec, Oxford Risk, GlycoForm, BioAnalab
2003	4	Summit(Vastox)*, ReOx, Riotech, OCSI
2004	4	Avacta(OMD)*, G-Nostics, Surface Therapeutics, EKB Technology
2005	5	Oxford Nanopore Technologies, Oxford RF Sensors, Oxbridge Pulsars, Celleron, Oxford Catalysts*
2006	7	TDeltaS, Oxford Medistress, Particle Therapeutic, Aurox, Oxford Advanced Surfaces*, Cytox, OxTox
2007	4	Eykona Technologies, Clinox, Oxford Biodynamics, Crysalin
2008	4	Semmle, Oxford-Emergent TB Consortium, Navetas(ISE), Organox
2009	3	Oxford Financial Computing, Zyoxel, Oxford Yasa Motors
2010	4	OxEms, Kepler Energy, IXO, Oxford PhotoVoltaic
2011	5	Oxyntix, Oxtex, Oxford Multi Spectral, Oxford Imaging Detectors, OCB

Total external investment to date in 63 spin-outs since 2000: **£327m**£42m 1st round Seed/Business Angels – average amount invested £850k; 1/3rd > £1m invested.£285m follow-on Venture/Institution Capital* stock exchange listing

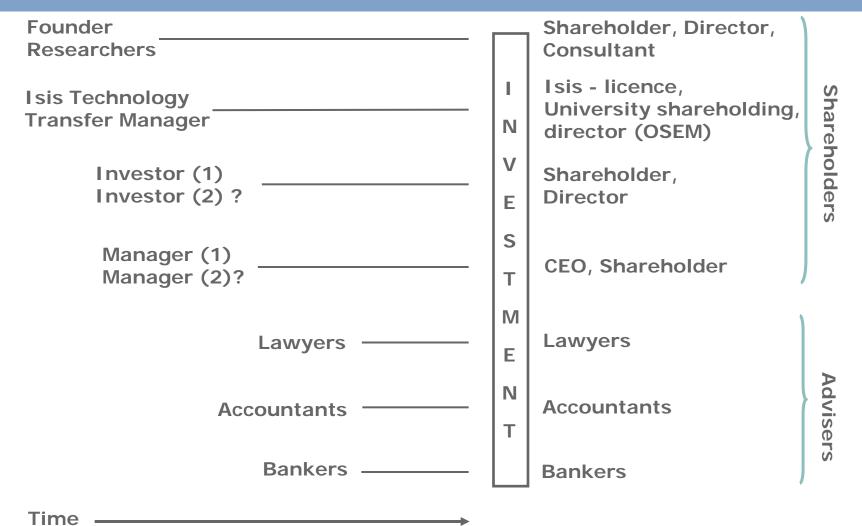


Spin-out Strategy





Spin-outs – The Players





Investment Sources

Oxford University Challenge Seed Fund

- Launched with £4m in 1999
- University provided £1m; HM Treasury, Wellcome, Gatsby £3m
- £5.7m invested in 102 projects development, seed equity
- Resulting in Equity stakes in 31 spin-outs, 4 completed licensing deals & 33 active technology projects. These 31 spin-outs have attracted £80m seed/venture investment

Oxford Invention Fund

- Donations to the University of Oxford as part of Oxford Thinking, the University's overall fund raising Campaign
- Invest in development of new technologies and innovation from Oxford

Isis Angels Network

- Business Angels, Seed/Venture Capital
- 100 members
- Events, No Charges







Isis Software Incubator, established in 2010

- Support for early-stage software ventures from Oxford University
- Assists the creation and development of a software business opportunity, whether or not a company has yet been incorporated
- Isis provides commercial mentoring, negotiation support, services, desk space, access to business networks
- Projects that have a credible business concept and need:
 - Substantial work to develop IP and build a realistic commercial prospect
 - With entrepreneurial founders
 - But do not need patents, investors, full-time management

Successful exits

Pilio Ltd – environmental monitoring tool

An Isis project since 2007, with no realistic licensing prospects. Entered the Software Incubator

in December 2010, exited in September 2011 as a trading company with customers and cash in the bank



TheySay Ltd – sentiment analysis

An Isis project since 2008 with very limited licensing prospects. Developed a 3rd party application whilst in the incubator, exited in December 2011 having completed one significant

commercial contract, with outlook for follow-on business very strong





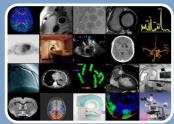
Oxford University Consulting



Providing external organizations with access to University expertise & resources.



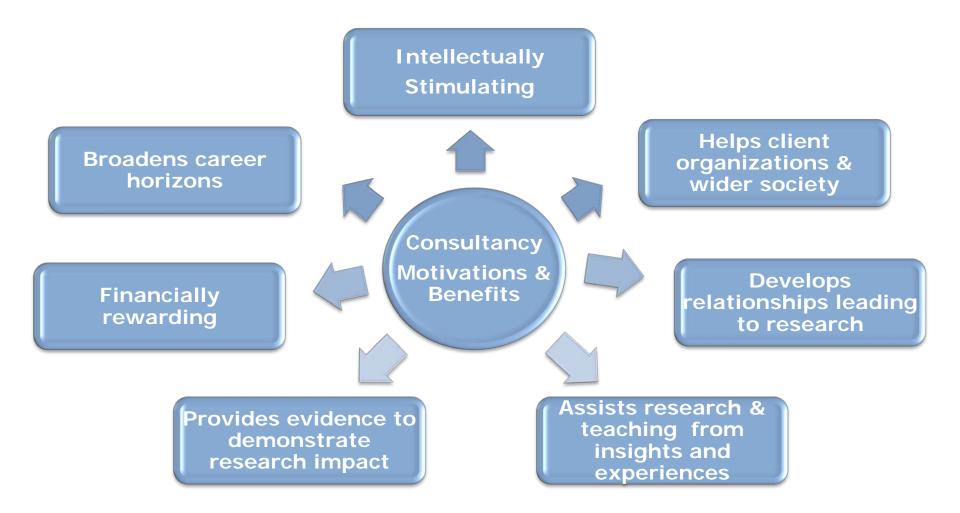
Helping academics identify and manage consulting opportunities.



Supporting Departments in arranging external services (including consultancy) work.



Academic consultancy – Motivations & Benefits





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Oxford University Consulting

- Personal Consultancy for a Physics academic to advise on climate prediction models to underpin 'Fate of the World', a game which simulates the real social and environmental impact of global climate change.
- Departmental Consulting for a member of the University's Department for Education to join a Panel, convened by the Government Chief Scientific Advisor. The panel drew up criteria for a review of the government's Department for Education to consider use of science and analytical evidence in its strategy, policy and decision making.
- Departmental Services providing access for a global biopharmaceutical company to the Biophysics equipment and expertise from the Department of Biochemistry to support the client's R&D programme.





Isis Enterprise

- Created in 2004 as a division of Isis Innovation
- Isis Enterprise helps technology providers and seekers to source, develop and commercialise new innovations.
- Isis Enterprise clients and services:
 - Governments: Policy and benchmarking studies
 - Companies: Innovation management
 - Universities and Research Institutes: Technology transfer partnerships
 - Research Funding Bodies: Translational funding, impact reviews
 - Investors: Technical and market due diligence
 - Science Parks: feasibility studies, innovation ecosystem development
- An international consultancy business:
 - Last year we worked on projects for clients in 30 countries
 - An office in Hong Kong
 - Our staff are often seconded out to work on client projects



Isis Enterprise

We link technology providers with technology seekers



Technology Providers Facilitators **Technology Seekers** Government Universities SMEs Start-ups SMEs Research institutes Research funders Large companies Investors Large companies Science Parks Maturity ideas products companies

4 5

6

7

8

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10

Often with support from governments, research funders etc.

3

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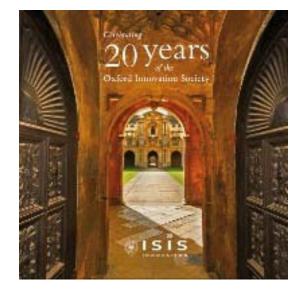
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TRL

Oxford Innovation Society

- Established by Isis in 1990 to foster University/business links
- An open innovation network
- Since 1990 over 175 companies have joined
- Companies pay an annual fee of £6,800 for membership
- Membership Benefits:
 - Ready access to the academics and University
 - Interactions with other Members, leaders in technology innovation
 - Advance notification of all marketed patent applications
 - Invitations to thrice-yearly meetings and dinners
 - Customised research presentations and seminars
 - Regular newsletters and portfolios





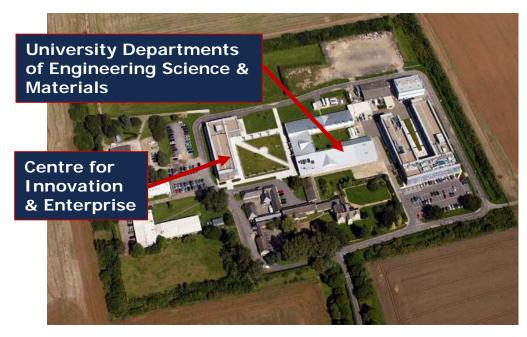
OIS Meeting & Dinner



- Tea & coffee
 reception
- Academic
 presentation
- Sponsor presentation
- Champagne
 reception
- Dinner in College
- After dinner drinks



Begbroke Science Park



- Spin-outs on site:
- Prolysis/Biota Europe
- Oxford Gene Technology
- Oxonica
- Oxford Advanced Surfaces
- Oxford Biodynamics
- Particle Therapeutics
- Owned & operated by Oxford University, 5 miles north from the city centre
- University research labs;
- University Supercomputer operated by e-research centre
- Business incubator & premises for new companies
- Central meeting room and café



Oxford & Entrepreneurship

- Oxford Centre for Entrepreneurship & Innovation
 - Within the Saïd Business School
 - Development of the Oxford Science Enterprise Centre, est. 2000
 - Brings together innovators from across the world, as well as the high-tech companies based around Oxford
 - Building a Business,
 - The SBS Venture Fund
- Oxford Entrepreneurs Student Society
 - 'Idea Idol' competition
 - Ideas to Market
 - Changemaker speaker series
 - Enterprising Women speaker series
 - Emerging Markets speaker series









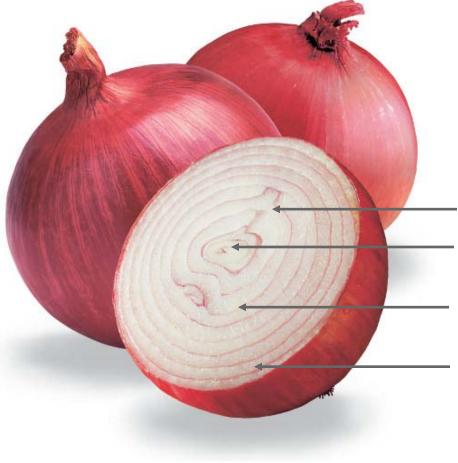
Culture Change & Making Connections



- Universities and Businesses are very different; a university is not meant to be like a company, nor a company designed to be like a university; remembering this helps when trying to bring them together
- The ideas are in the University; if University provides strong TT resource, the cultures can be connected and ideas transferred
- If the University doesn't lead, the University may not receive its share of the benefits
- Technology is a cost; you don't make money out of technology; you make money out of a business that successfully commercialises technology



Layers in the Innovation Ecosystem



Innovative companies, investors, entrepreneurs,

University People – Researchers, TTO, Administrators

Professional advisers – patent attorneys, lawyers, accountants, banks, commercial property managers, pr, head-hunters, consultants, students, journalists

Other universities



Conclusions – How Isis Works

- Universities
 - Technology Transfer is a good thing
 - Part of University purpose; may make money for University and researchers
 - It does not happen on its own
 - You need to invest resources in People, Patent budget, Proof-of-Concept
 - You need a policy framework
 - Who owns the inventions; who shares the rewards
 - It takes a long time ... So start and do not stop.
- Business
 - Access to technologies, resources and expertise
 - Help understand universities
 - Help your business innovate
- Investors
 - Source of investment opportunities
 - Home for entrepreneurs
- Government
 - Stimulates innovation and enterprise
 - Improves society



Vision for Isis

- Technology
- Innovation
- For People

- From Oxford and elsewhere
- Successful exploitation of new ideas
- Health & Wealth of Society



Greener Emission Fuels Silent & Clean Power Energy from Waste A New Steam Revolution



A Gambian infant is inoculated as part of a previous MRC study with the MVA85A vaccine.





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Developing Strategy in a University Context

Michael Shattock

www.ioe.ac.uk







Introduction: two themes

STRATEGY

some principles

STRATEGY

implementation



Some definitions

- Tactics; strategy; vision
- Strategic management is "the art and science of formulating, implementing and evaluating cross functional decisions that enable an organisation to fulfil its objectives"

(David 1996)



Text book strategies

- Environmental scan (IPEST)
- SWOT analysis
- Porter's Five Forces Framework
- Ansoff's Growth Matrix
- Delphi technique
- Rational planning-Intended strategy
- Emergent strategy
- Foresight planning
- Scenario planning
- De facto strategy
- This is not an exhaustive list



Why don't they fit?

- What is the core business?
- Mixed economy organisations
- Conflicting public and internal expectations



Some strategy principles

The road map or the swamp?

"When you are lost on a highway a road map is very useful, but when you are lost in a swamp where topography is constantly changing a road map is of little help. A simple compass which indicates the direction to be taken and allows you to use your own ingenuity in overcoming various difficulties is much more useful"

(Hayes, 1985, Harvard Business Review 63, 6)



Some strategy principles - cont

- Evolutionary or the big bang approach to strategy?
- Bottom up or top down?
- Environmental fit
- Being competitive
- Building on staff capabilities
- Coherence and complementarity
- Financial viability—the resource base





Strategy and implementation

Strategy is easy—implementation is difficult





Implementation: an example

The EU "has today set itself a new strategic goal for the next decade: to become the most competitive and dynamic knowledge based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion." EU Lisbon 2000

"Europe is no longer setting the pace in the global race for knowledge and talent, while emerging economies are rapidly increasing their investment in higher education....too few European higher education institutions are recognised as world class in the current research orientated global university rankings...And there has been no real improvement over the past years" EU 2011

(quoted from lecture by Ellen Hazelkorn EAIR 2011)



Strategy and implementation - cont

- "the strengthened steering core" (Clark 1998)
- "the small turning circle"—centre-department/ academic discipline vis à vis centrecollege/faculty/school of study relationships (Shattock 2010)
- resource allocation and strategy
- the management information data base
- finance led strategic planning



Strategy and implementation - cont

Managing the day to day—coherence, opportunism and communication

"Every time an institution hires or dismisses a faculty member, starts a new programme or curtails an old one, decides to recruit students or staff in one way or another, it is creating a strategic plan through its actions. The greatest influence managers have over their institutions is through the daily choices in what Baldridge and Okimi (1982) once called 'jugular vein decisions', which 'build their institution' s internal strength and condition it to respond favourably to opportunities or threats. Cumulative, every day decisions can have a lot more impact on an institution' s destiny than any master plan'. These decisions ... create 'emergent strategies' (Mintzberg 1994) that 'converge in time in some sort of consistency or pattern' (Hardy, Langley, Mintzberg and Rose 1983)."

(Birnbaum 2000)





Strategy and implementation - cont

Momentum





Reputation and strategy

- Reputational reinforcement
- League tables the strategy impact

"Comparing current with preferred rank, 70% of all respondents [heads of institutions] wish to be in the top 10% nationally and 71% want to be in the top 25% internationally." (Hazelkorn 2007)

Reputation and morale



Leading education and social research Institute of Education University of London

Strategy defined

Strategic management is "the art and science of formulating, implementing and evaluating cross-functional decisions that enable an organisation to fulfil its objectives."

(David 1996)





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Leading education and social research Institute of Education University of London

Managing University Research Strategy

Michael Shattock

www.ioe.ac.uk







The UK background

- The dual funding system: the Funding Council and the Research Councils: institutional and project funding
- The 'Haldane principle' and its replacement by 'Impact'
- The Research Assessment Exercise





The traditional approach to research strategy

- Appoint the best people
- Establish a good research infrastructure
- Human resources policies which nurture and incentivise research
- Academic and research freedom



International trends in research management

- Selectivity and research concentration
- The economic importance of research—Impact
- Interdisciplinarity rather than single discipline
- Establishment of research themes
- Globalisation and research partnerships
- Competitiveness and league tables



The modern approach: four case studies

- Dublin City University (DCU) Ireland
- Monash University, Melbourne, Australia
- University College, London (UCL), UK
- Warwick University, UK





DCU

- Four advertised posts for Theme Leaders plus admin support: Life Sciences, Public Policy, Humanities and Business/ Finance
- Recruitment issues
- Integration/ isolation—relationship with deans





Monash

- Cross disciplinary research centres
- International recruitment of Directors
- Resources
- Relationships with academic departments





UCL

- National and international rankings, size
- The four 'Grand Challenges': Global Health, Sustainable Cities, Intercultural Interactions, Well-Being
- Support for research themes and interdisciplinary research centres
- Overseas research campuses





Warwick

- 11 Global Priority Programmes: Food Security, Energy, Innovative Manufacturing, Science and Technology for Health, Public Policy, Global Governance, Individual Behaviour, Digital Change, Development
- Synergy with Research Council priorities
- Leadership; relationship with academic departments





Some lessons from the case studies

- Bottom up or top down?
- Relationship with existing departmental structures
- Relationship with Government, industry and society
- Research strengths outside the designated research themes
- Recruitment and resource allocation
- Marrying the traditional with the modern approach
- Organisation and communication





Possible weaknesses of the modern approach

- Freezing research structures; how to maintain flexibility
- The effect on individual creativity
- Internal organisational issues
- How far should university research priorities be determined by state policies and priorities?



SEAMEO delegation visit

Wednesday 17th October 2012

Professor Alistair Fitt, Pro Vice-Chancellor, Research and Knowledge Transfer

WELCOME!

It's a great honour for us to have you here!

SEAMEO has a fastgrowing reputation

Particularly for its centres



OXFORD

RRC



QUESTION

Are you going to have another SEAMO?





Promoting excellence in research

- 1. Why research is important to us University strategy
- 2. How research is funded in the UK how the REF works
- 3. What we expect our academics to do
- 4. PhD students
- 5. Building research capacity
- 6. Research support and promotion RBDO structure
- 7. Knowledge transfer and commercialization spin outs



1. Why research is important to us

- For many of us it's why we do the job that we do
- It's the ultimate intellectual test
- It makes us money, and enhances university reputation
- Gives us a chance to make a lasting mark
- Nothing more satisfying
- Earns money, IPR and prestige for "UK PLC"
- For some of us it dominates our lives and thinking

NOTE: THE UK AND THE USA LEAD THE WORLD BY MANY RESEARCH MEASURES – EUROPE IS NOWHERE



1. University Strategy 2020

Vision

"Oxford Brookes University will provide an exceptional, studentcentred experience which is based on both internationally significant research and pedagogic best practice. We will build on a tradition of distinction in academic, professional and social engagement to enhance our reputation as a university which educates citizens for lives of consequence."



1. Research and knowledge transfer: strategic goal

"We will be a university that is committed to externally recognised world-leading research which is exploited and disseminated for the benefit of our communities".

We value both applied and blue skies research;

We expect our research to be of the highest quality;

Wherever appropriate, we capitalise on our research through knowledge transfer activities;

Our research should benefit our students; our academic community; our local, national and international partners.



1. Strategic Objectives

Objective 1: Focus* on the areas of research that are, or have the potential to be, recognized as world and encourage multi- and interdisciplinary research activity across the University

Objective 2: Increase the exploitation and dissemination of our highest quality research and our collaboration with other Higher Education Institutions and the public, private and third sector

* we do not aim to support all areas equally!



This means:

Increasing research capacity through:

- Developing critical mass (staff and research students) in areas which are, or have the potential to be, world leading
- "Backing winners" by selectively investing in the bits of research that are "best in class"
- Using a strong disciplinary base to develop inter- and multidisciplinary research groups
- Increasing PhD student numbers
- Increasing research income through both bits of the dual funding system as we as via Europe, charities, consultancy, IPR, spin-outs – HEIF etc.



It also means.....

Being "outward facing"; e.g. being active in learned, professional and disciplinary societies and research councils; contributing to national and international debate and policy formulation

Building external research partnerships,

Building external research partnerships, networks and collaborations with other UK HEIs, public, private and third sectors and international partners.

NOTE – THE BEST RESEARCH IS INTERNATIONAL!



University strategy put simply

Brookes is a special university with a special reputation

We've climbed to about 40th in the league tables

The only way we'll get higher is by research.

- that's why our research is so important to us

(Sarah Taylor will say a little more about university strategy later)



2. Dual Research funding in the UK

RCUK

Public money given to the Research Councils to run competitions ("grants") to distribute money to universities. The competitions sort of go on continuously and about £3.2 bn is available each year (AHRC, BBSRC, EPSRC, ESRC, MRC, NERC, STFC). About £22m (JISC) and about £300m TSB) is also available

REF (used to be "RAE")

Public money distributed to universities (about £1.6 bn per year) via a once-every-seven-years competition where each university enters its best researchers.



2. Teaching funding in the UK

HEFCE

Public money given to Universities – about £4.5 bn per year for teaching – universities considered to be a public good

CANCELLED BY THE COALITION – BILL SENT TO STUDENTS

Yes, the teaching budget dropped by 80% in a single year and went from £4.5 bn down to ± 0.8 bn!



2. Teaching funding in the UK

- Virtually ALL UK students now pay fees of £9,000 per year
- Students are loaned the money by the government
- Fees are paid by the Treasury to universities
- Loan collected back from students when they get a job that pays a salary of more than £21,000
- Universities in the UK essentially privatised



2. Total public spending in the UK

ITEM	TOTAL (£ bn)
Pensions	129
Health care	124
Education	93
Defence	47
Welfare	110
TOTAL	703

TOTAL PUBLIC SPENDING 2012 ~ £703 bn COMPLETE TOTAL FOR RESEARCH ~ £5 bn per year (< 1%)



2. The way the RAE (REF) works

A BIG COMPETITION EVERY 6 years:

Here's how it works for Mathematics (imaginary example)

- Each University decides whether or not to "make a return" to the mathematics unit of assessment
- Suppose we decide to make a mathematics return at our University
- Let's say that in our Mathematics Department we have 34 academic staff
- Each must submit their "best four papers" published between 2008-2013
- Only staff in post on the census date (October 31st 2013) are allowed to take part
- We can choose how many of the staff to submit

• Some will be included, some excluded. Normally we choose the ones with the best papers.



2. The way the RAE (REF) works

AT THE END OF 2013 (after the census date):

- Suppose we submitted 20 staff out of our 34 academics
- An external "REF PANEL" (peer review) grades each of the 20x4 papers that we submitted, rating them 4*, 3*, 2*, 1* or 0*
- 4^* = world leading research (0^* = no good)
- The panel also grades our RESEACH IMPACT using this scale
- The panel also grades our RESEARCH ENVIRONMENT using this scale
- The following weightings are applied:

PAPERS: 65%, IMPACT: 20%, ENVIRONMENT: 15%



2. The way the RAE (REF) works

EVENTUALLY MATHEMATICS GETS AN "AVERAGE QUALITY PROFILE"

STAFF	4*	3*	2*	1*	0*
20	15%	45%	30%	5%	5%

WE NOW CALCULATE THE "AVERAGE STAFF % DISTRIBUTION"

STAFF	4 *	3*	2*	1*	0*
20	3.0	9.0	6.0	1.0	1.0
MULTIPLIER	3	1	0	0	0
FINAL SUM	9.0	+ 9.0	+0.0	+0.0	+0.0 = 18.0

The final "QUALITY WEIGHTING" (18.0) is multiplied by a constant sum of money (for mathematics £11,000) to give a total of 18 x £11,000 = £198,000



2. The final result.....

FOR EACH OF THE NEXT 6 YEARS

MATHEMATICS AT OXFORD BROOKES GETS

£198,000 per year for its research funding



2. A brutal system – but with good points

✓ COMPLETELY FORMULAIC

✓ COMPLETELY TRANSPARENT

✓ DONE COMPLETELY BY PEER REVIEW

✓ ACTUALLY FAIRLY EFFICIENT

✓ EVERYBODY KNOWS THE RULES



2. But also some very bad points.....

- You may be fired if you are not returned in the REF
- Funding is fixed for a long period
- "Transfer market" we'll pay you £50K to move before October 31st
- "Let's have lots of authors so we can return each others' papers"
- How do you rate a paper with reliable accuracy?
- The REF may dominate research thinking in the UK
- Turns research into a funding game with strange rules



2. Oxford Brookes in the RAE

Sarah Taylor will give you full details of our performance later

She will also tell you abut our aspirations for REF 2014 and beyond.



3. What we expect our academics to do

The UK model has "academic staff doing everything"

It's not like the Eastern European model where research happens in research institutes and teaching in universities

A typical (imaginary) academic department (e.g. History) consists of:

- 30 academic staff
- 7 administrators
- 45 PhD students
- 15 post-doctoral research assistants
- 3 emeritus professors



3. It's hard for academics.....

We expect a lot of our academic staff

For them to be "successful", we expect them to:

- Carry out high quality teaching, using the latest methods
- Produce top quality research, outputs for the REF
- Supervise PhD students
- Win Research Council grants

They may also do:

 Consultancy, knowledge transfer, public engagement, scholarly duties, spin-out activity, learned society duties (the list can be very long)



3. It's hard for academics.....

It can be very hard for young academics to know what to do:

- How much time to spend on research/teaching/PhD students?
- Where to go to get money?
- What journals to publish in?
- How much time to spend doing consultancy?
-there are many other things to consider

Since this is hard, we try to give quite a lot of training for young academics. Training is linked to PDR (Personal Development Review)

"Just chatting" (informal mentoring) can be VERY helpful for everybody



4. PhD students

PhD students are the "engine of research". Having lots of good PhD students:

- Gives a dynamic edge to a research department
- Promotes to a great research atmosphere
- Allows you to do research that might not otherwise have got done
- Eventually provides the next generation of academics
- Leads directly to more money in the RAE/REF
- Leads to joint publications and awards
-there are many other benefits too



4. PhD students

We currently have about 350 PhD students, in all parts of the university. WE WANT MANY MORE

Good universities have lots of PhD students

The key issues to deal with to increase PhD numbers tend to be:

- PhD applications
- Supervision capacity
- Money



4. PhD students – PhD applications

For us, this is not much of a problem.

In all but a few parts of the university we have plenty of students who WANT to do a PhD.

When this is a problem, the solution normally involves:

- Being smart and efficient about the applications process
- Building capacity through groups of researchers
- being imaginative about finding attractive sources of funding
- Make sure that the advertising is all in place
- Being proactive about attracting students



4. PhD students – supervision capacity

In a few parts of the university we have too few qualified supervisors This is a problem that can be dealt with:

- Don't be too conservative: everybody has to have their first PhD student at some time!
- Think about supervisor training and sharing best practice
- Consider joint supervision/group supervision/mentoring
- If your PhD monitoring system is good, then any problems can be picked up early

OXFORD BROOKES UNIVERSITY

4. PhD students – money

This is our biggest problem.

Students will soon leave their first degrees with lots of debt - how can we help to fund them for a PhD?

Currently we have students will many different forms of funding ranging all the way from fully funded to completely self-funded

- Offer a range of funding packages optimise the use of your valuable money
- Be imaginative with funding sources look in new places
- Use split site, dual and joint PhDs with other universities
- Different funding mechanics may be required in different subjects
- Allow the students to do paid teaching during their studies



5. Building research capacity

THE REAL QUESTION: How do we build research capacity?

Currently in Oxford Brookes we have:

- Some research areas that are world leading
- Some that are nationally excellent
- Some where research is just starting to develop

So how do we develop our research portfolio?

Overall in the UK the RAE/REF has meant that we have had to think about this a lot more

We don't just "leave it to develop itself" like we used to do.



5. Building research capacity

Several elements are crucial to build research capacity:

- Hire good researchers whenever possible
- Build research capacity through PhD students who continue their careers here
- Use central research money to support strategic initiatives
- Support interdisciplinary research themes
- Increasing critical mass via "new blood" appointments
- Increasing research grant income
- Support researchers in as many ways as possible:



5. Building research capacity

Supporting individual and group research through:

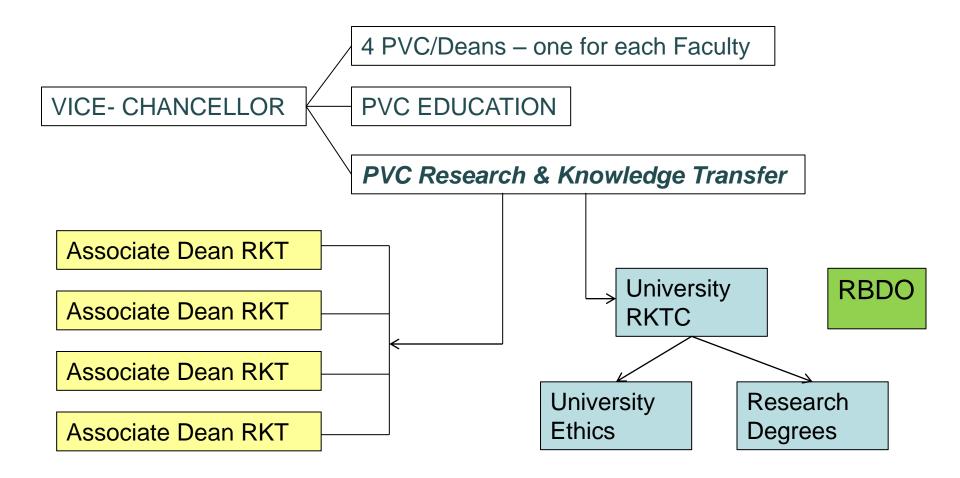
- Workload planning and personal research plans
- Central Research Fund; e.g. time for writing research grants, finishing monograph; funding for international conference attendance, research visits, pilot projects, hosting research events etc.
- Sabbatical scheme

Establishing and nurturing international links:

Visiting research fellowship scheme



6. Research - University structure





6. Research support and promotion - RBDO

The researchers who do the research need support.

They cannot do all of the administration that goes with the research.

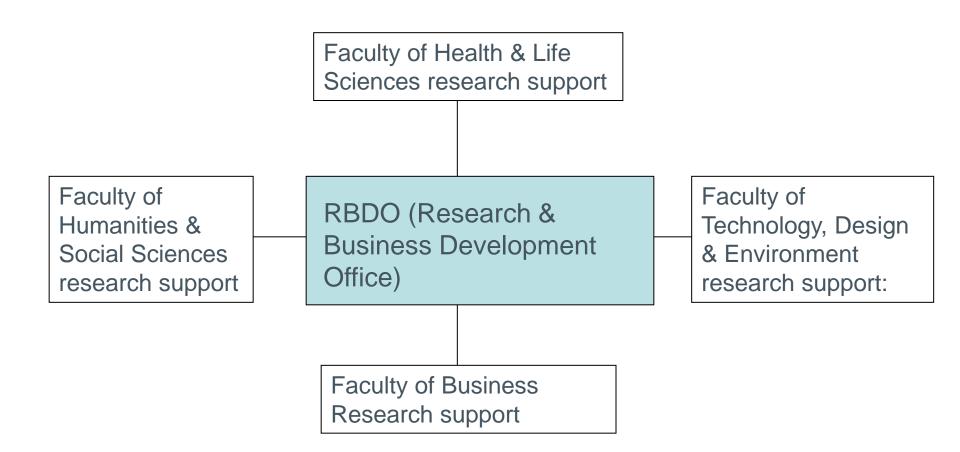
Every research University has a problem to wrestle with

- If the research support is centralised, then it will lose touch with the researchers and the research departments: "us and them"
- If the research support is devolved and there is no "centre", then there will be anarchy – everybody doing things in different ways and no uniformity of process. This is expensive and inconvenient.

SOLUTION: have the best of both worlds – "hub and spoke" model



6. Research support – hub & spoke model





6. Research support – role of RBDO

RBDO has a total of 23 staff who do carry out various key tasks

They do fantastic work and we could not do without them

Sarah Taylor from RBDO will give you many more details about RBDO a bit later

Having something like RBDO can avoid a lot of problems.....



6. Research support – RBDO can control this!

Having RBDO can avoid a lot of common problems:

- "I costed it myself I thought that it would come out cheaper that way!
- "It's OK I don't mind doing research for a cigarette company!"
- "Oh dear I didn't realise that human experiments would require ethical approval. They weren't badly injured though......"
- "Errrm yes I signed to say that we'ed provide the £100,000 electron microscope that's OK, isn't it?"
- "I have the money for the PhD student's first year and I promised them that I'd arrange the rest later"
- "I signed all the IPR away I don't care about that sort of thing"
- "I didn't put anything in about insurance or tax too complicated!"



6. Research support – in faculties

Each of the 4 faculties has a research support network:

- Research manager research accountants research administrators
- Faculty RKTC (Research & Knowledge Transfer Committee)
- Faculty grants panel to make sure that only high quality bids are sent
- Scanning the horizon for faculty-specific funding opportunities



7. Knowledge transfer & commercialization

We do blue-skies research, and applied research

BUT WE ALSO DO KT (Knowledge Transfer) and commercialization

Experience has taught us that it is essential to make sure that everybody understands the rules. In this way everybody can benefit

The issues:

- An academic's work can sometimes be commercialized, and can become very valuable
- The academic should get something but they did the work while they were being paid by the university so it's NOT ALL THEIRS.
- Need to have careful arrangements in place so that everybody understands what the rules are
- This way everybody can be a winner.



7. Knowledge transfer – University policy

Key documents:

- Research & Knowledge Transfer Strategy 2010
- Intellectual Property Policy & Regulations, 2006
 - Commitment to exploitation and dissemination of high quality research
 - The University will meet its obligations to funders to exploit and disseminate
 - Knowledge transfer activity is included in measures of assessment by HEFCE
 - IP is owned, protected and used for the general good of the whole University community
 - > The University will not infringe the rights of others



7. So, you have an invention.....

Ownership

- For all staff the University owns IP generated in the course of employment
- Research students assign their rights to IP on enrolment
- Undergraduates and taught post-graduates are exempt
- Some exceptions copyright in scholarly works, commercially funded research

Disclosure

- Keep appropriate records laboratory notebooks
- Disclose to Dean and RBDO using Invention Disclosure Form
- Keep it confidential! no publication or unintended public disclosure

7. Commercialisation.....



Commercialisation – we can help you with:

- Assessing market potential
- Commercial options licensing, spin-outs
- Finding partners, customers, finance
- Rewards to Inventors
- Working with Isis Enterprises, OxIGT and other sources of business support
- Other routes to knowledge transfer



7. Other forms of rewards for academics

Academic Trust Funds

- Available where a staff member is eligible for an additional private payment
- Funds held in an interest-bearing account specific to the individual
- May be used for equipment, staff development, scholarship and travel
- University enhances payment by 10%

Consultancy

- Various forms of arrangement can be made
- Usually the university takes a small fee for insurance, overheads etc.

Brookes spin out - WildKnowledge



Helping you mobilise

Turn your mobile device into a tool for gathering & accessing information on the move with WK's user-generated content (UGC) toolkits. *Create* your content on our portal, *mobilise* it via the toolkit's mobile app & *visualise* any information you've gathered on our portal. Make your own WildProjects which can be kept private or opened up for collaboration. Click on a toolkit to find out more or register to get started.

Want to mobilise your organisation?

WK is used by schools, hospitals, visitor attractions & companies to revolutionise how they interact with students, customers or staff. Subscribe as an organisation to the toolkits or commission your own branded white label solution.

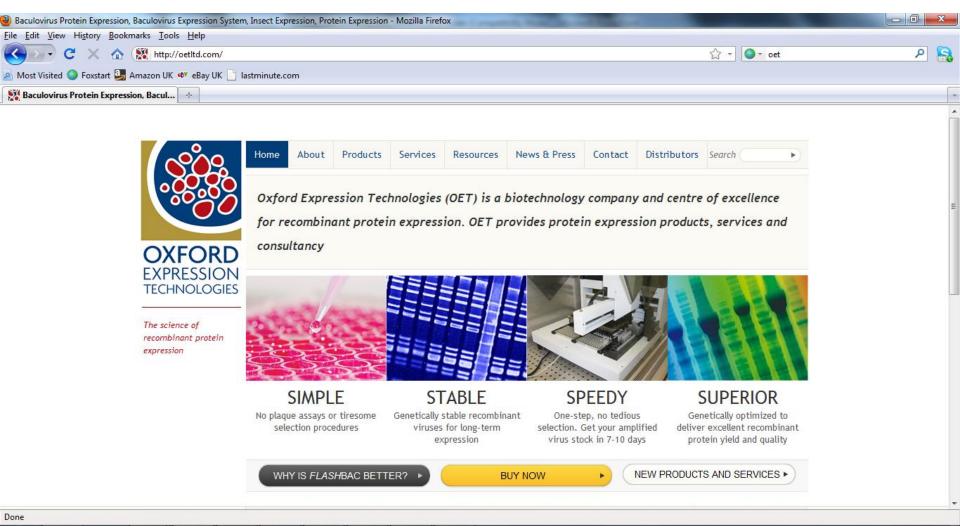


Done

Citizen Archaeology

Brookes spin out - OET

15



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WELCOME TO OXFORD BROOKES UNIVERSITY

SEAMEO Study Tour Wednesday 17th October 2011

Richard Side Associate Director, Oxford Brookes International



Overview of Oxford Brookes

- History
- Some facts and figures
- New Developments
- Organisation of the University
- What we offer
- Study Programmes
- Teaching Partnerships







Our Location

- 1 hour by train to London and direct buses to airports
- Student city
- Centre for industry and enterprise
- 154,000 people: 32,000 students
- Cosmopolitan and multicultural city
- 60 miles (95km) from London





OXFORD BROOKES UNIVERSITY

Our History

HISTORY

- First founded in 1865 as Oxford School of Art
- Became Oxford City Technical School in 1891
- John Henry Brookes becomes vice-principal in 1928
- Main campus moves to Headington in 1949
- Becomes Oxford College of Technology in 1956, then Oxford Polytechnic in 1970
- Becomes Oxford Brookes University in 1992
- In 2007 the state of the art engineering building was opened
- Janet Beer became our Vice-Chancellor in 2007
- Shami Chakrabarti (Director of Liberty) became our Chancellor in 2008

IN SEPTEMBER 2010 WAS NAMED THE BEST POST-1992 UNIVERSITY IN THE UK FOR THE 10TH YEAR RUNNING



Key Facts

- 18,000 students
- 14,000 UG, 4,000 PG 17% of students are non-UK
- Turnover of about £170m makes healthy surplus
- Motto: "excellence in diversity"
- Campuses:
 - Harcourt Hill
 - Headington (Gipsy Lane)
 - Marston Road
 - Wheatley



Directorates

DIRECTORATES:

- Academic & Student Affairs
- Corporate Affairs
- Estates & Facilities Management
- Finance & Legal Services
- Human Resources
- Learning Resources
- Oxford Brookes Information Solutions



Departments

Faculty of Business	Faculty of Health & Life Sciences	Faculty of Humanities & Social Sciences	Faculty of Technology, Design & Environment
Business School	Department of Biological and Medical Sciences	School of Education	School of Architecture
Oxford International Centre for Publishing	Department of Clinical Health Care	Department of English and Modern Languages	School of Arts
Oxford School of Hospitality Management	Department of Psychology	Department of History, Philosophy and Religion	Department of Computing and Communication Technologies
	Department of Social Work and Public Health	School of Law	Department of Mechanical Engineering and Mathematical Sciences
	Department of Sport and Health Sciences	Institute of Public Care	Department of Planning
		Department of Social Sciences	Department of Real Estate and Construction



New Developments



Making an entrance High quality, robust materials and university services that are easy to access



Library and teaching space – our vision





Library spaces A change to the frontage creates a stronger character for study spaces



Green space Mature trees retained and a strong, well-defined planting palette







Partnerships -UK

- Oxford Brookes works in partnership with regional further education colleges (UG/PG and FnD)
- Foundation degrees:
 - degree level qualifications designed jointly with employers.
 - combine work based learning with academic study
 - opportunity to continue working
 - study for a degree at a local college.



Partnerships - outside UK

Programme delivery (Transnational Education TNE)

- Increased priority in Internationalisation Strategy
- Increasing demand for delivery of programmes overseas
- Physical limitations for on campus recruitment



Teaching Partnerships

- Brookes has currently 12 international and EU partnerships Brookes or dual awards
- Around 8,500 students on Brookes programmes
- Include franchises and flying faculty
- Biggest is with ACCA global partnership (3,740)
- Others in India, Malaysia, Hong Kong, Poland, Hungary, France



Research capacity and capability

Sarah Taylor,

Research Support Manager

Research and Business Development Office



Research Assessment Exercise (RAE) 2008

Results for Oxford Brookes:

4*	3*	2*	1*	U/C
8%	26%	44%	20%	2%

- more than three-quarters of our research activity was judged 'international
- one third was graded 'internationally excellent/world leading'
- Brookes submitted to 19 of the 67 separate units of assessment, and of these 15 had some research classified 'world leading'



RAE2008 vs RAE2001

	RAE2008	RAE2001
Income	£23,331,677	£11,851,427
Students in FTE	1307.5	1136
Doctorates awarded	245	188
Staff in FTE	226.03	256.40
QR money allocated	£4,280,000	£2,741,000

- Note increase in income and students
- Note decrease in FTE staff returned aiming for high quality profile. Not reflection of number of staff involved in research



Analysis of Research Base

- Saw that we had pockets of excellence but these were often small and diverse
- No problem with "lone researcher" model but can be great strength in collaboration, as well as more opportunities
- Need to ensure that if a researcher leaves, our strength in a given area can be maintained



RESEARCH AND KNOWLEDGE TRANSFER STRATEGY 2010-2015

- Objective 1: Focus on the areas of research which are, or have the potential to be, recognised as world leading and encourage multi- and interdisciplinary research activity across the University
- Objective 2: Increase the exploitation and dissemination of our highest quality research and our collaboration with other Higher Education Institutions and the public, private and third sector.



RESEARCH AND KNOWLEDGE TRANSFER STRATEGY 2010-2015

- We believe that undertaking scholarship and research is non-negotiable; it is fundamental to our mission as a University and should be supported as a core activity, as important as teaching
 - Expect 90% of the research submitted to exercises which assess research to be judged as international quality, and the percentage of internationally excellent or world leading research to rise to 60% by 2020
 - Aim to raise proportion of staff submitted to assessment exercises to 75%
 - Provide a research environment which ensures strong foundations
 - Will not dilute disciplinary strength



RESEARCH AND KNOWLEDGE TRANSFER STRATEGY 2010-2015

- As a university our mission is to ensure our students benefit from the transfer of knowledge and from the dissemination of our research and their engagement with it
 - expect our researchers to engage in activities which raise their profile and that of the university.
 - value of developing international partnerships, both at research group level and institutionally
 - expect our applied research to translate into meaningful application and we will support the development of knowledge transfer and enterprise activities
 - increase the volume of applied, user-driven research and other knowledge transfer activity, including commercialisation of intellectual property



Addressing the Issues

- We require all new academic staff who do not already have a strong research profile, to have a PhD
- Support for new researchers "First Three Years" programme and mentoring and support in Faculties
- Bridging funds to retain contract research staff between contracts
- Workload plans up to 5 years for research
- Significant investment in new posts over the last 5 years



- Research Services Office set up in 1994 with c 12 FTE – now called Research and Business Development Office (RBDO) with 25+ FTE
- Some Schools had access to some administrative support. Now each Faculty has Research Manager, student support and all have grants officers
- Dean of Research 0.5 FTE now Pro V-C Research at 1.0 FTE
- Schools had a fractional Research Director, now have an Associate Dean, Research at 1.0 FTE



Support for Research – Research and Business Development Office

- Work to support staff submitting applications to external funders
- Look for funding opportunities
- Provide support for academic staff and Faculties in running grants
- Support the ethics approval processes
- Have dedicated Contracts Manager to facilitate contractual issues
- Support external processes such as the REF
- Working on issues related to research such as management of research data
- Bought CRIS to manage and support research



- RBDO work with staff to develop their ideas to see if they can be commercialised
- This can be patents, licensing, exploitation of knowhow, consultancy, continuing professional development (CPD)
- Have Higher Education Innovation Fund (HEIF) from government to support commercialisation. Roughly £1.65M a year
- Allows Faculties and staff to generate income which can be used to support their research



The Graduate Office: Working with Faculties to deliver the University's Research Degree Programmes

Jill Organ Head of the Graduate Office



The Graduate Office

Part of the Academic Registry providing a one-stop-shop for all central administration supporting:

- The Graduate College
- Faculties
- The Research Degree Sub-Committee
- Research Students and their programmes
- Postgraduate Tutors, Supervisors and Research Administrators
- Internal and external reports, funding returns, Funding Council Studentship Grants, scholarships
- Marketing



Enquiry to Enrolment

- Process and respond to enquiries
- Managing the application process
- Supporting the offer process
- Annual enrolment

Develop, manage and monitor the University's Research Degree Programmes

OXFORD

- Research and Knowledge Transfer Committee (RKTC) Overall responsibility to Academic Board for the quality and standards of research programmes and degrees
- Graduate College Steering Group
 Responsible to RKTC for promoting and developing high-quality research
 degrees and training in the University and providing research students
 voice at a senior level
- University Research Degree Sub-Committee (RDSC) Responsible to RKTC for all managing all aspects of the current programmes and for developing policies and regulations
- Faculty Research Degree Committees Responsible to RDSC for monitoring and delivering research programmes within the Faculties



Supporting progression during the Programmes

Research Degree subject Sub-Committees

- The Humanities, Environment and Social Sciences Sub-Committee and the Science and Technology Sub-Committee:
- Registration
- Transfer from MPhil to PhD
- Changes to mode of study
- Suspension
- Examination
- Conferment



Organise Central Training

Supporting the work of the Research Training Co-ordinator:

- Research Student generic transferable skills training
- Supervisor training
- The Research Training Stakeholder Forum
- Manage the Central Training Fund



Research Student Forum and Postgraduate Society

Research Student Forum:

- Student representation
- Organise regular meetings, networking and social events

Postgraduate Society:

• Provide administrative and financial support for activities

Professor Helen Dawes



Research Lead Department of Sport and HealthSciences Elizabeth Casson Trust Chair, Oxford Brookes University Director of Movement Science Group, Oxford Brookes University Associate Research Fellow in Neurology, University of Oxford Visiting Professor, University of Cardiff

Rehabilitation Research at Oxford Brookes University

Research Education Community

Mechanism to Translation



REHABILITATION AT OXFORD BROOKES

2005: Helen Dawes, Ken Howells and 1 PhD student

2012: multidisciplinary research group

- Professor
- •Reader
- •Manager
- •4 Academic researchers (physiologist, programmer, sport science, bioengine
- •5 Clinical researchers (Rehab clinicians, AHPs, psychologist)
- Statistician
- •2 Post doctoral researchers and 2 Research Assistants
- •Visiting Researchers and Clinicians
- •10 PhD students (8 externally funded)
- •6 MSc students and 7 BSc project students
- •User steering groups- adult and children

$E \cdot S \cdot R \cdot C$ OXFORD Work with: BROOKES UNIVERSIT & S O Industries / Charity / Private Donations/ Research Councils RESEAR The COUNCI Huntington's Disease Elizabeth Casson Trust Association Brainmarker Online Wildkey Association Huntington's Disease Association Charity No. 211015 NIHR NHS Cornwall and Isles of Scilly BRU Stroke Association Multiple Sclerosis Society RIMC **DH** Department of Health MS Society NHS Parkinson's UK National Institute for Wellcome Trust Health Research Welcome trust **Department of Health Thames Valley Primary Care Trust Cornwall Primary trust** PARKINSON'S^{UK}CHANGE ATTITUDES. FIND A CURE, JOIN US. Welsh Assembly **Glaxo Smith Kline Oxford University** IHDN GlaxoSmithKline **RIMD** Trust lywodraeth Cynulliad Cymru L **Clear Trust** Welsh Assembly Government The Elizabeth Casson Trust **Technology Strategy Board** South East Health Technologies Alliance (SEHTA)

COLLABORATORS

OXFORD

Universities

University of Oxford: Functional Imaging Brain FMRIB University of Birmingham, Dept of Primary Care and Sport Science Maastricht University, NL, Dept Primary Care University of East London: School of Health and Life Sciences University of Cardiff: Faculty of Medicine Zuyd University, NL: Dept of Technology Oxford Brookes University: Faculty of Health and Life Sciences, Oxford University: Dept of Psychiatry University of Bristol: Exercise, Nutrition and Health Sciences, Oxford University: Dept of Clinical Neurology **Oxford University: Biomedical Research Unit** Manchester University: Health Sciences Queen Margaret, Edinburgh: Life Sciences Oxford Brookes University: Dept of Mathematics University of Jordan, Jordan E, Dept of Rehabilitation Hospitals Universities Geneva, Geneva



COLLABORATORS

Hospitals

Oxford University NHS Trusts Stroke Mandeville NHS Oxford Primary Care NHS Trust

Enterprise Brain-Marker, NL Wild Knowledge, UK

Charities

Huntington's Disease Association UK Spinal Cord Injury Research Network MS Society UK Parkinson's UK Stroke Association



- 10 Publications
- 1 Patent
- Keynote of work at National/International Conferences



OXFORD

OUTPUT 2012

PUBLICITY and IMPACT

- Independent National newspaper article
- Soapbox Science L'oreal
- 'Who Am I Exhibition' Science Museum London Movement Prints

MK Gallery

- Dance production
- Poetry 'Movement Prints'
- Local Schools Movement Prints
- Stroke Association Campaign
- Invited National/International Presentations
- Industry SME's
- 4000 prints of research booklet translated into practice PASS







- BSc PhDs In UK 5 * depts.
- MSc PhDs in UK 5 * depts and World top 300 Universities
- PhD Associate Prof/Lecturers/RA

Maastricht University University of Jordan HUG Geneva University of Oxford and World top 300 Universities



OXFORD

TPUT-2012

Community

- Community exercise unit (CLEAR) 3000 visits
- Winter & Summer Games
- Gifted and Talented 100 local school children
- Exercise Classes for charity support groups
- Charity and Support Group Talks
- Patient and professional training sessions and materials

MK Galler





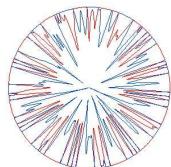
RESEARCH THEMES

Optimise body function, activity and participation for health and wellbeing in adults and children with neurological/neurodevelopmental/neurodegenerative conditions

~5 million people

- Exercise
- Rehabilitation
- Movement



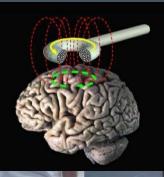


REHABILITATION





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CURRENT PROJECTS

Rehabilitation

- Dual tasking and community mobility after stroke
- Car driving- understanding mechanisms of control
- Walking understanding mechanisms of control
- Physiotherapy for people with osteoporotic spinal fractures
- Effective therapy delivery systems and models [hospital and community]



EXERCISE

"Lack of activity destroys the good condition of every human being, while movement and methodical physical exercise save it and preserve it." Plato

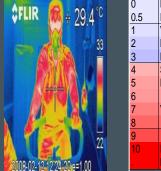
The evidence is overwhelming exercise/physical activity benefits health and well being for all; a 'wonder drug' or 'miracle cure'. (Chief Medical Officer UK2010)



CURRENT PROJECTS

Exercise in neurological populations [Adults & children]

- Impact on function, mobility, health wellbeing, fatigue
- Disease progression [MCI, PD, HD, MS]
- Dose (minimal) and recovery
- Speed and power training in disability sport
- Exercise and Brain Health and wellbeing



0	Nothing at all
0.5	Extremely light (Just noticeable)
1	Very light
2	Light
3	Moderate
3 4 5	Somewhat hard
5	Hard
6	
7	Very hard
8	
9	
10	Extremely hard (almost maximal)
	Maximal





Movement Science

Mechanism and control of movements and walking

•Measurement tools: Diagnosis and monitoring

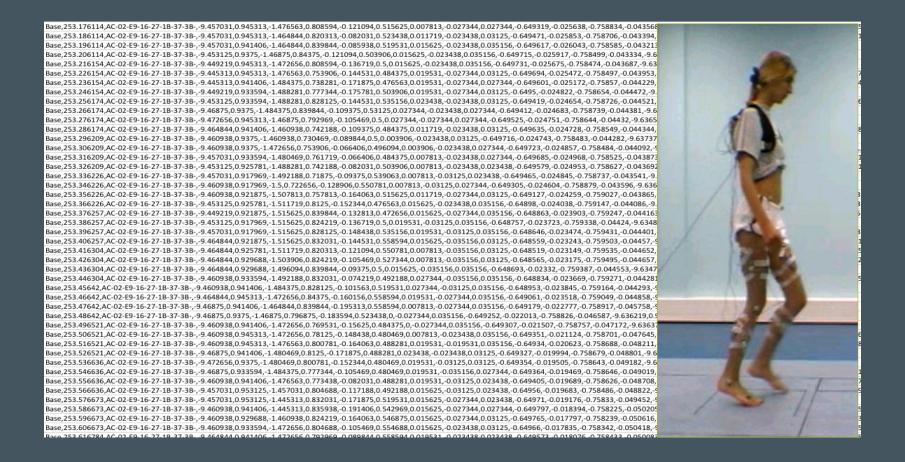
Virtual gym

•Modeling movement: Imaging techniques

Stimulated motor learning-relearning



Development of DataGait





INERTIAL MEASUREMENT UNITS

Combination of multiple sensors

• <u>Accelerometers</u>

- Acceleration in x,y,z
- Gravitational component (up and down)

<u>Gyroscopes</u>

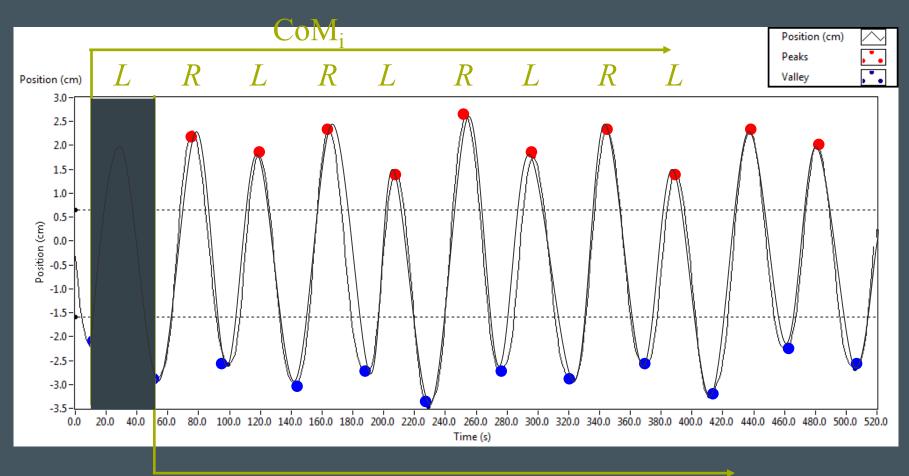
- Rate of turn around x,y,z
- Angle of sensor (roll, pitch, yaw)

<u>Magnetometers</u>

- Compass (North East South West)



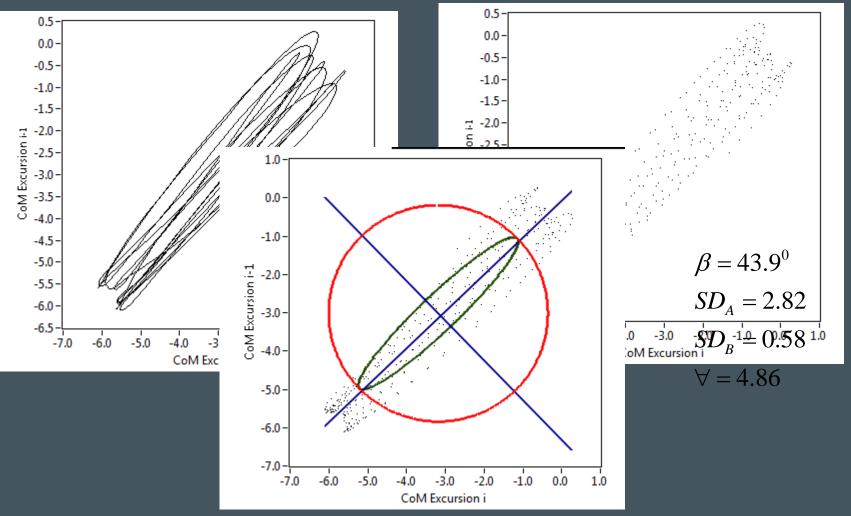
Method



CoM_{i-1}



Method



Different conditions



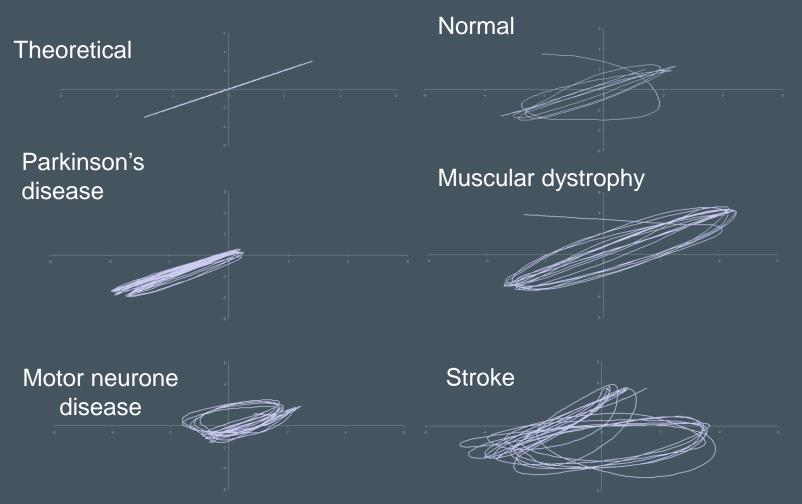


Figure 1: Non-linear symmetry plots of a representative participant from each group during a single assessment. Units on the x- and y-axes are arbitrary units

School of Life Sciences

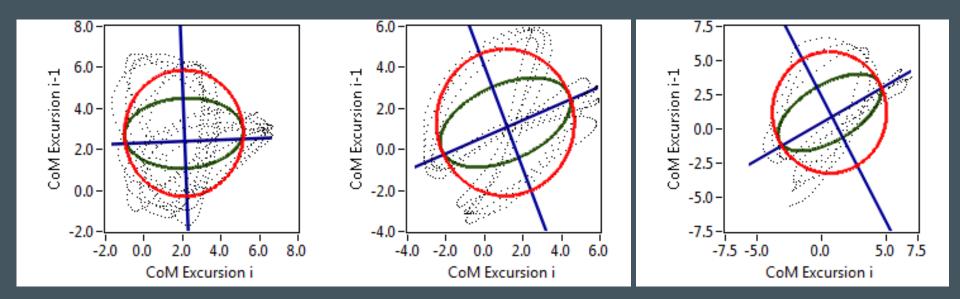


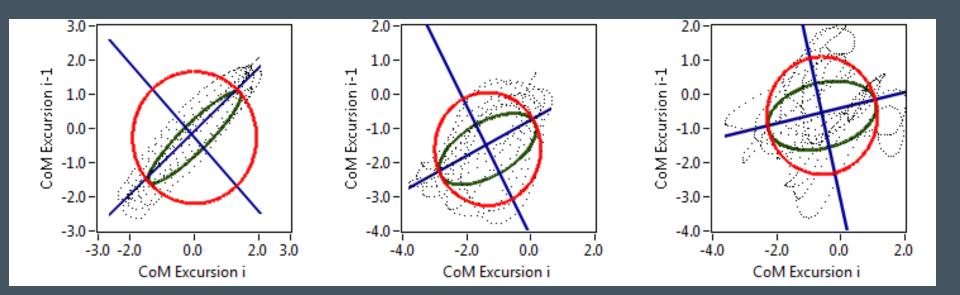
Stroke recovery

Acute ($(\leq 10 \text{days})$
в	$=2.3^{0}$
SD _A	= 3.09

<u>3 mon</u>	ths after
<u> </u>	= 21.80
<u>SDA</u>	= 3.58

<u>6 mont</u>	<u>ths after</u>
<u> </u>	= 28.60
<u>SDA</u>	= 4.44







Pre-sym

Symp



HUNTINGTON'S







Research



- Walking & control [elderly and neurological conditions]
- Monitoring and detecting onset of movement disorders
- Normative Database: Science Museum 2100 pec & 4200 dataset
- AP development
- Virtual gym IMU and Kinnect



Professor Helen Dawes



Research Lead Dept. Health & Sport Science Elizabeth Casson Trust Chair Oxford Brookes University Director of Movement Science Group Oxford Brookes University Associate Research Fellow in Neurology University of Oxford

Rehabilitation Research at Oxford Brookes University

Research Education Community

Mechanism to Translation



INNOVATION AND MANAGEMENT IN UNIVERSITIES





INNOVATION AND MANAGEMENT IN UNIVERSITIES

Dr Sean Wellington

Associate Dean Strategy and Development Faculty of Technology, Design and Environment

OVERVIEW OF PRESENTATION



- Overview of Faculty of Technology, Design and Environment
- Innovation in:
 - Teaching
 - Research
 - Enterprise
 - Partnership Working
- Leadership and Management
 - Vision and values
 - Distributed leadership
- The Future



Faculty of Technology, Design and Environment

The Faculty has six departments providing specialist and interdisciplinary teaching, research and knowledge transfer across a wide range of subject areas:

- School of Architecture
- School of Arts
- Department of Computing and Communication Technologies
- Department of Mechanical Engineering and Mathematical Sciences
- Department of Planning
- Department of Real Estate and Construction



STUDENT NUMBERS

Approximate student numbers, 2011/12:

- Undergraduate Home/EU = 2760
- Undergraduate Overseas = 208
- Postgraduate Taught Home/EU = 559
- Postgraduate Taught Overseas = 210
- These figures include programmes delivered by partner institutions in the UK and overseas
- Postgraduate Research = 98



School of Architecture

- one of the largest architecture schools in the UK, with around 660 students
- one of the country's leading schools
- top architects and the social and cultural advantages of a historic university city
- strong international links, especially to Europe, the USA and South-East Asia
- an international reputation in research
- close links with many of the country's pre-eminent design practices as well as prominent figures from abroad



School of Arts

- broad portfolio spanning Fine Art, Film, Music and Publishing, with around 600 students
- world-class degree courses, Masters and PhD opportunities, Foundation Art & Design and innovative short courses
- specialist research units including Social Sculpture and Sonic Art - renowned for their unique and interdisciplinary approach to contemporary arts practice. The School also houses world-leading researchers in Popular Music and Operatic Studies
- the School is home to the Oxford International Centre for Publishing Studies



Department of Computing and Communication Technologies

- blends excellence in teaching and knowledge transfer with world-leading research in areas that span Computer Science, Media Technology and Communications
- distinctive portfolio of undergraduate and postgraduate courses with around 600 students
- strong links with industry
- modern, well-equipped laboratories and audio/video facilities, including a fully equipped TV studio



Department of Mechanical Engineering and Mathematical Sciences

- provides professionally accredited mechanical, automotive, motorsport, mathematical and statistical courses with around 720 students
- strong links with industry Oxfordshire a 'hub' for automotive activity, for example motorsport and 'clean' technologies
- excellent laboratories and workshops located in a purpose-built facility



Department of Planning

- one of the most diverse departments of Planning in the UK and Europe, with around 240 students
- clients and projects covering subjects from local concerns to multi-national organisations, government and industry
- environment, design and development subjects
- courses, research and consultancy ranging from local area regeneration to urban planning in developing countries



Department of Real Estate and Construction

- subject areas include property management, property investment and property and land appraisal, acquisition and development
- around 490 students and courses include aspects of valuation, economics, law, finance and investment, construction and maintenance, business and information technology
- teaching provides the high level of relevant skills and knowledge needed in the commercial world



Innovation in Teaching

Example: Centre for Development and Emergency Practice (CENDEP) – MA Development and Emergency Practice



MA Development and Emergency Practice

- Founded in 1991
- Over 600 students have attended the programme
- Provides a unique academic setting for the study of international development, conflict, disaster management, urbanisation, humanitarianism and human rights
- In 2000 the course was awarded the Queen's Anniversary Prize for Higher and Further Education



Education and training for humanitarian aid workers The university has gained an international reputation for pioneering education and training for humanitarian aid workers. Combining innovative practice-based study with a multidisciplinary academic approach, its unique emphasis on educating humanitarian practitioners for work in war, political violence and disaster is a model for others. The Centre for Development and Emergency Practice (CENDEP) at Oxford Brookes University offers a pioneering MSc course in Development Practice. It also promotes best practice in humanitarian work overseas and provides appropriate training for local community leaders and public officials.

The Royal Anniversary Trust



Innovation in Research

Example: MINI E Trial



MINI E TRIAL

Taking place in the South East UK, in partnership with BMW Group, Scottish and Southern Electricity, SEEDA, Oxfordshire County Council and Oxford City Council. This is a TSB funded project aiming to understand the realworld use of electric vehicles in the hands of typical drivers.





Innovation in Enterprise

Example: Knowledge Transfer Partnership (KTP) – Motion Capture



- This Knowledge Transfer Partnership (KTP) project brought together OMG plc and Oxford Brookes University in an outstanding collaboration
- The project built a highly-automated motion capture system capable of working outdoors under general lighting
- The project was named best KTP project in the UK for 2009
- New products are being marketed by the company based on this innovation



Innovation in Partnership Working

Example: Old Fire Station Project





- Oxford City Council and Crisis, the national charity for single homeless people, are working together to redevelop and refurbish the Old Fire Station to create a centre for creativity, skills development and enterprise
- The School of Arts is supporting the project and will be introducing a new Studio Award Scheme, where two Arts graduates will be awarded a studio space for 12 months whilst working alongside the Old Fire station and Crisis Skylight to deliver training and workshops in arts practice and arts therapy



Leadership and Management

- The new Faculty/Departmental structure was formally launched in September 2011
- The new departments are responsible for specialist and interdisciplinary teaching, research and knowledge transfer across a wide range of subject areas
- Shared vision and values
- Distributed leadership

OXFORD BROOKES UNIVERSITY

The Future

- New student funding arrangements from 2012
- Continue to provide an excellent student experience
- Build on our world-class research activity
- Develop mutually-beneficial partnerships, local/regional/international



FURTHER INFORMATION

Dr Sean Wellington

T: +44 (0)1865 484200 E: <u>swellington@brookes.ac.uk</u>

http://tde.brookes.ac.uk

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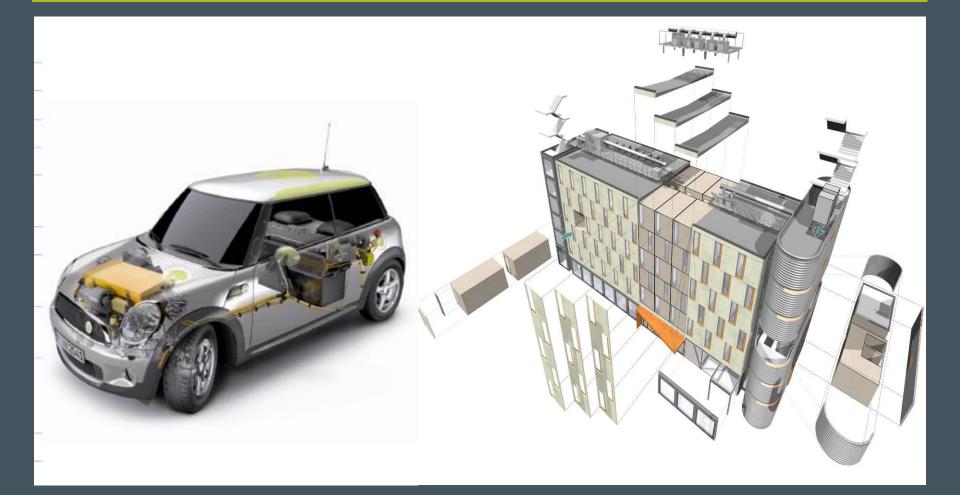
Student numbers

For the academic year 2011-12, WBS has over 7,200 students and participants enrolled. The breakdown by programme and course is:

Undergraduate Programme	
BSc Accounting & Finance	624
BSc Management	
BSc International Business	
BSc International Management	
BA German & Business Studies	39
BA Law & Business Studies	
BSc Joint Degrees with Sciences	
All undergraduate degrees	
Masters Portfolio	
MSc Accounting & Finance	55
MSc Business Analytics & Consulting	86
MSc Finance	
MSc Finance & Economics	75
MSc Financial Mathematics	44
MSc Information Systems & Management	
MSc Management	
MSc Management Science & Operational Research	
MSc Marketing & Strategy	103
MA Industrial Relations & Managing HR/International Employment Relations	
MA Management & Organizational Analysis	53
All master's degrees	840
The Warwick MBA	
The Warwick MBA by distance learning	1,582
The Warwick MBA by full-time study	61
The Warwick Executive MBA	409
The Warwick MBA corporate streams and Global Energy MBA	
All MBAs	2,311
Research	
Doctoral Programme	172
All research degrees	172
Executive Education	
Customised & Open Diplomas & Certificates	1,403
Public Management Programmes	
The Warwick MPA	53
The Warwick Diploma in Local Government Management	
The Warwick Diploma in Public Leadership & Management	78
The Warwick Diploma & Masters in Police Leadership & Management	195
The Warwick Masters in Public Leadership & Management	
All Public Management programmes	674
Visiting & exchange students	
Visiting & exchange students	171
Grand Total	7,246



Commercialisation of Research





Role of the Research & Business Development Office

- Maintaining good practice and procedures for research and consultancy proposals
- Identifying research funding opportunities
- Identification, appraisal and exploitation of Intellectual Property
- Marketing and sales support for business services and training courses
- Collating management information on research
 performance and business interactions





University Policies for Knowledge Transfer

- Commitment to exploitation and dissemination of high quality research
- Intellectual Property is owned, protected and used for the general good of the whole University community
- Policies for funding 'Proof of Concept', patenting and exploitation activities and for distributing 'HEIF' funds to achieve greatest benefit
- Policies in place to manage intellectual property, ensure a fair reward to inventors and respect the IP of others





Selected areas of engagement



Automotive

Construction

General Engineering



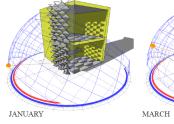
Facilities

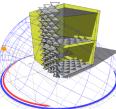


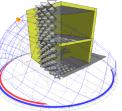


Advanced computational and analytical capabilities

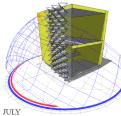


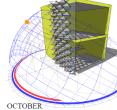


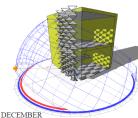




MAY







DECEMBER

Staff







Modes of working

- Consultancy and knowledge transfer
- Research grant funded activities
- Internal 'QR' funded activities
- Close to industry working and partnering
- Multi-partner and collaborative working with commerce and industry, and with other academic and research institutes.
- Patent and licensing and other forms of commercialisation



BMW Oxford





Mini Futures





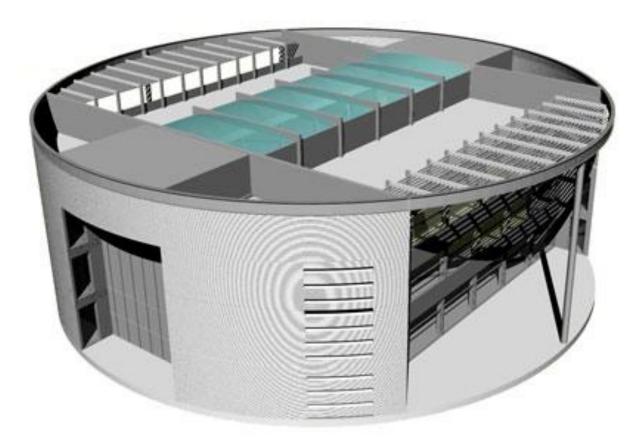
MINI E

- 2 year project involving: BMW, Oxford Brookes University, Scottish & Southern Energy and SEEDA
- 40 MINI Es involved in field trials
- Installation of public and private (home) charging points
- Analysis of vehicle data and energy use
- Development of business models





Demonstration Buildings





TSB 'Retrofit for the Future'



But behind its 18th century facade has the larast in 21st century carbon-cutting ideas. oreating carbone-cutiling ideas. That is beechas the Nealson Streact huma in Jonisha has been outgobedly ecoremoval-ed as part of an ambritons research project. This notupin inverse theory on Several Distance Research project (Severa and Schnieg Backow, are to hathous how on their energy con-sumption and certain ends-tion are sometherd. vapour berrier

 Windows - new ciple-glazed windows.
 Photovoltais cells - amB of solar panale
 m the rost.
 Solar thermal hot water - butce or south
 cash taking mort apply hot water in the water
 vyinder in the fisciliant helitication.
 Forth wall - 62.5mm (Herminius Insulation
 Phase wall - 62.5mm (Herminius Insulation
 phase wall - 62.5mm) (Herminius Insulation Homodoling and homover on measure on covered with a high deformance membrane.
 Scienced Noor — new tiscang chippoters from with Tolenin Tolevision taxed to wails to more with tolevision taxed to wails to the tolevision of the taxed taxed to wails to the tolevision of the taxed taxed to wails to the taxed taxed taxed taxed taxed taxed dicts in of tax supplying air to head Resource, and excreasing air from work topms, Homoson supplying air top work topms, Homoson supplying air top work topms, Homoson supplying air top work topms, Konsvant sumple: - to improve netural light and vanitation in the carkest part of the house. 200a m extensi insulation Root – 420mm oft insulation with airlight could base a basis for compar-ison. The set of the set Mr and Mrs Bishop, 59 ami

We shall blis Station, 50 and 55, have Level in the mountil property for 21 years. Mrs. Bishop said: "It's man-ing. There are no create, it's much, much lighter because of the triple stating and taking continent." The whole sum is to find out Markov and Carl Tree surgeon
 Markov and Carl amounting to a reduction of 60 per cent, came from 42cm Udek insulation in the loft A highly officiant heating cent, with the remaining 10 per cast from solar water beating and solar parchs. The idea was to reduce the

The idea was to reduce the properties fuel bills from 5000 to \$150 annually and Prof Cupta sold with the house car-rendy "in cred." thanks to the onergy feeding back into



01993 822483 www.bluecross.org.uk/burford



Oxford retrofit cuts energy consumption by 85%

Two council tenants in Oxford have had their home turned into a showcase for energy efficient technology.

Steve and Shirley Bishop are taking part in a research project looking at the best ways to reduce CO2 emissions in existing UK housing stock.

The couple have seen their energy consumption cut by 85% and hope to see bills drop from £600 a year to £150.

Project leader, Prof Rajat Gupta, from Oxford Brookes University said findings would inform future government policy.

The Victorian terraced property on Nelson Street has been fitted with a number of energy-saving measures and will be studied over a two-year period.

Mrs Bishop, who has lived there for 21 years, said the changes had improved her guality of life and even helped with her asthma.

She said: "It's bright warm, no draughts ... the air quality is amazing, it's somehow fresher."

Optimum technologies

There are 86 other houses across the country taking part in the government's Retrofit for the Future programme.

The information will be used to decide on the most cost effective ways of reducing carbon emissions



The Victorian property on Nelson Street has been retrofitted with a number of energy-saving measures

Related Stories

Bond designer criticises eco-town

Solar cells use cheap metal oxide

Building smart homes of the future



Bicester Ecotown

Technical and policy support to development teams including: planning policy, climate resilience, comfort and low carbon technologies



Demonstration home

Site

Location



UK, EU and international steel sector activities



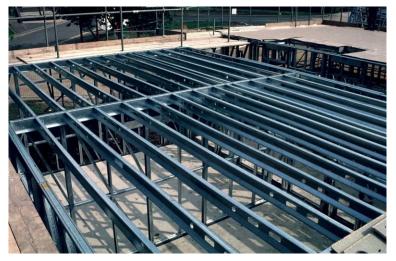
- One of only 2 UK strategic partners since 2002 (other steel Construction Institute)
- Novel umbrella agreement covering portfolio of research activities
- Shared IPR and exploitation routes
- Complementary industrial funding to support EU and other bids
- High impact factor (past successful R&D estimated to account for 5% of total current UK steel production)
- University encouraged to proactively contribute business strategy
- Many other university axes dropped. Demonstrable mutual benefits essential.

Light Steel Framing Developments EU MegaProject5





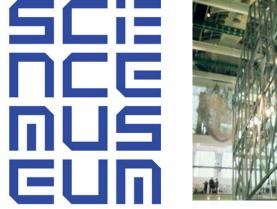




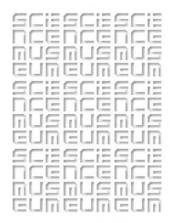


Light Steel Framing Developments Science Museum









Early Developments





Modular construction





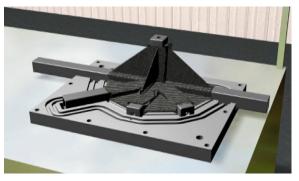
Joining Technology Truss structures











Project Partners





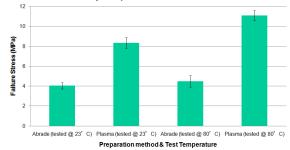
Electric motor bonding







Zytel Lap Shear Failure Stress





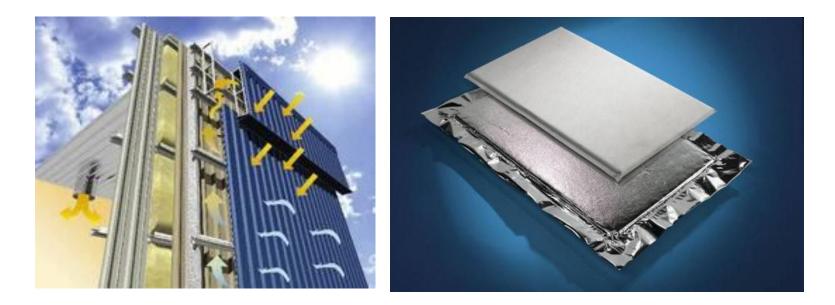
Bonded strengthening and upgrade







Renewable and Low energy systems

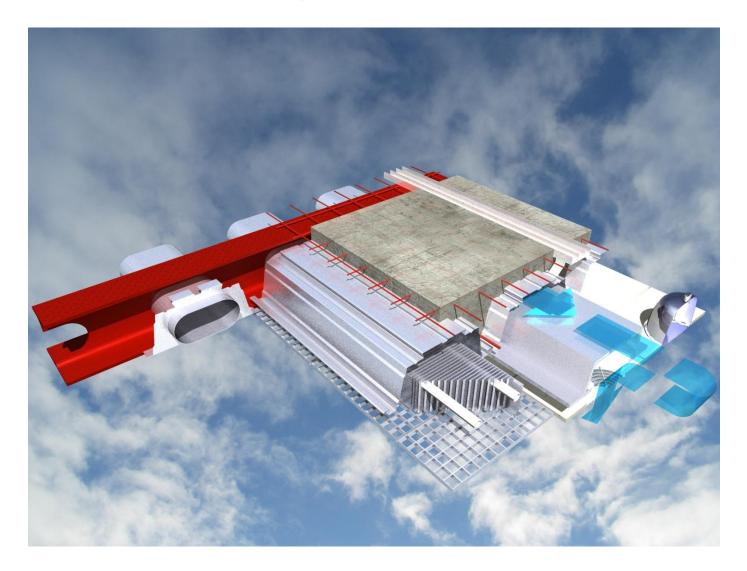


Transpired Solar Collectors

Vacuum Insulation Systems



Fabric Thermal Storage





Sustainable vehicle engineering





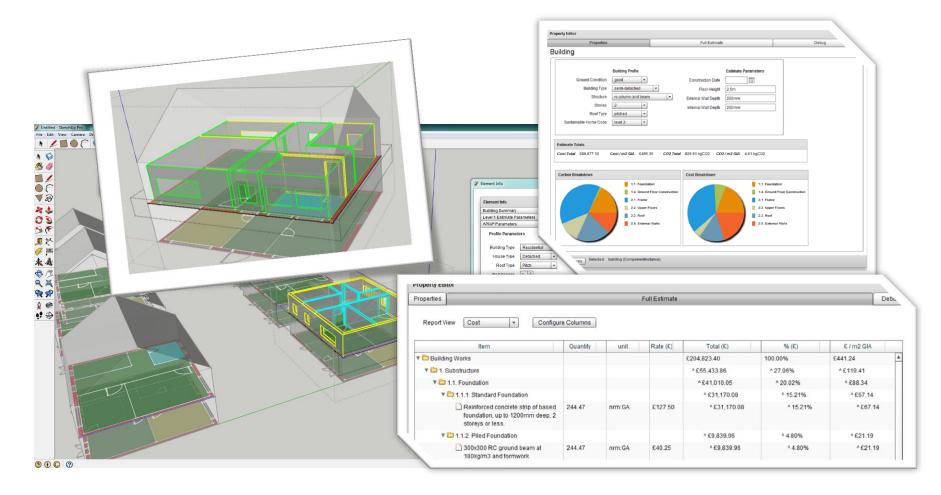
- Current areas of engagement include:
- Induction charging
- Light weighting
- CO2 reduction
- Particulate control
- Alternative and mixed fuels





Low Impact Design Explorer (LIDX)

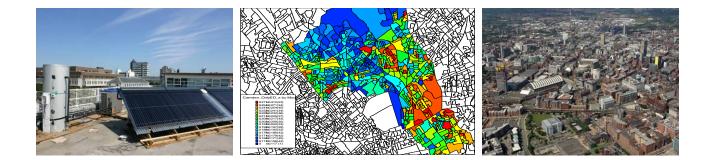
Users can easily develop 3D models of building developments in Google Sketchup and see the implications of their decisions on multiple performance measures such as embodied and operational CO₂, waste and cost simultaneously.





Research Council work in urban retrofit

Aim is to develop knowledge and capability to overcome the separation between the 'what' and 'how' of urban scale retrofitting in order promote a managed socio-technical transition in built environment and urban infrastructure.





Laboratory Commercialisation



- Use of new structures and building physics laboratory to generate income to benefit research
- Partnership with SCI and TRADA to increase skills and reduce costs
- Working with trade organisations including MCRMA and Buildoffsite to secure market.



Accreditation





Lloyds Register agreement to adopt lab for all CE marking and other industry accreditations.



Overview

- Many forms of commercialisation across a wide variety of areas.
- Multi-partner projects increase scale, competencies and overall 'traction'.
- Firm belief that involvement of commerce and industry gives increased focus and currency to research agenda.
- University benefits financially from commercial and industrial research funding and from the proceeds of commercial exploitation.
- Major benefit to 'impact' component of REF
- Significant USP of parts of the Brookes research portfolio in comparison with other institutes.

Welcome South East Asia Ministers of Education

Professor Stuart Croft, Pro-Vice-Chancellor, Research Dr Peter Hedges, Director Research Support Services

18th October 2012

THE UNIVERSITY OF WARVICK

Warwick profile

First students enrolled in 1965. 23,420 students

- 12,979 Undergraduate
- 10,441 Postgraduate
- 1/3 from outside the UK
 4912 staff (1389 academics and researchers).

Annual turnover £419 million. Only 20% of income from HEFCE grants.

Ranked 7th in the UK's 2008 Research Assessment Exercise (RAE).



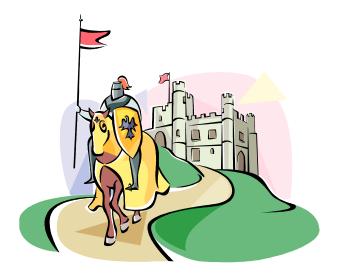


Summary

- **Research Support Services**
- Who are we?
- What do we do?
- Why is it important?
- How can we help you?



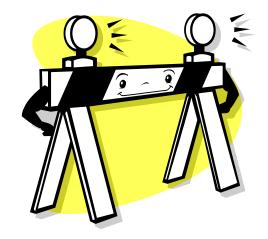
Academic Perceptions!



Knights in Shining Armour?

Villains?





...or just a barrier?



Who are we?

- C.60 administrative, clerical and IT support staff within the Registrar's Department;
- With financial, legal, IT, marketing, project management (and more) skills;
- Working closely with academic and departmental support staff (located in departments/regular surgeries held);
- Working closely with the Pro Vice Chancellors for Research;
- Administer the Research Development Fund (RDF);
- Supporting the University's Research Committee and Research Ethics Committee (and subcommittees).



What do we do?

- Source/create research funding opportunities;
- Develop applications, bids, proposals, tenders, business plans and negotiate legal agreements to secure funding for research (~1500 applications worth >£325m in 2011-12);
- Formally accept funding awards (> 600 new awards of value, >£75m in 2011-12); and financially manage projects (invoicing and expenditure claims management) (~£85m income in 2010/11);
- Statutory role the Administrative Authority i.e. the legal entity.

WARWICK

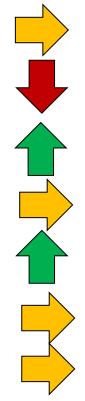
External Sources of Income

Research Councils	£32.4m
Central Govt, Local Auth. & Public Corps	£33.5m
Industry & Commerce	£4.7m
Charities	£7.3m
European Union	£6.6m
Overseas & other	£1.8m
Total 2011-12	£ 86.4m



External Funding Trends

Research Councils Central Govt, Local Auth. & Public Corps Industry & Commerce Charities European Union Overseas & other **Overall Grants and Awards**





Vision 2015 – we aim to..

- Double Warwick's turnover;
- Double Postgraduate research students;
- Establish new multidisciplinary research centres;
- Increase our cohort of ISI Highly Cited researchers
- Develop new international research collaborations.



However....

- Comprehensive Spending Review impact on Government R&D;
- Changes to PhD funding;
- Pressure on full economic costing;
- Increasing competition for EU funding;
- Enhanced support for industrial partnerships



Research Development Fund (RDF)

- £500,000 available in 10/11 across 2 schemes:
 - Strategic Awards
 - Development Awards
- **Strategic Awards** pump-priming support of up to £25,000 per award for new research initiatives of strategic importance, ideally of an interdisciplinary nature, which must lead future bids for external funding. One deadline per academic year. The next deadline is likely to be July 2012.



Research Development Fund (RDF)

- **Development Awards** provide limited funding to develop research capabilities aligned to the University Strategy.
- Online submission process
- Further information on the RSS webpages: http://www2.warwick.ac.uk/services/rss/funding/r df/



Other Options for Support

Institute of Advanced Study (IAS)

- Short-term Visiting Fellowships;
- Augmentation Awards (for externally-funded visiting fellows);
- Early Career Summer/Easter Vacation Research School Awards;
- Incubation Awards;
- Facilities;

http://www2.warwick.ac.uk/go/ias



Other Options for Support

Warwick Impact Fund

- **Impact Development Awards** to modest support for impact activity specifically related to the University Strategy and Global Priority Programmes (GPPs).
- Strategic Impact Awards pump-priming support for the development of new impact activities and initiatives which are creative and innovative and clearly of a strategic nature.
- **Proof of Concept Awards** To support the commercial exploitation of University Intellectual Property and "Know How", developing innovative new products and processes.

http://www2.warwick.ac.uk/insite/news/intnews2/impactfund_201 1_2015



Other Options for Support

Global Research Priorities

A key part of the University research strategy aiming to focus our world-class, multidisciplinary research on key areas of international significance

- The current GRPs are: Connecting Cultures; Energy; Food Security; Global Governance; Individual Behaviour; Innovative Manufacturing; International Development; Science and Technology for Health; Sustainable Cities.
- The GRPs aim to bring together the scholarly expertise of Warwick academics from across faculties and departments to tackle global challenges.
- Funding is available for a range of activities including networking, external engagement, workshops, meetings, feasibility studies etc.



Research Support Systems

A number of different systems available to support funded research activity at Warwick including those to support

- Finding of funding opportunities
- Creation and tracking of research proposals
- Approval of research proposals
- Showcasing research profile
- Monitoring and reporting on research activity





Research Ethics

RSS supports the oversight of research ethics at Warwick. Some issues you need to be aware of are:

- The Research Code of Practice updated and adopted by Senate & Council, July 2011;
- Information & support available to academic staff on procedures for ethical oversight of research;
- New <u>website</u> launched in 2012.



Research Support Services on the web

http://www2.warwick.ac.uk/services/rss/





Research in Warwick Business School SEAMEO Visit - 18th October 2012

Stephen.Brammer@wbs.ac.uk Associate Dean (Research)



Warwick Business School

Aims

- To briefly say something about the range of research activity going on in WBS
- To emphasise issues related to the nature of the research environment we're aiming to build and maintain
- To discuss how we support and develop research excellence at multiple levels

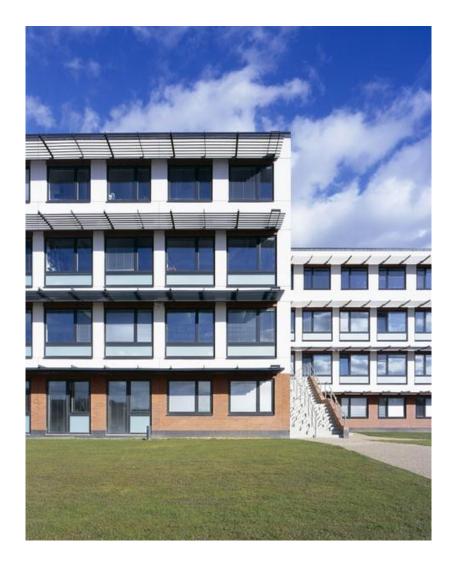
Our mission

"To be the *leading university-based* business school in *Europe*."

"To produce and disseminate **world**class, cutting edge research that is capable of shaping the way organisations operate and businesses are led and managed."

About us...

- Big
- Diverse
- International
- Inter-disciplinary and methodologically plural
- Collaborative



Performance & Assessment



- High quality outputs (65%) Journals, Books etc
- Impacts outside academia (20%) effects on government policy, practices in organisations, public awareness and wellbeing
- Research environment (15%) how we support sustained research excellence

Supporting excellence - individuals

- Sustained excellence in research stems from continuous engagement by *high-quality people*; Teaching loads are managed to *create space for research*
- We invest in *attracting and retaining* superb staff, and in *developing the next generation* through our PhD programme
- Generous support budgets are available to fund conference attendance, research expenses, pumppriming of new projects
- All staff have *designated mentors*

Supporting excellence - groups

- Staff are organised into 10 subject groups we've *invested strategically to generate critical mass* in a number of areas – Entrepreneurship, Health Management, Global Energy, Behavioural Science
- Groups are co-located, host visitors, hold seminar series, run working paper series etc
- Some staff are located across two groups to promote cross-group collaborations

Supporting excellence - school

- Research office 3 dedicated staff support for developing and costing research grant/funding applications, induction for new staff, research information
- WBS solutions 10 staff manage and develop IT infrastructure, e-conferencing/telepresence facilities
- Communications and external relations 10 staff help with translation, media relations, dissemination and knowledge exchange events
- Laboratory space a dedicated space to support experimental behavioural research

Supporting excellence – university and beyond



Conclusions & Questions

- Creating an environment within which research excellence can be sustained is a complex business in an increasingly competitive world
- We do this by attracting, retaining and developing great people, surrounding them with a supportive environment (including other great people for them to collaborate with), and encouraging engagement and collaboration
- Questions?



UK Higher Education developments

18 October 2012

Will Hammonds, Policy Researcher, UUK



Outline of presentation

- Introduction to UUK
- Context: UK HE
- Forces currently affecting the sector
- Recent developments
- Specific challenges for science research and innovation policy



UUK history and structure

- Founded the Committee of Vice-Chancellors and Principals 1919
- A single voice for universities speaking to government
 - The media face for higher education
 - Central policy and research function looking at higher education policy and its effects
 - Conferences and seminars
 - International promotion and engagement
- UK Board primary decision making body, informed by members through policy networks and member conferences
- Universities UK
- Higher Education Wales
- Universities Scotland
- Semi-autonomous units (Medical Schools Council, Dental Schools Council, Concordat to Support the Career Development of Researchers)



UUK leadership

- UUK is headed by a president
 - Elected for 2 years from among the members
 - Current president is Eric Thomas, VC of University of Bristol
- President also chairs the UUK board
 - 24 elected members
 - Meets 4 times a year
- UUK is managed on a day-to-day basis by a Chief Executive
 - Current Chief Executive is Nicola Dandridge
- Employs c.80 staff across organisation
- Turnover c.£5m a year



- The sector is diverse institutions, ranging in size and mission, but all essentially delivering high-quality teaching, research, and knowledge transfer.
- Certain features continue to characterise the sector:
 - Institutions are highly autonomous, operating in a competitive environment
 - The predominant mode of delivery of undergraduate education is full-time
 - The distribution of research funding is highly competitive and highly concentrated
 - Funding from private sources (especially business and industry) remains a relatively small element within the overall funding streams of universities
- A nationally coordinated approach to higher education regulation by government and by the sector itself



Some facts and figures (09-10)

- Total UK students- 2,493,415
 - UG 1,914,710
 - PG 578,705
- Undergraduate modes
 - Full time 1,333,900
 - Part-time- 580,810
- Student numbers by domiciles
 - UK- 2087615 (83.7%)
 - Other EU- 125,045 (5%)
 - Non-EU- 280,760 (11.3%)



Sector governance

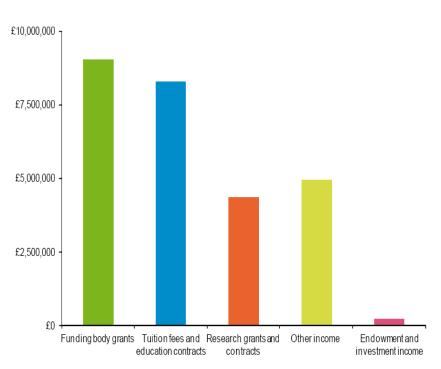


- All institutions are autonomous in terms of teaching, admissions and management
- There are also a number of government and sector agencies involved in the coordination of the sector:
 - Department for Business Innovation and Skills: The government department responsible for higher education and scientific research
 - Higher Education Funding Councils (England, Scotland, Wales): 'Arms length' allocation of student numbers and research funding to institutions
 - **Quality Assurance Agency:** Sector owned quality standards body
 - Office for the Independent Adjudicator for Higher Education: Complaints and disputes
 - Office for Fair Access: Fair access
 - Higher Education Statistics Agency: Collection and dissemination of statistics about publicly funded UK higher education

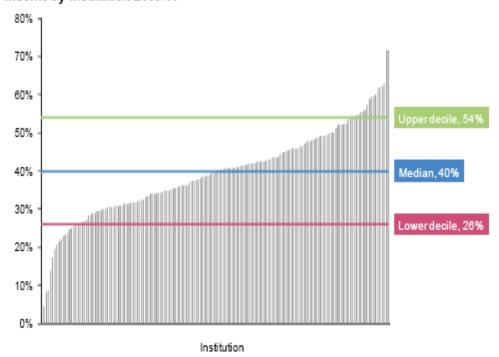


Income to UK higher education institutions 2009-10

1.14a Income of higher education institutions by source of income 2009/10 (£ thousands)



2.26 Percentage ratio of total funding body grants to total income by institution 2009/10



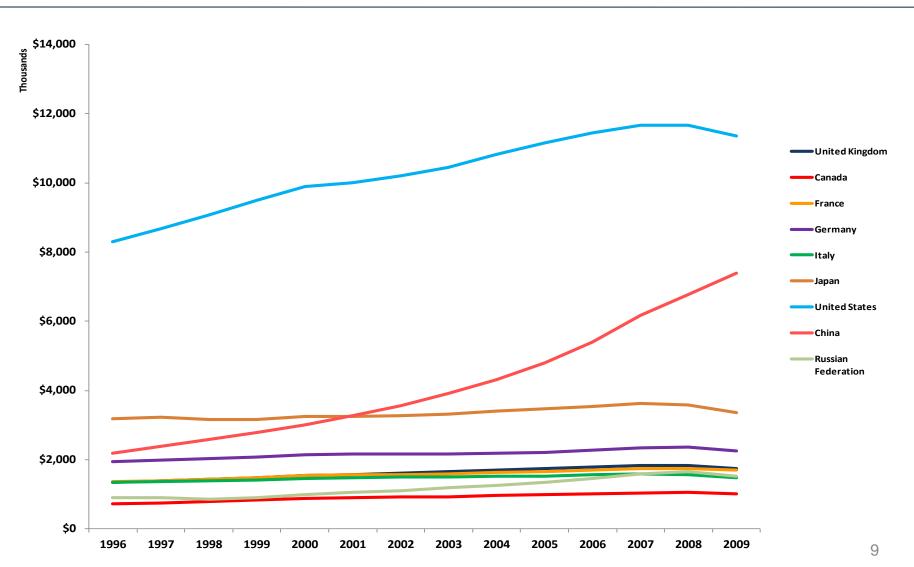
Source: HESA Fin ance Record 2009/10

Source: HESA Finance Statistics Return 2009/10

Total income £26.7bn

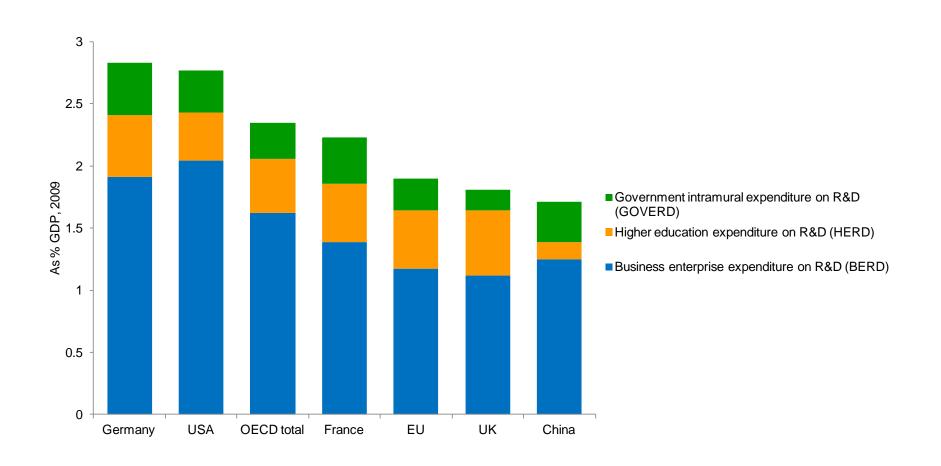


Gross UK Expenditure on R&D





UK science and research - Investment as % of GDP

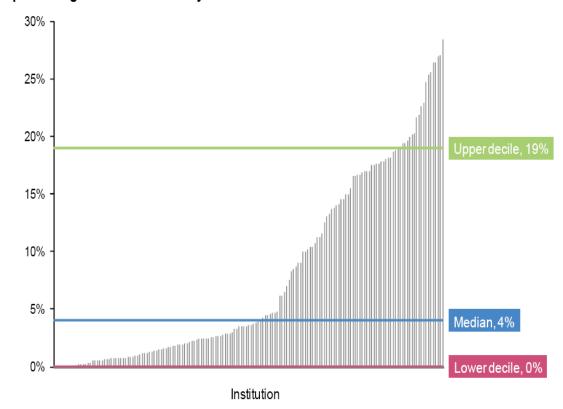




Research funding

- Dual support system
- Core research funding Quality Related (QR)
 - Higher Education Funding Councils
 - 2011-12 £1,558 million
 - Research evaluation framework 2*, 3* and 4* (2008)
- Project based funding
 - full economic costs (fEC) of projects that they commission.
 - Seven research councils, organised by discipline – plus Umbrella Body Research Councils UK

2.29 Funding of research through the dual support system as a percentage of total income by institution 2009/10



Source: HESA Finance Return 2009/10



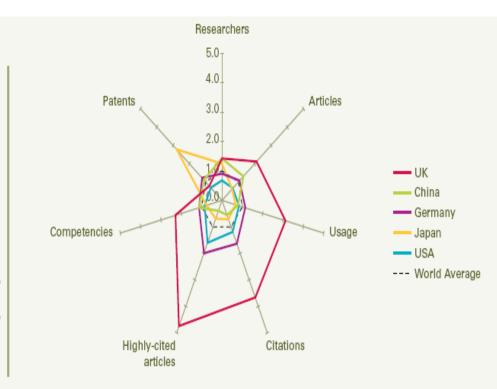
Research output

GERD

per

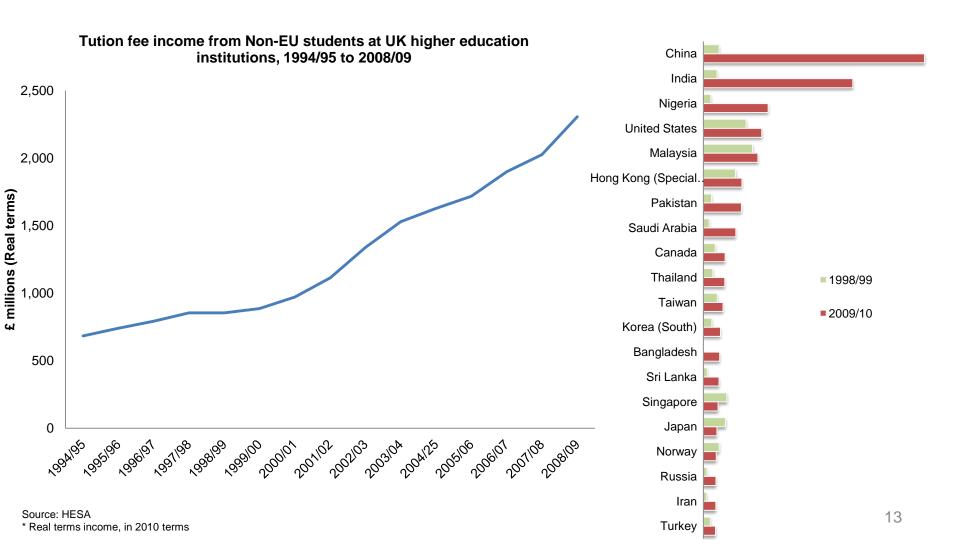
- In terms of global shares of R&D inputs and outputs, in 2010 the UK represented
- •0.9% of population
- •3.9% of Researchers
- •3.0% of Gross Expenditure R&D
- •6.4% of articles
- •9.4% of article usage
- 10.9% of citations
- •14.0% of highly-cited articles
- •2.2% of patent applications

Output •In terms of research outputs and performance the UK is second only to ö the USA.





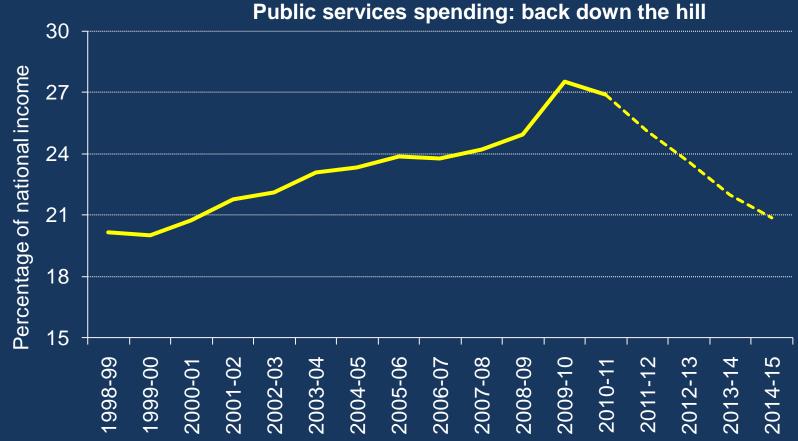
International students





The forces currently affecting the sector

Fiscal environment





Public spending cuts

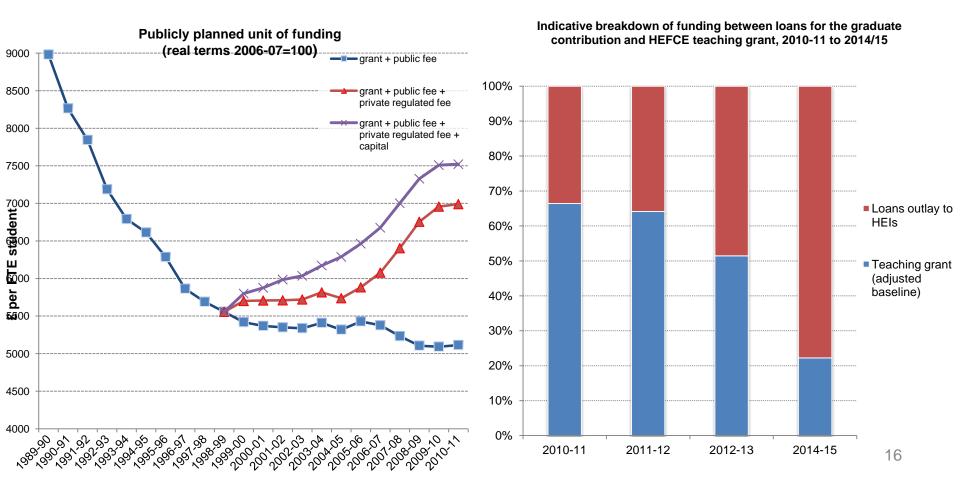
2010 Spending review

- A resource cut for Department of Business Innovation and Skills (BIS) of 25% but the annual higher education budget faces a cut of 40% over the period of the Spending Review.
- Research funding is protected with a ring-fence (£4.6bn), but decreases in real-terms by 8.9% and efficiency savings will need to be found across the dual support system.
- Significant implications for institutional (QR) funding and Research Council funding with shift toward concentration into 'research intensives'
- The main cut is in grant for undergraduate students to be replaced with the shift to tuition based student funding



Funding reform

Transfer to tuition fee funding with government backed loans



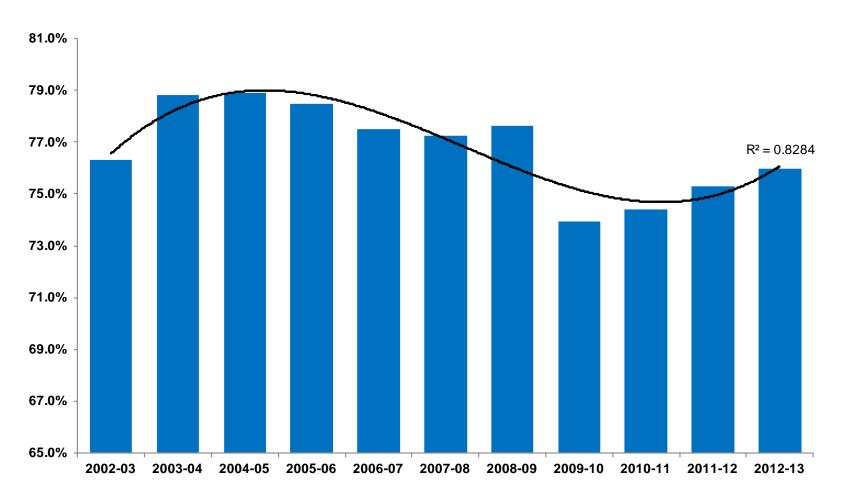


White paper: Students at the heart of the system

- Introduction of a 'structured market' designed to increase competition and choice:
 - Revisions to student number allocations for public institutions
 - For profit providers given access to student support student loans
 - Incentives introduced into the system for public institutions to keep fees down below £7500
 - De regulation of places for students with AAB to encourage competition at the 'top end' of the market
- Revisions to the regulatory system to open up and simplify:
 - Open up degree awarding powers and university title to new providers
 - Stream line the regulatory regime to respond to a greater level of complexity and new funding relationships
- Legislation expected 2012 now delayed



Mainstream QR funding accounted for by top 25 research institutions* in England according to share of mainstream QR, 2002-2012



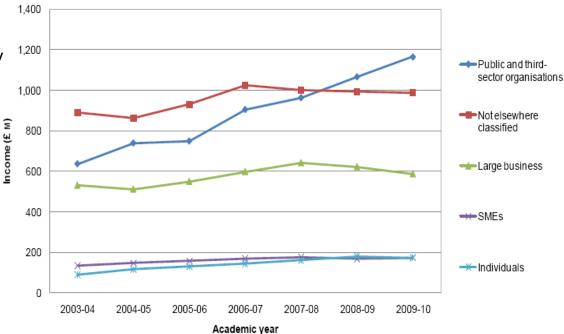
Source: HEFCE QR related funding data (http://www.hefce.ac.uk/research/funding/qrfunding/)

* Top research institutions measured by overall amount of QR funding received in each year



Economic growth and innovation agenda

- Universities role in the economic recovery
 - Highly skilled knowledge economy
 R&D output and skills
 - Regional economic multipliers employers, students and knowledge transfer
- Technology Strategy Board
 - Emphasis on encouraging engagement with small and medium enterprises
 - Knowledge Transfer Partnerships,
 - the Small Business Research Initiative
 - Catapult centres



Source: HE-BCI Part B Tables 1, 2, 3 and 4c

Contract by organisation type	SME	Non-SME	Non-commercial
Number	7%	35%	58%
Value	4%	33%	63%
Average value per contract	£18,917	£32,449	£37,525 19



Immigration

Managed migration points based system

- Points based system for employment route 'Tier 2'
- Students come under their own route 'Tier 4'
 - No cap on international student numbers
 - Fees still set by the individual institution
 - Language requirements based on university standards
 - Process apply to the university and the process of obtaining a visa starts from there
 - Post study work provision now under tier 2



- 1. Shift in the balance of public and private funding and changing expectations of students
- 2. Increased differentiation of resources with the sector
- 3. Re-structuring within the sector (collaboration, merger, partnerships)
- 4. Increased plurality of providers (private providers and HE/FE)
- 5. Pressure to innovate in terms of business models, with greater focus on efficiencies and value for money
- 6. New types of providers



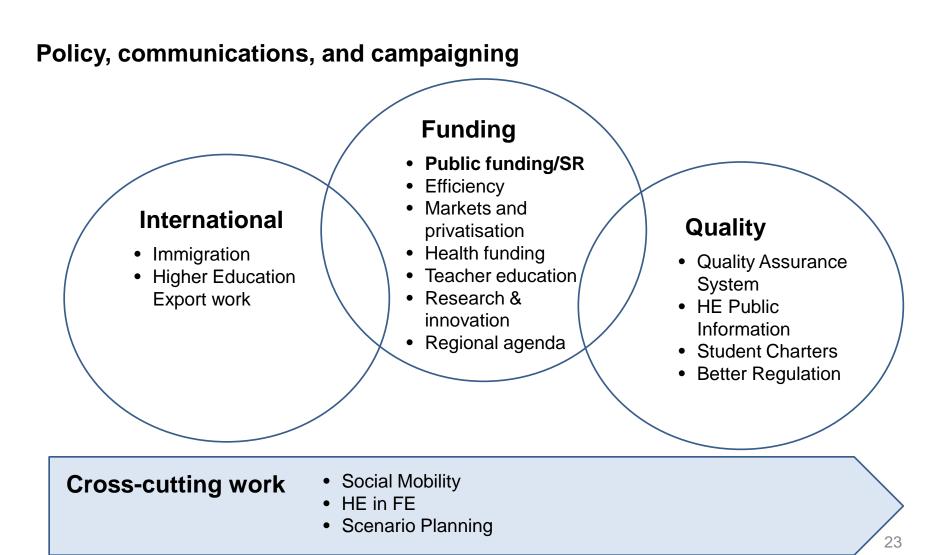
UUK response

UUK Strategic Plan 2010-2013

- 5 Strategic Aims:
- 1. To support and enhance the strength and success of universities in the UK
- 2. To promote the international competitiveness of UK universities
- 3. To inform and shape the future agenda for higher education
- 4. To provide high quality services to members
- 5. To be an effective and responsive organisation



UUK response





Questions

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UK higher education, internationalisation and South East Asia



Andy Heath Policy Officer for Asia UK Higher Education International Unit

October 2012

UK Higher Education International Unit



Mission

To represent the UK higher education sector internationally and to empower, with skills and knowledge, the sector to secure maximum value from international opportunities.



MISSION / VISION

Strategic priorities

Priority One

Build capacity of UK HE sector to capture international opportunities

Priority Two

Shape international and European policy

Priority Three

Represent UK higher education internationally

Priority Four

Provide market intelligence to the UK HE sector to help them identify opportunities

THROUGH PARTNERSHIPS AND COMMUNICATIONS

Key objectives

 Enhance transnational education
 Facilitate engagement and relationships/exchanges with key markets
 Build expertise and promote best practice
 Maximise relationships with key organisations

 Develop a national mobility strategy
 Inform the development of UK HE international policy
 Prioritise engagement with key international HE sectors

 Influence European Union decision-makers

 Promote and increase the UK's involvement and expertise in the ongoing developments in EU policy
 Share knowledge within the sector Increase the profile and representation of UK HE internationally
Promote the strength and diversity of UK HE
Develop and foster international networks
Provide a strong UK voice in Europe Support, enhance and develop the capacity of the UK HE sector
Identify and promote opportunities to UK HEIs
Enhance the knowledge and awareness of key priority countries
Excellence in communication

UK's international performance

- UK universities have a world-wide reputation for excellence
- 2nd only to the US attracting international students
- Number of international students in UK higher education more than doubled in past 10 years

international

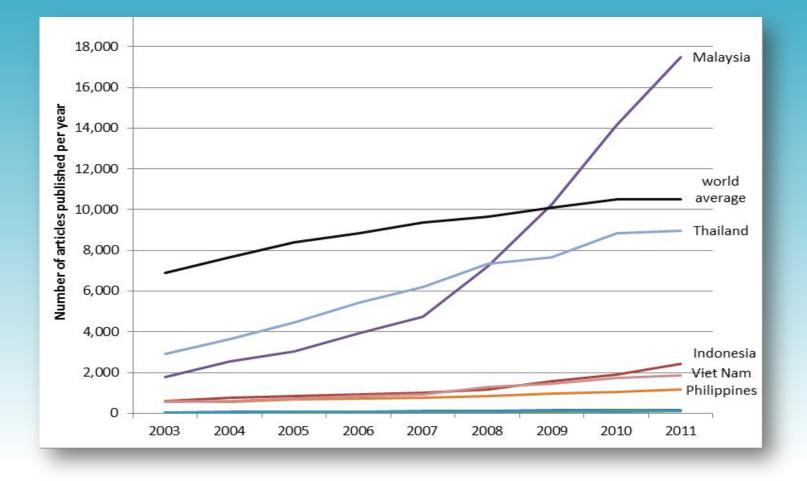
unit

• International research collaboration

ASEAN scientific output

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Global opportunities for UK higher education international unit

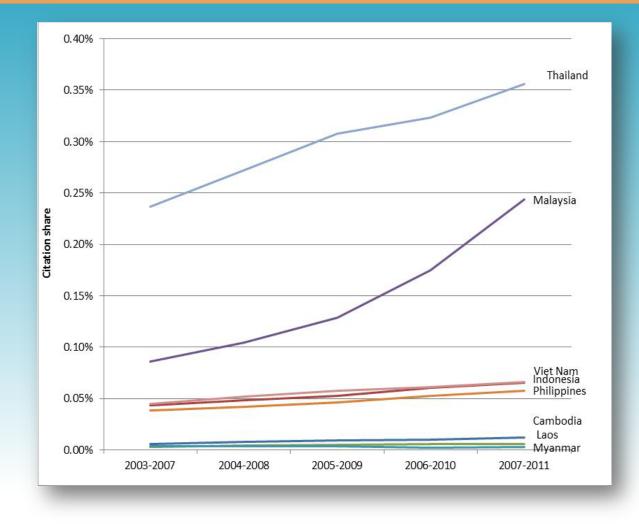


Data from SciVal Content & Analytics; Dr Janet Ilieva, British Council

ASEAN citation share

Global opportunities for UK higher education

international unit



Data from SciVal Content & Analytics; Dr Janet Ilieva, British Council

Three levels of research systems



High output	Medium output	Low output
Malaysia	Indonesia	Cambodia
Thailand	Vietnam	Laos
Singapore	Philippines	Myanmar

Are internationally-authored articles more highly cited?

	Nationally-authored	Internationally-authored
Thailand	1.0	2.2
Malaysia	1.0	1.9
Indonesia	1.0	6.0
Vietnam	1.0	2.9
Philippines	1.0	4.9
Laos	1.0	1.9
Cambodia	1.0	0.8
Myanmar	1.0	2.8

Global opportunities for UK higher education

international

unit

Data from SciVal Content & Analytics; Dr Janet Ilieva, British Council

Why does internationalisation lead to better research?



Seeking Excellence

- Scientists seek to work with the most outstanding scientists in their field
- Collaboration brings with it the benefit of scale

Capacity-building

Collaboration enables access to facilities, funding equipment and networks

International collaboration is becoming the norm



Global trend is towards multilateral, international research

- Just 26% of papers are the product of one institution alone
- Over 35% of papers are international

Regional collaboration an emerging trend

- Driven by regional research strategies
 - ASEAN
 - EU
 - African Union

How to promote international collaboration



- 1. Funding for internationally collaborative projects
- 2. Student and academic mobility
- 3. Joint degrees, split-site PhDs
- 4. Research centres

1. Funding for internationally collaborative projects



UK-ASEAN Knowledge Partnership

- A new project from the UK government
- Funding from UK and ASEAN governments, private sector and HEI partners
- One main 'pillar': encouraging development of research capacity and collaboration
- Project still being designed.

2. Student and academic mobility



UK-Indonesia Dikti Scholarship scheme

- The International Unit has proposed a sector-wide PhD scholarship scheme with DIKTI
- We want **150** Indonesian scholars a year come to the UK's world-class universities
- Indonesian lecturers up-skill to PhD level building capacity of Indonesian universities
- Creates long lasting links which will lead to joint research

3. Joint degrees and split-site PhD programmes



Imperial College London and Singapore

- Imperial runs two split-site PhD programmes with National University of Singapore and Nanyang Technological University
- 3 or 4-year programmes which results in a joint award conferred by both institutions.
- Split-site PhDs act as a catalyst for collaborative research/international partnerships

4. Research institutes

Global opportunities for UK higher education international unit

Fudan Tyndall Centre

- Collaboration of UEA, Fudan University and 7 UK universities
- Harnesses partners' various strengths in climate change research
- Physical hub for researchers as each partner university

The European context



- The 'Europe 2020' strategy follows on from the Lisbon Strategy (2000-2010) that set out to create "the most competitive and dynamic knowledge-based economy' in the world
- 3% of the EU's GDP should be invested in R&D by 2020
- The share of early school leavers should be under 10% and at least 40% of the population aged 30-34 should have completed tertiary or equivalent education

Next generation of EU HE and research programmes



- New budgetary cycle: 2014-2020
- Rationalising, simplifying, connecting
- Focus on added value of European level
- Europe in international context

Horizon 2020: key strands



- Excellent Science (€24.6 billion)
 - 77% increase for ERC;
 - Special attention to Future and Emerging Technologies (FETs);
 - International co-operation encouraged
- Societal Concerns (€31. 7 billion)
 - Health, demographic change and wellbeing;
 - Food security, sustainable agriculture and bio-economy;
 - Secure, clean and efficient energy;
 - Smart, green and integrated transport;
 - Climate action, resource efficiency and raw materials;
 - Inclusive, innovative and secure societies.
- Industrial Leadership (€17.9 billion)





Engagement with South East Asian organisations

- ASEAN University Network
- SEAMEO-RHID

Secure maximum participation in UK-ASEAN Knowledge Partnership programme

Sector-wide scholarship schemes with other ASEAN countries?



Thank you



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