

Science & Research Funding : Impact and the REF

HEPI

22nd November 2011

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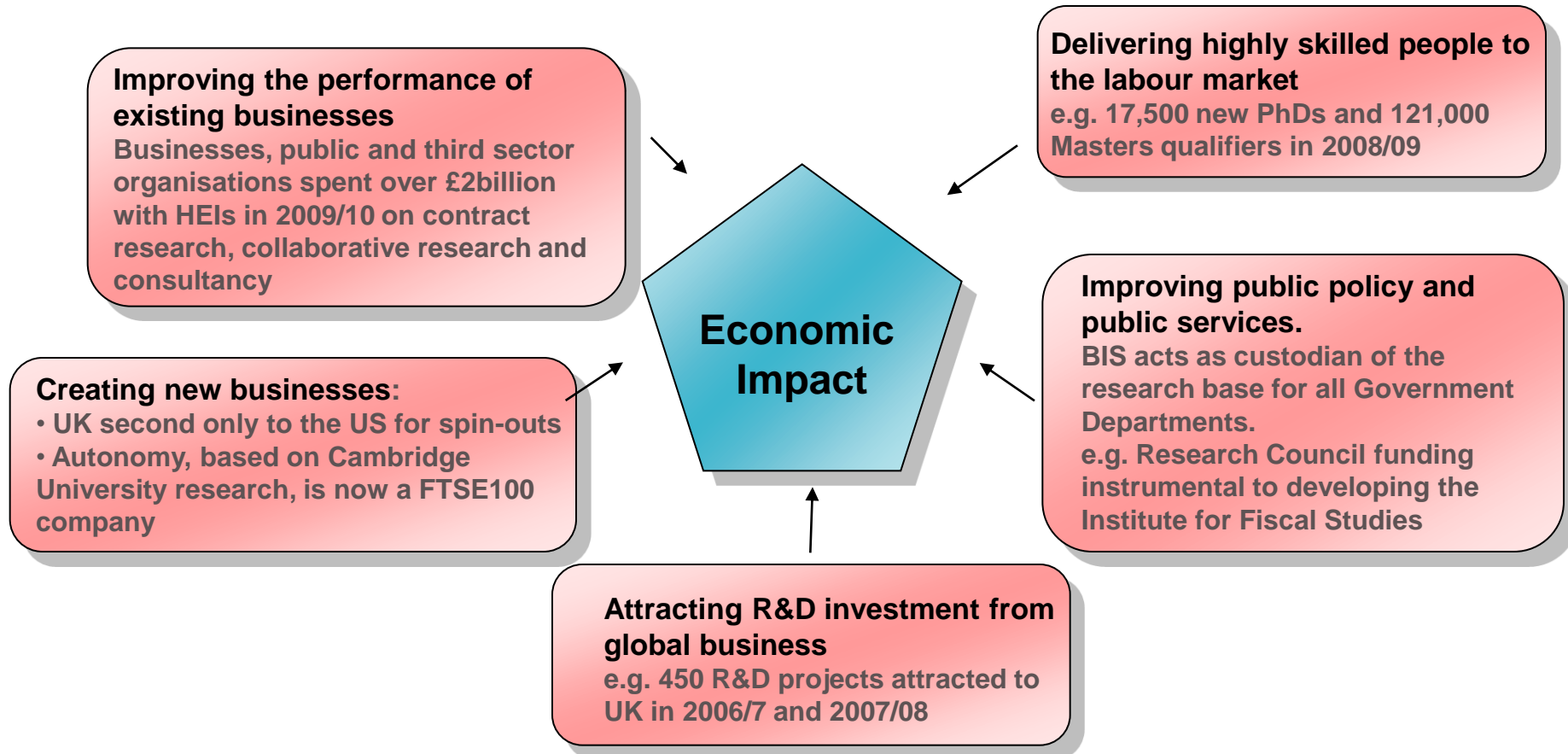
Science and Research Funding 2011/12 to 2014/15

“When money is short, we should ruthlessly prioritise those areas of public spending that are the most likely to support economic growth, including investments in our science base and the skills and education of our citizens.”



Chancellor of the Exchequer, House of Commons, 20 October 2010

Why does Government fund Science and Research?



- UK's HEIs are world class – with more Universities near the top of international rankings than any country other than the USA
- HEIs strongly independent and autonomous organisations, with interests and perspectives which are often national or international.
- UK's research base is excellent - second in the world only to the USA for number of citations, and it is the most productive country for research in the G8 in citations and publications per pound.^[1]
- With 1% world population UK produces 6.9% of world publications, receive 10.9% of citations and 13.8% of citations with highest impact.
- University income from external sources - engagement with business and community - is at an unprecedented level, and has more than doubled in real terms since 2001 to an unprecedented £3bn^[2]

^[1] International Comparative Performance of the UK Research Base, October 2011

^[2] Higher Education Business and Community Interaction Survey <http://www.hefce.ac.uk/econsoc/buscom/hebci/>

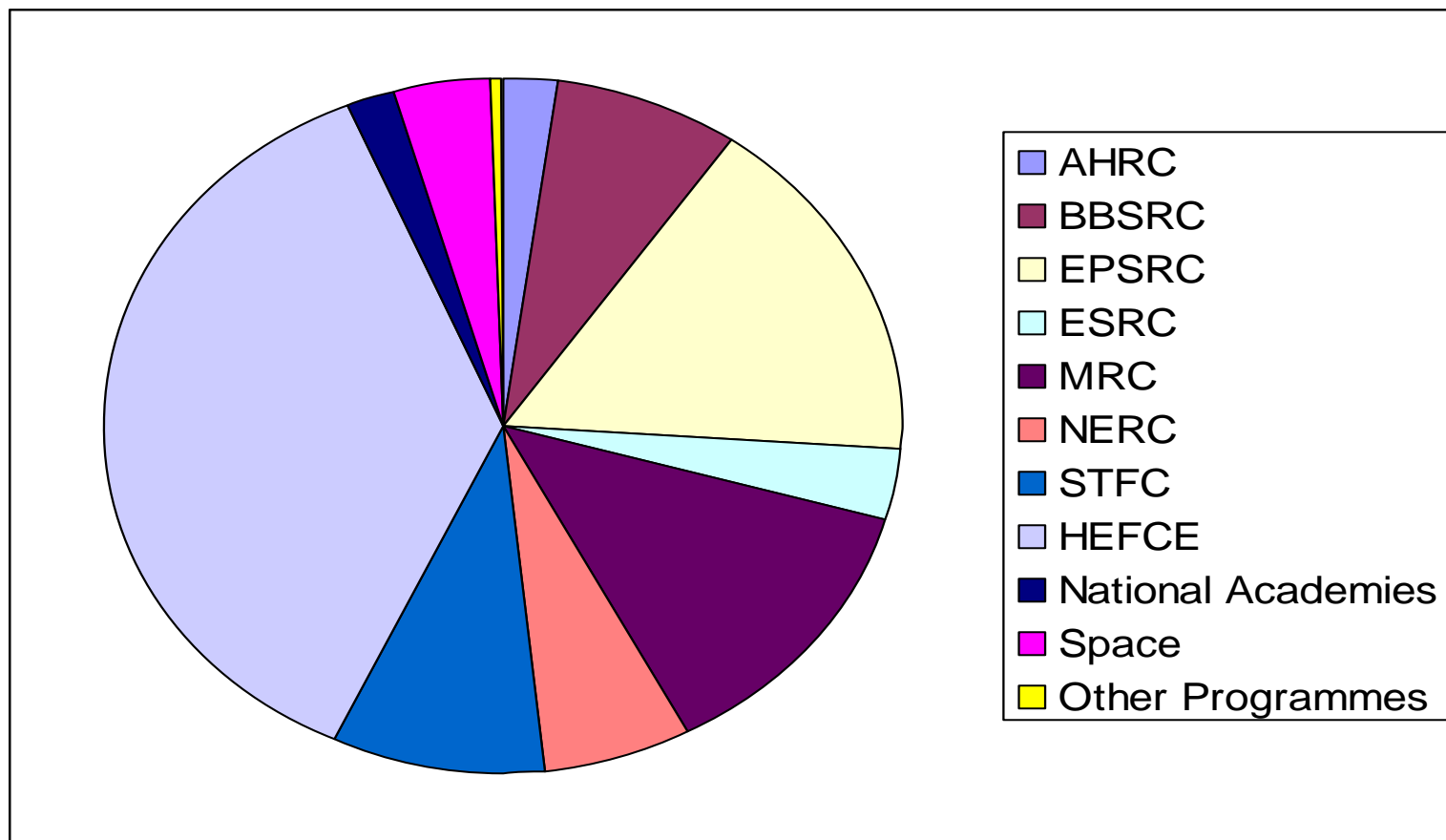
Our Objective - to deliver and maintain a UK research base which is :

- excellent across a broad span of disciplines
- flexible, responsive and dynamic
- financially and intellectually sustainable
- and has a high impact on the economy and society

This is enabled by:

- **Dual Support** for HEIs:
 - Project funding from Research Councils
 - Institutional funding from Funding Councils (Quality-Related research funding ‘QR’)
- Funding for national research institutes by Research Councils with ‘core’ and ‘project’ funding

Science and research programme funding (£4.6bn)

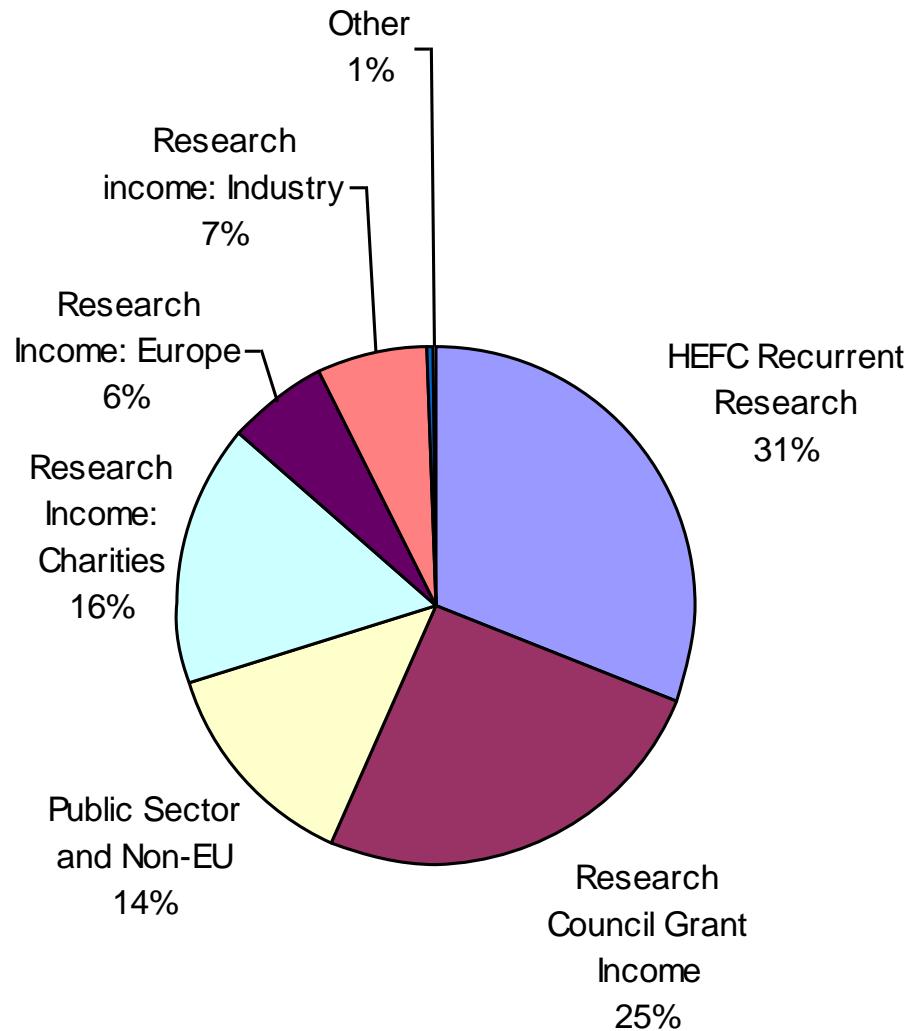


Outputs



- Knowledge
- Economic Return
- Skilled People

Where does university research funding come from?



Breakdown of Total HEI Research Income (2010)

Source	Income (£'000s)
HEFC Recurrent Research Income	1,974,548
Research Council Grant Income	1,585,357
Public Sector and Non-EU	872,530
Research Income: Charities	1,022,942
Research Income: Europe	399,798
Research income: Industry	422,575
Other	42,219

Research Council Project funding to HEIs :

- Allows strategic research priorities to be set, taking account of wider societal benefits,
- Is used to encourage larger, multidisciplinary projects
- Allocates adequate resources to each project
- Funds only the very best projects
- Provides unsuccessful applicants with constructive feedback
- Provides access to the best facilities here and abroad
- Allows direct costs of projects to be scrutinised

Institutional funding to HEIs provides the system with:

- Support for institutions to have the ability to:
 - Invest strategically in - and maintain - their research capacity
 - Plan ahead and develop excellence between project funding
 - Innovate to achieve results
 - Explore fields and projects before they are ready for project grants
 - Leverage in funding and competitively price commissioned research
 - Provide capacity to pursue research projects where funders cannot meet full economic costs – e.g. charities, business
 - Prepare applications and business cases for project and other funding

- Breadth to be ready to respond to emerging priorities

Funding incentive structure awards past achievement, and has a strong influence on institutional leaders' behaviour as it goes to them

The institutional assessment system:

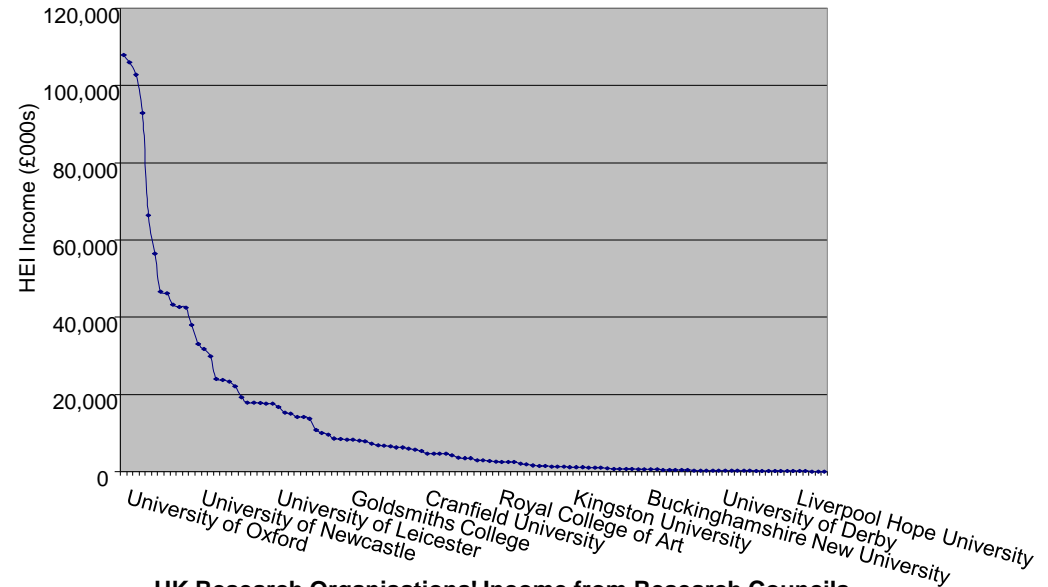
- Influences international perceptions
- Incentivises for long term leadership

Research Councils also support national research infrastructure

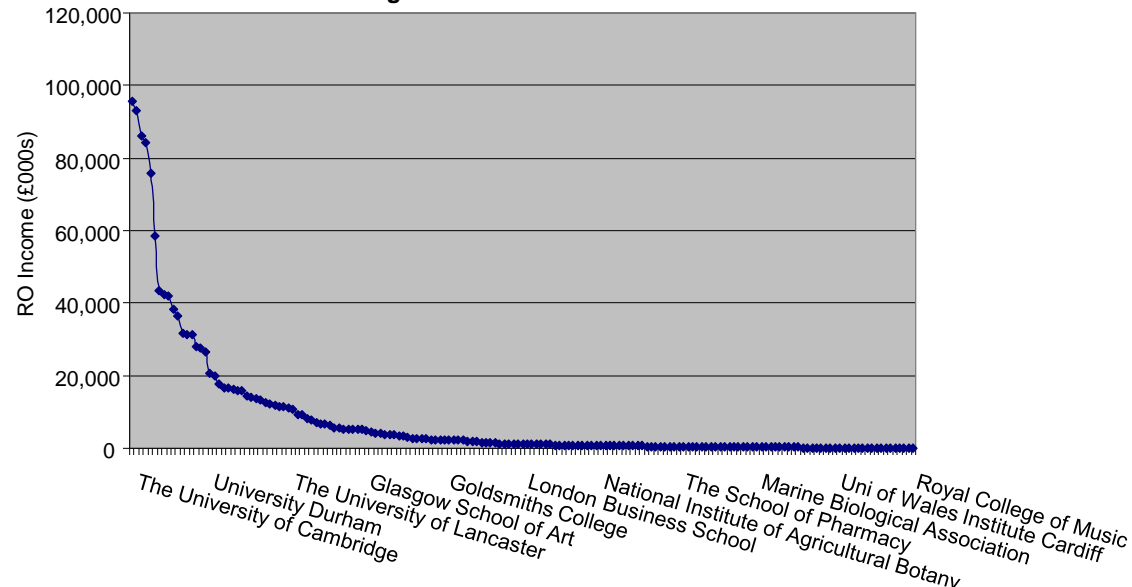
- Access to international science organisations, providing facilities on a scale that would be uneconomic for the UK to provide alone
- Specialist centres of excellence, where there is a national need for that capability, often in partnership with HEIs
- Large scale operations beyond the scope of an individual HEI, for example:
 - Large scale facilities, e.g. Diamond Light Source
 - Long term monitoring, e.g. health, environment, security

- The two halves of the Dual Support System allocate money differently- Research Councils to prospective **projects** and HEFCE to **departments** based on retrospective assessment
- Each stream provides different incentives and dynamics, but **both** focus on **excellent research** and are highly concentrated on the strongest institutions

English HEI Income from HEFCE QR (2008/9)

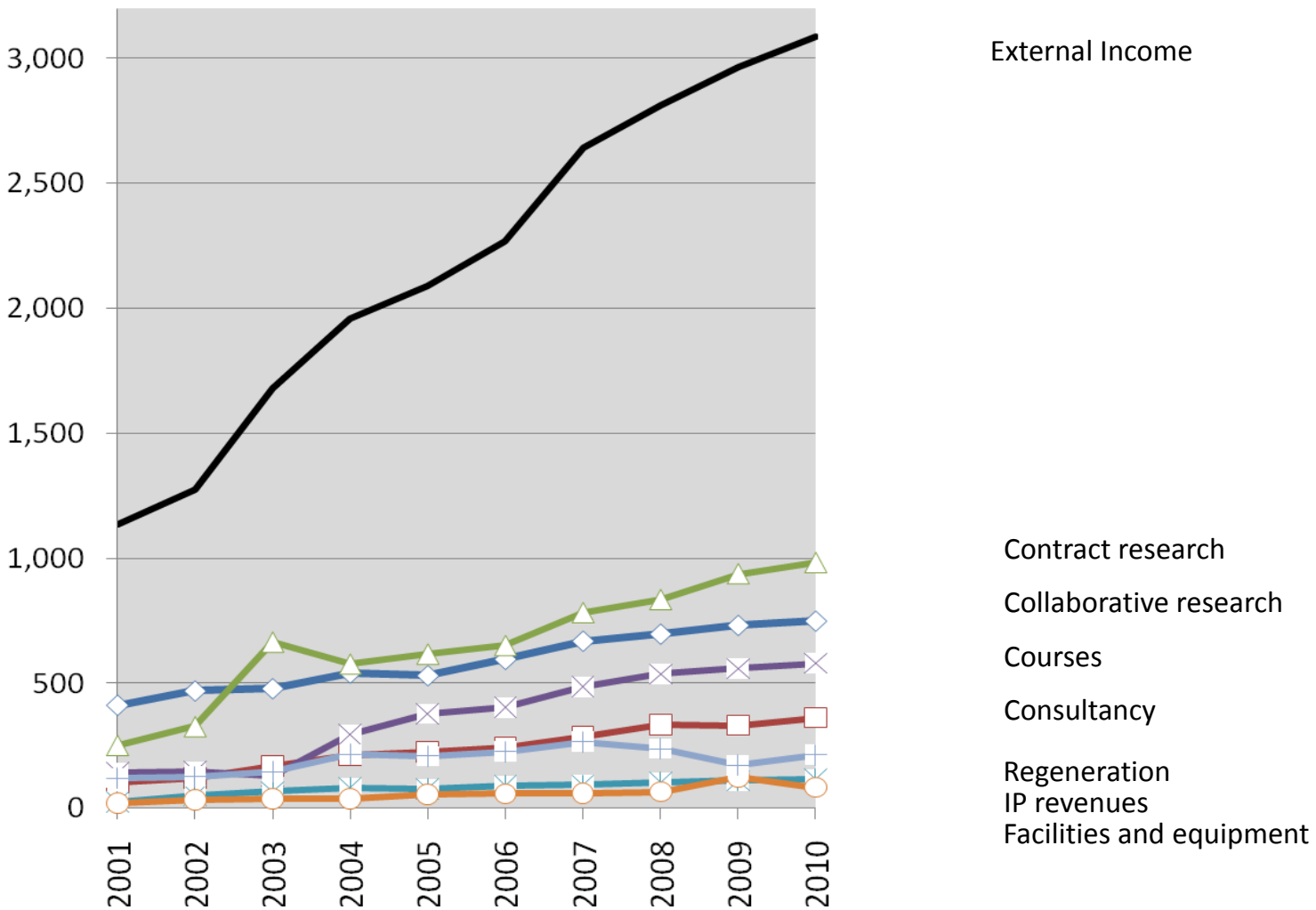


UK Research Organisations' Income from Research Councils



Universities working with business

A period of growing government funding for universities has also seen universities do increasingly well at business interaction and attracting external income. Last year universities secured over £3bn from external sources.



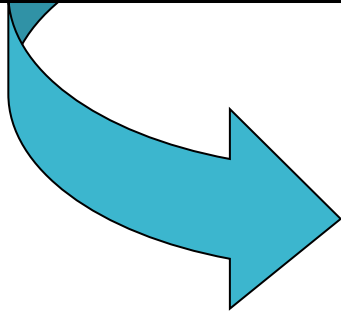
Sources: HEBCI surveys, PACEC/CBR analysis

The overarching definition of economic impact is given in HMT's Green Book,

- “An action or activity has an economic impact when it affects the welfare of consumers, the profits of firms and/or the revenue of government”. Economic impacts range from those that are readily quantifiable, in terms of greater wealth, cheaper prices and more revenue, to those less easily quantifiable, such as effects on the environment, public health and quality of life.*

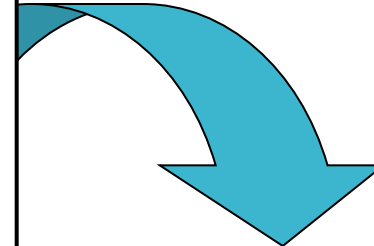
Past

Research Excellence Framework (REF) will **recognise universities'** impacts from excellent research.



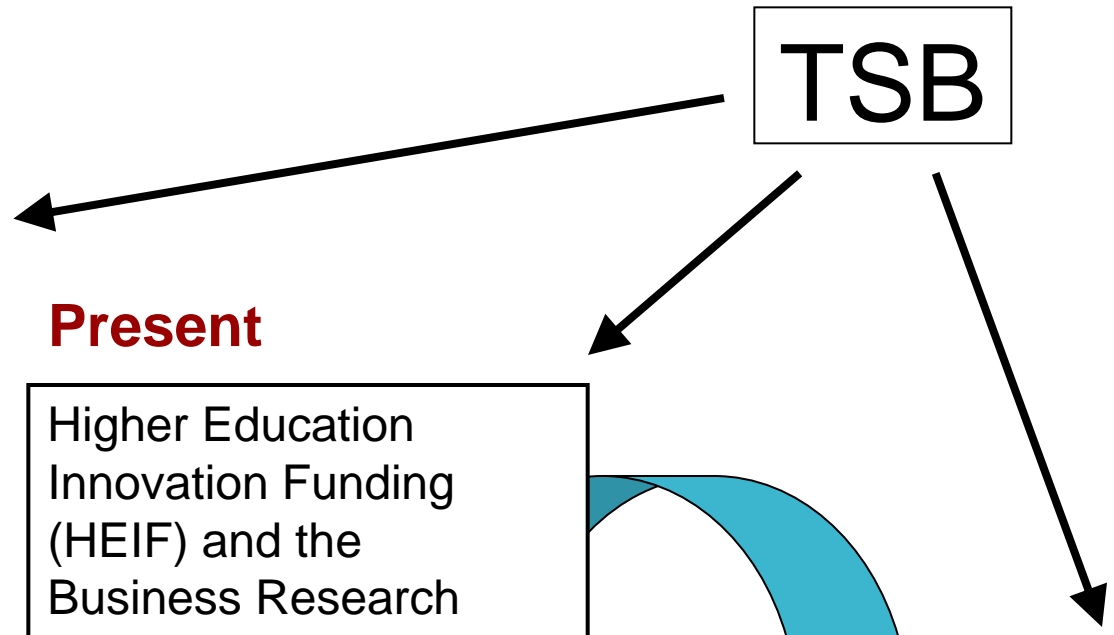
Present

Higher Education Innovation Funding (HEIF) and the Business Research element of QR **support universities' current capacity to work with business.**



Future

Research Councils' Pathways to Impact encourage researchers to consider **potential beneficiaries and the future pathways towards impact**



Science & Research funding Allocations objective :

“To protect national capability and international competitiveness and to maximise the economic and social benefits of research”

- Maintain a strong and innovative national research base, which is essential to support national prosperity in a globalised knowledge based economy
- Strengthen links between undertaking research and developing new products and services
- Develop and sustain a dynamic and internationally competitive research sector that makes a major contribution to economic prosperity, national wellbeing and the expansion and dissemination of knowledge.