



Impact and Universities

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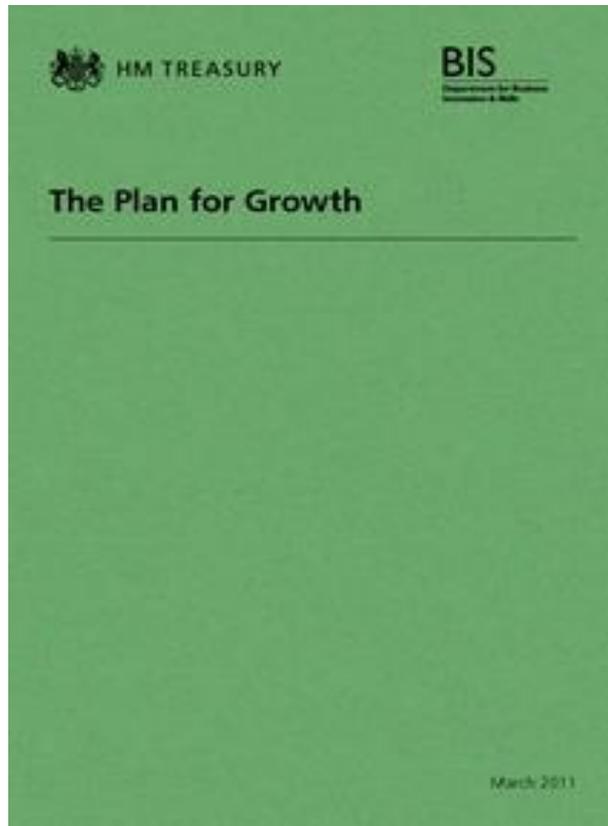
The Royal Society

‘No-one can predict the 21st century counterparts of quantum theory, the double helix and the internet. But there is little doubt that advances in science and technology will continue to transform the way we live, create new industries and jobs, and enable us to tackle seemingly intractable social and environmental problems.’

The British Academy

‘The quest for a better, deeper, more valuable life has always been at the heart of the Humanities and Social Science. They seek to illuminate the human condition and explain how economies, cultures and societies function. In addition to the intrinsic value of this quest, the insights it generates can guide – and promote – reasoned political and public discourse, by bringing fresh knowledge and ideas to the fore.’

The government's Plan for Growth



‘The overriding priority of this government is to return the UK economy to balanced, sustainable growth...that is more evenly shared across the country and between industries.’

‘Higher education is central to growth and the UK has one of the most successful higher education systems in the world.’

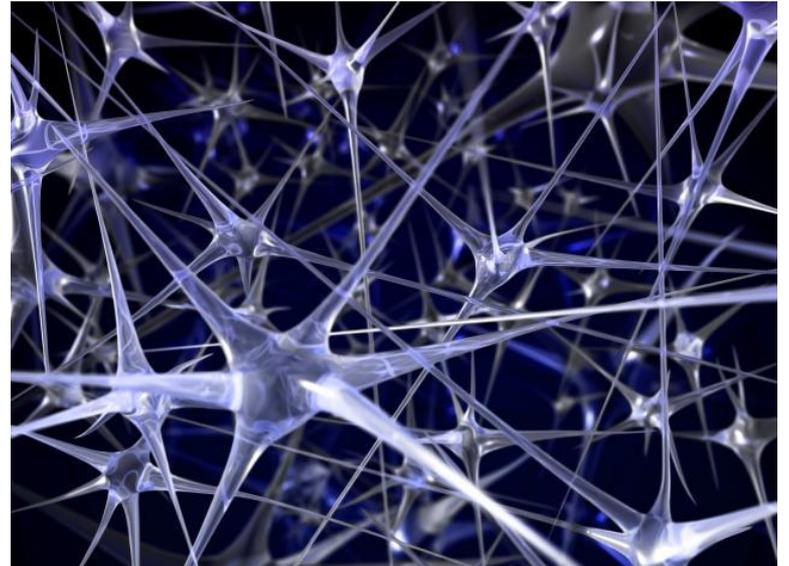
Working in context of Government policies

The Government's Plan for Growth

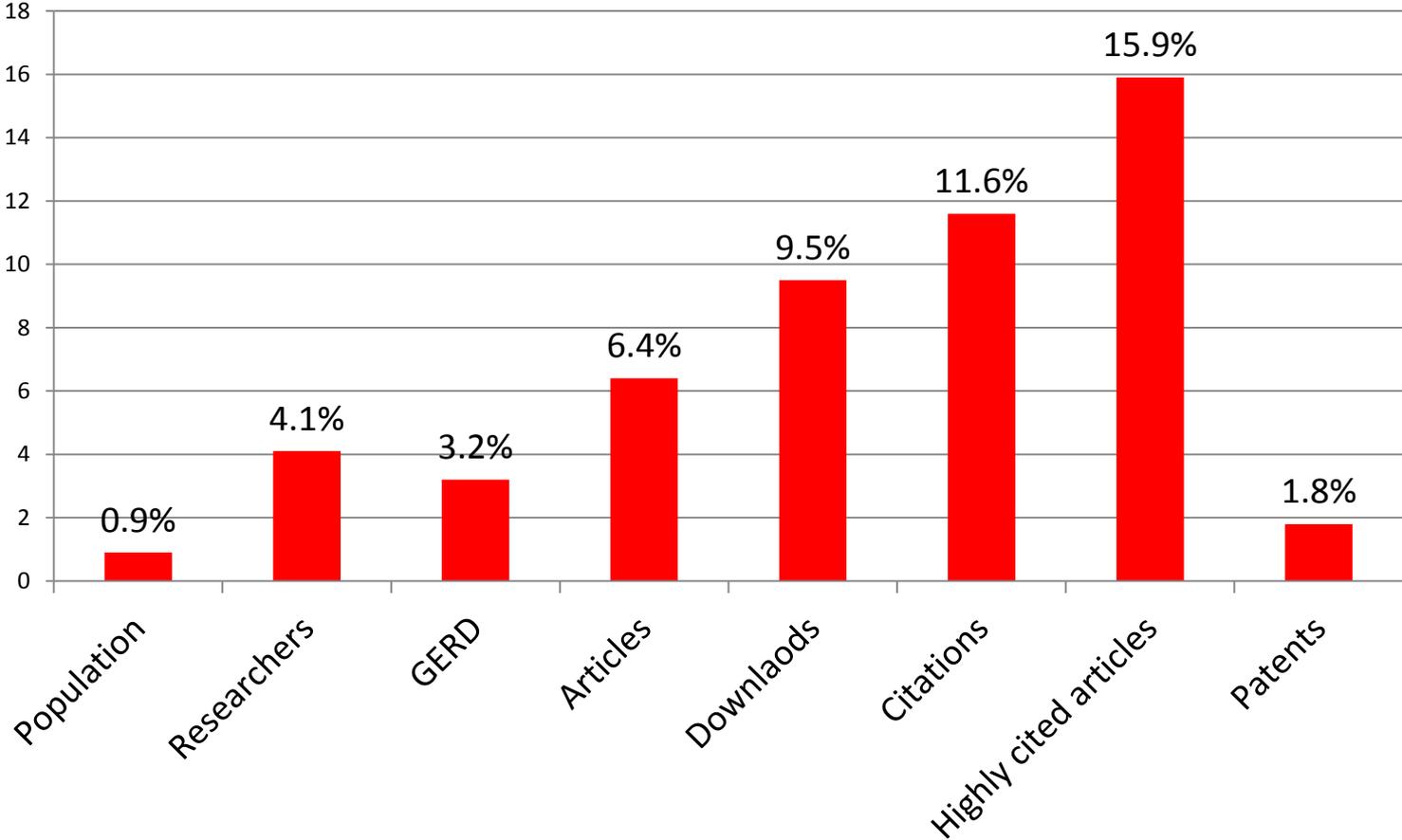
- to make the UK the best place in Europe to start, finance and grow a business
- to encourage investment and exports as a route to a more balanced economy
- to create a more educated workforce that is the most flexible in Europe
- [and to create the most competitive tax system in the G20]

National Objectives (1)

- Intellectual leadership in the development of new knowledge
 - ‘International Comparative Performance of the UK Research Base’– ‘better than world average in all subject fields based on field-weighted citation impacts
 - ‘Well-rounded portfolio’



UK research – Punching beyond its weight



World shares data derived from Elsevier - International Comparative Performance of the UK Research Base – 2013

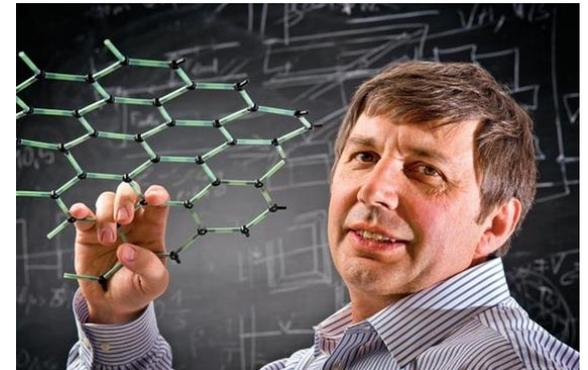
National Objectives (2)

- Optimal Contribution to Society from that new knowledge – ‘Impact’ and Innovation
 - Culture change & broad engagement of universities/academics
 - Greater investment from business, not just to capture cash but to support shared objectives
- ‘when do we want it?’ – Now, of course, but recognizing that is based on past investment.



National Objectives (3)

- Develop highly-skilled individuals who will take forward the challenge of developing and applying new knowledge

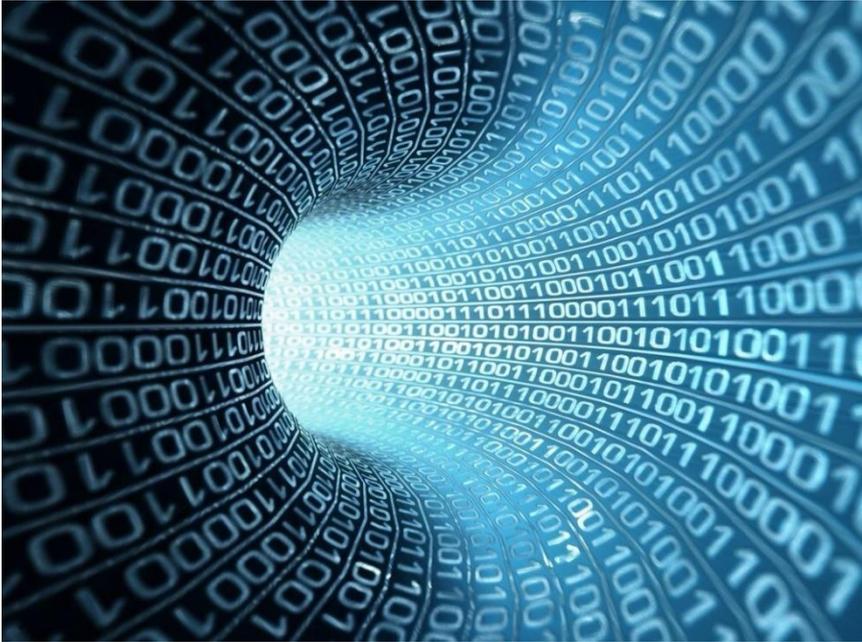


Industrial strategy

- Automotive
- Aerospace
- Life sciences
- Higher education
- Professional business services
- Energy
- Construction



Key general-purpose technologies



- Big data
- Space
- Robotics and autonomous systems
- Synthetic biology
- Regenerative medicine
- Agri-science
- Advanced materials
- Energy

How it works

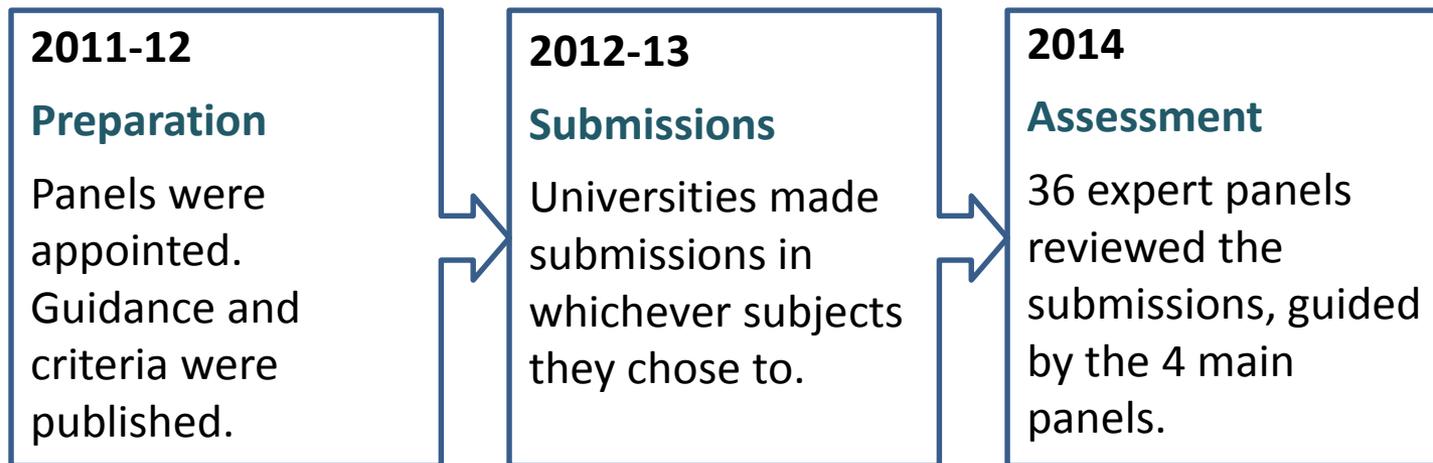
REF assesses the quality of research in all UK universities, in all disciplines. It is carried out by 36 expert panels, grouped into 4 main panels.

Main Panel A: **Medical and life sciences**

Main Panel B: **Physical sciences and engineering**

Main panel C: **Social sciences**

Main Panel D: **Arts and humanities**



What was assessed

Panels judged the **overall quality** of each submission

65%

Quality of research
outputs

191,150 research
outputs by **52,061**
staff were reviewed

20%

Impact of research
on society

6,975 impact case
studies were
reviewed

15%

The research
environment

The review was
based on data and
information about
the environment



They made **1,911** submissions including:

- **52,061** academic staff
- **191,150** research outputs
- **6,975** impact case studies

The **overall quality** of submissions was judged, on average to be:

★★★★★ **30%** world-leading (4*)

★★★☆☆ **46%** internationally excellent (3*)

★★☆☆☆ **20%** recognised internationally (2*)

★☆☆☆☆ **3%** recognised nationally (1*)



Assessing quality – ‘Impact Agenda’

To identify and reward the contribution that high quality research has made to the economy and society:

- Making these explicit to the Government and wider society
- Creating a level playing field between applied and theoretical work but recognising only impact based on excellent research
- Encouraging institutions to achieve the full potential contribution of their research in future
- Intellectually coherent with the historical purposes of universities

Impact: Definition for the REF

- An effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia
- Impact **includes** an effect, change or benefit to:
 - The activity, attitude, awareness, behaviour, capacity, opportunity, performance, policy, practice, process or understanding
 - Of an audience, beneficiary, community, constituency, organisation or individuals
 - In any geographic location whether locally, regionally, nationally or internationally
- It **excludes** impacts on research or the advancement of academic knowledge within HE; and impacts on teaching or other activities within the submitting HEI

Challenges of assessment

- **Time lags** – we will look at impacts that are evident during from REF period (2008-2012), underpinned by research over a longer timeframe
- **Attribution** – case studies to tease out how the research *contributed* to the impacts
- **Limitations of metrics** – expert panels will *assess* rather than *measure* impact; indicators to be used as supporting evidence
- **Corroboration** – scope for third party verification, and expert panels to judge credibility of the evidence

Assessment criteria

- Expert panels to assess benefit in terms of their 'reach' and 'significance'
- All panels to include substantial user representation – we suggest user members focus on the impact element, with reviewing outputs as 'optional'
- Impact pilot exercise to test and develop the proposals further
- Comments from consultation events feed into pilot

Culture and society

A Impacts on society, culture and creativity:

Impacts where the beneficiaries are individuals, groups of individuals, organisations or communities whose knowledge, behaviours or practices have been influenced

B Impacts on society, culture and creativity

Impacts where the beneficiaries may include individuals, groups of individuals, organisations or communities whose knowledge, behaviours, creative practices and other activity have been influenced

C Impacts on creativity, culture and society:

Impacts where the beneficiaries are individuals, groups of individuals, organisations or communities whose knowledge, behaviours, practices, rights or duties have been influenced

D Civil society

Influencing the form and content of associations between people or groups to illuminate and challenge cultural values and social assumptions.

D Public discourse

Extending the range and improving the quality of evidence, argument and expression to enhance public understanding of the major issues and challenges faced by individuals and society.

D Cultural life Creating and interpreting cultural capital in all of its forms to enrich and expand the lives, imaginations and sensibilities of individuals and groups.

Economic and commercial

A Commercial impacts:

Impacts where the beneficiaries are usually companies, either new or established, or other types of organisation which undertake activity that creates wealth

A Economic impacts:

Impacts where the beneficiaries are usually the NHS or private health care or agricultural activity

C Economic, commercial, organisational impacts:

Impacts where the beneficiaries may include new or established businesses, or other types of organisation undertaking activities which create wealth

B Economic impacts

Impacts where the beneficiaries may include businesses, either new or established, or other types of organisation which undertake activity that may create wealth

D Economic prosperity Applying and transferring the insights and knowledge gained from research to create wealth in the manufacturing, service, creative and cultural sectors.

Health and welfare

A Health and welfare impacts:

Impacts where the beneficiaries are individuals and groups (both human and animals) whose quality of life has been enhanced (or potential harm mitigated)

B Health impacts

Impacts where the beneficiaries may include individuals (including groups of individuals) whose health outcomes have been improved or whose quality of life has been enhanced (or potential harm mitigated) through the application of enhanced healthcare for individuals or public health activities

C Health and welfare impacts:

Impacts where the beneficiaries are individuals and groups (human or animal) whose quality of life has been enhanced (or harm mitigated) or whose rights or interests have been protected or advocated

Public policy and services

C Impacts on public policy, law and services: Impacts where the beneficiaries are usually government, public sector and charity organisations and societies, either as a whole or groups of individuals in society through the implementation or non-implementation of policies, systems or reforms

D Education Influencing the form or the content of the education of any age group in any part of the world where they extend significantly beyond the submitting HEI.

D Public services Contributing to the development and delivery of public services or legislation to support the welfare, education, understanding or empowerment of diverse individuals and groups in society, including the disadvantaged or marginalised.

A Impacts on public policy and services: Impacts where the beneficiaries are usually government, public sector, and charity organisations and societies, either as a whole or groups of individuals in society, through the implementation of policies

B Impacts on public policy and services Impacts where the beneficiaries may include government, non-governmental organisations (NGOs), charities and public sector organisations and society, either as a whole or groups of individuals in society

D Policy making Influencing policy debate and practice through informed interventions relating to any aspect of human or animal well-being

Environment

A Impacts on the environment:

Impacts where the key beneficiary is the natural or built environment

B Impacts on the environment

Impacts where the key beneficiaries are the natural environment and/or the built environment, together with societies, individuals or groups of individuals who benefit as a result

C Impacts on the environment:

Impacts where the key beneficiaries are the natural, historic and/or built environment, together with societies, individuals or groups of individuals who benefit as a result

Practitioners and services

A Impacts on practitioners and services:

Impacts where beneficiaries are organisations or individuals, including service users involved in the development of and delivery of professional services

B Impacts on practitioners and professional services

Impacts where beneficiaries may include organisations or individuals involved in the development of and delivery of professional services

A Production impacts:

Impacts where the beneficiaries are individuals (including groups of individuals) whose production has been enhanced

C Impacts on practitioners and professional services:

Impacts where the beneficiaries may include organisations or individuals involved in the development and/or delivery of professional services and ethics

Impact: Case studies (REF3b)

- In each case study, the impact described must:
 - Meet the REF definition of impact
 - Have occurred between 1 Jan 2008 and 31 July 2013 (can be at any stage of maturity)
 - **Be underpinned by excellent research (at least 2* quality) produced by the submitting unit between 1 Jan 1993 to 31 Dec 2013**
- Submitted case studies need **not** be representative of activity across the unit: pick the strongest examples

Impact: Case studies (REF3b)

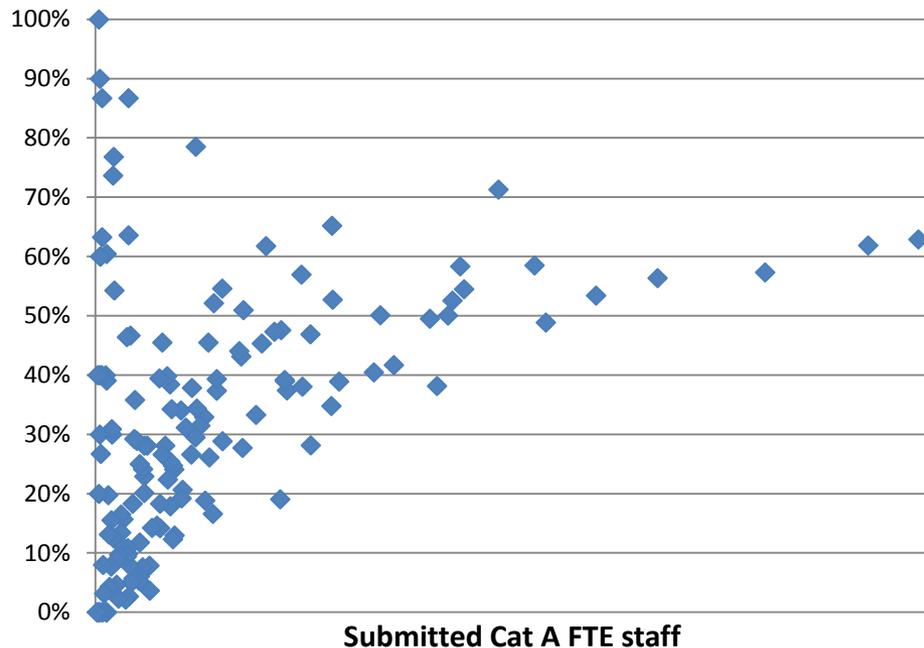
- Each case study is limited to 4 pages and must:
 - Describe the underpinning research produced by the submitting unit
 - Reference one or more key outputs and provide evidence of the quality of the research
 - Explain how the research made a ‘material and distinct’ contribution to the impact (there are many ways in which this may have taken place)
 - Explain and provide appropriate evidence of the nature and extent of the impact: Who / what was affected? How were they affected? When?
 - Provide independent sources that could be used to verify claims about the impact (on a sample audit basis)

For the first time, REF has demonstrated the impact of UK research in all subjects

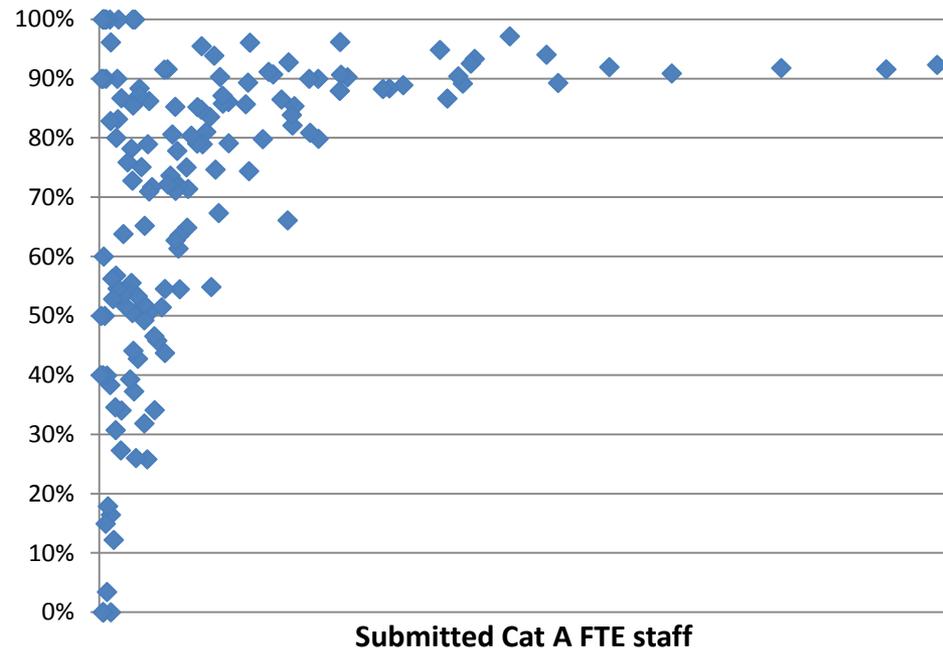
- Over 250 research users judged the impacts, jointly with academic panel members.
- **44%** of impacts were judged outstanding (4*). A further **40%** were judged very considerable (3*).
- Impressive impacts were found from research in all subjects.
- REF shows many ways in which research has fuelled economic prosperity, influenced public policy and services, enhanced communities and civic society, enriched cultural life, improved health and wellbeing, and tackled environmental challenges.

Impressive impact was found across institutions with submissions of all sizes

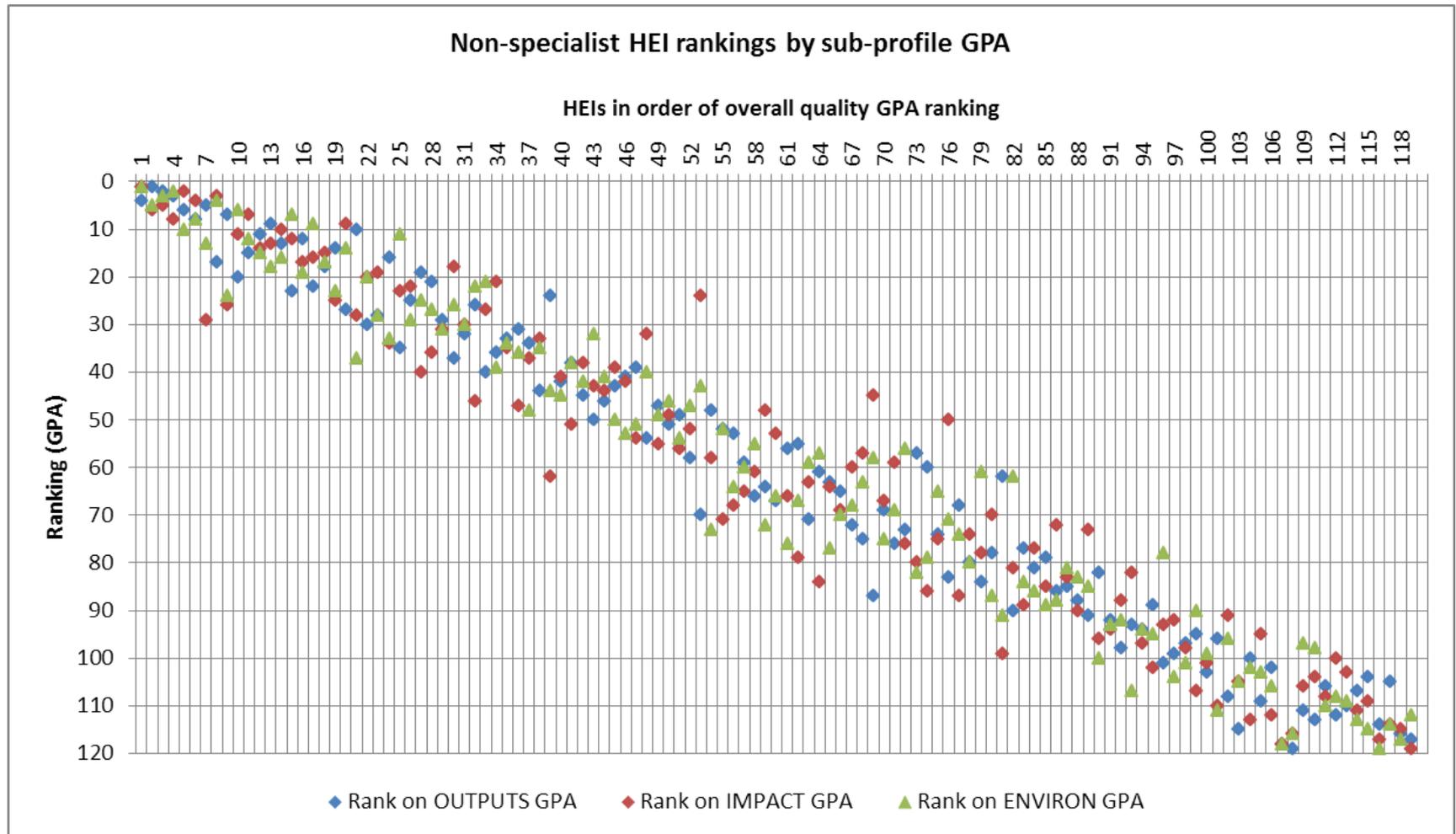
Impact: average 4* by institution



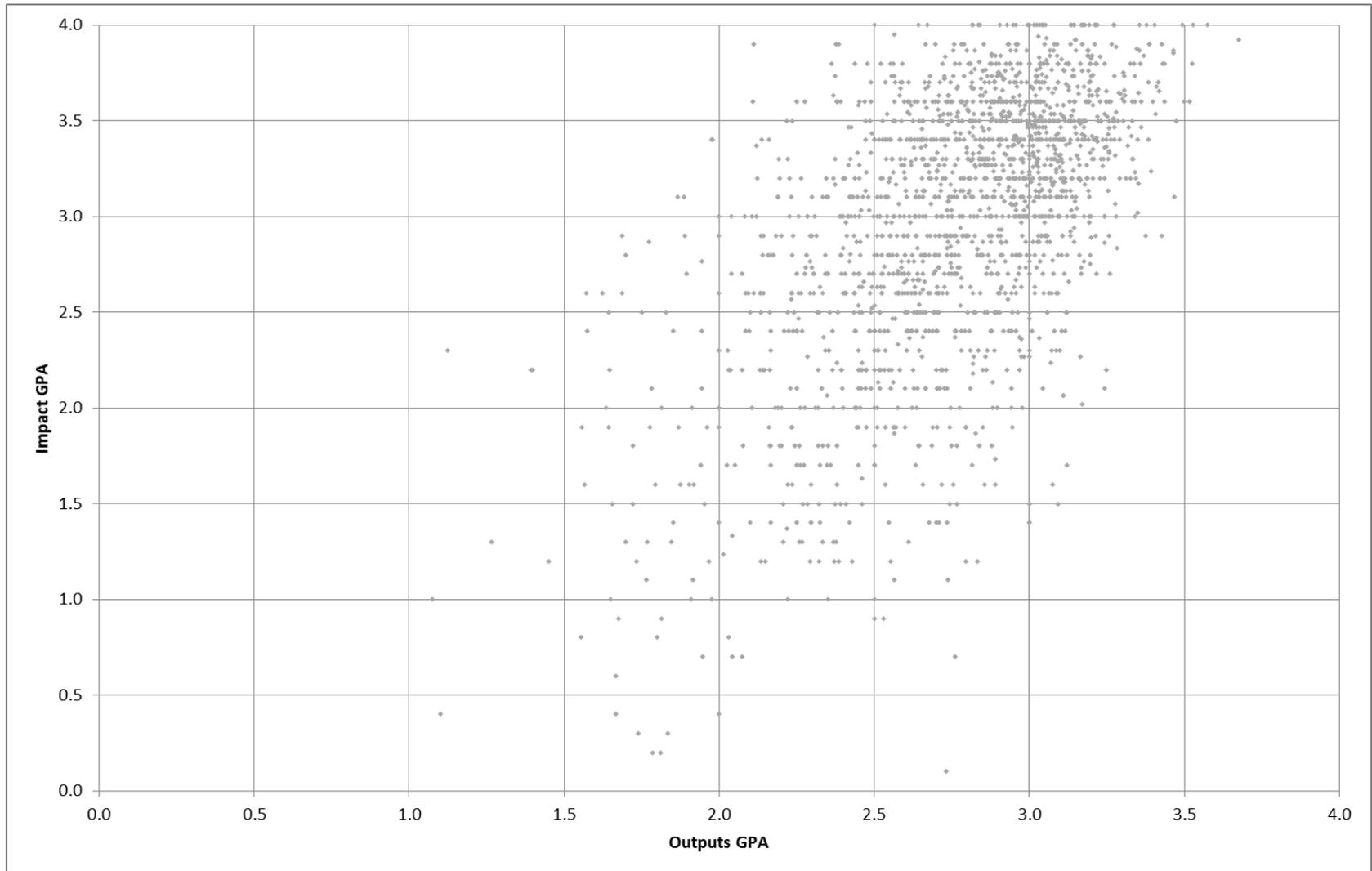
Impact: average 3*+4* by institution



Impact and other scores related, but not perfectly



Impact and other scores related, but not perfectly



Advances in gamma-ray detection and imaging: University of Southampton

- Research on design of technology for gamma-ray detection influencing new counter-terrorism practices
- Technological advances from research critical in fields of homeland security and nuclear safety
- Spin-out company from the research, Symetrica, recognised as example of best practice

Collaborative Strategic partnership with BorgWarner: University of Huddersfield

- Research into engine technologies resulted in a major new partnership with engineering multinational BorgWarner
- Collaboration involves multi-million-pound investment, as well as significant job creation and safeguarding
- Substantial contract with Jaguar Land Rover, furthering its R&D activities and upskilling its workforce for the benefit of the UK automotive supply chain and the local and national economy

Bringing recognition and improved welfare service provision to young adult carers: University of Nottingham

- First major piece of published research on young adult carers
- Led to recognition of a 'new' group of carers in policy and practice, and the development of two new psychometric instruments
- Raising awareness has resulted in provision of new services and support and further education provision for young adult carers across the UK

'Cold War Modern': the international impact of modern design on public understanding and curatorial practice: Royal College of Art

- A four-year research project exploring the impact of the cold war on modern art, architecture and design
- Provided new interpretations of the history of design in the second half of the 20th century for a wide public, international audience
- Impact in the fields of public and media understanding of post-Second World War cultural history and on the curatorial and collecting activities of museums around the world

World-leading research

- Impressive impacts were found from research in all subjects
- Importance of peer review in research
- Multi-disciplinary research and collaboration





Thank you for listening

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