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Changes to the UK Research Council Landscape and International Developments

Professor Philip Nelson, Engineering and Physical Sciences Research Council

Higher Education and Research Bill

The Higher Education and Research Bill received Royal Assent on 28th April

The creation of UK Research and Innovation (UKRI) to include the 7 Research Councils, Innovate UK and parts of HEFCE

- UKRI will be a single arms-length body with a single Chief Executive as Accounting Officer
- The current Research Councils will no longer exist in their current form and Royal Charters will be removed
- The White Paper restates the Government's commitment to the Haldane Principle and Dual support

Higher Education and Research Bill

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Department of Business, Energy and Industrial Strategy

UK Research and Innovation (UKRI)

IUK £547m	EPSRC £858m	MRC £616m	STFC £529m	BBSRC £422m	NERC £325m	ESRC £178m	AHRC £98m	QR £1686m

Sir John Kingman has been appointed as interim Chair of UKRI

Sir Mark Walport has been appointed as the first CEO of UKRI

UK Research and Innovation Strategic Objectives:

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- Be the **unified voice** for continued **strengthening** of the UK research and innovation system, nationally and **internationally**
- Lead on the development and delivery of a **coherent** national research and innovation strategy which **maximises economic and societal impact** based on more and better **evidence** and **data**
- Ensure better **prioritisation** of resources, especially for the best interdisciplinary and cross-cutting research, as well as longer term investment in research infrastructure
- Maximise the impact of Innovate UK in supporting **business-led innovation**
- Promote **stronger commercialisation**, business and policy links and wider societal engagement with publicly funded research
- Nurture and improve the **talent pipeline** for research and innovation
- Deliver a **simpler, well-functioning research and innovation ecosystem** which is easier to use and helps build collaborative partnerships between **end-users**, including universities, researchers, charities, communities, businesses, communities, NGOs and international organisations
- Deliver a step-change in **administrative efficiency**, including through combining corporate functions

Prime Minister at CBI Annual Conference 2016

"*Our strengths are clear. We are an open, competitive, trading economy.*

We compete with the best in autos, aerospace and advanced engineering. We are breaking new ground in life sciences and new fields like robotics, artificial intelligence, and quantum computing. We are leaders in global professional services from architecture to accountancy from law to consulting.

[Industrial Strategy is about] creating the conditions where winners can emerge and grow. It is about backing those winners all the way to encourage them to invest in the long-term future of Britain. And about delivering jobs and economic growth to every community and corner of the country."

*A new **Industrial Strategy Challenge Fund** will direct some of that investment to scientific research and the development of a number of priority technologies in particular, helping to address Britain's historic weakness on commercialisation and turning our world-leading research into long-term success.*"

Chancellor's Autumn Statement 2016

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"*Mr Speaker, we do not invest enough in research, development and innovation.*

As the pace of technology advances and competition from the rest of the world increases, we must build on our strengths in science and tech innovation to ensure the next generation of discoveries is made, developed and produced in Britain.

So today I can confirm the additional investment in R&D, ***rising to an extra £2 billion per year by 20-21****, announced by my Right Honourable Friend, the Prime Minister on Monday*."

Industrial Strategy Challenge Fund (ISCF)

- Initially delivered by Innovate UK and the Research Councils, this will be managed by UKRI once it is established
- Programmes delivered by the fund will be industry-led and powered by multi-disciplinary research and business-academic collaboration
- The Industrial Strategy Challenge Fund will:
  - Help the UK capitalise on its strengths
  - Support business led collaborations with coordinated research efforts
  - Identify challenges that may well cut across boundaries of research
  - Focus on areas with the potential to transform existing industries and create entirely new ones
- The fund is part of Government's long-term plan for research and innovation putting them at the heart of industrial strategy

ISCF challenge areas

Specific challenges being explored via engagement workshops:

- Bioscience and biotechnology;
- Leading edge healthcare and medicine;
- Manufacturing processes and materials of the future;
- New energy technologies including battery storage and grid technologies;
- Quantum technologies;
- Robotics and artificial intelligence (including driverless cars and drones);
- Satellites and space technologies; and
- Transformative digital technologies including supercomputing, advanced modelling, and 5G.

Additional themes being explored via engagement workshops:

- Integrated and Sustainable Cities
- Technologies for the Creative Industries

Global Challenges Research Fund

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2015 Government Spending Review

Address global challenges through disciplinary and interdisciplinary research

Strengthening capability for research and innovation, within both UK and developing countries

Agile response to emergencies and opportunities

Cutting edge research which addresses the problems faced by developing countries

Global Challenges Research Fund

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Delivery partners have £1.5billion of ODA funding to spend between 2016-2021

Focus is on:

- Challenge led / researcher driven
- Interdisciplinary research with impact
- Strengthening capacity

OECD
BETTER POLICIES FOR BETTER LIVES

Key Criteria

- ✓ Research Excellence
  new approaches not constrained by traditional methodologies or disciplinary silos
- ✓ Official Development Assistance (ODA) compliance
  OECD guidelines
- ✓ Equitable Partnerships and Building Capacity
  strong and enduring partnerships between UK and developing-country researchers to enhance the research and innovation capacity of both
- ✓ Impact: Problem and Solution Focused
  substantial impact on improved social welfare, economic development, and environmental sustainability

Global Challenges Research Fund

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- **Map of Beneficiary Countries – the relative size of the marker indicates the number of awards focussing on providing benefits to each Country**

Newton Fund

- **Launched in April 2014** for 5 years and £75M per year
- **2015 UK Spending review** agreed to **extend** and **expand** the Newton Fund
- **Extension** – Newton Fund extended from 2019 to 2021 and expanding to £150m per year by 2021.
- **Expansion** – £735M UK investment to 2021 with 16 partner countries providing matched resources within the Fund

The UK Delivery Partners:

British Academy for the humanities and social sciences
Royal Academy of Engineering
The Royal Society
Research Councils UK
Innovate UK
British Council
The Academy of Medical Sciences
Met Office

Newton Fund

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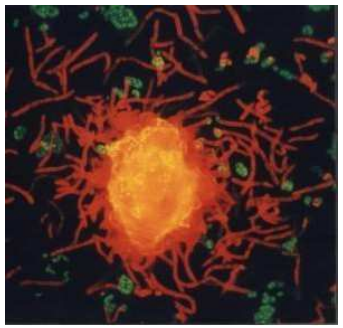
- The Newton Fund aims to **promote the economic development and social welfare working with partner countries**
- **Working in partnership -** All Newton Fund investment is matched by partner countries
- **Building strong, sustainable and systemic relationships** by working together on bi-lateral and multi-lateral programmes
- **Excellence is key -** Newton Fund is allocated through an open, transparent and competitive process – to fund the best people and projects ensuring continued excellence of science and innovation



International Collaborations

- The Research Councils aim to help the best researchers work together, wherever they are in the world.
- We recognise that research is critical to solving grand challenges, and that increasingly the solutions will require work across boundaries, crossing disciplines and borders between nations.

International Collaborations

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Existing International Schemes:

International Co-Investigator Policy

- AHRC, ESRC and MRC support international Co-Is via response mode schemes.

- 35 contacts currently listed at Canadian Co-Is on AHRC grant applications

Lead Agency Agreements

- e.g. LA agreement with FAPESP

International Collaborations Cont.

Multilateral Collaborations

- ESRC, AHRC NSERC and SSHRC members of **Trans-Atlantic Platform for the Social Sciences and Humanities** (T-AP).

Enhances transatlantic research collaboration in social sciences

- MRC and CIHR members of **Global Alliance for Chronic Diseases (GACD**)

Collection of the world's biggest public research funding agencies.

International Collaborations Cont.

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Engagement with multilateral forums

- **Global Research Council**

Virtual organization, comprised of the heads of science and engineering funding agencies from around the world, promoting the sharing of data and best practices for collaboration among funding agencies worldwide.

GLOBAL RESEARCH COUNCIL

- OECD Global Science Forum

Improves science policies and shares benefits of international collaboration. Provides a venue for consultations and mutual learning among OECD member countries.

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- Working together on **global challenges.** Currently in discussions with partners and development agencies in developing international policies.

Questions


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Arts & Humanities
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NERC
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ENVIRONMENT


BBSRC
bioscience for the future


EPSRC
Engineering and Physical Sciences
Research Council


Science & Technology
Facilities Council


MRC
Medical
Research
Council