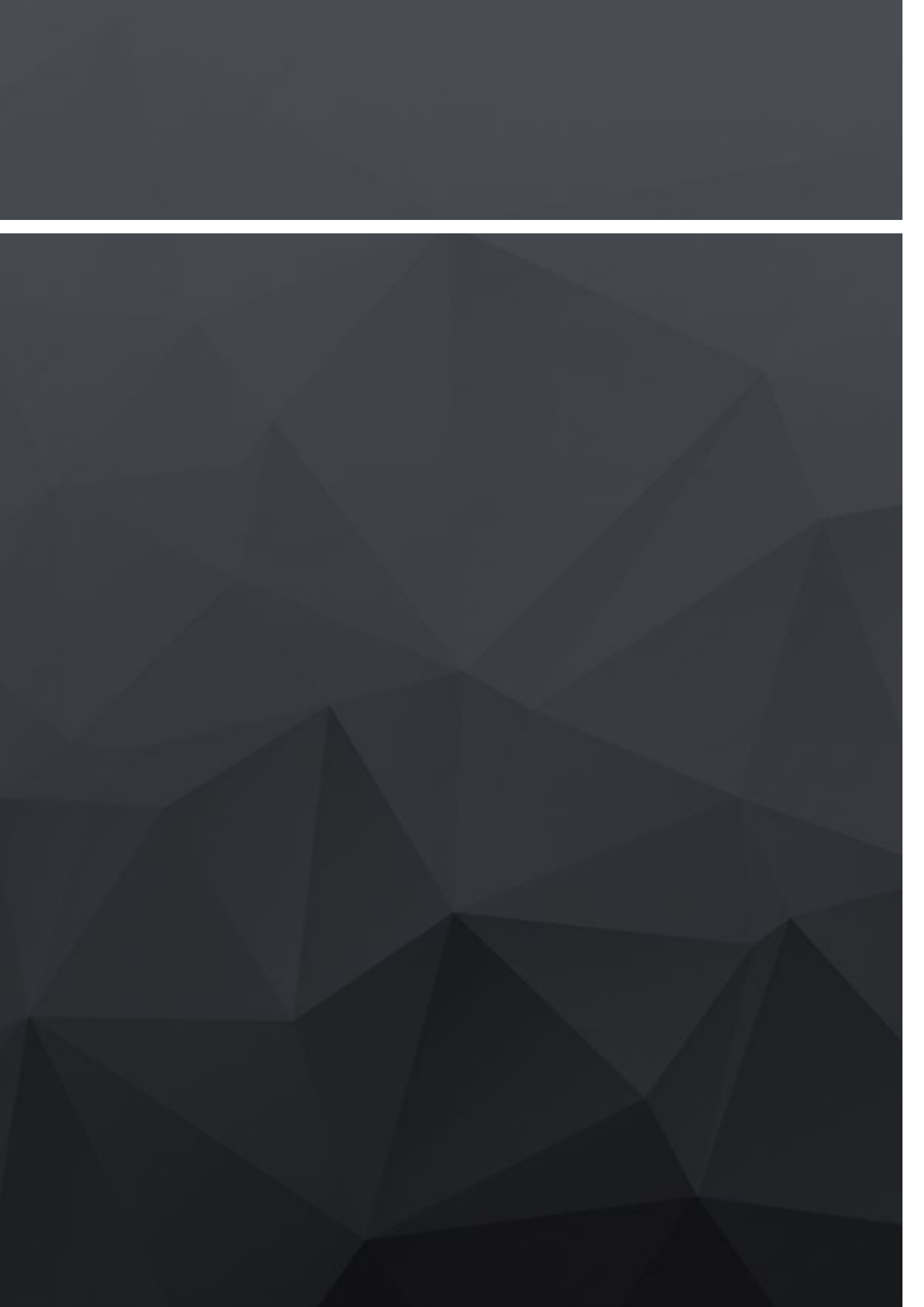


UK Research and Innovation

Annual Report and Accounts **2018–2019**





UK Research and Innovation Annual Report and Accounts **2018–2019**

Presented to Parliament pursuant to Section 14 (5) of Schedule 9
of the Higher Education and Research Act 2017.

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Introduction by UKRI CEO

UK Research and Innovation is an extraordinary organisation with an extraordinary purpose. We bring together the complementary talents of thousands of colleagues across the councils¹ – in order to support the best Research and Development in the country and we help deliver transformational benefits for citizens across the UK and around the world.

Since bringing together the seven research councils with Innovate UK and Research England on 1st April 2018, the newly formed UK Research and Innovation has made great progress:

- We published our Strategic Prospectus in May 2018, the beginning of our strategy development process.
- Since then we have engaged extensively with our communities through the councils and held a series of cross-cutting workshops with stakeholders on the main issues involved with reaching the 2.4 per cent target.
- We published a set of Delivery Plans which build on this engagement and set out the next level of detail on our strategy.
- We progressed work on the UK's first research and innovation Infrastructure Roadmap, and published the Roadmap Progress Report in March.
- We have designed and implemented five new flagship funds to invest the National Productivity Investment Fund in world class research and innovation, from challenge-led to discovery research. We have maintained our focus on our existing programmes, investing £7.5bn in total in 2018-19 across our councils.

In order to deliver this, we have come a long way towards creating and developing UKRI as an organisation:

- We successfully transitioned to create UKRI in April 2018.
- We have established a world-class Board, chaired by Sir John Kingman.
- We have welcomed nine excellent Executive Chairs.
- We have recruited nearly 100 leaders from research and innovation to bring their expertise to our Councils.
- We have recruited nine Industrial Strategy Challenge Fund Challenge Directors.
- We have set up shared corporate services, cross-cutting strategy, analysis and communications functions.
- We have scoped out an organisational transformation and set a clear plan to deliver it, focusing on improved systems and building further on our domain expertise.

We will be held to account not by our activities and inputs, but by the outcomes that we deliver. It is still very early in the life of UKRI, but we are seeing tremendous results from the councils' sustained activity over many years, and the benefits of bringing them together in UKRI are beginning to emerge. These range from the discovery of plastic-eating enzymes and new ways to make hydrogen to fuel cars, to the discovery of the earliest galaxies and the award of the 2018 Nobel Prize for Chemistry to Professor Sir Gregory Winter. They include countless examples of major societal and economic impacts. Eleven companies supported by Innovate UK have been named in the 2019 Maserati 100, which celebrates 100 of the UK's most innovative entrepreneurs.

While we have achieved a lot in our first year, we can, and will do more. In 2019-20, we will build upon the Strategic Prospectus by: publishing the UK's first Infrastructure Roadmap; and completing the 2019 Spending Review.

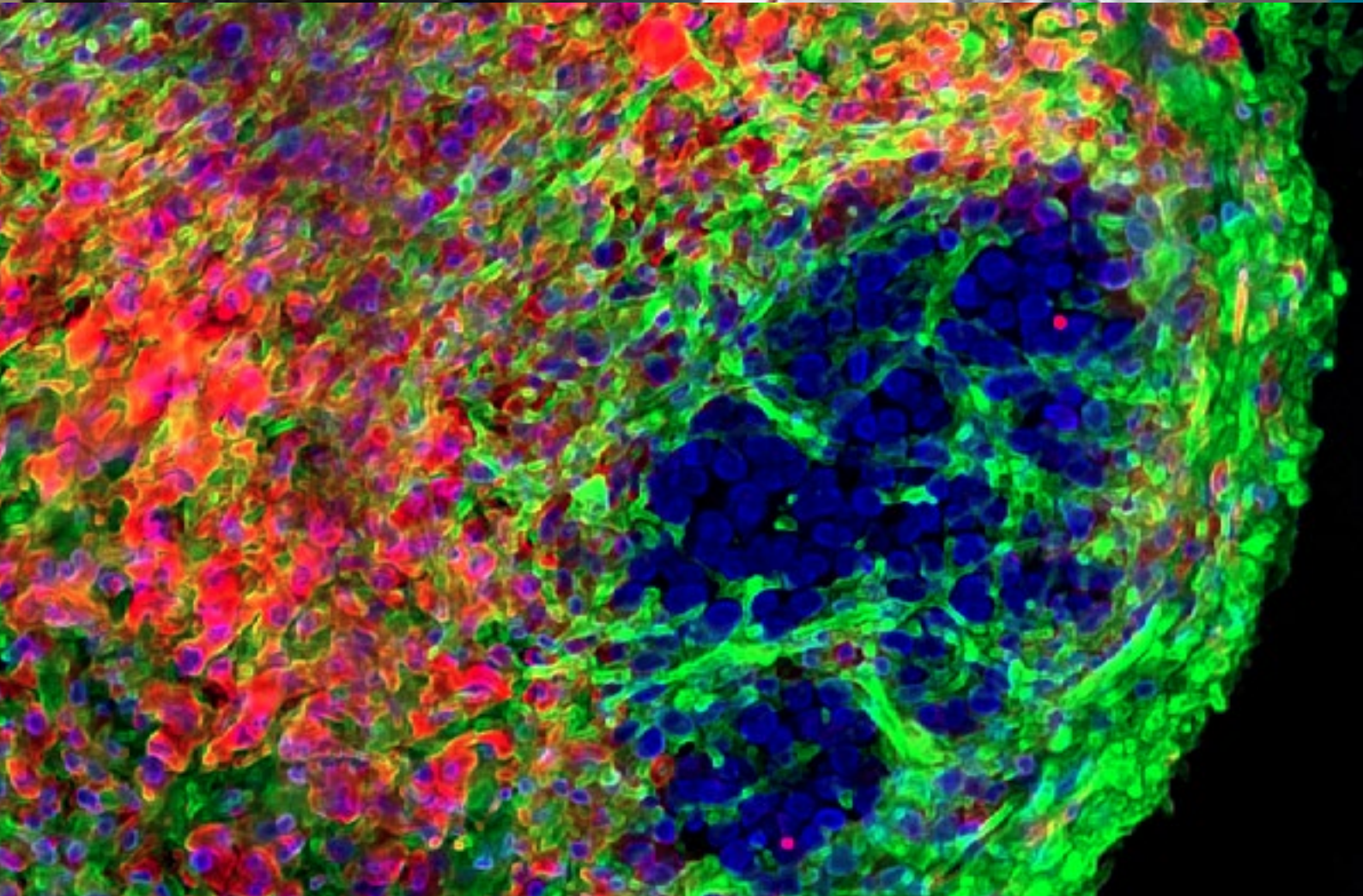
None of this work would be possible without the hard work and dedication of UKRI's staff. I want to thank everyone within UKRI, as we embrace the opportunities created by bringing together nine excellent organisations to provide a single voice for research and innovation. I look forward to continuing our collective work to deliver UKRI's mission: working with our partners to ensure that world-leading research and innovation continues to grow and flourish in the UK.

Professor Sir Mark Walport

¹ For the purpose of this document, we refer collectively to UKRI's 9 constituent parts as 'councils.' The 7 of these councils engaged primarily in research activities are the 'research councils.' The advisory body of each of our councils is referred to as its 'Council,' and intentionally capitalised.

Performance Report





Overview

This section gives a summary of our organisation, its purpose, its key activities during the past year, and the key risks to the achievement of its objectives.

UKRI's mission and objectives

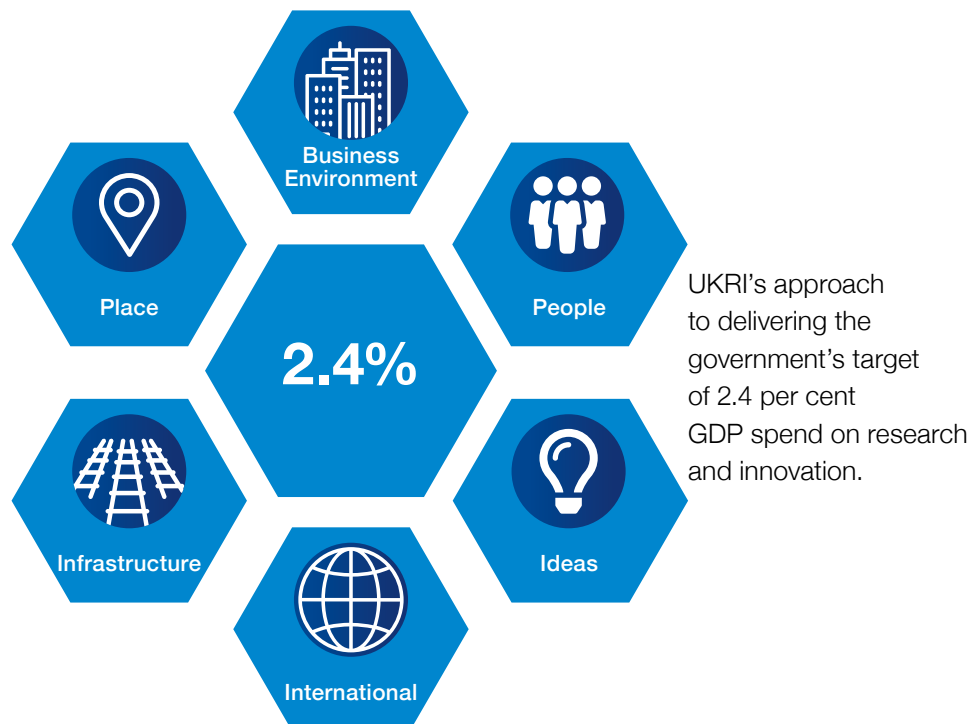
Our mission is to work with our partners to ensure that world-leading research and innovation continues to grow and flourish in the UK.

We will work with our many stakeholders to:

- push the frontiers of human knowledge and understanding; in order to
- deliver economic impact; and
- create social and cultural impact by supporting society to become enriched, healthier, more resilient and more sustainable.

In the Industrial Strategy, the Government set out its five foundations of productivity: ideas, people, infrastructure, the business environment and places. We have considered how to reform and invest across each of these to drive private research and development and deliver transformational benefits for the UK, as well as adding a sixth element on our International approach, recognising the global nature of research and development.

In addition to the five foundations of productivity, the Government has established four Grand Challenges to put the UK at the forefront of future industries, in AI and data, the ageing society, clean growth, and the future of mobility. UKRI has a central role to play in supporting each of these foundations as well as promoting the UK's research and innovation strengths globally. Together, these will help to deliver the commitment set out in the Industrial Strategy to increase research and development spend across the whole economy to 2.4 per cent of GDP by 2027 (and 3 per cent in the longer term) and to realise long term benefits across the country.



Business environment – we will deliver economic, social and cultural impact by:

- supporting businesses in every sector to develop their most innovative ideas;
- translating ideas emerging from the research base, and scaling up the resulting businesses for economic and wider benefit; and
- partnering with government, businesses, charities and other stakeholders to address specific government and societal goals.

People – we will build the skills and environment required for research and innovation to thrive by:

- growing, developing and retaining the talented workforce the UK needs;
- nurturing a supportive and responsible research and innovation culture; and
- inspiring the public and involving them in research and innovation.

Ideas – we will push the frontiers of human knowledge and understanding by:

- advancing the frontiers of discovery research;
- seeking and supporting new, emerging and disruptive technologies, and exploring their global and national impact; and
- helping to understand today's greatest challenges which we know span society and cross disciplinary boundaries.

International – we will build global partnerships and address global challenges by:

- continuing to support cutting-edge research and innovation addressing global issues; and
- deepening international collaborations and relationships.

Infrastructure – We will invest in and enable access to world-leading research and innovation infrastructure, by:

- developing an infrastructure roadmap to 2030 to inform investment decisions on research and innovation infrastructure and provide a framework for the development of new projects from concept to design to implementation;
- offering a coherent long-term vision to maximise the value of government investment in national and international infrastructure; and
- identifying common themes, which could benefit from a cross-sectoral approach.

Place – we will support growth across the UK by:

- supporting all parts of the UK to build on their research and innovation strengths so that they contribute to and benefit from the Government's 2.4 per cent Research and Development target; and
- working closely with government departments to understand how every region and nation of the UK can benefit from national investment in research and innovation.

How we are organised

The UKRI Board is UKRI's primary governing body. It oversees and directs the activities of UKRI, including its strategy for research and innovation. It is supported by an Audit, Risk, Assurance and Performance Committee, and a Nominations and Remuneration Committee. The Board consists of the Chair, Sir John Kingman; the CEO, Professor Sir Mark Walport; the CFO and twelve non-executive board members. Fiona Driscoll sits on the Board and chairs the Audit, Risk, Assurance and Performance Committee. Sir John Kingman chairs the Nominations and Remuneration Committee.

The Executive Committee provide strategic advice to the Board and is responsible for delivering the Board's vision through UKRI by overseeing the organisation's overall performance and delivery. It is supported by a People, Finance and Operations Committee, a Health and Safety Committee, an Investment Committee, and a Strategy Committee. The Executive Committee consists of the CEO, CFO and the Executive Chairs of the nine UKRI Councils.

The nine Councils are responsible for making decisions on scientific, research and innovation matters within their disciplines, as well as holding their Executive Chairs to account for performance, quality of portfolio, delivery against the council's Delivery Plan, and reporting of outputs, outcomes and impacts. UKRI's nine councils are:

[Arts and Humanities Research Council \(AHRC\)](#)

AHRC funds outstanding original research across the whole range of the arts and humanities. This research provides economic, social and cultural benefits to the UK, and contributes to the culture and welfare of societies around the globe.

[Biotechnology and Biological Sciences Research Council \(BBSRC\)](#)

BBSRC invests in world-class bioscience research and training. This research is helping society to meet major challenges, including food security, green energy and healthier, longer lives and underpinning important UK economic sectors, such as farming, food, industrial biotechnology and pharmaceuticals.

[Engineering and Physical Sciences Research Council \(EPSRC\)](#)

EPSRC invests in world-leading research and postgraduate training across the engineering and physical sciences. This research builds the knowledge and skills base needed to address scientific and technological challenges and provides a platform for future UK prosperity by contributing to a healthy, connected, resilient, productive nation.

[Economic and Social Research Council \(ESRC\)](#)

ESRC is the UK's largest funder of research on the social and economic questions facing us today. This research shapes public policy and contributes to making the economy more competitive, as well as giving people a better understanding of 21st century society.

Innovate UK

Innovate UK drives productivity and economic growth by supporting businesses to develop and realise the potential of new ideas, including those from the UK's world-class research base. They connect businesses to the partners, customers and investors that can help them turn these ideas into commercially successful products and services, and business growth.

Medical Research Council (MRC)

MRC is at the forefront of scientific discovery to improve human health. Its scientists tackle some of the greatest health problems facing humanity in the 21st century, from the rising tide of chronic diseases associated with ageing to the threats posed by rapidly mutating micro-organisms.

Natural Environment Research Council (NERC)

NERC is the driving force of investment in environmental science. Its leading research, skills and infrastructure help solve major issues and bring benefits to the UK, such as affordable clean energy, air pollution, and resilience of our infrastructure.

Research England

Research England is a new council within UKRI. Taking forward the England-only responsibilities of the Higher Education Funding Council for England in relation to research and knowledge exchange (KE), Research England will create and sustain the conditions for a healthy and dynamic research and KE system in English universities. It works closely with its counterparts in the Devolved Administrations.

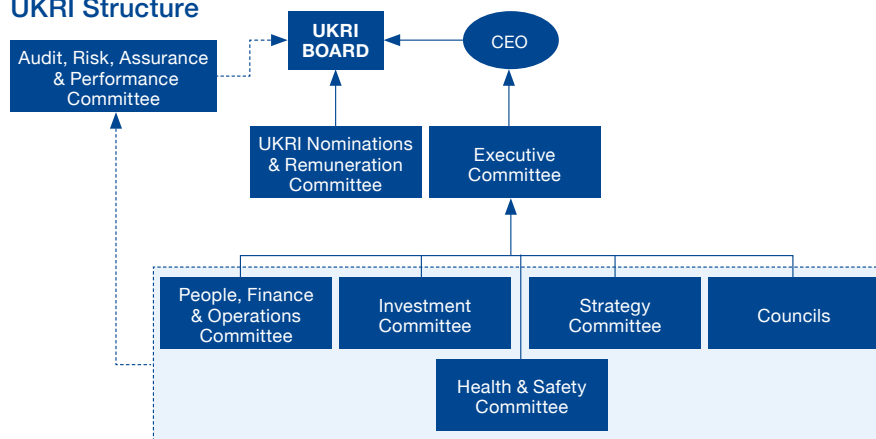
Science and Technology Facilities Council (STFC)

STFC is a world-leading multi-disciplinary science organisation. Its research seeks to understand the Universe from the largest astronomical scales to the tiniest constituents of matter, and creates impact on a very tangible, human scale.

The Board met eight times in 2018-19, twice with the Executive Committee. Its business has covered overall strategy; cross-cutting policies, and funding mechanisms; corporate governance; and transformation. In addition, the Board has met with BEIS Ministers to discuss the Government's 2.4 per cent ambition and Industrial Strategy; in Edinburgh with Professor Sheila Rowan, the Chief Scientific Advisor to the Scottish Government, on UKRI working with Scotland; with Dame Carolyn Fairbairn, Director General of the CBI on UKRI engagement with business; with the Presidents of the National Academies, and with Sir Michael Barber, Chair of the Office for Students, on shared priorities and ways of working; and with Andy Haldane, on the work of the Industrial Strategy Commission.

The Executive Committee met eleven times in 2018-19. Its business has covered overall strategy; shared strategy agendas, including international policy, research culture, talent, place, infrastructure, and maximising economic impact from research; delivery and performance; finance and risk; staffing; organisational transformation; and communications and public engagement.

UKRI Structure



Relationship with the Office for Students (OfS)

UKRI and OfS were established with broad legal powers and duties to cooperate and share information. In support of this, the two organisations have:

- Agreed on attendance at each other's Board meetings when matters of mutual interest are being discussed;
- Signed a "collaboration agreement", outlining a number of areas of cooperation around funding assurance, information sharing and cooperation on knowledge exchange;
- Signed a data-sharing agreement.

Joint working between UKRI and OfS has focused on a number of priority areas, including:

Funding assurance: Senior officials from OfS and UKRI have been in discussion on HEI-level funding assurance arrangements, including the formal assurance advice provided to UKRI to support the public investments we make in the HE sector in England.

Regulatory advice: OfS is communicating decisions on newly registered HE providers to UKRI via Research England, whose funding is conditional on registration.

Financial sustainability: UKRI now attends the Financial Sustainability Strategy Group. Its work programme includes exploring HEI sustainability issues pertaining to research, such as income cross-flows.

Analysis: OfS and UKRI/RE analysts shared evidence to support the government review of post-18 fees and funding. OfS analysts are involved in developing the Knowledge Exchange Framework.

Equality, diversity and inclusion (EDI): On 28th January, OfS and UKRI (led by Research England) hosted a roundtable event with EDI experts to explore commonalities in EDI issues across teaching and research, particularly at postgraduate level.

Knowledge exchange: Research England and OfS officers have worked together on the distribution of the combined £210m Higher Education Innovation Fund (HEIF) allocation, which includes a £47m element from the OfS teaching grant

Quality: UKRI has been working closely with OfS on quality guidance relating to the conferring of research degree awarding powers to HE providers.

Highlights

Our highlights include inputs, outputs and outcomes. The inputs include developing our strategy and new models for investment, supporting research and innovation projects and strengthening UKRI as an organisation. Amongst the outputs and outcomes are awards, research breakthroughs and transformational benefits for the economy and society.

Inputs



*Of all applications that had a decision made in 2018-19, 27% were awarded funding

- We published our **Strategic Prospectus in May 2018**, marking the beginning of our strategy development process. Since then we have engaged extensively with our communities through the councils and held a series of cross-cutting workshops on the main issues involved in reaching the 2.4 per cent target. We published a set of Delivery Plans in June 2019 which build on this engagement and set out the next level of detail on our strategy.
- **The Industrial Strategy Challenge Fund:** We continued to deliver on Wave 1 investments and began spend on Wave 2 in 2018-19. These two waves will represent a £1.7bn lifetime investment in high priority innovation challenge areas. We also ran an expression of interest process to determine which challenges will be funded through Wave 3. From over 250 proposals, HM Government has announced a shortlist of nine potential investments through this third wave, subject to the business case and industry co-funding.
- We have designed and are now delivering the **Strength in Places Fund**, which will enable us to drive Research and Development-led economic growth across the country. This has already identified 23 promising proposals which are progressing as part of Wave 1.
- We have established the new **Fund for International Collaboration**, which is investing £110m over three years to strengthen and build powerful partnerships around the world.
- In April we launched the new pan-UKRI **Future Leaders Fellowship** programme to help individuals with leadership potential in any discipline to accelerate their early careers.
- We are realising Sir Paul Nurse's vision of a 'common fund' through the new **Strategic Priorities Fund**, which is already investing in new interdisciplinary programmes and to help solve pressing public policy challenges.

- We have welcomed nine excellent new **Executive Chairs**: Andrew Thompson (AHRC), Melanie Welham (BBSRC), Lynn Gladden (EPSRC), Jennifer Rubin (ESRC), Ian Campbell (Innovate UK), Fiona Watt (MRC), Duncan Wingham (NERC), David Sweeney (Research England), and Mark Thomson (STFC).
- We have recruited nearly **100 leaders** from research and innovation to bring their expertise to our Councils.
- We have recruited **nine Challenge Directors**, leaders from industry to drive forward the Industrial Strategy Challenge Fund.

Outputs and outcomes



See the performance Annex A at page 136 for a consolidated set of performance metrics spanning inputs and outputs of UKRI funding.

Realising the benefits of Research and Development can take anything from months to decades. In 2018-19 we celebrated a wide range of compelling successes, from early indicators of quality in our new programmes to prizes and breakthroughs that are the culmination of years of sustained work.

Highlights include:

Creating economic impact for the UK

EPSRC-supported researchers at the University of Glasgow have developed a “robot chemist” which uses the power of Artificial Intelligence to discover new molecules offering opportunities to significantly reduce the costs of drug discovery.

Next-generation solar cell technology company Oxford Photovoltaics, backed by early support **from Innovate UK**, set a new record for efficiency in converting sunlight to power.

BBSRC-supported scientists at the Roslin Institute have used gene editing techniques to produce pigs that can no longer be infected by a disease – Porcine Reproductive and Respiratory Syndrome – that costs the industry £1.75bn a year.

The Materials Innovation Factory at the University of Liverpool, a state-of-the-art research facility co-funded by **Research England** and Unilever, brings together world-leading researchers in materials science, robotics and automation technology across industry and academia.

Spinout company Ziylo, based on **UKRI-supported research and innovation**, is developing the world’s first glucose-responsive insulin that could transform diabetes treatment and was bought by global healthcare company Novo Nordisk in a deal worth around \$800 million.

MX3D, a 3D printing company, is building the world’s largest 3D printed metal structure, a ten-metre steel bridge in Amsterdam. To ensure safety and inform the next generation of 3D printed structure, the company is working with a team from the **EPSRC-supported Alan Turing Institute** to create a ‘digital twin’ of the bridge, a living computer model that will imitate the physical bridge in real time thanks to data from a network of sensors. Funded by The Turing-Lloyd’s Register Foundation programme for data-centric engineering, it will deliver a step-change in the way bridges are designed, constructed and managed.

² Field-Weighted Citation Impact (FWCI) is the ratio of the total citations actually received by the denominator’s output, and the total citations that would be expected based on the average of the subject field.

Improving society and quality of life

NERC-funded researchers played a central role in each of the published assessment reports from the Intergovernmental Panel on Climate Change (IPCC), the cornerstones of the international climate agreement, including the IPCC's October 2018 special report.

New guidelines, developed by **ESRC-funded research** at Bournemouth University, use the latest research on ageing and memory to improve care home design and help people living with dementia find their way around unfamiliar environments.

As part of an international collaboration, **BBSRC-supported researchers** at the University of Portsmouth identified and then improved enzymes that can “digest” commonly used plastics, offering new ways of tackling plastic waste.

AHRC's The Forgotten Female Composers, a collaborative project with BBC Radio 3, shone a light on the significant achievements of five neglected female composers, and was recognised in the BBC's Annual Report.

EPSRC-backed researchers at King's College London and Guy's and St Thomas' NHS Trust used MRI and powerful computers to build 3D models of the unborn babies' hearts, allowing doctors to identify life-threatening abnormalities and plan life-saving surgery as soon as possible after birth.

A second person has experienced sustained remission from HIV-1 after ceasing treatment, as a participant in new research **part-funded by the MRC**. Both patients were treated with stem cell transplants from donors carrying a genetic mutation that prevents expression of the CCR5 HIV receptor. In the new study, the person has been in remission for 18 months after his antiretroviral therapy was discontinued.

Pushing the boundaries of human knowledge

MRC scientist Professor Sir Gregory Winter was awarded the 2018 Nobel Prize in Chemistry for his work to develop humanised, and human, therapeutic antibodies, establishing a whole new class of drugs which have helped millions of patients worldwide.

STFC-supported technology and engineering teams were part of the international team of astronomers behind the Event Horizon Telescope (EHT) project, that succeeded in producing the first image of a **black hole**.

Professor Sir Richard Blundell was elected by the National Academy of Sciences in the US as one of only six European foreign members in recognition of distinguished achievements in **ESRC-funded pioneering research**, covering the empirical microeconomic study of consumer, savings and labour supply behaviours.

New research led by scientists at the **MRC Toxicology Unit** suggests that by analysing levels of DNA in the blood, the early detection of lung cancer could be improved.

Where we spent our money in 2018-19

2018-19 UKRI Expenditure



UKRI spent £7.5bn for the year ending 31 March 2019. The diagram shows how expenditure on science, research and innovation breaks down across the foundations of productivity, with further detail on the breakdown of research councils, Research England and Innovate UK spend on the following page³. In practice, many UKRI programmes cut across these foundations. For example, UKRI supports international activity through a combination of programmes across the business environment, people, ideas and infrastructure spend.

In accordance with its Industrial Strategy, the government allocated an additional £7bn for Research and Development as part of the **National Productivity Investment Fund (NPIF)** over the period 2017-18 to 2021-22. UKRI has a key role in delivering this investment, which provides a welcome and substantial boost to UKRI's funding, and has helped to deliver the following key investments in 2018-19:

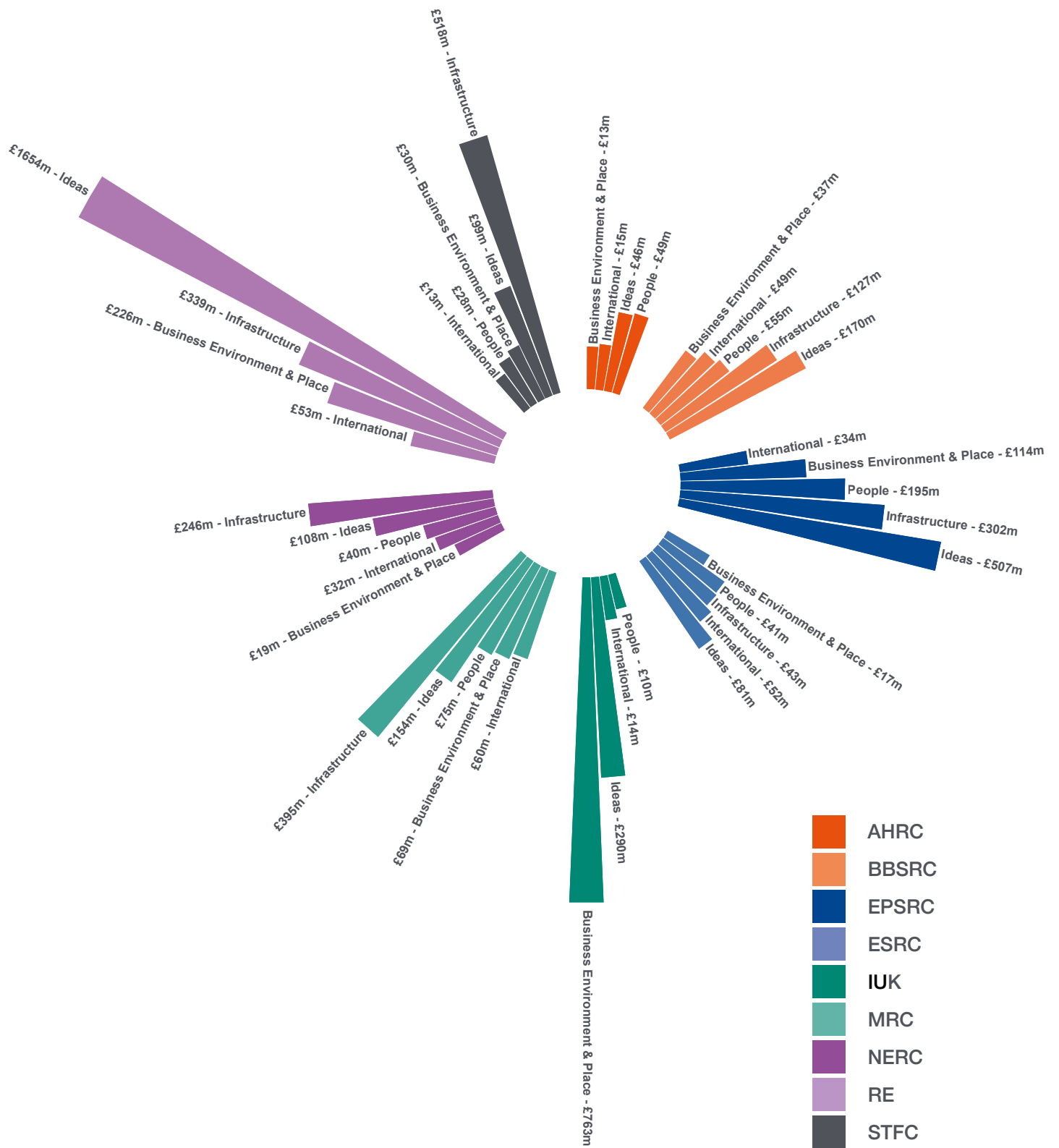
- £325m for Waves 1 and 2 of the Industrial Strategy Investment Fund (ISCF)
- £74m for new talent schemes, including £2m for the first year of the Future Leadership Fellowship Programme
- £35m for the new Strategic Priorities Fund (SPF)
- £6m for the first year of the Fund for International Collaboration (FIC)

The Government has pledged to allocate 0.7 per cent of Gross National Income to **Overseas Development Assistance (ODA)**. Critical to achieving this target are the Global Challenges Research Fund (GCRF) and the Newton Fund, and both are protected science spend. In 2018-19 UKRI spent £302m on ODA funding:

- £224m for activity associated with the GCRF
- £78m for programmes under the Newton Fund

³ Expenditure is broken down across the Industrial Strategy Foundations based on the definitions set out on page 11. Totals exclude administration and tax expenditure.

2018-19 Expenditure by Council, UKRI



Transforming our organisation

Following UKRI's formal creation we are now at the end of the first 12 months of our three-year transformation. This will ensure we become a single organisation respectful of its constituents but more than the sum of its parts, working to achieve the vision set out in our Strategic Prospectus which will deliver:

- enhanced decision-making
- efficient and effective delivery
- enhanced communications and engagement.

We have developed a framework which focuses our transformation around seven key pillars:



- 1. Designing our organisation:** creating one unified, adaptable, high-performing organisation that is easy to navigate and which creates and evaluates impact by connecting research and innovation communities.
- 2. Skills and capability of our people:** attracting, developing and valuing excellent leaders and teams to deliver our ambitions.
- 3. Shared operations:** simplifying our internal operations, policies and processes to make UKRI more effective and efficient, and maximising the impact of the money entrusted to us.
- 4. Digital transformation:** modernising our technology to enable research and innovation communities to engage with us in a smart, flexible, innovative, collaborative way.
- 5. An inspiring working environment:** designing an environment and infrastructure that create a great employee experience, leading to increased motivation and engagement.
- 6. United values and culture:** evolving a world-leading, trusted brand which embodies an innovative, inclusive culture based on values we can all share.
- 7. Engaging communications:** delivering the right message to the right people at the right time in the right way.

We achieved a great deal in 2018-19, as described previously in the Introduction, but the pace of change is expected to continue, with further waves of the ISCF to come in 2019-20 and the need to manage the consequences of EU Exit and the Comprehensive Spending Review. In April 2019 we launched a new operating model to respond to the changes and challenges that we face, in a way that strengthens the capability of our councils. Changing the organisational design of our individual councils will be our focus for the remainder of the year, together with our plans for developing the centralised corporate centre, comprising strategy, analysis, communications, finance, HR, risk, governance and technology, and including the crucial grants systems and services. Our priorities for this period are:

- engaging and exciting our staff through these far-reaching changes;
- instilling a new pan-UKRI people performance management system;
- instilling a pan-UKRI business performance management capability which analyses in more detail the outputs, outcomes and impact of our work;
- upgrading domain expertise in the councils so we are able to work more effectively with the research community;
- delivering a centralised grants process, system and service;
- automating and further professionalising HR and Finance including the development of a new IT system; and
- building a UKRI identity and brand.

Principal risks and uncertainties

UKRI's Board is responsible for ensuring that effective and adequate systems for internal control are in place to manage the major risks to which the organisation is exposed. It does this by monitoring the effectiveness of our risk management framework.

This framework is designed to support informed decision-making concerning the risks that affect our ability to achieve our objectives. It also provides a consistent approach to identifying, assessing and dealing with risks facing us, to ensure that they do not exceed the level of risk we are willing to accept. The framework is designed to manage, rather than eliminate, the risks to our objectives. UKRI's approach to risk management is further described in the Governance Statement.

Risk profile

UKRI's risks cover the following key themes:

- **People** – ensuring we have the right people across UKRI and the organisations that we fund, to deliver the envisaged impacts and outcomes;
- **Reputation** – ensuring that we are recognised as a world class organisation, with support from the public and key decision makers;
- **Programme management** – ensuring our major programmes are managed effectively;
- **Strategic Investment** – making the evidence-based case for further investment in research and innovation to deliver the Government's long-term priorities and maintain our position as a world leader
- **Operational Control** – ensuring that day-to-day operations are effective and efficient.

We have identified the following key risks as the most material. The key mitigating activities are monitored by the Board and the Executive.

Risk	Mitigating activities
<p>EU Exit UKRI is managing operational and strategic risks associated with the UK's future relationship with the EU.</p>	<ul style="list-style-type: none"> • Increased the capacity and capability of UKRI's International Strategy team • Working with BEIS, consider potential alternatives to EU programmes • Working closely with partners across the sector to develop a cross sector response • Preparing and implementing detailed plans to deliver the UK Government's underwrite guarantee and extension
<p>Staff capability and capacity UKRI is delivering increased levels of investment associated with the Government's Industrial Strategy. This requires UKRI to recruit and develop extra staff, with the necessary skills.</p>	<ul style="list-style-type: none"> • Increased the focus on recruitment, performance management and ongoing development • Establishing a new organisation structure within each council and across central teams • Making progress to introduce a new Resourcing and Talent Framework • Working with BEIS and HM Treasury to build support for pay freedom and flexibilities for specific scientific roles in UKRI's own centres and institutes

Risk	Mitigating activities
<p>Transformation UKRI has established a transformation programme to bring together the individual organisations and then transform the overall performance with a specific focus on existing systems and structures.</p>	<ul style="list-style-type: none"> • Established a transformation programme • Recruited an experienced Transformation Director • With external support from a specialist consultancy we have developed a new organisation structure • Detailed communication plan developed with regular staff surveys undertaken to track progress • Detailed plans being developed to transform UKRI's key grant management, HR and Finance systems
<p>ISCF UKRI is managing risks associated with the delivery of the Industrial Strategy Challenge Fund.</p>	<ul style="list-style-type: none"> • ISCF governance structure established, with oversight from a Steering Board which meets at least monthly • Standard UKRI competition and call processes including peer review and independent assessment are used to determine the highest quality projects within Challenges • Consistent set of principles applied to all grant awards to enable effective monitoring and capture of information for evaluation • Overarching ISCF risk register established and reviewed by oversight board
<p>Equality, Diversity and Inclusion (EDI) UKRI needs to lead the research community to ensure there is commitment to an inclusive, open culture.</p>	<ul style="list-style-type: none"> • Creation of EDI Workstream • External Advisory Group established to evaluate best practice • Developing EDI strategy • Commissioning evidence-based review
<p>Cyber Security UKRI takes appropriate steps to protect its staff and information from attack and compromise.</p>	<ul style="list-style-type: none"> • Implemented best practice throughout the Information Security framework, informed by Cyber Essentials • Consolidating our IT infrastructure • Rolling out GCHQ-endorsed cyber security training across the organisation • Increasing cyber security awareness and assessment
<p>Communications and Engagement UKRI is optimising the opportunity to present a strengthened unified voice across research and innovation.</p>	<ul style="list-style-type: none"> • A Director of External Relations, Communications and Public Engagement has been recruited • A single communications function, bringing together expertise from the councils, has been established • Established regular communication and escalation channels within UKRI and BEIS

Performance Analysis

Our foundations



1. Business environment: delivering social, cultural and economic impact

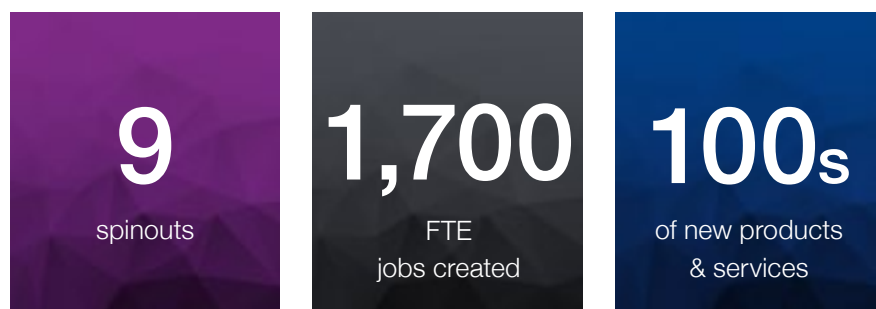
The application of new ideas and knowledge is a key driver of economic growth and social benefit and is at the heart of the UK's industrial strategy. Our ability to develop new ideas and deploy them is a great strength and we need to do more to ensure the UK's excellence in discovery research is translated into application and commercial practices.

In 2018-19 UKRI directly supported over 3,500 businesses and partnered with 2,700. In addition, Innovate UK secured further long term investment in several programmes, including:

- In August 2018, the Government confirmed an investment in the Catapult Network worth more than £1.1bn over five years.
- Continuation of the Innovation to Commercialisation of University Research programme (ICURe).

We are continuing to develop new and innovative forms of support. Following the successful completion of the £50m pilot of Innovation Loans, a £25m extension to the pilot to achieve 100 loans was approved in early 2019.

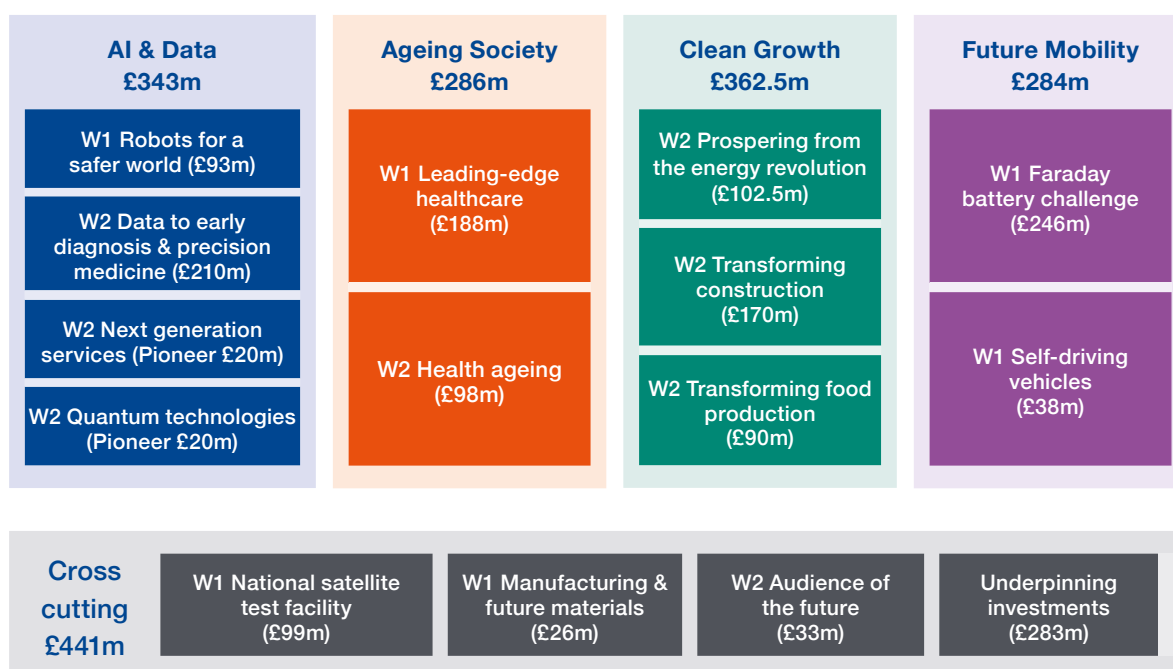
In 2018-19, Innovate UK funding to business resulted in the creation of 1,700 FTE jobs and nine spinouts with a further nineteen planned. Hundreds of businesses expect to introduce new products, processes and services over the next 1-3 years as a direct result of this funding.



1.1 Industrial Strategy Challenge Fund (ISCF)

ISCF is our flagship, challenge-led innovation programme, announced by the Prime Minister in November 2016 as part of the National Productivity Investment Fund (NPIF). It aims to bring together business with the UK's world-leading research base to meet the major industrial and societal challenges of our time.

Through the first two waves, we are investing over £1.7bn to help solve ambitious industrial challenges, from transforming the UK construction industry to developing the next generation of batteries. Over the past two years, we have begun to deliver these first two waves, closely aligning their progress to support the aims and objectives of the Grand Challenges in the Industrial Strategy:



In 2018-19, we invested £325m across Wave 1 and 2 projects. Although we are at an early stage of delivering the ISCF (delivery began in 2017-18), we are already starting to see the benefits of this challenge-led approach:

- It is securing a significant amount of industrial co-investment. We expect the £1.7bn from Waves 1 and 2 to secure approximately £1bn from industry. To date, we have secured £664.8m and remain on-track to deliver the £1bn.
- It is bringing together diverse consortia of partners to address challenges. For example, the 'next generation services' challenge includes a consortium with Lloyds Insurance, AXA, PwC, IBM, Willis Towers Watson and Comparethemarket.com working together with the Universities of Loughborough, Exeter and Queen Mary, London.
- Programmes are already being recognised for the quality and potential of their work. The Offshore Robotics for Certification of Assets hub, led by Heriot-Watt University, won the Business Collaboration category at the Guardian University Awards 2018.

Industrial Strategy Challenge Fund – Wave 3

In his 2018 Budget the Chancellor of the Exchequer announced an increase of funding for the ISCF, demonstrating continued government support for this programme. We asked industry to come forward with compelling challenge ideas to deliver the four Grand Challenges through a broad, open process. We received a huge response to this call for expressions of interest, which generated over 250 ideas. Based on our rigorous assessment of these proposals, ministers have agreed to invest in the following challenge areas through Wave 3 subject to business case:

AI and data

- accelerating detection of disease
- commercialising quantum technologies
- digital security by design
- manufacturing made smarter.

Future of mobility

- future flight
- driving the electric revolution.

Clean growth

- industrial decarbonisation challenge
- transforming foundation industries
- smart sustainable plastic packaging.

We expect to confirm the final portfolio of challenges in summer 2019.

1.2 Maximising economic benefit from world-leading research

Our approach to reaching the 2.4 per cent Research and Development target must be led by opportunities to drive a significant increase in private sector Research and Development and maximising the potential economic benefits from our world-leading research. This is a central part of the Industrial Strategy.

The Industrial Strategy sets out several actions to further strengthen the UK's performance. These include changes to the Research Excellence Framework to increase the weighting for impact, and the planned introduction of the Knowledge Exchange Framework led by Research England. To go further, we have established a programme of work to look across our full organisational remit to consider what more we can do to maximise the economic impact of our research in the UK. This work is being led by three UKRI Executive Chairs: Professor Lynn Gladden, Dr Ian Campbell and David Sweeney.

We are continuing to enhance our institutional support to universities to help them engage with industry and maximise economic impact from their research outputs. The Industrial Strategy set out a commitment to increasing Research England's Higher Education Innovation Funding to £250m by 2020 – an increase of over half compared with 2016. We have also launched the £100m Connecting Capability Fund to support collaborations between universities to pool capacity and expertise. The research councils also spent approximately £100m in 2018-19 to help progress the outputs of previously funded research towards applications in a real world setting, such as in industry, non-governmental organisations, and public policy.

1.3 Strategic Priorities Fund (SPF)

The SPF supports emerging priorities and opportunities for multi-disciplinary and inter-disciplinary research in areas that cross boundaries between the nine UKRI councils, or between councils and government departments. As part of the National Productivity Investment Fund, it builds on Sir Paul Nurse's vision of a "common fund", as recommended in his independent review of the research councils⁴.

The SPF supports excellent programmes from any part of the research and innovation landscape which meet the objectives of the fund, which are to:

- drive an increase in high-quality multi-disciplinary and inter-disciplinary research and innovation
- ensure that UKRI investment links up effectively with government departments' research and innovation priorities and opportunities
- ensure the system is able to respond to strategic priorities and opportunities.

In 2018-19, UKRI completed Wave 1 of the programme, funding a high quality portfolio of research and innovation projects. UKRI also launched Wave 2 of the programme, recommending a further portfolio of high quality projects for funding. To identify which programmes should be funded through the SPF, we have engaged extensively with stakeholders through our councils, while working closely with BEIS and other government departments. This process includes close collaboration with the Government Office for Science (GO-Science) and government departments' Chief Scientific Advisors (CSAs) to encourage alignment with published departmental Areas of Research Interest.

The SPF includes UKRI as well as five non-UKRI BEIS-funded Research and Development bodies: The Met Office, the National Nuclear Laboratory (NNL), the National Physical Laboratory (NPL), the UK Atomic Energy Authority (UKAEA), and the UK Space Agency (UKSA). An expert panel assesses potential SPF programmes and makes recommendations to the UKRI Board on funding approval.

⁴ <https://www.gov.uk/government/publications/nurse-review-of-research-councils-recommendations>

Near-term actions

During 2019-20, we will:

- Continue to drive forward and monitor delivery across the existing portfolio of Wave 1 and 2 ISCF challenges
- Announce the final funding allocation for ISCF Wave 3 and move into delivery for these programmes
- Develop an ambitious approach for future waves of the ISCF, building on learnings to date
- Deliver a further increase to 'Higher Education Innovation Funding', rising to £250m by 2020, supporting higher education institutions in England to help deliver the UK's Industrial Strategy
- Extend the pilot of 'Innovation to Commercialisation of University Research', supporting more early career researchers to find the right route to market for their commercially promising ideas
- Work with our BEIS-funded Research and Development partners to deliver the SPF programmes announced to date, including running research calls and innovation competitions open to researchers and businesses across the UK
- Develop and make the case for further rounds of the SPF as part of the Comprehensive Spending Review, with a particular focus on cross-government collaboration.

2. Places: supporting growth across the UK

Research and innovation strengths exist across the UK, as has been borne out by the Science and Innovation audits. UKRI is committed to supporting every part of the UK to build on its strengths, so that the whole country is contributing towards – and feeling the benefits of – the Government's 2.4 per cent Research and Development target and Industrial Strategy.

UKRI is investing to maintain and build on these regional strengths through our cross-cutting programmes and council funding. From the Industrial Strategy Challenge Fund to research council grant funding and from Centres for Doctoral Training to the Knowledge Transfer Partnerships, UKRI's programmes support regions across the country to benefit from public research and innovation investment.

A number of council programmes have particularly strong impacts on their local geography. For example, Research England's 'Expanding Excellence in England' pilot is supporting small but high-quality research units and departments in universities across England to build their research capacity. Additionally, the Connecting Capability Fund is supporting a number of university consortia to maximise the economic impact of their research. Many of these have a strong regional focus, – such as the Midlands Innovation Commercialisation of Research Accelerator, the Northern Accelerator and the Northern Triangle Initiative.



Most significantly, we have launched a new cross-cutting programme that has a specific focus on leveraging local research and innovation strengths to drive local economic growth and productivity improvements: the Strength in Places Fund.

2.1 Strength in Places Fund

The Strength in Places Fund is a competitive funding scheme that takes a place-based approach to research and innovation funding to support significant regional economic growth. It is designed to support the development of significant local research and innovation clusters, building on local strengths. Its high level aims are:

- To support innovation-led regional growth by identifying and supporting areas of Research and Development strength that are driving clusters of businesses of various sizes and with the potential to innovate or to adopt new technologies. The aim is for these clusters to become nationally and internationally competitive
- To enhance local collaborations involving research and innovation by building on the underpinning regional economic impact role played by universities, research institutes, Catapults and other research and development facilities
- To engage businesses at the forefront of delivering economic growth through innovation within the identified economic geography.

Wave 1 of the programme was launched in May 2018. UKRI received a large number of high quality bids and following an independent assessment, confirmed in March 2019 that it was taking forward a shortlist of 23, including bids from all four UK nations and every major region of England. Each of these consortia has been awarded up to £50k in 'seedcorn' funding to develop a full bid, which will be assessed later in 2019, ahead of between four and eight full awards being made in 2020.

Near-term actions

In 2019-20 UKRI will:

- Support the shortlist of Wave 1 consortia to develop full bids, with final decisions on these to be made in 2020
- Launch Wave 2 of the Strength in Places Fund to support the development of more high-impact clusters across the UK.



3. Ideas: pushing the frontiers of human knowledge and understanding

Human curiosity about ourselves, the world and the universe we inhabit has inspired the UK's long, proud tradition of enquiry. Our ever-expanding knowledge has transformed and delivered lasting benefits for our economy and society.

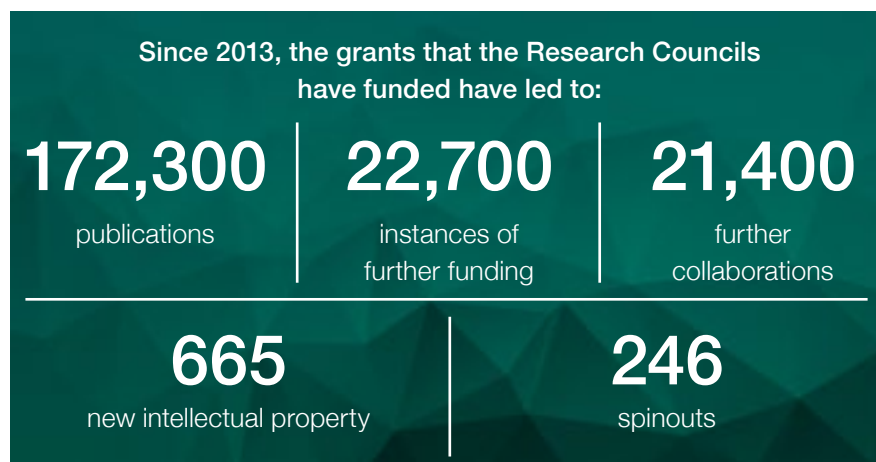
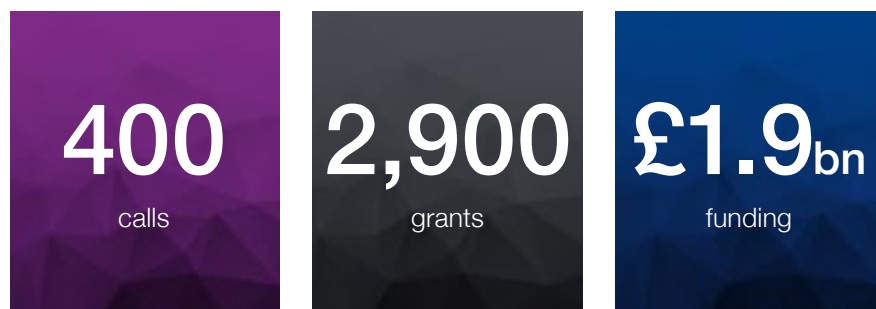
UKRI advances the frontiers of human knowledge and understanding by supporting new ideas and discovery research. This curiosity-driven research across the full spectrum of UKRI's disciplinary areas drives a healthy and vibrant ecosystem, as researchers follow their ideas to discover new things about the world we live in. These investments underpin research and innovation across the UK, providing a critical complementary and dynamic foundation for future translational and applied research and innovation.

UKRI's support for discovery research, described in its Strategic Prospectus, is delivered through our councils and has at its heart the long-established 'dual funding approach'. The two arms of the dual funding system are complementary:

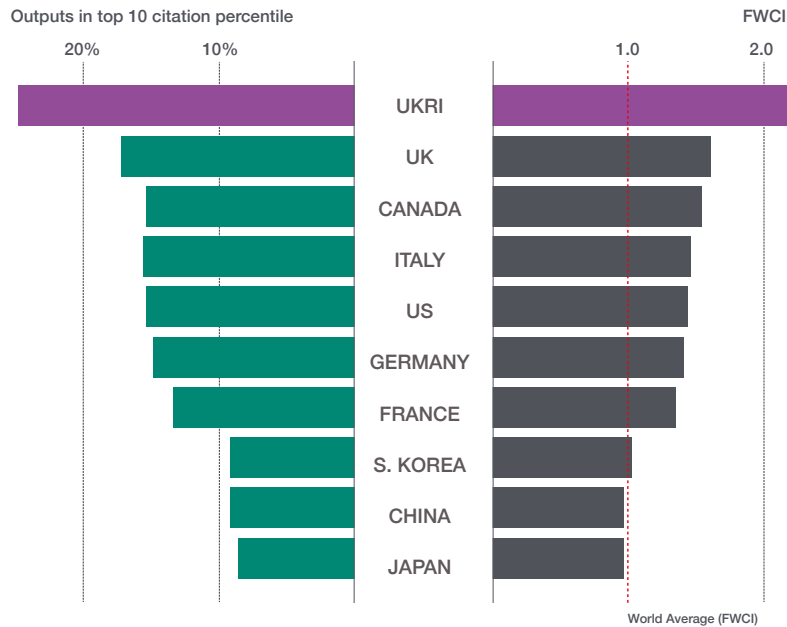
- Research into priority themes and questions, including cross-cutting technologies and challenges, led through the research councils
- Performance-related investment to support investigator-led and institution-led research, as well as to ensure the sustainability of the research system in the long term, led through Research England (referred to as quality related or QR funding).

Research council investment

In 2018-19, we ran nearly 400 calls through the research councils, successfully funding 2,900 research grants totalling £1.9bn.



This investment in research helps support the UK's leading position in research excellence. The UK's Field Weighted Citation Impact (FWCI) consistently ranks higher than for comparable research nations. When focusing exclusively on Research Council funded research, the FWCI increases further, demonstrating the excellence of the research supported by UKRI⁵. Our attention to rigorous peer review is fundamental to ensuring we support the very best discovery research.



Comparison of UKRI publications to other comparative countries by field-weighted citation impact (FWCI) and outputs in the Top 10 citation percentile (%)
 Citation data is 2014-17 inclusive, includes self-citations. FWCI data is 2016, includes self-citations and all publications.

We invest in discovery research across the entire spectrum of disciplines, reflecting the broad range of domains of our councils. This investment is made through both directed and responsive mechanisms. Directed research calls support the priorities of the issuing council, as described in each council's delivery plan. Responsive research calls provide a mechanism to ensure excellent investigator-led ideas can be pursued.

The research questions that comprise UKRI's portfolio cover a vast span of scales (from the nano to the macro); of disciplines (from the biology of the brain to the philosophy of what it is to be human); and of approaches (from individual investigators doing research in an archive or lab, through to global consortia coming together to invest in cutting edge infrastructure to address fundamental questions in particle physics).

⁵ Source: UKRI internal analysis of the Elsevier Scopus database; data as at 12 April 2019

Selected Research Highlights

While the highlights of UKRI's research portfolio are many, and outcomes materialise over the course of several years, some selected highlights in 2018-19 include:

Astronomers have discovered the first galaxies ever formed over 13 billion years ago

UK astronomers, together with US colleagues, have found evidence that the faintest satellite galaxies orbiting our own Milky Way galaxy are amongst the very first formed in our universe.

Professor Carlos Frenk, Director of Durham's Institute for Computational Cosmology, said: "Finding some of the very first galaxies that formed in our Universe orbiting in the Milky Way's own backyard is the astronomical equivalent of finding the remains of the first humans that inhabited the Earth. It is hugely exciting."

The research was part-funded by UK Research and Innovation's Science and Technology Facilities Council (STFC).

Scientists have engineered an enzyme which can digest some of our most commonly polluting plastics, providing a potential solution to one of the world's biggest environmental problems.

The discovery could result in a recycling solution for millions of tonnes of plastic bottles, made of polyethylene terephthalate, or PET, which currently persists for hundreds of years in the environment.

Professor John McGeehan at the University of Portsmouth and Dr Gregg Beckham at NREL solved the crystal structure of PETase - a recently discovered enzyme that digests PET - and used this 3D information to understand how it works. During this study, they inadvertently engineered an enzyme that is even better at degrading the plastic than the one that evolved in nature. The researchers are now working on improving the enzyme further to allow it to be used industrially to break down plastics in a fraction of the time.

The research was part funded UK Research and Innovation's Biotechnology and Biological Sciences Research Council (BBSRC).

A ground-breaking paper celebrating the release of the genetic data of 500,000 people published

The data is already being used for hundreds of research projects on a wide range of illnesses including cancer, heart disease, diabetes, stroke, osteoporosis and schizophrenia. Funded primarily by UK Research and Innovation's (UKRI) Medical Research Council and the Wellcome Trust, UK Biobank recruited 500,000 people aged between 40-69 years in 2006-10 from across the country to take part in this project. They have undergone measurement, provided blood, urine and saliva samples for future analysis, given detailed information about themselves and agreed to have their health followed. The paper, released in the journal Nature, celebrates this research triumph, which is a culmination of several years' work carried out by a consortium of genetics experts.

Quality related (QR) investment

Completing the councils' investment and helping support the overall sustainability of the research sector, UKRI invested £1.6bn in QR through Research England. The largest allocation, in terms of the number of universities in England receiving funding and the total funding awarded (£1.05 bn in academic year 2018/19), is 'mainstream QR funding'. The most stable element of QR funding, this is critical to supporting research excellence, and the overall sustainability of the research sector. This funding is allocated on the basis of the Research Excellence process. It was awarded to 122 institutions in 2018/19, ranging from large multi-faculty universities to specialist institutions.

Two further elements then recognise and incentivise English universities to pursue research in support of the third sector and industry. 'QR charity support' sustains research that universities carry out on behalf of charities, recognising that charities sponsor high-value research in universities which benefits scientific discovery and society but do not always meet the full cost of that research. This support amounted to £200m in academic year 2018/19. 'QR business research' provides additional support for research that universities undertake with business and industry, encouraging them to collaborate with business on research agendas and develop relationships with industry. To qualify, institutions must attract investment from industry. This funding stream amounted to £100m in academic year 2018/19.

Research Excellence Framework Process (REF2021)

In 2018-19, following a year-long consultation process, UKRI-Research England along with the wider UK higher education funding bodies, confirmed final decisions on the operation of the next Research Excellence Framework (REF2021). The broad framework set out for REF2021 meets the recommendations set out in the independent review of REF2016 led by Lord Stern. These recommendations include the submission of all staff with significant responsibility for research in the REF and enabling the submission of research outputs from the institution where they were generated. Membership appointments for the four main panels and 34 sub-panels for the first stage of the REF2021 exercise have also been announced, following a process involving over 4,000 nominations.

Balanced Funding Initiative

In 2018-19 UKRI commenced further work to deepen the understanding of the interactions between the two arms of the dual support system. Led by David Sweeney, Executive Chair of Research England, this will include examining how dual support funding interacts with the wider university research funding landscape (e.g. non-research council research funding streams such as charity or departmental funding) - the impact of dual support on disciplinary and interdisciplinary research including the emergence of new disciplines, and stress-testing the balanced support ratio against emerging sustainability risks. Whilst the focus of the current work is on the English dual support system, we are engaging closely with the devolved administrations and funding bodies, sharing our evidence as it develops. The outcomes from this process will help us ensure that the dual support system provides the strongest possible base on which we can build a thriving research sector delivering security and prosperity for the UK.

Near-term actions

In 2019-20 we will:

- Continue to support world leading discovery research, as described in our councils delivery plans, while refining the list of priority emerging technologies
- Review our peer review mechanisms to best support multidisciplinary research
- Use the findings of our review of the dual support system to advise ministers on the appropriate balance of funding following the Comprehensive Spending Review

The University of Manchester – Supporting research sustainability

The University of Manchester has ring-fenced portions of its QR and formula capital funding allocations to increase the impact of active work streams, for example to support the Manchester Cancer Research Centre (MCRC).

MCRC focusses on translational medical research for improving clinical care for cancer patients, developing patient-centred treatment strategies. The MCRC works closely with charities including Cancer Research UK and the Christie Foundation Trust to ensure that the research outputs of the Centre maximise the potential of cross-disciplinary working by developing therapy strategies alongside the clinical community. Specialists in Experimental Cancer Therapeutics, Radiotherapy Related Research and discovery research in certain tumour specific themes (lung, prostate, melanoma and pancreatic) have already been recruited and there are plans to recruit further strategic posts and associated postdoctoral support.

As charity research funding does not cover the full economic costs of research activities, the QR funding for MCRC is essential for match funding and covering shortfalls in these areas, thus allowing research to continue. The QR funding not only funds the academic posts and any start-up funds but also the estates and infrastructure required to house the academic staff who work as part of the MCRC.

4. People: building the skills and environment for research and innovation to thrive



The UK is one of the world's most successful research nations. Building on our existing strengths, UKRI will ensure we can address the challenges of the future by providing the best environment for researchers and innovators, through:

- growing the skills base of the UK by developing, retaining, attracting and sustaining research and innovation talent
- nurturing a supportive and responsible research and innovation culture
- inspiring the public and involving them in research and innovation

UKRI is a single, powerful voice for research and innovation. It influences change in areas that impact the research workforce, including migration, Equality, Diversity and Inclusion and Research Culture.

4.1 Growing and developing the skills base

UKRI makes a significant contribution to supporting the UK's research workforce. At any one time, we are directly funding 58,000 researchers (including over 20,000 students), accounting for 17 per cent of the total academic workforce in the UK. Alongside this, we estimate that about 20 per cent of total mainstream unhypothecated quality related (QR) spend, about £210m, is used for attracting and retaining talent, for training and to support doctoral students.

UKRI directly supports the training and development of the UK's current Research and Development workforce through its talent programmes, in particular doctoral training and fellowships. In 2018-19, UKRI invested over £490m in these programmes. Alongside research council investments, QR funding sustains infrastructure and the broader research environment, and these investments are complementary to UKRI's direct investment into talent.

Doctoral training

In 2018-19, UKRI funded over 6,000 new studentships. UKRI's research councils invest in doctoral training through a number of mechanisms, including Doctoral Training Partnerships, Centres for Doctoral Training, and CASE awards. These train researchers in the skills, knowledge and confidence needed to tackle today's evolving issues, developing the highly-skilled workforce the UK needs for the future, while forging lasting links with collaborators, including industry. Research England invested a further £260m into doctoral training in England through quality related research degree programme supervision funding.

In 2018-19, UKRI launched and completed a competition to invest £100m to create 16 Centres for Doctoral Training in Artificial Intelligence. These will train about 1,000 students during the next nine years. The centres will be delivered through 18 Research Organisations across the UK.

Fellowships

Fellowships are personal awards that allow researchers the support and time to establish or further develop themselves as research leaders. UKRI's research councils provide a diverse portfolio of Fellowships, New Investigator and Career Development Awards across different career stages. In 2018-19, these funded 1,511 individuals.

In July 2018 we launched the UKRI Future Leaders Fellowship Scheme through which we plan to award up to 550 fellowships over the next three years. This is a new UKRI-wide Fellowship scheme aimed at recruiting and retaining the rising stars of research and innovation, attracting the brightest and best from at home and across the world. These prestigious awards will offer funding for seven years with a review at year four, for early-career researchers and innovators, addressing a known pinch-point in research career paths. The first 41 recipients of FLFs were announced in May 2019. They are tackling a broad spectrum of challenges and global issues and pursuing interdisciplinary and business-linked activities.

In 2018-19, we launched a new Turing Fellowship to attract the best global research talent in AI to the UK, in partnership with the Office for Artificial Intelligence and the Alan Turing Institute. The first round, being managed by the Alan Turing Institute with UKRI support, was launched in February 2019 and will invest £8m. In 2019-20 and beyond, UKRI will invest a further £38m in Turing Fellowships, making a total investment of £46m.

4.2 Research and innovation culture

UKRI is focussing on several key areas of policy interest which matter for this agenda including:

- Research integrity and ethics
- Equality, diversity and inclusion (EDI)
- Bullying and harassment
- Open Access to research.

Research integrity and ethics

In July 2018 we welcomed the House of Commons Science and Technology Committee's report on research integrity in the UK. The report identified a number of causes for concern, including incomplete levels of compliance with the Concordat to Support Research Integrity ("the concordat"), the lack of transparency around research integrity issues, and the absence of independent oversight to examine whether research institutions have followed appropriate processes to investigate research misconduct. We are working with BEIS, Universities UK (UUK), UK Research Integrity Office (UKRIO) and the other signatories to strengthen the Concordat to Support Research Integrity and ensure the requirements and expectations are clearer. We plan to establish an entity which can independently examine whether research institutions have followed appropriate processes to investigate misconduct. In addition, we are in the process of developing a UKRI ethics statement and framework.

Equality, Diversity and Inclusion (EDI)

Here we are already making progress to realise our ambitions. Following the appointment of Professor Jennifer Rubin, Executive Chair of the Economic and Social Research Council, as the UKRI Champion for Equality, Diversity and Inclusion, we have established a UKRI EDI External Advisory Group, comprising an outstanding group of individuals with EDI expertise from diverse backgrounds.

Bullying and harassment

The Global Institute for Women's Leadership at King's College London has carried out an evidence review into bullying and harassment that will inform how UKRI can take action to address these issues in the research and innovation landscape. The review has focused on current challenges both in the UK and internationally, an overview of approaches to prevent bullying and harassment in the research and innovation sector and other sectors, and an assessment of existing evidence for the effectiveness of those approaches and where gaps in knowledge exist.

Open access to research

In September 2018 UKRI became part of an international coalition called "Plan S". This aims to accelerate sustainable open access and seeks to collaborate with other research funders and stakeholders to achieve better value and impact for publicly funded research. Working internationally is important to help achieve open access since scholarly communications operate globally. Moving to openness requires alignment.

We have initiated an open access review that will take Plan S into account. The review seeks to develop a policy across UKRI that:

- enhances the research, societal and economic benefits that can be derived from our funded research through improving access to research outputs;
- delivers sustainable support for open access and the best value for money;
- ensures policy is joined up across our constituent bodies and that it is clear, unambiguous and as easy as possible to comply with;
- encourages the development of new models of open access publishing;
- supports the adoption of open access through collaboration and alignment with national and international partners.

4.3 Public Engagement

Research improves lives and UKRI's vision is a society in which research is created, used, challenged, valued, and shared by all. We aim to deliver a broad programme of public engagement, providing opportunities for informing, involving and inspiring the public in the UK's world-class research and innovation. Throughout 2018-19 we have engaged with internal and external stakeholders to develop UKRI's vision for public engagement. We will publish this strategy in Summer 2019. Examples of the public engagement activities undertaken in 2018-19 include:

Inspiration

We have brought schools and young people together with higher education institutions, research institutes and researchers throughout the UK to create opportunities to inspire and engage with the next generation of scientists and researchers. UKRI, led by EPSRC, has been proud to support the Year of Engineering to inspire young people from all backgrounds to take a closer look at engineering. Innovate UK's Young Innovator programme and Women in Innovation awards celebrated diversity in innovation, providing inspiring role models for young people. We supported delivery of the BEIS Public Engagement and Inspiration programmes such as the STEM Ambassadors, who delivered 500,000 volunteer hours to young people throughout the UK.

Public Engagement with Research

We have had an active programme of public engagement with research across the breadth of UKRI's research and innovation. Highlights include engaging with adults and young people at festivals, science centres and museums including ESRC's Festival of Social Science, STFC's Explore Your Universe and NERC's Operation Earth. In collaboration with the BBC we reach hundreds of thousands of people every year through our AHRC New Generation Thinkers scheme, where arts and humanities researchers are selected to make programmes about research with the BBC, while also taking part in public engagement events and activities around the country.

Public Dialogue

During 2018-19 we have listened and responded to the issues and opportunities raised by members of the public as stakeholders in research. We launched a NERC-led public dialogue about Digital Environments, which will report in 2019-20. In June 2018, we published the results of an EPSRC-led public dialogue about quantum technology and its applications, the findings of which are informing research and innovation priorities in the next phase of the UK National Quantum Technologies Programme.

Near-term actions

- In 2019-20 UKRI will continue to deliver on our talent programmes by, starting the first cohort of 200 new AI doctoral students, awarding of up to 200 further FLFs, and launching the Hawking and Turing Fellowships. UKRI will also pilot a new Innovation Scholarship scheme, with the dual objectives of increasing porosity between business and academia and facilitating the exchange of ideas and skills.
- Supporting and nurturing talent goes beyond our funding schemes. In 2019-20, we will play a more active role in supporting technicians and skilled specialists, both in our own institutes and facilities and in the wider research and innovation workforce. UKRI is also working closely with partners in developing the new version of the Concordat to Support the Career Development of Researchers, which will be published in 2019.
- In 2019-20 we will continue our work on Equality, Diversity and Inclusion by developing a strategic framework, which will help to ensure that EDI is considered and supported in all that we do, including in flagship programmes such as ICSF and SPF. It will be complete by Summer 2019.

- We will address bullying and harassment by working with national and international partners to develop the evidence base for the prevalence, challenges and evidenced effective interventions needed to prevent and tackle these problems.
- We will develop open access policy options and actions and assess their feasibility. This will involve a consultation exercise to inform the final policy and implementation plan. We will continue to engage in Plan S in collaboration with other national research funders.

We will launch a new public engagement strategy. This will involve:

- Continuing to deliver an £9m portfolio of STEM inspiration and public engagement initiatives such as STEM Ambassadors, the CREST awards and Sciencewise;
- The development and delivery of £2m of new activity in 2019. As part of this we will fund a number of citizen science pilot projects focusing on research areas that are of strategic interest to UKRI. Further funding will be awarded to a number of these pilots in 2020-21 to develop full scale projects.

5. Infrastructure: enabling access to, and investment in, world-leading research and innovation infrastructure

The UK's global stature in research and innovation is founded on access to world-leading infrastructure that supports research and innovation activities at all scales, from individual investigators to large multinational collaborations.

5.1 Investment in world-leading research and innovation infrastructure

UKRI has continued its commitment to provide its researchers access to cutting-edge scientific research infrastructure. In 2018-19, UKRI invested almost £2bn in infrastructure and associated core Research and Development, which includes institutes, centres, and facilities that are used by research and innovation communities to conduct research and foster innovation in their fields. For investments above £20m, UKRI centrally reviews progress for each project/programme across 5 key areas: delivery confidence, finance, people, milestones, and benefits. In 2018-19, all major projects remain on-track.

Of the £2bn in total investment, £480m was invested in Grand Challenges and major capital projects, which included:

- £92m for the Royce Institute, which brings together world-leading researchers and world-leading companies to develop materials science into a major economic force
- £74m on the UKRI research ship RRS Sir David Attenborough, a key part of a government polar infrastructure investment programme, designed to keep Britain at the forefront of world-leading research in Antarctica

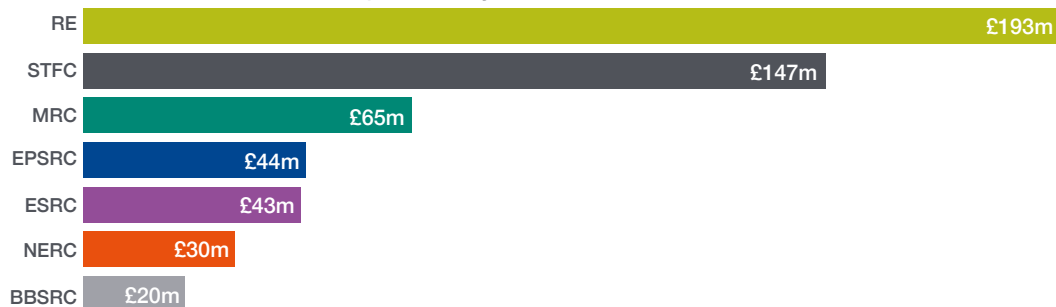


- £146m to fund the research facilities of Higher Education Institutions (HEIs) undertaking world-leading research through the UK Research Partnership Investment Fund
- Opening of the Quadram Institute, a partnership with the Norfolk and Norwich Hospital, which brings together clinical practice with cutting edge research to transform our understanding of how food affects gut health.

£540m of the infrastructure total was invested in World Class Lab funding, which is allocated to councils to be spent at their discretion in line with their strategic priorities. This funding maintains and refreshes existing research infrastructure, to ensure the research community's ability to carry out exceptional research and to retain the country's prominence in research and output. This investment includes, for example, BBSRC's ALERT programme for mid-range equipment to enhance UK capabilities in key areas of bioscience research; EPSRC's strategic equipment to enhance scientific capability and support high-quality research in their remit; ESRC's social science data services; the West Africa Research Infrastructure at the MRC Gambia Unit, that aims to reduce the burden of illness and death in low and middle income countries; NERC's environmental data service; and STFC's construction of the UK elements of the upgrades to the ATLAS and CMS particle physics detectors at CERN; as well as research capital from Research England that contributes to the replacement of premises or infrastructure, improved space utilisation, and increased sharing and utilisation of research equipment.

This funding was allocated to the following councils:

2018-19 World Class Lab Expenditure by Council



Just under half of the total infrastructure spend (about £900m) is funding for UKRI's institutes, centres, facilities, which include⁶:

- MRC's institutes, units and centres
- STFC's large-scale research facilities and UK access to large-scale facilities in other countries
- NERC's research centres.

As well as funding infrastructure, we have encouraged collaboration to increase the value of this investment through investing in partnership, working with suppliers and users, and facilitating access to infrastructure that we fund, nationally as well as internationally and across disciplines.

⁶ Expenditure on Catapults is classed as supporting the "Business Environment" ambition, and not included with the infrastructure total.

5.2 Research and Innovation Infrastructure roadmap

UKRI's investment in research and innovation infrastructure sits alongside the contributions of several other public, private and charitable organisations that support UK research and innovation capability. Working with these organisations, UKRI is developing a long-term research and innovation infrastructure roadmap for the period up until about 2030. It will:

- inform future investment decisions in research and innovation infrastructure and provide a framework for development of new projects from concept to design and implementation
- offer a coherent long-term vision to maximise the value of government investment in national and international infrastructure and contribute to the ambition to deliver an economy where Research and Development investment contributes 2.4 per cent of GDP by 2027
- recognise common themes, which could benefit from a cross-sectoral approach
- promote the UK as a global leader in research and innovation.

In December 2018, we published Initial **Landscape Analysis**⁷, which captures our emerging understanding of the existing infrastructure landscape and provides a solid foundation on which to build our roadmap for future planning. It draws heavily on over 800 responses from existing facilities, supplemented with insight gained from consultation workshops and interviews with stakeholders. These span research disciplines and cut across the research and innovation spectrum.

This was followed in March 2019 by the publication of the **Roadmap Progress Report**⁸, which synthesises input from the first phase of the roadmap programme, including workshops and discussions with established advisory groups and networks. It outlines emerging themes and key drivers of change impacting research and innovation infrastructures, such as developments in artificial intelligence and data science; and identifies several emerging cross-cutting policy issues, such as the availability of specialised skilled staff across all sectors.

The programme has received contributions from a broad range of stakeholders, including academia, representative bodies, learned societies, business networks, key charitable organisations, public sector research establishments (PSREs), the Catapult network, government departments, agencies and devolved administrations. It is also drawing on the programme's advisory board, which includes council representatives from across UKRI, BEIS-funded PSREs, Universities UK (UUK), the Association for Innovation Research and Technology Organisations (AIRTO), devolved funders and the Royal Society. We have consulted internationally with the European Strategy Forum on Research Infrastructure (ESFRI) and colleagues responsible for the development of roadmaps in other countries.

Near-term actions

In 2019-20 we will:

- Finalise and publish the first edition of the infrastructure roadmap, which will set out detail on future capability needs, options for how these might be achieved, and an outline of next steps.

⁷ <https://www.ukri.org/files/infrastructure/landscape-analysis-2-pdf/>

⁸ <https://www.ukri.org/files/infrastructure/progress-report-final-march-2019-low-res-pdf/>

- Develop an online portal for research and innovation infrastructure discovery that identifies and signposts infrastructures available to researchers and innovators, for release in summer 2019.



6 International: building global partnerships and addressing global challenges

UKRI fosters international collaborations to leverage the best talent, ideas and resources, wherever in the world they are located. Global cooperation enhances the quality of research and innovation, avoids duplication of effort, provides economies of scale, and allows us to meet global challenges, such as climate change, which require an international approach due to their scale and complexity.

UKRI's Strategic Prospectus sets out our ambition for the UK to maintain its reputation for research and innovation excellence and its status as an outward-facing nation, open to talent and ideas from around the world, by:

- Promoting the UK as a world-class destination for research and innovation
- Developing new and existing collaborative programmes that target countries with high performing research and innovation sectors to engage in joint-funded bilateral or multilateral agreements
- Using the Newton Fund and Global Challenges Research Fund to meet global challenges
- Building the capacity of UK institutions, researchers and innovators to stimulate, consolidate and grow their international collaborative activity.

UKRI will work with BEIS to support the UK's International Research and Innovation Strategy. Working in partnership with our teams in our international offices in Washington D.C., Brussels, New Delhi, and Beijing, we will use new and existing international partnerships to enhance the quality of UK research and innovation, and attract outstanding international talent to our universities, research organisations and businesses.

6.1 Global Challenges Research Fund (GCRF)

GCRF supports cutting-edge research that addresses challenges faced by developing countries. It focuses on urgent challenges where ground breaking research has the most potential for real-world impact, working in partnership with developing countries, global institutions and funders of research for development.

2018-19 saw the launch of 12 GCRF Interdisciplinary Research Hubs. An investment of £200m will support over 550 researchers in 85 countries tackling global challenges, including water security, health, urban equity and gender, justice and security. This was also the year when GCRF Challenge Leaders were recruited to develop the six GCRF strategic portfolios in Health, Food Systems, Education, Resilience, Cities and Conflict and Migration.

2018-19 also saw the launch of the UKRI-African Research Universities Alliance (ARUA) partnership. The partnership will address the United Nations Sustainable Development Goals (SDGs), strengthen Africa-UK research collaborations and enhance research capacity across African and UK research communities.

6.2 Newton Fund

The Newton Fund promotes the economic development and social welfare of emerging economies through strengthening our international partners' science and innovation capacity.

In 2018-19, two flagship calls were launched: Understanding of the Impacts of Hydrometeorological Hazards in South East Asia was held in collaboration with counterparts in Indonesia, the Philippines, Vietnam, Malaysia and Thailand, NERC and ESRC. A total of £7.8m was committed to 18 projects aiming to boost resilience to hazards such as floods, droughts, landslides and storm surges in South East Asian countries that will run until 2021. Each partner country providing a contribution to matched funds.

In partnership with Colciencias in Colombia, £2.8m was committed to 10 projects on post-conflict transitions. This programme will bring together researchers from Colombia and the UK, under the themes of participation and inclusion, to work towards reconciliation and education for peacebuilding.

Alongside these calls we continued our successful staff exchanges programme, that allows us to share learning and good practice with colleagues from Newton partner country research funders in South Africa, Turkey, Thailand, Philippines, Malaysia, Colombia, Egypt, Kenya, Brazil and Peru. All of these projects build on an existing Newton Fund investment of over £150m across several years, with more than 120 programmes in 16 countries.

6.3 Fund for International Collaboration (FIC)

The FIC aims to enhance the UK's excellence in research and innovation through global engagement, forging new bilateral and multilateral research and innovation programmes with a select group of leading global partners. The first wave of FIC-funded programmes, a £79m investment in 17 international projects, were launched in January 2019.

The projects leverage matched funding from our international partners and reflect the breadth of UK research and innovation. They range from new activities in social innovation and the creative industries to agricultural technologies. Helping to expand the UK's engagement and influence in multilateral fora, the programmes involve global partners from leading research and innovation nations including Australia, Canada, China, Israel, Japan, South Korea and the USA.

6.4 Strategic global partnering

UKRI is working to strengthen existing and establish new international partnerships to ensure the UK continues being a world leader in research and innovation:

- *UK-Japan Collaborative Science and Technology programme* – agreed with the Japanese Prime Minister in January 2019, this £30m programme will transform the way people live in the 21st Century.
- *UK-China Joint Commission in Science and Innovation* – held in November 2018, it strengthened the Joint Science and Innovation Strategy with China (signed in 2017) and delivers new collaborative research on Healthy Ageing.

- *UK-Canada Joint Science and Technology Committee* – in September 2018 the UK hosted the Committee's inaugural meeting to review progress under the 2017 MoU. A £1m UK-CAN fund will support collaborative feasibility programmes in priority areas, including: Quantum Technologies, Clean Technologies, Agricultural Technologies and Advanced Manufacturing.
- *UK-India Science and Innovation Commission (SIC)* – in July 2018 we announced four new awards worth £4.8m under the Civil Nuclear Energy research programme and seven awards worth £10.8m under Phase 2 of the Global Research Programme on Health.
- *UK-Israel Science and Innovation agreements* – signed in May 2018, the agreements drive Research and Development partnerships between British businesses and Israeli tech leaders on areas such as Ageing and Artificial Intelligence.
- *UK-India Tech partnership* – established in April 2018, it builds on 10 years of bilateral collaboration to bring together UK industrial strategy with India's initiatives, including Digital India and Start-up India.
- *Framework of the UK-Canada Clean Growth Partnership* – signed in September 2017, the framework has delivered a joint fund of up to £11m for the Power Forward Challenge on smart grids and energy storage.
- *International agreements* – in 2017 we signed significant science and innovation agreements with the US. These agreements provide an overarching framework for UK Institutions to collaborate with partner countries, especially around the four Grand Challenges in our Industrial Strategy, while building long-lasting partnerships.

UKRI also continues to actively engage with our European partners to secure the best science relationship with Europe and the world, including:

- *EUREKA* – In 2019 the UK chairs this international innovation collaboration network for a third time. The first EUREKA Network Meeting was held in Edinburgh, and the UK has now injected an additional £20m of funding for UK businesses to collaborate globally through EUREKA over the next four years.

Near-term actions

In 2019-20 these will include:

- *GCRF* – 2019-20 will see awards made under the GCRF Collective Programme and a review of the first year's progress under the Growing Research Capability Programme. This year will also see the launch of the Global Research Translation Awards, Digital Innovation for Development in Africa, KTN Africa, the Energy and Agri-Tech catalyst and Demonstrate for Impact.
- *Newton Fund* – we will launch an impact scheme in collaboration with the British Council. This £25m initiative will give existing Newton award holders the opportunity to apply for additional funding to stimulate new pathways to impact.
- *FIC* – We will launch a further wave of Fund for International Collaboration-funded programmes.

Staff Performance Report

Our first year has, as expected, been one of challenges and opportunities. We have brought together employees from the seven research councils, Innovate UK, and Research England, while also creating a corporate hub, to make UKRI. With the teams in our centres, institutes and units (CIUs) and our staff on secondment we employ over 8,000 staff.

Our CIUs:

- British Antarctic Survey
- British Geological Survey
- Centre of Ecology and Hydrology
- Laboratory of Molecular Biology
- London Institute of Medical Science
- Medical Research Council Harwell
- National Centre for the Replacement, Refinement and Reduction of Animals in Research,
- National Oceanography Centre

As UKRI we have sought to build on the capabilities of the individual councils to create a more agile and multi-disciplinary organisation with the capacity to deliver significant new cross-cutting programmes, such as the Industrial Strategy Challenge Fund (ISCF). The increase in scale of the organisation has also provided a critical opportunity to enhance our International capability.

We have a workforce that is truly world class. For the councils' and UKRI central teams, we have been structuring the new organisation and working to harmonise processes as the key foundation of a broader transformation that will enable UKRI to deliver our stretching goals. The teams in our CIUs have not seen significant changes since the inception of UKRI and retain a continued focus on active scientific research.

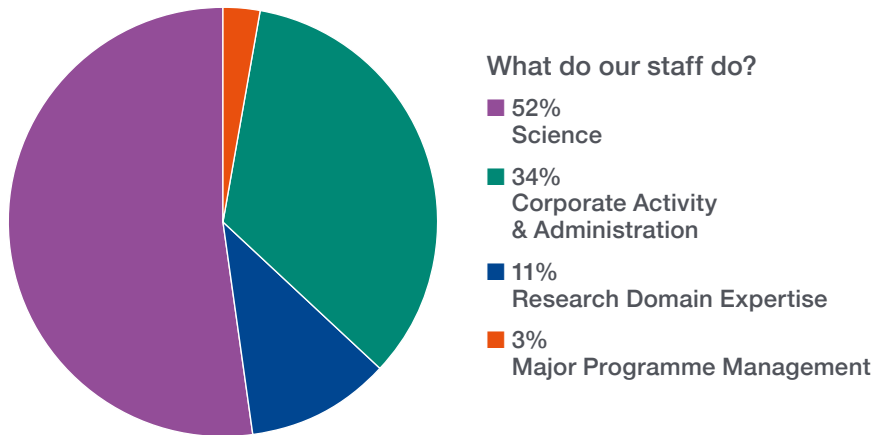
Our ability, however, to attract and retain the right staff to deliver the increased levels of funding represents a key risk and our performance measures related to this centre around measuring existing and future quantity and quality of staff.

What does our workforce look like?

We categorise our workforce within one of four broad domains; Science and Research domain experts, Corporate administrators and Major programme and project managers. We are focused on the diversity of our workforce; success in the highly competitive field of scientific research depends upon people with diverse perspectives, experiences, and expertise working together.

Staff turnover sits around 15 per cent for the year, and other than expected peaks and troughs (associated with seasonal and academic years) we have seen no significant trends due to transition and ongoing change initiatives. We participated in the Civil Service People survey and the results, coupled with more targeted surveys do however indicate we have work to do in communicating with staff, and our approach to change management.

Our gender split is 43 per cent female and 57 per cent male, but within science teams female representation drops to 35 per cent. We are actively seeking to rebalance this disparity. We recognise we have a lack of ethnic diversity; only 6 per cent of our staff belong to the Black, Asian, Mixed or other Ethnic group which is below the national UK figure (13 per cent). Two per cent of staff report having a disability, but low disclosure rates indicate a continued reticence to report on this issue. We are proud to be an accredited Disability Confident employer and regard this as an issue that we need to address.



What are we doing?

The recruitment of staff to fill senior roles has and continues to be a significant activity; we have successfully filled over 20 roles within the year. We have consolidated general recruitment activity at the same time as EU Exit mitigation plans came into effect. As a result, we successfully ran centralised recruitment campaigns, recruiting several hundred staff on fixed term appointments. We will continue to focus on building a unified resourcing capability to more quickly and easily plug gaps.

In the coming year the focus will move to Learning and Development to better support the careers of individuals and enable them to identify rewarding career paths. Following a successful pilot programme, we will be launching a senior leadership development programme and a generic management development programme which among other aims will help develop a common UKRI culture. We are also focusing on early careers, specifically within some specific STEM populations and are working with BEIS and HM Treasury to achieve an increased level of pay freedom for some of these specific roles. We are also developing a single common performance management platform, which will enable us to apply a consistent approach across the organisation.

Much original change activity focused on the creation of UKRI, however much consolidation work has been in progress to ensure the underlying organisational changes associated with UKRI's creation work effectively with our council organisations. We continue implementation work to define staff roles and thereby measure key metrics such as vacancy rates.

Much of our work in the first year of UKRI has been about unifying policies, approaches and processes. In the coming years we will better recognise the enormous contribution our people make, more clearly recognise the needs of our differing populations and support them appropriately.

UKRI Sustainability Report 2018-19

UKRI Approach to Sustainability

Through its strategic prospectus UKRI is committed to **embedding sustainability in everything that we do**. To deliver scientific excellence and innovation we must ensure that the way we conduct, fund and support our research meets the highest sustainability standards.

We established the UKRI Sustainability Forum in September 2018. It will steer future UKRI environmental sustainability policy and includes representation from all UKRI partners. The forum encourages collaboration and sharing best practice between UKRI partners while driving innovation to find solutions to common challenges⁹. **17**

As a newly formed organisation, UKRI is at the start of its sustainability journey, utilising skills and ideas from across the councils and their partners. We aspire to move beyond compliance and become a 'Leader for Sustainability'.

Over a three-year period, we will benchmark sustainability performance, roll out a new environmental database and harmonise reporting between the councils which make up UKRI. During this transition, those councils captured by the HM Treasury Sustainability Reporting Guidelines for Public Sector Bodies prior to UKRI formation will report actual performance data for the four year reporting period, while performance data for the small partners will be also included for the last year (since UKRI formation)¹⁰. This report summarises environmental performance against a common set of metrics: greenhouse gas emissions, water usage and waste disposal, with corresponding financial data. We provide commentary on how we are fulfilling our sustainability commitments in procurement, construction, and biodiversity action planning and climate change adaptation. Commentary at the end of this report describes the work and sustainability successes of the UKRI community.

UN Sustainable Development Goals

UKRI directly supports the UK contribution to all 17 of the UN Sustainable Development Goals (SDGs). Specific contributions highlighted by the UK Government include:

- Working to increase investment in R&D across the economy to 2.4 per cent of GDP by 2027 **9**
- Supporting international action on climate change **13**
- Working together with business, academia and civil society to deliver the Clean Growth Strategy **12**

⁹ For more information visit: <https://www.ukri.org/about-us/policies-and-standards/sustainability/>

¹⁰ Environmental data for UKRI partners with small estates and not historically captured by the HM Treasury Sustainability Reporting Guidelines for Public Sector Bodies are estimated for 2018-19 in this report. These partners are defined as the non MRC, STFC and NERC components of UKRI. These partners form a small part of our direct environmental footprint e.g. electricity use for these partners presents an estimated 1.08% of total UKRI electrical use. UKRI is implementing a data collection system to facilitate a harmonised approach to reporting in future.



UKRI Environmental Performance Quantitative Reporting Areas

Scope of UKRI reporting

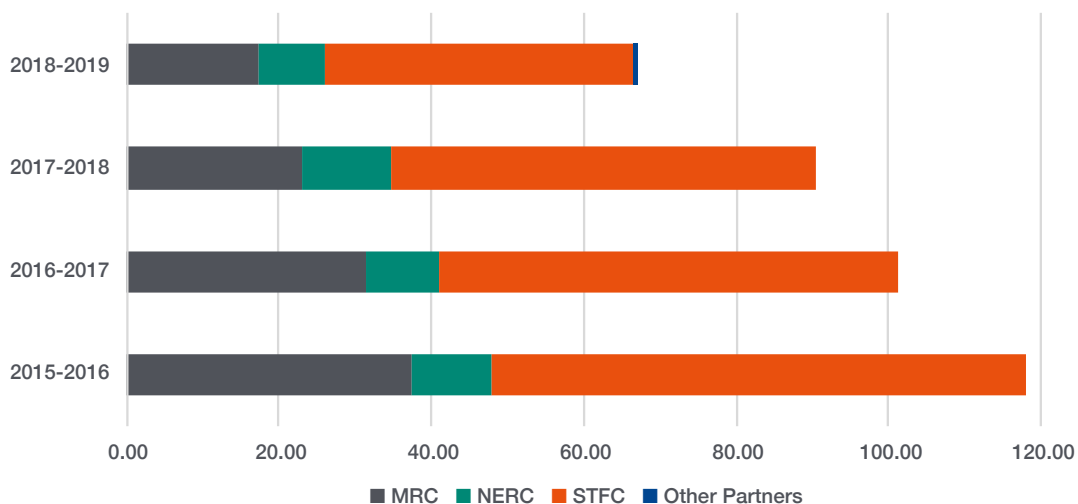
The scope of data set reporting is defined by the HM Government Greening Government Commitments. The data set includes direct (scope 1); indirect (scope 2) and Greenhouse Gas emissions from UK buildings and business-related transport (scope 3) for the four year reporting period 2015-16 to 2018-19.

The historic base line data is the MRC, STFC and NERC reportable estate, including scientific facilities. MRC, STFC and NERC have historically reported against the Greening Government Commitments and are therefore in scope for annual report sustainability reporting for the previous three year period.

The 2018-19 year includes the additional reportable estate we are required to report on due to the formation of UKRI. This is the UKRI component of Polaris House in Swindon not already reported by MRC, STFC and NERC.

UKRI greenhouse gas emissions

UKRI total reportable carbon emissions (1000t CO₂)
2015-16 to 2018-19



UKRI carbon emissions from the UK estate fell by 23.5 per cent, 2018-19 vs. 2017-18. This reduction was largely due to a notable reduction in the 'carbon intensity' of carbon conversion factors published by central government. For example, the grid average electricity conversion factor reduced by 32 per cent (2018-19 vs. 2017-18) due to the changing energy supply mix in the UK as the result of better representation of renewables and phasing out of coal generation. Milder winter conditions were also observed reducing heating demand across the estate and therefore reducing energy consumption, particularly heat and gas.

UKRI greenhouse gas emissions		2015-16	2016-17	2017-18	2018-19	
Non-financial Total gross indicators (1000t CO ₂ e)	Total gross emissions	118.2	101.3	90.6	66.9	
	Total net emissions	118.2	101.3	90.6	66.9	
	Gross emissions Scope 1 (direct)	Gas & LPG	13.3	11.3	14.1	12.4
		Owned transport	0.3	0.2	0.2	0.1
		Fugitive emissions	1.8	1.7	1.7	1.7
	Gross emissions Scope 2 & 3 (indirect)	Electricity	101.3	86.5	72.8	51.5
		Heat	0.03	0.03	0.03	0.02
		Business Travel	1.5	1.6	1.8	1.2*
	Related energy consumption (million kWh)	Electricity: non renewable	207.4	196.0	165.3	167.7
Electricity: renewable		0.2	0.2	0.2	0.3	
Gas		72.3	61.3	69.9	67.6	
LPG		0.03	0.03	0.06	0.01	
Heat		0.1	0.1	0.2	0.1	
Other		0.5	0.3	0.3	0.00	
Financial Indicators (£m)	Expenditure on energy	19.3	20.0	17.6	23.4	
	CRC Expenditure	1.9	1.7	1.4	0.0	
	Expenditure on accredited outsets	0.0	0.0	0.0	0.0	
	Expenditure on business travel	5.3	5.6	5.2	4.5*	

Notes for data

The observed total carbon emissions reduction is largely due to the milder winter conditions over the 2018-19 winter period compared to the 2017-18 period and due to the reduction in carbon intensity of government issued carbon conversion factors.

Historic reductions in energy use can be attributed to reduction on the overall size of the estate, notably at MRC, and efficiency improvements across UKRI.

Minimum reporting requirements do not include international air travel or international rail travel.

UKRI received confirmation from the Environment Agency that following its formation MRC, STFC and NERC did not have to participate in the final year (2018-19) of the Carbon Reduction Commitment (CRC) Energy Efficiency scheme.

*Business travel data is not current available for the additional smaller partners reported in the 2018-19 year.

UKRI waste generation

UKRI waste generation			2015-16	2016-17	2017-18	2018-19
Non-financial Total gross indicators (tonnes)	Total waste		2608.0	2780.1	2021.9	2071.0
	Hazardous Waste	Total	327.0	490.0	291.7	287.4
		Landfill	463.0	379.6	110.6	110.8
	Non- hazardous waste	Reused/ recycled Inc. composting	1591.0	1607.3	1372.0	1227.3
		Incinerated with energy recovery	227.0	303.1	247.6	445.5
Incinerated without energy recovery		0.0	0.0	0.0	0.0	
Financial Indicators (£m)	Total disposal cost		0.9	0.8	0.9	0.7
	Hazardous Waste		0.3	0.3	0.3	0.3*
	Non- hazardous waste	Landfill	0.11	0.08	0.06	0.03*
		Reused/ recycled/ composted	0.3	0.3	0.3 ^a	0.2 ^a
		Incinerated with energy recovery	0.1	0.1	0.2 ^a	0.2*
Incinerated without energy recovery		0.0	0.0	0.0	0.0	
Notes for data						
All waste sent for incineration is with energy recovery based on local knowledge of sites and waste facilities.						
*Data not available for UKRI other partners						
^a Data not available for STFC						

UKRI water consumption

UKRI water consumption			2015-16	2016-17	2017-18	2018-19
Non-financial Total gross indicators (000 m ³)	Total water consumption		480.6	349.0	269.9	282.5
	Water consumption (office estate)	Supplied	109.5	79.0	86.9	105.8
		Abstracted	0.0	0.0	0.0	0.0
	Water consumption (non- office estate)	Supplied	371.1	270.0	183.0	176.7
Abstracted		0.0	0.0	0.0	0.0	
Financial Indicators (£m)	Total cost		0.8	0.74	0.58	0.82
	Water supply cost (office estate)		0.2	0.18	0.19	0.25
	Water supply cost (non- office estate)		0.6	0.56	0.39	0.57
Notes for data						
Office Estates is taken as Polaris House, STFC non-facility buildings plus the MRC Kemble Street offices in London. Note Kemble Street is due to be returned to the landlord in August 2019.						
No water is abstracted for consumption across the UKRI estate, but water is abstracted and returned for process cooling under permit at National Oceanography Centre Southampton (NERC).						
Water costs include costs of any associated licences.						

UKRI environmental performance qualitative reporting areas

Biodiversity action planning

A number of the Biodiversity initiatives being undertaken are outlined at the link below:

www.ukri.org/about-us/policies-and-standards/sustainability/

Sustainable procurement

UK Shared Business Service (UK SBS) provides the procurement function for UKRI and ensures adoption of applicable government buying standards and Timber Policy as applicable. UKRI is working with UK SBS to drive sustainable procurement practices down the supply chain. This includes tracking activities against ISO BS 20400:2017, the international guidance standard for Sustainable Procurement, and the delivery of Sustainable Procurement training to category buyers in February 2019.

UKRI centres and institutes arrange their own catering contracts. At UKRI's Head Office in Swindon, catering services are provided by Aramark & Harbour and Jones. Catering outlets sell Fairtrade Goods and undertake a range of sustainability initiatives e.g. reducing the single use plastics **12**.

UKRI's policy is to comply with the Prompt Payment Code for the payment of invoices for goods and services. Whilst our standard terms and conditions specify payment within 30 days of receipt, we aim to make payments within five working days. In 2018-19, UKRI paid 95 per cent of undisputed invoices were paid with 30 days and 64 per cent were paid within five working days.

Climate change adaptation

Practical climate change adaptations are being made throughout the UKRI estate and are considered during policy development where applicable.

At the MRC Laboratory of Molecular Biology, solar control blinds have been reprogrammed to improve benefit from solar gain in periods when parts of the building are in controlled heating mode **12 13**. At NERC, the need to adapt to climate change is regarded as part of the new NERC Responsibility Framework and is considered as part of all major projects, for example in the hull design for the new polar research vessel **9**. STFC considers future weather extremes in new building design. For example at the Daresbury Laboratory, cladding has been used to assist with internal building temperature regulation.



Sustainable construction

Examples of sustainable construction practices can be found across the UKRI estate.

New building designs and major refurbishments for MRC and NERC are commissioned and guided by the 'BREEAM' environmental assessment scheme, while STFC also builds sustainability criteria into construction works. STFC is investigating the use of ground source cooling for scientific facilities at Daresbury Laboratory **9 12**, where site work is ongoing to implement reduced mains voltage **9 12**. STFC has rolled out solar panels across its estate including its latest installation at the STFC Royal Observatory Edinburgh in September 2018 **9 13**.

In Swindon, UKRI has made extensive reuse of furniture as part of the Polaris House refurbishment, saving over 350m² of desktop materials, and re-used power and data cables to those desks.

Greening ICT

UKRI is committed to the promotion and adoption of Greening ICT principles and is establishing working groups to drive best practice. NERC has run staff energy awareness events across the NERC estate and MRC and NERC have been saving energy by moving data to the cloud in server reduction works. MRC requires new equipment to have improved energy performance. Redundant equipment is offered for reuse by school or charitable bodies **12 13**.

STFC hosts large data centres both for internal scientific use and as a Tier 2 centre for CERN on behalf of the UK. These are managed to reduce cooling costs and thus energy usage. The STFC 'green computing' group is researching novel ways to reduce the cooling costs in large data facilities **9 13**.

Modern slavery

UKRI is committed to preventing slavery and human trafficking in all its activities and contractual suppliers, whilst working with them to ensure that their supply chains are also free from slavery and human trafficking, in line with our responsibilities under the Modern Slavery Act 2015. During the year, UKRI has created and resourced a new central Governance team which has responsibility for leading UKRI's Modern Slavery agenda. The Governance team is engaging with the key stakeholders across the organisation to evolve UKRI's approach and training plans for 2019-20. The UKRI Modern Slavery and Human Trafficking Statement for 2018-19 will be published by Autumn 2019 **8**.



Further UKRI sustainability case studies

Other wider sustainability successes from across the UKRI in 2018-19 have included:

- All NERC sites successfully transferred to the new 2015 version of ISO14001, the International Standard for Environmental Management Systems **12 13 17**
- Innovate UKs project with business partner ‘NVP Energy’ developed a technology that cleans wastewater, whilst recovering valuable high-quality biogas that are available for heat and electricity production on site **6 7 9 11**
- MRC developed an online waste gadget for staff at the MRC Laboratory of Molecular Biology to identify the best disposal route for all waste **12**
- As a lead in the Dark Skies Discovery network, STFC continues to actively manage light pollution from its facilities **15 4**
- EPSRC’s investment in The Advanced Metal Casting Centre, continues to help to make automotive components lighter and completely recyclable, saving energy as well as material **9**
- NERC retained the Carbon Trust Standard, which commits the council to year-on-year carbon reduction **13**
- MRC energy-saving trials of running some 80 freezers at warmer set points without damaging samples, and of reducing the number of air changes in specialist buildings, continue to reduce energy costs **12 13**
- In a joint venture with Siemens, STFC is currently working on a process to produce ammonia using renewable energy **9 7**
- ESRC-funded research has helped over 1000 hair stylists gain water saving skills to save a total of 286,000 litres of water a year **12**.

To find out more about Sustainability activity across UKRI visit:

www.ukri.org/about-us/policies-and-standards/sustainability/

Professor Sir Mark Walport

Chief Executive and Accounting Officer

2nd July 2019



Accountability Report





Corporate Governance Report

The Corporate Governance report sets out the governance arrangements of UKRI and comprises:

1. The Directors' Report
2. The Statement of Accounting Officer's Responsibilities
3. The Governance Statement

Directors' Report

UK Research and Innovation (UKRI) is an independent non-departmental public body of the Department of Business, Energy and Industrial Strategy (BEIS), established by the Higher Education and Research Act 2017.

UKRI's Chief Executive, in his role as Accounting Officer, is accountable to the public via Parliament. Parliament monitors and influences UKRI's work through its Select Committees and the Parliamentary Ombudsman.

UKRI leadership

The Governance Statement outlines UKRI's governance structure and describes the role of the UKRI Board and its Committees, with information about membership, performance and attendance.

Note 22 in the Accounts contains details of related party transactions.

Registers of interest for UKRI's Board and Committees can be found at: <https://www.ukri.org/about-us/governance-and-structure/uk-research-and-innovation-board/>

Personal data related incidents

UKRI recognises and fully supports the need for effective information governance in protecting its information and the information entrusted to it in the course of its business. UKRI's approach to information governance is described in the Governance Statement. The tables that follow set out the personal data related incidents during 2018-19.

Summary of personal data breaches reported to the Commissioner's Office in 2018-19:

Date of incident	Nature of incident	Nature of data involved	Number of people potentially affected	Notification steps
June 2018	Unintentional internal release of underlying data in an Excel spreadsheet	Age, date of birth and ethnicity data	39	June 2018 - reported to ICO August 2018 - ICO advised no further action necessary

Summary of other personal data breaches in 2018-19

Category	Nature of incident	Total
I	Personal data unintentionally included in a wider communication	5
II	Personal data unintentionally sent to incorrect recipient	18
III	Personal details assigned to incorrect employee record	7
IV	Hacking, malware	7
V	Other	0

Freedom of Information

UKRI is subject to the Freedom of Information Act and the Environmental Information Regulations. Responses were provided to 318 requests during 2018-19.

Financial Review

Expenditure

UKRI's expenditure is reported on two different bases in this Annual Report and Accounts:

- 1) The Statement of Comprehensive Net Expenditure (page 100) presents net expenditure of £4.9bn for the UKRI Group. The expenditure is calculated following accounting standards and guidance which are explained in more detail in note 1 to the financial statements and on a similar basis to those rules applied by organisations internationally.
- 2) Outturn against Budget, which is a total of £7.7bn (see table overleaf). These figures are calculated in accordance with HM Treasury's budget framework. The figures used in this Annual Report have been prepared on this basis.

There is a difference between these two bases primarily due to:

- 1) The net gain on absorption of £2.6bn arising from the transfer of undertakings arising into UKRI. This is included in the Statement of Comprehensive Net Expenditure but does not have a budgetary impact.
- 2) Additions to Property, Plant and Equipment, Intangible Assets and Financial assets of £279m that are capitalised, rather than being reflected in the Statement of Comprehensive Net Expenditure, but have a budgetary impact.

Outturn against Budgets for 2018-19

	Full Year Outturn £m	Budget £m	Variance £m	Variance £m
Science R & D	4,368.2	4,299.9	68.3	1.6%
Science Infrastructure	1,040.4	1,021.4	19.0	1.9%
NPIF	607.9	695.9	(88.0)	-12.6%
Non Ringfenced	563.5	568.7	(5.2)	-0.9%
HE Teaching Grant Contribution	57.7	57.7	0.0	0.0%
Corporate Funding (ESA 10 Administration)	111.1	105.8	5.3	5.0%
Core Capital Allocation	6,748.8	6,749.4	(0.6)	0.0%
GCRF	224.4	230.6	(6.2)	-2.7%
Newton Fund	77.5	81.9	(4.4)	-5.4%
Other Business & Science Group Programmes	268.7	305.8	(37.1)	-12.1%
Tax (Asset Transfer Liability)	143.3	150.0	(6.7)	-4.5%
Ring Fenced Capital Allocation	713.9	768.3	(54.4)	-7.1%
Grand Total Capital Allocation	7,462.7	7,517.7	(55.0)	-0.7%
Annually Managed Expenditure	(36.9)	12.8	(49.7)	-388.3%
Ring-Fenced Resource Budget	231.0	303.9	(72.9)	-24.0%
Total Allocation	7,656.8	7,834.4	(177.6)	-2%

Spend against UKRI's core capital allocation was delivered to budget and spend against the total capital allocation was within 1% of budget. There were some variances in spend against different budget lines. The extra spend on core Science Research and Development was primarily due to £21m of additional tax costs incurred because the Research Councils had charitable tax status, which UKRI does not; and £35m additional spend on core grants within EPSRC.

Infrastructure spend was £19m higher than budget. A number of small underspends across a range of infrastructure programmes enabled UKRI to make a £30m endowment to The Francis Crick Institute as announced by the Chancellor in the 2015 budget.

Spend from the National Productivity Investment Fund was £88m below budget. There was an underspend on the ISCF of £28m. This was primarily driven by some delays to the National Satellite Test Facility as well as the Healthy Ageing, Early Diagnosis and Precision Medicine, Transforming Food Production and Transforming Construction challenges. Overall spend has been managed across the ISCF portfolio to minimise the aggregate variance to budget wherever possible. There has been a specific focus on ensuring that the challenges are progressing to robust delivery plans aimed at maximising the outcomes achieved with the funding available. This means that spend will not always be in line with the budget profiles previously assumed.

Spend on Research England's Development Fund has commenced more slowly than initially planned due to the time taken to develop a pipeline of fundable projects.

The Strategic Priorities Fund activity commenced later than planned due to the time taken to receive starting approval.

During 2018-19, UKRI was required to pay corporation tax on the chargeable gain arising on the transfer of assets from the predecessor Councils into UKRI. The total value of this payment was £143m. Additional funding was received from HM Treasury to fund this payment, so there was no reduction in the value of funding available for research and innovation arising from this tax liability.

Statement of Accounting Officer's Responsibilities

Under the Higher Education and Research Act 2017, the Secretary of State for Business, Energy and Industrial Strategy with the consent of HM Treasury has directed UK Research and Innovation to prepare a statement of accounts in the form and on the basis set out in the Accounts Direction. The accounts are prepared on an accruals basis and must give a true and fair view of the state of affairs of UK Research and Innovation and of its income and expenditure, Statement of Financial Position and cash flows for the period.

In preparing the accounts, the Accounting Officer is required to comply with the requirements of the Government Financial Reporting Manual and in particular to:

- observe the Accounts Direction issued by the Secretary of State, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis;
- make judgements and estimates on a reasonable basis;
- state whether applicable accounting standards as set out in the Government Financial Reporting Manual have been followed, and disclose and explain any material departures in the financial statements;
- prepare the financial statements on a going concern basis; and
- confirm that the Annual Report and Accounts as a whole is fair, balanced and understandable and take personal responsibility for the Annual Report and Accounts and the judgements required for determining that it is fair, balanced and understandable.

The Department of Business, Energy and Industrial Strategy has appointed the Chief Executive as Accounting Officer of UK Research and Innovation. The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which the Accounting Officer is answerable, for keeping proper records and for safeguarding UK Research and Innovation's assets, are set out in Managing Public Money published by HM Treasury.

As the Accounting Officer, I have taken all the steps that I ought to have taken to make myself aware of any relevant audit information and to establish that UK Research and Innovation's auditors are aware of that information. So far as I am aware, there is no relevant audit information of which the auditors are unaware.

The Accounting Officer has taken all reasonable steps to ensure the annual report and accounts as a whole is fair, balanced and understandable and that he takes personal responsibility for the annual report and accounts and the judgments required for determining that it is fair, balanced and understandable.

2018-19 Governance Statement

Introduction

To underpin the UK's new unified system for research and innovation, it was critical that we established the right governance arrangements and control framework. The Governance Statement, for which I take personal responsibility, describes the dynamics of UKRI, its governance, risk and internal control arrangements, and how successfully the new organisation has coped with the challenges and opportunities presented in the year.

The statement explains how UKRI has established and maintained a sound system of governance and internal control, which supports the achievement of UKRI's policies, aims and objectives whilst safeguarding the public funds and UKRI assets for which I am responsible, in accordance with the responsibilities assigned to me and disclosed in HM Treasury's guidance 'Managing Public Money'.

Governance framework

In my role as UKRI's Accounting Officer, I am supported by the UKRI Board, the nine Executive Chairs of the Councils, and the Executive team within UKRI, who use a range of management information to monitor performance and inform decision making. The Executive Chairs, in turn, are supported and challenged in the delivery of their specific aims and objectives by their Councils, which comprise the Executive Chair and ordinary Council members. For more information, see the UKRI Governance Structure table on page 14.

In 2017, the Secretary of State for BEIS appointed the new UKRI Board, which met in shadow form prior to UKRI's creation. The Board, chaired by Sir John Kingman, comprises a very strong team of research and business leaders who worked with me and my Executive team to deliver the successful launch of UKRI last April, and who continue to ensure the UK's research and innovation continues to be world leading. I am grateful to the outgoing non-executive members of the legacy Councils and Audit Committees, who have helped to ensure a smooth transition to the new governance structures. We have been fortunate to retain a number of pre-UKRI non-executive Council members as ordinary Council members, as well as appointing two experienced Research Council non-executive audit committee members to UKRI's Audit, Risk, Assurance and Performance Committee.

UKRI Board

The UKRI Board is chaired by Sir John Kingman, and comprises me as Chief Executive, the Chief Finance Officer and 12 other members. All members are appointed by the Secretary of State for BEIS and details of membership can be found at: <https://www.ukri.org/about-us/governance-and-structure/uk-research-and-innovation-board/board-members/>

The Board is UKRI's top-level decision-making body and exercises full and effective control over the activities of UKRI and its people. The Board provides strategic leadership and makes decisions on issues of major importance, including: key strategic objectives and targets, corporate strategy, major decisions involving the use of financial and other resources, and substantive personnel issues including key appointments. The Board met eight times this year and the key issues discussed include:

- UKRI's strategy, with a particular focus on the 2.4 per cent ambition, the balance of funding between Councils, and preparation of Delivery Plans;
- Cross-cutting policy areas, including international, commercialisation, open research and research culture;
- UKRI's transformation programme;
- Major cross-cutting investments, including the Industrial Strategy Challenge Fund, the Strength in Places Fund, the Strategic Priorities Fund, the Future Leaders Fellowships, and the Infrastructure Roadmap;
- Corporate governance, risk and assurance; and
- Environmental impact reporting and future sustainability strategy.

Minutes of the Board meetings are published on UKRI's website at: <https://www.ukri.org/about-us/governance-and-structure/uk-research-and-innovation-board/>

All Board members are required to declare any personal or business interests which may influence their judgement in discharging their obligations, or which may be perceived to do so. These interests are published on UKRI's website at: <https://www.ukri.org/about-us/governance-and-structure/conflicts-of-interest/#documents>

Following the completion of our first year of operations, and in line with good governance principles, UKRI is in the process of undertaking an annual appraisal of the performance of the Board. Collective appraisal provides the Board with an opportunity to consider its own effectiveness and to comment on issues which are not normally part of its usual business, the results of which will be presented to the Board for an open discussion on issues of significant note.

Audit, Risk, Assurance and Performance Committee

The Audit, Risk, Assurance and Performance Committee (ARAPC) is chaired by Fiona Driscoll, a Non-Executive Board Member and comprised Board members Professor Sir Ian Diamond and Lord John Browne of Madingley, and independent members Richard Bacon, Jane Madeley and Charlotte Moar. The Chair, Chief Executive and Chief Finance Officer regularly attend ARAPC meetings. The role of ARAPC is to support the UKRI Board and Accounting Officer by reviewing UKRI's operational performance, the comprehensiveness and reliability of assurances on governance, risk management, the control environment and the integrity of financial statements. ARAPC provides oversight and independent challenge regarding the design and implementation of policies and processes, as well as reviewing operational performance. Meetings are attended by representatives from BEIS, the National Audit Office (NAO) and Government Internal Audit Agency (GIAA), UKRI's internal audit service provider.

ARAPC held three meetings in the year and has focused on:

- UKRI's assurance framework and corporate risk management arrangements;
- Findings from the internal audit programme for 2018-19 and internal audit plans for 2019-20;
- Compliance issues in Innovate UK which are discussed later in this statement;
- UKRI's adoption of the General Data Protection Regulation; and
- Performance of UKRI's major projects and programmes, including closure of the UKRI Implementation Programme and ongoing oversight of UKRI's Transformation Programme.
- Preparations for UKRI's first Annual Report and Accounts for 2018-19;

ARAPC has established links with the BEIS Audit and Risk Committee to enable clear BEIS departmental sight of UKRI's risk and assurance arrangements.

Nominations and Remuneration Committee

The Nominations and Remuneration Committee is chaired by Sir John Kingman, UKRI Chair, and comprises Board members Sir Peter Bazalgette, Professor Julia Black, Fiona Driscoll and Lord David Willetts. The Secretary of State, or a representative, is entitled to observe meetings and receive all relevant committee papers, so an attendee from BEIS is also present. The committee is responsible for determining the composition and effectiveness of the councils' Councils, reviewing UKRI's people strategy, and having strategic oversight of senior remuneration with particular regard to diversity and equal pay. The committee met twice in the year.

Executive Committee

The UKRI Executive Committee is chaired by me and comprises the nine Executive Chairs and the Chief Finance Officer. Executive Committee is responsible for providing strategy advice to the UKRI Board and constitutes the executive leadership of UKRI. The Director of Strategy and Chief People Officer also regularly attend.

Executive Committee met 11 times last year and its areas of operational focus have included UKRI's Transformation Programme, planning for EU Exit, performance and risk management, communications, and UKRI's people strategy. Areas of focus on policy have included international strategy, research culture, talent, open research, place and commercialisation.

Strategy Committee

The Strategy Committee is chaired by the Director of Strategy, and comprises senior strategy representatives from the nine councils. Strategy Committee provides expertise and advice on the development and implementation of UKRI's research and innovation strategy. The committee met seven times last year and areas of focus have included the development of Delivery Plans, strategic planning for EU Exit, creation of the Strategic Priorities Fund, preparing a report on raising investment in research and development to 2.4 per cent of GDP, and input to the Equality, Diversity and Inclusion Strategy.

People, Finance and Operations Committee

The People, Finance and Operations Committee (PFO) is chaired by the Chief Finance Officer, and comprises senior operational professionals from the central corporate services teams and councils. PFO is responsible for establishing and monitoring effective common operational frameworks and policies and providing advice to Executive Committee on operational matters. PFO met 10 times in the year and focused on financial reporting, grants management, operational performance, people policies, and the operational impacts of transformation and the UK's withdrawal from the European Union.

Investment Committee

The Investment Committee is chaired by the Chief Finance Officer, and comprises two Executive Chairs, senior operational professionals from across UKRI and an independent member from the Audit, Risk, Assurance and Performance Committee. Investment Committee provides expertise, advice and assurance on major investment decisions, including assessment of business cases and the oversight of the portfolio of major projects across the organisation. Investment Committee met eight times in the year and reviewed more than 20 investments.

Health and Safety Management Committee

The Health and Safety Management Committee is chaired the Director of Operations (delegated to the Deputy Director Governance, Assurance, Risk and Information Governance from 1 November 2018 - 31 March 2019) and comprises the Head of Health and Safety, Head of Office Estates, and senior operational professionals and health and safety experts from the councils. The committee is responsible for monitoring the capability and performance of health and safety management systems with the objective of regulatory compliance, and for establishing continuous improvement in health and safety performance. The Committee met four times in the year and focused on UKRI's health and safety policy, systems, reporting and performance.

Councils' Councils

As set out in the Higher Education and Research Act 2017, each Executive Chair is supported by a Council of between five and twelve ordinary members. Councils are chaired by the Executive Chairs, though the Senior Independent Member is often asked by the Executive Chair to chair all or part of the Council meetings. Councils are responsible for making decisions, as delegated to them by UKRI, on scientific, research and innovation matters within their disciplines, as well as supporting and challenging Executive Chairs to ensure the effective delivery of their responsibilities. Details of ordinary Council members can be found at: <https://www.ukri.org/about-us/governance-and-structure/executive-committee/our-council-members/>

The Chair and I have initiated a cyclical programme of attending meetings of each Council to discuss priorities for that Council and gather input to the evolving UKRI strategy. We also hosted an event on 1 April 2019 for all Board and Council members to share knowledge, expertise and best practice, and increase engagement across UKRI's Councils.

Research Centres, Institutes, Units and Catapult Centres

UKRI operates a number of wholly-owned and directly-controlled research centres, institutes and units. These bodies are managed by their respective Councils, and Executive Chairs are accountable for delivery from both strategic and operational perspectives.

UKRI's remit also involves research and innovation delivered at independent mission-oriented institutes and centres (such as the BBSRC's strategically-funded Institutes and the Innovate UK funded Catapult Centres). Whilst these institutes and centres are independent, UKRI Executive members and staff meet regularly with institutes to discuss high-level policy, and strategic and operational issues in so far as they are aligned to, or have an impact on, UKRI's strategic priorities and strategic plan.

Risks that relate to UKRI's owned estates, capital developments and reputation as a result of activities at independent institutes and centres are managed by UKRI via its councils on an ongoing basis, and reported on councils' Risk Registers, which are regularly reviewed by councils' senior teams and escalated to the UKRI Corporate Risk Register as appropriate.

The risk and internal control framework

The UKRI system of internal control is designed to manage risk to an appropriate and proportionate level rather than to eliminate all risk of failure to achieve policies, aims and objectives.

Risk management

As an organisation that operates on an international scale with novel and complex technologies, large scale investments and high-profile facilities, a robust approach to risk management is critical. In its first twelve months UKRI has made considerable progress in establishing the risk management framework and a consistent internal control environment. UKRI has developed a risk management policy and strategy, set its risk appetite, developed the corporate risk register, started the transition to a single risk management system, and introduced a new central team with qualified risk business partners to embed effective risk management across the organisation. A recent internal audit report on UKRI's risk management provided a moderate rating.

Through its risk management strategy, UKRI has set a clear ambition for the next two years to embed a structured approach to risk management, resulting in a positive culture that is risk enabled, not risk-averse, and which encourages and supports effective risk management across the organisation. The Executive Committee, supported by the People, Finance and Operations Committee, will oversee the implementation of the strategy and the continued evolution of our approach to risk management.

Counter Fraud and Bribery

UKRI is committed to fostering an environment in which opportunities for fraud, bribery and corruption are reduced to the lowest possible level of risk. During the year UKRI has made significant progress in establishing its counter-fraud framework.

Board and Committee Attendance

The table below sets out attendance for UKRI's key governance bodies. Where members were unable to attend meetings in person, they have been able to share their views in advance with the Chair.

	UKRI Board	Audit, Risk, Assurance and Performance Committee	Nominations and Remuneration Committee	Executive Committee
Number of meetings held	8	3	2	11
Board Members				
Sir John Kingman	8/8	3/3	2/2	-
Professor Julia Black	8/8	-	1/2	-
Lord John Browne of Madingley	8/8	1/3	-	-
Professor Sir Ian Diamond	7/8	2/3	-	-
Professor Alice Gast	6/8	-	-	-
Professor Max Lu	7/8	-	-	-
Vivienne Parry	6/8	-	-	-
Sir Peter Bazalgette	7/8	-	2/2	-
Professor Sir Leszek Borysiewicz	6/8	-	-	-
Fiona Driscoll	8/8	3/3	2/2	-
Sir Harpal Kumar	7/8	-	-	-
Mustafa Suleyman	7/8	-	-	-
Lord David Willets	8/8	-	0/2	-
Professor Dame Sally Davies*	5/8	-	-	-
ARAPC Independent Members				
Jane Madeley	-	3/3	-	-
Charlotte Moar	-	3/3	-	-
Richard Bacon	-	3/3	-	-
Executive				
Professor Sir Mark Walport	8/8	1/3	-	10/11
Ian Kenyon	8/8	3/3	-	11/11
Professor Andrew Thompson	-	-	-	8/11
David Sweeney	-	-	-	9/11
Professor Jennifer Rubin	-	-	-	11/11
Professor Mark Thomson	-	-	-	10/11
Professor Melanie Welham	-	-	-	9/11
Doctor Ruth McKernan**	-	-	-	1/1
Professor Philip Nelson***	-	-	-	5/5
Professor Duncan Wingham	-	-	-	9/11
Professor Fiona Watt	-	-	-	9/11
Doctor Ian Campbell**	-	-	-	8/11
Professor Lynn Gladden***	-	-	-	6/6

* As a serving civil servant, Dame Sally was not a formal member of the Board in 2018-19 but joined meetings in a personal capacity.

** Dr Ruth McKernan's appointment as Innovate UK Executive Chair ended in April 2018, and Dr Ian Campbell was appointed in May 2018.

*** Professor Philip Nelson's appointment as EPSRC Executive Chair ended in September 2018 and Professor Lynn Gladden was appointed in October 2018.

UKRI has launched a new Counter Fraud and Bribery policy, run its first Counter Fraud Awareness Week, established a new central team building on capability inherited from Innovate UK, completed counter-fraud training for specialist staff, and developed a new counter fraud risk register strategy.

In April 2018, Cabinet Office assessed UKRI's compliance with Government's counter-fraud functional standards, with UKRI achieving green in nine standards and amber in two standards out of 11 key standards. Internal audit reports on UKRI's and UK SBS's counter fraud management both provided moderate ratings.

Programme and project management

UKRI is investing in the way we deliver projects and programmes, building on the previous successes of the legacy councils. UKRI is making good progress to develop the people, tools and processes needed to deliver a robust project management capability. We have created a Project Delivery Profession, adopted the Government Project Delivery Competency Framework and rolled out the Government On-line Skills Toolset. We are running a pilot for a new project delivery toolset to allow projects to be run efficiently and consistently across UKRI. A Project, Programme and Portfolio Management Maturity Model (P3M3) assessment is being undertaken to baseline current performance and allow further focused interventions to be undertaken as part of the ongoing development of the profession.

Regularity and propriety

UKRI is committed to establishing and applying appropriate regularity and propriety standards, including embedding appropriate cultures and behaviours, and does not tolerate any form of fraud, bribery or corruption. The key components in this regard are UKRI's:

- Counter Fraud and Bribery policy and arrangements;
- Whistleblowing policy;
- Gifts and Hospitality policy;
- Complaints policy; and
- Good Research Conduct policy and guidelines.

I confirm that for 2018-19:

- Neither I nor my staff authorised a course of action, the financial impact of which is that transactions infringe the regulatory requirements as set out in 'Managing Public Money';
- There were no novel, contentious or repercussive transactions that required BEIS or HM Treasury approval;
- There have been no instances of fraud which materially impacted UKRI identified within UKRI and UK SBS; 39 fraud referrals were received and investigated by UKRI's Counter Fraud team, which resulted in interventions (recovery, withdrawal, prevention and termination) valued at £900,000;
- There were three whistleblowing cases raised through UKRI's whistleblowing channels, which were investigated in accordance with our policy; and

- Since the establishment of UKRI, a pay delegation compliance exercise has provided assurance that internal controls are in place for handling senior management remuneration. We are working with BEIS to review pre-existing remuneration arrangements from the Research Councils and Innovate UK to satisfy ourselves that there are no regularity issues arising from actions taken prior to UKRI's creation.

Pay remit

I can confirm that UKRI was compliant with Civil Service pay-setting requirements set out in guidance issued by HM Treasury.

Tax arrangements of public sector appointees

The government's review of tax arrangements for public sector appointees highlighted the possibility for artificial arrangements to enable tax avoidance. UKRI's senior staff are all paid through the payroll and tax arrangements are in place to provide assurance that appropriate tax arrangements are in place to cover other in-year appointees. UKRI provides BEIS with tax assurance evidence on a yearly basis, which forms part of their summary of BEIS tax assurance data that can be found at

www.gov.uk

Quality Assurance of business-critical models

Prior to the creation of UKRI, each Council had processes in place for the quality assurance (QA) of business-critical models. A review of the models and QA frameworks in place across the organisation has identified eight models that are in use and critical to business delivery. Each of these models has been subject to the QA frameworks in place locally. Some of these models have been reviewed by the NAO or have been subject to the long-standing framework in place at the Department for Business, Energy and Industrial Strategy. During 2019-20 UKRI will develop and implement a common QA framework and governance process for business-critical models, in line with the recommendations from the MacPherson Review and the AQuA book which sets out guidance for producing quality analysis for government.

Ministerial directions

There were no Ministerial directions given in 2018-19.

Information governance and security

Since the formation of UKRI, information security has been a corner-stone in the design and implementation of the information services it provides to its employees, and in how it protects its staff and information from attack and compromise. UKRI's executive leadership identified information security as a corporate risk, which is regularly reviewed and actively managed through appropriate mitigating actions.

UKRI implements best practice throughout its Information Security framework, informed by the Cyber Essentials Scheme, 10 Steps to Cyber Security and the National Cyber Security Centre's End User Device standards and the Government's Information Security Framework. During the year, a robust information governance framework has been introduced within UKRI and a new central team has been created to ensure a consistent approach across the organisation.

We have established a Data and Information Governance Committee, reporting to the People, Finance and Operations Committee, to promote strategic interaction between all key data and information stakeholders to ensure that data and information are valued, accessible and protected where appropriate.

The General Data Protection Regulation (GDPR) came into force in May 2018, representing a significant overhaul of data protection legislation. During the year, UKRI has taken appropriate action to adopt the GDPR requirements, including commissioning an independent external review of UKRI's GDPR compliance. UKRI has an ongoing programme of work to continue embedding best practice across the organisation and to deliver sustained compliance. This continues to be a key risk due to the significant impact of non-compliance if there is an incident where we are at fault.

UKRI recognises and fully supports the need for effective information governance in protecting its information and the information entrusted to it in the course of its business. Compliance with data protection laws is taken very seriously. UKRI provides all employees with training on their responsibilities on an annual basis. UKRI continues to monitor and assess its information risks to identify and address any weaknesses and ensure continuous improvement of its systems and procedures. During the year, there was one personal data breach that required notification to the Information Commissioner's Office (ICO), which advised that no further action was necessary. There were a further 37 incidents that did not require notification.

Review of effectiveness

As Accounting Officer, it is my responsibility to ensure a sound system of governance and internal control is being maintained. In 2018-19 this review has been informed by the work of the ARAPC, the Executive Committee and its supporting Committees, the internal audit service provided by GIAA, UKRI's Funding Assurance Programme, the assurance opinion provided by the Accounting Officer of UK SBS, and comments made by the NAO as our external auditors in their management letter and other reports.

Stewardship return

Executive Committee members provided a statement on the effectiveness of internal controls in their spheres of responsibility, both at mid-year and year-end. Both Executive Committee and ARAPC discussed the results, which highlighted:

- Evidence of a positive trajectory throughout the year in relation to the strengthening of internal controls;
- The continued challenge to ensure that the skills and capability required to deliver can be met within operational budgets and can be properly supported by recruitment systems;
- The need to invest in new technology that enables our ways of working, and allows us to reduce our overall costs or improve our operational efficiency;

- The challenge of delivering an ambitious programme of transformation while continuing to deliver a growing programme of funding in research and innovation;
- Further work to maximise the effectiveness of the new business partnering model for corporate services and focus on value added activities; and
- The challenge which planning for EU exit has placed upon our people and resources.

Government Internal Audit Agency

The Group Chief Internal Auditor (GCIA) is required to provide me with an opinion on the overall adequacy and effectiveness of UKRI's framework of governance, risk management and control. In her annual report and opinion, the GCIA has provided a Limited opinion for 2018-19. This is a lower level of assurance than the Moderate opinion received by the predecessor research councils and Innovate UK.

The GCIA identified inconsistencies in the effectiveness of processes and controls where UKRI has been operating inherited policies and processes, and in Innovate UK's control framework (further described in the Compliance section later in this statement).

The GCIA set out that this opinion should be read in the context of UKRI as a new and large Arm's Length Body, undergoing a complex transition and transformation, and highlighted that it is not uncommon for organisations subject to major transformative change to receive a Limited opinion in the first year of existence, or indeed in the second.

Funding Assurance

UKRI has adopted an annual funding assurance assessment process to evaluate whether the research and innovation funding invested during the year continues to accord with the purposes intended and set out in the grant or funding agreements. These procedures allow weaknesses or levels of ineligible spend to be identified and assessed, and ultimately enable me to form a view that my responsibilities as Accounting Officer have been properly discharged. During the year, a Funding Assurance Oversight Committee, reporting to the People, Finance and Operations Committee, was established to review funding assurance arrangements and oversee the collation of assurance from a range of sources.

A breakdown of expenditure by council can be found in the overview section.

Research Councils

The assurance provided through the research councils' funding assurance framework indicates a low level of current and historic errors for all councils. The Head of Funding Assurance provides an opinion of Moderate assurance based upon the programme of work undertaken in 2018-19, with the following highlights overleaf:

- 34 funding assurance assignments were undertaken, of which three achieved Substantial assurance, 27 Moderate assurance and four received Limited assurance with subsequent special measures put in place;
- Two research organisations previously receiving limited assurance opinions achieved improved assurance ratings after follow-up visits in 2018-19, and improvement plans have been agreed with a third research organisation previously receiving a limited assurance opinion, with a follow up visit planned in 2019-20;
- An advisory assignment of 64 research organisations in receipt of Global Challenges Research Funding was undertaken, which raised awareness of UKRI funding assurance processes and requirements. A follow-up assignment is planned in 2019-20;
- Three overseas assignments were undertaken to review research organisations in receipt of direct funding from UKRI, all achieving Moderate assurance or above;
- UKRI hosted an International Funding Assurance workshop in South Africa to promote UKRI research administration and assurance expectations; and
- A thematic review of cyber-security was undertaken across a sample of 13 research organisations, which identified common areas of risk and best practice, and provided a benchmark of cyber security awareness and management.

During the year, internal audits of the Funding Assurance Programme and International Funding Assurance both provided opinions of Moderate assurance.

In addition to the Funding Assurance Programme, individual research councils have in place a variety of governance, assurance and project management mechanisms to ensure that funding is spent appropriately. There were five internal audit reports on research councils' major grants, all with opinions of Moderate assurance, and a further five internal audit reports on research councils' major infrastructure, operational centres and major projects, with two opinions of Moderate assurance, two of Limited assurance and one advisory.

By taking assurance from the Higher Education Regulatory Bodies that the control systems within Higher Education Institutions (HEIs) are working effectively and combining this with the transaction-level testing undertaken by the Funding Assurance Programme (FAP), the work of internal audit, and their individual governance and assurance arrangements, research councils are able to provide a high level of assurance to the public that funds are being spent in accordance with the principles contained within 'Managing Public Money'. The assurance indicates a number of funding pressures, and the very nature of some of the activities is that they are complex and cutting-edge. Nevertheless, I am reassured through the mechanisms described here that they are being managed in an appropriate manner and that there are no issues that warrant reference here.

Innovate UK

Innovate UK primarily funds businesses to help commercialise world-class UK research, and as such its funding has an inherently higher level of risk than the research councils which fund eligible Research Organisations. Accordingly, the funding assurance framework has a greater focus on pre-award due diligence and live monitoring activities than on retrospective assessment. Innovate UK takes assurance from its thorough due diligence checks on funding recipients prior to awarding grants and from its monitoring regime, through which a monitoring officer is assigned to review technical progress, project management and financial control for the lifetime of every grant awarded. For awards of more than £25,000, Innovate UK seeks additional assurance through its requirement for independent accountant reports prior to final payments being issued.

To augment its funding assurance, Innovate UK commissioned 24 independent audits during the year, 14 through UKRI's specialist counter-fraud investigators and 10 by a contracted audit firm. These additional audits were a combination of responses to specific issues brought to management's attention, and proactive targeting of high-risk grants.

During the year there were seven internal audits of Innovate UK funding streams, of which two provided opinions of Moderate assurance, four of Limited assurance, and one resulted in a management letter. A further two external reviews were commissioned following potential compliance issues being identified in Innovate UK, and which are described in the Compliance section below. The findings of internal audit and the external reviews consistently indicate that improvements are required to Innovate UK's governance, risk management and control framework.

By considering the assurance from Innovate UK's due diligence and monitoring arrangements, the independent assurance received, and the work of internal audit, Innovate UK is able to provide a limited level of assurance to the public that funds are being spent in accordance with the principles contained within 'Managing Public Money'. Innovate UK has set out a programme of activity to strengthen its control environment during 2019-20 and is committed to achieving an improved level of assurance in future.

Research England

The Office for Students, as the regulator of the English higher education system, assesses and monitors the financial sustainability of higher education institutions in England. Research England only funds those institutions that have met the thresholds for financial sustainability. The Office for Students undertook eight audits in 2018-19 on behalf of Research England to seek assurance on the effectiveness of the systems and processes used to inform quality-related funding for 2018-19. Of these audits, five are complete. Four gained appropriate assurance over systems, processes and accuracy of data; one resulted in a correction of financial records and required the higher education institution to submit an action plan to address the audit recommendations.

An internal audit of Research England's funding formula provided an opinion of Moderate assurance. A second audit on the effectiveness of controls over the support provided by the Office for Students to Research England received Limited assurance.

By combining the assurance received from the Office for Students with the work of the Funding Assurance Programme and internal audit, Research England is able to provide a high level of assurance to the public that funds are being spent in accordance with the principles contained within 'Managing Public Money'. I am satisfied that there are no issues to report here.

Effectiveness of Whistleblowing Arrangements

We recently launched a new 'Freedom to Speak Up' policy and procedures, including a new external whistleblowing hotline, and appointed the ARAPC Chair, Fiona Driscoll, as Freedom to Speak Guardian. Before its implementation and for the majority of the year, we operated well-established policies and procedures from the research councils to support whistle-blowers. There were three whistleblowing cases raised in the year and no common themes or specific risks were identified among the whistleblowing cases raised this year.

Shared Services Assurance

In 2018-19, UKRI received services from UK Shared Business Services Ltd (UK SBS), another BEIS partner organisation, which also provides services to BEIS. We receive assurance reports from UK SBS on the design and effectiveness of its internal control framework. Overall, while emphasising recruitment and retention of staff as an issue, and highlighting risks associated with the UK's withdrawal from the EU; UKRI's transformation; the need to invest in a new system; and cyber threats, UK SBS has reported that its HR, payroll and finance services are operating effectively. Further narrative is available in the Governance Statement for UK SBS, which is published separately as part of its Annual Report and Accounts.

Significant Issues

The performance report describes the organisation's highlights and the key risks we have managed during the year. There are four key issues which I believe warrant reference in this Governance Statement, set out in the paragraphs that follow.

Transformation of UKRI

Following the successful closure of the UKRI implementation programme which led the creation and launch of the new organisation, UKRI has set out an ambitious programme of transformation to become a single organisation working collectively and sustainably to achieve our goals. Creating a single, unified organisation with shared and simplified operations, excellent people, and modernised technology will ensure that we do not compromise our ability to deliver by placing excessive pressure on existing resources, structures and systems. More detail is set out in the overview section.

European Union Exit

The UK was scheduled to leave the EU on 29 March 2019. This means that future access to EU research funding, and the nature of future immigration arrangements with the EU for researchers, are subject to the negotiations between the UK and EU, which at the time of writing are still underway. To address the uncertainty in relation to future EU funding, the UK Government announced in August 2018 that it would guarantee certain EU funded projects after the UK has left the EU. UKRI continues to monitor developments and we are addressing this risk by working closely with colleagues in government and the wider sector to ensure an effective and joined-up approach to the implications of leaving the EU.

Capability and Capacity of Staff

I am clear that to deliver our ambition, UKRI needs to attract, develop and value excellent leaders and teams. Recruitment of staff has been a challenge throughout the year, as UKRI has taken time to articulate and plan for the new capabilities and capacity it requires. The HR function is still developing new ways of resourcing, both for bespoke senior roles and broader-scale recruitment for a large organisation. The early fruit of these new ways of working has shown through in recruiting for the Industrial Strategy Challenge Fund and for teams preparing for the UK's withdrawal from the EU.

Compliance

During the year we found evidence of potential compliance issues in Innovate UK and commissioned an independent review of the control framework in Innovate UK, and a second thematic review across the whole of UKRI. The Innovate UK review concluded that there are areas where the design or operation of controls has fallen short of good practice but found no evidence of serious risks having materialised. As a result, Innovate UK has established a new Risk Sub-Committee of its Council with independent experts to strengthen its second line of defence, completed a number of immediate improvement actions and agreed a comprehensive control environment improvement plan.

A compliance issue was identified in AHRC in relation to a legacy contractual arrangement. We initiated an internal audit to investigate both the specific compliance issues and the wider effectiveness of contract management control procedures. The audit concluded that there are areas of weakness in the design and operation of controls associated with low-value contract management, and remedial actions have been agreed.

Conclusion

I have considered the evidence provided regarding the production of the annual Governance Statement and the independent advice and assurance provided by the ARAPC. I conclude that while the evidence in respect of the governance and internal controls in place within the legacy councils of UKRI during 2017-18 were moderate overall, the evidence gathered during 2018-19 shows that UKRI has had a limited level of control. The formation of UKRI created some short-term challenges to risk management, governance and internal controls. UKRI has also inherited some historical gaps in policies and internal controls, alongside instances of non-compliance.

While we have identified areas where UKRI's processes and controls fall short of good practice, there is no evidence of risks having materialised and I am satisfied they have not impacted UKRI's delivery of its objectives during the year.

UKRI has started to make progress in addressing the specific control issues identified and has set out plans to improve the control framework. During 2019-20, UKRI will:

- Address the weaknesses identified in the control framework within Innovate UK;
- Strengthen the wider control environment, with modernised and unified policies and processes;
- Implement its risk management strategy to increase the maturity and consistency of our approach to risk management; and
- Review the efficiency and effectiveness of its funding assurance arrangements.

UKRI is committed to the highest standards across its operations and will take all necessary actions to strengthen the control environment. Delivering these plans will enable us to build on our good progress to date and achieve an improved level of assurance in the future.

Professor Sir Mark Walport
Chief Executive and Accounting Officer

2nd July 2019

Notes for table right:

¹ Sir John Kingman is the Chair of UKRI

² Fiona Driscoll is the Chair of UKRI Audit Committee

³ Sir Harpal Kumar is the UKRI Innovation Champion

⁴ 2018-19 Remuneration includes 6 months honorarium from 2017-18

⁵ Sir Ian Diamond has declined his honorarium from July 2018

⁶ As a serving civil servant, Dame Sally Davies is not formally be a member of the Board but joins meetings in a personal capacity

⁷ Declined to receive honorarium

⁸ Remuneration disclosed in Executive Remuneration table

Remuneration and Staff Report

Board Chair and Board members except Chief Executive Officer and Chief Finance Officer

Remuneration Policy

The Chair and Board members receive a letter of appointment from the Department for Business, Energy and Industrial Strategy (BEIS). They are not employees of UK Research and Innovation (UKRI) although remuneration is made through the UKRI payroll. The Business and Science group within BEIS advises UKRI of the rates they are required to pay, and these are reviewed annually. Board members may receive additional remuneration for chairing advisory committees.

The Board Chair and Board Members are defined as Office Holders. They are neither employees nor civil servants. Appointments are usually made for up to four years. In exceptional cases members may be offered the possibility of re-appointment for up to a further four years. Appointments are non-pensionable and there are no superannuation payments relating to the fees paid to them. There is no compensation for loss of office.

Remuneration – Audited Information

Total Remuneration of Board Membership	
Remuneration (£ per annum)	2018-19
Board Chair	28,000
Board Members	9,180

Board Honoraria – Audited Information

Board Membership			
	Period of Appointment		Remuneration £000 2018-19
	From	To	
Professor Sir Mark Walport ⁸	01-Apr-18	01-Jun-20	-
Ian Kenyon ⁸	01-Apr-18	07-Sep-21	-
Sir John Kingman ¹	01-Apr-18	31-Mar-22	25-30
Sir Peter Bazalgette	01-Apr-18	29-Oct-20	5-10
Lord John Browne of Madingley ⁷	01-Apr-18	29-Oct-21	-
Professor Max Lu	01-Apr-18	29-Oct-20	5-10
Fiona Driscoll ²	01-Apr-18	29-Oct-21	10-15
Professor Sir Leszek Borysiewicz	01-Apr-18	29-Oct-19	5-10
Sir Harpal Kumar ³	01-Apr-18	29-Oct-21	15-20
Mustafa Suleyman ⁷	01-Apr-18	29-Oct-20	-
Professor Julia Black ⁴	01-Apr-18	29-Oct-19	10-15
Professor Alice Gast	01-Apr-18	29-Oct-19	5-10
Lord David Willetts	01-Apr-18	29-Oct-21	5-10
Vivienne Parry	01-Apr-18	29-Oct-20	5-10
Professor Sir Ian Diamond ⁵	01-Apr-18	29-Oct-19	0-5
Dame Sally Davies ⁶	01-Apr-18	ongoing	-

Chief Executive Officer, Chief Finance Officer and Executive Chairs

Ministerial appointments (CEO, CFO, and Executive Chairs) have their initial remuneration package, both basic pay and performance related pay element, agreed by the relevant BEIS minister.

The UKRI Remuneration Committee provides advice and recommendations to BEIS as to the performance element of the pay package on an annual basis, changes in basic pay for existing role holders, and the package for new recruitment exercises. They will also review and oversee the expenses arrangements of these appointments. Inputs include scrutiny of performance, benchmarking, recruitment and retention issues, compliance with equality duties and overall efficiency and affordability.

This advice is exchanged between the Chair of UK Research and Innovation and the BEIS Permanent Secretary, where the context of wider public sector pay policy and managing public money rules are relevant factors in the decision making. The final decision as to the performance related pay elements of these ministerial appointees is taken by the BEIS Permanent Secretary.

When setting remuneration policy, the UKRI Remuneration Committee reviews and has regard to pay and employment conditions across UKRI and the wider public sector, especially when determining annual salary increases.

Other Senior Employees

The remuneration of other senior roles which existed before the formation of UKRI and transferred into UKRI on 1st April 2018 remained unchanged and with their pay arrangements protected. The remuneration for new senior roles recruited into UK Research and Innovation centre and corporate functions from 1st April 2018 make use of EPSRC's senior pay arrangements.

The remuneration for new senior roles recruited into the UK Research and Innovation institutes, centres and laboratories mirrored the remuneration arrangements previously applied in these areas.

The role of the UKRI Remuneration Committee is to ensure that remuneration arrangements support the strategic aims of UKRI and enable the recruitment, motivation and retention of senior staff while also complying with additional requirements.

Senior Staff Remuneration Table – Audited Information

Chief Executive & Directors	Salary (£'000)	Bonus (£'000)	Pension Benefits* (£'000)	Totals (£'000)
Professor Sir Mark Walport Chief Executive UKRI ¹	170-175	-	-	170-175
Ian Kenyon UKRI CFO ²	140-145	-	-	140-145
Professor Philip Nelson Exec Chair EPSRC ³	70-75	-	13	85-90
Professor Lynn Gladden Exec Chair EPSRC ⁴	55-60	-	-	55-60
Professor Melanie Welham Exec Chair BBSRC	140-145	-	55	195-200
Professor Jennifer Rubin Exec Chair ESRC ⁵	130-135	-	20	150-155
Dr Ruth McKernan Interim Exec Chair IUK ⁶	15-20	-	-	15-20
Dr Ian Campbell Interim Exec Chair IUK ⁷	155-160	-	54	210-215
Professor Fiona Watt Exec Chair MRC ⁸	140-145	-	24	165-170
Professor Duncan Wingham Exec Chair NERC	135-140	-	52	185-190
David Sweeney Exec Chair RE ⁹	130-135	-	-	130-135
Professor Mark Thomson Exec Chair STFC ¹⁰	145-150	-	38	180-185
Professor Andrew Thompson Exec Chair AHRC ¹¹	95-100	-	17	110-115

Directors bonuses are in line with Senior Civil Service pay guidance. These are being processed under legacy Council terms for 2018-19 and will be published in next year's report.

Notes

- ¹ Professor Sir Mark Walport's role is 88% of full time. The FTE Salary is in the 195-200 banding. He has opted out of the Pension scheme.
- ² Ian Kenyon has opted out of the Pension scheme.
- ³ Prof Nelson is an employee of the University of Southampton and was on secondment to UKRI. The values shown above are the amounts reimbursed (excl Pension & NI contributions) to the University of Southampton. VAT is payable on the total amount invoiced but is not included in the figure above. UKRI also covers the expense claims for travel and accommodation between Southampton and UKRI Head Office in Swindon. This is a taxable benefit and UKRI covered the cost of any tax and NI payable on these expenses. Prof Nelson's secondment ended on 30 September 2018. FTE salary banding for a complete year is 145-150.
- ⁴ Professor Gladden is an employee of the University of Cambridge and is on secondment to UKRI from 1 October 2018. The secondment is 80% of full time. The values shown above are amounts reimbursed (excl Pension & NI Contributions) to the University of Cambridge from Oct 2018 to Feb 2019 and the estimated amount due for Mar 2019. VAT is payable on the total amount invoiced but is not included in the figures above. FTE salary banding is 140-145. University of Cambridge does not invoice UKRI for pension contributions.
- ⁵ Professor Rubin is an employee of King's College London and is on secondment to UKRI. The values shown above are the amounts reimbursed (excluding Pension and NI Contributions) to King's College from Apr 18 to Feb 2019 and the estimated amount due for Mar 2019. VAT is payable on the total amount invoiced but is not included in the figures above. Prof. Rubin's secondment was 80% of full time from Apr-Jul 2018 and 95% of full time from Aug 18 onwards. FTE salary banding is 145-150.
- ⁶ Dr McKernan was appointed until 3rd May 2018. The FTE salary banding for a complete year is 200-205.
- ⁷ Dr Campbell was appointed on 4th May 2018. The FTE salary banding is 170-175.
- ⁸ Professor Watt is an employee of King's College London and is on secondment to UKRI. The secondment is 80% of full time. The values shown above are the amounts reimbursed (excluding Pension and NI Contributions) to Kings College from Apr 18 to Feb 2019 and the estimated amount due for Mar 2019. VAT is payable on the total amount invoiced but is not included in the figures above. The FTE salary banding is 175-180.
- ⁹ David Sweeney has opted out of the Pension Scheme.
- ¹⁰ Professor Thomson is an employee of the University of Cambridge and is on secondment to UKRI. The values shown above are amounts reimbursed (excluding Pension and NI Contributions) to the University of Cambridge from Apr 2018 to Jan 2019 and the estimated amount due for Feb & Mar 2019. VAT is payable on the total amount invoiced but is not included in the figures above.
- ¹¹ Professor A Thompson is an employee of the University of Exeter and is on secondment to UKRI. The values shown above are amounts reimbursed (excluding Pension and NI Contributions) to the University of Exeter from Apr 18 to July 18 and the estimated amount due for Aug 18 to Mar 2019. VAT is payable on the total amount invoiced but is not included in the figures above. Professor Thompson's secondment is 80% of full time. The FTE Salary banding is 120-125.

*The value of pension benefits accrued during the year is calculated as (the real increase in pension multiplied by 20) less (the contributions made by the individual). The real increase excludes increases due to inflation or any increase or decrease due to a transfer of pension rights. The pension benefit disclosures for directors on secondment is not equivalent to the pension benefit of the other directors. It is the re-imbusement of the contributions UKRI makes to the secondment organisations in respect of the director's pension.

Salary and Allowances, Benefits in Kind and Bonuses – Audited Information

Salary paid in 2018-19 includes salary and any allowances. It does not include severance payments, reimbursement of expenses, employer pension contributions and the cash equivalent transfer value of pensions.

The monetary value of benefits in kind covers any benefits provided by the employer and treated by HM Revenue and Customs as a taxable emolument. There were no benefits in kind paid to any of the UKRI Executives in 2018-19.

Decisions on whether to award non-consolidated performance awards to Directors are made by the CEO in conjunction with the Remuneration Committee. Decisions are strictly performance based and are made in accordance with Cabinet Office Guidance 'Senior Civil Service pay 2013-14' document published in March 2013 and Non-Consolidated Performance Related Pay (NCPRP) guidance set out in the Government's announcement in May 2010, as well as the annual Senior Salaries Review Body report and any guidance from HM Treasury, Cabinet Office or BEIS. Directors are awarded non-consolidated awards based on how well they achieved or exceeded the personal objectives given to them at the beginning of the appraisal period. At time of publication FY2018-19 Performance Related Pay hadn't been decided; these awards will be included within next year's report.

The banded remuneration of the highest-paid director in UKRI in the financial year 2018-19 was £195,000-£200,000. This was 5.54 times the median remuneration of the workforce, which was £35,630.

In 2018-19, no employees received remuneration in excess of the highest-paid director. Remuneration ranged from £11,255 to £199,000.

Total remuneration includes salary, non-consolidated performance-related pay and benefits-in-kind. It does not include severance payments, employer pension contributions and the cash equivalent transfer value of pensions.

Senior Staff Pension Table – Audited Information

Chief Executive and Executive Chairs	Accrued pension at pension age at 31-03-19 and related lump sum £000	Real increase in pension and related lump sum at pension age £000	CETV at 31-03-19 £000	CETV at 01-04-18 £000	Real increase in CETV £000
Professor Sir Mark Walport ¹ Chief Executive UKRI	-	-	-	-	-
Ian Kenyon ¹ UKRI CFO	-	-	-	-	-
Professor Philip Nelson ² Exec Chair EPSRC	-	-	-	-	-
Professor Lyn Gladden ³ Exec Chair EPSRC	-	-	-	-	-
Professor Melanie Welham Exec Chair BBSRC	15-20	2.5-5	264	196	37
Professor Jennifer Rubin ⁴ Exec Chair ESRC	-	-	-	-	-
Dr Ian Campbell Exec Chair IUK	5-10	2.5-5	89	37	24
Professor Fiona Watt ⁴ Exec Chair MRC	-	-	-	-	-
Professor Duncan Wingham Exec Chair NERC	20-25	2.5-5	406	321	42
David Sweeney ¹ Exec Chair RE	-	-	-	-	-
Professor Mark Thomson ³ Exec Chair STFC	-	-	-	-	-
Professor Andrew Thompson ⁵ Exec Chair AHRC	-	-	-	-	-

¹ Not enrolled in employers pension scheme

² On secondment from University of Southampton

³ On secondment from University of Cambridge

⁴ On secondment from King's College London

⁵ On secondment from University of Exeter

Details of Pension Schemes

Most employees of UK Research and Innovation are members of one of 3 occupational pension schemes; the Research Councils' Pension Scheme (RCPS), the Medical Research Council Pension Scheme (MRCPS) and the Civil Service pension schemes (CSPS). These are all defined benefit schemes.

UKRI complies with Auto Enrolment legislation enrolling eligible employees into a qualifying occupational pension scheme. Generally, most staff employed by UKRI are entered into the Civil Service pension scheme arrangements. Staff that are employed at the MRC institutes in Cambridge, London and Oxford are enrolled in the MRC Pension Scheme, and staff employed at the Centre for Ecology and Hydrology and National Oceanography Centre are enrolled in the Research Councils' Pension Scheme.

Staff that were previously employed by the BBSRC, AHRC, STFC, EPSRC, ESRC, NERC, Innovate UK, MRC or Research England, and had their employment transferred to UKRI through a statutory staff Transfer Scheme on 1 April 2018, are entitled to remain in their pension scheme including if they take up a new post on UKRI Terms and Conditions.

Members of relevant pension schemes

RCPS:	5,298 members
MRCPS:	1,346 members
CSPS:	861 members

Research Councils' Pension Scheme

The RCPS is a defined benefit scheme funded from employer and employee contributions and annual grant-in-aid on a pay-as-you-go basis. The benefits are by analogy to the Principal Civil Service Pension Scheme, except that while the schemes provide retirement and related benefits based on final or average emoluments, redundancy and injury benefits are administered and funded by UKRI. The scheme is administered by the Joint Superannuation Service, with the associated grant-in-aid managed by UKRI. The scheme accounts are prepared by UKRI on behalf of the UKRI Chief Executive as the accounting officer of RCPS. Separate accounts are published for the pension schemes.

Employees may be in one of four defined schemes; either a 'final salary' scheme (classic, classic plus or premium); or a career average scheme (Nuvos).

Pensions payable are increased annually in line with changes in the Consumer Prices Index (CPI). Employees' contributions vary between 4.6 and 8.05 per cent depending on the scheme. The employer's contribution is agreed by the RCPS Board of Management on the recommendation of the Government Actuary's Department (GAD) and is currently set at 26.0 per cent of pensionable pay.

RCPS Employee Contribution Rates for 2018-19:

Annualised pensionable earnings	Normal Member Contribution Rate (%)
Up to £21,636	4.60
£21,637 - £51,515	5.45
£51,516 - £150,000	7.35
£150,001 and above	8.05

The employer's contribution to the RCPS for 2018-19 was £51.2m.

Contributions are set at a level that is expected to be sufficient to pay the required benefits falling due in the same period, with future benefits earned during the current period to be paid out of future contributions.

Formal actuarial valuations are used to determine employer and employee contribution rates. The last actuarial valuation undertaken for RCPS, which resulted in the current 26 per cent employer contribution rate, was at 31 March 2006 and completed in 2008-09. An actuarial valuation as at 31 March 2010 was initiated but not completed due to HM Treasury suspending all public sector pension scheme valuations whilst reform policies were being developed. Although HM Treasury concluded its reform policy which enabled the Government Actuary Department to start the process of completing a revised scheme valuation as at 31 March 2012 this was suspended due to ongoing RCPS reform discussions. The RCPS Management Board decided in February 2019 that a valuation should be completed and will be progressing this during 2019-20. The scheme valuation will be as at 31 March 2018, with a subsequent review of employer contributions expected during 2020-21.

As an alternative to the RCPS, a Partnership Pension Account was made available to new staff from 1 October 2002, based on the portable Stakeholder Pension introduced by the Government in 2001. This is a defined contribution scheme. The employers pay the RCPS 0.8 per cent of pensionable pay to cover death in service and ill health benefits. The employers pay the balance to the employee's private pension provider. The employer contribution for 2018-19 was £386,309. The employer's 0.8 per cent death in service Partnership contribution for 2018-19 was £14,708.

Further details about the Research Councils' Pension Scheme can be found at <http://jsspensions.nerc.ac.uk>

Medical Research Council Pension Scheme

Details of the Medical Research Council Pension Scheme are disclosed in Note 12 of the Financial statements.

Civil Service Pension Schemes

UKRI began participating in the Civil Service pension scheme arrangements in April 2018. The Civil Service pension arrangements comprise the Principal Civil Service Pension Scheme (PCSPS) and Alpha, a new scheme set up in April 2015. Generally, all new employees joining on UKRI Terms and Conditions are enrolled in the Alpha pension scheme.

Alpha provides benefits on a career average basis with a normal pension age equal to the member's State Pension Age (or 65 if higher). The PCSPS operates four defined benefit schemes: three providing benefits on a final salary basis (classic, premium or classic plus) with a normal pension age of 60; and one providing benefits on a whole career basis (Nuvos) with a normal pension age of 65.

These statutory arrangements are unfunded, with the cost of benefits met by monies voted by Parliament each year. Pensions payable under classic, premium, classic plus, Nuvos and Alpha are increased annually in line with Pensions Increase legislation.

Employee contributions are salary-related and range between 4.6 to 8.05 per cent for members of premium, classic plus, Nuvos and Alpha.

Civil Service Employee Contribution Rates for 2018-19

Annualised pensionable earnings	Normal Member Contribution Rate (%)
Up to £21,636	4.60
£21,637-£51,515	5.45
£51,516-£150,000	7.35
£150,001 and above	8.05

The employer contribution rate for the 2018-19 period was between 20.0 and 24.5 per cent depending on the employee's salary. The employer contribution rates are increasing for 2019-20 and from 1 April 2019 will vary between 26.6 and 30.3 per cent.

Benefits in classic accrue at the rate of 1/80th of final pensionable earnings for each year of service. In addition, a lump sum equivalent to three years' initial pension is payable on retirement. For premium, benefits accrue at the rate of 1/60th of final pensionable earnings for each year of service. Unlike classic, there is no automatic lump sum. In Nuvos a member builds up a pension based on their pensionable earnings during their period of scheme membership. At the end of the scheme year (31 March) the member's earned pension account is credited with 2.3 per cent of their pensionable earnings in that scheme year and the accrued pension is uprated in line with pensions increase legislation. Benefits in Alpha build up in a similar way to Nuvos, except that the accrual rate is 2.32 percent. In all cases, members may opt to commute pension for a lump sum up to the limits set by the Finance Act 2004.

The partnership pension account is a stakeholder pension arrangement. The employer makes a basic contribution of between 8 and 14.75 per cent, depending on the age of the employee at the beginning of the tax year, into a stakeholder pension product chosen by the employee from a panel of providers. The employee does not have to contribute, but where they do make contributions, the employer will match these up to a limit of 3 per cent of pensionable earnings in addition to the employer's basic age-related contribution. During 2018-19, employer contributions of £49,389 were payable to partnership pension providers. Employers also contribute a further 0.5 per cent of pensionable earnings to cover the cost of centrally-provided risk benefit cover such as death in service and ill health retirement referred to as mini Accruing Superannuation Liability Charges (mini ASLCs); these totalled £1,735 for 2018-19.

The accrued pension quoted is the pension the member is entitled to receive when they reach their scheme pension age, or immediately on ceasing to be an active member of the scheme if they are already at or over pension age. Pension age is 60 for members of classic, premium and classic plus, 65 for members of Nuvos, and the higher of 65 or State Pension Age for members of Alpha.

All sections of the PCSPS and Alpha have provision for death and medical retirement benefits. Anyone entitled to be covered by these schemes is also covered by the Civil Service Injury Benefit Scheme in the event of sustaining an injury at work.

Further details about the Civil Service pension arrangements can be found at **www.civilservicepensionscheme.org.uk**

During 2018-19, employer contributions of £ 3,317,326 were payable to the Scheme at one of four rates in the range 20.0 to 24.5 per cent of pensionable earnings, based on salary bands.

Other Pension Schemes

UKRI also paid contributions during the year to a number of other multi-employer pension schemes for specific groups of employees. These schemes are:

- Principal Non-Industrial Superannuation Scheme (PNISS) of the United Kingdom Atomic Energy Authority
- National Employment Savings Trust (NEST), the Government's workplace pension scheme
- Merchant Navy Officers' Pension Fund
- Merchant Navy Ratings' Pension Fund
- Merchant Navy Ratings Group Personal Pension Plan

Cash Equivalent Transfer Value

A Cash Equivalent Transfer Value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme.

A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme. The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies. They also include any additional pension benefit accrued to the member as a result of their purchasing additional years of pension service in the scheme at their own cost. CETVs are calculated within the guidelines and framework prescribed by the Institute and Faculty of Actuaries.

Real Increase in the Value of the CETV

This reflects the increase in the CETV and takes account of the increase in accrued pension, contributions paid by the employer, and contributions paid by the employee, which includes the voluntary purchase of additional years of pensionable service and the value of any benefits transferred from another pension scheme or arrangement.

Staff Report

Staff Numbers – numbers of persons employed at 31st March 2019 – Audited Information

	2018-19
Permanent staff	7,790
Temporary & Contract Staff	227
Secondments*	28
Total number of staff	8,100

*Includes staff on secondment into UKRI and other senior appointments with off-payroll arrangements.

Staff Related Costs – Audited Information

	Permanently employed staff £000	Temporary staff £000	Total £000
Wages and salaries	277,463	8,685	286,148
Social security costs	31,470	-	31,470
Other pension costs	84,677	-	84,677
Sub total	393,610	8,685	402,295
Less recoveries in respect of outward secondments	(205)	-	(205)
	393,405	8,685	402,090

Sickness Absence

UKRI HR and management monitor employee sick absences on an on-going basis with all sickness absences followed up by a return to work interview in line with the harmonised Research Council Sickness Absence Policy or local policy. A harmonised UKRI attendance policy is to be implemented on 1st September 2019. Short-term and long-term absences are managed on a case-by-case basis with appropriate support from an Occupational Health Assessor.

Sickness Absence	2018-19
Total days of absence	43,326
Frequency of absences lasting longer than 28 days	276
Total days of long-term absence	19,987
Average days of sick absence per person in UKRI	5

Staff Numbers by Gender

Pay Bands	Head Count				FTE			
	Male	Female	Unknown	Total	Male	Female	Unknown	Total
Directors (Grades X & Y)	61	29	1	91	58	28	1	87
Senior Managers (G & H)	299	129	0	428	279	122	0	401
Other Employees (A-F)	4,190	3,309	82	7,581	4,024	3,043	79	7,146
Total	4,550	3,467	83	8,100	4,361	3,193	80	7,634

Staff Numbers by Ethnicity

Ethnic Group	Year End Number of Employees	Percentage
Black and minority ethnic (BME)	451	5.5%
Non BME	5,724	70.7%
Not disclosed	1,407	17.4%
Other Ethnic Group	32	0.4%
Not captured	486	6.0%
Total	8,100	100%

Staff Numbers by Disability

Disability	Year End Number of Employees	Percentage
Yes	155	1.9%
No	3,245	40.1%
Not disclosed	11	0.1%
Not captured	4,689	57.9%
Total	8,100	100%

Reporting of Civil Service and other Comprehensive Schemes – Exit Packages

Audited information

Redundancy costs have been paid in accordance with either the provisions of the Research Councils' Compensation Scheme, which mirrors the terms of the Principal Civil Service Compensation Scheme, a statutory scheme made under the Superannuation Act 1972, or the provisions of the Medical Research Council Redundancy Compensation Scheme.

Exit package cost band	Number of compulsory redundancies	Number of other departures agreed	Total no of exit packages by cost band
<£10k	7	22	29
£10k - £25k	31	25	56
£25k - £50k	5	18	23
£50k - £100k	0	10	10
£100k - £150k	0	1	1
Total no by type	43	76	119
Total resource cost	£781,152	£2,119,867	£2,901,019

Health and Safety

On the creation of UKRI, each of its constituent bodies had in place its own Health and Safety Management System proportionate to the size and complexity of its hazard profile, ranging from polar operations through cutting edge laboratory research to office environments. The Chief Executive Officer, on behalf of the Board, published his Health and Safety policy in April 2018 articulating the principles of Health and Safety management in UKRI.

During the year, good progress has been made to evolve UKRI's approach to Health and Safety.

- A new governance structure has been established, with a Health and Safety Management Committee reporting directly to the Executive Committee, working alongside a Health and Safety Consultation Committee, facilitating workforce engagement on Health and Safety matters. A Health and Safety Advisors Working Group supports the Committees and facilitates the sharing of best practice and learning from experiences.
- A new UKRI Head of Health and Safety was appointed to lead the development of the UKRI Health and Safety Management System.
- Work is progressing to procure and implement a common electronic reporting system across UKRI, and to develop a shared suite of Corporate Health and Safety Codes.
- Health and Safety training has continued to be delivered effectively across UKRI's sites and councils.
- Health and Safety audit and inspection programmes have been delivered as planned in 2018-19, and a UKRI-wide Health and Safety assurance plan is being developed.

Performance

Accident and incident data from across UKRI is consolidated and reported quarterly to the Executive Committee, this includes injuries and learning opportunities.

Expenditure on Consultancy

Expenditure on consultancy in 2018-19 was £1m, the majority of which was to support the Transformation Programme.

Expenditure on Contingent Labour

During 2018-19, £8.7m was spent on Contingent Labour.

Off Payroll Engagements

All payroll workers at UKRI are on arrangements in which the supplier agencies process their payments through PAYE to ensure full tax compliance. The only exception to this is in rare cases where the HMRC tool has shown that an off-payroll worker's engagement arrangements fall outside the scope of the intermediaries legislation IR35. This circumstance currently applies to just one-off payroll worker working through a limited company.

	Number
Number of existing engagements as of 31 March 2019	102
Of which, the number that have existed:	
For less than one year at the time of reporting	60
For between one and two years at the time of reporting	14
For between 2 and 3 years at the time of reporting	9
For between 3 and 4 years at the time of reporting	7
For 4 or more years at the time of reporting	12

For all new off-payroll engagements between 1 April 2018 and 31 March 2019, for more than £245 per day and that last longer than six months:

	Main department
No. of new engagements, or those that reached six months in duration, between 1 April 2018 and 31 March 2019	27
Of which:	
No. assessed as caught by IR35	0
No. assessed as not caught by IR35	11
No. engaged directly (via PSC contract)	16 on agency payrolls
No. of engagements reassessed for consistency / assurance purposes during the year	0
No. of engagements that saw a change to IR35 status following the consistency review	0

*Assurance is requested for all engagements. It is completed by Fieldglass who manage off-payroll appointments on our behalf.

For any off-payroll engagements of board members, and/or, senior officials with significant financial responsibility, between 1 April 2018 and 31 March 2019:

	Number
Number of off-payroll engagements of board members, and/or senior officials with significant financial responsibility, during the financial year	0
Total number of individuals on payroll and off-payroll who have been deemed "board members, and/or, senior officials with significant financial responsibility" during the financial year	12

Employee Engagement

People are central to the success of UKRI and the organisation is working to establish a range of communications and engagement channels to ensure staff understand the importance of what they do and are appreciated for their vital contribution. We are committed to effective two-way communication and consultation with staff. The most critical aspect of this task is day to day leadership and management at every level in the organisation. It is currently supplemented by:

- UKRI has an effective partnership with recognised Trade Unions, through a Joint National Consultative Committee, who represent staff on a range of matters including pay, benefits, pensions and organisational change.
- Regular updates are provided to staff by senior executives, face to face for many and available as an internet 'live-stream' for others; this provides staff with progress updates and the opportunity to ask executives challenging questions.
- An Information Hub provides a central online portal for all UKRI staff covering for news, events, and resources; complemented by additional material for each constituent Council.
- UKRI participated in the Civil Service People Survey in October. Just under half of our employees completed the survey and we recorded an overall engagement score of 51 per cent. Employees appear to be positive about their teams, their work and the way they are treated but we received clear feedback that employees would welcome more learning opportunities, that reward is a concern and there is an opportunity for us to improve leadership and management of change. We will work to address these issues as a part of our transformation programme, although public sector pay policy constrains our ability to change pay and benefits.

Staff Policies

UKRI has established an HR policy harmonisation and modernisation project, to ensure that all UKRI employees are employed on common terms and conditions. Harmonisation is on schedule for June 2019 and modernisation of policies for March 2020. Modernisation ensures that HR policies are easy to use and can be reviewed and updated through an established consultation and negotiation protocol with Trades Unions.

Learning and Development

Over this past year, UKRI has defined 14 job families across the new organisation. These job families require both unique and generic skillsets that are in the process of being developed. In time, UKRI will expand its range of training provision (which currently includes basic skills training and management development) to a more strategically focused learning and development programme which will develop our organisation, our centres and institutes, and the career progression of individuals.

Disability and Wellbeing

UKRI policy on recruitment and selection is based on the Equality Act 2010 and focuses on the ability of the candidate to perform the job regardless of gender, colour, ethnic or national origin, disability, age, marital status, sexual orientation or religion. If disability should arise during employment, UKRI would make every effort to maintain employment and ensure the availability of adequate facilities for retraining and career development.

UKRI holds Disability Confident Employer status, which is awarded to employers who have made a commitment to employ, keep and develop the abilities of disabled people.

UKRI has agreed to embrace the Mindful Employer initiative. Participation indicates a positive attitude to mental health and demonstrates UKRI's commitment to improving the working lives of its employees. UKRI HR attends seminars and networking events involving other organisations in this area.

Equality and Diversity

UKRI has pledged to identify barriers and challenges to equality, diversity and inclusion, build knowledge of what works to improve outcomes in this area, and support the development and implementation of effective practices across the sector and internally for our own staff. Led by Professor Jennifer Rubin, we commissioned three external evidence reviews to understand what EDI initiatives work, and these are due to report soon. Whilst we await the outcome of these reviews we have also published our first Gender Pay Gap report and will be conducting a deeper analysis of staff demographics and perceptions of inclusivity. Using this evidence base, we will develop an EDI action plan. Our institutes and centres continue their own EDI programmes, primarily but not exclusively focused on the participation of women in science.

Trade Unions

UKRI has a recognition agreement with the following Trades Union: The British Medical Association (BMA), The FDA, Prospect, The Public and Commercial Services Union (PCS), Unite the Union (Unite), The University and College Union (UCU), Nautilus International (Nautilus), and The Rail, Maritime and Transport Union (RMT) as well as the Independent Pilots Association. UKRI has set up engagement with unions through a Joint Negotiation and Consultative Committee at an organisational level, Local Joint Consultative Committees at some sites, and Joint Council Consultative Committees at Council level.

The following tables are provided under section 172A of the Trade Union and Labour Relations (Consolidation) Act 1992 in connection with the imposition of requirements on public authorities to publish information on time taken by trade union officials.

Trade Union Facility Time Report 2018-19	
Number of employees who were relevant union officials during the relevant period	Full-time equivalent employee number
69	64.75
Percentage Time	Number of Employees
0	30
1-50%	38
51-99%	1
1	0
Total cost of facility time	97,000
Total pay bill	402,090,000
The percentage of the total pay bill spent on facility time, calculated as: (total cost of facility time ÷ total pay bill) x 100	0.024%

During 2018-19, following the formation of UKRI, there was no centralised method for recording facility time available to union representatives. During that year representatives self-reported their total facility time usage at the end of the year. From the 1st April 2019 there is a web-based reporting system that enables us to collate facility time over the year with greater granularity of information. This will enable us to report total facility time and union activity time for the coming year.

Senior Civil Servant Pay Structure

The pay bands for Senior Civil Servants (SCS) equivalent as of 31 March 2019 are as follows:

SCS Equivalent Pay Ranges from 31 March 2019

Minimum (£)	Maximum (£)	Number of Staff
£50,001	£60,000	2
£60,001	£70,000	2
£70,001	£80,000	4
£80,001	£90,000	17
£90,001	£100,000	9
£100,001	£110,000	6
£110,000	£120,000	9
£120,001	£130,000	1
£130,001	£140,000	6
£140,001	£150,000	2
£150,001	£160,000	0
£160,001	£170,000	0
£170,001	£180,000	2
£180,001	£190,000	0
£190,001	£200,000	1

*SCS equivalent pay has been assumed based on organisation hierarchy matching Executive Chairs and their direct reports to SCS grades. This tables excludes staff in Centres, Institutes, Units and National Labs.

Parliamentary Accountability and Audit Report

Losses and Special Payments – Audited Information

UKRI had one payment over the reporting threshold classified within losses and special payments in the financial year 2018-19. It paid £1m of interest on the corporation tax payment made to HMRC in March 2019 with regard to the chargeable gains that arose on the transfer of assets from the legacy councils into UKRI. Additional budget was received from HM Treasury to cover this payment and it did not reduce the funding available for science in the year. The total losses and special payments incurred by UKRI in the year were £1.1m.

Remote Contingent Liabilities – Audited Information

In addition to contingent liabilities reported within the meaning of IAS 37, UKRI also reports liabilities for which the likelihood of a transfer of economic benefit in settlement is too remote to meet the definition of contingent liability.

UKRI has two remote contingent liabilities as at 31 March 2019.

The UKRI, through STFC, collaborates with a number of other international partners in the funding, management and operation of technical facilities which are not owned by STFC. In the event of a decision to withdraw from any of these arrangements, it is likely that STFC would assist in the search for a replacement partner to ensure that technical commitments were met. The most significant international collaborations are in respect of CERN and ESO. For both of these facilities there is the possibility that STFC would be obliged to contribute to decommissioning costs arising from a decision taken to discontinue operations. The decisions to decommission are not wholly within STFC's control.

In July 2018, the UK Government announced an extension of its guarantee for EU-funded projects after the UK has left the EU. The guarantee was originally announced in 2016 and now covers the following:

- a. The full Multiannual Financial Framework allocation for structural and investment funds over the 2014-20 funding period, with payments to beneficiaries made up to the end of 2023;
- b. The payment of awards where UK organisations successfully bid directly to the European Commission on a competitive basis for EU funding projects while we remain in the EU (e.g. before Exit day), for the lifetime of the project;
- c. The payment of awards where UK organisations successfully bid to the European Commission on a competitive basis to participate as a third country after Exit, and until the end of 2020, for the lifetime of the project; and,
- d. The current level of agricultural funding under CAP Pillar 1 until 31 December 2020.

A financial settlement was agreed in principle by both the UK and EU, and is set out in the draft Withdrawal Agreement of 25th November 2018. The guarantee will therefore only be called in the event that the Withdrawal Agreement is not ratified in the case of no deal, and UK organisations are unable to access EU funding.

Audit Fees – Audited Information

The cost of the external audit for UKRI was £490k, the statutory audit fee for SIL was £15k and the statutory audit fee for Innovate UK Loans Limited was £50k. No remuneration was paid to the external auditors in respect of non-audit work in 2018-19.

Fees and Charges

Fees are set to comply with the cost allocation and charging requirements set out in HM Treasury and Office of Public Sector Information guidance.

Facilities are offered to European Union users, commercial users and external users. Users are charged a unit cost based on direct operating costs and annual quantity of access with an allowance for overheads.

Professor Sir Mark Walport
Chief Executive and Accounting Officer

2nd July 2019

The Certificate and Report of the Comptroller and Auditor General to The Houses of Parliament

Opinion on financial statements

I certify that I have audited the financial statements of United Kingdom Research and Innovation for the period ended 31 March 2019 under the Higher Education and Research Act 2017. The financial statements comprise: The Group and Parent Statements of Net Comprehensive Expenditure, Financial Position, Cash Flows, Changes in Taxpayers' Equity; and the related notes, including the significant accounting policies. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Accountability Report that is described in that report as having been audited.

In my opinion:

- the financial statements give a true and fair view of the state of the group's and of United Kingdom Research and Innovation's affairs as at 31 March 2019 and of the group's and the parent's net expenditure for the period then ended; and
- the financial statements have been properly prepared in accordance with the Higher Education and Research Act 2017 and Secretary of State directions issued thereunder.

Opinion on regularity

In my opinion, in all material respects the income and expenditure recorded in the financial statements have been applied to the purposes intended by Parliament and the financial transactions recorded in the financial statements conform to the authorities which govern them.

Basis of opinions

I conducted my audit in accordance with International Standards on Auditing (ISAs) (UK) and Practice Note 10 'Audit of Financial Statements of Public Sector Entities in the United Kingdom'. My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of my certificate. Those standards require me and my staff to comply with the Financial Reporting Council's Revised Ethical Standard 2016. I am independent of the United Kingdom Research and Innovation in accordance with the ethical requirements that are relevant to my audit and the financial statements in the UK. My staff and I have fulfilled our other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Conclusions relating to going concern

I am required to conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the group's and United Kingdom Research and Innovation's ability to continue as a going concern for a period of at least twelve months from the date of approval of the financial statements.

If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the entity to cease to continue as a going concern. I have nothing to report in these respects.

Responsibilities of United Kingdom Research and Innovation and the Accounting Officer for the financial statements

As explained more fully in the Statement of Accounting Officer's Responsibilities, United Kingdom Research and Innovation and the Accounting Officer are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view.

Auditor's responsibilities for the audit of the financial statements

My responsibility is to audit, certify and report on the financial statements in accordance with the Higher Education and Research Act 2017.

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs (UK), I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's and United Kingdom Research and Innovation's internal control.
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

In addition, I am required to obtain evidence sufficient to give reasonable assurance that the income and expenditure reported in the financial statements have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

Other Information

United Kingdom Research and Innovation and the Accounting Officer are responsible for the other information. The other information comprises information included in the annual report, other than the parts of the Accountability Report described in that report as having been audited, the financial statements and my auditor's report thereon. My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon. In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact. I have nothing to report in this regard.

Opinion on other matters

In my opinion:

- the parts of the Accountability Report to be audited have been properly prepared in accordance with Secretary of State directions made under the Higher Education and Research Act 2017;
- in the light of the knowledge and understanding of the group and the parent and its environment obtained in the course of the audit, I have not identified any material misstatements in the Performance Report or the Accountability Report; and
- the information given in the Performance Report and the Accountability Report for the period for which the financial statements are prepared is consistent with the financial statements.

Matters on which I report by exception

I have nothing to report in respect of the following matters which I report to you if, in my opinion:

- adequate accounting records have not been kept or returns adequate for my audit have not been received from branches not visited by my staff; or

- the financial statements and the parts of the Accountability Report to be audited are not in agreement with the accounting records and returns; or
- I have not received all of the information and explanations I require for my audit; or
- the Governance Statement does not reflect compliance with HM Treasury's guidance.

Report

I have no observations to make on these financial statements.

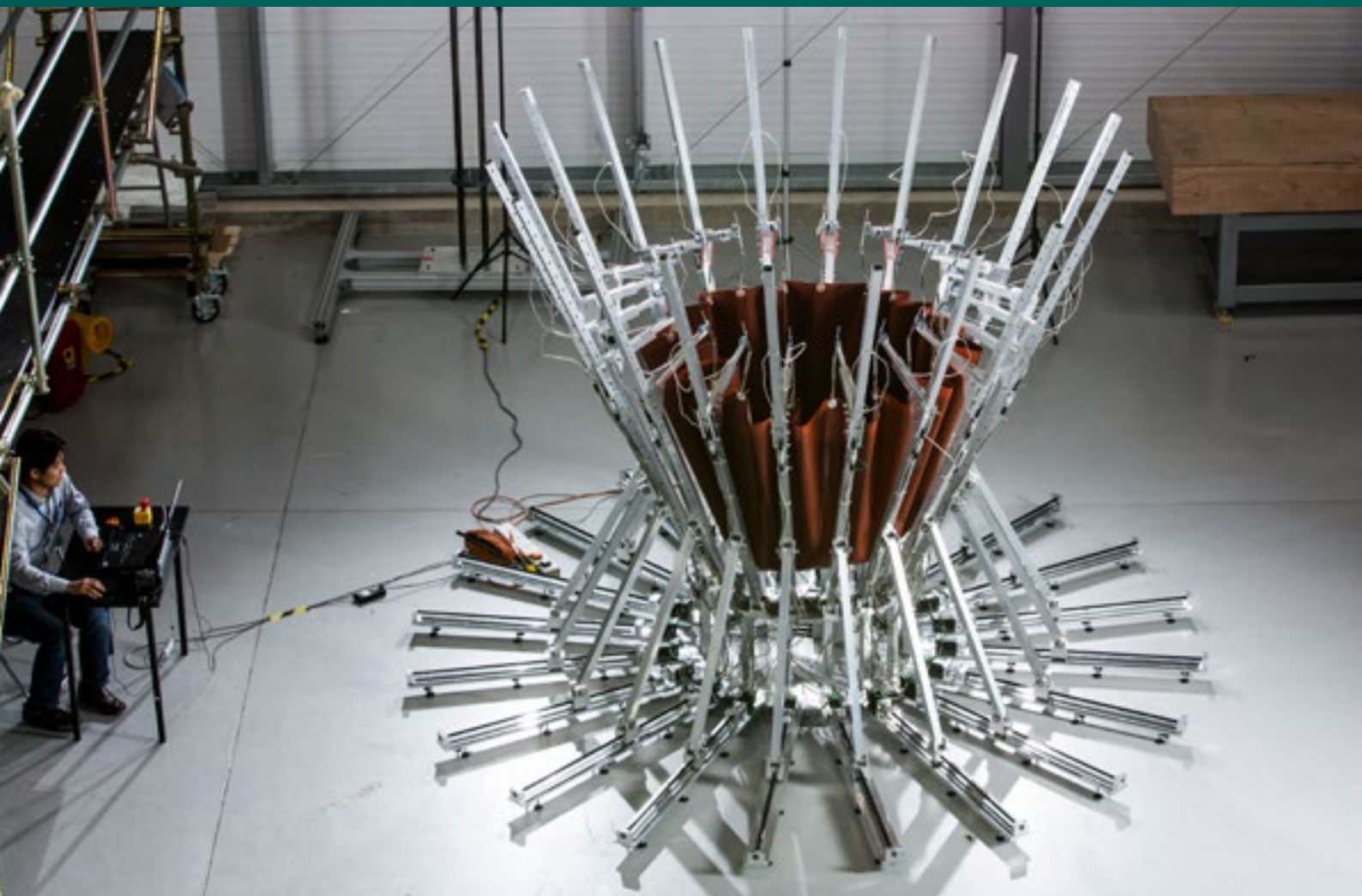
Gareth Davies
Comptroller and Auditor General

10 July 2019

National Audit Office
157-197 Buckingham Palace Road
Victoria
London
SW1W 9SP

Financial Statements





Consolidated Statement of Comprehensive Net Expenditure

	Note	2018-19 UKRI £000	2018-19 Consolidated £000
Total operating income	3	(330,555)	(331,112)
Staff costs	4	404,896	405,335
Purchase of Goods and services	5.1	562,110	563,418
Depreciation and impairment charges	5.2	242,722	247,246
Research and Innovation	5.3	6,438,797	6,439,076
Provision expense	5.4	(35,072)	(35,072)
Other operating expenditure	5.5	(5,751)	18,594
Notional service charge	-	21,444	21,444
		7,629,146	7,660,041
Net operating expenditure		7,298,591	7,328,929
Transfer of undertakings - net gain on absorption	6	(2,712,470)	(2,556,243)
Taxation	7	147,272	147,272
Finance income	-	(287)	(470)
Finance expenditure	-	(1,303)	(1,300)
Net expenditure for the period		4,731,803	4,918,188
Other comprehensive expenditure			
Net (gain)/loss on revaluation of property, plant and equipment	-	(167,239)	(167,239)
Net (gain)/loss on revaluation of intangible assets	-	(3,278)	(3,278)
Net (gain)/loss on revaluation of investments	-	265	265
Net (gain)/loss on revaluation of investment property	-	(230)	(230)
Net (gain)/loss of revaluation of assets held for sale	-	(5,000)	(5,000)
Actuarial loss on defined benefit pension plan	-	71,291	71,291
Total net comprehensive expenditure for the period		4,627,612	4,813,997

The notes on pages 104 to 135 form part of these accounts.

Consolidated Statement of Financial Position

	Note	2018-19 UKRI £000	2018-19 Consolidated £000
Non-current assets			
Property, plant and equipment	8	2,409,371	2,409,371
Intangible assets	9	139,321	139,321
Investment property	10	4,470	4,470
Financial assets	11	900,859	766,839
Pension asset	12	44,335	44,335
Trade and other receivables	13	27,399	27,399
		3,525,755	3,391,735
Current assets			
Assets held for sale	14	20,359	20,359
Trade and other receivables	13	353,193	354,665
Cash and cash equivalents	16	103,424	104,058
		476,976	479,082
Total assets		4,002,731	3,870,817
Current liabilities			
Trade and other payables	17	(1,040,183)	(1,046,842)
Derivative financial instruments	15	(11,770)	(11,770)
Provisions	18	(3,997)	(3,997)
		(1,055,950)	(1,062,609)
Total assets less current liabilities		2,946,781	2,808,208
Non-current liabilities			
Trade and other payables	17	(3,514)	(3,514)
Provisions	18	(101,978)	(101,978)
		(105,492)	(105,492)
Total assets less total liabilities		2,841,289	2,702,716
Taxpayers equity and other reserves			
General fund	-	1,702,543	1,436,607
Revaluation reserve	-	1,024,964	1,152,327
Intellectual property reserve	-	69,447	69,447
Pension reserve	-	44,335	44,335
Total reserves		2,841,289	2,702,716

The notes on pages 104 to 135 form part of these accounts.

Professor Sir Mark Walport
Chief Executive and Accounting Officer

2nd July 2019

Consolidated Statement of Cash Flows

	Note	2018-19 UKRI £000	2018-19 Consolidated £000
Cash flows from operating activities			
Net expenditure for the period	SoCNE	(4,731,803)	(4,918,188)
Transfer of undertakings	6	(2,712,470)	(2,556,243)
Adjustments for non-cash transactions	19	269,564	298,428
(Increase)/decrease in trade and other receivables	13	(30,358)	(30,358)
(Decrease)/increase in trade and other payables	17	64,022	64,022
(Decrease)/increase in provisions	18	(36,860)	(36,860)
Net cash outflow from operating activities		(7,177,905)	(7,179,199)
Cash flows from investing activities			
Purchase of property, plant and equipment	8	(202,856)	(202,856)
Purchase of intangible assets	9	(23,027)	(23,027)
Investment in joint ventures	11.1	(20,269)	(20,269)
Other investments	11.3	(990)	(990)
Investment in Loans	11.4	-	(15,872)
Proceeds of disposal of assets held for sale	-	50	50
Proceeds of disposal of property, plant and equipment	-	519	519
Net cash outflow from investing activities		(246,573)	(262,445)
Net cash outflow before financing activities		(7,424,478)	(7,441,644)
Cash flows from financing activities			
Grant-in-aid received from BEIS	-	7,407,005	7,424,805
Net cash inflows from financing activities		7,407,005	7,424,805
Net increase/(decrease) in cash and cash equivalents		(17,473)	(16,839)
Cash and cash equivalents at the beginning of the period	-	-	-
Cash and cash equivalents transferred in during the period	-	120,897	120,897
Cash and cash equivalents at the end of the period		103,424	104,058

The notes on pages 104 to 135 form part of these accounts.

Consolidated Statement of Changes in Taxpayers' Equity

	General reserve	Revaluation reserve	Pension reserve	Intellectual property reserve	Total reserves
Consolidated					
Balance at 30 March 2018	0	0	0	0	0
Transfer of undertakings	(2,556,243)	-	-	-	(2,556,243)
Transfer between reserves	1,159,766	(974,793)	(122,293)	(62,680)	-
Net expenditure for the period (excl transfer of undertakings)	7,474,431	-	-	-	7,474,431
Grant in aid from BEIS	(7,424,805)	-	-	-	(7,424,805)
Movements in reserves:					
Addition of associate undertaking	-	(13,180)	-	-	(13,180)
Addition of intangible assets	-	-	-	(15,558)	(15,558)
Net gain on revaluation of property, plant and equipment	-	(167,239)	-	-	(167,239)
Net gain on revaluation of intangible assets	-	-	-	(3,278)	(3,278)
Cash flow hedge	-	(12,337)	-	-	(12,337)
Net gain on revaluation of investments	-	(29,672)	-	-	(29,672)
Actuarial gain in the pension scheme	-	-	71,291	-	71,291
Contributions from other employers in the pension scheme	-	-	(4,682)	-	(4,682)
Notional services charge	(21,444)	-	-	-	(21,444)
Transfers between reserves	(68,312)	44,894	11,349	12,069	-
Balance at 31 March 2019	(1,436,607)	(1,152,327)	(44,335)	(69,447)	(2,702,716)
UKRI					
Balance at 30 March 2018	0	0	0	0	0
Transfer of undertakings	(2,712,470)	-	-	-	(2,712,470)
Transfer between reserves	1,062,415	(877,442)	(122,293)	(62,680)	-
Net expenditure for the period	7,444,273	-	-	-	7,444,273
Grant in aid from BEIS	(7,407,005)	-	-	-	(7,407,005)
Movements in reserves:					
Addition of associate undertaking	-	(13,180)	-	-	(13,180)
Addition of intangible assets	-	-	-	(15,558)	(15,558)
Net gain on revaluation of property, plant and equipment	-	(167,239)	-	-	(167,239)
Net gain on revaluation of intangible assets	-	-	-	(3,278)	(3,278)
Cash flow hedge	-	(12,337)	-	-	(12,337)
Net gain on revaluation of investments	-	340	-	-	340
Actuarial gain in the pension scheme	-	-	71,291	-	71,291
Contributions from other employers in the pension scheme	-	-	(4,682)	-	(4,682)
Notional services charge	(21,444)	-	-	-	(21,444)
Transfers between reserves	(68,312)	44,894	11,349	12,069	-
Balance at 31 March 2019	(1,702,543)	(1,024,964)	(44,335)	(69,447)	(2,841,289)

The notes on pages 104 to 135 form part of these accounts.

NOTE 1 Statement of accounting Policies

United Kingdom Research and Innovation (UKRI) is an executive non-departmental public body established by the United Kingdom Parliament.

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been applied consistently to all the years presented unless otherwise stated.

NOTE 1.1 Basis of accounting

The consolidated financial statements have been prepared in accordance with the Accounts Direction issued by the Secretary of State for Business, Energy and Industrial Strategy, with approval of HM Treasury, in pursuance of Section 14(2) of Schedule 9 of the Higher Education and Research Act 2017.

The consolidated financial statements have been prepared in accordance with the 2018-19 Government Financial Reporting Manual (FReM) issued by HM Treasury. The accounting policies contained in the FReM apply International Financial Reporting Standards (IFRS) as adapted or interpreted for the public sector context.

Where the FReM permits a choice of accounting policy, the accounting policy judged to be most appropriate to the particular circumstances of UKRI for the purpose of giving a true and fair view has been selected. The particular policies adopted by UKRI are described below. They have been applied consistently in dealing with items that are considered material to the consolidated financial statements.

Transfer of functions

UK Research and Innovation was created as a legal entity on 30 March 2018.

Under the Higher Education and Research Act 2017, UKRI incorporated the assets, liabilities and functions of the seven Research Councils, Innovate UK and Research England (which comprises Government's funding of research in higher education) from 1 April 2018.

This transfer of functions is accounted for as a transfer by absorption in accordance with the FReM. The carrying value of the assets and liabilities of the predecessor bodies have not been adjusted to fair value. There has been no recognition of goodwill and no restatement of comparatives in the primary financial statements. Historical financial information of the predecessor bodies is set out in Note 2. The recorded amounts of net assets have been brought into the financial statements of the predecessor bodies from 30 March 2018. The net asset carrying value has been recorded as a non-operating gain from the transfer of function, through net expenditure. The revaluation reserves of the predecessor bodies have been transferred in full, with the remaining balance transferred to the General Fund.

Going concern

UKRI is dependent on funding from the Department of Business, Energy and Industrial Strategy (BEIS) to meet liabilities falling due within future years. Confirmation of UKRI's budget allocation for 2019-20 was received from BEIS in June 2019. UKRI has no reason to believe that future funding will not be forthcoming beyond the current spending review period. It has accordingly been considered appropriate to adopt a going concern basis for the preparation of the financial statements. UKRI monitors future levels of commitment to ensure they remain within the anticipated budget.

NOTE 1.2 Accounting convention

The consolidated financial statements have been prepared under the historical cost convention modified to include the fair value of property, plant and equipment, intangible assets and financial instruments to the extent required or permitted under IFRS as set out in the relevant accounting policies.

The consolidated financial statements are presented in pound sterling and all values are rounded to the nearest thousand (£'000), except where indicated otherwise.

NOTE 1.3 Presentational currency

The consolidated financial statements are presented in pounds sterling, the functional currency of UKRI. Transactions denominated in a foreign currency are translated into sterling at the rate of exchange on the date of each transaction. In preparing the financial statements, monetary assets and liabilities denominated in foreign currencies are translated at the rates prevailing at the reporting date. All translation differences of monetary assets and liabilities are included in net expenditure for the year.

NOTE 1.4 Basis of consolidation

The Group comprises:

UK Research and Innovation

STFC Innovations Limited

Innovate UK Loans Limited

The consolidated bodies prepare accounts in accordance with either the FReM or the Companies Act 2006 (for limited companies). For those bodies that do not prepare accounts in accordance with the FReM, adjustments are made at consolidation if necessary where differences would have a significant effect on the accounts.

NOTE 1.5 Changes in accounting policy

There are no changes in accounting policies in the 2018-19 financial year, with the exception of the adoption of the new accounting standards below.

NOTE 1.6 New accounting standards adopted in the period, and frem changes

IFRS 9 Financial Instruments was issued in July 2014 to replace IAS 39 Financial Instruments: Recognition and Measurement and has been endorsed by the EU. The standard is effective for accounting periods beginning on or after 1 January 2018 and was adopted by UKRI from 30 March 2018.

IFRS 9 changed how financial instruments are classified and measured and amended how impairment provisions are calculated for certain types of financial assets, moving to an expected credit loss model from an incurred loss model. As required by the FReM, UKRI has applied the change retrospectively but there was no material adjustment required in the 2018-19 opening balances.

IFRS 15 Revenue from Contracts with Customers replaced both IAS 18 Revenue and IAS 11 Construction Contracts, unifying the concepts in these two standards into a single model to recognise revenue once performance obligations under a contract are satisfied. As required by the FReM, UKRI has applied the change retrospectively. No material adjustment was made in the 2018-19 opening balances because none of the changes had a material effect.

NOTE 1.7 Grant-in-aid

Grant-in-aid for revenue purposes and grants from BEIS (controlling body) is recognised as a financing flow and thus credited to the General Reserve.

NOTE 1.8 Income

Operating income is shown net of trade discounts; value added tax and other taxes. Revenue is recognised when goods are delivered and title has passed and services in the accounting period in which the service is rendered.

Grant Income receivable and funding for collaborative projects is recognised as income over the period in which UKRI recognises the related costs for which the grant or funding is intended to compensate in accordance with IAS 20.

Commercial income is recognised in line with the satisfaction of performance obligations over time as per IFRS 15.

NOTE 1.9 Deferred income

UKRI receives funding for projects to support the UKRI research. The majority of such funding is received from the UK public sector, charities, and from the European Commission (EC). Some of the funding may involve payment for projects a number of years in advance of the accounting period to which it relates, such as is common with the EC. Where there is a variance between activity in the accounting period and received funding, income will be deferred when there is a condition which makes the grant repayable or returnable.

NOTE 1.10 Staff costs

Staff costs are recognised as expenses when UKRI becomes obliged to pay them, including the cost of any untaken leave entitlement.

NOTE 1.11 Grants and training awards payable

Research Councils Grants, Fellowships and Studentships

Research grants and fellowships are paid on an instalment basis in accordance with an agreed payment profile. Grant payments made in advance or in arrears are accounted for on a prepayments or accruals basis in the financial statements. Where the grant documentation does not specify a pre-agreed payment profile or other matching considerations, obligations are recognised in full. Studentship payments are paid on a quarterly instalment basis in advance or arrears directly to the research institute.

Where the profile indicates an unclaimed and/or unpaid amount exists at the Statement of Financial Position date, such sums are accrued in the financial statements.

Innovate UK Technology Grants

Technology grant expenditure is recognised in the period in which eligible activity creates an entitlement in line with the terms and conditions of the grant. Accrued grants are charged to the Statement of Comprehensive Net Expenditure on the basis of estimates (see Note 1.32 below) and are included in accruals in the Statement of Financial Position.

Research England Grants

Most grants are paid on agreed profiles, which are set to reimburse the grant recipient based on the expected profile of expenditure.

The profiles are periodically updated throughout the academic year, and as such no financial year end accruals are expected for these streams of expenditure. Grants are recognised at the payment dates agreed with the organisations concerned.

Future commitments at the Statement of Financial Position date are disclosed in Note 20.

NOTE 1.12 Ownership of equipment purchased with grants

Equipment purchased by an institution using UKRI grants, belongs to the institution and is not included in UKRI property, plant and equipment. UKRI reserves the right through its grant conditions to determine the disposal of such equipment and how any disposal proceeds are to be used.

NOTE 1.13 Notional UK SBS charge

When the ownership of the UK SBS transferred from the Research Councils to BEIS, the cost of the services provided by UK SBS ceased to be a direct charge and instead was deducted from UKRI's allocation. In order to reflect the cost of using the services provided by UK SBS, the charge has been shown as a notional cost and has then been written back to the General Reserve.

NOTE 1.14 Taxation

UKRI is subject to corporation tax on taxable profits. Current tax assets and liabilities are measured at the amount expected to be recovered from or paid to HM Revenue and Customs, based on tax rates and laws that are enacted or substantively enacted by the reporting date.

NOTE 1.15 Value added tax

As UKRI is partially exempt for VAT purposes, all expenditure and non-current asset purchases are shown exclusive of VAT except:

- Irrecoverable VAT is charged to the Statement of Comprehensive Net Expenditure, and included under the relevant expenditure heading
- Irrecoverable VAT on the purchase of an asset is included in additions.

Residual input tax reclaimable by the application of the partial exemption formula is taken to the Statement of Comprehensive Net Expenditure as a reduction of expenditure.

The net amount due to, or from, HM Revenue and Customs in respect of VAT is included within other receivables and payables on the Statement of Financial Position.

NOTE 1.16 Intangible assets

Recognition

Expenditure on intangible assets is capitalised where the cost is £10,000 or more and is applied on a grouped basis using a threshold of £10,000 where the elements in substance form a single asset.

Subsequent acquisitions of less than £10,000 in value which are of the same nature as existing grouped assets are appended. Otherwise, expenditure on intangible assets which fall below £10,000 is charged as an expense in the Statement of Comprehensive Net Expenditure.

Measurement

Intangible assets are initially measured at cost in line with IAS 38. For separately acquired assets cost comprises the purchase price and any directly attributable costs to prepare the asset for its intended use. The cost of internally generated assets comprises all directly attributable costs necessary to create, produce, and prepare the asset to be capable of operating in the manner intended by management.

There are no active markets for any of UKRI's intangible non-current assets which are valued at the lower of depreciated replacement cost and value in use using a valuation technique (for example for income-generating assets); where there is no value in use, depreciated replacement cost is used. Assets of low value or with short useful lives are carried at cost less accumulated amortisation and impairment losses as a proxy for fair value.

Impairment

Intangible assets are monitored for any indication of impairment. At the end of each reporting period, tests for impairment are carried out for any such asset with an indefinite useful life or in the course of development.

Where indications of impairment exist and any possible differences are estimated to be material, the recoverable amount of the asset is estimated and, where this is less than the carrying amount of the asset, an impairment loss is recognised in the Statement of Comprehensive Net Expenditure.

Where an impairment loss is subsequently reversed, the reversal is credited in the Statement of Comprehensive Net Expenditure, up to the amount of the original loss, adjusted for amortisation that would have been charged if the loss had not been recognised.

Amortisation

Amortisation is provided on all intangible assets from the date at which they are available for their intended use at rates calculated to write off the cost of each asset (less any estimated residual value) on a straight-line basis over its expected useful economic life. UKRI reviews and updates the remaining useful economic lives of its assets each year. The estimated useful economic lives of the intangible assets currently in service are summarised as overleaf:

Internally developed software	3 – 5 years
Software licences	Up to 10 years (subject to the length of the licence)
Internally developed websites	2 – 5 years
Data Sets	5 – 10 years
Patents	Up to 15 years (subject to the length of agreement)

Disposals

When scrapping or disposing of an intangible asset, the carrying amount is written off to the Statement of Comprehensive Net Expenditure and a loss (or gain) is recognised and reported net of any disposal proceeds.

NOTE 1.17 Property, plant and equipment

Recognition

Expenditure on the acquisition, creation or enhancement of Property, Plant and Equipment is capitalised on an accruals basis, provided that it is probable that the future economic benefits, including service potential, associated with the item will flow to UKRI and the cost of the item can be measured reliably. A capitalisation threshold of £10,000 is applied to all asset classes. Expenditure below this value is charged as an expense in the Statement of Comprehensive Net Expenditure.

Property, plant and equipment usually comprises single assets. However, capitalisation is applied on a grouped basis using a threshold of £10,000 where the elements in substance form a single asset. Further, where an item includes material components with significantly different useful economic lives, those components are capitalised separately and depreciated over their specific useful economic lives.

Expenditure that maintains but does not add to an asset's potential to deliver future economic benefits or service potential (i.e. repairs and maintenance) is charged as an expense as incurred.

Any capital funding provided by UKRI to BBSRC institutes is included within Research Grants in the Statement of Comprehensive Net Expenditure (SoCNE). Where these contributions result in a change in value of assets, this is accounted for as a non-current asset valuation addition in the Property, Plant and Equipment note based on the construction costs during the year up to the Statement of Financial Position date, with the corresponding entry to revaluation reserve.

Measurement

Property, plant and equipment are initially measured at cost, comprising the purchase price plus any costs attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. The initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located are capitalised as a decommissioning asset with a matching provision where an obligation to dismantle or remove the asset arises from its acquisition or usage. The decommissioning asset is depreciated over the life of the respective asset as the provision is unwound.

Assets are thereafter carried in the Statement of Financial Position using the following measurement bases:

Land, buildings, Antarctic ice stations, ships and aircraft are professionally revalued every five years and in the intervening period relevant indices are used. Indexation is not applied to assets under construction.

Specialised assets are valued on a depreciated replacement cost basis in line with FReM. For non-specialised assets, open market value is used where this can be established. Any surplus on revaluation is taken to a revaluation reserve.

For furniture, fixtures and fittings where an asset pool is maintained replacements on a one-to-one basis are charged directly to the Statement of Comprehensive Net Expenditure in the year of replacement.

Impairment

Property, plant and equipment are monitored for any indication of impairment. At the end of each reporting period, tests for impairment are carried out for any assets with a remaining useful life and on assets in the course of construction. Where an annual check is impractical given the number of assets held, a targeted risk-based approach is taken to assess all assets within 18 months of the end of their UEL plus a randomly selected check of 10% by number of the whole asset population.

Where indications of impairment exist or trigger points are noted (such as transfer from AUC into PPE) and any possible differences are estimated to be material, the recoverable amount of the asset is estimated and, where this is less than the carrying amount of the asset, an impairment loss is recognised in the Statement of Comprehensive Net Expenditure.

Where an impairment loss is subsequently reversed, the reversal is credited in the Statement of Comprehensive Net Expenditure, up to the amount of the original loss, adjusted for depreciation that would have been charged if the loss had not been recognised. Anything over and above will be recognised in the revaluation reserve.

Depreciation

Assets under construction are not depreciated until the asset is brought into use.

Depreciation is provided on all property, plant and equipment, apart from assets under construction, from the date at which they are available for their intended use at rates calculated to write off the cost of each asset (less any estimated residual value) on a straight-line basis over its expected useful economic life. Increased depreciation charges arising from revaluations are matched by transfers from the revaluation reserve to the general reserve. Assets that are under construction are not depreciated until such time as they are available for their intended use.

UKRI reviews and updates the remaining useful economic life of its assets each year. The estimated useful lives of the assets currently in service are summarised as follows:

Freehold land	Not depreciated
Leasehold land	Up to 60 years (subject to the length of the lease)
Freehold buildings	Up to 60 years
Leasehold buildings	Up to 60 years (subject to the length of the lease)
Major facilities (costing over £50,000)	Up to 15 years
Scientific equipment	3 to 15 years
IT equipment	Up to 10 years
Other plant and machinery	3 to 20 years
Furniture, fixtures and fittings	Up to 10 years
Motor vehicles	Up to 10 years
Antarctic ice stations	Up to 35 years
Ships	20 to 50 years
Aircraft	15 to 50 years

Disposals

When scrapping or disposing of property, plant and equipment, the carrying amount is written off to the Statement of Comprehensive Net Expenditure and a loss (or gain) is recognised and reported net of any disposal proceeds. On disposal of a revalued asset, the resulting element of the revaluation reserve that is realised is transferred directly to the general reserve.

NOTE 1.18 Investment properties

Investment properties are measured using the fair value model in IFRS 13. The fair value of investment properties reflects the market conditions at the end of the reporting period based on the rental income from current leases and reasonable and supportable assumptions that represent what knowledgeable, willing parties would assume about rental income from future leases in the light of current conditions.

A gain or loss arising from a change in the fair value of investment property is recognised in the statement of comprehensive net expenditure in the period in which it arises.

NOTE 1.19 Non-current assets held for sale

Non-current assets are classified as held for sale if their carrying amount will be recovered through a sale transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable, the asset is available for immediate sale in its present condition, management are committed to the sale and completion is expected within one year from the date of classification.

The asset is revalued immediately before reclassification and carried at the lower of this amount and fair value less selling costs. Assets held for sale are not depreciated. Where there is a subsequent reduction in fair value, the loss is reported in the Statement of Comprehensive Net Expenditure, and increases are only recognised as gains in the Statement of Comprehensive Net Expenditure up to the amount of any previously reported losses.

NOTE 1.20 Investments in joint arrangements and associates

UKRI's investments in joint ventures and associates are accounted for using the equity method of accounting. The investment in an associate or joint venture is initially recorded at cost and is subsequently adjusted to reflect UKRI's share of the net profit or loss of the associate or joint venture. Where appropriate, UKRI adjusts information from the investee's financial records to bring in line with the FReM.

Details of UKRI's investments in Joint Ventures and Associates can be found in Note 11.

NOTE 1.21 Financial instruments

UKRI recognises and measures financial instruments in accordance with IFRS 9 Financial Instruments as interpreted by the FReM.

A financial asset or financial liability is measured initially at fair value plus, for an item not at fair value through profit or loss, transaction costs that are directly attributable to its acquisition or issue.

UKRI derecognises a financial asset when the contractual rights to receive future cash flows from the financial asset expire or it transfers the rights to receive the contractual cash flows in a transaction in

which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which UKRI neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

UKRI derecognises a financial liability when its contractual obligations are discharged, cancelled or expires.

Innovation loans

Innovation loans are valued at fair value at initial recognition. In accordance with IFRS 9 Financial Instruments, a financial asset must subsequently be held at amortised cost if it passes the business model test, where the objective of UKRI's business model is to hold the financial asset to collect the contractual cash flows, and the cash flow characteristics test, where the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. The innovation loans passed the business model test and the cash flow characteristics test, therefore the loans are held at amortised cost.

Interest income is calculated using the effective interest method and is recognised in the Statement of Comprehensive Net Expenditure.

IFRS 9 Financial Instruments outlines a three-stage model for impairment based on changes in credit quality after initial recognition. At each reporting date, loans are reviewed for changes in credit risk since the loans were initially recognised. If, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, a loss allowance equal to 12-month expected credit losses (based on the probability of default within the next 12 months) is recognised. Where credit risk has increased significantly since initial recognition lifetime expected losses are recognised. In these circumstances, interest revenue is calculated on the gross carrying amount of the asset. All innovation loans with payments falling 90 days past due are assessed to be non-performing, where a lifetime expected credit loss is recognised and interest revenue is calculated on the net carrying amount (net of credit allowance).

Innovation loans will be written off at the point when any further recoveries are unlikely or become uneconomical to pursue. At this point, any remaining provision held against a non-performing loan asset will be taken to the Statement of Comprehensive Net Expenditure and the value of the loan written off in the Statement of Financial Position.

NOTE 1.22 Derivative financial instruments

Derivative financial instruments comprise forward contracts held to hedge exposure to foreign currency risk relating to payments due for membership to international research collaborations. The forward contract is designated as a cash flow hedge against the related membership commitment.

For cash flow hedges of a forecast transaction which result in the recognition of a financial asset or liability, the accumulated gains and losses recorded in equity are reclassified to the Statement of Comprehensive Net Expenditure in the same period or periods during which the hedged expected future cash flows affect the Statement of Comprehensive Net Expenditure. Where there is a cumulative loss on the hedging instrument and it is no longer expected that the loss will be recovered, it must be immediately recognised in the Statement of Comprehensive Net Expenditure.

NOTE 1.23 Trade and other receivables

Under IFRS 9, trade and other receivables are measured at amortised cost. In line with FReM, the simplified approach will be adopted and any loss allowances will be recognised at an amount equal to expected lifetime credit losses.

NOTE 1.24 Trade and other payables

Trade and other payables are recognised in the period in which related money, goods or services are received or when a legally enforceable claim against UKRI is established or when the corresponding assets or expenses are recognised.

NOTE 1.25 Cash and cash equivalents

Cash and cash equivalents comprise cash in hand and other short-term highly liquid investments which are readily convertible to known amounts of cash, are subject to insignificant risk of changes in value and have an original maturity of three months or less. Any bank overdraft amounts without the right of offset are included within trade payables and other liabilities.

NOTE 1.26 Risks

Due to the non-trading nature of its activities and the way in which UKRI is financed, UKRI is not exposed to the degree of financial risk faced by non-public sector entities. UKRI has very limited powers to borrow or invest surplus funds. Financial assets and liabilities are generated by day to day operational activities and are not held to change the risks facing UKRI in undertaking its activities.

UKRI is subject to foreign currency risk through the maintenance of bank accounts in foreign currencies to deal with day to day overseas transactions. The risk is low level and not actively managed by UKRI.

NOTE 1.27 Provisions

Provisions are recognised and measured in accordance with IAS 37 Provisions, Contingent Liabilities and Contingent Assets. Where the time value of money is material, provisions are discounted to present value using HM Treasury's real discount rates.

When a decommissioning provision is created, a decommissioning asset is established at the same time and depreciated over its useful life. The decommissioning provision is measured at present value with the discount unwound over the useful life of the asset.

NOTE 1.28 Leases

Leases are classified as finance leases when the risks and rewards of ownership are transferred substantially to the lessee; other leases are classified as operating leases.

Finance leases – UKRI as lessor

Amounts due from lessees under finance leases are recognised as receivables at the amount of UKRI's net investment in the lease. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on UKRI's net investment outstanding in respect of the leases.

Finance leases – UKRI as lessee

Assets subject to finance leases and the associated liabilities for future payments (if any) are recognised in the Statement of Financial Position.

Operating leases – UKRI as lessor

Assets subject to operating leases are recognised in the Statement of Financial Position with rental income plus initial direct costs incurred in arranging the lease, including incentives to the lessee to enter into the lease, recognised on a straight-line basis over the lease term.

Operating leases – UKRI as lessee

Rentals payable under operating leases, including benefits received and receivable as incentives to enter into the leases, are expensed on a straight-line basis over the term of the lease.

NOTE 1.29 Pensions

Retirement benefits to employees of UKRI are provided by:

- the Research Councils' Pension Scheme (RCPS);
- the Principal Civil Service Pension Scheme (PCSPS);
- the Medical Research Council Pension Scheme (MRCPS);
- the Prudential and Scottish Widows Pension Scheme (PSWPS); and
- United Kingdom Atomic Energy Authority (UKAEA) Pension Scheme.

The RCPS, PCSPS, PSWPS and UKAEA are unfunded pension schemes and the MRCPS is a funded scheme. The treatment of the different pension schemes is explained below:

Unfunded pension schemes

UKRI is unable to identify its share of the underlying net liability; as such these schemes are accounted for as defined contribution pension schemes, with employer contributions charged to the Statement of Comprehensive Net Expenditure in the period to which they relate.

Funded pension scheme

Employer superannuation costs are based on an actuarially derived calculation under IAS 19. See Note 12. The defined benefit plan requires contributions to be made to separately administered funds. The cost of providing benefits under the defined benefit plan is determined using the projected unit credit actuarial valuation method.

Actuarial gains and losses are recognised in full as income or expense in the Comprehensive Statement of Net Expenditure.

The past service cost is recognised as an expense on a straight-line basis over the average period until the benefits become vested. If the benefits are already vested immediately following the introduction of, or changes to, a pension plan, past service cost is recognised immediately.

The defined benefit liability is the aggregate of the present value of the defined benefit obligation and actuarial gains and losses not recognised reduced by past service cost not yet recognised and the fair value of plan assets out of which the obligations are to be settled directly. If such aggregate is negative, the asset is measured at the lower of such aggregate or the aggregate of cumulative unrecognised net actuarial losses and past service cost and the present value of any economic benefits available in the form of refunds from the plan or reductions in the future contributions to the plan. The net asset is recognised as UKRI has rights to any surplus once the pension entitlements have been gradually settled over time until all members have left the plan.

Defined contribution pension schemes

Contributions are charged to the Statement of Comprehensive Net Expenditure when they become payable. UKRI has no further liabilities in respect of benefits to be paid to members.

NOTE 1.30 Early departure costs

UKRI is required to meet the additional cost of benefits beyond the normal Scheme benefits in respect of employees who retire early. In accordance with IAS 19, Employee Benefits, UKRI provides in full for this cost when an early retirement programme has been announced and is binding. Early departure costs are discounted using HM Treasury's current pension rate. Payments by UKRI of early retirement lump sums are recoverable from the Research Councils' Pension Scheme when recipients achieve normal retirement age. Recoverable amounts are recognised as receivables in these accounts and offset against annual staff restructuring costs.

NOTE 1.31 Contingent assets and liabilities

Contingent assets and liabilities are disclosed in accordance with IAS 37 Provisions, Contingent Liabilities and Contingent Assets.

Where an outflow of economic benefits from a past event is possible but not probable, UKRI discloses a contingent liability. No disclosure is made for those contingencies where crystallisation is considered to be remote or the amounts involved are immaterial.

Where an inflow of economic benefits from a past event is probable, UKRI discloses a contingent asset. No disclosure is made where realisation is considered to be possible, but not probable, or the amounts involved are immaterial.

NOTE 1.32 Judgements, estimates and assumptions

Funded Pension Scheme

The determination of the pension cost and defined benefit obligation (liabilities) of the Medical Research Council Pension Scheme (MRCPS) depends on the selection of certain assumptions which include the discount rate, inflation rate, salary growth, mortality rates and expected rate of return. See Note 12 for further details.

Patents and Royalties

Where patents and royalties are recognised as intangible assets, these are revalued annually by specialists based on future royalty income streams. Management applies the discount rate. Estimates are subject to business uncertainty in terms of sales and the fluctuation of exchange rates. Significant judgement has been required in assessing the impact of these variables. The policy has been judged to be compliant with IAS 38.

Innovation Loans

The measurement of the expected credit loss under IFRS 9 for the innovation loans made to UK small or medium-sized enterprises is an accounting estimate.

Grant Accrual

The UKRI accounts include a grant accrual for each project (including fellowships, studentships and grants) where it has been determined that there is an unclaimed amount at the year-end that is due to participants. Given the nature of this estimate and history of recipients not spending and therefore reimbursed for their full entitlement, an expected future underspend percentage is calculated based on historic data of underspend against payment profile and applied to the year-end balance.

Innovate UK Technology Grant Accrual

The technology grant accrual is based on participants' forecast of expenditure submitted with their latest claim, adjusted for the participants' historical forecasting accuracy. For a number of large non-core projects, the Knowledge Transfer Network (KTN) and Catapult Centres, Innovate UK contacts the participants directly to obtain further information and assurances on claims due at the year-end date. For those grants that are based on procurements, Innovate UK confirms the accruals based on purchase orders raised for the period. The technology grant accrual as at 31 March 2019 was £352.7m.

The major sources of uncertainty in the estimate relate to the profiling of incurring and defraying the project costs that create the entitlement to the grant and the amount of the grant not utilised at the end of the project. The projects funded by Innovate UK are typically collaborations between private businesses and academia; this aspect introduces a degree of interdependency between project partners that may impact on the timing of individual work packages. In addition, projects are typically 2 to 5 years long, which permits a degree of flexibility for grant recipients in the scheduling of their project activity. The projects seek to develop new technology-based products and services for future markets and as such are inherently uncertain in terms of their success and, related to this, the project duration and activity costs ultimately incurred.

Decommissioning Provisions

Calculation of the decommissioning costs for STFC and NERC facilities constitute a significant accounting estimate. External experts give insight into the current cost of the work to be undertaken and assumptions regarding inflation rates. Management translate these costs into a provision using knowledge of the timing of the decommissioning and the profiling of the expenditure. To reduce the risk of material misstatement, the estimates and assumptions are reviewed annually.

STFC's share of the Institut Laue-Langevin (ILL) decommissioning provision is taken from information included in the ILL financial statements. The provision was re-evaluated in 2016 by the Commissariat à l'Énergie Atomique (CEA) using information provided by ILL management.

1.33 Prior period adjustments

There have been no prior period adjustments made in the 2018-19 financial year.

NOTE 2 Statement of Operating Expenditure by Operating Segment
Analysis of UKRI information by business segment

	AHRC £000	BBSRC £000	EPSRC/ UKRI £000	ESRC £000	IUK £000	MRC £000	NERC £000	RE £000	STFC £000	Intra £000	Total £000
2018-19											
Total operating income	(1,667)	(6,956)	(19,331)	(18,119)	(80,489)	(88,152)	(64,955)	(711)	(75,283)	24,551	(331,112)
Staff costs	9,326	10,589	25,745	7,728	29,022	91,860	114,920	3,424	116,402	(3,681)	405,335
Purchase of goods and services	(7,269)	(10,144)	32,793	(7,801)	42,312	59,333	84,723	3,388	289,699	76,384	563,418
Depreciation and impairment charges	21	11,522	3,970	96	8,506	77,019	48,505	-	97,607	-	247,246
Research & Innovation	124,135	456,630	1,174,445	254,334	1,091,148	700,869	213,019	2,269,800	252,013	(97,317)	6,439,076
Provision expense	3	(218)	258	-	-	(893)	2,001	-	(36,223)	-	(35,072)
Other operating expenditure	-	(5,051)	(522)	-	(230)	(1,662)	(27)	-	26,086	-	18,594
Notional service charge	930	1,481	2,214	975	74	5,942	5,568	-	4,260	-	21,444
Net expenditure	125,479	457,853	1,219,572	237,213	1,090,343	844,316	403,754	2,275,901	674,561	(63)	7,328,929

	AHRC £000	BBSRC £000	EPSRC/ RCUK £000	ESRC £000	IUK £000	MRC £000	NERC £000	RE £000	STFC £000	Intra £000	Total £000
2017-18											
Total operating income	(6,472)	(17,554)	(32,717)	(28,206)	(78,061)	(128,380)	(71,134)	(142)	(79,857)	102,462	(340,061)
Staff costs	7,830	10,031	15,552	7,074	24,409	115,232	111,891	2,012	107,895	(520)	401,406
Purchase of goods and services	2,203	4,385	14,487	3,662	43,764	103,461	85,965	691	268,896	(15,754)	511,760
Depreciation and impairment charges	35	12,078	5,687	91	2,263	23,253	39,025	-	90,501	-	172,933
Research & Innovation	108,856	490,316	1,053,595	230,959	969,508	651,640	220,618	2,055,021	263,307	(86,150)	5,957,670
Provision expense	4	1,752	-	-	-	(52)	229	-	17,960	-	19,893
Other operating expenditure	-	(4,109)	-	-	5	12,612	32	-	12,796	-	21,336
Notional service charge	765	1,527	2,235	1,021	-	5,911	5,643	-	4,178	-	21,280
Net expenditure	113,221	498,426	1,058,839	214,601	961,888	783,677	392,269	2,057,582	685,676	38	6,766,217

UKRI reports its expenditure by operating segments in accordance with IFRS 8 Operating Segments.

Operating segments are funding segments about which separate financial information is available that is regularly reviewed by the chief operating decision maker, the UKRI Executive Committee.

The comparatives are included for information purposes only and have not been audited.

NOTE 3 Total Operating Income

	2018-19 UKRI £000	2018-19 Consolidated £000
Current grants from Central Government	(80,948)	(80,948)
Current grants from European Commission	(21,829)	(21,829)
Capital Grants	(3,075)	(3,075)
Current grants from private sector	(59,067)	(59,067)
Income from private sector	(16)	(16)
Income from other government departments and public sector	(77,449)	(77,449)
Rental income	(5,419)	(5,419)
Sales of goods and services	(27,687)	(27,955)
Other income	(55,065)	(55,354)
	(330,555)	(331,112)

NOTE 4 Staff Costs

	2018-19 UKRI £000	2018-19 Consolidated £000
Wages and salaries	286,148	286,489
Social security costs	31,470	31,504
Other pension costs	84,677	84,741
	402,295	402,734
Staff severance costs	2,601	2,601
	404,896	405,335

NOTE 5.1 Purchase of Goods and Services

	2018-19 UKRI £000	2018-19 Consolidated £000
Rentals under operating leases	6,546	6,546
Finance, HR, IT and support costs	9,919	9,919
Accommodation and office equipment costs	129,272	129,282
Consultancy and legal expenditure	3,143	3,401
Training and other staff costs	4,958	4,977
Travel and subsistence costs	28,906	28,977
Advertising and publicity	17,492	17,723
Professional services	38,806	39,063
Auditors remuneration	490	555
Programme management and administration of grants and awards	5,872	5,872
Professional and international subscriptions	231,643	231,650
Recharges	31,091	31,535
Other purchase of goods and services cost	53,972	53,918
	562,110	563,418

NOTE 5.2 Depreciation and Impairment Charges

	2018-19 UKRI £000	2018-19 Consolidated £000
Depreciation	153,755	153,755
Amortisation of intangible assets	37,931	37,931
Impairment of PPE	48,673	48,673
Impairment of financial assets	71	71
Impairment of Joint Ventures	713	713
Expected credit loss - Trade receivables	1,579	6,103
	242,722	247,246

NOTE 5.3 Research and Innovation

	2018-19 UKRI £000	2018-19 Consolidated £000
Research and Innovation grants	1,493,505	1,493,505
Quality-related Research	1,634,301	1,634,301
Talent	468,644	468,644
Institutes, centres, facilities & catapults (ESA10)	567,083	567,362
Knowledge exchange	148,263	148,263
Higher Education Innovation Fund	210,000	210,000
International	16,322	16,322
Managed Programmes	337,669	337,669
Other costs	37,686	37,686
Industrial Strategy Challenge Fund	299,113	299,113
Other National Productivity Investment Fund	35,007	35,007
Global Challenge Research Fund	235,117	235,117
Newton	72,864	72,864
Infrastructure	843,215	843,215
Competitive	33,623	33,623
Administration	6,385	6,385
	6,438,797	6,439,076

In March 2019 BEIS provided UKRI with an additional £74 million of QR funding. As a consequence the QR grant allocations for 2019-20 have been reduced by £74 million. Over the two financial years the changes in funding cancel each other out so there is no impact on the funding provided to higher education institutions.

NOTE 5.4 Provision Expense

	2018-19 UKRI £000	2018-19 Consolidated £000
Provision expense - Early retirement	1,306	1,306
Provision expense - Other provisions	947	947
Provision expense - Decommissioning	(37,325)	(37,325)
	(35,072)	(35,072)

NOTE 5.5 Other Operating Expenditure

	2018-19 UKRI £000	2018-19 Consolidated £000
Revaluation - assets held for sale	(5,000)	(5,000)
Revaluation - Investment property	(230)	(230)
Profit on disposal - PPE	(65)	(65)
Loss on disposal - PPE	65	65
Share of profits on joint venture and associates	(521)	(5,753)
Share of losses on joint venture and associates	-	29,577
	(5,751)	18,594

NOTE 6 Transfer of Undertakings

On 30 March 2018 the Higher Education Research Act 2017 created a new body, UK Research and Innovation (UKRI).

UKRI brings together the Arts and Humanities Research Council; Biotechnology and Biological Sciences Research Council; Engineering and Physical Sciences Research Council; Economic and Social Research Council; Innovate UK; Medical Research Council; Natural Environment Research Council; Research England; and Science and Technology Facilities Council.

The assets of the former bodies were transferred into the new body in the Statement of Comprehensive Net Expenditure under the absorption method as described in the FReM. These were then transferred to the relevant reserve in the Statement of Changes in Taxpayers Equity.

NOTE 7 Taxation

During 2018-19, UKRI was required to pay corporation tax on the chargeable gain arising on the transfer of assets from the predecessor Councils into UKRI. The total value of this payment was £142m. Additional funding was received from HM Treasury to fund this payment.

	2018-19 UKRI £000	2018-19 Consolidated £000
Current tax	5,000	5,000
Corporation Tax on Transfer of Assets	142,272	142,272
	147,272	147,272

NOTE 8 Property Plant and Equipment

	Land £000	Buildings £000	Plant, equipment, fixtures and fittings £000	IT equipment £000	Transport £000	Assets under construction £000	Total £000
Cost							
At 30 March 2018	0	0	0	0	0	0	0
Transferred in from former bodies	242,730	1,648,661	1,211,804	153,440	323,297	284,607	3,864,539
At 1 April 2018	242,730	1,648,661	1,211,804	153,440	323,297	284,607	3,864,539
Additions	3,380	2,699	26,812	2,244	3,795	163,926	202,856
Disposals	-	-	(19,502)	(6,265)	(1,295)	-	(27,062)
Transfers	(6)	59,935	6,911	22,231	945	(92,489)	(2,473)
Revaluation	(7,217)	197,868	9,597	786	2,925	9,608	213,567
Impairment	(40,949)	(7,190)	5,031	-	(5,565)	-	(48,673)
At 31 March 2019	197,938	1,901,973	1,240,653	172,436	324,102	365,652	4,202,754
Depreciation							
At 30 March 2018	0	0	0	0	0	-	0
Transferred in from former bodies	(6,599)	(565,234)	(750,228)	(106,276)	(191,946)	-	(1,620,283)
At 1 April 2018	(6,599)	(565,234)	(750,228)	(106,276)	(191,946)	-	(1,620,283)
Charged in period	(285)	(47,065)	(66,112)	(22,071)	(18,222)	-	(153,755)
Disposals	-	-	19,447	6,248	1,277	-	26,972
Transfers	-	29	59	11	(88)	-	11
Revaluation	(316)	(34,189)	(3,258)	(380)	(8,185)	-	(46,328)
Impairment	-	-	-	-	-	-	-
At 31 March 2019	(7,200)	(646,459)	(800,092)	(122,468)	(217,164)	-	(1,793,383)
Net book value							
Carrying value at 31 March 2019	190,738	1,255,514	440,561	49,968	106,938	365,652	2,409,371
Carrying value at 1 April 2018	236,131	1,083,427	461,576	47,164	131,351	284,607	2,244,256
Asset financing:							
Owned	171,211	1,087,591	440,561	49,968	106,938	365,652	2,221,921
Finance leased	19,527	167,923	-	-	-	-	187,450
Carrying value at 31 March 2019	190,738	1,255,514	440,561	49,968	106,938	365,652	2,409,371

The former MRC and some of the former STFC land and buildings were revalued professionally during the period. The former MRC assets were professionally revalued as at 31 December 2018 by Powis Hughes Ltd, Chartered Surveyors, an independent valuer. Land and buildings were valued in accordance with the Royal Institute of Chartered Surveyors Valuation Standards (8th Edition), the "Red Book" and are prepared either on a Market Evidence or a Depreciated Replacement Cost basis. The former STFC assets were professionally revalued as at 30 November 2018 by Grimley Ltd, Chartered Surveyors, an independent valuer. Land and buildings were valued in accordance with the Royal Institute of Chartered Surveyors Valuation Standards (8th Edition), the "Red Book" and are prepared either on a Market Evidence or a Depreciated Replacement Cost basis.

Included in Assets under construction is £212.4m for the RRS Sir David Attenborough and associated projects.

Impairments includes £40.9m for the impairment of the Crick land, which was professionally revalued in the period and £5.6m for the impairment of a specialised airplane on an open-market value basis, it was previously held at cost. This also includes a reversal of £5.0m for assets, which were impaired in a prior organisation but have been re-instated.

NOTE 9 Intangible Assets

	Patents and licences £000	Information technology £000	Software licences £000	Assets under construction £000	Total £000
Cost or Valuation					
As at 30 March 2018	0	0	0	0	0
Transferred in from former bodies	297,723	46,390	48,543	10,032	402,688
As at 1 April 2018	297,723	46,390	48,543	10,032	402,688
Additions	15,558	-	7,839	15,188	38,585
Disposals	-	(13)	(469)	-	(482)
Transfers	-	(283)	21,602	(18,846)	2,473
Revaluation	3,278	-	-	-	3,278
Impairment	-	-	-	-	-
As at 31 March 2019	316,559	46,094	77,515	6,374	446,542

Amortisation

As at 30 March 2018	0	0	0	0	0
Transferred in from former bodies	(235,064)	(19,413)	(15,283)	-	(269,760)
As at 1 April 2018	(235,064)	(19,413)	(15,283)	-	(269,760)
Charged in period	(12,069)	(8,423)	(17,439)	-	(37,931)
Disposals	-	11	470	-	481
Transfers	-	(11)	-	-	(11)
Revaluation	-	-	-	-	-
Impairment	-	-	-	-	-
As at 31 March 2019	(247,133)	(27,836)	(32,252)	-	(307,221)

Net book value

As at 31 March 2019	69,426	18,258	45,263	6,374	139,321
As at 1 April 2018	62,659	26,977	33,260	10,032	132,928

NOTE 10 Investment Property

	Investment property £000	Held for sale £000	Total £000
Carrying value as at 30 March 2018	0	0	0
Transferred in from former bodies	4,240	477	4,717
Carrying value as at 1 April 2018	4,240	477	4,717
Held for sale	-	-	-
Revaluation	230	-	230
Disposal	-	(477)	(477)
Carrying value as at 31 March 2019	4,470	0	4,470

Investment properties are measured using the fair value model. The investment properties are valued at £4.5m and the cumulative changes in fair value recognised for the period ending 31 March 2019 in the Statement of Comprehensive Net Expenditure (SoCNE) amounted to a net loss of £0.2m. Of the total property value, £0.5m relates to a proportion that is held for sale as at 31 March 2018. The properties were valued on 31 March 2019 by independent valuers Cushman & Wakefield, in accordance with the Appraisal and Valuation Manual of the Royal Institute of Chartered Surveyors (MRICS). This valuation has been adopted at the reporting date. Cushman & Wakefield confirm in their valuation report that they have sufficient current knowledge of the relevant markets, and the skills and understanding to undertake the valuation competently. They confirm the individual with overall responsibility for the valuation is in a position to provide an objective and unbiased valuation and is competent to undertake the valuation.

NOTE 11 Financial Assets

	Notes	2019 UKRI £000	2019 Consolidated £000
Investments in joint ventures	11.1	857,595	712,227
Investments in associates	11.2	21,526	21,526
Other investments	11.3	11,610	11,610
Loans	11.4	10,128	21,476
		900,859	766,839

NOTE 11.1 Investments in joint ventures

	Francis Crick Institute (FCI) £000	Diamond Light Source (DLS) £000	Institut Laue-Langevin (ILL) £000	Harwell Science and Innovation Campus (HSIC)	Other £000	Total Joint Ventures £000
Consolidated						
At 30 March 2018	0	0	0	0	0	0
Transferred in from former bodies	253,817	360,591	41,204	29,130	2,185	686,927
At 1 April 2018	253,817	360,591	41,204	29,130	2,185	686,927
Additions	-	18,369	-	1,900	-	20,269
Transfers from other investment	-	-	-	-	152	152
Revaluation	47,792	(17,414)	(433)	-	(8)	29,937
Impairments	-	-	-	-	(713)	(713)
Share of joint venture profit/(loss)	1,706	(29,577)	-	3,526	-	(24,345)
At 31 March 2019	303,315	331,969	40,771	34,556	1,616	712,227
UKRI						
At 30 March 2018	0	0	0	0	0	0
Transferred in from former bodies	269,119	550,291	1	16,299	2,185	837,895
At 1 April 2018	269,119	550,291	1	16,299	2,185	837,895
Additions	-	18,369	-	1,900	-	20,269
Transfers from other investment	-	-	-	-	152	152
Revaluation	-	-	-	-	(8)	(8)
Impairments	-	-	-	-	(713)	(713)
At 31 March 2019	269,119	568,660	1	18,199	1,616	857,595

The revaluation of investment in ILL relates to the movement in UKRI's share of the ILL capital investment reserve. The adjustment is taken to the revaluation reserve.

The revaluation of investment in Diamond Light Source Limited (DLS) relates to the adjustment required to account for differences in accounting policy between UKRI and DLS. The adjustment is taken to the revaluation reserve.

The revaluation of investment in the Francis Crick Institute (FCI) relates to the adjustment required to account for differences in accounting policy between UKRI and FCI. The adjustment is taken to the revaluation reserve.

The Francis Crick Institute Limited (FCI)

The Francis Crick Institute is a UK registered charity and limited company formed in partnership with Cancer Research UK, University College London, Kings College London, Imperial College of Science Technology and Medicine and the Wellcome Trust. The Institute became operational on 1 April 2015. The entity is designed to allow the delivery of the scientific aims of the joint venture.

The Francis Crick Institutes objectives as set out in its Articles of Association are "the advancement of human health and education for the benefit of the public by the promotion and carrying out, directly and indirectly, of all aspects of biomedical research and innovation".

The funding of the project was via capital contributions leading to shares. The UKRI investment in the Francis Crick Institute Ltd is represented by issued shares. The investment is therefore valued under the equity method in accordance with the arrangements of IFRS 11 Joint Arrangements as a Joint Venture and additional disclosures regarding the investment are made under IFRS 12 Disclosure of Interests in Other Entities. The principal place of business is Midland Road, London. The proportion of share capital of The Francis Crick Institute that the UKRI holds is 41.9 per cent.

Summarised financial information relating to the FCI is presented below:

	2018-19
Summarised financial information	£000
Current asset	84,806
Non-current assets	559,167
Current Liabilities	(33,915)
Net assets	610,058
Revenue	153,235
Profit/(loss) from continuing activities	4,071
	2018-19
Other financial information	£000
Cash and cash equivalents	33,934
Depreciation and amortisation	(38,898)
	2018-19
Other information	£000
Capital commitments	3,691
Grant commitments	-

A lease dated 7th June 2012 between the original founders and the Francis Crick Institute Ltd grants land at Brill Place, Camden, London (site of the Francis Crick Institute) to the Francis Crick Institute Ltd. The lease term is for a period of 55 years at peppercorn rent. The land had been revalued by Powis Hughes, Chartered Surveyors at 31 December 2018. The valuation was carried out in accordance with RICS Valuation Manual, as amended April 2010, known as the revised "Red Book", at Market Value. The MRC's interest in the land is recorded at £6m and reflected in the financial statements accordingly.

Diamond Light Source Limited (DLS)

UKRI has an 86% interest in DLS, a company incorporated and operating in the UK. DLS is a synchrotron science facility. Its purpose is to produce intense beams of light to be used in scientific research, and the principal activities are research and experimental development on natural sciences and engineering.

DLS is a separate structured vehicle under the joint control of UKRI and the Wellcome Trust (WT). UKRI has a residual interest in its net assets. Under IFRS 11 this joint arrangement is classified as a joint venture and has been included in the consolidated accounts using the equity method.

UKRI holds 86% of the ordinary share capital and 100% of the non-voting redeemable shares in DLS. The purpose of the redeemable shares is to provide for the funding of irrecoverable VAT incurred during the construction and operation of the synchrotron facility.

DLS is consolidated using the equity method based on UKRI's net share of the ordinary and preference shares and after adjusting DLS financial statements for differences in accounting policy.

Summarised financial information relating to the DLS is presented below:

	2018-19
Summarised financial information	£000
Current asset	22,123
Non-current assets	369,028
Current Liabilities	(21,196)
Non-current liabilities	(57,976)
Net assets	311,979
Revenue	72,135
Profit/(loss) from continuing activities	34,187
	2018-19
Other financial information	£000
Cash and cash equivalents	14,721
Depreciation and amortisation	36,081
	2018-19
Other information	£000
Capital commitments	6,874
Grant commitments	-

Institut Laue-Langevin (ILL)

UKRI has a 33% shareholding and 27.5% net interest (31 March 2017: 27.5% net interest) in the ILL; an international research centre for neutron science, incorporated and operating in France. UKRI is the UK representative and, along with the French and German Foreign Ministries, jointly controls the ILL. The ILL is a separate structured vehicle and UKRI has a residual interest in its net assets. Under IFRS 11 this joint arrangement is classified as a joint venture and has been included in the consolidated accounts using the equity method. ILL prepares accounts to 31 December (in euros); they are produced in accordance with French accounting rules and principles.

	31 December 2018
Summarised financial information	£000
Current asset	279,287
Non-current assets	134,809
Current Liabilities	64,609
Non-current liabilities	186,455
Net assets	665,160
Revenue	100,363
Profit/(loss) from continuing activities	-

	31 December 2018
Other financial information	£000
Cash and cash equivalents	57,874
Depreciation and amortisation	9,841

	31 December 2018
Other information	£000
Capital commitments	-
Grant commitments	-

Harwell Science and Innovation Campus Public Sector Limited Partnership (hsic pubsp)

UKRI has a 46% (31 March 2017: 51%) interest in HSIC PubSP, a company incorporated and operating in the UK. Management and control of PubSP is jointly shared by UKRI and the UKAEA, with financial interests reflecting the relative contributions of the partners; under IFRS 11 the joint arrangement is classified as a joint venture and is equity accounted. The principal activity of the joint venture is to manage and develop the Harwell Oxford Campus as a partner in the Harwell Science and Innovation Campus LP.

	2018-19
Summarised financial information	£000
Current asset	26,090
Non-current assets	54,723
Current Liabilities	(27)
Non-current liabilities	-
Net assets	80,786

Revenue	-
Profit/(loss) from continuing activities	9,164

	2018-19
Other financial information	£000
Cash and cash equivalents	-
Depreciation and amortisation	-

	2018-19
Other information	£000
Capital commitments	-
Grant commitments	-

NOTE 11.2 Investments in Associates

	2018-19 UKRI £000	2018-19 Consolidated £000
Opening balance	7,824	7,824
Profit/loss	522	522
Transfer in	13,180	13,180
	21,526	21,526

UK Shared Business Services Limited (Registered in England)

BEIS holds one Government Department (GD) £1 share carrying 51% of the votes. All other stakeholders, including UKRI, each hold one Non-Governmental Department (NGD) share with a combined vote of 49%.

The UK Innovation & Science Seed Fund IP (UKI2SF)

The UKI2SF is an independently managed capital venture fund established to invest in technologies developed from publicly funded research. UKRI is a limited partner in the fund and has provided £10m in total as a capital contribution to the fund.

Rothamsted Centre for Research and Enterprise (ROCRE)

UKRI hold one ordinary share at 100p, representing 20 per cent of the issued share capital (with voting rights) of Rothamsted Centre for Research and Enterprise Ltd (RoCRE). Lawes Agricultural Trust and Rothamsted Research each hold two ordinary shares, or 40 per cent, of the remaining issued share capital. RoCRE is incorporated in England and Wales. RoCRE's primary aim is to promote collaboration and innovation through partnering with commercial agricultural technology businesses and opening up the research process. www.rocre-rothamsted.com/

Roslin Biocentre Ltd (RBL)

49 ordinary shares at 100p each representing 49 per cent of the issued share capital of Roslin BioCentre Ltd fully paid. Roslin BioCentre Ltd is incorporated in Scotland. www.roslinbiocentre.com/

Leaf Systems International Ltd

30 ordinary shares at 100p each, representing 30 per cent of the issued share capital (with voting rights) of Leaf Systems International Ltd. Leaf Systems International Ltd is incorporated in England and Wales and was launched in January 2017, following construction of the government-funded £5m transitional facility at Norwich for producing high-value protein in plants. www.leafexpressionsystems.co.uk.

NOTE 11.3 Other Investments

	2018-19 UKRI £000	2018-19 Consolidated £000
Opening balance	11,108	11,108
Additions	990	990
Revaluation	(265)	(265)
Impairment	(71)	(71)
Transfer to JV investment	(152)	(152)
	11,610	11,610

Included within other investments are shares in companies that UKRI held through development of its research.

NOTE 11.4 Loans

	2018-19 UKRI £000	2018-19 Consolidated £000
Opening balance	10,128	10,128
Additions	-	15,872
Impairment	-	(4,524)
	10,128	21,476

NOTE 11.4.1 Loans

The loans are further split between Innovate Loans Limited (ILL) and a loan to Daresbury SIC LLP (DSIC), which is a joint venture between UKRI and Halton Borough Council. The interest on the loan is 3%.

	UKRI			Consolidated		
	DSIC £000	ILL £000	Total £000	DSIC £000	ILL £000	Total £000
At 30 March 2018	0	0	0	0	0	0
Transferred in from former bodies	10,128	-	10,128	10,128	-	10,128
At 1 April 2018	10,128	-	10,128	10,128	-	10,128
Additions	-	-	-	-	15,872	15,872
Impairment	-	-	-	-	(4,524)	(4,524)
At 31 March 2019	10,128	0	10,128	10,128	11,348	21,476

NOTE 11.5 Subsidiary Undertakings

STFC Innovations Limited (SIL)

STFC Innovations Limited (SIL), a company registered and operating in the UK, is a wholly owned subsidiary of UKRI. SIL was established to manage and commercially exploit intellectual property owned by UKRI for the benefit of the UK economy in accordance with HM Government policy.

SIL is consolidated in UKRI's financial statements in accordance with IFRS 10. In 2018-19 SIL recorded a profit of £1.5m. Its net deficit of capital and reserves at 31 March 2019 was £0.5m.

Innovate UK Loans LIMITED

Innovate UK Loans Limited (IUKLL), a company registered and operating in the UK, is a wholly owned subsidiary of UKRI. IUKLL was incorporated on 22-02-2018 to implement a programme of innovation loans for the benefit of the UK economy in accordance with HM Government policy.

IUKLL is consolidated in UKRI's financial statements in accordance with IFRS10. In 2018-19 IUKLL recorded a loss of £5.4m. Its net deficit of capital and reserves at 31 March 2019 was £(5.4)m.

NOTE 12 Funded Pension Scheme

The MRC operates a funded pension scheme (MRCPS) providing benefits based on service and final pensionable pay at the normal retirement age of 65. The scheme is a defined benefit scheme that prepares its own scheme statements. Benefits accrue at the rate of 1/80th of pensionable salary for each year of service. In addition, a lump sum equivalent to three years' pension is payable on retirement. Members pay contributions of between 6.0% and 6.5% pensionable earnings to the Scheme.

Due to the number of MRC units transferred to universities in recent years a University section has been set up to account for the obligations to those former employees employed by the universities that remain in the MRC pension scheme. During the period obligations of £6.9m were recognised under Section 75 (S.75) of the 1995 Pensions Act in respect of liabilities of transferred employees; the University section, has been set up within MRCPS to manage S.75 liabilities. These costs are reflected in the valuation of the pension scheme.

The required MRCPS contribution rate is assessed every three years in accordance with advice of the Government Actuary. The latest actuarial assessment of the MRCPS was at 31 December 2016. This showed a surplus of £160.3m (2013 valuation £160.1m) and the market value of the assets of the MRCPS was £1,406m (2013 = £1,054m), an ongoing funding level of 113 per cent (2013 valuation 118 per cent). The actuarial value of the assets was sufficient to cover 113 per cent of the benefits that had accrued to members after allowing for expected future increases in earnings. Triennial valuations are conducted under the Pensions Act 2004 on a scheme specific funding basis. The present MRCPS employers' contribution rate rose to 15% in 2018-19.

The contributions due to the scheme are set out in the schedule of contributions for each section. The most recent schedules of contributions were signed on 7 December 2017 and are due to be reviewed following the next actuarial valuation of the scheme which is due to be carried out as at 31 December 2019.

The following payments are due in 2019-20:

MRC Section

By the members:	6.5% of pensionable pay
By MRC:	15.0% of pensionable pay
By other employers:	15.9% of pensionable pay

The total contribution expected to be paid into the MRC section in 2019-20 is £11m.

University Section

By the members:	6.5% of pensionable pay
By the universities:	15.9% of pensionable pay
By MRC:	23.6% of pensionable pay

The total contribution expected to be paid into the university section in 2019-20 is £14m.

As at 31 December 2016 the average maturity of the scheme as a whole was around 21 years.

The valuation used for IAS 19 disclosures has been based on the data for the most recent actuarial valuations as at 31 December 2016, and updated to take account of the requirements of IAS 19 in order to assess the liabilities of the scheme at 31 March 2019. The mortality assumptions included within the figures are that male (female) members who retire at typical ages will live to approximately age 90 (91).

a. Financial Assumptions Used to Calculate Scheme Liabilities

	2018-19 %
Rate of increase on pensionable salaries	3.45
Rate of increase on pension payments	2.45
Discount rate	2.40
Inflation rate	2.45
Expected return on equities	2.40
Expected return on bonds	2.40
Expected return on overall fund	2.40

The results of any actuarial calculation are inherently uncertain because of the assumptions which must be made. The table below indicates the approximate effects on the actuarial liability as at 31 March 2019 of changes to the main actuarial assumptions.

Change in assumption			Appropriate effect on total liability
Discount rate	-½%	+11.0%	+£176m
Rate of increase in earnings	-½%	-1.0%	-£16m
Rate of increase in pensions	-½%	-8.0%	-£128m
Member's experience mortality one year younger	-	+3.0%	+£48m

b. Analysis of Actuarial (loss)/gain

	2018-19 £000
Actual return less expected return on pension scheme assets	49,693
Experience gains arising on the scheme liabilities	(604)
Changes in demographic assumptions	-
Changes in financial assumptions	(120,380)
Actuarial (loss)	(71,291)

c. Analysis of actuarial (loss)/gain expressed as a percentage of the scheme's assets and liabilities at the statement of financial position date

	2018-19 %
Actual return less expected return on pension scheme assets	3.01
Experience gain/(loss) arising on the scheme liabilities	(0.04)
Actuarial (loss)/gain	(4.44)

d. The assets and liabilities in the scheme

	2018-19 £000
Assets	
Equities	1,000,045
Property	366,689
Bonds	216,696
Cash	65,430
	1,648,860
Actuarial value of liability	(1,604,525)
	44,335

Equities and bonds contain assets that have a quoted market price in an active market. As at March 2019, the value of those assets within equities is £451m and £129m within bonds. An investment strategy is in place which has been developed by the pension trustee, in consultation with the Employer to mitigate the volatility of liabilities, to diversify investment risk and to manage cash. To this end the majority of assets are invested in growth assets, which in the long term are expected to yield a greater return than would be available for fixed income assets such as bonds and gilts.

e. The movements in the scheme surplus

	2018-19 £000
Surplus at the start of the period	122,293
Current service costs net of employee contributions	(35,393)
Employer contributions	25,683
Other finance income (note 12f)	3,043
Actuarial (loss)/gain (note 12b)	(71,291)
(Loss)/Surplus at end of period	44,335

f. Other finance income

	2018-19 £000
Expected return on pension scheme assets	40,825
Interest on pension scheme liabilities	(37,782)
Net return – other finance income (note 12e)	3,043

NOTE 13 Trade and other receivables

	2018-19 UKRI £000	2018-19 Consolidated £000
Due within one year		
Trade receivables	63,790	63,237
Other receivables	59,325	61,294
Prepayments	133,542	133,542
Accrued income	79,332	79,388
Contract assets	17,204	17,204
	353,193	354,665
Due after more than one year		
Other receivables	17,093	17,093
Prepayments	10,306	10,306
	27,399	27,399

NOTE 14 Assets held for sale

	2018-19 £000
At 30 March 2018	-
Transferred from former bodies	15,359
At 1 April 2018	15,359
Revaluation	5,000
Reclassification	-
Disposal	-
At 31 March 2019	20,359

The 2018-19 opening balance represents land and two dwellings that have been identified as surplus to our requirements at our Roslin site. The assets were revalued in year to bring the figure in line with its current market value and under IFRS 5 this valuation has been shown in the SOCNE rather than revaluation reserves.

NOTE 15 Derivative financial instruments

	2018-19 £000
Derivative financial liabilities	
Forward foreign exchange contracts - cash flow hedges	(11,770)
Of which:	
Current	(11,770)
Non-current	-

The notional principal amounts of outstanding forward foreign exchange contracts at 31 March 2019 were £181.1m. Their fair value is £11.8m net liability.

The hedged forecast transactions denominated in foreign currency are expected to occur at various dates over the next two financial years. Gains and losses recognised in the general reserve on forward foreign exchange contracts as at 31 March 2019 are recognised in the SoCNE when the hedged forecast transactions affect the SoCNE.

NOTE 16 Cash and cash equivalents

	2019 UKRI £000	2018-19 Consolidated £000
Balance at 1 April	120,897	120,897
Net change in cash and cash equivalent balances	(17,473)	(16,839)
Balance at 31 March	103,424	104,058

The following balances at 31 March were held at:

Government Banking Service	81,695	81,834
Commercial banks and cash in hand	21,729	22,224
	103,424	104,058

NOTE 17 Trade and other payables

	2019 UKRI £000	2018-19 Consolidated £000
Amounts falling due within one year:		
VAT	(3,173)	(3,165)
Other taxation and social security	(12,343)	(12,343)
Trade and other payables	(212,331)	(218,807)
Accruals	(206,576)	(206,767)
Grant accruals	(571,489)	(571,489)
Deferred income	(29,197)	(29,197)
Contract liabilities	(4,942)	(4,942)
Current part of finance leases	(132)	(132)
	(1,040,183)	(1,046,842)
Amounts falling due after more than one year:		
Accruals	(3,514)	(3,514)
	(3,514)	(3,514)

NOTE 18 Provisions for liabilities and charges

	2018-19 £000
At 30 March 2018	
Transferred in from former bodies	141,933
Balance at 1 April 2018	141,933
Provided in the period	4,692
Provisions not required written back	(1,323)
Provisions utilised in the period	(2,104)
Change in the discount rate	(38,440)
Unwinding of discount	1,217
Balance at 31 March 2019	105,975
Analysis of expected timing of cash flows	
Not later than one year	3,997
Later than one year and not later than five years	8,413
Later than five years	93,565
Balance at 31 March 2019	105,975
Analysis of provisions	
Decommissioning	
ISIS	35,329
ILL	40,702
Other	26,001
Early retirement	2,201
Other provisions	1,742
	105,975

NOTE 19 Adjustments for non-cash transactions

	2018-19 UKRI £000	2018-19 Consolidated £000
Depreciation and impairment charges	242,722	247,246
Other operating expenditure	(5,951)	18,389
IAS19 Pension costs	11,349	11,349
Notional service charge	21,444	21,444
	269,564	298,428

NOTE 20 Commitments

NOTE 20.1 Capital Commitments

	2018-19 £000
Contracted capital commitments at 31 March 2019 not otherwise included in these accounts	
Property, plant and equipment	230,725
Intangible assets	13,990
	244,715

NOTE 20.2 Grant commitments

	2018-19 £000
Not later than one year	2,600,475
Later than one year but not later than five years	3,752,026
Later than five years	190,766
	6,543,267

NOTE 20.3 International subscriptions

UKRI had the following commitments in respect of membership of international collaborations:

Organisation	Within one year £000	Between one year and five years £000	After five years £000	Total £000
CERN	149,224	82,596	-	231,820
ESO	27,681	13,601	-	41,282
ESRF	8,945	22,537	-	31,482
ILL	18,620	77,648	-	96,268
XFEL	2,825	-	-	2,825
IODP	1,950	-	-	1,950
IIASA	920	-	-	920
Other	562	-	-	562
	210,727	196,382	-	407,109

NOTE 21 Contingent liabilities

Prior to the creation of UKRI, the Research Councils paid levels of tax consistent with charitable status, although they were not registered as charities. HMRC have indicated that, due to changes in legislation, they may review whether the Research Councils should have been applying charitable tax reliefs after 1 April 2012 without registering as charities. UKRI has a contingent liability relating to the potential clawback of previously applied VAT relief of £30m.

Prior to 31 March 2018, some staff at BBSRC strategically funded institutes were on BBSRC terms and conditions. Whilst their direct salary costs are paid by the institutes, BBSRC is liable for any exit costs for these staff. The date and number of staff to take exit packages in any one year is unknown; however, if all staff were to take exit packages, the maximum liability is estimated at £31m, with the amount declining on an annual basis up to March 2025.

UKRI is responsible for Institut Laue-Langevin (ILL) staff related commitments and costs associated with reprocessing fuel elements. The contingent liability is estimated to be £13.6m.

NOTE 22 Related Party Transactions

UKRI is a non-departmental public body sponsored by BEIS. For the purposes of International Accounting Standard 24, BEIS is regarded as a related party. During the year UKRI has had various material transactions with BEIS and other bodies for which BEIS is regarded as the parent department, namely UK Space Agency and UK Atomic Energy Authority. In addition, UKRI also had a number of related transactions with UK SBS Limited.

UKRI had transactions with other government departments and with other central government bodies, such as:

Intellectual Property Office; Foreign and Commonwealth Office; Department for International Development; Department for Environment, Food & Rural Affairs; Department of Health; Department for Transport; and Ministry of Defence. UKRI also had transactions with devolved administrations, such as the Scottish Government and the Welsh Government.

The accounts provide disclosure of all material transactions with those who are recognised as key management personnel as per IAS 24 'Related Parties'. This is taken to be those members of staff who are included under Executive Directors' remuneration in the Remuneration Report and all UKRI Board members.

During the year UKRI entered into no new awards or contracts funded by UKRI where UKRI Board members or Executive Directors are the principal investigator.

The following aggregated payments were made by UKRI in respect of funded awards or contracts to Institutions where Executive Directors, Board members or their close family members were employed during the year:

Organisation	Board Member or Director* (Relationship where involvement is not direct)	Position	Amount awarded (£)
Cancer Research UK	Sir Harpal S Kumar	CEO	2,768,810
	Professor Sir Leszek Borysiewicz	Chair	
Imperial College London	Professor Alice Gast	President	205,247,749
Kings College London	Professor Fiona Watt	Director, Centre for Stem Cells & Regenerative Medicine	146,307,075
London School of Economics and Political Science	Professor Julia Black	Pro Director of Research and Professor of Law	69,557,458
Natural History Museum	Sir Peter Bazalgette (Spouse)	Board Member	1,890,900
The Francis Crick Institute	Lord (John) Browne of Madingley	Chair	42,415,428
	Sir Harpal S Kumar	Board Member	
	Professor Fiona Watt* (Spouse)	Group Leader	
The Royal Society	Professor Sir Leszek Borysiewicz	Council Member	879,575
University of Aberdeen	Professor Sir Ian Diamond	Principal and Vice-Chancellor	5,474,125
University of Bradford	Fiona Driscoll	Council Member	5,554,946
University of Oxford	Professor Dame Sally Davies	Non-Executive Director, Blavatnik School of Government	296,656,241
	Sir John Kingman	Board Member	
University of Surrey	Professor Max Lu	President and Vice-Chancellor	28,370,217
Wellcome Trust	Professor Fiona Watt* (Spouse)	Director of Science	12,937,137
Surrey Satellite Technology Ltd	Lord (David) Willetts of Havant	Non-executive Director	605,374
Genome Research Ltd	Lord (David) Willetts of Havant	Chair	18,720
Sirius Constellation Ltd	Lord (David) Willetts of Havant	Director	198,252
University of Manchester	Sir Harpal S Kumar	Non-executive Director	283,180,462
University of Aberystwyth	Sir Ian Diamond	Chair, Advisory Board	3,853,406
University of Cambridge	Professor Sir Leszek Borysiewicz	Vice Chancellor	381,665,741
Cell Therapy Catapult	Sir Peter Bazalgette	Board Member	18,638,004

UKRI also has related party transactions with its joint ventures; the Frances Crick Institute, DLS, Daresbury SIC LLP, HSIC (PubSP), HSIC LP. These are disclosed in the table below:

Joint venture	Type of transaction	Transaction amount expense/income £000	Balance Debtor (Creditor) £000
Crick	Operations funding	83,458	(31,679)
DLS	Sale of goods and services	(1,367)	100
	Purchase of goods and services	493	(250)
	Operations funding	56,053	(1,524)
	Purchase of shares	18,369	(1,315)
Daresbury SIC LLP	Purchase of goods and services	632	(8)
HSIC (PubSP)	Capital injection	1,900	-
	Purchase of goods and services	2	(2)

UKRI sponsors nine research institutes, which conduct long-term, mission-orientated research using specialist facilities that are in line with UKRI's priorities. UKRI provides Strategic Programme Grants to the institutes to fund specific research programmes. The sponsored institutes have separate charitable status and an independent governing body oversees the institutes' activities.

	Type of transaction	Transaction amount expense/income £000	Balance Debtor (Creditor) £000
Transactions with UKRI sponsored Institutes			
Babraham Institute	Operations funding	11,539	-
The Pirbright Institute	Operations funding	34,806	8/(575)
Quadrum Institute Bioscience	Operations funding	13,913	-
John Innes Centre	Operations funding	33,332	(228)
Rothamstead Research	Operations funding	21,108	(9)
The Earlham Institute	Operations funding	9,721	(36)
UK Biobank Limited	Operations funding	13,644	-
UK Dementia Research Institute	Operations funding	16,115	-
Health Data Research UK	Operations funding	10,397	(575)
Transactions with other related parties			
LifeArc Limited	Operations funding	6,675/(111)	48/(159)
Babraham Bioscience Technologies Ltd	Operations funding	283	-
Norwich Research Partners LLP	Operations funding	33	(105)
Leaf Systems International Ltd	Operations funding	46	-
Institut Laue-Langevin	Operations funding	18,359	-
Alan Turing Institute	Operations funding	13,214	-

NOTE 23 Financial Instruments and Derivatives

IFRS 7, Financial Instruments: Disclosures, requires disclosure of the role which financial instruments have had during the period in creating or changing the risks UKRI faces in undertaking its activities. Specifically: (a) the significance of financial instruments affecting financial position and performance; and (b) the nature and extent of risks arising from financial instruments to which it is exposed. Because of the largely non-trading nature of its activities and the way it is financed, UKRI is not exposed to the degree of financial risk faced by businesses. Moreover, financial instruments play a limited role in creating or changing risk on its operational activities.

Liquidity risk

UKRI's net revenue resource requirements are largely funded by the grant-in-aid from its sponsor department. The capital expenditure is also financed through the grant-in-aid. UKRI is therefore not exposed to significant liquidity risks.

Interest rate risk

UKRI has a low level of exposure to interest rate fluctuations; it does not actively seek to invest cash in money markets. Any excess funds held outside of the Government Banking Systems banking framework, which could attract interest, are maintained in low level current accounting arrangements, as part of its banking arrangements with Lloyds Banking Group.

Foreign currency risk

The council maintains US dollar, Euro and Swiss francs bank accounts in order to deal with day-to-day transactions.

Foreign currency risk arises when UKRI enters into transactions denominated in a foreign currency. UKRI pays in Euros and Swiss Francs for the UK's membership to the international collaborations of CERN, ESO, ESRF and ILL. To minimise the currency risk, UKRI policy is to take out forward contracts arranged by the Bank of England to cover up to 90% of its annual international subscriptions due over the course of the current spending review period.

Execution of this policy is subject to BEIS approval. BEIS may consider other aspects beyond UKRI's immediate financial considerations in evaluating the business case for hedging e.g. sector reform and related budgetary uncertainty, and potential to manage risks across the department.

Therefore the risk attached to holding foreign currency denominations but this is not considered to be material.

Receivables and creditor risk

Financial assets and liabilities are held at fair value and changes in values are recognised in the Statement of Comprehensive Net Expenditure. The fair value of the council's financial assets and liabilities are equivalent to the carrying amount unless stated above. The council has limited powers to borrow or invest funds; financial assets and liabilities are generated by day-to-day operational activities and are not held to change the risks facing the council in undertaking its activities. Of current outstanding trade debt 49% is greater than 30 days old.

NOTE 24 Events after the reporting period

In accordance with the requirements of IAS 10 Events after the Reporting Period, post Statement of Financial Position events are considered up to the date on which the Accounts are authorised for issue. This is interpreted as the same date as the date of the Certificate and Report of the Comptroller and Auditor General.

Annex A – Performance Metrics

Inputs: Research and Innovation Grants, Fellowships and Studentships

Inputs for Research Councils, Innovate UK and Research England unless specified.

Applications received in 2018-19

Grant Category	Applications	Organisations	Applied Value (£m)
Research and Innovation Grants	16,904	7,651	11,037
Fellowships	2,227	150	1,455
Overall total across the categories	19,131	7,667	12,492

- Fellowships includes Research Councils only.
- The number of applications and organisations are unique instances.
- Applications received may include multiple organisations; the count is of lead organisations.
- Total count of organisations is lower than the sum of those applying for grants and fellowships, as some will be counted under both categories.

Funding decisions in 2018-19

		Decisions Made	Successful Decisions	Award Rate (%)
Research and Innovation Grants	By Number	17,225	4,653	27%
	By Value (£m)	£9,921	£2,843	29%
Fellowships	By Number	1,903	440	23%
	By Value (£m)	£1,157	£210	18%
Total	By Number	19,128	5,093	27%
	By Value (£m)	£11,078	£3,053	28%

- Fellowships includes Research Councils only.

Project partner contributions on awarded grants in 2018-19

Project Partner Sector	Awards	Total Partnerships	Project Partner Organisations	Total Contribution (£m)
Academic/University/ Learned Society	930	1,617	677	73
Charity/Non-Profit	134	187	163	5
Private	1,958	3,688	2,695	802
Public (including hospitals)	492	725	480	58
Other (including blank)	517	1,069	928	66
Overall total across the sectors	2,658	7,286	4,936	1,004

- Project Partner Organisations is the count of unique organisations involved in partnerships; organisations may be involved in more than one partnership.
- Total awards are lower than the sum of awards across sectors, as one award can involve many project partners from different sectors

Who our funding actively supported in 2018-19

Grant Category	Grants	People (Individuals)	Organisations
Research and Innovation Grants	15,448	24,317	4,106
Fellowships	1,489	1,511	100
Studentships	28,502	27,414	114
Of which started in 18/19	6,206	6,117	96
Overall total across the grant categories	45,439	52,787	4,109

- Lead organisations as reported at the application stage of the award.
- The figures are distinct instances of grant reference, people and organisations under all categories.

Organisations supported in 2018-19

Organisation Type	Number of Organisations
Academic/University/Learned Society	257
Of which UK HEI	137
Charity/Non-Profit	25
Private	3,367
Of which SME	2,647
Public (including hospitals)	85
Other (including blank)	375

HEI, Higher Education Institution as defined by HESA <https://www.hesa.ac.uk/support/providers>

Studentships

Number of Research Council funded PhDs submitted by year

Year Submitted	Number of PhDs Submitted
2014	3,680
2015	4,480
2016	4,313
2017	4,099
2018	1,124
Total	17,696

The first destination of PhD students who completed their PhD in 2016-17

Destination	Number of Leavers	Leavers (%)
University	1,671	43%
Public Sector	173	5%
Private Sector	1,133	29%
Other / Unknown	611	16%
Unemployed	289	7%
Total	3,877	100%

Outputs: Research and Innovation Grants and Fellowships

Outputs include data for Research Councils and Innovate UK. Research England are currently not included. The data are collected using researchfish® for the Research Councils and by annual survey for Innovate UK.

Research Councils have consistently used the researchfish® system to collect outcomes since 2014. As such, data for earlier years may not be complete. Recipients of funding are required to report emerging outputs, outcomes, and impacts for the duration of their award and for at least 5 years beyond. Once a year there is a formal submission period when researchers are required to confirm that their outcomes information is accurate and up to date. The data in this report are taken from the submission period that closed March 2018.

Innovate UK has used an online survey tool since February 2018. It is used to collect outcome information from all project participants when the project nears completion. Each participant is routed through the survey depending on their organisation type, role in the project, and responses to questions. The data are self-reported and static at the point of collection.

Data from the two collections has been combined and is presented below in a series of tables showing numbers of outcomes by year of award starting. Awards starting in more recent years are expected to have fewer outputs than older awards due to the nature of research and the time lag of realising outputs and outcomes. The data are self-reported and not meant to be exhaustive of all outcomes realised, but indicative of data reported over time.

Collaborations and type of collaborators

	Year the award started				
	2013	2014	2015	2016	2017
Instances of Collaborations	6,527	5,815	4,911	4,097	2,597
Instances of Collaborators					
Academic / University / Learned Society	4,555	3,737	3,113	1,956	1,068
Charity / Non-Profit	935	819	572	392	186
Private	1,539	1,234	1,089	662	305
Public (inc. Hospitals)	1,646	1,424	979	672	345
Other (inc. blank)	639	866	944	934	912
Number of Awards reporting ≥1 collaboration	1,884	1,757	1,784	1,833	1,392
% of Total Awards reporting ≥1 collaboration	43%	45%	47%	46%	41%
Total Number of Awards	4,366	3,896	3,793	4,011	3,399

- Definition of Collaboration is partnership between awarded organisation and other organisations to collaborate on the research; Collaborator is the organisation involved in the collaboration (other than the awarded organisation)
- Total count of collaborations will be lower than the count of collaborators, as one collaboration can involve many collaborators.

UK and International collaborations

	Year the award started				
	2013	2014	2015	2016	2017
Number of Awards reporting only UK collaborators	568	515	518	477	301
Number of UK collaborators involved	1,402	1,314	1,281	1,206	726
Number of awards reporting only International collaborators	405	415	434	441	258
Number of International collaborators involved	782	807	928	830	530
Number of awards reporting both UK and International collaborators	849	652	639	440	246
Number of UK collaborators involved	3,596	3,213	2,095	4,054	567
Number of International collaborators involved	3,086	2,106	1,788	965	494

- Research Councils only.
- Data only includes collaborators where the location of the collaboration is known.

Engagement activities

	Year the award started				
	2013	2014	2015	2016	2017
Instances of Engagement Activities	37,533	31,286	21,595	14,800	6,808
Awards reporting ≥1 Engagement Activity	2,523	2,200	2,143	2,019	1,295
% of Total Awards reporting ≥1 Engagement Activity	58%	58%	58%	55%	44%
Total Number of Awards	4,350	3,790	3,674	3,678	2,936

- Research Councils only.

Knowledge generation

	Year the award started				
	2013	2014	2015	2016	2017
Publications					
Instances of Publications	72,592	44,962	32,775	15,426	6,518
Journal Articles	59,491	34,786	25,643	12,163	5,123
Books	631	413	243	140	39
Book Chapters	1,498	1,039	677	360	102
Other Publications	10,977	8,724	6,212	2,763	1,254
Awards reporting ≥1 Publication	3,803	3,151	2,880	2,358	1,229
% of Total Awards reporting ≥1 Publication	87%	81%	76%	59%	36%
Total Number of Awards	4,366	3,896	3,793	4,011	3,399

- Instances of publications is not a count of unique publications. Duplicate publications may occur where different researchers have entered similar information independently of one another. Publications may also occur from more than one award. Efforts have been made to remove some duplications using Digital Object Identifier (DOI).
- Other publications include for example, edited book, conference paper, policy briefing.

Other types of knowledge generation

	Year the award started				
	2013	2014	2015	2016	2017
Instances of Other Knowledge Generation	4,058	3,370	2,740	1,892	1,088
Artistic and Creative Outputs	1,001	977	676	542	291
Research Models and Databases	1,168	861	739	550	276
Software and Technical Products	1,000	743	638	314	210
Research Tools and Methods	686	671	561	446	287
Medical products, interventions and clinical trials	203	118	126	40	24
Awards reporting ≥1 Other Knowledge Generation	1,388	1,128	1,058	889	511
% of Total Awards reporting ≥1 Other Knowledge Generation	32%	30%	29%	24%	17%
Total Number of Awards	4,350	3,790	3,674	3,678	2,936

- Research Councils only.

Awards that have obtained additional further funding

	Year the award started				
	2013	2014	2015	2016	2017
Instances of Further Funding	7,559	5,931	4,344	3,081	1,811
Awards reporting ≥ 1 instance of Further Funding	1,925	1,701	1,586	1,494	1,082
% of Total Awards reporting ≥ 1 instance of Further Funding	44%	44%	42%	37%	32%
Total Number of Awards	4,366	3,896	3,793	4,011	3,399

Awards that have resulted in instances of intellectual property

	Year the award started				
	2013	2014	2015	2016	2017
Instances of IP	251	196	153	90	35
Awards reporting ≥ 1 IP	168	128	100	67	29
% of Total Awards reporting ≥ 1 instances of IP	4%	3%	3%	2%	1%
Total Number of Awards	4,350	3,790	3,674	3,678	2,936

- Research Councils only.

Awards reporting a spinout

Spinout Status	Number of Spinouts	Number of Awards Attributed to the Spinouts
Total Spinouts	604	835
Spinout active in March 2019	512	741

- Research Councils only.

Notes

Inputs

Applications received

Applications received is the volume of funding applications submitted to UKRI in 2018-19, the number of organisations leading on the application for funding and the value of the funding requested.

The number and value of applications received is not directly comparable to awarded grants in 2018-19. The decisions on applications received in 2018-19 may not be made in the same financial year.

Funding decisions

The number of funding decisions made in 2018-19, the number awarded, and the award rate. This is not directly comparable to applications received in 2018-19 as there is a time delay between receiving an application and a funding decision.

Project partner contributions

Project partners are reported at the point of application with the financial value of their contribution to the research. The type of organisation shows the breadth of organisations that our supported researchers are working with and the financial contribution to the partnership; this includes direct investment and in-kind contributions.

Who we actively supported in 2018/19

Who we support demonstrates the number of people and organisations who received funding in 2018-19. We support individual people as Principal Investigators, Co-Investigators, Fellows, and Students.

Type of organisations supported

The type of organisation supported shows the variety of organisations receiving funding across the research and innovation landscape.

PhD submitted

Research Councils conduct a yearly submission survey, which captures those students who have been submitted for qualification within the expected time frame between the given dates 2014-15 to 2018-19.

Destination of PhD Students

HESA provide UKRI with the data from the Destinations of Leavers from Higher Education (DLHE) survey; this provides information about all graduates six months after they complete their studies. Data provided by HESA is limited to those who successfully completed the survey request, and this is matched to the data we hold, so may not account for all studentships in our portfolio.

Outputs

Collaborations

Research collaborations might take the form of joint funding, exchanging expertise, access to wide ranging facilities and equipment, accessing datasets, working across different sectors and bringing together inter-disciplinary teams required to tackle complex problems. This indicator relates to new collaborations as reported after the award has started. Researchers may also report collaborations that were in place at the point of application. Collaborations are only included in the indicator for the year the award started but the collaboration may continue for several years after this date.

International collaboration shows that researchers are collaborating with organisations around the world and gaining access to internationally competitive facilities and infrastructure.

Engagement Activities:

Researchers engage with a wide variety of audiences and stakeholders to communicate research outcomes, disseminate knowledge, stimulate public awareness, and encourage public engagement and dialogue. The engagement activities indicator helps demonstrate the extent to which researchers are engaging with others including audiences outside academia.

Knowledge Generation

Publications are a mechanism used to disseminate the findings of research to a wider audience; increasing the visibility of research, the diffusion of knowledge and the advancement of research.

Further Funding

Researchers also obtain funding to continue or advance their work. This data includes additional funding from UKRI and other funders.

Intellectual Property

This indicator includes the generation of patents, copyrights and trademarks as an output of the research. This data does not include Innovate UK as their current online survey collects data on IP used as part of the project.

Spinouts

Researchers are asked to provide details of links between their research and the establishment of new private sector organisations, including for profit and not-for-profit organisations. Data provided in researchfish® have been verified using supplementary information to identify duplicate spin-out companies where applicable e.g. Companies House IDs for UK companies.

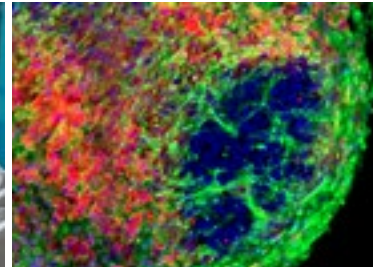
Picture information



A commercial 3D growing system for sustainable crop production developed by Saturn Bioionics.
© Saturn Bioionics



Apprentice training provides opportunities to work on international research projects.
© STFC



Tumour microenvironment, showing tumour cells (blue) surrounded by a matrix of collagen (green) and cancer-associated fibroblasts (magenta).
© Shields Laboratory, MRC Cancer Unit



Participants in the Museums on Prescription project get hands-on experience of specimens at the Grant Museum of Zoology.
© UCL



Researchers have mixed graphene with alcohol to form ink which can be screen printed onto plastics heralding a new era of flexible electronics.
© EPSRC



Fashion Factory, part of the AHRC Creative Industries Clusters Programme, supports innovation in the UK fashion and textiles industry.
© University of Leeds



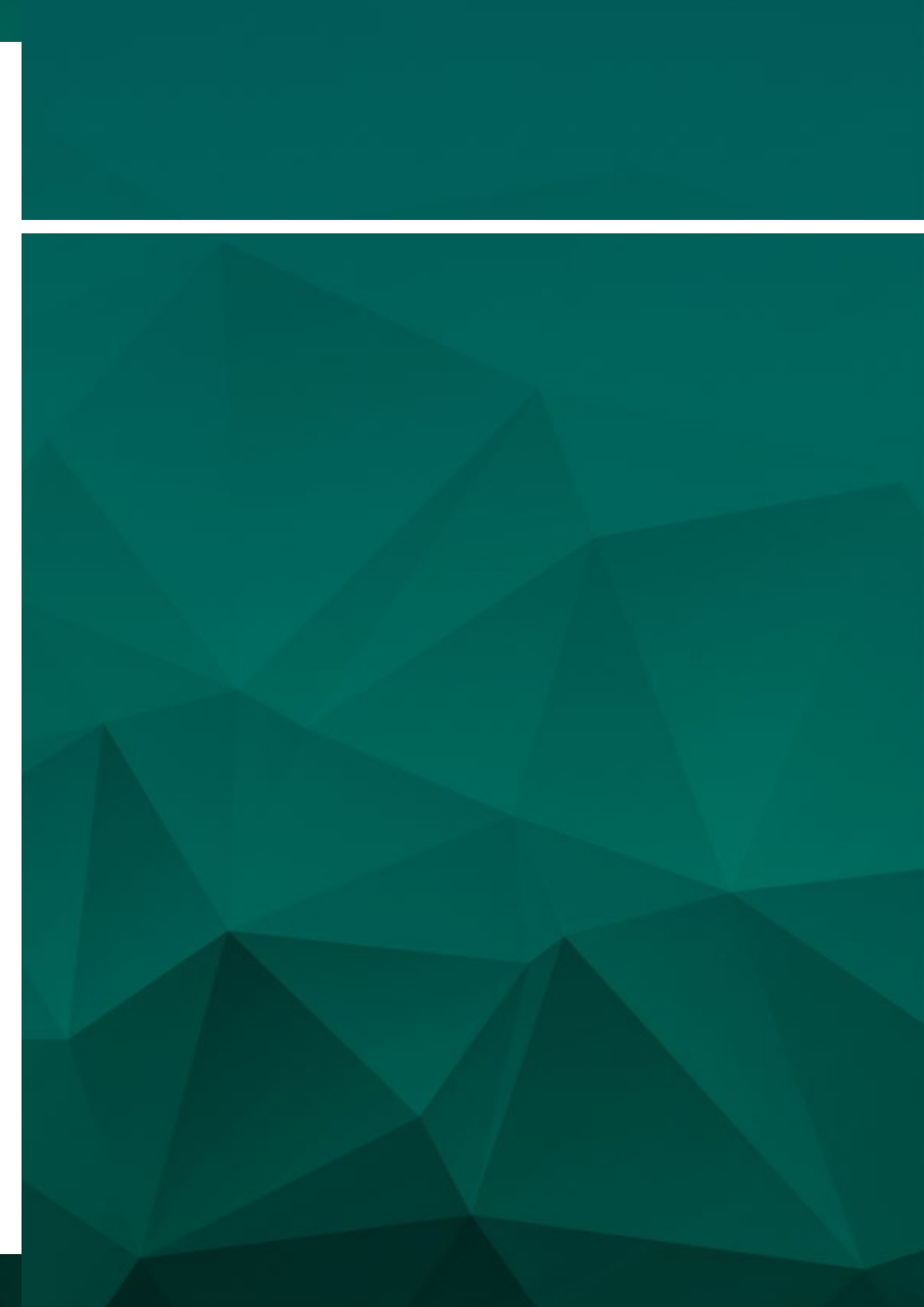
RRS Sir David Attenborough will have the ability to use remotely operated and robotic technologies to carry out research in extreme polar environments with minimal environmental impact.
© NERC



Oxford Space Systems' origami-inspired folding satellite.
© Adam Gasson



Physician administering vaccine to a child at a clinic at the MRC Unit The Gambia at LSHTM.
© The MRC Unit, The Gambia at LSHTM



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