

Volume 1 of 2

**UK Research and Innovation
Annual Report and Accounts
2023-24**

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HC32

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1. Introduction

Introduction by the Chair

I am delighted to introduce UK Research and Innovation (UKRI) Annual Report and Accounts (ARA) for 2023-24.

This marks the end of the second year of our ambitious five-year Strategy, **Transforming Tomorrow Together** (<https://www.ukri.org/who-we-are/our-vision-and-strategy/our-strategy-2022-to-2027/>) and I am inspired by the way the organisation has risen to the challenges set out within it. By engaging broadly and deeply as a trusted partner across our communities and across the whole of government, we have continued to deliver transformative impacts across the UK from public investment in research and innovation (R&I).

Our record in delivering on the promise of R&I year after year is rooted in our core commitment to research excellence and to the long-term investments in infrastructure and skills that make our goals achievable. Whether through the new interdisciplinary programmes we have launched this year; our continued commitment to experimentation in the way we invest, led through the new Metascience unit set up in partnership

with the Department for Science, Innovation and Technology (DSIT), or the work to harmonise and improve our studentship and fellowship programmes, we have strengthened our ability to continue this trend in the years and decades to come.

The breakthroughs from R&I are a crucial driver of long-term growth and play a foundational role in improving lives and helping to tackle societal challenges. UKRI has a duty as a smart investor to deliver value and to maximise the economic impact of every pound of public money entrusted to us. Over the last year UKRI has invested innovatively, responding with agility as a single organisation, to systematically shape our portfolio to deliver against the national priorities detailed in the UK Science and Technology Framework and the five critical technologies it outlines.

Additionally, we have made good progress in partnership with organisations across public and financial sectors to develop a more cohesive and actionable framework to attract more private investment into all stages of innovation, with a particular focus on scale-up.

I thank Professor Dame Ottoline Leyser for continuing to inspire and lead the organisation through a year of extensive change and

challenges, as UKRI's organisational change programmes accelerated. Through her leadership we have embedded the recommendations of the independent review of UKRI led by Sir David Grant and improved the organisation.

The recommendations from this review and the wider reviews carried out by Professor Adam Tickell and Professor Sir Paul Nurse have made sure that UKRI is effectively positioned as the UK's largest public investor in R&I which delivers value to the taxpayer. We unlock increased productivity and innovation across the UK R&I ecosystem both through direct investments, and through our unique role across the R&I ecosystem with DSIT and wider departments to create opportunities for the whole of government to deliver on our shared strategic agenda for R&I.

I thank Professor Julia Black and Lord David Willetts who stepped down from the Board this year for their invaluable contributions to the success of UKRI. I also warmly welcome the Baroness Bull and Professor Sir Ian Chapman to the Board of UKRI from April 2024. Their experience and expertise will be invaluable and will further strengthen the board's important work to help guide UKRI in the coming years.

Nationally and globally, we face a period of intense change. The whole of the R&I system is going through a period of significant financial challenge and uncertainty and will need to make difficult decisions in the years ahead. I am reassured that, as UKRI continues to mature and improve its organisational effectiveness, and through the dedication of its talented staff, we are in the best position to rise to the challenge.

Introduction by the CEO

There is now a critical window for the UK to harness our outstanding strengths in research and innovation to deliver prosperity across the UK. Research and innovation underpin the high-productivity, innovative businesses and world-class public services that we need, creating high-quality jobs and empowering people and communities to thrive. UKRI is a key national asset in this endeavour, which is at the heart of our five year 2022-2027 strategy, Transforming Tomorrow Together I am delighted to report on progress in implementing our strategy, as set out in our **Corporate Plan** (<https://www.ukri.org/who-we-are/our-vision-and-strategy/corporate-plan/>) and **Council Strategic Delivery Plans** (<https://www.ukri.org/who-we-are/our-vision-and-strategy/delivery-plans/>).

This year, I have continued to engage broadly with our communities across the UK, for example, through our UKRI Connect programme, providing a valuable national platform for discussion. I have been privileged to see first-hand some of the extraordinary work UKRI enables, and how this is driving forward new knowledge and delivering real-world benefits.

This has been the first full year of operation of our new sponsoring department, the Department for Science, Innovation and Technology (DSIT), and of the Science and Technology Framework, creating unprecedented opportunities to maximise the impact of UKRI's work in delivering for the UK and beyond.

Reflecting these opportunities, this year has seen significant investment in the five critical technologies set out in the Science and Technology Framework. In line with the Framework and with our strategy, our investments span skills, infrastructure, cutting-edge discovery research development, innovation and support for adoption and diffusion across the full research and innovation landscape.

Another highlight this year has been the launch of new programmes to support interdisciplinary research and innovation. This includes our

cross-research council responsive mode programme, allowing researchers and innovators to secure funding to pursue ideas that transcend disciplinary boundaries. The programme has proved extremely popular, with 976 outline applications, and 1,300 researchers and innovators from across our communities applying to join our Interdisciplinary Assessment College.

Interdisciplinarity is also a cornerstone of our five Strategic Themes, which seek to address major national and global challenges. The themes amplify and connect disciplinary investments through targeted investments to bridge gaps, capture synergies and build partnerships with departments across government, and international funding agencies. Examples from this year include a £9.5 million programme co-funded with the Foreign, Commonwealth and Development Office to explore opportunities for equitable nature-based climate resilience in Sub-Saharan Africa, and £11.5 million of funding with the Department for Environment, Food and Rural Affairs to enhance the resilience, health and wellbeing of UK coastal communities and seas. Through the themes we have also partnered with Malaysia's Ministry of Higher Education, Thailand's Agricultural Research Development Agency and other Southeast Asian leading funders, in a £21 million funding opportunity to support research on

infectious diseases with epidemic or antimicrobial resistance (AMR) potential.

Our work with departments across government has been greatly facilitated by the welcome boost to their research and development (R&D) budgets at the last spending review. Beyond UKRI's budget allocated through DSIT, we are delivering a wide range of collaborative and managed programmes with government departments and agencies totalling approximately £2 billion across the current spending review period. The creation of DSIT, with its cross-government remit, along with our close relationships with the network of Chief Scientific Advisors, offers the opportunity of a much more joined-up and effective approach to public R&D investment.

International collaboration has also received a major boost this year with the welcome news of the UK's association with Horizon Europe, the EU's €95.5 billion R&D programmes. UKRI's delivery of the UK government's Guarantee programme, allowing UK researchers and innovators to participate in the programme from its inception, is helping to smooth our transition to capturing the full benefits of association.

Collective working across UKRI on our studentship and fellowship programmes has also made

significant progress this year, for example, by simplifying and harmonising our PhD studentship programmes. UKRI's unique power to catalyse and convene is demonstrated by the unprecedented levels of partnership underpinning this year's £1 billion **investment in doctoral training** (<https://www.ukri.org/news/1-billion-doctoral-training-investment-announced/>) support across engineering and the physical sciences. The investment has leveraged partnerships with more than 1,400 companies, higher education institutions, charities and civic organisations, which will develop the UK's researchers and innovators of the future. We are on track to achieve our commitment to increase investment in our people and careers portfolio by 26% in this spending review period. High inflation, and the need to provide adequate support for early career researchers, has underpinned our decision to support fewer people better.

In this highly challenging economic environment, our ability to build a balanced, connected investment portfolio, with every pound we invest delivering on multiple objectives, is more important than ever. This kind of coordinated, expert, evidence-based investment is essential in shaping the diverse, connected, resilient and engaged research and innovation system needed for success. To build the evidence base for effective,

efficient R&I investment we have been supporting the Research and Innovation Caucus. Extending this work, this year saw the establishment of the new Metascience unit, in collaboration with DSIT, through which we will enhance our work to experiment with new approaches to investment, for example, by testing some of the ideas set out in our Review of Peer Review published this year.

All of this work is of course dependent on UKRI's extraordinary staff. I would like to take this opportunity to thank them all, across our national labs and institutes and our professional service teams. Our staff continue to work tirelessly, serving R&I in the UK as we deliver our strategy. I continue to be inspired by their dedication as we implement significant organisational change, replacing our main digital platforms including the antiquated JeS grant application system, and changing the way we work together through our new operating model. We are delivering this change in parallel with meeting challenging targets in operational expenditure for our professional service activities. This is driving workload pressures on the organisation, and I recognise the significant impact this is having on our staff.

A high point in the year for me was the showcase event held to celebrate our Leadership Through Change programmes to develop 177 leaders

across the organisation to support the adoption of the changes we are implementing, and the new ways of working at the heart of our operating model. It was inspiring to hear of the great ideas being implemented to create an environment where everyone feels valued and empowered to work together to deliver on our strategy.

Through our change programmes, this year has also seen major progress in delivering on the recommendations of the Grant and Tickell reviews. Both reviews endorsed our existing plans for organisational change and provided advice on how we can work in partnership with the sector to go further, which we have incorporated into our work. We are already one of the world's most efficient funding agencies with operational expenditure 3.3% of budget, despite the complexity of our investment portfolio. Our ambition is for continuous improvement, tackling key performance indicators such as the time from application to award for our research grants, which currently stands at a mean of 156 days.

I want to thank Sir Andrew Mackenzie for his role in UKRI's success and would like to echo his thanks to our outgoing Board members for their immense contribution to UKRI. This has been a year of much change across UKRI's senior leadership, and I would like to express my deepest

gratitude to Professor Sir Duncan Wingham, Professor Dame Lynn Gladden and Professor Dame Melanie Welham, for their many years of contributions to UKRI's senior leadership as Executive Chair for Natural Environment Research Council (NERC), Engineering and Physical Sciences Research Council (EPSRC), and Biotechnology and Biological Sciences Research Council (BBSRC), respectively. I also wish to thank Professor Alison Park, Professor Guy Poppy, Professor Sir John Iredale, Professor Miles Padgett and Professor Peter Liss for their contributions throughout last year as Interim Executive Chair for the Economic and Social Research Council (ESRC), BBSRC, Medical Research Council (MRC), EPSRC and NERC, respectively.

I also thank Emma Lindsell, Isobel Stephen and Tim Bianek for their crucial work as Directors of Strategy, Performance and Engagement, and Chief Operating Officer, respectively.

I have been delighted to welcome Professor Charlotte Deane, Professor Louise Heathwaite, Professor Patrick Chinnery and Stian Westlake as Executive Chair for EPSRC, NERC, MRC and ESRC, respectively, and Christine Ashton, as UKRI's new Chief Information Officer.

This coming year will be another year of much change. The work we have done together puts us in a strong position to capture the opportunities and navigate the challenges it will bring, transforming tomorrow together.

2. Performance Report

The **Performance Overview** section provides a summary of our performance, our finances, our response to challenges over the year, and how we manage key risks.

The **Performance Analysis** describes in more detail how we have delivered over the year. Each section includes the relevant ambitions we set out in our Corporate Plan and describes UKRI's progress against them.

Performance Overview

UK Research and Innovation (UKRI) is the largest public funder of research and innovation (R&I) in the UK, spanning all disciplines and all sectors. We invest in people, places, ideas, innovation and impacts, empowering researchers, innovators and entrepreneurs to turn the many challenges we face into opportunities. We leverage our breadth and depth of knowledge of R&I to harness the full potential of the UK's talent and creativity.

We work with partners to transform tomorrow together, creating tangible benefits: advancing knowledge, improving lives and creating the industries and jobs of the future. Some examples are shared below.

Case Studies

Accelerating biomedical research

Biobank (<https://www.ukbiobank.ac.uk/>), funded from conception by the Medical Research Council (MRC), enables research to improve the prevention, diagnosis and treatment of diseases. For example, Biobank data was used in a **study** (<https://www.ukri.org/publications/impacts-arising-from-mrc-supported-institutes-and-major-investments/>) showing that smartwatch data has the potential to predict Parkinson's disease seven years before diagnosis. This year, the whole genome sequencing data for Biobank's 500,000 participants was added to the database, allowing genetic and physiological links to conditions such as heart disease and cancer to be explored.

Addressing big industrial and societal challenges

Our **Challenge Fund** (<https://www.ukri.org/what-we-do/ukri-challenge-fund/>) is testament to our ability to collaborate with UK businesses and researchers to shape and deliver comprehensive programmes that addresses major industrial and societal challenges. The fund has supported cross-sector R&I, creating over 4,400 jobs and retaining another 8,240 to date. With co-investment reaching £4.9 billion – far exceeding

the initial £2.8 billion target – the business-led programmes within the fund demonstrate our unique ability to design and deliver large-scale initiatives. We effectively leverage diverse sectors and disciplines across the UK, collaborating with businesses, policymakers, and academia to implement complex, often mission-oriented projects.

Tackling economic crime

Insights from a team of researchers supported by the Economic and Social Research Council (ESRC) are helping counteract the UK's vulnerability to illegal trade and threats to national security. UKRI research into the impact of organised and **economic crime** (<https://www.ukri.org/who-we-are/how-we-are-doing/research-outcomes-and-impact/esrc/enabling-the-uk-government-to-tackle-economic-crime/>) informs government policy, helping introduce reforms to the legal system and the introduction of new anti-corruption sanctions. Economic crime, driven by kleptocratic sources, costs the UK economy billions every year.

Transforming how we monitor wildlife

Early career Impact Award 2023 winner Dr **Hannah Cubaynes** (<https://www.youtube.com/watch?v=rMFLzjD-tC8&list=PLucAMf26t>)

YbHwNHhSTKZmij1NHdoltVJQ&index=7) and colleagues from the Natural Environment Research Council's (NERC) **British Antarctic Survey (BAS)**, (<https://www.bas.ac.uk/>) developed techniques using high-resolution satellite technology to survey polar wildlife from space. Along with the charity WWF, more than 26,000 citizen scientists scoured 500,000 satellite images. Risks to researchers were reduced, as were costs, emissions and disturbances to wildlife. This project inspired government agencies, businesses and wildlife organisations in the UK, US, Canada and Germany to invest millions in further development of satellite imagery to study whales.

Reducing flood risk

CAFlood (<https://cafloodpro.com/features-benefits/>) rapidly and accurately assesses flood risk to inform protection measures and reduce **flood damage** (<https://results2021.ref.ac.uk/impact/34f0566a-7234-4b91-80d0-f929da47c4c4?page=1>). Developed through funding from the Engineering and Physical Sciences Research Council (EPSRC), CAFlood helps governments and industries quickly coordinate emergency responses, with the artificial intelligence tool used by businesses in the UK, Taiwan and Italy. In Torbay, a £3.4 million flood defence is estimated to have prevented £78 million worth of potential damage and protected 3,000 people.

The six strategic objectives in our strategy, **Transforming Tomorrow Together**, (<https://www.ukri.org/publications/ukri-strategy-2022-to-2027/>) will ensure that the UK has the people, institutions, infrastructures and partnerships to support a thriving R&I system. Our vision is for an outstanding research and innovation system in the UK to which everyone can contribute and from which everyone benefits, enriching lives locally, nationally and globally.

Our purpose – transforming tomorrow together

UKRI is the engine for the UK as a research and innovation powerhouse. We invest more than £8 billion each year on behalf of the UK government, leveraging expertise across all disciplines and sectors. We inspire and enable talented people and teams to push the boundaries of discovery, support innovative businesses to grow and scale, and target solutions to national and global priorities.

Our strategy sets out how we will work with our many partners and stakeholders to foster an outstanding research and innovation system in the UK that drives economic, social, environmental and cultural benefits for all citizens, transforming tomorrow together.

Our principles for change – we will embed these principles across all our work, to drive change and create the conditions for an outstanding research and innovation system

Diversity of ideas, people, activities, skills, institutions and infrastructures advances knowledge, increases quality and creativity.

Connectivity across disciplines, sectors and borders catalyses new ideas and approaches to deliver impact.

Resilience ensures the agility, capability, and flexibility needed to withstand shocks, deliver long-term goals and capture new opportunities.

Engagement shapes research and innovation to reflect the needs, perspectives and motivations of diverse stakeholders and the public.

Our strategic objectives provide the framework for how we will achieve our vision and realise our principles, through world-class:

People and careers

Making the UK the most attractive destination for talented people and teams from the UK and around the world.

Places

Securing the UK's position as a globally leading research and innovation nation with outstanding institutions, infrastructures, sectors and clusters across the breadth of the country.

Ideas

Advancing the frontiers of human knowledge and innovation by enabling the UK to seize opportunities from emerging research trends, multidisciplinary approaches and new concepts and markets.

Innovation

Delivering the government's vision for the UK as an innovation nation, through concerted action of Innovate UK and wider UKRI.

Impacts

Focusing the UK's world-class science and innovation to target global and national challenges, create and exploit tomorrow's technologies, and build the high-growth business sectors of the future.

Supported by a **world-class organisation** – making UKRI the most efficient, effective and agile organisation it can be.

UKRI shapes and supports a diverse and connected R&I landscape that is resilient and deeply engaged with society. We enrich lives by increasing our understanding of ourselves and the world around us, supporting innovative businesses and public services, and creating high-quality jobs throughout the UK.

We seek to be a responsible organisation in the activities, research and innovation we fund, and in how we inspire, lead and engage our staff, our partners and our communities. Our four principles for change – diversity, connectivity, resilience and engagement – are fundamental to how we work as an organisation and will help to create the conditions for the UK's research and innovation system to flourish.

This 2023-24 Annual Report and Accounts sets out the progress we have made against our ambitions and activities as laid out in our **2022-25 Corporate Plan** (<https://www.ukri.org/publications/ukri-corporate-plan/>). The Corporate Plan and its **annual updates** (<https://www.ukri.org/who-we-are/our-vision-and-strategy/corporate-plan/>), alongside the **nine Strategic**

Delivery Plans (<https://www.ukri.org/who-we-are/our-vision-and-strategy/delivery-plans/>) of our councils, describe the ways in which we deliver through the current spending review period (2022-25) and how we monitor our progress in delivering against our six strategic objectives, which underpin the analyses presented in this Performance Report.

UKRI Strategy: Transforming Tomorrow Together



UKRI Corporate Plan and Councils' Strategic Delivery Plans



UKRI Framework for Performance



UKRI Annual Report and Accounts

Our UKRI Framework for Performance allows us to consider our performance at stages across the R&I cycle and is underpinned by a high-level logic model that links our inputs and activities to the anticipated outputs, outcomes and impacts that realise our strategic ambitions.

Key reports throughout the year provide regular monitoring of how we are delivering the activities and near-term outputs identified in our Corporate Plan and Strategic Delivery Plans, as well as reviewing longer-term trends and how we are

enabling the outcomes and impact identified within our Strategy using a balanced scorecard approach. Our refreshed Corporate Plan will set out our activities for 2024-25 as we continue to deliver against our strategic objectives and ambitions.

UKRI Framework for Performance

Delivery assurance of our Strategy across the full logic model – from activities we set out in our Strategic Delivery Plans and Corporate Plan, to the outcomes and societal benefits these activities collectively realise

Logic Model Reporting Products

Benefits

Impact: Annual Report and Accounts

Demonstrates how we have met our legal requirements, what and how we have delivered against our Corporate Plan and how we have added value over the year in realising our strategic ambitions

Outcomes: Annual Balanced Scorecard

Providing a holistic overview of our performance, focusing on the outcomes that arise from the

activities UKRI delivers, in the context of the wider R&I system and longer-term trends

Outputs: Implementation reviews and deep dives

Providing in-depth exploration against the strategic objectives or within key areas, supporting delivery confidence and performance

Activities: Progress and Performance Report

Providing assurance on our quarterly progress against delivering our strategic and key government priorities as set out in our Strategy and Corporate Plan

Inputs: Local performance reporting and monitoring

Managed at a fund, programme or directorate level, and supports development of the above reporting products

How we are organised and governed

UKRI is a non-departmental public body sponsored by the Department for Science, Innovation and Technology (DSIT).

We are nine councils, working individually and collectively across all disciplines and sectors. We use our broad reach and deep expertise to support

a dynamic investment portfolio with aligned incentives.

The UKRI Board is our primary governing body. It oversees our activities, including delivery of our Strategy. The Board provides updates and advice to the DSIT Secretary of State for Science, Innovation and Technology.

Our Executive Committee (ExCo) provides strategic advice to the Board and is responsible for delivering the Board's vision by overseeing the organisation's overall performance and delivery.

ExCo comprises primarily of the Executive Chairs of each of our nine councils, each of whom is advised by a Council of external members.

Further details of each of the committees shown can be found in our Governance Statement on page 186.

UKRI Board → Nominations and Remuneration Committee; Board Investment Committee; Audit and Risk Assurance Committee; Organisational Change Committee.

UKRI Board → Executive Committee Including the Executive Chairs of each of our nine councils → Workforce and Financial Planning Committee;

People, Finance and Operations Committee;
Strategy Committee; Health and Safety
Management Committee.

Risk summary

We use effective risk management to support delivery of the objectives and priorities identified in our strategy. Our goal, through early identification and active management of risks, is to anticipate uncertainties that may impact the delivery of priorities, undertake relevant and timely assessments, plan mitigations and manage issues (should they arise) with an agile and effective response.

Our approach to managing our principal risks includes a robust schedule of deep dive evaluations of each of our principal risks in our monthly ExCo meetings.

These deep dives enable the ExCo to scrutinise the risk elements and the measures we are taking to reduce risk. Through these dives, we analyse the flight path of each risk and track the planned activity from residual score through to our target, where the risk is expected to come within our risk appetite.

A summary of our principal risks is presented in the heatmap below, including risk titles to indicate the types of risk. The Risk and Performance section of this reports provides more information about the nature of these risks and how they are being managed (page 118)

Effective of UKRI systems and IT infrastructure:
Risk Medium

Major gap/failure in our internal control environment: Risk Low

UKRI staff and capability and capacity: Risk medium

Failure to deliver the benefits of UKRI's organisational change: Risk medium

Failure to deliver against UKRI environmental sustainability and greening government commitments: Risk low

Trusted research and innovation: Risk medium

Failure to influence/respond to changes in the policy landscape: Risk medium

Financial sustainability of the UK research system:
Risk medium

Managing strategic direction to achieve UKRI's intended impact: Risk medium

Performance summary

In the 2023-24 financial year, we invested £9.3 billion including:

£1,578 million (18%) in our rolling portfolio of research and development grants, including fully open funding opportunities and strategically targeted opportunities focused on specific priorities (£1,514 million in 2022-23)

£2,309 million (26%) strategic institutional funding to higher education providers in England for research and knowledge exchange (£2,204 million in 2022-23)

£636 million (7%) in dedicated skills investments for the next generation of researchers, innovators and technicians, noting that almost all our investments involve significant people and skills development (£647 million in 2022-23)

£946 million (11%) in **infrastructure**, (<https://www.ukri.org/what-we-do/creating-world-class-research-and-innovation-infrastructure/>) from laboratory equipment to major international research facilities (£1,120 million in 2022-23)

£1,427 million (16%) towards specialist **institutes**, (<https://www.ukri.org/publications/explainer-ukris-institutes/explainer-how-ukris-institutes-support-research-and-innovation/>) centres, facilities and **Catapults** (<https://catapult.org.uk/>) that provide national capabilities in specific R&I areas, including specialist equipment, expertise and knowledge (£1,340 million in 2022-23)

£472 million (5%) in collaborative challenge-led funding to address specific national and global priorities (£472 million in 2022-23)

£729 million (8%) in innovation project grants that support innovative small and medium-sized enterprises (SMEs) (£523 million in 2022-23)

£688 million (8%) in **international partnerships** (<https://www.ukri.org/what-we-do/international-funding/>) funding to enable specific opportunities for UK researchers to collaborate with their peers globally (£580 million in 2022-23)

In addition, we also invested £12 million (<1%) in public engagement activities to involve wider society in R&I, ensure that its benefits are widely shared, and inspire and engage the next generation of researchers and innovators (£12 million in 2022-23)

For details of our £9.3 billion total capital allocation see page 37. More information on our R&I grant investment portfolio is available through our explainer series: <https://www.ukri.org/who-we-are/about-uk-research-and-innovation/ukri-explainers/> and data on our awards and outputs are published here: <https://www.ukri.org/what-we-do/what-we-have-funded/>

In 2023-24 we:

Assessed over 29,160 applications for R&I funding (2022-23: 22,300) and made 6,145 new awards (2022-23: 6,118)

Supported 5,032 organisations (2022-23: 3,661), including 138 universities, our 61 institutes, centres and Catapults, and 3,912 small and medium-sized enterprises

56,099 (2022-23: 57,889) individuals, including principal investigator, co-investigators, fellows, researcher co-investigators and students

Delivering our strategic objectives

April 23

Impacts: The **interim evaluation report on Innovate UK's Future Flight Challenge** (<https://www.ukri.org/publications/interim->

evaluation-report-future-flight-challenge-ffc/) demonstrates that the visionary £300 million programme has led to collaboration at a scale that would not have occurred otherwise, and widely supported and informed government policy.

Ideas: £1 billion **milestone reached** (<https://www.ukri.org/news/horizon-europe-guarantee-fund-awards-1bn-in-grants/>) by the Horizon Europe Guarantee fund, delivered by UKRI, which enabled UK-based researchers and innovators to participate in Horizon Europe during the delay to association.

Impacts: NERC's British Geological Survey delivered an assessment of the UK's geological potential for critical raw materials, meeting a key priority of the government's Critical Minerals Strategy. Materials such as lithium and cobalt are essential components of many modern technologies and are vital to our wellbeing, security and journey to net zero.

May

Places: UK **Biobank** (<https://www.ukri.org/news/uk-biobank-in-127-6m-move-to-manchester-science-park/>) announced £127.6 million move to a new purpose-built facility in Manchester, supported by the UKRI Infrastructure Fund, replacing outdated infrastructure and promoting

academic, commercial and public health links in the Manchester region and beyond.

June

Places: We celebrated 15 years of our North America Office and its **evolution and impact** (<https://www.ukri.org/publications/ukri-in-north-america-impact-in-a-changing-world/>) in the key relationships and partnerships that have been nurtured.

Impacts: EPSRC and Innovate UK **unveiled a suite of AI investments** (<https://www.ukri.org/news/54m-to-develop-secure-ai-that-can-help-solve-major-challenges/>) during London Tech Week, bringing academic and industry partners together to continue to build and expand the UK's global strengths in AI.

July

Places: **Four new research facilities** (<https://www.ukri.org/news/new-research-facilities-to-be-created-thanks-to-flagship-scheme/>) were announced, supported by £52 million investment from our **UK Research Partnership Investment Fund** (<https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/uk-research-partnership-investment-fund/>) and a further £113 million leveraged by the projects from industry

partners, charitable organisations, and philanthropic donors, boosting UK research into childhood mental health, the rail industry, and the manufacture of medicines.

August

Impacts: We announced a **£6 million investment** (<https://www.ukri.org/news/ukri-funds-research-for-a-sustainable-fashion-and-textiles-industry/>) to help the fashion and textile industry integrate more sustainable and responsible practices.

Innovation: An **evaluation** (<https://www.ukri.org/publications/knowledge-transfer-partnerships-evaluation/>) of Innovate UK's Knowledge Transfer Partnerships (KTPs) estimated that for every pound of public and private investment, KTPs generated a return of £4.20-£5.50 in net economic benefits between 2010-20.

September

People and careers: We published plans to improve support for students studying towards doctorates and other research degrees, through a **new deal for postgraduate research**. (<https://www.ukri.org/news/ukri-to-improve-support-for-research-students-through-new-deal/>)

People and careers: A new **£4 million transatlantic initiative**, (<https://www.ukri.org/news/uk-us-collaboration-to-develop-future-cancer-research-leaders/#:~:text=New%20funding%20will%20support%20UK,of%20their%20cancer%20research%20careers.>) supported by MRC, was announced to enable UK researchers to undertake placements at leading US cancer research institutions.

Impacts: The scale of UKRI investments and its focus on multiple critical themes has underpinned wide-ranging and substantive impacts' according to an independent **evaluation** (<https://www.ukri.org/news/report-reveals-impact-of-covid-19-research-and-innovation-funding/>) of our responses to COVID-19.

October

Innovation: Innovate UK launched a **£32 million competition** (<https://www.ukri.org/opportunity/collaborative-ai-solutions-to-improve-productivity-in-key-sectors/>) to develop Collaborative AI solutions to improve productivity in key sectors.

People and careers: We announced £177 million investment **for doctoral training** (<https://www.ukri.org/news/ukri-invests-in-the-next-generation-of-ai-innovators/>) in AI, ensuring that the UK has

the skills needed to seize the potential of the AI era.

Places: The **Regional Innovation Fund** (<https://www.ukri.org/publications/regional-innovation-fund-2023-to-2024/>) boosted support for universities to engage with businesses, investing £48.8 million to grow local economies.

November

Supported by a world-class organisation: We embraced government's response to the independent review of the UK's research, development and innovation organisational landscape, including announcing £10 million Metascience unit, supporting our role as an expert, evidence-based, innovative investor.

Places: We launched the first phase of a new **AI Research Resource**, (<https://www.ukri.org/news/300-million-to-launch-first-phase-of-new-ai-research-resource/>) a national facility to provide world-leading AI-specialised compute capacity to public researchers, academia and industry, through a landmark collaboration between UK government, UKRI, the University of Cambridge, the University of Bristol, Intel and Dell.

Places: We supported growth of the UK's creative economy by launching a national network of labs

through AHRC's **CoSTAR programme**, (<https://www.ukri.org/councils/ahrc/remit-programmes-and-priorities/convergent-screen-technologies-and-performance-in-realtime-costar/>) powering up major industry names and SMEs across the creative industries with new facilities, partnerships and technological approaches, from virtual production to AI.

People and careers: UKRI celebrated **5,000 Global Talent visa endorsements**, (<https://www.ukri.org/news/ukri-celebrates-5000-global-talent-visa-endorsements/>) helping attract outstanding scientists and researchers to pursue their careers in the UK.

January

Innovation: We announced **two new Innovation and Knowledge Centres**, (<https://www.ukri.org/news/uk-research-investment-to-boost-uk-semiconductor-industry/>) supported by EPSRC and Innovate UK to deliver new semiconductor technologies to market, boosting UK industry and enhancing our workforce capability.

Places: State-of-the-art MRC Laboratory of Medical Sciences building **opened**, (<https://www.ukri.org/news/opening-of-mrc-institute-building-heralds-new-team-science-era/>) heralding new 'team science' era.

February

Innovation: A **report** (<https://www.ukri.org/publications/economic-impact-assessment-of-bbsrc-attributable-spin-outs/>) showed the significant impact of BBSRC funding in driving economic value through the UK spin-out community, estimating a real net Gross Value Added of over £5 billion.

Places: Launched STFC's **Cluster Strategy**, (<https://www.ukri.org/publications/stfc-cluster-strategy/>) in parallel with the **DSIT Cluster Mapping Tool**, (<https://www.gov.uk/government/publications/identifying-and-describing-uk-innovation-clusters>) identifying and describing UK innovation clusters.

Impacts: We announced **£100 million investment** (<https://www.ukri.org/news/new-100m-fund-will-unlock-the-potential-of-engineering-biology/>) to unlock the potential of engineering biology through six new Engineering Biology Mission Hubs and 22 Mission Awards, funded through BBSRC and the UKRI Technology Mission Fund to transform solutions in areas like vaccine, textile and food production.

March 24

People and careers: We announced the UK's largest investment of **over £1 billion** (<https://www.ukri.org/news/1-billion-doctoral-training-investment-announced/>) to support critical engineering and physical sciences skills through EPSRC's Centres for Doctoral Training, including in critical technologies such as AI, quantum technologies, semiconductors, telecoms, engineering biology.

Financial overview

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

1. The Consolidated Statement of Comprehensive Net Expenditure (page 104 Volume 2) presents net expenditure of £9.4 billion 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. The outturn against budget is £9.6 billion. These figures are calculated in accordance with HM Treasury's budgeting 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 additions to Property, Plant and Equipment of £239 million that are capitalised, rather than being in the Statement of Comprehensive Net Expenditure, but which have a budgetary impact.

Outturn against Budget 2023-24

UKRI 2023-24 Budget Allocation	Full year Outturn £m	Full Year Budget £m	Variance to Outturn £m	UKRI Variance to Outturn %
UK Research Base, of which:	7,372.3	7,209.8	(162.3)	(4.3%)
Core Research	5,515.9	5,390.1	(125.8)	(2.3%)
Non-Core Research	1,856.2	1,819.7	(36.5)	(2.0%)
R&D Other	555.0	525.7	(29.3)	(5.6%)
Core Innovation	838.8	867.4	28.7	3.3%
Core Capital Allocation	8,765.9	8,603.0	(163.0)	(1.9%)
Core Innovation: DfT Zero emission HGV technologies	14.7	11.2	(3.5)	(31.1%)
ODA	51.1	63.5	12.4	19.5%
DSIT Managed	150.0	174.7	24.7	14.2%

UKRI 2023-24 Budget Allocation	Full year Outturn £m	Full Year Budget £m	Variance to Outturn £m	UKRI Variance to Outturn %
Programmes				
EU Programmes	359.3	405.8	46.5	11.5%
Ringfenced Capital Allocation	575.1	655.3	80.1	12.2%
Grand Total Capital Allocation	9,341.1	9,258.2	(82.9)	(0.9%)
Innovation Loans	21.7	19.0	(2.7)	(14.3%)
Other Financial Transactions	(1.3)	5.5	6.8	123.2%
Ringfenced Resource Budget	252.0	234.2	(17.8)	(7.6%)
Annually Managed Expenditure	(29.7)	91.7	121.4	132%
Total Allocation	9,583.8	9,608.6	24.8	0.3%

The table above provides a summary of UKRI's outturn against budget. UKRI has a financial management target to deliver an outturn that is within 1% of its capital allocation.

The table above includes a £181 million balance within UK Research Base, where UKRI increased expenditure by reprofiling quality-related funding payments to higher education institutions at the request of DSIT. Additionally, DSIT agreed for UKRI to deploy a total spend of £11.4million to CERN and Square Kilometre Array Observatory to utilise Horizon Europe underspends. If these two elements are removed from outturn numbers, UKRI can report an underspend of £29million against the Core Capital allocation (0.3% variance).

The following table sets out outturn since 2018-2019:

Outturn since 2018-19¹

¹ Each year excludes outturn where UKRI increased expenditure by reprofiling quality-related funding payments to higher education institutions at the request of DSIT, for which DSIT did not transfer UKRI any budget cover.

UKRI Allocation Headings	Full Year Outturn 2023-24 £m	Full Year Outturn 2022-23 £m	Full Year Outturn 2021-22 £m	Full Year Outturn 2020-21 £m	Full Year Outturn 2019-20 £m	Full Year Outturn 2019-19 £m
UK Research Base, of which:	7,372.2	7,034.3	6,821.3	7,204.1	6,021.1	6,011.0
Core Research	5,515.9	5,121.2	4,968.5	4,959.2	4,447.8	4,555.2
Non-Core Research	1,856.2	1,913.0	1,852.9	2,244.9	1,573.2	1,455.8
R&D Other	555.0	485.7	461.4	474.1	481.5	306.7
Core Innovation	838.8	678.6	643.4	553.0	546.4	563.5
Core Capital Allocation	8,765.9	8,198.7	7,926.2	8,231.2	7,048.9	6,890.8
Core	14.7	0.1	0.0	0.0	0.0	0.0

UKRI Allocation Headings	Full Year Outturn 2023-24 £m	Full Year Outturn 2022-23 £m	Full Year Outturn 2021-22 £m	Full Year Outturn 2020-21 £m	Full Year Outturn 2019-20 £m	Full Year Outturn 2019-19 £m
Innovation: DfT Zero emission HGV technologies						
ODA	51.1	118.6	131.9	387.7	347.5	301.9
DSIT Managed Programmes	150.0	445.7	378.0	294.9	268.2	268.7
EU Programmes	359.3	524.9	5.9	0.0	0.0	0.0
Ringfenced Capital Allocation	575.1	1,089.1	515.8	682.5	615.7	570.5
Grand Total	9,341.1	9,287.8	8,442.0	8,913.8	7,664.6	7,461.3

UKRI Allocation Headings	Full Year Outturn 2023-24 £m	Full Year Outturn 2022-23 £m	Full Year Outturn 2021-22 £m	Full Year Outturn 2020-21 £m	Full Year Outturn 2019-20 £m	Full Year Outturn 2019-19 £m
Capital Allocation						
Innovation Loans	21.7	5.3	62.3	37.7	23.7	15.9
Other Financial Transactions	(1.3)	(11.4)	(20.3)	(3.0)	(17.5)	(18.0)
Ringfenced Resource Budget	252.0	198.2	203.5	192.6	190.0	233.2
Annually Managed Expenditure	(29.7)	(57.6)	120.0	23.6	88.0	(20.1)

UKRI Allocation Headings	Full Year Outturn 2023-24 £m	Full Year Outturn 2022-23 £m	Full Year Outturn 2021-22 £m	Full Year Outturn 2020-21 £m	Full Year Outturn 2019-20 £m	Full Year Outturn 2019-19 £m
UK Research Base, of which:	9,583.8	9,437.5	8,807.5	9,164.8	7,948.8	7,672.2

UK Research Base outturn grew by £1.2 billion in 2020-21 due to the additional spend on COVID-19 interventions, a single-year increase in World Class Labs expenditure of £293 million designed to support the sector during the COVID-19 pandemic and reprofiling of quality-related payments to higher education institutions to manage the overall UKRI Core Capital position. The Strategic Priorities fund also started in 2020-21 which contributed to this increase in spend when compared to 2019-20. The overall UK Research Base position has remained broadly balanced since 2020-21. The increase of £338 million in UK Research Base in 2023-24 compared to 2022-23 has been driven by Core Research spend, in particular a £206 million increase in International and £109 million increase in quality-related (QR) research funding.

The research and development (R&D) Other ringfence has increased spend in 2023-24, mainly driven by increases within the Technology Missions Fund, Levelling Up Programme and Faraday Institution compared with last year. The Industrial Strategy Challenge Fund spend has reduced slightly in 2023-24 compared to prior years as the fund draws to a close.

In Spending Review 2021, our Core Innovation budget received a significant, specific uplift in

funding; it is expected that Core Innovation spend will be £2.4 billion between 2022-23 and 2024-25. The total Core Innovation spend in this period to date is £1.5 billion, with a £160 million more spent in 2023-24 compared to 2022-23.

Part of Core Innovation, Department for Transport (DfT) Zero emission heavy goods vehicle (HGV) technologies is strictly ringfenced and is reported separately. This has been reported within the Core Capital allocation in prior years but has been moved to Ringfenced Capital in 2023-24 as any under or overspends cannot be used against other allocation headings. Spend in this area has increased in 2023-24 due to the projects being encouraged to pull forward spend to reduce the risk of overspend against the DfT allocation in 2025-26.

Managed Programmes outturn increased in 2020-21 due to the COVID-19 package awarded to Innovate UK specifically in relation to the Vaccines Task Force. Funding further increased in 2021-22 by £88 million mainly due to increases in programmes funded by the Vaccines Task Force, with £54 million increase in spend when compared to 2020-21 and new funding of £17 million and £8 million for the Low Cost Nuclear and Industrial Energy Transformation Funds. In 2022-23 funding increased for Low Cost Nuclear by a further £67

million. The Centre for Aerodynamics funding also increased by £75 million. This was partially offset by a reduction in funding for the Vaccines Task Force of £42 million compared to 2021-22 as the programme winds down. In 2023-24 the Department for Energy, Business and Industrial Strategy (BEIS) was split into three new Departments, with the Department for Science, Innovation and Technology (DSIT) continuing the majority of UKRI's funding. As a result of this, the cost of most programmes managed by Department for Business and Trade (DBT) and DSIT are recovered via invoicing as opposed to DSIT transferring budget to UKRI, which shows in our outturn as a decrease in spend in 2023-24. £64 million of the DSIT Managed Programme spend is in relation to new funding for the AI Research Resource (AIRR).

In addition, Innovate UK loans expenditure increased in 2020-21 and 2021-22 following the introduction of Innovation Continuity Loans in response to the COVID-19 pandemic. This reduced significantly in 2022-23 due to the combined impact of lower-than-expected loan issuance and the beginning of capital repayment in earlier competitions of the loan portfolio. Innovation Loans spend has increased again in 2023-24 due to an increased portfolio. The Innovation Loans variance of £2.7 million

represents solely the drawdown of new loans but excludes capital repayments. Capital repayments of £5 million are shown under the other financial transactions budget line. These two lines combined would be an underspend of £4 million against budget.

UK association to the Horizon Europe programme was granted in September 2023. Association means that UK organisations will be able to bid into Horizon Europe, certain that all successful UK applicants will be covered for the remainder of the programme either through the UK's association, or through the UK guarantee which is being delivered by UKRI. In 2023-24, UKRI increased its spend under the Horizon Europe Guarantee to £291 million, due to the significant increase in the onboarding of grants from Horizon Europe.

Funding for Earth Observation (Copernicus) also sits under the EU Programmes ringfence and spend continued in 2023-24, increasing to £22 million.

Official Development Assistance (ODA) expenditure decreased by £256 million in 2021-22 following the Government's decision to reduce ODA funding announced in March 2021, triggered by the impact of the COVID-19 pandemic on the UK economy. Funding continued at this level for

2022-23 but halved again in 2023-24 to £63.5 million. In 2022, the government announced that both the Global Challenges Research Fund (GCRF) and Newton programme would be discontinued. The replacement was also announced as the International Science Partnerships Fund (ISPF) which is a blend of ODA/non-ODA funding and sits under the DSIT Managed Programmes ringfence. The reduction in ODA expenditure in 2023-24 is reflective of GCRF and Newton portfolios coming to an end and in line with expectation, although the underspends being recognised on the ending grants are much higher than anticipated.

Full detail on changes in UKRI's Consolidated Statement of Financial Position in 2023-24 is contained in the Financial Statements and notes at pages 101-125 Volume 2. Explanations for year-on-year variances in balances can be found in the notes to the financial statements.

UKRI Councils' and Programmes Investments in 2023-24

Actuals 2023-24

Core AHRC – £85 million

Core BBSRC – **£301 million**

Core EPSRC – **£661 million**

Core ESRC – **£125 million**

Core MRC – **£558 million**

Core NERC – **£319 million**

Core STFC – **£609 million**

Core RE – **£2,105 million**

Core IUK – **£819 million**

Existing Time-Limited Commitments – **£85 million**

Collective Talent Funding – **£636 million**

Infrastructure Programmes – **£946 million**

Existing Cross-UKRI Strategic Programmes –
£813 million

New Cross-UKRI Strategic Programmes – **£258
million**

Centrally Managed Funding – **£278 million**

* * *

Budgets have been rounded to nearest £25 million to represent in squares. The sum of planning allocations to individual budgets and councils is £815 million higher cumulatively over 2022-23 to 2024-25 than the UKRI budget limit to mitigate the risk of underspends and ensure best use of available funding. Figures presented are in nominal terms.

All figures exclude funding for ODA, DSIT Managed Programmes, Annually-Managed Expenditure, Expected Credit Losses & Innovation Loans Interests, Provisions, Resource Non Cash Departmental expenditure limit, Horizon and Innovation Loan.

Note that the outturn data in this table takes into account actual, audited spend which has been mapped, as far as possible, to headings that are consistent with other UKRI publications. However there will be some differences in how some spend lines have been mapped between headings in this document and previously published documents. Please also be aware that UKRI's budgets change throughout any given year due to a combination of day-to-day financial management including the reprofiling of budgets between years and the adjustment of budgets between programme lines

in-year. During the course of 2023-24 UKRI also received some additional allocations from DSIT to deliver on priorities. If comparing the figures in this document with other documents, any lower numbers will be due to slippage or mapping changes, and will not impact on total investment across multiyear programmes.

Our website includes more information about how we manage our **budget** (<https://www.ukri.org/who-we-are/about-uk-research-and-innovation/ukri-explainers/>) and **what we have funded**. (<https://www.ukri.org/what-we-do/what-we-have-funded/>)

Performance Analysis

This section describes in detail how we have delivered over the year.

The section outlines the ambitions we set out in our Corporate Plan and describes UKRI's progress against them for each of our six strategic objectives, details of key risks and how they have been managed, and how we are driving environmental sustainability across the organisation.

Objective 1: People and careers

We invest across the full R&I skills spectrum, building a portfolio that covers the breadth and depth needed to make the UK the destination of choice for talented people, teams and businesses. In our **Corporate Plan**, (<https://www.ukri.org/publications/ukri-corporate-plan-update-2023-to-2024/>) we committed to increase investment in our people, culture and talent portfolio, to boost career path diversity and connectivity, and to enable a wide range of exciting careers and a vibrant UK R&I culture. To deliver these commitments in 2023-24 we:

Developed and delivered our UKRI-wide talent programme in line with our Collective Talent Funding roadmap, (https://www.ukri.org/publications/collective-talent-funding-roadmap-2022-to-2025/?_ga=2.115926470.1741184687.1698048908-1933910927.1681728387) by:

- simplifying and harmonising our talent-focused investments by launching our new **UKRI doctoral investment framework** (<https://www.ukri.org/news/update-on-collective-talent-funding/>) which included developing a '**core offer**' (<https://www.ukri.org/news/ukri-to-improve-support-for-research-students-through-new-deal/>) for all postgraduate research (PGR) students in

- receipt of UKRI funding. The first funding opportunity under the framework is already live
- setting out actions we will take in response to the outcomes of the **PGR New Deal Call for input** (<https://www.ukri.org/publications/new-deal-for-postgraduate-research-response-to-the-call-for-input/>)
 - convening more than 1,400 companies, higher education institutions, charities and civic organisations to underpin the **UK's largest investment of over £1 billion** (<https://www.ukri.org/news/1-billion-doctoral-training-investment-announced/>) to support skills across engineering and physical sciences through EPSRC's centres for doctoral training

Incentivised diverse career paths and mobility between sectors, and ensured we attract a diverse range of global R&I talent with different skills and backgrounds, by:

supporting the mobility and development of bioscience researchers and technical staff through partnerships and secondments through BBSRC's £3.4 million investment in **Flexible Talent Mobility Accounts** (<https://www.ukri.org/opportunity/flexible-talent-mobility-accounts-ftma/>)

updating our **Global Mobility evidence report**, (<https://www.discover.ukri.org/global-mobility-evidence-report-23/index.html#group-section-1-2023-update-ZsUuRMSwxf>) including new

evidence on international researchers in R&D businesses, leading to improved information available via the **GREAT Talent campaign** (<https://greattalent.campaign.gov.uk/>)

(<https://www.ukri.org/apply-for-funding/how-to-apply/resume-for-research-and-innovation-r4ri-guidance/#:~:text=The%20R%EF%BF%83%EF%BE%A9sum%EF%BF%83%EF%BE%A9%20for%20Research%20and,applying%20for%20UKRI%20funding%20opportunities>)

Championed and fostered a diverse, inclusive and connected R&I system, and developed our understanding of future R&I workforce skills and knowledge needs, by:

- developing the evidence base on **EDI barriers to PGRs** (<https://www.ukri.org/publications/equality-impact-assessment-of-ukris-standard-training-grant-terms-and-conditions/#:~:text=Literature%20review%20on%20EDI,Request%20a%20different%20format>) through **commissioned analyses (Error! Hyperlink reference not valid.)** from AdvanceHE, including an **analysis of the UKRI training grants terms and conditions**
- connecting innovators and businesses across the UK to talent and skills opportunities through Innovate UK's **No Limits** (<https://nolimits.ukri.org/>) platform

(<https://www.ukri.org/apply-for-funding/how-to-apply/resume-for-research-and-innovation-r4ri-guidance/#:~:text=The%20R%EF%BF%83%EF%BE%A9sum%EF%BF%83%EF%BE%A9%20for%20Research%20and,applying%20for%20UKRI%20funding%20opportunities>)

Implemented our people and teams action plan, and piloted, modelled and adopted good practice for improving R&I culture, by:

- better recognising the wide range of roles that contribute to the delivery of R&I through our new **roles in funding applications** (<https://www.ukri.org/publications/roles-in-funding-applications/roles-in-funding-applications-eligibility-responsibilities-and-costings-guidance/>) policy and implementing a narrative CV format, Resume for Research and Innovation (R4RI), on our new digital Funding Service platform
- empowering technical leadership through Research England's investment to support the Institute of Technical Skills and Strategy's three **technical leadership programmes** (<https://itss.org.uk/technical-leadership-programmes/>)

(<https://www.ukri.org/news/mrc-urges-researchers-to-consider-diversity-in-experiments/>)

Worked with a wide range of partners to develop and influence responsible national and international R&I policy and culture, driving the adoption of good practice, by:

- launching our new **position statement on research involving animals**, (<https://www.ukri.org/news/position-statement-on-research-and-innovation-involving-animals/>) demonstrating our commitment to the 3Rs (replacement, reduction and refinement of the use of animals in research), and ensuring excellent welfare standards for animals involved in R&I we fund

(<https://www.ukri.org/news/mrc-urges-researchers-to-consider-diversity-in-experiments/>)

In addition to our Corporate Plan commitments for 2023-24, we also:

- supported the **National Centre for Universities and Business's mobility task force** (<https://www.ncub.co.uk/about/what-we-do/people-skills-talent/researcher-career-mobility-taskforce/>) launch, to explore how greater movement of researchers between sectors can positively impact economic growth
- worked with the **MESSAGE** (<https://www.georgeinstitute.org.uk/projects/message-medical-science-sex-and-gender-equity>) initiative to

co-design a framework to embed sex and gender considerations into UK health and biomedical research, building on MRC's new **policy on embedding diversity in research** (<https://www.ukri.org/news/mrc-urges-researchers-to-consider-diversity-in-experiments/>) design, which is regarded as an example of best practice

- announced a further £7 million Innovate UK investment in the **Workforce Foresighting Hub**, (<https://iuk.ktn-uk.org/programme/workforce-foresighting/>) ensuring we embed the skills needed in the UK to harness the impact of our world-leading innovation

Developing the breadth of skilled people and teams essential for the future R&D workforce

Who our funding supported in 2023-24

Across our full portfolio of investments active in 2023-24

Students 27,257; Fellows 2,102; Researchers and Innovators 27,088

2022-23: Students 27,944; Fellows 2,129; Researchers and Innovators 27,459

2021-22: Students 29,301; Fellows 2,074;
Researchers and Innovators 28,008

The number of students supported by UKRI has decreased due to anticipated factors such as the end of additional support, including extending studentships, to mitigate the impacts of COVID-19, as well as factors such as the increase in our UKRI stipend.

Our award holders

Our **2024 diversity data report** (<https://www.ukri.org/publications/ukri-equalities-monitoring/>) has detailed analyses of UKRI's applicants and awardees in 2021-22. Totals for each category may not equal 100%, reflecting data suppression methods where groups of four or fewer individuals were not included in the analyses. Our Funding Service details **role descriptions and responsibilities**. (<https://www.ukri.org/publications/roles-in-funding-applications/roles-in-funding-applications-eligibility-responsibilities-and-costings-guidance/>)

Fellows

Female Asian: 5%

Female Black: 1%

Female Mixed: 2%

Female Not Disclosed: 2%

Female Other:

Female White: 38%

Male Asian: 6%

Male Black: 1%

Male Mixed: 2%

Male Not Disclosed: 2%

Male Other:

Male White: 38%

Not Disclosed, Not Disclosed: 1%

Unknown, Unknown: 1%

Researcher co-investigators

Female Asian: 3%

Female Black:

Female Mixed: 3%

Female Not Disclosed: 1%

Female Other:

Female White: 32%

Male Asian: 6%

Male Black: 1%

Male Mixed: 2%

Male Not Disclosed: 2%

Male Other:

Male White: 48%

Not Disclosed, Not Disclosed: 1%

Unknown, Unknown:

Co-investigators

Female Asian: 3%

Female Black: 1%

Female Mixed: 1%

Female Not Disclosed: 2%

Female Other:

Female White: 23%

Male Asian: 7%

Male Black: 2%

Male Mixed: 2%

Male Not Disclosed: 6%

Male Other: 1%

Male White: 50%

Not Disclosed, Not Disclosed: 1%

Unknown, Unknown: 1%

Principal investigators

Female Asian: 2%

Female Black:

Female Mixed: 1%

Female Not Disclosed: 1%

Female Other:

Female White: 23%

Male Asian: 6%

Male Black:

Male Mixed: 1%

Male Not Disclosed: 5%

Male Other:

Male White: 58%

Not Disclosed, Not Disclosed: 1%

Unknown, Unknown:

Attracting and retaining talented people and teams from the UK and around the world

Over **2,595 Global Talent Visas** (<https://www.gov.uk/global-talent>) endorsed by UKRI in 2023-24 (2022-23: 1,967*), attracting excellent researchers and team members to work on peer-reviewed

grants from a breadth of UK and international funders

£100 million awarded to **72 new R&I fellows** in 2023-24 through Future Leaders Fellowships (FLF) **556 FLF fellowships** awarded since the scheme launched in 2018, through investing a total of **£650 million**

FLF has successfully retained in or attracted to the UK **228 international fellows** (including 60 in 2023-24) and retained in or attracted back to the UK **307 UK national fellows** (87 in 2023-24)**

* The 2022-23 figure has been revised from that reported in the 2022-23 Annual Report and Accounts, reflecting lags in the applications data

** 21 fellows did not disclose their nationality

Shifting research culture to support talented people and teams to pursue their ideas

44 policy fellows (<https://www.ukri.org/news/44-policy-fellows-to-work-in-government-and-what-works-network/>) to work in government and the **What Works Network**, (<https://www.gov.uk/guidance/what-works-network>) putting some of the UK's outstanding researchers at the heart of government, to help inform the way policy is made,

more than doubling the programme's scale and expanding the range of research disciplines

11 projects offering a range of interdisciplinary platforms to support **research technical professionals** (<https://www.ukri.org/news/new-funding-to-support-research-technical-professionals/>) to develop and nurture specialist skills

Highlights

UKRI enables cross-disciplinary scientists to develop their leadership skills

The support given in **Cross-Disciplinary Fellowships (XDF)** (<https://cross-disciplinary-fellowships.ed.ac.uk/about>) to early career scientists at the University of Edinburgh is helping foster leadership. The XDF programme helps physicists, chemists, mathematicians, statisticians, engineers and computer scientists move into interdisciplinary areas, for example, **applying AI and machine learning in cancer biology.** (<https://www.ed.ac.uk/mrc-human-genetics-unit/research/ava-khamseh-research-group>) The programme, supported by MRC **funding**, (https://gtr.ukri.org/projects?ref=MC_UU_00035%2F16) has recently appointed its **fourth cohort** (<https://cross-disciplinary-fellowships.ed.ac.uk/programme-fellows>) of fellows

who are becoming leaders in data-driven computational biomedicine.

Spearheading public dialogue on digital technologies, science and AI

We actively involve the public in discussion about science and technology through initiatives like **Sciencewise** (<https://sciencewise.org.uk/>). In 2023, Sciencewise partnered with the **UKRI Responsible AI programme** (<https://www.ukri.org/opportunity/responsible-and-trustworthy-artificial-intelligence/>) to gather public perspectives to shape the **development of governance and standards for digital services and technologies** (<https://sciencewise.org.uk/projects/digital-identity-services/?portfolioCats=43%2C44%2C45%2C46%2C15>). Sciencewise is a renowned public engagement programme led by UKRI, which ensures that research and innovation policies consider the concerns and hopes of the public. It has facilitated groundbreaking dialogues on **climate adaptation**, (<https://sciencewise.org.uk/projects/climate-adaptation/>) and identified areas where public input is crucial such as the health applications of **Engineering Biology**, (<https://sciencewise.org.uk/2024/01/public-perceptions-of-engineering-biology-health/>) to maximise the societal benefits of R&I.

Improving efficiency across vaccine supply chains

Novel technology is improving vaccine safety and reducing wastage. UKRI Future Leaders Fellowship (FLF) holder **Dr Izabela Jurewicz**, (<https://www.surrey.ac.uk/news/physicist-behind-innovative-next-gen-photonic-crystal-sensors-awarded-ukri-future-leaders-fellowship>) Chief Scientific Officer at **Advanced Material Development Ltd**, (<https://amdnano.com/>) won the inaugural **FLF R&I Impact Award** (<https://amdnano.com/news-release.php?id=56>) for her work using novel colour-changing materials to develop small stickers for vaccine vials which change colour when exposed to heat, indicating if vaccine doses have been exposed to temperatures during transit that could render the vaccine inactive. The stickers have the potential to save millions of pounds across global communities, making it possible to safely distribute vaccines across challenging and ever-growing global supply chains.

Objective 2: Places

We take a strategic and coordinated approach to investment across the UK in outstanding people and teams, institutions, infrastructures, sectors and clusters. In our **Corporate Plan**, (<https://www.ukri.org/publications/ukri-corporate->

plan-update-2023-to-2024/) we committed to enabling collaboration locally, regionally, nationally and internationally by deepening our engagement with local and regional authorities and devolved administrations, delivering substantial strategic investment in R&I infrastructure, and working to understand the financial challenges the R&I system faces. To deliver these commitments in 2023-24 we:

Sought new opportunities and partnerships to support collaboration and knowledge exchange to deliver impactful outcomes, by:

- boosting support to grow local economies through Research England's **Regional Innovation Fund** (<https://www.ukri.org/publications/regional-innovation-fund-2023-to-2024/>) and supporting research clusters to scale up and sustainably enhance their research capacity through Research England's **Expanding Excellence in England (E3) fund** (<https://www.ukri.org/news/156m-to-expand-excellent-research-units-in-english-universities/>)
- supporting the growth of business-led innovation clusters through Innovate UK's new **Launchpads**, (<https://iuk.ktn-uk.org/programme/launchpads/>) and enhancing the adoption of supercomputing, data science and artificial intelligence in regional small businesses through four new **engagement hubs** (<https://www.ukri.org/>

org/news/4-5m-digital-transformation-support-for-smes-across-the-uk/) as part of the Hartree National Centre for Digital Innovation programme

- addressing local challenges, driving sustainable and inclusive economic growth and reducing regional disparities in the UK by bringing together devolved governments, local authorities, local businesses and local communities by launching our four **Local Policy Innovation Partnerships** (<https://www.ukri.org/news/20-million-investment-in-four-partnerships-to-boost-local-growth/>)
- partnering with local authorities through Innovate UK's Local Action Plans across the **Glasgow City Region** (https://iuk.ktn-uk.org/wp-content/uploads/2023/11/Innovate-UK_Glasgow-Action-Plan_HK_D6.pdf), **Liverpool City Region** (**Error! Hyperlink reference not valid.**), **New Anglia** (https://newanglia.co.uk/wp-content/uploads/2023/12/Innovate-UK_New-Anglia-Action-Plan_PW_Digital_Pages-compressed.pdf), **Wales** (<https://iuk.ktn-uk.org/wp-content/uploads/2023/10/FINAL-English-DPS-Wales-Action-Plan.pdf>), **West Midlands** (https://iuk.ktn-uk.org/wp-content/uploads/2023/07/Innovate-UK_West-Midlands-Action-Plan_PW_AW2-Digital.pdf), **West Yorkshire** ([75](https://iuk.ktn-uk.org/wp-content/uploads/2023/02/Innovate-UK_West-</div><div data-bbox=)

Yorkshire-Action-Plan_DIGITAL_TW_D1.pdf), and **West of England** (<https://iuk.ktn-uk.org/wp-content/uploads/2024/02/Innovate-UK-West-of-England-Action-Plan.pdf>), and through a new landmark agreement with **Greater Manchester** (<https://www.greatermanchester-ca.gov.uk/news/landmark-agreement-between-greater-manchester-and-innovate-uk-to-boost-innovation-and-rd-in-the-city-region/>)

- investing in projects to accelerate the growth of three high-potential innovation clusters in Glasgow, Greater Manchester and the West Midlands through Innovate UK's new **Innovation Accelerators programme**, (<https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/innovation-accelerator-programme/>) and enhancing R&I clusters through EPSRC's **Place-based Impact Acceleration Accounts** (<https://www.ukri.org/opportunity/place-based-impact-acceleration-account/>)

Strengthened our evidence base on the financial resilience of the R&I system to embed it in our work and decision-making, by:

- working with DSIT to develop policy options for the Government's response to the **Research, Development and Innovation Organisational Landscape** (<https://www.gov.uk/government/publications/research-development-and->

innovation-organisational-landscape-an-independent-review) review

- publishing high-level **data and analysis of the financial pressures** (<https://www.ukri.org/publications/research-financial-sustainability-data/>) on the UK R&I system, which include increases to the cost base due to inflation, and the reliance on income from international students to cross-subsidise university research activity and, increasingly, publicly-funded teaching. This provided a clear description of the flows of funding and income in universities and the scale of the financial challenges facing the R&I system
- working with stakeholders, funders and participants in the R&I system to understand how these issues can be addressed in the current fiscal environment in the UK to create a more resilient and sustainable system for the future

Ensured that UK researchers have access to world-leading laboratory facilities, equipment and digital resources by:

- expanding and upgrading the UK's world-class research infrastructure, including digital infrastructure, through **investment of £103 million in World Class Labs** (<https://www.ukri.org/news/investment-in-world-class-labs-to-maintain-uk-infrastructure/>)

- enabling the acceleration of data-driven approaches through increased **bioinformatics capabilities** (<https://www.ukri.org/news/ukri-funding-set-to-transform-embl-ebi-bioinformatics-capability/>) and launching **Smart Data Research UK** (<https://www.ukri.org/news/ukri-investment-to-harness-the-power-of-smart-data-for-research/>) through investments via our **Infrastructure Fund** (<https://www.ukri.org/what-we-do/creating-world-class-research-and-innovation-infrastructure/funded-infrastructure-projects/>)
- supporting critical improvements in digital services as well as software and skills training across the UK through the **Digital Research Infrastructure programme** (<https://www.ukri.org/news/major-research-and-innovation-infrastructure-investment-announced/>)

In addition to our Corporate Plan commitments for 2023-24, we also:

- broadened support for **heritage science** (https://www.ukri.org/news/daresbury-laboratory-hosts-uk-programme-to-boost-heritage-science/?_ga=2.210373973.152159447.1688478922-926400194.1634724237) research in the UK through Research Infrastructure for Conservation and Heritage Science (RICHeS), an £80 million AHRC programme enabling

technological innovation to build on the national footprint of our existing heritage programmes

- launched a £90 million programme of improvements and instruments to boost the capacity and capability of STFC's **ISIS Neutron and Muon Source** (<https://www.ukri.org/news/isis-neutron-and-muon-source-to-receive-major-upgrades/>)

Strengthening clusters and partnerships – locally, nationally, and globally

Financial Year	UK	International
2020-2021	4,594	1,457
2021-2022	3,755	1,202
2022-2023	3,814	962
2023-2024	6,855	1,342

Financial Year	UK (£m)	International (£m)
2020-2021	£1,068	£280
2021-2022	£657	£215
2022-2023	£864	£97
2023-2024	£1,146	£146

Over £4.4 billion co-investment committed by project partners since 2020-21

Based on project partners declared at the point of application. Partners may change in delivery of projects.

In 2020-21 increased collaboration and co-investment coincided with our significant investment in COVID-19 R&I programmes and investment through the **UKRI Challenge Fund** (<https://www.ukri.org/what-we-do/ukri-challenge-fund/>). An additional 68 partners for whom geographical location was not classified contributed a further £10 million in 2023-24 (157 partners and £26 million in 2022- 23, 63 partners and £36 million in 2021-22, and none in 2020-21).

Innovate UK's Global function in 2023-24:

- supported **618 organisations**, of which **596** were businesses, to succeed globally through **12** bilateral collaborative research and development programmes with key partner innovation countries and territories
- launched Innovate UK's new **Global Explorers** (<https://iuk.ktn-uk.org/programme/global-explorers/>) programme to support businesses to explore global R&D and innovation opportunities
- delivered **22 Global Business Innovation Programmes** enabling **268** small to medium-sized enterprises (SMEs) to explore

global innovation opportunities in technology and sector areas of UK strength

- supported **92 SMEs** through **12 Global Incubator Programme cohorts** (<https://iuk.ktn-uk.org/programme/global-incubator/>) working with leading incubator and accelerator programmes in Australia, Canada, India, Singapore and USA
- delivered **11 Global Expert Missions**, ([https://iuk.ktn-uk.org/programme/global-expert-missions/#:~:text=The%20Global%20Expert%20Missions%20\(GEM,businesses%20in%20the%20right%20countries\)](https://iuk.ktn-uk.org/programme/global-expert-missions/#:~:text=The%20Global%20Expert%20Missions%20(GEM,businesses%20in%20the%20right%20countries))) generating new insights on international R&I landscapes and sectors and scoping future opportunities for Innovative UK businesses

In our most recent **published data**, (<https://www.ukri.org/what-we-do/what-we-have-funded/geographical-distribution-of-funding/2021-to-2022-geographical-distribution-of-funding/>) we invested £3.7 billion outside the greater South East (GSE), equivalent to 47% of our portfolio.

Normalising UKRI investment data by population, UKRI invests the most per person in London, the South East, and East of England. Outside the GSE, we invest the most per person in the North East despite the region receiving the least UKRI investment overall within England.

We invest relatively less in Scotland, Wales and Northern Ireland. UKRI data include substantial Research England Quality Related (QR) investment in English Universities (page 77) but do not include investment by the equivalent funding bodies in these nations, who allocate funding according to their national research policies and priorities.

Due to methodological changes, it is not possible to compare these investment data with previous years. 2021-22 data will form the baseline for future trend analyses.

Geographical distribution of UKRI investment per person in 2021-22

Scotland £85

Northern Ireland £32

North East England £107

Yorkshire and the Humber £96

North West England £90

West Midlands £99

Wales £44

East Midlands £88

East of England £132

London £201

South West England £94

South East England £165

**Securing cutting-edge infrastructures for world-class research and innovation
£946 million invested in R&I infrastructure in 2023-24.**

World Class Labs **£310 million**

Research Capital Investment Fund (Higher Education Research Capital England and HEI Research Capital England) **£231 million**
Existing Infrastructure Investments **£169 million**

Infrastructure Fund **£137 million**

Digital Research Infrastructure **£29 million**

UK Research Partnership Investment Fund **£7 million**

Carbon Zero Fund **£15 million**

Capital for International Subscriptions **£48 million**

Highlights

Developing next-generation cloud storage technology

The **development of new cloud storage technology** (<https://www.ukri.org/who-we-are/how-we-are-doing/research-outcomes-and-impact/epsrc/hard-drive-disks-propel-vital-market-growth/>) for smartphones is part of a growing regional photonics ecosystem in Northern Ireland (NI). Heat-Assisted Magnetic Recording (HAMR) technology increases the storage capabilities of hard drive disks used in cloud storage, including those accessed by smartphones and personal laptops. EPSRC investments to support the development of this new technology and wider R&I have been instrumental in building a regional photonics ecosystem in NI, helping create academic-industry consortia and increasing the training of scientists and engineers, helping to attract £81 million of foreign investment from Seagate Technology. A further investment of £42 million in **Smart Nano NI** (<https://www.smartnanoni.com/>) through our **Strength in Places Fund** (<https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/>

strength-in-places-fund/) attracted industry co-investment of £22 million and will create an estimated 500 further jobs and £250 million increase in exports in the next 10 years.

Convening and connecting to nurture clusters and power growth

Regional **clusters** (<https://www.ukri.org/who-we-are/stfc/facilities/clusters/>) are driving regional innovation and growth. Clusters spanning the space, health, energy, digital and quantum sectors are anchored to STFC's campuses at **Harwell** (<https://www.harwellcampus.com/>) and **Daresbury** (<https://sci-techdaresbury.com/>). These clusters have grown rapidly, attracting over 300 commercial organisations to date, which have raised over £1.4 billion in private investment and employ thousands of highly skilled people, and are fostering more than 20% job growth on average every year. STFC's new **Cluster Strategy** (<https://www.ukri.org/publications/stfc-cluster-strategy/>) builds on this incredible success to accelerate progress further.

Investment into wellbeing areas creates jobs and drives new policies

The South West Partnership for Environment and Economic Prosperity (**SWEEP**) (<https://sweep.ac.uk/impact/sweep-impact-report-2023/>) has led to £25 million savings in costs to businesses and

the public. NERC's £5 million funding has also helped to create 327 jobs and attract £115 million in investment and enabled >3,000 km² of natural space to be designed for health and wellbeing by bringing environmental research into the heart of regional decision-making.

(<https://www.ukri.org/news/bbsrc-injects-12m-into-pioneering-frontier-bioscience-research/>)

Objective 3: Ideas

We are advancing the frontiers of human knowledge by enabling the UK to seize opportunities from emerging research trends, multidisciplinary approaches, new concepts and markets. In our **Corporate Plan**, (<https://www.ukri.org/publications/ukri-corporate-plan-update-2023-to-2024/>) we committed to enhance and improve our toolbox of funding mechanisms, and to work with the UK government departments and international partners to enable greater strategic coordination in developing long-term international collaboration. To deliver these commitments in 2023-24 we have:

(<https://www.ukri.org/news/bbsrc-injects-12m-into-pioneering-frontier-bioscience-research/>)

Invested in a dynamic portfolio (<https://www.ukri.org/publications/explainer-ukris->

investment- portfolio/) of creative, curiosity-driven R&I to deliver new technologies, insights and knowledge that provide competitive advantages and solve tomorrow's challenges, by:

- supporting innovative ideas wherever they arise through our responsive funding for R&I, with examples in 2023-24 including:
- piloting BBSRC's £12 million fast-track approach to supporting **visionary early-stage bioscience** (<https://www.ukri.org/news/bbsrc-injects-12m-into-pioneering-frontier-bio-science-research/>) research projects aiming to transform our fundamental understanding of biological systems
- launching AHRC's **curiosity awards** (<https://www.ukri.org/opportunity/ahrc-responsive-mode-curiosity-award/>) to support fundamental research, networking and idea generation
- supporting new collaborations, generation of proof-of-principle results and exploration of new areas through EPSRC's **Maths Small Grants** (<https://www.ukri.org/opportunity/mathematical-sciences-small-grants/>) scheme, implementing streamlined application and assessment processes which lowered barriers to accessing our funding and helped support ideas across the breadth of mathematical sciences

- **pushing the frontiers of environmental research**, (<https://www.ukri.org/opportunity/pushing-the-frontiers-of-environmental-research-jul-23/>) supporting ambitious, high risk and high reward projects through £25 million NERC investment

(<https://www.ukri.org/opportunity/uk-japan-engineering-biology-for-novel-therapies-and-diagnostics-research-collaboration/>)

Have taken a strategic approach to international partnering, to reduce barriers to investigator-led, cross-border collaboration, and supported transdisciplinary mechanisms to address global challenges, by:

- launching the **International Science Partnerships Fund** (<https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/international-science-partnerships-fund/>) to address global challenges, build knowledge and develop the technologies of tomorrow, including:
 - through our UK-Japan partnership to build capacity in **engineering biology and novel** (<https://www.ukri.org/opportunity/uk-japan-engineering-biology-for-novel-therapies-and-diagnostics-research-collaboration/>) therapies and diagnostics and to **develop new**

technologies for nuclear waste

(<https://www.ukri.org/news/uk-japan-partnership-to-develop-new-tech-for-nuclear-waste-disposal/>) disposal

- partnering with the US, Canada and Australia to accelerate **clean energy innovation** (<https://www.ukri.org/news/global-collaboration-to-accelerate-clean-energy-innovation/>)
- strengthening the **UK-India partnership**, (<https://www.ukri.org/news/uk-and-india-commit-to-research-and-innovation-collaboration/>) committing to collaborate on vital R&I, including on earthquakes, animal health and AI
- supporting the UK's R&I communities' access to Horizon Europe opportunities, including collaborating with DSIT to deliver **Horizon Europe Insight Days**, (<https://iuk.ktn-uk.org/events/horizon-europe-insight-day-birmingham/>) and pump-priming applications from UK SMEs through Innovate UK's **Business Growth service** (<https://www.innovateukedge.ukri.org/Enter-new-markets/Horizon-Europe-Pump-Priming-Programme>)
- supporting a total of over **3,000 UK-based projects** (<https://www.ukri.org/publications/horizon-europe-guarantee-statistics/horizon-europe-guarantee-application-and-grant-offer-statistics/>) with over £1.5 billion investment

through the **Horizon Europe Guarantee scheme**, (<https://www.gov.uk/government/publications/horizon-europe-guarantee-open-letter-to-the-uk-research-and-development-sector>) including 1,246 multi-year projects worth a total of £646 million over their lifetime between 1 April 2023 and 31 March 2024

Developed and delivered funding mechanisms that help to capture the best ideas unconstrained by disciplinary boundaries, by:

- launching the **cross-research council responsive mode scheme**, (https://www.ukri.org/opportunity/ukri-cross-research-council-responsive-mode-pilot-scheme/?_ga=2.175907169.2127759271.1702286406-1933910927.1681728387) supporting new interdisciplinary ideas emerging from the research community
- supporting transformative multidisciplinary approaches in **novel computing** (<https://www.ukri.org/opportunity/sandpit-novel-computing-for-uk-defence-and-security/>) and **sensing** (<https://www.ukri.org/opportunity/sandpit-novel-computing-for-uk-defence-and-security/>) for complex national security and defence research challenges through our continued collaboration with **National Security Technology and Innovation Exchange** (<https://www.gov.uk/government/organisations>

- /national-security-technology-and-innovation-exchange) and UK government partners
- continuing to support the **Strategic Priorities Fund** (<https://www.ukri.org/what-we-do/strategic-priorities-fund/>) programmes, with the fund's **interim report** (<https://www.ukri.org/publications/strategic-priorities-fund-spf-interim-impact-evaluation-jun-2023/>) noting that it is helping to drive an increase in high-quality multi- and inter-disciplinary research and innovation at all stages

In addition to our Corporate Plan commitments for 2023-24, we also:

- addressed health challenges through multidisciplinary research including launching EPSRC's **Digital Health** (<https://www.ukri.org/opportunity/digital-health-hub-pilot-scheme/>) hubs and funding four hubs as part of a £40 million EPSRC investment in **Research and Partnership Hubs for Health Technologies** (<https://www.ukri.org/opportunity/research-and-partnership-hubs-for-health-technologies/>)

Investing in a diverse and dynamic portfolio of high-quality, creative research and innovation

Our portfolio of investments of research council and Innovate UK investments, 'Research and development expenditure by the UK government: 2022', ONS, April 2024

28% Experimental development

29% Applied research

43% Basic research

Investing **£2.2 billion** through Research England **quality-related research funding**, (https://www.ukri.org/publications/explainer-qr-research-funding-and-the-ref/?_ga=2.115669637.2070190575.1701160013-1933910927.1681728387) supporting the resilience, agility and strategic investment in the higher education research system

Investing **£1 billion** supporting curiosity-led R&I through our **responsive mode schemes** (<https://www.ukri.org/opportunity/>)

Over 175,000 knowledge outputs have been generated by UKRI awards starting between 2019-2023, with ideas translated into 23,628 diverse R&I outputs and 151,477 publications

	Quantity
Artistic and creative outputs	8,864
Research models and databases	7,716
Research tools and methods	3,863
Software and technical products	2,817

	Quantity
Medical products, interventions and clinical trials	368

	Quantity
Journal articles	109,735
Other publications	36,640
Book chapters	3,765
Books	1,337

Citations in 2023 to UK publications*

26% of the UK publications were enabled by UKRI funding

31% of citations to all UK publications were to that same 26% of publications enabled by UKRI funding** (Citations in 2022: 26% and 32%, respectively)

* Publications that included one or more authors affiliated to a UK R&I organisation. Data from Dimensions.ai. Citation analysis includes publications since 2008. Improved data linkage may increase the number enabled by UKRI.

** Based on the R&I funding sources cited by publications. This is not exhaustive and under-represents UKRI's contribution as not all

publications will cite our support, for example through Research England QR funding.

Incentivising and removing barriers to multidisciplinary and interdisciplinary working

- **£65 million** is being invested over two rounds of the **UKRI cross research council responsive mode pilot scheme** (<https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/ukri-cross-research-council-responsive-mode-pilot-scheme/>)
 - **976 outline applications** were assessed in Round 1, with **170 full applications submitted**
 - **over 1,300 R&I community** applied to join our Interdisciplinary Assessment College to assess applications
 - **89% of applicants** to the pilot agreed that the scheme will unlock new research, new approaches or new methods that would not emerge from established disciplinary thinking

Our councils collectively designed and launched **72 new interdisciplinary funding opportunities** in 2023-24 and **15 UK government departments** partnered UKRI across **53 funding opportunities** in 2023-24, promoted on our **funding finder** (<https://www.ukri.org/opportunity/>) which enables

researchers to view all our current competitions in one place.

Highlights

Filling a gap in dementia care through innovative design

Initial funding from AHRC in 2018 supported researchers at Cardiff Metropolitan University to **develop technology used in comfort devices for people with dementia** (<https://www.ukri.org/who-we-are/how-we-are-doing/research-outcomes-and-impact/ahrc/personalised-hugs-aim-to-help-people-with-dementia/>). Researchers identified a need to feel nurtured, and informed by principles of compassionate design, developed the toy, named HUG™. The commercial spin-out company leveraged additional investment and support from the Welsh Government, Alzheimer's Society and NHS Wales. HUG™ is now for sale in a leading UK retailer. Evaluations show that people living with dementia who used a **HUG™** (<https://hug.world/>) for six months had an 87% increase in their wellbeing and improved cognitive and functional ability. At an event in March 2024 the Rt Hon Greg Clarke (pictured) highlighted how "arts and humanities research stimulates, provokes and creates return on investment all across the country, by galvanising creativity".

Going back beyond galaxies, telescope finds first stars in space

Diamond-shaped star dust dating back billions of years has been detected for the first time in space by an international team of astronomers. A UK team, supported by STFC, found carbon-rich dust grains between the stars which could form earlier in the life cycle of galaxies than previously thought. Data from the **James Webb Space Telescope** (<https://www.ukri.org/news/james-webb-space-telescope-advances-our-understanding-of-galaxies/>) reveals crucial building blocks of planets and stars. STFC team plans to involve theorists to discover how the dust grains evolved in such a short timescale.

Developing climate change resilient wheat

R&I is helping safeguard one of the world's most vital crops, and BBSRC investments, totalling over £300 million since the turn of the century, are at the forefront of **revolutionising wheat** (<https://www.discover.ukri.org/revolutionising-wheat/>). Newly bred varieties can be heat tolerant, disease resistant, nutritious and sustainable, benefiting economies and building climate change resilience. An **independent evaluation** (<https://www.ukri.org/publications/evaluating-the-impacts-of-bbsrcs-investment-in-wheat-research/>) revealed significant socio-economic impacts from the research we have supported, with a projected

global return over the next 25 years of £8.90 for every £1 we have invested.

Objective 4: Innovation

We work to realise the full potential of the UK's world-class research base and national capabilities, helping deliver the UK government's vision for an innovation nation. In our **Corporate Plan**, (<https://www.ukri.org/publications/evaluating-the-impacts-of-bbsrcs-investment-in-wheat-research/>) we committed to enhance the speed and effectiveness of the UK's commercialisation activity, and to maximise the opportunities for knowledge exchange and collaboration between researchers, innovators, businesses, public services and policymakers, across a range of priority business sectors. To deliver these commitments in 2023-24 we:

Progressed our commitment to work across the system to support innovation to align funding opportunities and investments by:

- developing strategic partnerships to strengthen alignment within the system and deliver value, this includes an Innovate UK **Memorandum of Understanding** (<https://www.ukri.org/news/innovate-uk-and-british-business-bank-sign-mou/>) with British Business Bank to create new

pathways for business investment and promote growth through innovation

- acting as a trusted, expert partner to government across programmes that deliver sector specific outcomes, including Innovate UK's work with the Department for Business and Trade delivering the **Advanced Propulsion Centre** (<https://www.apcuk.co.uk/>) and **Aerospace Technology Institute** (<https://www.ati.org.uk/>) programmes, and investing £110 million across 217 projects funded through the **Farming Innovation Programme** (<https://farminginnovation.ukri.org/>) managed on behalf of the Department for Environment, Food and Rural Affairs (Defra)
- enhancing support for business through Innovate UK's **Catapult** (<https://catapult.org.uk/>) network and launched a new **UK Agri-Tech Centre**, (<https://ukagritechcentre.com/>) the national and international voice for agri-tech innovation in the UK
- enabling UK businesses and academia to team up in cutting-edge research, through our proven and expanded **Prosperity Partnerships** (<https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/prosperity-partnerships-business-and-academia-collaborations/>) model, including through EPSRC and BBSRC support for **19 new projects** ([98](https://www.ukri.org/news/uk-businesses-and-academia-team-up-in-cutting-</div><div data-bbox=)

edge-research/) focused on quantum, medtech, energy and other sectors, and **10 new dynamic collaborations** (<https://www.ukri.org/news/bbsrc-launches-uks-first-bioscience-prosperity-partnership-programme/>) unlocking innovation in the bioscience and biotechnology sectors

Worked with partners across the globe to support business to make global success a key part of their innovation-driven growth and scaling by:

- strengthening Innovate UK's bilateral relationships, culminating in the launch of several collaborative R&D competitions, including **Singapore for Net Zero technologies, Canada for quantum technologies**, (<https://apply-for-innovation-funding.service.gov.uk/competition/1675/overview/f891890f-8f16-4e59-bd91-846522347f25>) and multilateral competitions through **Eureka** (<https://apply-for-innovation-funding.service.gov.uk/competition/1656/overview/8920935f-6a78-4737-a0a1-e40bd572a30e>)
- launching the £20 million **Canada-UK Biomanufacturing** (<https://www.gov.uk/government/news/uk-science-minister-unveils-over-24m-in-new-science-and-innovation-agreements-to-deepen-collaboration-with-canada>) Collaboration, an integrated

programme to grow the biomanufacturing sector in both countries through joint work on business-led R&D, growth and scaling support, standards and regulations, supply chain resilience, and creating the talent and skills pipeline

Developed our approaches to incentivise and support new and existing research commercialisation opportunities, by:

- launching the new £7 million **UKRI Innovation and Research Caucus** (<https://www.ukri.org/news/new-network-to-maximise-research-and-innovation-funding-impact/>) as a world-leading centre of excellence in R&I funding, developing the evidence to maximise the impact of the R&I system
- enabling improved commercialisation outcomes by implementing our **Research Commercialisation Funding Framework**, (<https://www.ukri.org/blog/ukri-commercialisation-plan-from-ambition-to-action/>) delivering on the government's **UK Innovation Strategy** (<https://www.gov.uk/government/publications/uk-innovation-strategy-leading-the-future-by-creating-it>) and launching an **interactive brochure** ([https://www.discover.ukri.org/commercialising-your-research-with-ukri/#group-section- Routes-to-commercialisation-](https://www.discover.ukri.org/commercialising-your-research-with-ukri/#group-section-Routes-to-commercialisation-)

pbTs2v2hUI) outlining UKRI's commercialisation offer

- providing insights on emerging trends in performance improvement across English higher education providers by **publishing** (<https://www.ukri.org/news/kef3-gives-insights-on-emerging-trends-in-performance-improvement/>) the latest Knowledge Exchange Framework (KEF3) results
- bringing new products, processes, services and experiences to market through the **Social science, Humanities and Arts for People and the Economy Catalyst programme** (<https://www.ukri.org/news/4-million-for-research-commercialisation-to-benefit-uk/>) delivered by ESRC and AHRC in partnership with the **ARC Accelerator**, (<https://arcaccelerator.io/>) investing £ million in research commercialisation

In addition to our Corporate Plan commitments for 2023-24, we also:

- **published** (<https://www.ukri.org/publications/ukri-declaration-supporting-businesses-to-grow-and-scale/>) our declaration to improve the R&I environment for businesses seeking to scale up
- laid out **our plans** (<https://www.ukri.org/wp-content/uploads/2024/02/RE-220224-RE-CL-2024-02-SpinoutsReviewImplementationPlan>).

pdf) to implement recommendations from the **independent review of university spin-outs**

- launched Innovate UK's **£32 million competition** (<https://www.ukri.org/opportunity/collaborative-ai-solutions-to-improve-productivity-in-key-sectors/>) to develop and adopt artificial intelligence and machine learning solutions in the priority sectors of transport, construction, agriculture and creative industries
- invested £26.5 million through Innovate UK's **Next Generation Professional and Financial Services** (<https://www.ukri.org/news/new-programme-to-transform-uk-professional-and-financial-services/>) programme to transform UK professional and financial services

Delivering the skills, finance and collaboration opportunities needed to boost private sector investment

- provided **£224 million** through Innovate UK **Innovation Loans** (<https://iuk.ktn-uk.org/programme/innovation-loans-future-economy/>) for late stage research and development to 250 businesses, since 2017
- leveraged **£378 million** in private investment
- received early repayment of **£12.3 million** from **22 businesses** on successful exits

£260 million allocated in 2023-24 through **Higher Education Innovation Funding (HEIF)**

(<https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/higher-education-innovation-fund/>) led by Research England in partnership with the Office for Students, catalysing university and business collaboration and R&D investment to support knowledge exchange and increase the social and economic benefit of their work

£20 million additional allocation for a business and commercialisation supplement to contribute to delivering government priorities

£8.30 return on investment for every £1 of UKRI funding **through HEIF** (https://www.ifm.eng.cam.ac.uk/uploads/UCI/knowledgehub/documents/2020_Ulrichsen_Assessing_Impacts_of_HEIF.pdf) according to an independent **evaluation** (https://www.ifm.eng.cam.ac.uk/uploads/UCI/knowledgehub/documents/2020_Ulrichsen_Assessing_Impacts_of_HEIF.pdf)

Co-investment on new grants

Partner contributions (£ millions)

	2019-20	2020-21	2021-22	2022-23	2023-24
Academic	97	237	140	146	137
Charity	2	8	4	6	7
Other (incl. unknown)	212	45	138	30	84
Private	470	991	587	790	1,046
Public Sector, incl. NHS trusts	179	67	39	16	28
Total	960	1,348	908	987	1,302

Over £1.3 billion co-investment from partnering organisation on new UKRI grants in 2023-24, including **£1,046 billion** co-investment from the private sector.

The peak in 2020-21 coincided with increased COVID-19 and Industrial Strategy Challenge Fund investments. The increase in co-investment from partners in the private sector in 2023-24 compared to 2022-23 has been driven by Innovate UK's expanding portfolio of awards.

These data reflect project partner contributions declared at the point of application and represent only one mechanism by which UKRI catalyses private sector R&I investment.

Accelerating translation, commercialisation and knowledge exchange

By the end of 2023-24, Innovate UK was reaching a network of **450,000 innovators** across its system providing them with access to the UK's innovation ecosystem. That included through the new **Innovation Hub** (<https://www.ukinnovationhub.ukri.org/>) as a source of public funding and support for innovative businesses. Innovate UK also launched the **No Limits platform** (<https://nolimits.ukri.org/>) which aims to transform the UK's skills and talent

pipeline and to open up thousands of opportunities for people to become successful innovators.

Through **Innovate UK Business Growth**

(<https://iuk.ktn-uk.org/business-growth/>) **10,600 innovation-driven businesses** were supported in 2023-24, who in turn secured **£674+ million** in follow-on funding and finance while creating and maintaining **6,713 jobs**.

Businesses in receipt of Innovate UK investment secured **£3.61** of direct business benefit for every £1 we invested, and generated **£2.60** additional economic benefits according to a November 2023 **report** (<https://ircaucus.ac.uk/publications/innovate-uk-grants-rd-returns/>)

Innovate **UK's Investor Partnership**

(<https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/investor-partnerships-future-economy-programme/>) programme brings together grant funding and investor partners

- **£112million** of UKRI grants supporting 260 SMEs
- a total of over **£1 billion** in private investment through £326 million in aligned investment led by investor partners and follow-on equity investments of £754 million since the programme's launch in 2017

In 2023-24 the programme supported **82 SMEs** with grants totalling **£40 million**, with a further **£123 million** invested by partners and **£208 million** raised in total further investment by the portfolio of Investor Partnership companies

Highlights

Pioneering next-generation solar technology
Oxford Photovoltaics (Oxford PV) (<https://www.oxfordpv.com/news/oxford-pv-sets-new-solar-panel-efficiency-world-record-0>) set a new record in January 2024 for the world's most efficient solar panel, marking a crucial milestone in the clean energy transition. Oxford PV formed as a spin-out from the University of Oxford, capitalising on technology developed through EPSRC and Innovate UK support to become a pioneer and technology leader in the field of perovskite solar cells, employing 140 people based in the UK and Germany, and has raised £119 million in equity. Oxford PV's founders credit the **transformative impact** (<https://www.ukri.org/news-and-events/responding-to-climate-change/developing-new-behaviours-and-solutions/a-shining-light-in-solar-cell-innovation/>) of our funding in catalysing progress and enabling the UK to develop and capitalise on a competitive advantage in this technology.

An innovative 3D cell culture platform could replace the use of animals in research

PeptiMatrix (<https://www.peptimatrix.com/>) is a spin-out from the University of Nottingham aiming to reduce the need for animals in research by creating animal free hydrogels for 3D in vitro cell cultures. The short self-assembling peptide hydrogel (SAPH) platform is an innovative technology helping researchers to develop disease models that are more reproducible, reliable, and ethical. The platform was developed with funding from BBSRC, EPSRC and **NC3Rs** (<https://nc3rs.org.uk/>) (of which MRC is a major funder), and further support from Innovate UK is helping expand capacity and accelerate product development.

Decarbonising the UK railway network

Innovative technology addressing power supply challenges is opening opportunities to replace diesel trains with electric, hydrogen or battery bi-mode rolling stock. Work to manufacture and deliver the first fully-installed novel **Rail Charging Converter technology** (<https://www.webidconsult.com/the-edge/siemens-mobility-breakthrough-demonstrating-the-future-of-rail-charging-technology>) on the UK railway network is underway, building on a **project** ([108](https://www.ukri.org/who-we-are/how-we-are-doing/research-outcomes-and-impact/innovate-uk/rapid-charging-</p></div><div data-bbox=)

solution-to-support-greater-electric-train-use/) supported through Innovate UK and the Department for Transport's **First of a Kind demonstrator** (<https://iuk.ktn-uk.org/opportunities/sbri-foak-2022-cost-efficiency-and-performance-priorities-for-a-reliable-railway/>) initiative, work led by Siemens Mobility, alongside the University of York, Network Rail and a number of operating companies.

Objective 5: Impacts

We create opportunities to connect ideas, science and innovation, providing the foundations to target global and national challenges, including contributing to the UN's Sustainable Development Goals. In our **Corporate Plan**, (<https://www.ukri.org/publications/ukri-corporate-plan-update-2023-to-2024/>) we committed to harnessing the UK's world class R&I to deliver benefits to society and the economy, including amplifying our collective activity through **our strategic themes** (<https://www.ukri.org/who-we-are/our-vision-and-strategy/ukri-strategic-themes/>) and building on our existing investments to scale and expand R&I across **critical technologies** (<https://www.ukri.org/who-we-are/our-vision-and-strategy/tomorrows-technologies/>). To deliver these commitments in 2023-24 we:

Created opportunities across our five strategic themes, capturing synergies from wider investment across UKRI and partners by:

- amplifying our investments across our strategic themes: **building a green future, building a secure and resilient world, creating opportunities and improving outcomes, securing better health, ageing and wellbeing, and tackling infections** (<https://www.ukri.org/who-we-are/our-vision-and-strategy/ukri-strategic-themes/creating-opportunities-improving-outcomes/>) (page 96)

Strengthened our investment to accelerate technology development, adoption and diffusion for the whole of science, policy and innovation by:

- developing the UK's strengths in **critical technologies** (<https://www.ukri.org/who-we-are/our-vision-and-strategy/tomorrows-technologies/>) to transform our future economy, with around £470 million of investments in financial year 2023-24 specifically targeted at addressing a challenge, opportunity, or gap in one or more of the five National Science and Technology Council priority technologies through core-council and strategic UKRI investments, including through our **Technology Missions Fund** (<https://www.ukri.org/what-we-do/browse-our->

areas-of-investment-and-support/ukri-technology-missions-fund/) (page 101)

- aiding technology adoption by delivering clean maritime demonstrations and factory trials, through Innovate UK's **£33 million investment** (<https://www.gov.uk/government/news/33-million-boost-to-turn-green-ports-and-ships-into-a-reality>) in 33 projects in partnership with the Department for Transport

Invested in priority sectors including life sciences, advanced manufacture, space, food and the creative industries, by:

- developing opportunities to boost priority sectors, including:
 - launching four new **vaccine hubs** (<https://www.ukri.org/news/improving-access-to-vaccines-in-low-and-middle-income-countries/>) through an EPSRC partnership with the Department of Health and Social Care to address challenges in vaccine manufacturing and delivery in developing countries
 - investing in **32 innovative projects** (<https://www.ukri.org/news/15-6-million-boost-for-low-emission-food-production-systems/>) designed to produce foods in a more environmentally friendly way, driving transformation across the food industry to

meet the demands of a growing population while promoting health and sustainability through BBSRC and Innovate UK £15.6 million investment

- enhancing the UK's position as a global leader in sustainable manufacturing, including by creating a multidisciplinary network comprising **six new sustainable manufacturing research hubs** (<https://www.ukri.org/opportunity/manufacturing-research-hubs-for-a-sustainable-future-two-outline-stage/>) supported by EPSRC's £66 million investment, and the development, design and delivery of our new and disruptive £14 million **sustainable biomanufacturing** (<https://iuk.ktn-uk.org/programme/sustainable-bio-based-materials-and-manufacture/#:~:text=Innovate%20UK%20the%20Biotechnology%20and,and%20disruptive%20sustainable%20biomanufacturing%20solutions>) investment
- welcoming Airbus Defence and Space UK as the first customers at our **National Satellite Test Facility**, (<https://www.ukri.org/news/uks-largest-satellite-testing-facility-welcomes-first-customers/>) the UK's £116 million centre for testing large, next-generation satellites

In addition to our Corporate Plan commitments for 2023-24, we also:

- accelerated plans to address key government priorities in high-performance computing, quantum technologies, and telecommunications. This includes:
 - developing programmes to deliver a game-changing **Exascale supercomputer** (<https://www.ukri.org/news/preferred-location-for-new-supercomputer-announced/>) and the **AI Research Resource** (<https://www.ukri.org/news/300-million-to-launch-first-phase-of-new-ai-research-resource/>) to upgrade the UK's next-generation computer capacity
 - developing a programme to deliver an additional **£70 million commitment** (<https://www.ukri.org/news/ukri-to-invest-70m-in-new-future-telecoms-technologies/>) to support research hubs and accelerate market-ready solutions in future telecoms
 - investing a further **£45 million to unlock the potential of quantum** (<https://www.gov.uk/government/news/unlocking-the-potential-of-quantum-45-million-investment-to-drive-breakthroughs-in-brain-scanners-navigation-systems-and-quantum-computing#:~:text=The%20Quantum%20Catalyst%20Fund%20is%20funded%20by%20DSIT%20>)

and%20Innovate,targets%20and%20improving%20public%20services) to drive breakthroughs in brain scanners, navigation systems and quantum computing, including £15 million through the Innovate UK and DSIT Quantum Catalyst Fund to fast-track the integration of quantum solutions in the public sector

- investing further in semiconductors R&D, including Innovate UK's **£17 million boost** (<https://www.gov.uk/government/news/166-million-boost-to-power-up-chips-used-in-electric-cars-and-green-energy-industry>) to power up chips used in electric cars and the green energy industry, £12 million support for collaborations to **improve and scale-up semiconductor manufacturing**, (<https://www.ukri.org/opportunity/improving-and-scaling-up-semiconductor-manufacturing-crd/>) and £12 million for research to support a **digitally enabled circular economy and sustainably digital technologies** (<https://www.ukri.org/opportunity/research-for-a-digitally-enabled-circular-economy-and-sustainable-digital-technologies/>)

Addressing major national and global challenges

Our five strategic themes tackle large-scale, complex challenges in today's world. While each theme has dedicated new investment, this is designed and targeted to amplify existing investments across our councils and build alliances through co-investment with departments across government and international partners.

Activities in 2023-24 included:

Working across disciplines to tackle large-scale, complex challenges

investing more than £150 million to date across the five themes, directly amplifying over **£140 million** of existing UKRI investments

supporting over 150 transformative projects to date, collaborating with over **700 partners** across sectors

Creating opportunities, improving outcomes

(<https://www.ukri.org/who-we-are/our-vision-and-strategy/ukri-strategic-themes/creating-opportunities-improving-outcomes/>) launching the **Trial Accelerator** (<https://www.ukri.org/opportunity/creating-opportunities-trial-accelerator-fund/>) and **Evaluation Development funds,**

(<https://www.ukri.org/opportunity/creating-opportunities-evaluation-development-fund/>) to test and evaluate interventions that will spread opportunities and reduce economic, social and health disparities across the UK, with support from the Department for Levelling Up, Housing and Communities and Department for Work and Pensions

Building a green future (<https://www.ukri.org/who-we-are/our-vision-and-strategy/ukri-strategic-themes/building-a-green-future/>) investing **£61 million** (<https://www.ukri.org/news/global-collaboration-to-accelerate-clean-energy-innovation/>) with the US, Canada and Australia to catalyse global research in hard-to-decarbonise sectors

Building a secure and resilient world (<https://www.ukri.org/who-we-are/our-vision-and-strategy/ukri-strategic-themes/building-a-secure-and-resilient-world/>) launching the £4.3 million **Research and Coordination Hub** (<https://www.ukri.org/news/new-collaboration-seeks-to-boost-uks-security-and-resilience/>) bringing in expertise from academia, industry and government. The Hub will help strengthen the UK's societal and economic resilience and enhance security by coordinating over £180 million of investments from

across UKRI and four UK government departments as well as international partners

Tackling infections (<https://www.ukri.org/who-we-are/our-vision-and-strategy/ukri-strategic-themes/tackling-infections/>) enabling researchers to explore the evolution of bird flu and the ability to predict new strains through investment in the **FluMap consortium**, (<https://www.ed.ac.uk/roslin/news-events/latest-news-2023/ps3-3m-award-supports-research-into-tackling-bird>) protecting both animal and human health

Securing better health, ageing and wellbeing (<https://www.ukri.org/who-we-are/our-vision-and-strategy/ukri-strategic-themes/securing-better-health-ageing-and-wellbeing/>) establishing **Population Health Improvement UK (PHI-UK)**, (<https://www.ukri.org/news/35-million-investment-to-improve-population-wide-health/>) bringing together expertise and insights from across research, public health and community organisations to find innovative and inclusive ways to improve the health of people, places and communities and reduce health inequalities

Highlights

Oxford malaria vaccine awarded World Health Organisation approval

A new malaria vaccine developed by the University of Oxford and Serum Institute of India has been approved by the World Health Organisation. **The R21/Matrix-M™ vaccine** (<https://www.ox.ac.uk/news/2023-12-21-highly-effective-r21-matrix-m-malaria-vaccine-developed-university-oxford-and-serum>) can be deployed in the most at-risk areas, saving lives. The team, which has been funded over decades by MRC, increased its understanding of the malaria parasite life cycle and the genes and proteins involved. This vaccine can be made cheaply and produced on a mass scale. The Serum Institute has established production capacity for 100 million doses each year, doubling over the next two years.

Tracking online extremism to tackle violence

A risk index that helps predict real-world violence has had a **profound impact on counter-terrorism efforts**, (<https://www.ukri.org/who-we-are/how-we-are-doing/research-outcomes-and-impact/esrc/tracking-online-extremism-to-tackle-violence/>) aiding intelligence agencies in early prevention. By analysing online language

patterns, supported by ESRC funding, Dr Julia Ebner's work has influenced tech giants like Google and YouTube to revisit violence risk assessments, prompting policy changes, and her insights have directly advised security services globally, enhancing their ability to identify and mitigate extremist threats and to advance counter-terrorism strategies.

Software helps reduce suicide

A web-based system is aiding **mental health risk management**, (<https://www.ukri.org/who-we-are/how-we-are-doing/research-outcomes-and-impact/esrc/how-cloud-computing-software-helps-to-reduce-suicide-risks/>) including suicide prevention. The software, developed with ESRC and partners' support and commercialised as a spin-out, **Egrist Ltd**, (<https://www.egrisk.org/>) from Aston University, uses a database of 1.5 million clinician-based risk judgements, digitally capturing health practitioners' knowledge and reasoning processes to help mental health workers efficiently, flexibly and accurately complete risk assessments. The system has supported assessments for over 240,000 patients by 3,500 mental health practitioners.

Tackling regional inequality through community-led research

The **CAER** (<https://results2021.ref.ac.uk/impact/04d819df-2f9e-4329-b5a7-6e8bf78bb649?page=1>) project, supported through AHRC's **Connected Communities** (<https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/connected-communities/>) programme, developed educational opportunities for young learners and long-term unemployed people in one of the UK's most deprived wards in South Wales, and went on to secure **£830,000** (<https://www.heritagefund.org.uk/news/national-lottery-money-helps-community-discover-its-hidden-hillfort>) from the National Lottery Heritage Fund to develop a permanent **visitor centre** (<https://www.caerheritage.org/your-visit>). 25 new **Community Research Networks** (<https://www.ukri.org/news/networks-to-strengthen-publics-role-in-research-and-innovation/>) are building on the **success** (<https://www.youtube.com/watch?v=66bCBwY2rbo>) of the Connected Communities programme, responding to the priorities of communities through collaborations spanning social enterprises, local councils, museums, city farms, wildlife trusts, universities, and arts organisations.

Spurring global action on climate change

Research supported by NERC underpinned the development of the **Global Methane Pledge** (<https://www.globalmethanepledge.org/news/highlights-2023-global-methane-pledge-ministerial>) launched at COP26 in 2021, signed by 155 countries, tripling funding to tackle the problem to \$1 billion globally. We have also boosted funding by £12 million in partnership for **GEMMA**, (<https://www.ukri.org/news/growing-the-uks-greenhouse-gas-measurement-capability/>) the Greenhouse Gas Emissions Measurement and Modelling Advancement programme, designed to provide powerful new insights by delivering an integrated total of measured greenhouse gas emissions across the UK, helping inform and monitor the changes needed to meet the UK's net zero commitments.

Harnessing the opportunities from tomorrow's technologies and transforming sectors that are key to the future economy

We have made over **£1.2 billion** of direct investment specifically aimed at addressing a challenge, opportunity, or gap in one or more of the National Science and Technology Council's five priority technologies between 2021-22 and 2023-24*. Examples of investments delivering across this period and in some cases beyond, include:

*This complements and builds upon UKRI's larger broader portfolio of aligned investments that are clearly necessary for, or contribute to, our world-class capability in a specific technology, but where the technology is not the primary purpose of the investment (e.g., investments in infrastructure and institutes, facilities, centres, and Catapults that have a remit aligned with the particular technology, as well as research and innovation programmes targeted at delivering outcomes such as net zero but include elements relevant to the development/application of the technology) and underpinning investments in the disciplines required to create and sustain a vibrant R&I system that are necessary for a technology by demonstrably fuelling the surrounding skills pipeline, innovation, or foundational discovery science.

- Over **£100 million** on centres for doctoral training in AI, QT and EB
- The **£66 million Turing AI Fellowships Programme** (<https://www.gov.uk/government/publications/turing-artificial-intelligence-fellowships/turing-artificial-intelligence-fellowships>)
- The **£210 million Hartree National Centre for Digital Innovation** (<https://www.ukri.org/news/new-210-million-centre-to-advance-ai-and-quantum-computing/>) to advance AI and quantum computing

- The **£93 million National Quantum Computing Centre** (<https://www.ukri.org/what-we-do/creating-world-class-research-and-innovation-infrastructure/national-quantum-computing-centre/>)

Investments developed and launched in 2023-24 to boost the UK's position as a pioneer in critical technologies included:

Artificial intelligence (AI)

£100 million to support the **next phase**

(<https://www.ukri.org/news/100-million-investment-in-the-alan-turing-institute-announced/>) of the Alan Turing Institute

a further **£100 million in AI research hubs**

(<https://www.ukri.org/news/100m-boost-in-ai-research-will-propel-transformative-innovations/>) to deliver next-generation innovations and technologies

the **£100 million Bridge AI** (<https://iuk.ktn-uk.org/news/innovate-uk-launches-100-million-ai-fund-for-uk-business/>) programme for UK business, driving the adoption of AI in key sectors of the economy

£54 million in AI to solve major challenges,

(<https://www.ukri.org/news/54m-to-develop-secure-ai-that-can-help-solve-major-challenges/#:~:text=>

A further £313 million, have more sustainable land management) including establishing a £30 million Responsible AI UK consortium

Quantum technologies (QT)

advancing **quantum computing testbeds**

(<https://www.ukri.org/news/ukri-and-nqcc-invest-30-million-in-uk-quantum-innovators/>) through **£30 million** new investment

£45 million (<https://www.ukri.org/news/ukri-awards-45-million-to-develop-quantum-technologies/>) in 49 projects across the UK's quantum technologies sector, and working to establish new **Quantum Technology Research Hubs** (<https://www.ukri.org/opportunity/epsrc-quantum-technology-research-hubs/>)

Engineering biology (EB)

- Driving technology development, innovation and adoption of EB solutions in key mission-focused areas, including food systems, biomedicine, clean growth, and environmental solutions through:
- **£100 million investment** (<https://www.ukri.org/news/new-100m-fund-will-unlock-the-potential-of-engineering-biology/>) to establish six new Engineering Biology Hubs,

and support 22 mission awards and a further **48 business-led** (<https://www.ukri.org/news/13-5-million-for-48-engineering-biology-rd-projects/>) collaborative R&D projects

- partnering with Science Creates to launch the UK's first **engineering biology accelerator** (<https://www.ukri.org/news/ukri-and-science-creates-launch-engineering-biology-accelerator/>) to support scientists, spin-outs and start-ups to develop the skills and business plans to take their technologies to market

Future telecoms

£62 million (<https://www.ukri.org/news/major-future-telecoms-research-boost-announced/>) across four research hubs and 16 new projects, positioning the UK to shape the next generation of telecoms networks

Semiconductors

£26.8 million (<https://www.ukri.org/news/uk-research-investment-to-boost-uk-semiconductor-industry/>) to create two new Innovation and Knowledge Centres to deliver new semiconductor technologies to market and support 11 semiconductor skills projects to enhance workforce capability

Highlights

Quantum computing: from theory to reality, faster

Phasecraft Ltd (<https://www.phasecraft.io/>) is evolving quantum computing from experimental demonstrations to useful applications by designing efficient quantum algorithms to tackle complex challenges in a **wide range of sectors** (<https://www.ukri.org/blog/delivering-the-quantum-advantage/>). Building on EPSRC's **support**, funding through Innovate UK is underpinning **six major industrial collaborations** (<https://www.ukri.org/publications/project-directory-for-the-uk-quantum-technologies-challenge/>) between Phasecraft and international leaders in quantum hardware development and applications, to accelerate the economic impact of quantum computing **applications**

Reprogramming the genetic code

Researchers based at MRC's Laboratory of Molecular Biology have entirely **re-engineered** (<https://www.ukri.org/publications/impacts-arising-from-mrc-supported-institutes-and-major-investments/>) the genetic code of the gut bacterium, **E. coli**, creating a living organism with the largest synthetic genome to date. These unique cells can be turned into programmable

micro-factories to produce novel molecules, creating new classes of enzymes, drugs and biomaterials. The Cambridge-based spin-out constructive.bio is commercialising this groundbreaking synthetic biology research.

Global connectivity enabled by semiconductor laser technology

Laser technology developed in the UK through EPSRC and Innovate UK funding underpins some of the world's most advanced semiconductor photonics devices, which play a key role across AI, quantum communications and space applications, and are used in wearable fitness devices and video-on-demand services. CST Global, originally a **University of Glasgow spin-out**, (<https://www.sivers-semiconductors.com/company-history/>) was bought by Sivers IMA in 2017. **Sivers Photonics** (<https://www.sivers-semiconductors.com/sivers-photonics/>) now sells around a million lasers each month and exports 92% of its products, all made from a 95% UK-based supply chain.

Light-based communications pioneer nominated for European Inventor Award

LiFi (<https://lifi.co/harald-haas/>) uses light to wirelessly transmit data more than 100 times faster than conventional high-speed Wi-Fi or 5G connections, using a flickering light bulb. The technology, developed with EPSRC support, is

particularly suitable for areas where radio waves cannot be used, such as in hospitals and schools. **pureLiFi**, (<https://www.purelifi.com/about-purelifi/>) a spin-out company at the University of Strathclyde, is developing the technology and has worked with partners such as O2 and Cisco.

Boosting energy efficiency for major infrastructure

Reading railway station is **reducing its energy bills** (<https://optimise-ai.com/case-studies/reading-train-station>) and meeting its sustainability goals thanks to digital twins AI technology developed at Cardiff University, supported by EPSRC funding and commercialised by spin-out company **OptimiseAI** (<https://optimise-ai.com/>). OptimiseAI has also received funding from Innovate UK, and has attracted £1.3 million in seed funding, including the Development Bank Of Wales and the Welsh Government.

Objective 6: World-class organisation

We are transforming UKRI to become a more efficient, effective and agile organisation, integrating our capability to maximise and optimise the support we deliver for the R&I system. In our **Corporate Plan**, (<https://www.ukri.org/publications/ukri-corporate-plan-update-2023-to-2024/>) we committed to drive forward

re-engineering our operating model and programmes to harmonise our IT infrastructure and improve our operational data and funding service. Despite delays in implementing our new Services, HR, Accounting, Reporting and Procurement (SHARP) programme, to deliver these commitments in 2023-24, we:

Further improved how we work to drive greater efficiency, collaboration and agility across UKRI, harnessing and optimising our internal capabilities, by:

- transitioning our funding opportunities to the new digital **Funding Service** (<https://www.ukri.org/apply-for-funding/improving-your-funding-experience/council-transition-to-the-new-the-funding-service/>) platform, with streamlined application information and new harmonised approaches making it simpler for applicants to apply for UKRI funding
- bringing legacy data held in many systems across UKRI into a single data set, the UKRI Databank, providing the first automatically updated UKRI-wide view of our funding portfolio accessible by our staff. In parallel, we have launched our first Data Strategy, invested in improved policies and processes for data management, and strengthened our data governance with the appointment of a new Chief Information Officer and Chief Data

Officer, setting up a new governance committee for technology and data, and introducing a streamlined group of data owners

- creating a cross-UKRI Infrastructure team bringing together the Infrastructure Fund, Digital Research Infrastructure and the Infrastructure Portfolio Office
- improving security maturity, including through implementing a cross-UKRI national security vetting programme and new security incident management system as a single point of reporting incidents across UKRI, improving our 2023 security maturity scoring across the Cabinet Office framework
- reviewing the effectiveness of the Joint National Consultative Committee, to secure the greatest measure of cooperation between UKRI as an employer and our employees, implementing a revised approach and providing comprehensive guidance and support in navigating the trade union strike action to ensure it remained lawful and good-natured
- streamlining the collection of information from businesses on the impacts of our funding by launching our Innovate UK Impact Management Framework

Further embedded environmental sustainability across our operations and funding approach by:

- delivering our **Environmental Sustainability Strategy**, (https://www.ukri.org/who-we-are/policies-standards-and-data/corporate-policies-and-standards/environmental-sustainability/?_ga=2.180690212.2070190575.1701160013-1933910927.1681728387) as detailed in our Environmental Sustainability Report (page 140)
- working with the R&I sector to establish the **Concordat on Environmentally Sustainable Research and Innovation Practice**, (<https://wellcome.org/who-we-are/positions-and-statements/environmental-sustainability-concordat>) the first sector-wide joint agreement in this area
- assessing our scope 3 liabilities (emissions resulting from activities and assets not owned or controlled by UKRI) to enable better focus across our R&I portfolio supply chains to reduce our impact on the environment.
- developing plans for the transformation of UKRI-owned research facilities to net zero.
- piloting approaches to estimate carbon emissions from future infrastructure to help ensure UKRI meets its net zero targets

Implemented our refreshed communications and engagement strategic framework, by:

- implementing our annual plan to deliver on the framework objectives including:
 - building our **101 jobs that change the world series** (<https://www.ukri.org/news-and-events/101-jobs-that-change-the-world/>) with 10 new films, showcasing the diversity of roles in R&I, with the series promoted across social media channels and used by the **National Careers Service** (<https://nationalcareers.service.gov.uk/>)
 - promoting the impacts of R&I, including case studies of artificial intelligence used in media and visits around the AI Summit
 - publishing and promoting almost 700 **funding opportunities** (<https://www.ukri.org/opportunity/>)
 - publishing 19 **Voices blogs** (<https://www.ukri.org/news-and-events/voices/>) to share emerging thinking across the sector
- undertaking a Cabinet Office-led review of our communications and engagement work, drawing on the annual self-assessment of our functional standards and implementing recommendations

- completing our first UKRI perceptions audit using in-depth interviews with senior stakeholders and a broad-based survey, forming the baseline for future perception research to allow us to track changes over time
- establishing an Impact Communications team to focus on communicating the impact of R&I

Delivered a comprehensive people and teams action plan (<https://www.ukri.org/publications/ukri-people-and-teams-action-plan/>) to meet the needs of our new operating model and organisational change programme by:

- continuing to evolve our operating model as we move into the new, more efficient shape of the organisation, continuing working in a simpler and more harmonised way, while operating within our fixed operating budget and on track to deliver a 25% reduction in staff on a full-time equivalent basis during this spending review period
- undertaking an activity analysis to help us make better decisions about the way UKRI operates and the activities we can stop or change to ensure we can successfully deliver our core functions within our Operating Expenditure constraints, whilst also improving job satisfaction and wellbeing

- deploying specialist HR support alongside change leaders to ensure effective implementation of change and transition to our new operating model
- establishing a clear roadmap for staff engagement to ensure that all colleagues have the opportunity to help shape the changes that will affect them

In addition to our Corporate Plan commitments for 2023-24, we also:

- have achieved regular top ten rankings in **Sitemorse's** (<https://sitemorse.com/index/government-and-public-bodies/2024-q1%0D>) report on government and public sector websites since the successful development and launch of the **integrated UKRI website** (<https://www.ukri.org/>) in 2022, demonstrating its high quality

Empowering talented people to collaborate and thrive

We are committed to improving employees' experience of UKRI, so that the best people join UKRI, stay and thrive. We have set out detailed plans to strengthen leadership and enable learning, be ever more inclusive, seek, hear and respond to colleagues' views about UKRI and

support their wellbeing. Highlights in 2023-24 include:

Launching our **UKRI People Standards**, based on our organisational values, highlighting the core behaviours required by colleagues, and embedding these standards across our systems and processes

Developing and delivering three bespoke leadership development programmes, building the collective capability of **177 organisation-wide leaders** at all grades. Our leadership development programmes gained 'Recognised' status from the Institute of Leadership and Management this year

Delivering a programme of work to understand and tackle both the causes and the impact of bullying, harassment and discrimination (BHD) in UKRI. Our **anti-BHD action plan** will be published internally in 2024-25

Supporting the growing impact and influence of our **eight staff networks**, agreeing a clear and empowering framework of operation as they help develop a work environment and culture where colleagues feel safe, valued and able to be authentically themselves at work

Supporting the wellbeing of our people by delivering a calendar of over **60 wellbeing activities** in 2023-24, publication of line manager toolkits and providing a free-to-use Employee Assistance Programme

Strengthening and clarifying our **performance management process**, publishing tools and guidance to help everyone get the most from performance management conversations, linking both to our people standards and to council and corporate level objectives

Launching a **new virtual learning platform**, making thousands of additional learning opportunities available to all staff. 3,598 UKRI colleagues took part in recognised professional development activities across 361 course instances and 64 topics in 2023-24

Delivering the **annual UKRI People Survey** as the centrepiece of our ongoing engagement cycle; publishing and reporting against progress on council-level and UKRI-wide people survey action plans which focus on the issues of greatest importance for staff

Making UKRI an efficient, effective and agile organisation

By the end of 2023-24 over 85% of applications were being received on our new digital Funding Service platform

- over **12,000 applications** received through the new Funding Service
- **200 grant types** in our legacy service have been reduced to 15
- **35 project roles** reduced to 12
- **376 research organisations** have applied for funding through the new service
- **100,000+ account holders**
- over **6,000 people** signed up for user research

100% of full business cases approved first time by BEIS/DSIT Project and Investments Committee since 2020

54 full business cases developed

Worth over **£10 billion** of which 13 worth a total of £1.3 billion were approved in 2023-24

Average No. of Days	2022-23	2023-24
Managed mode	129	114
Responsive mode	180	191
Target	156	180

Average No. of Days	2022-23	2023-24
Overall average (mean)	161	156

IUK Average No. of Days	2022-23	2023-24
From call close date to initial decision	98	84
From initial decision to funding confirmation	59	56

5.1 months/156 days average processing times for research council funding applications - ahead of target

Responsive mode opportunities welcome applications on any topic within the disciplinary portfolio. Managed mode opportunities focus on specific R&I areas or challenges.

UKRI target 6 months/180 days. For comparison, the European Research Council target is 9 months, USA's National Science Foundation's target is 75% of applications within 6 months.

Innovate UK's customer base, products and processes differ to the research councils'.

For Innovate UK in 2023-24: **average 56 days** from call close date to initial decision (59 in

2022-23), and **average 84 days** from initial decision to funding confirmation (98 in 2022-23).

Highlights

Piloting innovative streamlined processes

The time taken to review and process applications to Innovate UK's **Transformative Technologies** (<https://apply-for-innovation-funding.service.gov.uk/competition/1492/overview/15b16995-e60c-49e7-81cc-f47d0dc62af2>) programme has been slashed by nearly a third this year, with the average time taken from the competition closing to projects being live reduced from 95 to 64 days. Challenging teams to remove steps from the 'as is' process and piloting changes to test their scalability resulted in a streamlined process. The lessons learned are being implemented across wider programmes to accelerate the pace for critical R&I projects to go live.

UKRI's project delivery expertise recognised

UKRI's Project Delivery and Improvement (PD&I) team won the Association of Project Management's 2023 **PMO of the Year Award** (<https://www.apm.org.uk/apm-awards/categories-2023/pmo-of-the-year-award/>). Over the last year PD&I transformed how it supports UKRI, supporting a significant increase in organisational

P3M3 (Project, Programme, Portfolio, Management Maturity Method) maturity from level 2 to level 3. Alongside delivering over 300 projects and programmes, PD&I have equipped our organisation to become better at project delivery through a portfolio management approach, new tools, a centralised hub and by providing over 250 hours of continuing professional development.

Enhancing our effectiveness

We've made excellent progress implementing improvements aligned to the findings of Sir David Grant's **independent review of UKRI**, (<https://www.gov.uk/government/publications/independent-review-of-uk-research-and-innovation-ukri/independent-review-of-uk-research-and-innovation-ukri-final-report-and-recommendations>) in particular through our long-term organisational change programme. Working closely with DSIT and our communities, we will continue to drive progress on the remaining recommendations. We also delivered a range of activities aligned to the recommendations of the **review of research bureaucracy**, (<https://www.gov.uk/government/publications/review-of-research-bureaucracy>) including transitioning our funding opportunities to the new Funding Service and introducing standardised guidance for most opportunities across our councils. In addition we have defined our 'people' data requirements to inform both

HESA and UKRI data system developments, enabling us to meet the key digital platforms commitments highlighted in the government **response** (https://assets.publishing.service.gov.uk/media/65c532309c5b7f000c951b95/independent_review_of_research_bureaucracy_government_response.pdf) to the review.

Risk and Performance

Risk management framework

We operate a risk management framework that is embedded across the organisation and aims to ensure that risks are identified, assessed and managed to support effective deployment of resources, as well as ensuring that appropriate oversight and escalation routes are in place. Our risk management framework is owned by the UKRI Chief Executive and championed by our Chief Finance Officer. Assessment of the performance of UKRI risk management is undertaken through the annual Executive Accountability Exercise, risk maturity assessments, analysis of performance against the principles of the Orange Book and internal audit.

UKRI risk management is subject to continuous improvement and during 2023-24 our approach to managing principal risks has been further

developed and embedded through assessment in the context of four principal risk lenses and a programme of rolling deep dives undertaken by our Executive Committee (ExCo).

Our principal risk approach includes assessment through four lenses: Delivery of Intended Strategic Impact, Major External Challenges, Internal Control Framework, Organisational Capabilities. This approach supports analysis and understanding of the links and interdependencies between our principal risks as well as providing the foundations for our golden thread assessment of aggregated risk.

In addition, an enterprise-wide Risk & Assurance Network has been further embedded to share information, learning and discussion on key risk areas and developments across the organisation.

Implementation of the risk management framework is supported by an enterprise risk management system and a team of professionally qualified risk & assurance business partners to support decision-making and challenge the business on the effective management of risk.

Delivery of intended strategic impact

Financial sustainability of the research system

Achieving intended impact of UKRI

Major external challenges

Policy landscape

Trusted research and innovation

Environmental sustainability

Internal control framework

Major gap/failure in internal control environment

Organisational capabilities

UKRI staff capacity and capability

Organisational change

Systems and IT infrastructure

Risk appetite

We recognise that we must take risks to achieve our objectives, and to inform this we have a risk appetite statement that sets the boundaries for risk taking. The risk appetite statement is approved by UKRI Board and enables effective identification and assessment of risks to evaluate mitigation plans.

Our risk appetite statement has five levels: averse, minimalist, cautious, open and bold. Risk appetite categories are applied to each level to reflect the level of appetite that is appropriate for the activity. A cycle of review is in place to ensure that we adapt our risk appetite to evolving internal and external requirements by evaluating the optimal levels of risk the organisation is willing to take in pursuit of objectives.

Principal risks

We define risk as an uncertain event or set of circumstances, which should it occur will have an impact on the achievement of our objectives.

There are twenty-two UKRI principal risks which are overseen by the Audit and Risk Assurance Committee (ARAC), with ownership and management by ExCo. Nine of these risks are identified as Board-level risks. Some of these risks map to the significant issues presented in the Governance Statement.

A summary of the Board-level risks is set out in the table below

Delivery of intended strategic impact

Risks and mitigating actions	Appetite and direction
<p>Financial sustainability of the research system: Improving the resilience of the research sector is a core principle for change within our strategy. We work with our partners and key stakeholders to assess current and future financial risks and challenges to the research base to support a strong, diverse and connected research and innovation system. Financial sustainability challenges have been exacerbated by recent external factors which have contributed to significant financial pressures. To support our response the Research Financial Sustainability Programme</p>	<p>Strategy (cautious) Residual score: 16 Very High Due to the evolving risk environment this risk is anticipated to remain outside appetite in 2024-25.</p>

Risks and mitigating actions	Appetite and direction
<p>assesses the system-level risks and potential mitigating actions to ensure the research system retains its agility, capability and flexibility to withstand shocks, deliver long-term strategic goals and capture new opportunities. In 2023-24 our financial analyses of sustainability trends in the higher education sector have been updated and published and we work closely with DSIT to consider and to develop the policy options needed to enhance the resilience of the research and innovation system.</p>	
<p>Managing strategic direction to achieve UKRI's intended impact: This is a new risk identified through risk evaluation at UKRI Board and ExCo level to recognise the uncertainties that may affect our ability to deliver world-class research and innovation</p>	<p>Strategy (cautious) Residual score: 12 High Currently this risk is outside appetite and will be reviewed in 2024-25</p>

Risks and mitigating actions	Appetite and direction
<p>outcomes and the challenges of evidencing the impacts of our strategy and delivery plans. We have developed a performance management framework and balanced scorecard to support monitoring of the implementation of our strategy via our strategic delivery plans, and we have a UKRI evaluation strategy and framework aligned with HM Treasury guidance for assessing value for money assessment in the Green Book and Magenta Book and use this to keep a sharp focus on the impact of our investments. The Board and ExCo review this material on a quarterly basis.</p>	

Major external challenges

Risks and mitigating actions	Appetite and direction
<p>Failure to influence/respond to changes in the policy landscape: We continue to respond quickly to changes in the R&I landscape through maintaining our strong relationships with the UK government and the UK research and innovation community. As the policy landscape continues to evolve we work closely with our internal and external stakeholders to undertake quality analysis and plan our policy, strategy and funding decisions to maximise the impact on knowledge, the economy and society. We continue to evaluate how we engage with and understand our</p>	<p>Strategy (cautious) Residual score: 12 High This risk is regularly reviewed to evaluate external and internal elements of risk, moving into 2024-25 the risk</p>

Risks and mitigating actions	Appetite and direction
<p>communities to ensure we are building and maintaining effective, influential and trusting connections across the research and innovation landscape.</p>	
<p>Failure to deliver against UKRI Environmental Sustainability and greening government commitments: The UKRI Environmental Sustainability Strategy includes a clear set of accountabilities and responsibilities across UKRI leadership. Key priorities have been established which will deliver the foundation for the delivery of the strategy, including:</p> <ul style="list-style-type: none"> • facilitating the forming of the concordat for the UK Research & Innovation sector that establishes mutually agreed targets for carbon 	<p>Legal/compliance (cautious) Residual score: 12 High The nature of the mitigations of this risk are of a longer-term nature and while the risk remains outside appetite currently, we continue to review and develop our approach to bring the risk towards appetite.</p>

Risks and mitigating actions	Appetite and direction
<p>net zero and principles of approach</p> <ul style="list-style-type: none"> • establish policies that provide clear direction for UKRI and external stakeholders, including: UKRI Travel policy, UKRI Policy Statement on Carbon Offsetting and a policy to set clear directions for minimum requirements on environmental performance for future investments as guidance for project development and approvals • establish accurate measurement of emission data and develop capability to predict/calculate future trajectory of carbon emissions for the existing and 	

Risks and mitigating actions	Appetite and direction
<p>future investments to assist corporate decision-making and operational management</p> <ul style="list-style-type: none"> • establish clear, viable, evidenced and costed plans for the transformation of UKRI-owned estate and research infrastructure to a net zero position. Activities for the transformation of the UKRI estate and research infrastructure include ensuring that these are capable to manage the future changes in the climate and pose no risk to research continuation due to increasingly extreme weather/ climate events <p>In 2023 the carbon budgeting workstream was added as an</p>	

Risks and mitigating actions	Appetite and direction
<p>additional priority.</p> <p>These priorities provide a preparatory stage of the programme for the delivery of the full objectives of the UKRI Environmental Sustainability Strategy. The approach will be reviewed and/or revised in 2024-25. The Environmental Sustainability Programme continues to develop and implement practical and effective guidance for the decision-making on future infrastructure and progress carbon budgeting activities. Detailed planning of future projects to support delivery of the strategy will be undertaken in preparation for the next spending review.</p>	
Trusted Research and Innovation:	Operational (cautious)

Risks and mitigating actions	Appetite and direction
<p>UKRI has a responsibility to respond appropriately to the risks posed by hostile or unethical interference from state actors in UKRI-supported activities. We launched our Trusted Research and Innovation (TR&I) programme in 2021 to ensure that our partnerships are 'as open as possible, and as secure as necessary'. We do this by developing appropriate principles and procedures to protect both individuals and intellectual property. We implement risk-based assessments internally, drawing on a range of current and historic information in our portfolio. Through our terms and conditions of funding we are able to embed proportionate</p>	<p>Residual score: 12 High Significant progress has been made however our view is that the risk score remains marginally outside appetite due to the evolving external landscape.</p>

Risks and mitigating actions	Appetite and direction
<p>controls and mitigations across a substantial part of the research and innovation ecosystem. Our TR&I programme considers collaborations that take place both within and outside the UK, including inward investment into the UK by overseas-based companies. By enabling the sector to participate in safe and secure collaborations, our TR&I programme aims to maximise international opportunities for UK research and innovation.</p> <p>In particular in 2023 we have developed and refined our approach, including embedding our '10 Steps to TR&I' risk assessment framework, and continuing to develop a positive and</p>	

Risks and mitigating actions	Appetite and direction
risk-aware culture across the organisation.	

Internal control framework

Risks and mitigating actions	Appetite and direction
<p>Major gap/failure in our internal control environment:</p> <p>We undertake regular review of our internal control environment through the management of risk, assurance activities and reviews, and through internal and external audits. This risk recognises the high-risk profile of our key legal or regulatory compliance areas and our responsibilities under UK government requirements. It</p>	<p>Legal/compliance (minimalist)</p> <p>Residual score: 9 Medium</p> <p>Although the risk is currently outside appetite, reflecting the evolving external risk environment, we are developing increased agility in our risk mitigations to bring this risk towards appetite.</p>

Risks and mitigating actions	Appetite and direction
<p>provides an overview of the elements of the control environment where specific development is underway, including within security and counter fraud, and also covers our ability to monitor, track and adapt our control environment through internal changes and in response to external pressures. As our major change programmes move closer to delivery we are assessing the transition from current controls into new controls where systems, processes and ways of working will evolve and provide new opportunities in our control environment. In response to these changes, and changes in the</p>	

Risks and mitigating actions	Appetite and direction
external landscape, we are reviewing our internal assurance processes to optimise our assessment and mitigation of this risk.	

Organisational capabilities (people and systems)

Risks and mitigating actions	Appetite and direction
<p>Failure to deliver the benefits of UKRI's organisational change: We have brought together all aspects of organisational change into one coherent portfolio, incorporating the Reforming our Business portfolio, the Operating Model programme and individual council-led programmes. This business change aims to produce a more efficient and effective organisation while</p>	<p>Programme and project delivery (open) Residual score: 15 Very High Implementation of our major change programmes over 2024-25 will reduce this risk</p>

Risks and mitigating actions	Appetite and direction
<p>responding to the current fiscal environment.</p> <p>Significant progress has been made to provide an environment where these change programmes can succeed in bringing about the necessary efficiencies as required by DSIT. There are agreed approaches in place for prioritisation of activity, communications and engagement, benefits realisation, change and dependency management, assurance and review, financial management, people and equality impact assessments and risk management. This is supported by a robust governance structure, flowing through to ExCo and the UKRI Board Organisational Change Committee. The</p>	

Risks and mitigating actions	Appetite and direction
<p>UKRI operating model programme is entering the delivery phase, with senior leaders across the organisation being supported to lead this change.</p>	
<p>UKRI staff capability and capacity: Staff capacity and capability in UKRI remains challenging and we are managing this through delivery of the UKRI HR Strategy. Key areas of mitigation include:</p> <ul style="list-style-type: none"> • developments in strategic workforce planning • increasing HR capacity and capability • support and delivery of people-related organisational change • improving the employee value 	<p>People (cautious) Residual score: 16 Very High The mitigations of this risk will require time to embed to reduce the score, although currently outside appetite at a very high score our planned mitigations are progressing towards reducing the risk towards appetite.</p>

Risks and mitigating actions	Appetite and direction
<p>proposition</p> <ul style="list-style-type: none"> • improving HR business intelligence. <p>The strategy aims to deliver a measurable return by achieving a high-performance culture in a safe and customer focused environment. By creating a more agile and resilient workforce we will reduce the likelihood of skill gaps, overburdened employees and operational disruptions.</p> <p>The strategy will help foster a culture where employees are capable and clear about their roles but also committed to contributing their best efforts to the organisational success, ultimately mitigating this risk and improving overall performance.</p>	
Effectiveness of UKRI systems and IT	Operational (cautious)

Risks and mitigating actions	Appetite and direction
<p>infrastructure: Effective systems and IT infrastructure are vital to ensure that UKRI can operate effectively and deliver strategic objectives. We are looking to more effectively support and control our processes end to end by delivering a programme of business systems that will replace legacy and dated systems and remediate accumulated acclimated technical debt. Increasingly we are opting for Software as a Service as it helps going forward to provide evergreen capability without the need for costly ongoing development. We have established the Strategic Technology and Data Governance Committee to ensure that strategic</p>	<p>Residual score: 12 High This risk is not within appetite however delivery of programmes in 2024-25 is anticipated to reduce this risk towards appetite.</p>

Risks and mitigating actions	Appetite and direction
<p>architecture and technology standards are aligned and followed across our distributed IT. This will strengthen our approach to managing legacy systems and optimising new technology. Data and its quality are vital to increasing integration and automation going forward, we have a programme to improve its quality and ownership.</p>	

Environmental Sustainability Report

Introduction

Research and innovation (R&I) is critical to understanding how our planet is changing and helping us act responsibly to protect and restore our natural environment.

The UKRI Strategy and Corporate Plan set out our responsibility to catalyse change and impact and to enhance that through partnership and leadership. This commitment extends to reducing the harm and enhancing the environmental sustainability of our own operations, while supporting the wider research and innovation system to do the same.

The UKRI Environmental Sustainability Strategy commits us to:

- being 'positive for the environment' through our decision-making
- achieving net zero* from our owned operations by 2040
- acting as agents of change to drive environmental in sustainability in the research and innovation sector

*The reduction of anthropogenic greenhouse gas emissions (expressed as CO₂e) to zero or to a

residual level that is consistent with reaching net zero emissions in eligible 1.5°C pathways (hence time-bound), recognising that UKRI will need to neutralise the impact of residual emissions (if any) by removing and storing an equivalent volume of carbon.

In line with these commitments, during 2023-24 we have:

- carried out low-carbon fuel trials on our research vessels
- launched all-staff training on environmental sustainability
- contributed to the collaborative development of the new sector-owned concordat for the environmental sustainability of research practice
- made a corporate decision to introduce UKRI-wide carbon budgets from 2025
- commissioned work to better understand UKRI scope 3 emissions
- developed biodiversity plans across our key office and research estates

Delivery against the UKRI Environmental Sustainability Strategy is governed via reporting to the UKRI Executive Committee (ExCo) and UKRI Board.

During 2024-25 we will continue to undertake extensive preparatory work to understand the activities that need to be undertaken to achieve net zero for the UKRI-owned research and innovation facilities, including laboratories, buildings, ships and planes. Once we have completed this work, we will publish our plans which will include an estimated total cost to achieve our 2040 target.

* * *

Our activity to decarbonise and minimise the negative environmental impacts of our operations supports several UN Sustainable Development Goals (SDGs) including but not limited to:

SDG7.a: Affordable & Clean Energy – 'By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology'.

SDG12.7: Responsible Consumption & Production – 'Promote public procurement practices that are sustainable, in accordance with national policies and priorities'.

SDG13.2: Climate Action – 'Integrate climate change measures into policy and planning'.

Environmental sustainability performance

Scope

UKRI environmental sustainability performance is presented in line with the 2021-2025 **Greening government commitments (GGC)** (<https://www.gov.uk/government/publications/greening-government-commitments-2021-to-2025>) reporting requirements and **HM Treasury Sustainability Reporting Guidance** (<https://www.gov.uk/government/publications/sustainability-reporting-guidance-2023-24>). Performance indicators are set against a 2017-18 financial year baseline.

The data set includes direct (scope 1) and indirect (scope 2) greenhouse gas (GHG) emissions from UK operations and UK business travel (scope 3). The 201718 data are for the MRC, STFC and NERC estate. The data for remaining years are for all UKRI councils and UKRI corporate hub.

Mitigating climate change

Key performance indicators:

- net zero carbon emissions by 2040 for UKRI-owned operations

- reduce GGC-scope GHG emissions by 65% and direct emissions by 30% by 2025
- UKRI's car fleet to be 100% zero emissions at the tailpipe by 31 December 2027
- reduce domestic business flight emissions by at least 30% by 2025 and report international business flight distance travelled

Task Force for Climate Change Financial Disclosures (TCFD)

We have reported on climate-related financial disclosures consistent with HM Treasury's TCFD-aligned disclosure application guidance, which interprets and adapts the framework for the UK public sector. We consider climate to be a principal risk and have therefore complied with the TCFD recommendations and recommendations for disclosures around governance, metrics and targets.

This approach to reporting is in line with the implementation timetable for Phase 1. Our plans to provide recommended disclosures for the strategy in future reporting periods are in line with the UK government's implementation timetable.

Governance

Our corporate governance reflects the legislation under the Higher Education and Research Act

2017. The governance for the environmental sustainability activities has been established to enable effective programme management, wider organisational change, and direct access to senior leadership to support and drive the delivery of the strategy.

Climate change and wider environmental impacts are a critical concern to us and our research. They have implications for our infrastructure, finance and the activities of those we fund. In accordance with the UKRI Environmental Sustainability Strategy, the UKRI Board is responsible for the strategic oversight on the successful delivery of the strategy.

Board/committee responsibility

Our ambition is to include environmental sustainability in all aspects of our work and decision-making. In that sense, all boards and committees will be required to include this in their respective activities. A number of UKRI boards and committees have specific and defined roles and responsibilities regarding all aspects of environmental sustainability, including UKRI Board, Audit and Risk Assurance Committee, Board Investment Committee, ExCo, People, Finance and Operations Committee and Investment Advisory Working Group.

Management-level responsibilities

Our CEO is accountable for the delivery of the UKRI Environmental Sustainability Strategy, and the Senior Responsible Owner (SRO) is responsible for the delivery of the strategy including sponsorship and strategic direction. The Executive Chairs of our councils are responsible for the implementation of environmental sustainability in all aspects of their respective operations, supported by the UKRI Environmental Sustainability Programme Director and the UKRI Environmental Sustainability Programme team. Due to the departure of the Executive Chair for NERC in June 2023, the SRO role was taken up in the interim by our Chief Finance Officer. In 2024 this responsibility will be transferred to the new incoming NERC Executive Chair, Professor Louise Heathwaite.

Metrics and targets

The UKRI Environmental Sustainability Strategy 2020-2025 set outs the ambition of the organisation and includes short-term and long-term goals. Our annual progress in delivering the strategy, including reporting our greenhouse gas emissions, is included in this environmental sustainability section of the UKRI Annual Report and Accounts. Later in 2024, the overall progress made by the organisation on these ambitions and

targets will be reviewed and plans for the period 2025-2030 will be set out and agreed.

UKRI greenhouse gas emissions

We have set a target of achieving net zero for our owned operations by 2040. In 2023-24 our operational emissions have decreased by 53.5% compared to the 2017-18 baseline year (Table 1):

Table 1: UKRI annual greenhouse gas emissions, energy consumption and expenditure

UKRI greenhouse gas emissions			2017-18 baseline	2020-2 1	2021-22
Non-financial total gross indicators (1000t CO ₂ e)		Total gross emissions	98.2	46.6	47.4
		Total net emissions	98.2	46.6	47.4
	Gross emissions Scope 1 (direct)	Gas & LPG	14.3	11.3	11.3
		Owned transport	0.2	0.03	0.03
		Fugitive emissions	1.7	0.6	0.3
	Gross emissions Scope 2 & 3 (indirect)	Electricity	74.3	34.3	35.3
		Heat	0.03	0.0	0.0
		Business travel	7.6	0.3	1.0

UKRI greenhouse gas emissions		2017-18 baseline	2020-21	2021-22
Related energy consumption (million kWh)	Electricity: non-renewable	193.3	12.9	0.0
	Electricity: renewable	0.2	122.6	148.6
	Gas	67.4	61.2	64.5
	LPG	0.006	0.015	0.030
	Heat*	0.2	6.4	6.5
	Other	6.5	0.3	0.1
Financial indicators(£m)	Expenditure on energy	17.6	21.7	23.8
	CRC Expenditure	1.4	0.0	0.0
	Expenditure on accredited offsets	0.0	0.0	0.0
	Expenditure on business travel	5.2	0.5	2.1

UKRI greenhouse gas emissions			2022-23	2023-24
Non-financial total gross indicators (1000t CO ₂ e)		Total gross emissions	45.4	44.3
		Total net emissions	45.4	44.3
	Gross emissions Scope 1 (direct)	Gas &LPG	11.0	9.6
		Owned transport	0.03	0.03
		Fugitive emissions	0.3	0.14
	Gross emissions Scope 2 & 3 (indirect)	Electricity	31.4	28.6
		Heat	0.0	0.3
		Business travel	2.7	5.8
	Related energy consumption (million kWh)	Electricity: non-renewable	108.1	124.1
Electricity: renewable		40.5	47.9	
Gas		60.1	52.7	
LPG		0.0	0	

UKRI greenhouse gas emissions		2022-23	2023-24
	Heat*	4.8	1.6
	Other	0.04	0.2
Financial indicators (£m)	Expenditure on energy	33.1	43.6
	CRC Expenditure	0.0	0
	Expenditure on accredited offsets	0.0	0
	Expenditure on business travel	5.3	7.5

* From onsite ground source heat pump and combined heat and power generation.

Note: UKRI does not purchase carbon offsets in line with the **UKRI position on carbon offsetting** (<https://www.ukri.org/who-we-are/policies-standards-and-data/corporate-policies-and-standards/environmental-sustainability/>). We seek to reduce our own carbon emissions as a matter of priority. We do not currently support carbon offsetting as a means of reducing carbon emissions as research indicates that the benefits of different offsetting activities are variable and that there is lack of evidence of genuine long-term additionality (permanent capture and storage of carbon). We continue to work to improve the long-term credibility of carbon offsetting through our research investment and collaboration.

Our annual emissions from our baseline year 2017-18 are currently within the reduction trajectory of our 2025 GGC-scope target, as illustrated in Figure 1:

Figure 1: UKRI annual emissions (tCO₂e) compared to GGC target of 65% reduction from baseline year by 2024-25

	2017-18	2018-19	2019-20	2020-21
UKRI emissions	98,171	85,106	54,860	46,647
GGC target trajectory	98,171	89,055	79,939	70,823

	2021-22	2022-23	2023-24	2024-25
UKRI emissions	47,476	45,460	44,260	
GGC target trajectory	61,707	52,591	43,476	34,360

Highlights of decarbonisation projects in 2023-24 have included:

- We rolled out a mandatory environmental sustainability training module to all UKRI staff as part of our learning & development programme. In addition to this, STFC launched council-specific sustainability training to all STFC staff and EPSRC have designed sustainability training for the EPSRC leadership team.
- At NERC's British Geological Survey headquarters in Keyworth, work has begun on a £1.7 million geothermal heat pump and living lab project, expected to save ~30 tCO₂e per year and provide data to help the public's understanding of how heat pumps can be an effective solution for heating.
- STFC's Higgs Centre for Innovation has commenced a project to make changes to how clean rooms are used involving reconfigurations of the clean air handling systems to reduce energy use. On completion, a 15% saving on electricity consumption is anticipated.
- During 2023-24 we helped bring together stakeholders from across the UK research and innovation sector to collaboratively develop a new concordat for the environmental sustainability of research practice, which

outlines an agreed set of priorities and responsible behaviours.

- AHRC provided funding to the Creative Industries Council to develop a new Creative Climate Charter designed to galvanise action in the creative industries on the climate and biodiversity crisis.
- The Centre for Climate Change and Social Transformations (CAST), funded by ESRC, produced a report commissioned by the Climate Change Committee (CCC) outlining the substantial behaviour change required across society to reach the UK's ambitious net zero 2050 target.

Low carbon emission vehicles

UKRI owns a fleet of ~ 85 vehicles, including specialist vehicles to support our science operations. These vehicles are being replaced with ultra-low emission models as they come to the end of their operating life or lease period in line with the Government Fleet Commitment targets. As at the end of March 2024, ~60% of the UKRI fleet is ultralow emission (50gCO₂e/km) vehicles. We continue to enhance electric vehicle charging infrastructure on our UK estate for staff and visitors.

Highlights

The National Oceanography Centre and NERC's British Antarctic Survey have begun low-carbon fuel trials on our research vessels which will explore the potential of using sustainably sourced hydrotreated vegetable oil. The trial outputs will support future decisions for our ships and support the wider shipping industry on its journey to net zero.

NERC's Enabling Change fund has allowed the FAAM Airbourne Laboratory to purchase an electric- powered aircraft tug for its research aircraft. The tug will transport the aircraft and its power unit over short distances at its Cranfield Airport base and will reduce greenhouse gas emissions and air pollution across the airfield.

Business travel

Note: Some business travel data for research councils in 2018-19 is not available due to incomplete records.

GHG emissions from UKRI employee business travel during 2023-24 have decreased by 24% compared to the 2017-18 baseline year. This includes a 56% reduction in emissions from UK domestic flights taken in 2023-24 compared to the 2017-18 baseline year against the GGC target of a

30% reduction by 2024-25, as illustrated in Figure 2.

Figure 2: UKRI annual emissions (tCO₂e) from UK domestic flights compared to GGC target reduction of 30% from baseline year by 2024-25

	2017-18	2018-19	2019-20	2020-21
UKRI emissions	340	148	260	10
GGC target trajectory	340	326	311	296

	2021-22	2022-23	2023-24	2024-25
UKRI emissions	28	131	150	
GGC target trajectory	282	267	253	238

This change in business travel emissions is enabled by the ongoing commitment to provide remote and hybrid working technologies across UKRI offices and continued implementation of UKRI's business travel policy which encourages 'climate conscious' travel choices.

While total international business travel flights (per passenger kilometres travelled) have decreased compared to our baseline, they have shown an increase since COVID-19 pandemic years as illustrated in Figure 3.

Figure 3: Total number of annual passenger kilometres travelled by UKRI employees on flights

	2017-18	2018-19	2019-20	2020-21
International flights	67,288,103	39,580,541	56,370,456	2,782,572
Domestic flights	2,405,432	937,188	1,925,229	77,050

	2021-22	2022-23	2023-24
International flights	6,352,826	18,530,686	27,487,526

	2021-22	2022-23	2023-24
Domestic flights	212,338	1,005,337	932,145

A full breakdown of our carbon emissions by travel mode is illustrated in Figure 4.

Figure 4: UKRI annual business travel by travel mode

	2017-18	2018-19	2019-20	2020-21
Domestic flights	340	148	260	10
International flights	5,938	3,462	4,997	224
Company owned or leased vehicles	202	213	113	32
Grey fleet/hire (UK)	855	528	700	73
Grey fleet/hire (Overseas)	0	0	5	0
Public transport	428	246	575	3
Taxi	39	48	62	7

	2021-22	2022-23	2023-24
Domestic flights	28	131	150
International flights	530	1,585	3,517
Company owned or leased vehicles	33	31	36
Grey fleet/hire (UK)	265	688	345
Grey fleet/hire (Overseas)	0	86	6
Public transport	68	248	409
Taxi	25	70	8

Minimising waste and promoting resource efficiency

Key performance indicators (by 2025):

reduce the overall amount of waste generated by 15%

reduce the amount of waste going to landfill to less than 5% of overall waste

reduce paper use by at least 50%

remove consumer single-use plastic from the office estate; measure and report on food waste; report on the introduction and implementation of reuse schemes; increase the proportion of waste that is recycled or reused to at least 70% of overall waste

We have reduced our total waste generation from operations in 2023-24 by ~24% compared to the 2017-18 baseline year (Table 2). The increase in total waste levels reported in 2023-24 is the result of improved reporting methods, as well as new site additions.

Table 2: UKRI annual waste generation and expenditure

UKRI waste generation			2017-18 baseline	2020-21	2021-22	
Non-financial total gross indicators (tonnes)	Total waste		2,065	1,130	1,073	
	Hazardous waste	Total	302	243	125	
		Non-hazardous waste	Landfill	128	64	30
			Reused/recycled incl. composting	1,349	499	516
			Incinerated with energy recovery	284	324	398
Incinerated without energy recovery	2		0	4		
Financial indicators (£m)	Total disposal cost		0.8	0.9	1.0	
	Hazardous waste		0.3	0.8	0.7	

UKRI waste generation			2017-18 baseline	2020-21	2021-22
	Non-hazardous waste	Landfill	0.06	0.02	0.2
		Reused/recycled/composted	0.3	0.1	0.2
		Incinerated with energy recovery	0.2	0.01	0.01
		Incinerated without energy recovery	0.0	0.0	0.0

UKRI waste generation			2022-23	2023-24
Non-financial total gross indicators (tonnes)	Total waste		1,176	1,601
	Hazardous waste	Total	122	129
	Non-hazardous waste	Landfill	92	56
		Reused/recycled incl. composting	623	994

			2022-23	2023-24	
		Incinerated with energy recovery	316	344	
		Incinerated without energy recovery	23	198	
Financial indicators (£m)	Total disposal cost		1.2	1.2	
	Hazardous waste		0.8	0.7	
	Non-hazardous waste	Landfill		0.01	0.01
		Reused/recycled/composted		0.3	0.4
		Incinerated with energy recovery		0.04	0.05
		Incinerated without energy recovery		0.0	0.0

A full breakdown by waste stream against the GGC reduction target is illustrated in Figure 5:

Figure 5: Annual UKRI waste volume (tonnes) by fate compared with GGC reduction target trajectory to reduce overall waste by 15% from baseline year by 2024-25

	2017-18	2018-19	2019-20	2020-21
Reused/recycled/composted	1,394	1,172	618	499
Incineration with heat recovery	284	419	339	324
Incineration without heat recovery	2	4	2	
Landfill	128	105	51	64
Hazardous	302	276	147	243
GGC Target Trajectory	2,111	2,066	2,021	1,975

	2021-22	2022-23	2023-24	2024-25
Reused/recycled/composted	516	623	915	
Incineration with heat recovery	398	316	441	
Incineration without heat recovery	3	23	98	
Landfill	30	92	56	
Hazardous	125	122	122	
GGC Target Trajectory	1,930	1,885	1,840	1,794

Compared to 2022-23, UKRI's overall recycling rate has increased by 5%. At 58% it remains below the 2024-25 target of 70% but the increasing trend suggests we are still on course to achieve this in future years, as illustrated in Figure 6:

Figure 6: Annual UKRI waste recycling (tonnes) as a percentage of overall waste compared with GGC target trajectory to increase overall recycled waste to at least 70% by 2024-25

	2017-18	2018-19	2019-20	2020-21
Total waste	2,111	1,976	1,156	1,130
Total recycling	1,394	1,172	618	499
UKRI recycling %	66	59.3	53.5	44.1
GGC target trajectory %	66	66.6	67.2	67.7

	2021-22	2022-23	2023-24	2024-25
Total waste	1,073	1,176	1,601	
Total recycling	516	623	996	
UKRI recycling %	48.1	53.0	58	
GGC target trajectory %	68.3	68.9	69.4	70.0

A UKRI-wide waste group has been set-up to develop and implement plans to improve waste capture and data. UKRI does not yet have complete data on consumer single use plastic use, paper consumption and food waste volume due to data capture constraints, but the group will be addressing this.

Environmental sustainability action plans for our activities across UKRI set out how we are working to meet reuse and recycling targets and how waste is being reduced across our operations.

Highlights of actions take over the last year to improve UKRI waste performance

- In our labs, efforts have been made to reduce single use plastic. At MRC labs we have engaged in supplier return schemes including solvent bottles, pipette tip boxes and ice packs and also carried out glove recycling trials. NERC's British Geological Survey has introduced a scheme to improve waste segregation across its labs where over 15,000 gloves have been sent for recycling annually.
- Through STFC's SPADE project (Sustainability Principles and Advice for Design and Engineering), staff have developed information and guidance resources for staff in technical roles to help make their work more environmentally sustainable. An exchange site for parts, materials and equipment has also been set up to prevent engineering waste.
- At MRC's Laboratory of Medical Science facility, we have integrated the Clean Zero 80 Cabinet which uses electrolysed water to reduce reliance on conventional chemicals and minimise resource consumption.
- Using funds generated from the UKRI PC recycling scheme, NERC undertook a trial of a range of electronic note pads to help reduce paper use. Options are being explored for wider UKRI roll out of the most suitable note

pad options to encourage smarter working and lower paper use.

Reducing our water use

Key performance Indicators:

reduce water consumption by at least **8%** by 2025

In 2023-24 UKRI water consumption has decreased by ~18% compared to the 2017-18 baseline year (Table 3):

Table 3: Total UKRI annual water consumption (m3) disaggregated by office and non-office estate

UKRI water consumption			2017-18 baseline	2020-21	2021-22
Non-financial total gross indicators (000 m ³)	Total water consumption		268.9	203.2	205.8
	Water consumption (office estate)	Supplied	2.4	10.7	6.9
		Abstracted	0	0	0
	Water consumption (non-office estate)	Supplied	266.5	192.5	198.9
		Abstracted	0	0	0

UKRI water consumption			2017-18 baseline	2020-21	2021-22
Financial Indicators (£m)	Total cost		0.58	0.56	0.59
	Water supply cost (office estate)		0.19	0.02	0.01
	Water supply cost (non-office estate)		0.39	0.54	0.58

UKRI water consumption			2022-23	2023-24
Non-financial total gross indicators (000 m ³)	Total water consumption		239.6	221.1
	Water consumption (office estate)	Supplied	10.1	11.9
		Abstracted	0	0
	Water	Supplied	229.5	209.2

UKRI water consumption			2022-23	2023-24
	consumption (non-office estate)	Abstracted	0	0
Financial Indicators (£m)	Total cost		0.78	1.1
	Water supply cost (office estate)		0.03	0.2
	Water supply cost (non-office estate)		0.75	0.89

Our water consumption across our office and science estate from our baseline year 2017-18 is currently within the reduction trajectory of our 2025 GGC-scope, as illustrated in Figure 7:

Figure 7: Annual UKRI water consumption (m³) compared with GGC reduction target trajectory to reduce overall water consumption by 8% by 2024-25

	2017-18	2018-19	2019-20	2020-21
UKRI consumption	268,995	290,255	221,606	203,163
GGC target trajectory	268,995	265,920	262,846	259,772

	2021-22	2022-23	2023-24	2024-25
UKRI consumption	205,745	239,583	221,120	
GGC target trajectory	256,698	253,623	250,549	247,475

Estates teams across UKRI utilise extensive building control and metering systems to monitor water use and identify leaks and opportunities to reduce consumption wherever possible.

Procuring sustainable products and services

Our reported GHG emissions do not include the embodied emissions of the goods and services procured by UKRI. During 2023-24 we revisited our supply chain emissions baseline and using a revised methodology our annual emissions for goods and services has been calculated to be approximately 109,970 tonnes CO₂ equivalent. UKRI works with its main catering provider Aramark and local providers to encourage sustainable food practices.

Highlights

- During 2023-24, we further developed our approach to sustainable procurement with the publication of the UKRI Responsible Procurement Charter. We also published an accompanying tool, the Responsible Procurement Impact Assessment, which has been developed to help staff implement the charter when purchasing goods and services. The Charter includes minimum environmental requirements for all our suppliers and ensures compliance with social value requirements. Commercial leads and colleagues across UKRI are receiving ongoing training to support the collaborative implementation of the charter.

- NERC's British Antarctic Survey have been building relationships with specialist apparel suppliers. In 2023-24 numerous items were sent for repair, enabling items to be used for many seasons to come and resulting in carbon and financial savings.

Nature recovery and biodiversity

Our strategy ambition to be 'positive for the environment' includes protection of biodiversity. Biodiversity enhancement plans have been developed and implemented or are underway across many of our key office and research estates and infrastructure where there are relevant outdoor spaces, in line with the requirement of nature recovery plans. Proposals for new UKRI-funded infrastructure developments continue to require consideration and plans to mitigate negative impacts on nature from construction and operations.

Highlights

- During 2023-24, staff across UKRI were involved in biodiversity projects. In June staff took part in a 'Bioblitz' at our head office site in Swindon and identified and catalogued over 300 wildlife species to help establish a baseline measure of the biodiversity around

the site. The results will contribute to plans to improve the site for wildlife.

- Staff at NERC's British Geological Survey Headquarters have helped set up two bee colonies at our Keyworth site. The bees are collecting local nectar and have produced honeycomb frames which are mostly being left for the bees to feed on.
- Nature recovery and biodiversity plans have been developed at all of our STFC sites and across our other sites work to develop nature recovery plans is underway. As a result of the completed plans, areas of ecological importance and where there is opportunity to improve the biodiversity have been identified.

Adapting to climate change

UKRI's approach to climate change adaptation assessment and planning is reflected in council level plans. At a council level we have reviewed climate change risk and impact assessments across our key sites by studying the risk posed to buildings' mechanical and electrical plants, building fabric and operations under a range of scenarios. This work highlights potential risks and capital costs, and sets out next steps to ensure our estates are adapted to future climate scenarios. Adaptation considerations are also being embedded in UKRI investment decision-making

and business case processes to ensure that UKRI operations are resilient to future climate change.

Reducing environmental impacts from ICT and digital

The use of ICT and digital infrastructure is increasingly important to deliver research and innovation; this comes with an environmental impact, which we are actively managing. We have invested more than £10 million in our infrastructure for digital meetings and to date have enabled video conferencing in approximately 450 meeting rooms across the UK. The UKRI travel and subsistence policy highlights our 'virtual first' approach to meetings in the context of business travel. This approach was introduced as a key policy driver to help reduce UKRI travel and the associated carbon emissions.

ICT waste data for 2023-24:

- 55 tonnes of ICT waste recycled externally
- 43 tonnes of tonnes ICT devices sent for reuse externally

Highlights of greening ICT actions in 23-24 have included:

- The Net Zero Digital Research Infrastructure project completed a scoping study in June 2023 and a final technical report and an

overview with recommendations have been published. A follow-on project to further the understanding of the carbon baseline of our digital research infrastructure is currently being undertaken.

- The NERC British Antarctic Survey High-Performance Computing (HPC) cluster has been configured to power off idle nodes which decreases power usage for the central processing unit (CPU) and large graphics processing unit (GPU) by 96%. We are also working on a report to show how future HPC jobs can be run more efficiently.
- In 2023-24 a total of 1,284 devices, including computers, phones and ICT equipment, were sold through our PC recycling scheme and further 2,424 were donated to charities. The scheme has diverted 7.45 tonnes of redundant ICT equipment from becoming waste.

Sustainable construction

UKRI, through its infrastructure funding, promotes sustainable construction and has adopted sustainability standards to support this. From 2022 to 2025 we are investing a total of £481 million into a portfolio of research and innovation infrastructure. Over the last year we have updated our requirements to ensure all new infrastructure investment proposals include a full carbon impact assessment to support informed decision-making

and accurate carbon forecasting. During 2023/24 over 100 project managers across UKRI received carbon accounting training and specialist carbon support is now provided to project teams developing business cases for future investments.

Highlights

In April, the Building Research Establishment published a scoping study report on the potential for demand-led innovation in the foundation and construction industries, which was part of a project commissioned by Innovate UK. The project also included holding an industry workshop to help drive forward the low-carbon agenda and validate findings. This study focused primarily on cement and concrete products, recognising their significant potential to mitigate embodied carbon emissions in the short to medium term. The final report includes recommendations and outline specifications for how we can offer support to stimulate demand-led innovation through Innovate UK.

Rural proofing

Rural proofing refers to understanding the impacts of our policies in rural areas of the UK and where relevant helping to enhance the economies of our rural communities. During 2023-24 we have funded projects and programmes that include a focus on rural economies in the UK.

Highlights

The Local Policy Innovation Partnerships programme funded by AHRC, ESRC, and Innovate UK has awarded ~£20 million in funding to four Local Policy Innovation Partnerships which will bring together devolved governments, local authorities, businesses and communities to drive sustainable and inclusive economic growth and reduce regional disparities in the UK. Work funded under this theme will improve outcomes for people and places across the UK by identifying solutions that promote economic and social prosperity and includes support for low-income, marginalised and isolated communities.

To find out more about environmental sustainability activity across UKRI visit:
Environmental sustainability – UKRI
(<https://www.ukri.org/who-we-are/policies-standards-and-data/corporate-policies-and-standards/environmental-sustainability/>)



Professor Dame Ottoline Leyser
Chief Executive and Accounting Officer
15 July 2024

3. Accountability Report

Corporate Governance Report

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

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

1. Director's Report

Statutory background

Launched in April 2018, UK Research and Innovation (UKRI) is an independent non-departmental public body of the Department for Science, Innovation and Technology (DSIT).

As UKRI's Chief Executive Officer (CEO) and sole Accounting Officer (AO), I am accountable to the public via Parliament. Parliament monitors and influences UKRI's work through its Select Committees and the Parliamentary and Health Services Ombudsman.

UKRI Leadership

An overview of UKRI's governance structure can be found within the Performance Report on page 25.

A list of Board and Committee members with their attendance for the period covering 1 April 2023 to 31 March 2024 can be found on page 199 of the Governance Statement.

Registers of interest for UKRI's Board and committees are published on the UKRI website.

Personal data related incidents

One personal data incident involving UKRI was reported to the Information Commissioner's Office in 2023-24. The incident, which was confirmed as a breach, was reported by UKSBS as the data controller, and related to a service provided by UKRI, as the data processor.

Freedom of information

Under the Freedom of Information Act (FOIA) and the Environmental Information Regulations, we received a total of 295 requests in 2023-24, an increase from 272 in 2022-23. We responded to 89% of requests within statutory deadlines (compared to 86% in 2022-23 and 95% in 2021-22).

In March 2024, a First Tier Tribunal upheld two appeals, heard jointly, against UKRI decisions to withhold information from FOIA requests from 2017 and 2018 relating to the Engineering and Physical Sciences (EPSRC) Centres for Doctoral Training 2013 exercise. We have applied to appeal the tribunal decision on both cases.

2. Statement of Accounting Officer's Responsibilities

Under the Higher Education and Research Act 2017, the Secretary of State for DSIT with the consent of HM Treasury has directed UKRI 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 UKRI and of its income and expenditure, statement of financial position and cash flows for the financial year.

As UKRI's AO, in preparing the accounts, I am 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
- confirm that the Annual Report and Accounts (ARA) as a whole is fair, balanced and understandable and I take personal responsibility for the ARA, and the judgements required for determining that all reasonable steps have been taken to ensure the ARA as a whole are fair, balanced and understandable

DSIT has appointed the CEO as AO of UKRI. The responsibilities of an AO, including responsibility for the propriety and regularity of the public finances for which the AO is answerable, for keeping proper records and for safeguarding UKRI's assets, are set out in "**Managing Public Money**" (https://assets.publishing.service.gov.uk/media/65c4a3773f634b001242c6b7/Managing_Public_Money_-_May_2023_2.pdf) published by HM Treasury.

As the AO, 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 UKRI'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. I take personal responsibility for the ARA, and the judgements required for determining that all reasonable steps have been taken to ensure the ARA as a whole are fair, balanced and understandable.

3. 2023-24 Governance Statement

Scope of responsibility

This Governance Statement, for which I take personal responsibility, describes the dynamics of UKRI, its governance, risk, and internal control arrangements, and how successfully the organisation has coped with the challenges and opportunities presented this financial year.

This statement explains how UKRI has maintained a sound system of governance and taken significant steps to enrich internal control. It is my responsibility to ensure sound governance underpins the achievement of UKRI's policies, aims and objectives whilst safeguarding the public funds and UKRI assets. I am also accountable for ensuring UKRI is administered prudently and economically and that resources are applied in accordance with HM Treasury's Managing Public

Money guidance and the responsibilities assigned to me by DSIT. I am also accountable for ensuring the ARA is fair, balanced and understandable.

Governance framework

In my role as UKRI's AO, I am supported by the UKRI Board, the nine Executive Chairs of our councils, and my wider executive team, 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.

UKRI Board overview

The UKRI Board (the Board) comprises a strong team of research and business leaders who collaborate with me and my executive team to ensure that UKRI continues to be world leading.

The Board is chaired by Sir Andrew Mackenzie and comprises myself as CEO, the Chief Finance Officer (CFO) and nine to 12 other non-executive members appointed by the Secretary of State for DSIT: Professor Sir Ian Boyd, Dr John Fingleton, Professor Sir Anthony Finklestein, Priya Guha, Professor Nola Hewitt-Dundas, Nigel Toon, Ruwan Weerasekera, Professor Julia Black and Lord

David Willetts. A representative of the Secretary of State of Science, Innovation and Technology also attends all board meetings.

Professor Julia Black and Lord David Willetts left the Board at the end of their tenure on 29 October 2023 and 7 November 2023, respectively. No new members were appointed during the year.

The Board is our top-level decision-making body and exercises full and effective control over the activities of UKRI. The Board provides strategic leadership, takes ownership of the principal strategic risks 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 underwent a Board Effectiveness Review during the year and will oversee delivery of the subsequent recommendations.

The Board met six times during this financial year and key areas discussed included:

- implementation of the UKRI Strategy
- sustainability of the research and innovation (R&I) system
- development of the UKRI operating model

- the UKRI Framework for Performance including development of our performance monitoring dashboard and balanced scorecard
- preparations for upcoming fiscal events and the spending review
- cross-cutting policy areas, including research commercialisation, people culture and talent, UKRI's international outlook and preparations for association to Horizon Europe
- UKRI's long-term direction around place
- horizon-scanning research and innovation trends
- UKRI's risk management approach
- Trusted Research and Innovation

Minutes of the Board meetings are published on **UKRI's website** (<https://www.ukri.org/who-we-are/how-we-are-governed/ukri-board/>)

The Board's approach to governance complies with the HM Treasury and Cabinet Office's Corporate Governance in Central Government Departments: Code of Good Practice (the Code), the Public Sector Equality Duty and the Cabinet Office Code of Good Practice for Partnerships between departments and arm's-length bodies.

The Board is supported by the Audit and Risk Assurance Committee, the Nominations and

Remuneration Committee, the Organisational Change Committee and the Board Investment Committee that strengthens the independent challenge and advice provided by the Board to help guide UKRI's strategic investment portfolio.

Audit and Risk Assurance Committee

The Audit and Risk Assurance Committee (ARAC) is chaired by Ruwan Weerasekera with Professor Sir Anthony Finkelstein as Deputy Chair. Dr John Fingleton joined ARAC as a non-executive Board member in September 2023. The Committee's independent non-executive members are Christina Coker, Philip Greenish and Fiona Sheridan, with Karen Kroger and Alison Jarvis who joined in January 2024.

The CFO, Chief Operating Officer (COO), Chief People Officer (CPO), senior operational leads and I attend, as agreed with the Chair. The Board Chair, Sir Andrew Mackenzie, is also invited to attend and receives regular reports of ARAC activity.

The role of ARAC is to support the Board and AO. It monitors the extent to which adequate controls are in place to ensure compliance with relevant codes and regulation and focuses on the risks to our organisation's ability to achieve its objectives. It ensures that our approach to assurance meets

organisational need. To do this the Committee constructively, yet firmly, reviews and challenges the reports of management as well as our internal and external auditors, with a particular focus on governance, understanding of risks, the related control environment and the integrity of our financial statements.

Meetings are attended by the National Audit Office (NAO) and the Government Internal Audit Agency (GIAA), and the Committee meets with their representatives regularly, independently of management. In addition, a representative from DSIT attends ARAC meetings and in turn, the ARAC Chair has observed the DSIT Audit Committee.

ARAC held five full meetings in 2023-24 and three additional meetings to provide independent challenge on the ARA. It also held deep dive sessions to explore particular areas of focus in greater detail.

It worked closely with management in the review of the ARA for UKRI, the Medical Research Council Pension Scheme and the Research Councils' Pension Scheme, ensuring that appropriate accounting policies and judgements have been scrutinised.

Throughout the year the Committee has focused on:

- UKRI's corporate governance and corporate risk management arrangements including management assurance and risk appetite, security and resilience, workforce and wellbeing, ethics and values, grant accruals, complaints, raised concerns and continuous improvement of funding assurance and counter fraud
- Board level and organisational level approach to identifying, mitigating and reporting risks, and bringing risks within appetite
- ongoing monitoring of the implementation of significant audit recommendations from GIAA and NAO
- the risks associated with major change programmes: Services, HR, Accounting, Reporting and Procurement (SHARP), The Funding Service and the Operating Model
- incidents and internal control failures and the organisational lessons learned

Nominations and Remuneration Committee

The Nominations and Remuneration Committee (NomCo) is chaired by the Board Chair, Sir Andrew Mackenzie.

Board members include Dr John Fingleton, Priya Guha and Nigel Toon. Professor Nola Hewitt-Dundas and Ruwan Weerasekera (ARAC Chair) joined the Committee from September 2023. Professor Julia Black and Lord David Willetts left the Committee at the end of their tenure. I attend as CEO, with the CFO and CPO invited as attendees, without decision-making powers.

NomCo met five times during the year. It reports to and supports the Board by:

- maintaining oversight of senior leadership succession plans, appointments and awards
- determining the performance-related pay of the executive members of the Board
- providing assurance of remuneration policy to the Board
- providing assurance of performance-related policy and pay to the Board
- providing assurance of pension schemes and their governance to the Board
- maintaining oversight of the Board and Executive Committee effectiveness reviews
- maintaining oversight of the completion of annual appraisals for non-executive board members and senior executives

UKRI Organisational Change Committee

Board member Nigel Toon chairs the Organisational Change Committee (OCC). Professor Sir Anthony Finkelstein and Ruwan Weerasekera are also members. The CFO, COO (as Senior Responsible Officer for Organisational Change) and CPO are regular attendees, and I have a standing invitation to attend as CEO. The Committee is responsible for supporting the Board by reviewing the planning, management and implementation of all major strategic organisational change programmes, including our new operating model. OCC also considers the risk to delivery and challenges the executive team on the outcomes expected from our investment in change, particularly our progress towards the challenging efficiency targets that were set as part of our spending review settlement.

OCC met seven times this year. It provides Board oversight and independent challenge to the change programmes by:

- keeping under review and providing constructive challenge to the development, planning and implementation of UKRI's change portfolio
- keeping under review government direction regarding UKRI efficiency and effectiveness
- reviewing and assessing the management of risk associated with delivering the outcomes

expected from the change portfolio in coordination with ARAC

UKRI Board Investment Committee

The Board Investment Committee (BIC) is chaired by Priya Guha and its members are Nigel Toon, Professor Sir Ian Boyd, the CFO and the Chair of the Infrastructure Advisory Committee (IAC).

Regular attendees include myself, the Chairs of the Investment Advisory Working Group (IAWG) and the Director of Investment Strategy and System Insight.

The Committee:

- strengthens the independent challenge and advice provided by the Board to help guide UKRI's strategic investment portfolio
- promotes accountability for financial decision-making on investments by the Executive and provide additional assurance to the Board, myself as CEO and DSIT on large, novel or contentious investments
- provides additional scrutiny and challenge on individual investment cases selected by the Committee, to ensure our largest investments are: sustainable and in accordance with environmental, social and governance principles; value for money; deliverable; and aligned with UKRI's strategic priorities

- reviews risks related to infrastructure investment
- considers evaluations and lessons learned

BIC met four times during the year and reviewed topics as diverse as IAC priorities, digital research infrastructure, large computing facilities, environmental sustainability, floods and droughts, Diamond II, monitoring and evaluation, lessons learned from Pioneer mega projects and lessons learned from Pioneer.

Executive Committee

I chair the Executive Committee (ExCo) which is responsible for providing strategic advice to the Board and constitutes the Executive leadership (the nine Executive Chairs of the councils, the CFO, the Executive Directors of Strategy, Performance and Engagement, the COO, the CPO and the Chief Information Officer (CIO). The Director of External Relations, Communications and Public Engagement also attends regularly.

The Committee meets a minimum of once a month (except August) and met 12 times during the year. It receives a monthly finance report and its areas of operational focus have included:

- delivering the UKRI's five-year Strategy

- developing and implementing the operating model
- governance, risk and assurance
- preparations for upcoming fiscal events and spending review
- UKRI Framework for Performance including the new balanced scorecard
- communications
- updating and delivering the Corporate Plan
- delivering our council strategic delivery plans
- staff performance and reward, including staff capability and capacity
- staff wellbeing
- policy and delivery areas including international strategy, public engagement, commercialisation, Trusted Research and Innovation, environmental sustainability, support for critical technologies, major infrastructure investments, regional distribution of R&I investment, equality diversity and inclusion in the research and innovation system, and our collective talent programme.

ExCo is supported by four sub-committees: the Strategy Committee, the People, Finance and Operations Committee, the Health and Safety Management Committee, and the Workforce and Financial Planning Committee

Strategy Committee

The Strategy Committee (StratCo) is chaired by the Executive Directors of Strategy, Performance and Engagement and comprises senior strategy representatives from our councils as well as directors with cross-cutting responsibilities such as talent and infrastructure. StratCo provides expertise and advice on developing and implementing the R&I elements of our strategy. The Committee met 11 times during the year.

People, Finance and Operations Committee

The People, Finance and Operations Committee (PFO) is chaired by the CFO or her nominated deputy. PFO is an executive committee and is responsible for establishing and monitoring effective UKRI operational frameworks and policies.

The Committee's membership comprises of the COO, CPO and the Chief Operating Officers or nominated representatives from each of the nine councils. Senior functional lead professionals from across the organisation are regular attendees. PFO met 10 times during the year, acting as UKRI's second line of defence across the following areas:

- people, learning and reward

- finance, legal, governance, risk and management assurance
- technology, data and information governance
- funding, commercial, international and operational performance
- security and resilience

Health and Safety Management Committee

The Health and Safety Management Committee (HSMC) is chaired by the CFO and comprises the Health, Safety and Environment Lead, the Head of Operations, lead health and safety advisors from across UKRI and senior operational professionals representing Estates, Risk and Human Resources functions.

The Committee is responsible for monitoring the capability and performance of health and safety management systems with the objective of safeguarding the health and safety of staff and visitors, regulatory compliance and for establishing and developing continuous improvement in health and safety performance.

HSMC met four times in the year and focused on UKRI's Health and Safety:

- policy and safety codes
- management system components
- reporting, risk and performance

- occupational health and wellbeing

Workforce and Financial Planning Committee

The Workforce and Financial Planning Committee (WFPC), comprising leadership representatives from across the organisation, plays a crucial role in ensuring that our workforce aligns with our strategic objectives within allocated headcount and budgetary constraints.

This Committee is chaired by the CPO and convened 10 times over the year. Its primary focus has been on optimising workforce efficiency to meet targets set during 2022-23. Additionally, it oversees the approvals process for all external recruitment and Senior Civil Service (SCS) equivalent roles.

Investment Advisory Working Group

The Investment Advisory Working Group (IAWG) comprises a set of subject-matter experts who provide challenge and advice on business cases, including making recommendations to the CFO and the ExCo about whether cases should be approved.

Chaired by the Head of the Project Delivery Profession (until December 2023) and then co-chaired by the Deputy Director of Financial Planning and Analysis and the Infrastructure

Portfolio Director (from January 2024), IAWG met 15 times during the year and reviewed 17 business cases with an approximate value of £1.5 billion.

Some cases were reviewed at both Outline Business Case stage and Full Business Case stage and included projects within the Infrastructure Fund, those related to alternatives to association with Horizon Europe, institute funding and other major investments in computing.

Table of attendance for UKRI senior executive and non-executive boards and committees

The table below sets out member and senior executive attendance for our 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.

Board Members

	Board	ARAC	BIC	NomCo	OCC	ExCo
Number of meetings held	6	8	4	5	7	12
Sir Andrew Mackenzie	6/6			5/5		
Professor Dame Ottoline Leyser (CEO)	6/6		4/4	5/5		11/12
Siobhan Peters (CFO)	6/6		4/4	3/5		10/12
Professor Julia Black	2/3			2/3		
Professor Sir Ian Boyd	4/6		4/4			
Dr John Fingleton	6/6	4/4		5/5		
Professor Sir Anthony Finkelstein	6/6	7/8			6/7	
Priya Guha	6/6		4/4	5/5		
Professor Nola Hewitt-Dundas	6/6			3/3		
Nigel Toon	6/6		4/4	5/5	7/7	
Ruwan Weerasekera	6/6	8/8		3/3	7/7	
Lord David Willetts	2/3			2/3		

ARAC Independent Members

	Board	ARAC	BIC	NomCo	OCC	ExCo
Number of meetings held	6	8	4	5	7	12
Christina Coker		7/8				
Philip Greenish		7/8				
Fiona Sheridan		5/8				
Karen Kroger		2/2				
Alison Jarvis		2/2				

Executive Committee Members

	Board	ARAC	BIC	NomCo	OCC	ExCo
Number of meetings held	6	8	4	5	7	12
Professor Dame Ottoline Leyser (CEO)	6/6		4/4	5/5		11/12
Siobhan Peters (CFO)	6/6		4/4	3/5		10/12

	Board	ARAC	BIC	NomCo	OCC	ExCo
Deputy for CFO						2/12
Tim Bianek (COO)						8/12
Christine Ashton (CIO)						3/3
Emma Lindsell (Executive Director, Strategy, Performance and Engagement)						4/12
Isobel Stephen (Executive Director, Strategy, Performance and Engagement)						8/12
Chris Ball (CPO)						11/12
Professor Christopher Smith (EC AHRC)						9/12
Deputy for AHRC EC						3/3
Professor Melanie Welham (EC BBSRC)						2/3
Professor Guy Poppy (Interim EC BBSRC)						7/9
Professor Alison Park (Interim EC						2/2

	Board	ARAC	BIC	NomCo	OCC	ExCo
ESRC)						
Stian Westlake (EC ESRC)						10/10
Professor Dame Lynn Gladden (EC EPSRC)						2/2
Professor Miles Padgett (Interim EC EPSRC)						4/6
Professor Charlotte Deane (EC EPSRC)						3/3
Deputy for EPSRC EC						2/2
Indro Mukerjee (CEO Innovate UK)						8/12
Deputy for CEO Innovate UK						4/4
Professor Sir John Iredale (Interim EC MRC)						4/6
Professor Patrick Chinnery (EC MRC)						5/6
Deputy for MRC EC						3/3
Professor Sir Duncan Wingham						2/2

	Board	ARAC	BIC	NomCo	OCC	ExCo
(EC NERC)						
Professor Peter Liss (Interim EC NERC)						8/9
Professor Louise Heathwaite (EC NERC)						1/1
Deputy for NERC EC						1/1
Professor Dame Jessica Corner (EC Research England)						9/12
Deputy for Research England EC						3/3
Professor Mark Thomson (EC STFC)			4/4			10/12
Deputy for STFC EC						2/2

Notes

- In line with the ExCo Terms of Reference, if members are not able to attend meetings, they may authorise an appropriate colleague to represent them
- Alexandra Jones, Director General for Science, Innovation and Growth at DSIT, attended all Board meetings in 2023-24 as representative of the Secretary of State for Science, Innovation and Technology
- Professor Melanie Welham's term as BBSRC Executive Chair ended on 30 June 2022
- Professor Guy Poppy was appointed interim BBSRC Executive Chair on 3 July 2023
- Professor Alison Park's term as interim ESRC Executive Chair ended on 2 June 2023
- Stian Westlake was appointed ESRC Executive Chair on 5 June 2023
- Professor Dame Lynn Gladden's term as EPSRC Executive Chair ended on 30 June 2023
- Miles Padgett was appointed EPSRC interim Executive Chair on 3 July 2023 and his term ended 31 December 2023
- Professor Charlotte Deane was appointed EPSRC Executive Chair on 8 January 2024
- Professor Sir John Iredale's term as interim MRC Executive Chair ended on 29 September 2023

- Professor Patrick Chinnery was appointed MRC Executive Chair on 2 October 2023
- Professor Sir Duncan Wingham's term as NERC Executive Chair ended on 30 June 2023
- Professor Peter Liss was appointed interim NERC Executive Chair on 12 June 2023 and his term ended 8 March 2024
- Professor Louise Heathwaite was appointed NERC Executive Chair on 11 March 2024
- Christine Ashton was appointed CIO on 22 January 2024

Councils overview

The councils act in an advisory capacity to the Executive Chairs. Ordinary council members contribute expertise and insight to influence and provide constructive challenge and advice within their respective fields to shape the councils' strategic delivery plans and implementation, which set out the combined and collective actions to deliver our Strategy. Councils work in partnership with ExCo and the Board and meet jointly, bi-annually, to address the UK's major research and innovation challenges.

Each council consists of the council's Executive Chair and between five and 12 non-executive

ordinary members, one of whom is the Senior Independent Member (SIM).

Each council met between four and six times last year. The full list of council members and councils' Terms of Reference are published on our **website**.

Innovate UK Loans Ltd Special Purpose Vehicle

Innovate UK Loans Ltd (IUKL) is a wholly owned subsidiary of UKRI and part of Innovate UK's delivery infrastructure. Through IUKL, Innovate UK supports the UK's best innovative businesses to undertake later stage R&D with a view to commercialisation, scale and growth. As a wholly owned subsidiary, IUKL is subject to the central government controls framework. The IUKL ARA are subject to audit by the NAO and are consolidated with UKRI's ARA. GIAA is responsible for the provision of internal audit services to UKRI, as set out in a Memorandum of Understanding, and provides internal audit services to IUKL under this agreement. Further narrative and detail of their governance arrangements and financial results are available within the IUKL ARA filed with Companies House.

Innovate UK Knowledge Transfer Network operating as Innovate UK Business Connect

Since becoming part of UKRI (Innovate UK) in 2022-23, Innovate UK Knowledge Transfer Network now operating as Innovate UK Business Connect (IUKBC) has aligned its strategic objectives to Innovate UK's Annual Delivery Plan and objectives. IUKBC reflects the core purpose - connecting for positive change and contributing to a clear and consistent portfolio of Innovate UK products and services so that businesses understand which products and services can best help them at the right time. Governance, accountability and operational requirements are set out in the UKRI and IUKBC Framework operating document and IUKBC own updated Articles of Association. Operational requirements set out in the Framework document cover the agreement of an annual work programme, financial and non-financial reporting regimes and broader information sharing. Financial Statements are filed with Companies House.

STFC Innovations Ltd

STFC Innovations Limited (SIL) is a wholly owned subsidiary of UKRI and conducts activities in the field of commercialisation for STFC. Staff working at SIL are employed by UKRI and are assigned to work for the company. SIL: invests in a portfolio of start-up companies based on STFC intellectual

property; commercially exploits STFC's intellectual property through licence agreements and sales of services; and provides facilities for early-stage companies looking to scale up and grow. The SIL ARA are subject to audit by the NAO and are consolidated within UKRI's ARA. Further narrative and detail of their governance arrangements and financial results are available within the SIL ARA filed with Companies House.

Diamond Light Source Ltd

Diamond Light Source Ltd (DLS) was first established as a joint venture by the Science and Technology Facilities Council (which became part of UKRI in 2018) and Wellcome Trust in 2002. We have worked with DLS and DSIT to develop a new Framework document which will establish the governance and sponsorship arrangements for DLS. Once this is approved, my AO responsibilities for DLS will transfer to the DLS CEO. UKRI will remain responsible for the provision of funding to DLS and will maintain a delegated sponsorship role via DSIT.

The DLS ARA is subject to external audit and consolidated within the DSIT ARA. Further narrative and detail of DLS's governance arrangements and financial results are available within the DLS ARA filed with Companies House.

Risk management

Capacity to handle risk

As AO, I have overall responsibility for ensuring there is an effective system of risk management, internal control and assurance in place within UKRI for meeting all relevant statutory requirements, and for ensuring adherence to guidance. Further accountability and responsibility for elements of risk management are set out in UKRI's Risk Management Strategy and Policy. An overview of the risk management framework and details of the principal risks managed this year are set out in the Performance Report from page 116.

Risk management framework

We have a risk management framework designed to support informed decision-making concerning the risks that have the potential to impact our ability to achieve our objectives.

The framework provides a consistent approach to identifying, assessing and mitigating enterprise risks through implementing and monitoring controls and actions to reduce risk to the levels the organisation is willing to accept in pursuit of objectives. Our risk management framework includes a Risk Management Policy, Strategy and Risk Appetite Statement.

Our risk management practices comply with the requirements of the five principles as set out in HM **Government's Orange Book** (<https://www.ukri.org/publications/ukri-declarations-of-interest-policy-and-guidance/>). Our practices and approaches are in turn supported by a central team of qualified risk business partners to embed effective risk management across UKRI. Our risk and assurance management system provides an integrated and dynamic view of UKRI's risks, issues, assurance framework, policies and control environment. The system continues to be developed and has delivered improved reporting enabling rich risk discussions and underpinning informed risk-based decision making.

The purpose of internal control

The system of internal control is designed to manage risk to a reasonable level rather than to eliminate all risk of failure to achieve policies, aims and objectives. It can therefore only provide reasonable and not absolute assurance of effectiveness. The system of internal control is based on an ongoing process designed to identify and prioritise the risks to achieving the policies, aims and objectives of UKRI, to evaluate the likelihood of those risks being realised and the impact should they be realised, and to manage them efficiently and effectively.

Regularity and propriety

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

- Counter Fraud and Bribery policy and arrangements
- Gifts and Hospitality policy
- Whistleblowing policy
- Complaints policy
- Declarations of Interest policy

I confirm that for 2023-24:

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
- no new UKRI employees or contractors have received remuneration in excess of the amount approved by DSIT and HM Treasury
- within the operations of UKRI and our shared service provider, UKSBS, no instances of fraud have been discovered with a material impact on UKRI.

Declaration of Interests

We recognise the importance of ensuring transparency and compliance with the Nolan Principles. Declaring interests supports transparency and demonstrates the integrity of our business and employees by providing assurance that any potential conflicts are considered and managed effectively.

Our employees and all persons engaged to represent or act on behalf of UKRI, or its affiliated organisations worldwide are expected to comply with the highest standards of professional and ethical practice and are required to declare any interests that may conflict, or may be perceived to conflict, with our business.

Interests are recorded and assessed in line with the **Declaration of Interests (DoI) Policy**, (<https://www.ukri.org/publications/ukri-declarations-of-interest-policy-and-guidance/>) using a self-service electronic portal. Controls applied to mitigate identified conflicts are subject to management approval and recorded in the portal. Declarations of the Board and ExCo members are published annually on the **UKRI website**, (<https://www.ukri.org/publications/declaration-of-interest-registers/>) and updated as required.

Gifts and hospitality

As a major funding organisation, we are aware that accepting or giving gifts or hospitality may affect how the organisation is perceived and may be seen to affect our decision-making and behaviour. The purpose of the **UKRI Gifts and Hospitality Policy** (https://www.ukri.org/publications/ukri-gifts-and-hospitality-policy/?_ga=2.243028170.971969410.1713773382-278585691.1675878857) is to ensure that all staff are aware of their responsibilities and are vigilant in ensuring that we remain impartial and fair across the work we do.

The cost of gifts and hospitality offered by UKRI must be proportionate, approved beforehand and recorded on the Gifts and Hospitality Register. All offers of gifts or hospitality made to staff must be declared even if not accepted and it is not standard for staff to accept gifts and hospitality. In line with the policy, any gifts above £20 in value have either been surrendered or retained with appropriate approval. During 2023-24, a GIAA audit confirmed a high level of assurance on our Gifts and Hospitality Policy, following the audit the policy was reviewed to ensure it remained relevant, effective and up to date, the new policy was approved by PFO in March 2024.

Counter fraud

The UKRI Fraud control framework is designed to minimise the risk of fraud and includes a Counter Fraud and Bribery policy and an approved counter fraud operating plan with key target outcomes.

This is a requirement of the Cabinet Office Functional Standard for Counter Fraud and sets out our approach with an action plan for the year.

The year saw a marked decline in casework arising under the COVID-19 schemes with only business as usual investigations ongoing, an increasing number of which are now with the police for criminal investigation. Two investigations have resulted in the Crown Prosecution Service bringing charges against defendants for both fraud and money laundering offences.

During the financial year 2023-24 (1 April 2023 to 31 March 2024), UKRI Counter Fraud and Investigation Services (CFIS) reported the following:

- 128 referrals of fraud, bribery or corruption (45% increase from 2022-23)
- total of 33 live investigations and a further 50 completed
- identified fraud of £4.57 million (287% increase from 2022-23)

- prevented fraud of £13.54 million (3,123% increase from 2022-23)
- amounts recovered from grant participants of £0.08 million (33% increase from 2022-23)

Comparative data for the financial year 2022-23 (1 April 2022 to 31 March 2023) was as follows:

- 88 referrals of fraud bribery and corruption
- 34 live investigations and a further 39 completed
- identified fraud of £1.18 million
- prevented fraud of £0.42 million
- amounts recovered from grant participants of £0.06 million

The increase of referrals is not understood to reflect increased exposure to risk of fraud or incidence of fraud within our research and innovation portfolio of grants.

Participation in the National Fraud Initiative

The National Fraud Initiative (NFI) is an exercise that matches electronic data within and between public and private sector bodies to prevent and detect fraud. As part of a biennial national exercise the NFI provides creditor payment screening and has developed a range of tests to identify duplicate payments. Aside from the financial benefits, data

matches help to improve the efficiency of organisations' creditor payment systems.

The NFI helps to identify duplicate payments and incorrect VAT payments that can be recovered, caused by incorrect supplier invoices, input errors and VAT miscalculations. The reasons for this are wide ranging, from human error to poor processes, controls that can be overridden and the fact that independent systems can only conduct basic checks.

The CFIS commenced work on NFI, which was planned to begin in late 2023 but resource constraints and delays acquiring relevant data have meant this has taken longer than expected. To date, of the 14,501 matches, 3,706 were found to have no identifiable issues. A further 106 are under active investigation with the remaining 10,689 to be reviewed when resource permits.

Government Functional Standard GovS 013

The **Government Functional Standard GovS 013: Counter Fraud** (<https://www.gov.uk/government/publications/government-functional-standard-govs-013-counter-fraud>) sets the expectations for the management of fraud, bribery and corruption risk in government organisations. We will complete a new assessment of compliance

against the standard in 2024-25 and develop an action plan to improve our level of compliance.

The self-assessment will inform the development of a new counter-fraud strategy which will encompass key changes across the fraud landscape (post COVID-19). This will ensure UKRI captures best practice, and develops alternative approaches to both deterrence and sanctions, including the recovery of public funds.

Fraud awareness

An ongoing programme of fraud awareness is in place in UKRI with a mandatory online fraud and bribery course for all UKRI staff. Additional bespoke training has been provided across some teams in UKRI with higher risk profiles.

Further, discussions have started with some higher education institution representative groups to consider ways in which fraud reporting for publicly funded research can be better followed up to ensure effective risk mitigation processes are in place to identify potential control environment weaknesses and deter re-occurrences.

Whistleblowing

Whistleblowing and "Freedom to Speak Up" is viewed by UKRI as a positive act, which can make a valuable contribution to our efficiency and

long-term success. The **UKRI Whistleblowing - Freedom to Speak Up Policy**, (<https://www.ukri.org/publications/ukri-whistleblowing-freedom-to-speak-up-policy/>) last reviewed in 2022-23, encourages and enables employees to speak out when they encounter or suspect malpractice. Internal avenues for raising concerns are also supported by an external advice line through **Protect** (<https://protect-advice.org.uk/>).

UKRI aims to ensure concerns are investigated properly, sensitively and in confidence, and individuals are protected from any detrimental impacts as a result of raising a concern in good faith, in line with the Public Interest Disclosure Act.

22 concerns were submitted in 2023-24, of which four were assessed as being in scope of the UKRI Whistleblowing 'Freedom to Speak up' Policy and were, or are being investigated as a "qualifying disclosure" regarding alleged or actual malpractice. By comparison, in 2022-23, 17 concerns were submitted, of which six were assessed as being in scope of the UKRI Whistleblowing 'Freedom to Speak up' Policy. The findings from each completed investigation are acted upon and a process has been established to identify and address lessons learned.

Raising concerns

UKRI has identified the need to improve the management of concerns raised by staff and external stakeholders. We are developing a new harmonised mechanism for reporting and managing concerns. This will be underpinned by revised policies, procedures and a new approach to the resourcing and delivery of investigations.

Complaints

We recognise that complaints present an opportunity to learn and make improvements to the way we operate and for our stakeholders. We have a responsibility to act where we identify that our services and processes could be improved.

We have an external **UKRI Complaints**

(<https://www.ukri.org/who-we-are/contact-us/make-a-complaint/>) webpage that outlines the process for external stakeholders to submit a complaint, what we can investigate, timescales for response and how to appeal. Further details about our internal processes are outlined in the UKRI Complaints Handling Procedure. As an organisation we commit to operating a responsive, transparent and fair complaints process and this is particularly important when things go wrong.

In 2023-24 we received 77 formal complaints, compared to 42 in 2022-23. This increased

number reflects Innovate UK harmonising with the UKRI Complaints Procedure.

During 2023-24, we were notified by the Parliamentary and Health Service Ombudsman (PHSO) of three cases that had been accepted for review. Two of these are at the primary investigation stage and the other at the detailed investigation stage. The outcomes of these PHSO cases are expected in 2024-25.

The PHSO outcome of a complaint case review, of which UKRI were notified in December 2022, was received in June 2023. This outlined that the case was closed at the primary investigation stage as there were no indications of maladministration.

We have improved our ability to provide assurance that actions and lessons learned from complaints are addressed and evidenced as complete through the migration of action tracking to our risk management system. As part of our Complaints Annual Review 2022-23, we have identified priorities which will enable us to continue to strengthen our approach to complaint handling and improve stakeholder experience.

Modern slavery

We are committed to the principles of the Modern Slavery Act 2015 and the abolition of modern

slavery and human trafficking. We seek to minimise the risk of modern slavery and human trafficking in our operations through a control framework which focuses on recruitment, selection and resource management, commercial supply chain arrangements, policy development for safeguarding and reporting of concerns, and employee awareness training. The latest UKRI Modern Slavery and Human Trafficking Statement published in September 2023 reported the following:

- no concerns identified or reported by employees or third parties
- UKRI has rolled out its programme of Universal Learning to all employees

During 2023-24 we have continued to:

- monitor recruitment and commercial activity for modern slavery indicators
- improve uptake of training for all employees.

In the last year, we have established a modern slavery working group to bring together expertise in modern slavery from across the organisation and to monitor risks and controls. Focus areas in the coming year will include our exposures to risk from subcontracting by grant recipients and in supply chains.

Welsh Language Scheme

Our Welsh Language Scheme sets out how UKRI complies with the principles established by the Welsh Language Act and which services and communications are offered in Welsh. The scheme was prepared in accordance with guidelines issued by the Welsh Language Commissioner under Section 9 of the Act and was approved by the Welsh Language Commissioner on 8 April 2021.

Data and information governance

Data and information governance has been strengthened by the appointment of a new Chief Information Officer (CIO) and Chief Data Officer (CDO) in line with the recommendations of the Grant Review. A new Strategic Technology and Data Governance Committee has been established, reporting to PFO, to provide strategic direction, oversight and ensure the effective management, ethical use, and maximisation of technology and data assets in support of UKRI's strategy.

The launch of our Data Strategy and improved policies and processes for data management, alongside existing information governance policies, procedures and controls are aimed to ensure that our data and information is valued, managed and protected. Data and information

governance risks are being revisited within our new structures and are reviewed regularly and managed through appropriate mitigating actions.

Security and resilience

The UKRI Security and Resilience team has expanded, taking full ownership of the Business Continuity Management function and strategic ownership for delivering on travel risk management.

Reflecting its expanded scope, the Security and Resilience Strategy was published internally, outlining deliverables across physical, cyber, personnel, travel risk management and business continuity management domains that will better secure and improve resilience for organisational assets, whilst enabling business areas to achieve their wider goals. This has been supported by refreshed governance, headed by the Security and Resilience Committee, which continues to oversee strategic and operational delivery, while monitoring evolving threats and escalating in line with risk.

Our compliance with the **Government Functional Standard GovS 007**: (<https://www.gov.uk/government/publications/government-functional-standard-govs-007-security>) Security standards continue to improve from an assurance perspective, and significant work has begun on

building the security culture in the organisation, to underpin the relatively new policies and processes that have been launched.

We have continued to respond proportionately and effectively to incidents ensuring root causes are identified, and lessons learned.

Prompt payment

Our policy is to comply with the Prompt Payment Code for the payment of invoices for goods and services. While our standard terms and conditions specify payment within 30 days of receipt, we aim to make payments within five working days. In 2023-24, we paid 97% of undisputed invoices within 30 days (2022-23: 97%) and 66% within five working days (2022-23: 71%).

Pay remit

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

Tax arrangements of public sector appointees

The government's 2012 review of tax arrangements for public sector appointees highlighted the possibility of artificial arrangements to enable tax avoidance. Our directly hired senior employees are all paid through the payroll and

controls exist to provide assurance that appropriate tax arrangements are in place to cover other in-year appointees. We provide DSIT with tax assurance evidence on a yearly basis, which forms part of their summary of DSIT tax assurance data at **gov.uk**. (<https://www.gov.uk/>)

Ministerial directions

There were no Ministerial directions given in 2023-24.

Project delivery

The UKRI Project Delivery Profession has approximately 450 members benefiting from the tools, guidance, frameworks, training and development it offers. Members can access the Government Online Skills Tool for self-assessment against competencies, skills and behaviours for current job roles and future career steps. We are piloting the Government Project Delivery Profession's accreditation scheme with the first members of the profession recently being awarded accreditation.

The profession undertakes annual self-assessments against the **Government Functional Standard GovS 002: Project Delivery** (<https://www.gov.uk/government/publications/project-delivery-functional-standard>) for compliance and assurance purposes, and

completes a Portfolio, Programme and Project Management Maturity Model assessment exercise to help inform the key focus areas. Specific Interest Groups continue to facilitate knowledge sharing and the development of best practice in key project management areas including risk management, benefits realisation and change management. The profession expanded their annual learning event to provide a fortnight of learning opportunities, providing over 900 hours of continuing professional development to members free of charge.

A project management system is in place with over 500 active users. It provides project management professionals with the ability to manage and report on projects, programmes and portfolios at any level improving the efficiency of delivery, effectiveness of reporting, and consistency in practice.

The Business Case Hub provides expertise covering HM Treasury Five Case Model, helping projects and programmes within our Major Projects Portfolio produce business cases that set projects up for successful delivery. Since its inception in 2020, the Business Case Hub has maintained its 100% success rate of first-time approval by BEIS/DSIT, with a total of over £10 billion worth of programmes approved by the department.

SHARP programme

The SHARP programme is a multi-year programme established to implement a modern Enterprise Resource Planning solution for UKRI and our shared service provider, UK SBS. The system being implemented is Oracle Fusion.

This implementation will improve colleagues' experiences and reduce complexity for functional specialists. It will align our processes to government global processes, harmonise ways of working for back-office activities across UKRI, improve our data integrity and with a combination of more self-service and efficient operation, reduce the resource requirements of a range of tasks.

Due to the complexity of bringing all elements of UKRI together, a number of issues and challenges have been identified. These are being worked through but will affect the planned go-live date. A revision of the programme plan is underway. The SHARP programme team is continuing to engage and communicate across both organisations as well as delivering training, to support implementation.

Simpler and Better Funding programme

UKRI's Simpler and Better Funding (SBF) Programme is introducing a new unified funding service to reduce bureaucracy and difficulty when

applying for grants and managing funding. The Funding Service (TFS) aims to make our grant-making processes more consistent, predictable and simple, as recommended by the Grant and Tickell reviews. This will benefit applicants, research and administrative offices, and expert reviewers and assessors.

We have simplified opportunity types, harmonised applicant guidance and reduced administrative checks. Underpinned by core functionality on the digital TFS platform, the new Funding Service helps users manage Accountability Report UK Research and Innovation 80 opportunities, applications and awards. 85% of new applications are now made on the TFS platform.

Each week, the service releases new features on the TFS platform to cater for more funding opportunities, reduce bureaucracy, speed up the grant application process and reduce internal processing effort. The SBF Programme continues to harmonise and standardise policies, guidance and processes across UKRI to improve the service and enable operational efficiencies.

The programme is currently planning for the migration of new and existing grants to the TFS platform, adding features to remove the need for workarounds and functionality requested by users,

and preparing for business-as-usual. This process involves careful management of end-to-end risk, and integration with existing UKRI systems, which constitute a major focus for the Programme as it enters its concluding stages.

The goal of the TFS platform is to enable an improved service for funding applications, review and awards. At these initial stages, however, we recognise that some users may find aspects of the service more challenging than they would like. We will continue to iterate and improve the TFS platform to reduce these difficulties over time.

Assurance

Review of effectiveness

As Accounting Officer, it is my responsibility to ensure that UKRI is maintaining a sound system of governance and internal control. In 2023-24 I looked to the work of the ARAC, ExCo and its supporting committees, the internal audit service provided by the GIAA, UKRI's Funding Assurance Oversight Committee, the assurance opinion provided by the Accounting Officer of UKSBS, and comments made by the NAO as our external auditors in their management letter and other reports to inform my view.

Executive Accountability Assessment

We have an assurance framework that records the assurance available on the:

- legal, regulatory and government requirements that UKRI must adhere to
- good governance and best practice frameworks

The design of the assurance framework is aligned to HM Treasury guidance. This framework identifies and evaluates the different sources of assurance using a three lines model comprising: management; internal assurance; and independent assurance.

An executive accountability exercise was completed at the end of the financial year. Executive Chairs and Directors provided a first-line assessment of assurance against their legal, regulatory, control and governance obligations. These assurances were subject to a second line of supporting evidence by the Management Assurance Team and a challenge meeting with the Deputy Director Risk and Assurance. The outcomes were reported to the PFO as well as the ExCo and ARAC.

The 2023-24 executive accountability exercise provided an overall moderate level of assurance. The exercise provided six new areas of low

assurance. These related to: a lack of clarity on delegations; loss of key staff in the business continuity team; the need to increase understanding of modern slavery risks in supply chains and through sub-contracting by recipients of UKRI grants; the need to increase knowledge of safeguarding arrangements amongst staff and other stakeholders; the need to confirm that the tax arrangements of our staff working overseas are compliant with local tax rules; and the need to continue to evolve Funding Assurance arrangements to demonstrate the effective and proper use of public funds.

Government Internal Audit Agency annual opinion

The GIAA Head of Internal Audit (HIA) is required by the Public Sector Internal Audit Standards to provide me with an annual internal audit opinion and report. The HIA opinion is based primarily on the outcomes of audit engagements conducted during the 2023-24 financial year but is also informed by knowledge gained from meetings with senior management, and attendance at governance forums and their associated papers. The HIA also placed reliance on two specific engagements carried out by the UKRI Management Assurance Team as agreed through the audit plan.

The HIA has provided me with a moderate assurance opinion which reflects that, although there are areas that could be improved, UKRI's frameworks for governance, risk management and control are operating effectively to deliver strategic objectives. The HIA reported an overall positive trend in UKRI's direction of travel across themes raised in prior years. The HIA highlighted two themes that have remained unchanged: Funding Assurance, and Risk Management. These themes are being addressed through operating model work. GIAA assurance related to the theme of Strategic Change has reduced. We recognise and are addressing the GIAA concerns in this area. The distribution of internal audit assurance ratings is comparable to previous years, though the proportion of 'limited' and 'unsatisfactory' together has increased.

The HIA highlighted areas that were not found to be fully effective in 2023-24. These are: supply chain resilience; governance and management of the counter fraud function; SHARP programme testing and business readiness; SBF programme; the delivery of new digital services; and data quality held by the Innovate UK Loans. Action plans have been agreed to address the findings of GIAA.

The GIAA annual report and opinion included valuable feedback on four themes: risk management; continuous improvement functions; delivery of corporate change; and management information and core controls assurance.

Assurance on our Funding

The requirement for Funding Assurance spans the entire research and innovation funding lifecycle, from designing our schemes to post-project reporting. I have received a report from the Funding Assurance Oversight Committee that identifies the sources of assurance and provides an overall moderate assurance opinion on the effectiveness of governance, risk management and internal control in relation to funding assurance.

We have improved our level of compliance with the **Government Functional Standard GovS 015**: (<https://www.gov.uk/government/publications/grants-standards>) Grants through the completion of Fraud Risk Assessments for the major funding types. GIAA has provided a substantial assurance opinion on the approach taken by the Funding Service Programme to deliver compliance with the standard.

Stewardship reporting has confirmed that the systems of governance, risk management and

internal controls are effective and, in some areas, have been improved in 2023-24. GIAA have provided seven positive assurance reviews and three advisory reviews related to funding assurance. One Limited Assurance was received in relation to Governance of The Funding Service. 20 of the 55 actions agreed following these reviews are already complete.

The Management Assurance Team have completed three reviews of which one returned a positive assurance opinion. Two negative assurance opinions were received in relation to a specific payment error and the management of conflicts of interest on the Exascale project. 17 of 23 Actions agreed following these reviews are complete.

Improvements have been made in the methodology used by the UKRI Funding Assurance Teams. These teams review compliance with terms and conditions of funding and test validity of spend charged to UKRI grants. The assurances provided by the Research England, and Innovate UK are Moderate Assurance. The Research Council Funding Assurance Team has provided a Limited Assurance reflecting that 39% of organisations they reviewed received a negative assurance opinion due to: deficiencies in the recording of staff

time to UKRI funded projects, non-compliance with Transparent Approach to Costing (TRAC) requirements, lack of controls on training grants or weak financial controls.

Innovate UK

- Innovate UK processed over 34,000 claims with a total value of £1.65 billion. Review of claims identified 2757 ineligible cost items totalling £2.7 million (0.16% error rate)
- Review of £152.4 million of grant claims rated as high or medium risk identified £2.4 million of ineligible spend (1.57% error rate)

Research England

- 21 audits were completed of Research England block-grants covering a £451 million funding. No material or major issues were identified, providing positive assurance over the data and the systems and processes used

Research Councils

- 33 reviews of research organisations were completed. One assignment provided substantial assurance, 19 moderate assurance and 13 received Limited Assurance. Three of the assignments were undertaken either as joint reviews with other funders (The Royal Society) or with an extended scope to include

Innovate UK and Research England awards that would previously have been subject to separate assurance arrangements

- 437 grants were selected for substantive testing, from which ineligible expenditure of £1.7 million of ineligible spend was identified (£0.5 million in 2022-23). The error rate for research grants and fellowships was 1.16% and 6.63% for training grants
- TRAC costs underpin over 40% of the full economic costs of research funded by universities. The 2022-23 annual TRAC returns were subject to validation and review by UKRI alongside the UK Higher Education Regulator and Funders: Returns from seven Providers were excluded due to non-compliance with TRAC requirements and one Provider was moved to dispensation rates. Funding Assurance assignments include TRAC scrutiny as part of their overall reviews

Action is taken to address the specific and thematic findings from funding assurance reviews:

- When we identify ineligible expenditure charged to a UKRI grant is it removed from the claim before payment
- Organisations subject to a research council funding assurance visit are required to receive and respond to a report. Improvement actions are followed-up

- All claims made by Research Organisations in receipt of a limited opinion funding assurance visit are subject to additional scrutiny
- Terms and conditions of are reviewed and updated as a result of systemic fundings from funding assurance reviews

I have received a letter providing assurance on payments made by UKRI from the AO of the Office for Students (OfS). The assurance covers regularity, propriety, and value for money in higher education providers in England that are primarily regulated by the OfS. The assurances are that:

- higher education providers have appropriate arrangements for financial management and accounting to mitigate the risk that funds are not used for the purposes given
- based on the funding assurance work completed by OfS there are no reports from external auditors for the academic year 2023-24 that would indicate any concerns which would be of interest to UKRI in relation to compliance with the terms and conditions of revenue grant funding from UKRI

In addition to these assurances the OfS continued its processes to collect and validate annual Transparent Approach to Costing (TRAC) data returns, for 2022-23, and to deliver this data to UKRI. This work includes a review of institutional

declarations of compliance with the TRAC requirements as set out in TRAC guidance. The OfS noted that some institutional TRAC returns have not been completed and the related validation remains work in progress.

Work continues towards an integrated UKRI Funding Assurance Target Operating Model with increased joint working across UKRI. Five changes to the Funding Assurance Operating Model, representing those changes that have the most impact in the next year, have been agreed and are being progressed.

In parallel, significant progress has been made implementing the recommendations in the Reducing Bureaucracy review and identifying further opportunities to reduce the burden of assurance on research organisations whilst at the same time ensuring I have the assurance needed to fulfil my accounting officer responsibilities.

Shared services assurance

UKSBS is a company wholly owned by its public sector customers and shareholders: Department for Business and Trade, Department of Energy Security and Net Zero, DSIT and UKRI. The company aims to provide efficient HR and payroll, finance, procurement, and IT business services.

We receive bi-annual assurance reports from UKSBS on the design and effectiveness of its internal control framework, and within the UKSBS Assurance Framework the company's overall assurance status for the second half of financial year 2023-24 remains at Amber. UKSBS also receives its internal audit provision from GIAA and received three substantial and five moderate assurance opinions for audits completed in 2023-24.

We have worked closely with UKSBS during the year to identify the root causes of two significant payment errors and a data protection incident related to the UKRI printing of payslips on behalf of UKSBS. UKRI was informed of a mandate fraud in June 2024 for invoices that were accrued in 2023-24, the fraud is under investigation.

Quality assurance of business-critical models

Quality assurance of business-critical models is managed by the Analytical Leadership Group which identifies, reviews and maintains a list of business-critical models. This approach utilises existing review processes and expertise within UKRI, with oversight from its Analytical Leadership Group, and aligns UKRI practice with recommendations and standards for analytical modelling as outlined in **Managing Public Money**, (<https://www.gov.uk/government/publications/>

managing-public-money) the **MacPherson Review**, (<https://www.gov.uk/government/publications/review-of-quality-assurance-of-government-models>) and the **Aqua Book** (<https://www.gov.uk/government/publications/the-aqua-book-guidance-on-producing-quality-analysis-for-government>).

Significant issues

Security

Our security maturity has improved, with a clear path to reduce risk within appetite through delivery of our Security and Resilience Strategy (2023-2026). Although there has been improvement in all security domains, due to the complexity of UKRI and remaining legacy technology debt, we are not yet working within risk appetite in all areas. The new CIO will facilitate federated areas of UKRI to explore all the opportunities to maximise collaboration on digital and data across UKRI while increasing security and resilience. This is set against a fast-changing threat landscape with growing focus on the research and innovation ecosystem and being fuelled further by geopolitical events.

Organisational change programmes

Our organisational change portfolio brings together our five major change programmes including our new operating model and council/functional improvement initiatives. The UKRI Future State has been presented during this year and sets out an overview of the key objectives, concepts and timeline. Delivery of our change programmes while meeting our challenging operational expenditure reduction targets remains a significant issue in 2023-24 and will continue be in 2024-25.

Capacity and capability of staff

Staff capacity and capability in UKRI remains a significant issue, with retention and recruitment being challenging across the organisation. This is being managed through delivery of our HR Strategy which aims to provide a measurable return by achieving a high-performance culture in a safe and inclusive environment. Through creation of a more agile and resilient workforce we will reduce the likelihood of skill gaps, overburdened employees and operational disruptions.

Operational expenditure reduction

We are reducing operational expenditure spend through a range of activities to identify and realise efficiencies. Restrictions on recruitment while we

move towards new ways of working have been challenging in many areas of the organisation. Our organisational change programmes are providing the opportunity to review, reshape and optimise the way we do things to meet financial targets agreed with the government.

Geopolitical events

Increasing complexity in geopolitical uncertainty, including instability and conflict, continues to present challenges in the international landscape. This not only places pressures on important collaboration but potentially presents unknown supply chain risks. International collaboration is an important part of our strategy and UKRI collaborations create impact across the globe. We continue to develop our organisational resilience and ability to respond and remain adaptable in times of rapid change due to global challenges.

Delays in senior appointments

Our Executive Chairs, Board members, CEO and CFO are public appointments. These appointments are made by the Secretary of State for Science, Innovation and Technology, with most roles appearing on the No.10 interest list. These roles are subject to an extensive recruitment process that in some cases, required more than 18 months to complete. In the last year, we successfully recruited a number of Executive

Chairs, with our gratitude to Interim Executive Chairs who have stepped in to bridge the gap during the lengthy recruitment process, some improvements have been possible. Our Public Appointments team are now managing most administrative and candidate-facing aspects. However, there are elements that remain outside the control of UKRI.

Incident management

We have responded to major incidents, from concerns raised regarding adherence to the Seven Principles of Public Life to breakdowns of internal control processes related to making payments and the printing of sensitive documents. The incidents experienced in 2023-24 have been fully investigated by UKRI in conjunction with the relevant third parties and responded to.

Economic and global instability impacts are still emerging that could lead to disruptive situations. We are developing business continuity options to be prepared for disruption, support national emergencies (as seen during COVID-19), and respond and recover effectively to serious incidents within the organisation.

Conclusion

I have considered the accounts and evidence provided by colleagues across UKRI in the

production of this Governance Statement as well as independent advice and assurance provided by our organisation's ARAC.

Based on the review outlined above, I conclude that UKRI has a sound system of governance, risk management and internal control that supports UKRI's aims and objectives for 2023-24.