



Department for  
Business, Energy  
& Industrial Strategy

# UKRI Independent Review

Final Report and Recommendations

July 2022



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# Foreword



I am pleased to present the findings and recommendations resulting from my review of UKRI. To introduce the report, it is important to note that the review has been carried out in a framework largely based on the Cabinet Office 'public bodies review process' and this has brought helpful structure to my work and the resultant findings.

To provide further context, it is important to recognise that UKRI is a large organisation supporting a huge and successful national research and innovation system. However, UKRI was established just four years ago and has been brought into operation in a rapidly changing and challenging environment - the COVID-19 pandemic, for example. Despite the many challenges, UKRI has sustained its support of research and innovation and has delivered new initiatives such as the Strength in Places Fund, the Industrial Strategy Challenge Fund, increased support for the Talent Programmes and, with great agility, demonstrated its ability to pivot to COVID-19.

By many measures of impact, UKRI clearly enables and supports a strong national research and innovation environment - but could UKRI be even more effective and more efficient? I have consulted widely and sought evidence to support our findings and my emphasis has been to provide scrutiny of performance, assurance that UKRI is achieving the core objectives that led to its creation and an assessment of its readiness to contribute to the UK Government's ambitions for the future of research and innovation.

Most of the evidence I have received supports the original case and objectives for UKRI, resulting from the 2015 Nurse Review - a single cohesive UKRI incorporating nine previously separate organisations.

My review notes that UKRI has partially met the objectives that were set at its formation but that gaps remain.

I observe that many support processes have not yet achieved the potential efficiencies resulting from harmonisation and integration of services envisaged at the launch of UKRI. However, I believe the projects recently under way to create a new operating model are appropriate steps leading to efficiencies and greater agility. I note that this is an ambitious and challenging change programme requiring substantial and experienced resource, concerted effort, and careful focus. I recognise that the UKRI Board and executives are very engaged with and committed to the work.

UKRI has a complex governing architecture set out in legislation which provides links to academic, business and other communities. I observe that there is still some way to go to ensure this governance system supports effective decision-making and makes best use of the

expertise available across the organisation. I recognise that the board and executives are addressing this important issue.

The success of any organisation, especially a large yet still young and transforming organisation such as UKRI, comes from its people. Without exception, every member of UKRI I have met during the review has demonstrated commendable professionalism and enthusiasm to contribute to UKRI's strategic objectives. I am very grateful for their openness and contribution to the review.

From my discussions with the UKRI Board and executives it is apparent that they will recognise the findings and challenges set out in the report. The response to this report will require concerted effort between UKRI, BEIS and wider government to achieve the greater potential for the UK.

Finally, I would like to acknowledge the work of our independent advisors; also the secretariat team in BEIS supporting the review, and my special thanks to Dr Alexander Ademokun who led the team and made a huge and insightful contribution to the work of the review.

A handwritten signature in black ink that reads "David Grant". The signature is written in a cursive, flowing style.

Sir David Grant

# Introduction

*This report provides the findings and recommendations from the Independent Review of UK Research and Innovation (UKRI).*

## Scope

The full terms of reference for the review are in Annex A. The review covers each of the four Cabinet Office functional standards: efficacy, efficiency, governance, and accountability. This report has one section for each functional standard, although they should not be considered in isolation from one another.

The Nurse Review of the research, development and innovation (RDI) landscape is looking at the characteristics and range of organisations that carry out research across the UK. The Tickell Review is looking at how bureaucracy impacts researchers across the whole system, including the processes and systems at funders like UKRI. Consequently, this review has not investigated in detail the performance of UKRI-owned or affiliated research institutes, nor has it looked in detail at the impact of UKRI funding processes on the research community.

## Methods

The review team interviewed more than 80 stakeholders, including staff and the leadership of UKRI, Department for Business, Energy and Industrial Strategy (BEIS), HM Treasury (HMT), other government departments, current and former UKRI Board members and external sector leaders.

Surveys were sent to all council members, current board members, a selection of UKRI-funded institutes and Catapults, professional bodies and learned societies across the four nations of the United Kingdom and wider sector experts. A total of 137 individuals and organisations responded to the survey.

The review team held roundtable discussions with early career researchers, representatives from business and senior leaders in Higher Education Institutions (HEIs).

The team reviewed publicly available documents and data, as well as management information documents provided by both UKRI and the UKRI Sponsorship team in BEIS.

## Overview

UKRI was launched in April 2018, bringing together the seven disciplinary research councils, Research England, which is responsible for providing research and knowledge exchange funding to HEIs in England and Innovate UK, the UK's innovation agency. The overarching goal of this review is to provide scrutiny of UKRI's performance, assurance that UKRI is achieving the core objectives that led to its creation and an assessment of its readiness to contribute to the UK Government's ambitions for the future of research and innovation.

In setting up UKRI and in the supporting [framework document](#), BEIS set ten objectives for the new organisation. It is the view of this review that UKRI has partially met the objectives set out in the framework document but that gaps remain.

UKRI has successfully delivered between £7 billion and £8 billion of research and innovation funding annually since 2018 and continued the work of the individual councils in maintaining the UK's strong research and innovation base. UKRI has helped to maintain the UK's position as a world-leader in research, and by some metrics, UKRI-funded research outperforms that of other national research and development funders in the G7.<sup>1</sup> Whilst competitive grant-funding is often seen as UKRI's key responsibility, it represents just one area of activity for UKRI. UKRI also plays a crucial role in maintaining critical aspects of UK research infrastructure, funds postgraduate researchers including 28% of UK PhD students in FY2020/21, provides research funding to universities, including formula-based and other funding for English universities, and runs programmes that support thousands of business enterprises to bring innovations through development to market.

UKRI has also delivered innovative funds that go above and beyond the work of the individual councils, thus demonstrating the added value of the new organisation. Funds such as the Industrial Strategy Challenge Fund (ISCF) were scaled up at relatively short notice and have received promising early independent evaluations. UKRI's response during the COVID-19 pandemic demonstrated agility and speed, and successfully helped to mobilise the research base to address emerging knowledge gaps across multiple disciplines. We have heard these cross-cutting problems would not have been tackled as effectively had the nine constituents been working individually rather than collectively as UKRI.

Against this backdrop of achievements, this review identified a number of issues that UKRI and BEIS, as the sponsor department, need to resolve.

One of the key challenges is that while the Higher Education and Research Act 2017, hereafter the HER Act or the Act, set UKRI up as a body corporate (single entity), there remains ambiguity for some people over whether this was a merger of nine organisations into one or whether UKRI is a light-touch umbrella sitting above nine empowered organisations. In the process of this review, we have discovered a continuing lack of clarity within and outside UKRI

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<sup>1</sup> Based on field citation ratio. Source: UKRI analysis from Dimensions datasets.



on which of these models was the aim. UKRI leadership is consistent in describing it as one organisation made from the nine parts, which this review supports.

Internally, risks to efficiency remain due to legacy systems and uncoordinated processes, insufficient cross-council (or cross-discipline) cooperation and a lack of clarity on organisational aims and purpose. Most of the issues in this report have been identified by UKRI who are already developing plans to address them, but strong leadership will be required to ensure these plans succeed. The scale of the challenge is significant, and the UKRI executive, board and BEIS all have important roles to play in improving efficiency and effectiveness.

## Background and timeline of UKRI

UKRI was set up as the government's response to the [2015 Nurse Review](#). The new organisation drew together the seven disciplinary research councils, Research England, which was split out of the Higher Education Funding Council for England (HEFCE) and Innovate UK, the UK's innovation agency. It also absorbed Research Councils UK, a small team funded by the seven research councils to manage cross-cutting issues. Whilst officially launched in April 2018, parts of central UKRI existed as a 'shadow' organisation from early 2017, to enable a smooth transition into the new entity.

The years since UKRI's creation have seen a rapidly changing policy and political landscape. These challenges are set out here for context and the findings of this report should be read in light of them. UKRI has engaged with at least seven government strategies with a focus on research and innovation (Figure 1) and until Spending Review (SR) 2021, only had one-year funding settlements, like most government departments and public bodies.

The government's Industrial Strategy was the flagship policy that UKRI played a substantial role in delivering through a number of funds and programmes including the ISCF, Future Leaders Fellowships and the Strategic Priorities Fund (SPF). These funds mostly cut across disciplinary boundaries and contributions to this review suggest they would have been difficult to deliver prior to UKRI and have been successful at increasing interdisciplinary research and innovation.

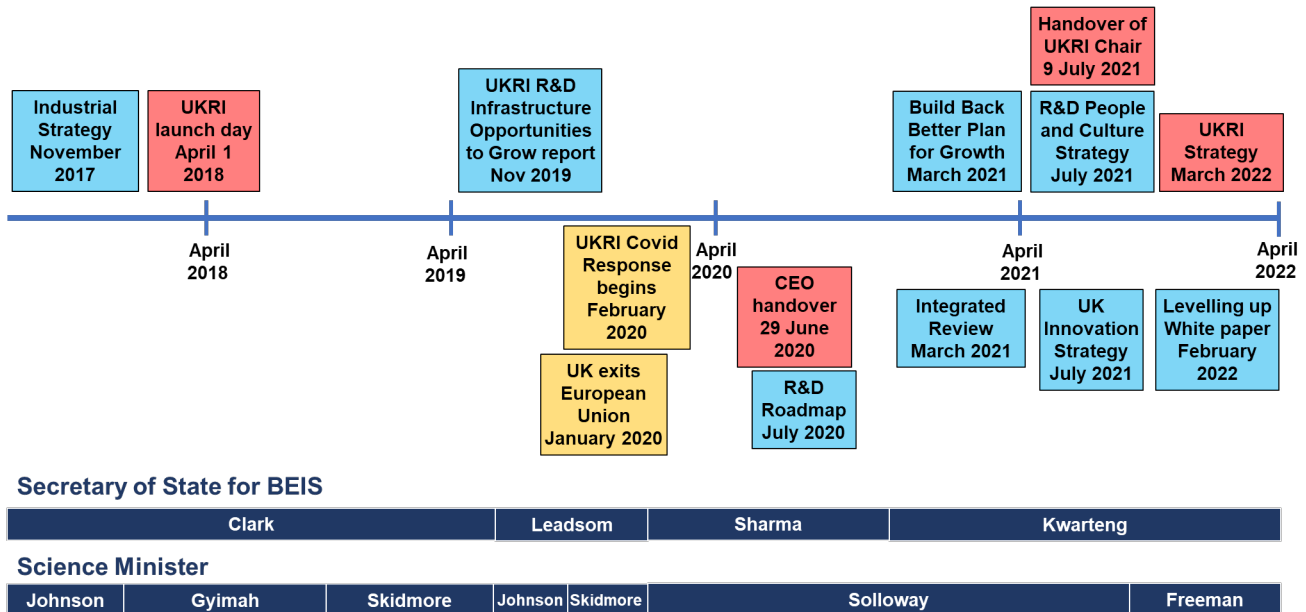
Over the same period, UKRI worked with BEIS on understanding and managing the implications of EU Exit negotiations for the RDI sector, including articulating the case for continued association to Horizon programmes and developing contingency arrangements to protect and support UK-EU research partnerships in the event of non-association – work that is still ongoing.

The COVID-19 pandemic began less than two years into UKRI's existence. UKRI started funding COVID-19 research with the National Institute for Health Research (NIHR) in January 2020, well before most funders realised the significance of the threat. UKRI played a substantial role in mobilising the UK's RDI sector to understand the virus, develop vaccines, and understand the medical and wider societal impacts of the pandemic. They quickly

mobilised resources to researchers and Innovate UK managed a substantial increase in grant applications to provide financial support to businesses affected by public health measures.

This review overlapped with the 2021 Spending Review, which gave UKRI its first three-year budget allocation, and the production of UKRI’s first five-year strategy. The recommendations contained in this report are therefore aimed at supporting UKRI to deliver on the ambition and opportunity of the strategy and settlement.

**Figure 1: UKRI and UK Government Strategy Timeline**



# Efficiency

This section provides our findings on the efficiency of UKRI. The 2018 UKRI framework document provided the following objective in this area: ‘deliver a step-change in administrative efficiency, including through combining corporate functions’. Similar statements can be found in the 2015 Nurse Review and the Department for Business, Innovation and Skills 2016 business case for the creation of UKRI.

UKRI has drawn up efficiency plans to cover the current SR period and is working with HMT and BEIS to finalise them. UKRI notes that its operating expenditure (OpEx) has grown since its creation, but so has the size of the budget and the complexity of the funds it administers. However, it is confident that its operating expenditure as a percentage of its overall budget compares favourably with that of other UK and international research funders at 2.9%.

As a proxy for efficiency, the review recognises this assessment but notes the challenges of benchmarking against international organisations with different delivery and operational contexts. The efficiency concerns discussed below reflect our analysis of internal UKRI trends over its lifetime, and the data and evidence the review has gathered indicates that the potential for efficiency gains from bringing together nine organisations into one has not yet been achieved. There are several reasons for this with inefficiencies manifested in different but connected ways. The most visible evidence of inefficiencies can be seen in increased staff and headcount levels. Alongside this, processes are not optimised, systems are not integrated or harmonised, and IT systems have legacy challenges. These factors appear to have received inadequate funding and managerial priority during the early years of the organisation.

## Staffing and headcount

Recognising the diversity and complexity of UKRI’s activities and the limits of different criteria for assessing efficiency, the review makes some observations. Our analysis of UKRI data showed that, in the three years to FY2020/21, there was a 21% increase in OpEx-funded full-time equivalents (FTE) across the organisation.

More striking is the increase in FTE in the Corporate Hub of UKRI over the same period. The Corporate Hub is responsible for finance, operations, human resources (HR), communications, strategy and performance. Most of the initial complement of 840 staff in the Corporate Hub in 2018/19 were relocated from the councils, but subsequently, there has been a 55% growth in FTE in the three years to FY2020/21 and the average cost of Corporate Hub OpEx is higher than that of most councils.

Contributions to the review highlighted that, in some cases, roles that moved to the hub were backfilled within the councils resulting in duplication of functions. It appears that within UKRI, there is no collective view on the effectiveness of the shared functions. The one exception is in finance where there is a consistent view that the function works more effectively than in the

previously separate organisations, even though financial processes have not been fully harmonised.

At the time of drafting this report, UKRI and BEIS are working with HMT to agree new efficiency targets for UKRI. Understandably, a new multi-year SR settlement provides the opportunity for HMT to think through operational targets in the round.

Employee surveys have not been carried out consistently during the lifetime of UKRI, but the results of surveys carried out up to two years ago indicate UKRI was almost 30 percentage points below the Civil Service average for ‘Organisational Objectives and Purpose’, and almost 20 percentage points below the survey average for ‘Leadership and Managing Change’. In addition, UKRI’s staff were 25% less likely than the survey average to say that their senior leaders are visible. Clearly the working arrangements during COVID-19 restrictions will have influenced employee satisfaction and it may be inappropriate to draw conclusions from older surveys, so it is promising to see that UKRI are returning to annual staff surveys. Nevertheless, the drivers for the rise in employee turnover over the last year (Table 1) should be examined by UKRI.

The review has learnt that salary levels and employee benefits, especially for people with specialist skills and experience, have become less competitive, and this influences retention and recruitment challenges. We have not examined this issue in depth, but we suggest that it should be within the scope of the work by UKRI to examine the rising turnover rate.

**Table 1: Leavers, resignations and turnover for UKRI (October 2019 to October 2021)**

Period	Total leavers (FTE)	Resignations (%)	Employee Turnover (%)
<b>12 months to October 2020</b>	810.4	40	9.5
<b>12 months to October 2021</b>	1089.8	44	16.7

An update in February 2022 noted that there were 529 resignations in the previous 12 months and total employee turnover remained at 16%.

Source: UKRI HR Scorecard October 2020, October 2021 and February 2022.

## Systems and IT

UKRI inherited a complex landscape of IT infrastructure and systems. Some councils shared infrastructure through UKSBS, a shared services company co-owned by UKRI and BEIS. Other councils had their own private arrangements.

Importantly, UKRI is a knowledge-based organisation that increasingly must rely upon digital management and delivery of its services. Internally, the organisation recognises that 'business

IT' includes the technology and services required by all UKRI members of staff to perform their roles. Common services typically include: Office 365 (email, SharePoint and Microsoft Office applications), network access on main sites (WiFi, LAN), remote access, online collaboration tools (e.g. Zoom), fixed/mobile telephony and video conferencing, digital services, grants, corporate website, operational systems, enterprise resource management, customer relationship management, data analysis infrastructure, security operations, IT service helpdesk and specialist requirements unique to the role or environment the member of staff works in (e.g. scientific instrumentation).

Since its creation, UKRI has brought together many of its IT staff into a single team in the Corporate Hub and has aligned a number of IT systems. However, some institutes and centres with distinctive requirements have retained their own teams and systems. The Corporate Hub team had 172 FTE including vacancies in 21/22 but the Science and Technology Facilities Council (STFC) had 83 (including 60 on scientific computing), Medical Research Council (MRC) centres had 19 and the Natural Environment Research Council (NERC) centres had 45.

The review found that data management and consolidation for reporting purposes are poor and often requires manual intervention to consolidate nine inputs. The overall impression is that, whilst some progress has been achieved in recent years, there is still inadequate harmonisation and a lack of integration. Consequently, process driven efficiencies have not been achieved and many processes remain labour intensive and inconsistent across the organisation.

While standard operating procedures are available for most core processes, feedback loops for continuous improvements are less well developed partly due to the inflexibility of existing IT systems. This makes it difficult to adapt the system to accommodate new activities or translate strategic decisions into operational change.

The SHARP (Services for HR, Accounting, Reporting & Procurement) programme aims to replace UKRI's current enterprise & resource planning (ERP) software which processes payroll, payments, accounts and HR. Currently, most of the councils have their own account ledger on the ERP system. However, these are outdated, inflexible systems with some reliance on manual processes. For example, to enable effective financial reporting, information from these ledgers needs to be manually harmonised to give a consolidated UKRI view.

The SHARP programme is UKRI's response to these challenges and aims to deliver a new ERP system by the end of 2023 when the current one runs out of support. SHARP is appropriately at the top of UKRI's corporate risk register, reflecting the risk that, after 31 December 2023, UKRI will have no guarantee its ERP system can meet its day-to-day business and regulatory needs. The review recognises that the systems must change and that there are clear risks to UKRI if this is delayed. The review notes that new ERP systems for large, complex organisations (tier 1) routinely take between 18 to 24 months to implement and UKRI aims to do this in less time. The review also notes that most ERP projects worldwide fail to meet their objectives, timescale and budgets. UKRI have set themselves an ambitious timetable to deliver SHARP and senior leaders will need to monitor progress closely. BEIS and UKRI should also continue to monitor the consequences of wider plans to deliver the

Government Shared Services Strategy on UKRI to ensure it does not put SHARP at risk of further delay.

Another challenge is the impact of legacy systems with limited interoperability on delivering new cross-council activity. The grant-making platforms, critical to the core business of UKRI, have been described as ‘paper-based processes that were digitised’ rather than digital-first applications. At present, running cross-council initiatives is difficult and often requires using an individual council’s platform and associated branding and processes. This may be appropriate in some instances but, in others, may lead to a poor user experience and limit engagement with target communities.

UKRI is aware of this issue and the Simpler Better Funding (SBF) programme aims to address it. Reforming the grant funding system was an objective of the research councils before UKRI but has faced problems. The SBF programme has made more progress than previous attempts and has taken onboard lessons from those efforts, however, challenges remain. The timelines for the delivery of SBF are parallel to the timelines for SHARP with both due in December 2023. The integration of the two systems will require coordination across the two programmes which are currently run by different teams. Flexibility is a central objective of the programme and once delivered, SBF must ensure support for continuous improvement to grant-making processes and digital systems.

Independent reports on SBF commissioned by UKRI have consistently stressed that teams developing solutions need to be empowered to take decisions quickly with responsibility and accountability at the appropriate level and as few steps as possible between the programme managers and the decision-makers. This is an approach that needs to be taken across UKRI’s transformation portfolio. Senior leaders will have to empower teams to deliver change, with councils consulted and leaders updated regularly but not allowing that engagement to delay progress.

Finally, work is ongoing to improve the IT infrastructure and important resilience such as cybersecurity. If not managed well, the risks, vulnerabilities and resilience of the Digital, Data and Technology (DDaT) infrastructure have potentially serious implications. Ongoing work to improve this should be prioritised and appropriately resourced.

### **Incentives and drivers at the creation of the organisation**

The staffing and systems challenges described above represent the main set of issues around efficiency. However, contributions to the review and our analysis suggests that the priorities at the creation of UKRI were to secure a better RDI settlement and deliver new ways of supporting research through new programmes and funds. It is clear that efficiency was neither a primary driver nor a priority for UKRI or government in the first few years of its existence.

UKRI is taking steps to respond to the challenges raised in this section through an efficiency plan and a business transformation programme. While similar approaches have been attempted in the past, they often lacked a clear and coherent set of objectives. These areas now have the attention of the board and Executive Committee (ExCo), and their leadership, along with BEIS and HMT engagement, will be required to make these programmes a success.

## Recommendations

To deliver the efficiencies envisaged from its creation, UKRI must invest in robust systems, automate processes and standardise them where it makes sense. It should strive for simplicity, interoperability and usability across its platforms.

Processes and systems need to be flexible enough to adapt to changes in priorities and new ways of doing things, for example, in response to the findings from the Bureaucracy Review. This will require focus, commitment and investment from UKRI and BEIS to maintain both the speed and quality of implementation of the critical SHARP and SBF programmes.

- In delivering its efficiency plan, UKRI should aim for simplicity, integration, harmonisation and agility of its systems. These should be objectives of any monitoring framework or performance indicators used to monitor progress and delivery.
- In delivering its efficiency plans and developing its operating model, UKRI should clarify the roles and responsibilities between the Corporate Hub and the councils. This process should ask if the right functions are centralised or devolved and should explore appropriate reductions in size, for example in the Corporate Hub.
- In delivering its efficiency plans, UKRI will need to invest in capability, IT systems and infrastructure in the short term that will improve efficiency in the long term, ensuring that the ambition set out in the UKRI DDaT Strategy 2020-23 is implemented. This will require UKRI to ensure that it retains the right technical and project delivery capability across the organisation.
- UKRI should appoint a chief information officer to drive the coherence and delivery of both SHARP and SBF to ensure the systems are able to interface appropriately and interdependencies and risks between the programmes are appropriately managed and mitigated. They should also be responsible for a coherent data strategy across the organisation.

# Governance

This section considers the governance arrangements in place for UKRI. In general, the lines of accountability and responsibility between the constituent parts, their councils, and the UKRI Board appear clear on paper. In practice, however, this is more complicated than first seems.

The HER Act established UKRI as a body corporate with the board as the governing body. The councils are set up as committees that advise the board with responsibility for carrying out UKRI's functions in respect to their specific disciplinary areas.

The Act requires that in relation to the seven disciplinary research councils, 'UKRI must arrange for the Council ... to exercise such functions of UKRI in respect of the [corresponding] field of activity', with similar wording for Innovate UK and Research England. However, the Act also states that 'A function is delegated ... to the extent, and on the terms that, UKRI determines'.

In addition to the specific disciplinary functions delegated to the Councils, section 98 of the Act states that:

- 'UKRI may arrange for any Council to exercise such other functions of UKRI as UKRI may determine in addition to those exercisable by the Council...
- Arrangements... may result in a function of UKRI being exercisable by more than one Council.
- A function of UKRI which is exercisable by a Council on UKRI's behalf ... may also be exercised by UKRI.
- Arrangements... must require the Council concerned to provide UKRI with such advice or information about the exercise of any function to which the arrangements relate as UKRI may require it to provide.'

The ambiguity of responsibility implied in the delegation of functions above manifests in different ways in the organisation. In carrying out this review we found that UKRI responsibilities are currently perceived to be held either by i) one or more councils ii) jointly by all councils or iii) centrally. It is the view of this review that ii) and iii) should be seen to be one and the same and are described as such. Today they are not.

Before documenting the initial observations from the review, it is worth reiterating the implications of the creation of UKRI while noting the review is not commenting on the appropriateness or otherwise of the model.

At the creation of UKRI, a number of significant changes were made to the leadership and governance of the original nine organisations:

- The chief executive officers (CEOs) of these organisations became executive chairs with changes to their autonomy and decision-making powers.

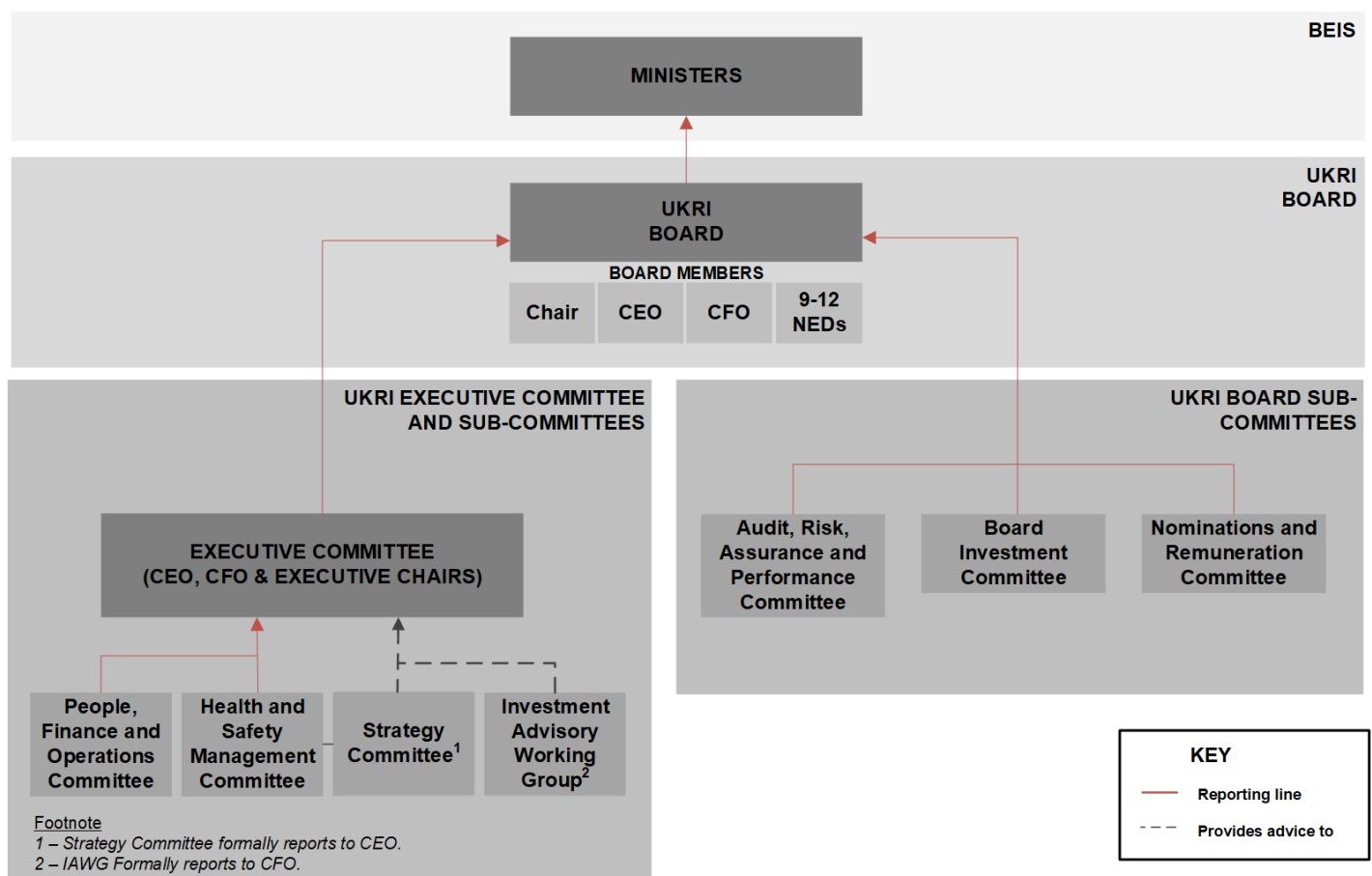


- A CEO was appointed to the newly formed organisation, reporting to the board.
- The research councils' councils which, prior to UKRI, served as boards for the constituent organisations, effectively went from decision-making to advisory committees with uncertainty regarding their roles, delegations and relationship with the new board.

It is also important to note the wider context of governance of UKRI. It is a relatively young organisation but has had two chairs, two CEOs, three chief financial officers (CFOs) and has been accountable to six science ministers and four Secretaries of State (Figure 1). This is a significant level of change in the leadership, governance and oversight for any organisation.

The structure in Figure 2 represents the current governance structure of UKRI.

**Figure 2: Simplified governance and structure of UKRI**



The UKRI Board is responsible for ensuring that UKRI achieves its strategic objectives and is accountable to the Secretary of State. The board consists of the chair, CEO, CFO and 9 to 12 independent members appointed by the Secretary of State, with this structure and composition set in legislation.

Within this structure, the reporting and accountability lines for the CEO could be made more clear. The CEO reports to the board but, in practice, also reports to the Secretary of State and, in their capacity as accounting officer, is accountable to parliament.

The review has identified concerns in the relationship between the board and the councils of the constituent parts of UKRI which has implications for decision-making.

## Assurance

The first thing to note is that against this backdrop the performance of UKRI, from an audit and assurance point of view, is widely accepted as improved when compared to the previous individual organisations.

Our analysis of meeting papers and contributions to the review show that the board has historically delegated scrutiny of operations and management to the Audit, Risk, Assurance and Performance Committee (ARAPC). ARAPC is an advisory committee, however it has done an effective job of improving UKRI's control environment. For example, UKRI inherited over 400 outstanding audit actions from the constituent councils, some of them of serious concern. This situation has improved due to UKRI's improved finance and assurance management and scrutiny from ARAPC.

Analysis of board papers shows that the board agenda prioritises strategic conversations over operational matters which may be appropriate but risks losing sight of some of the systems risks discussed above.

## Relationship between the UKRI Board and the councils' councils

This is an area that has been highlighted in our evidence gathering as a challenge for UKRI.

Each of the constituent parts retain their council committees with strong links and networks into their relevant academic communities and interest groups. Each of these councils are made up of the Executive Chair and between 5 and 12 members such that, across UKRI, there are over a hundred council members sorted by domain expertise but with no clear way to engage with UKRI strategic decision-making and governance and with uncertainty over if they need to.

The role of the members of the councils' councils is not as clear as it should be, certainly as perceived by some members and, in practice, each council operates differently. While this may be reasonable and reflects the distinct academic communities they serve, the overall effect is one of ambiguity about the role of the councils' councils compared to the role of ExCo or the board.

A survey of council members shows that, within their councils, they feel their expertise is valued, they make effective decisions and work effectively as a group. However, they say that the split of responsibilities between the council and the board is unclear.

Our survey suggests that newer council members are generally more positive about UKRI as an organisation. Council members in post for at least five years were generally less positive on

questions around the clarity of responsibilities, delegations between the board and councils, effectiveness of decisions made by the board and the role of the Corporate Hub. Council members in service for less than a year were the highest scoring group across the themes they were surveyed on.

Interactions between council members and the board are minimal. There have been attempts to bring these groups together with limited success. We understand efforts have been renewed in this area, but this requires clear objectives and resources as it is hard to coordinate and usefully engage over 100 people in a strategic conversation. However, there are potential opportunities for UKRI to maximise this network of expertise, for example in shaping an approach to multi-disciplinary research across the organisation, but clarity of purpose and mechanisms for engagement need to be resolved.

## Board effectiveness

The review has not focused extensively on the effectiveness of the board, partly because an independent board effectiveness review was recently conducted (March 2021), and it is right that the findings are worked through by UKRI and the board. We are also aware that the board has recently been refreshed with some former members stepping down and new members joining alongside recent changes in the CEO and Chair. This review echoes findings from the Board Effectiveness Report, which UKRI should consider with the refreshed board:

- There is concern about the extent to which the board makes strategic decisions around the direction of UKRI which then translate into meaningful activity within the organisation. For example, there is little evidence that UKRI has made strategic decisions to prioritise particular goals and the bulk of spending has not shifted between different councils, activities within councils or activities across UKRI.
- The question of responsibility and delegation is not as clear in practice as it should be. There are questions on how, and how much, decisions by the board influence the councils.

It is worth noting that, in comparison to other groups that were surveyed, board members appeared to be the most positive about their role and UKRI as an organisation. Responses to statements such as 'UKRI fulfils its objective to be the unified voice for continued strengthening of the UK research and innovation system, nationally and internationally' and 'The board have sight of ongoing and planned work in the UKRI councils.' were overwhelmingly positive in this group.

The review is pleased to note that the new chair of UKRI is addressing these and related matters. This was also noted by some of the survey respondents.

## Executive Committee

The composition of the ExCo is set in legislation and comprises the CEO as chair, the CFO, the executive chairs of the nine councils and any other employees of UKRI the CEO may wish to appoint. In practice this includes the Chief People Officer, the Chief Operating Officer and the Executive Director for Strategy, Performance & Engagement.

The HER Act sets no obligations for ExCo, however the framework document states that 'the UKRI Executive Committee will provide strategic advice to the board and will act as the day-to-day coordinating body for UKRI operations. It will provide leadership to the organisation including across the collective activities of the individual councils to ensure strategic and operational coordination and collaboration'.

Contributions to the review have highlighted that ExCo, with 14 standing members, is large. They report that it operates by consensus which ensures views across the organisation are heard, however it is sometimes difficult to get clarity on how decisions are made and by whom. There are frequent meetings and thus potential opportunities for robust discussion between the leadership team. However, in practice, meetings do not always lead to decisions collectively owned by the group. It is the view of the review that, while the composition of ExCo is right, how it operates in practice should be carefully reviewed to ensure that it is an efficient and effective body. For example, could decision-making on operational matters better maximise the relevant technical expertise across the organisation, while balancing the input from the Councils?

## Recommendations

UKRI needs to simplify its governance and decision-making processes within the framework set by legislation. The challenges in this area are as much about culture as they are about structures and composition. Delegation of authority and decision-making to the most effective and appropriate level should happen more often while recognising that this comes with responsibility and accountability. The leadership across the organisation needs to engage with the operational challenges discussed in this review as well as the RDI ones, reflecting the most significant challenges UKRI faces in the medium term.

- The board should actively engage more with the operational risks and challenges discussed in this review. Matters of UKRI's performance should be discussed at the full board level and not only delegated to the ARAP Committee.
- UKRI should review the ways of working of the Executive Committee to improve the speed of decision-making and efficient use of executive time. Clarity on the decision-making process should be reflected in the committee's terms of reference with the understanding that ExCo decisions are binding for the collective.
- The relationship between the council members and the board should be reviewed with the aims of effectiveness, simplicity and clarity.



# Accountability

This section looks at the relationship between UKRI and government departments with a focus on sponsorship, delegation of authority and responsibilities between organisations.

## BEIS sponsorship of UKRI

The review observes that BEIS and UKRI have a positive relationship at working and senior levels. The sponsorship team manage the flow of information and decisions between UKRI, BEIS and the centre of government. However, the balance of time and resource spent on facilitating these interactions as against strategic scrutiny and oversight of UKRI could be improved, otherwise the sponsorship team at BEIS will focus on immediate challenges instead of long-term reforms.

Whilst the sponsorship relationship treats UKRI as a single organisation, there is a tendency and need in BEIS and other government departments to work directly with individual councils. It is appropriate for government departments to deal directly with councils, but this should not undermine collective UKRI strategy and identity.

The sponsorship team should have more authority to work with policy teams across BEIS to ensure their policy development aligns with the long-term strategy for UKRI, and any divergence is done with conscious understanding of the impacts.

UKRI reports receiving a high volume of ad-hoc requests from government. Responding can be labour intensive partly because of the IT and systems challenges discussed previously and partly because of the decision-making culture which requires escalation and sign-off at multiple levels. These requests also take up attention of senior leaders in UKRI who rightly feel a responsibility to quality assure information going to government. UKRI would be able to operate more effectively if objectives and requests for information were agreed upfront and reported at regular intervals. This requires government departments to be clear about what information they need in the short to medium term, but also requires UKRI to be better at collecting and reporting information on their performance and impact. UKRI are developing a new performance framework with BEIS, but key government departments with interest in information from UKRI are not involved in shaping this framework to ensure it meets all needs.

## Government controls

A common view expressed to this review is that UKRI is too bureaucratic. The impact of bureaucracy on the research system is the subject of the Tickell Review, so we will comment only on internal bureaucracy in this section.

Internal bureaucracy is driven by a complex set of issues. There are areas where the time or complexity of controls has increased due to decisions in UKRI, such as adding in additional

subject-specific committees to drive collective outcomes. However, a proportion of the burden of bureaucracy felt by the constituent parts is a consequence of HMT and Cabinet Office rules that UKRI, as a public body, is bound by, for example the grants functional standards, clearance to divest estates or dispose of assets, and permission to reinvest commercial income, for example from intellectual property. In some cases, the level of bureaucracy has increased only because the councils did not fully adhere to these rules before UKRI's creation, as discussed in the assurance section. The size of UKRI, relative to the previous individual councils, also makes it subject to different regulatory processes. UKRI has identified a non-exhaustive list of 40 different reports they must produce for government either annually, quarterly or monthly.

A further consequence of controls is the time it takes to make decisions. For example, the business case for the second wave of COVID-19 funding went through UKRI approvals in a week, BEIS in two weeks and HMT in six weeks consecutively, which is less than ideal in an emergency response situation. As another example, UKRI's SHARP programme must go through internal controls in addition to external assurance from four separate organisations (GIAA, IPA, BEIS Portfolio Office Gateway Reviews, CDDO)<sup>2</sup> and approvals from BEIS commercial board, BEIS investment board, and ministers from BEIS, Cabinet Office and HMT. The fact that the SHARP programme is subject to multiple layers of controls but still carries significant delivery risks suggests the balance between quantity and quality of controls could be improved.

UKRI's system and reform plans will need to automate reporting against as many of these controls as possible, as well as investigate which ones may have negative effects. In addition, a risk-based approach to assurance and controls should be agreed between UKRI and government with clarity on what data and information is required for effective management and sponsorship and at what frequency.

## Appointments processes

This is an issue that impacts UKRI in several ways. The first is in the requirement in legislation for a number of positions in UKRI to be appointments by the Secretary of State. Some of these reflect the history of the research councils where the executive chairs were heads of independent organisations, however the review notes that across UKRI there are 24 positions that are ministerial appointments with a further nine that the Secretary of State may appoint at their discretion. Ministerial appointments are not unique to UKRI and documents seen by this review show the Secretary of State for BEIS is responsible for 497 appointments to boards of BEIS partner organisations. However, it is unique across government that UKRI has employees below CEO level who are ministerial appointments. This review is not commenting on the principle of ministerial appointments but observes that the number of positions and the process, as currently run, has a significant impact on UKRI. This can be illustrated by the fact that Innovate UK had an interim CEO for almost three years at a crucial moment for integration

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<sup>2</sup> GIAA (Government Internal Audit Agency) IPA (Infrastructure & Projects Authority), CDDO (Central Digital and Data Office)

and transformation for UKRI. The effectiveness of the interim CEO is not in question, rather the fact that such a crucial role would be left with an interim leader for that period. At present, the review understands that three executive chair recruitment processes are live (ESRC, MRC and Research England). The ESRC process started with the announcement of the departure of the executive chair in November 2020. The process has now been running for over a year and reached the interview and recommendations stage, but no candidate has been appointed. The MRC process was initiated in July 2021 and an interim executive chair was appointed in January 2022 ahead of the full recruitment process beginning in earnest. These are positions with clearly defined term limits such that the process for recruiting and appointing to the roles could be managed in sufficient time to minimise gaps.

It is our understanding that similar challenges have been faced when recruiting new members to the board. There are several implications of the appointments process as currently managed:

- The vacancies and uncertainty created by the lengthy process can create a leadership vacuum in the councils, on the Executive Committee, or the board.
- Interim leaders may be reluctant to make significant decisions at the council level, particularly on spend or organisational reform in the absence of an executive chair.
- The review observes that it is highly unusual to have significant numbers of ministerial appointments below the CEO. While the CEO is involved in aspects of their recruitment, the situation as currently stands means the CEO of UKRI is not responsible for appointing 83% of the executive team who report to them.

## UKRI's relationships with other government departments and PSREs

Although BEIS, HMT and Cabinet Office are involved in the oversight of UKRI, UKRI has relationships with other government departments. The main relationships are with those that hold significant research interests, for example MoD, DHSC, Defra and DfE. Relationships between UKRI and these departments appears to be broadly positive and most councils have a relevant departmental chief scientific adviser as a member of their council. However, we have heard of cases where working relationships between UKRI and government departments have been less effective.

However, there could be a better understanding at UKRI and across government of the role of UKRI to service a whole of government research and innovation agenda. The Strategic Priorities Fund, which provided a mechanism to enable this, will not be continued. Supported by the Government Office for Science, departments have published 'areas of research interest' but it is unclear how these and discussions in other strategic fora influence funding decisions within UKRI, or if there are consistent mechanisms for doing so. In the absence of dedicated funds, UKRI should work with departments to understand the most effective mechanism for understanding research priorities, particularly from departments without significant independent research budgets. This was recommended in the 2015 Nurse Review, but not implemented alongside creating UKRI. For those departments with research budgets, it would help to clarify



the terms of engagement with UKRI for collaborative programmes or using UKRI as a delivery body.

Contributions to the review suggest UKRI tends to have positive working relationships with public sector research establishments (PSREs). However, evidence from PSREs highlight concerns that they are often an after-thought when designing programmes because UKRI considers its primary audience to be universities. This means UKRI is not making the fullest use of UK RDI expertise and infrastructure in tackling research priorities. Some of the operational challenges relate to the fact that PSRE's eligibility for UKRI grants are not always clear and UKRI grants would not normally cover full economic costs (universities funded by UKRI have an additional quality-related funding stream and commercial income) making it difficult for some PSRE funding models, even where they are eligible for funding.

## Responsibilities for RDI policy in government

There are a few areas of policy where UKRI shares responsibility and expertise with officials in BEIS or other government departments. For example, work on research sustainability or on place-based approaches to funding RDI. The split of responsibilities are not clearly documented, with some officials reporting that they think it is clear in practice whilst others suggesting otherwise. UKRI was set up with the intention that it would shape some RDI policy, but increased policy interest in this area has created some confusion over what is within UKRI's remit and where government sets direction. For example, there is little evidence that budget allocation advice from UKRI is made on a clear analysis of its goals and what the right allocation is to achieve those goals.

One consequence of this ambiguity is that it is often difficult to get a line of sight from government policy to funding activity through UKRI. In some areas it is a somewhat clearer, for example the innovation strategy, but this is the exception. Clarity in responsibilities between UKRI and government is needed to enable effective planning and give UKRI autonomy in appropriate areas, given the long-term nature of research.

Unclear responsibilities contribute to a disconnect between policy and delivery. Best practice in policy-making requires a dialogue between policymakers and those involved in frontline delivery, with a business change process in place to translate changes in policy into operational changes. Currently this process is not consistent between BEIS, other government departments and UKRI, especially in relation to providing grant funding relating to specific policy endeavours. Partly this is a technical limitation being resolved by the SBF programme, however making the best use of this new technology will require changes, not only to how UKRI operates, but also its relationship with BEIS. As part of SBF, BEIS and UKRI should put in place a standard business change process for how policy change leads to changes in funding activity where appropriate.

## Transparency

Information on UKRI is readily available via its website. Board minutes are published, as are minutes for most of the nine councils' councils. All grants awarded are reported online, with some automated dashboards providing summaries. Where data on UKRI awards are lacking, it is usually because UKRI do not have the data easily available internally rather than a decision to not publish. Work is underway to improve UKRI's data management system. UKRI should improve the data it publishes on outcomes and impact, not just outputs, as well as improving the understanding of how different parts of their portfolio contribute to its objectives.

The process for applying for funding and how UKRI assess applications in each of its funds are also relatively easily available online. Some applicants have noted that application documents are often long and complicated, with short deadlines to understand them and apply, but long timelines to decisions. This is an area that will be covered by the Tickell Review of bureaucracy, however UKRI should be mindful that transparency and accessibility are both needed for applicants, stakeholders and members of the public to best understand the critical role it plays in the UK RDI system.

## Recommendations

BEIS should ensure that UKRI has the stability and autonomy it needs to effectively plan and deliver. This will require setting out a clearer line of responsibility between BEIS and UKRI on strategy and delivery, as well as the criteria used to assess performance. Clarity is also needed on responsibilities for research policy across government, and therefore UKRI's role in shaping and implementing these policies.

BEIS and the Cabinet Office should lead on ensuring that government controls on UKRI are adding value in terms of improving the efficiency and effectiveness of public funds, taking a risk-based approach to assurance. For those controls that remain necessary, there should be a focus on how their implementation can be managed in ways that do not impede UKRI's operational efficiency.

- BEIS should set out a clearer set of fewer objectives and agree key performance indicators for monitoring them.
- Government should set out its routine data and information requirements from UKRI with clarity on management information needs, frequency and format.
- Should the Higher Education and Research Act 2017 be reviewed, consideration should be given to the number of ministerial appointments within UKRI, for example removing the council executive chairs from the list.
- The process for ministerial engagement on appointments at UKRI should be reviewed to improve the efficiency and timeliness of the process. For example, executive chairs could be removed from the Public Appointments Order in Council. Scrutiny should be

carried out at the appropriate stage such that shortlisted candidates are considered appointable in principle.

- The relationship between RDI policy and delivery should be made more explicit and UKRI's role as a delivery organisation clearly set out.
- BEIS and UKRI, working with relevant departments, should agree a method of feeding government needs and priorities into UKRI to shape activities as appropriate.

## Efficacy

This section considers the evidence we have received on efficacy defined using the Cabinet Office principle that the organisation has a clear purpose and appropriate delivery model to deliver effective outcomes for citizens. This includes the structure of the organisation, its reach into all parts of the UK and its ability to deliver objectives linked to efficacy, for example increasing interdisciplinary and cross-cutting research and innovation.

## Structure

The evidence we have received from interviews and the documents we have reviewed suggests that the nine organisations, comprising seven research councils, Innovate UK and Research England, are the appropriate constituent bodies of an effective UKRI. There were a small number of outlier opinions on this matter regarding individual councils of UKRI, however the majority of views are consistent. The information that shaped this view has not been influenced by the HER Act, however we note that it would be a factor to consider should change be deemed desirable at a later date.

Evidence shows that bringing the organisations together has brought some of the benefits envisaged in UKRI's creation, but not all. For example, efficiency is an area we touched on earlier where benefits have not been realised.

The constituent councils can all make claim to being different in some way, but essentially UKRI delivers three 'functions' led by the three groups (Research Councils, Research England, Innovate UK): (i) investing in and enabling research and development – both across the UK and internationally (ii) supporting the English higher education research system (iii) investing and enabling innovation and the commercialisation of research. Whilst maintaining disciplinary expertise is valuable, the changing nature of global challenges necessitates working across disciplinary boundaries and being able to define sectors of the future. The potential for the UK, should UKRI get this right, is significant.

UKRI's framework document sets out three aims and ten objectives for UKRI, with an 11th announced in the Levelling Up white paper. Most of these aims and objectives are individually sensible, but collectively there are too many of them to guide meaningful discussions about UKRI's performance and strategy. In practice, these objectives are not used as the driving force behind UKRI and we have seen little evidence that they are used to make strategic decisions in the organisation.

## Leadership

From the evidence and advice that we have gathered during the review, there is a consistent view that efficacy and efficiency can and must be improved. The key to making these improvements, we have been told, is by having shared and clear objectives, agreed

prioritisation, and collective determination and energy from an experienced and effective leadership and management team. The review notes the significant changes to the leadership team in less than four years. Two chairs, two CEOs, three CFOs, three CPOs and two COOs is evidence of change and a lack of continuity of management and leadership. Yet we observe that the leadership team was, and is, expected to deliver the step-change in organisational efficiency described in the framework document.

Contributions to the review have reported that delegation frameworks, especially for non-financial matters, are often unclear leading to decisions moving up the hierarchy. We have described the decision-making culture and the structure of the executive committee in previous sections. These factors all combine to make leadership in this context difficult but not impossible.

The review notes that responsibility for the delivery of several business-critical reform programmes sits with individuals and whilst this may be appropriate it is important to recognise that collective ownership of the challenges is also required across the senior leadership of UKRI.

The board, CEO and Executive Committee are all aware of the challenges we have described and will need to provide clarity, appropriate delegation and empowered leadership across the organisation.

## Culture

Commenting on an organisation's culture from the outside is a challenging task. Nonetheless, the review received numerous comments about the influence of culture, or cultures, within UKRI, and the importance of cultural change to achieving many improvements envisaged by this review.

As with any merger or coalition, UKRI faces the task of creating an appropriate culture and related behaviours whilst retaining beneficial elements in and from each council. We have heard that elements of the cultures are influenced by the background experience of leaders and staff. For example, some previously from academe, or the Civil Service. Respondents have compared UKRI's culture to that of these wider professional communities, commenting on the number of committees, the desire for consensus in decision-making, or the tension between hierarchy and empowerment. Different backgrounds may also contribute to siloed working between different parts of UKRI. Silos are beginning to break down and a unified UKRI identity starting to develop but it remains a work in progress.

Whilst it is neither possible nor appropriate to make firm recommendations on culture, we feel it is important to acknowledge that many respondents to the review make reference to culture and the importance of cultural change, acknowledging that it is an important but longer-term objective of UKRI's reform efforts.

## Interdisciplinary research and innovation

The UKRI framework document sets an objective to ‘ensure better prioritisation of resources, especially for the best interdisciplinary and cross-cutting research, as well as longer term investment in research infrastructures.’

While there are examples of this across the organisation, the potential for interdisciplinary research has not been fully realised. The most successful example is the ISCF which put new money into the system to support inter-disciplinarity. In practice, with most councils’ budgets committed into future years and systems that limit cross-council working, UKRI is unable to maximise the full potential for interdisciplinary research or transform the collective UK approach to this outside of specific programmes such as the ISCF.

The 2021 SR settlement gave UKRI greater flexibility in their approach to funding multi and interdisciplinary research by removing the ring-fence around programmes like the ISCF and SPF. New cross-cutting funds will now be allocated through a shared pool with decisions on prioritisation and spend made by UKRI.

The multi-year settlement should allow UKRI to embed this new approach and there are already signs of this, for example there are plans for councils to pool funding for talent development and interdisciplinary research over the SR period. In line with the recently published UKRI Strategy, UKRI should continue to remove these barriers, in particular exploring how existing council budgets can be used to achieve shared objectives and identify other areas where pooling of budgets would be advantageous. Creating more bespoke funds for these shared objectives may be an effective near-term solution, but the goal should be to enable long-term changes in the way core council budgets are delivered.

The review has three observations regarding UKRI’s approach to innovation. Firstly, innovation and engagement with business is done to varying degrees across UKRI and not only through Innovate UK. However, it seems this is not fully understood or appreciated outside the organisation. The second point is that the advantages of having Innovate UK within UKRI have not been fully realised. With the exception of specific programmes such as ISCF we note that there have been examples and pockets of joint working between councils and Innovate UK, however this was often driven by passionate individuals and not by a strategic plan. During the course of the review, we noted and welcome some changes in this regard with plans for greater cooperation across UKRI. The third point we have heard from contributors is that UKRI has established mechanisms for engaging with small business but is yet to develop effective processes for engaging with larger businesses.

The challenges in structure, interdisciplinarity and systems can combine to have greater negative impacts on efficacy. The review heard examples of cross-council initiatives to harmonise processes that took up to two years to simply standardise application forms and align timelines. Strategic leads for cross-council priorities do not have the authority to drive council-wide initiatives. The challenges can be illustrated by a cross-council portfolio of projects administered primarily via spreadsheets and PDF applications forms sent to inboxes that are manually sorted.

The review's observation is that the potential to make the whole greater than the sum of the parts by pulling through research into development and commercialisation is not being maximised.

## Institutes, centres and Catapults

UKRI funds a large number of research institutes and centres – over 50, but exact numbers are difficult to assert as the definition of a research institute varies. These include institutes that are managed directly by UKRI and staffed by UKRI employees, such as the British Antarctic Survey and Laboratory of Molecular Biology. Others are independent institutions where UKRI is the largest individual funder, for example the John Innes Centre or the industry-focused Catapult centres. Institutes form a critical part of the UK's research architecture and fill a gap for medium-to-large research programmes and mission-focused research that few universities are able to undertake.

Results from our survey of these institutes suggest that they have seen minimal changes as a result of the creation of UKRI, and possibly an increase in bureaucracy. Some of this arises from additional approvals required at the UKRI level on top of individual councils. For institutes within UKRI, it also arises from attempts to harmonise policies across the organisation which may not be appropriate for specialist technical institutes, although UKRI does enable exceptions where necessary. These institutes also face challenges due to public sector controls discussed in the accountability section.

Institutes face many of the same challenges described above for PSREs in accessing funding. Applying for grants for specific research projects outside their core funding is subject to the challenges of the 80% of full economic costs that most UKRI programmes provide. This policy was designed with universities as the intended funding recipients and disadvantages researchers in institutes who lack alternative funding streams. This can make it harder for institutes to collaborate with researchers in other organisations and reduce the overall impact of RDI spend.

## Impact

UKRI funds high-quality research, oversees world leading research facilities, funds talent development across the research career pipeline, supports important national and international research collaborations and helps small businesses explore the commercial potential of new knowledge and innovation. Through public documentation such as annual performance reports, UKRI highlight their role in maintaining and building UK RDI capacity. Between 2018 and 2021, UKRI awarded more than 52,800 grants with a combined value of more than £22.5 billion and UKRI-funded research publications were cited 2.6 times more than the global average.<sup>3</sup>

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<sup>3</sup> Source: UKRI Annual Report 2020-21

UKRI's performance during the COVID-19 pandemic is an example of the organisation at its best, delivering societal outcomes despite the issues and challenges discussed above. In January 2020, when governments and markets were mostly ignoring the virus, UKRI, with the NIHR, started to fund research into it. They were faster to respond than similar organisations in other countries. Although initial research was biomedical, once society-wide effects became apparent, UKRI was able to fund a wide range of research across disciplines to meet the needs of pandemic response. Along with the NIHR, UKRI played an essential role in funding vaccine development and the research base supported by the councils over decades meant the UK was in a position to play a leading international role in response to the pandemic.

Many of UKRI's successes beyond the core business of the councils have come through dedicated programmes such as the ISCF (£3 billion) and SPF (£830 million). Contributions to the review have highlighted how these funds facilitated outcome-focused interdisciplinary research to tackle complex challenges, from mapping every cell type in the human body to research to understand and boost productivity in the UK with a regional and global lens.

## Communication

Despite these successes, the review notes that the outcomes and impact of this activity and investment is often not communicated effectively and therefore is frequently not well understood by key stakeholders, including those within government. This is related to data challenges discussed elsewhere in this report. UKRI needs to be able to produce high-quality, timely datasets in order to provide assurance to government and evidence for effective decision-making.

Much of UKRI's current communication of what it does is output focused. Whilst recognising the challenges of demonstrating evidence of impact and outcomes in RDI, UKRI could and should make efforts to monitor and report outcomes of their activities more clearly and routinely.

The way UKRI-funded research informs wider policy debates in important areas from net zero to artificial intelligence, and the success stories from the local to the global should be heard in the corridors of government and celebrated widely. To allow a strategic conversation about the future of UKRI requires an understanding of what it does well now as well as what needs to change so that it can fully contribute to UK RDI ambition.

UKRI has an objective to 'be the unified voice for continued strengthening of the UK research and innovation system, nationally and internationally'. Contributions to the review have stressed that this is a difficult ask, partly because being a 'unified voice' is a vague concept. At its best, UKRI acts as a unified voice when advocating for RDI investment such as during the SR process, however there are several areas where UKRI's stakeholders may have different views and it is rightly unable to speak as a unified voice for its communities recognising it encompasses research intensive universities across the UK, the English higher education system, research institutes and varying business and enterprise with RDI interests.



## Equalities

UKRI's management take their responsibilities under the public sector equality duty seriously and have a robust set of governance structures in place, overseen by a central programme board. Equality, diversity and inclusion (EDI) are seen as important by UKRI's leadership. UKRI have recently consulted on a draft EDI strategy primarily focused on shifting the practices, behaviours and culture of the research sector, based on evidence summarised in independent reports commissioned by UKRI. This work is at an early stage, but the ambition and direction of travel seem positive. UKRI recognise that, whilst they hold some levers to change culture through funding conditions, UKRI can also play a role as an advocate, convener and facilitator for the sector.

## Place

The question of how UKRI activities and spending impacts the four nations and sub-national regions is important, but surprisingly difficult to answer. There is a lack of clear, consistent, and up-to-date information due mainly to the fragmentation of UKRI data management systems and processes. UKRI have only recently produced spend data for FY2020/21 for the English regions (Table 2) and the four nations (Table 3). These data mask sub-national dynamics outside England and do not take into account the impact of quality-related research (QR) funding and devolved equivalents. The table compares spend to population, however the data can look different depending on the choice of comparison (e.g. GDP, number of universities, private R&D spend)<sup>4</sup>.

The data shows that much of the spending is focused on London and the south-east of England whereas much of the rest of England, Wales and Northern Ireland get less funding. Notably Innovate UK spend more outside the Greater South-east – especially in the West Midlands, building on existing regional business innovation strengths in the area.

Contributors and our analysis suggest a variety of reasons behind UKRI's current geographical distribution of spending. Much of UKRI's spend is distributed on the basis of research excellence, where funding is distributed to the highest performing universities which have clustered around London and south-east England. Innovation spending, as illustrated by the Innovate UK distribution (Table 2), shows a broader spread, following high performing and spending sectors such as engineering and manufacturing in the Midlands as well as research intensity in London and the south-east. These regional differences are exacerbated by longer term investment decisions on infrastructure which tend to flow to where existing institutions, talent and skills have clustered. This agglomeration of research spending is similar to that in many other high-income nations.

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<sup>4</sup> See discussion in Chaytor, Gottlieb & Reid (2021) 'Regional policy and R&D: evidence, experiments and expectations', available at: [www.hepi.ac.uk/2021/05/13/regional-policy-and-rd-evidence-experiments-and-expectations/](http://www.hepi.ac.uk/2021/05/13/regional-policy-and-rd-evidence-experiments-and-expectations/).

The levelling up agenda and the objectives set out in the white paper to ‘deliver economic, social, and cultural benefits from research and innovation to all of our citizens, including by developing research and innovation strengths across the UK...’, means that UKRI may need to reconsider their approach to decision-making in order to meet wider government objectives on this issue while supporting the quality and strengths of the UK research base.

**Table 2: Proportion of research council and Innovate UK regional spend in England regions FY2020/21**

Region and population %	Research councils	Innovate UK	UKRI total
North-east (4%)	2.7%	3.7%	3.4%
North-west (11%)	7.8%	3.2%	7.4%
London (13.4%)	21.6%	15.4%	22.1%
East Midlands (8.9%)	4.7%	8.4%	6.5%
South-east (13.8%)	22.9%	20.6%	24.9%
South-west (8.4%)	5.2%	9.1%	7.1%
East of England (9.4%)	12.5%	7.7%	12.3%
West Midlands (7.2%)	4.3%	20.6%	10.1%
Yorkshire and the Humber (8.1%)	6.5%	3.4%	6.2%
<b>Total (£ million)</b>	<b>3,763</b>	<b>1,526</b>	<b>5,289</b>

Table shows the proportion of research council and Innovate UK spending in England in FY2020/21 (and a combined total of the two). Figures include grants awarded to universities and research institutes including research grants, training grants and fellowships as well as research infrastructure capital. Innovate UK spend includes innovation grants as well as funding which is spent on the national network of Catapult centres, Knowledge Transfer Network and Enterprise Europe. Data excludes Research England QR funding data, devolved administration equivalents or any other centrally managed UKRI spending from programmes such as Strength in Places.

Source: UKRI and ONS.

## Devolved Administrations

The review sought and received evidence from academics and policy experts in the devolved administrations (DAs). The approach and engagement of the current leadership has been well received across the DAs, with an increase in proactive engagement from UKRI over the last year through workshops and other engagement activities. However, the inclusion of Research England in UKRI will always raise questions and perceptions of UKRI's remit. This can be managed to some extent and will matter to varying degrees depending on the performance of HEIs and the research sector in all four nations.

Respondents to the review noted an imbalance in the levels of funding awarded by UKRI to the DAs. Scotland tends to receive similar levels of UKRI funding to England in per capita terms, receiving 7.4% of research council and Innovate UK funding in FY2020/21. However, Wales and Northern Ireland underperform with Wales receiving 2.4% and Northern Ireland 0.9% of research council and Innovate UK funding in FY2020/21.

The reasons for this are similar for the regional differences described above and the review found no evidence of a specific English bias. Major cities like Edinburgh and Cardiff still receive a majority of public money flowing to the DAs and some of our respondents have suggested UKRI's levelling up efforts should consider regions of the DAs outside of the major cities.

Another point raised during the review was that the DAs do not have any explicit representation in UKRI decision-making, for example mandated seats on boards. The HER Act states that 'The Secretary of State must, in appointing the members of UKRI, have regard to the desirability of the members including at least one person with relevant experience in relation to at least one of Wales, Scotland and Northern Ireland'.

There has been representation on UKRI boards from the DAs without this being mandated, although not at the level of one per nation. It is the view of the review that mandating specific national representation on the board or councils is less likely to have significant impact on research activity in the DAs. The current process which assesses potential board members based on their expertise and gives consideration to DA experience seems appropriate. UKRI should continue working with DA funding bodies and researchers to understand regional needs and research strengths, especially when considering their response to regional policy following the Levelling Up white paper.

**Table 3: Research council and Innovate UK spend in the UK FY2018/19 to FY2020/21**

Nation	UKRI spend on grants to HEIs, research institutes and businesses in the four nations (£ million)*					
	2018/19		2019/20		2020/21	
	Research councils	Innovate UK	Research councils	Innovate UK	Research councils	Innovate UK
<b>England</b>	2,111	873	2,930	1,088	3,319	1,405
<b>Wales</b>	66	30	66	27	86	62
<b>Northern Ireland</b>	25	11	25	13	29	19
<b>Scotland</b>	248	57	279	49	329	62
<b>Total</b>	<b>2,450</b>	<b>971</b>	<b>3,300</b>	<b>1,177</b>	<b>3,763</b>	<b>1,548</b>

Table shows research council and Innovate UK spending between FY2018/19 and FY2020/21. Figures include grants awarded to universities and research institutes including research grants, training grants and fellowships as well as research infrastructure capital. Innovate UK spend includes innovation grants as well as funding which is spent on the national network of Catapult centres, Knowledge Transfer Network and Enterprise Europe. Data excludes Research England QR data, DA equivalents or any other centrally managed UKRI spending from programmes such as Strength in Places Fund.

Source: UKRI

## Recommendations

The current composition of UKRI should remain with the transformation programmes used to drive further integration and harmonisation across the organisation. UKRI's recent five-year strategy is an opportunity to demonstrate the effectiveness of this model in bringing together disciplines to tackle new and more complex challenges.

The perceived tensions between research excellence and place-based approaches to RDI investment need to be worked through and UKRI is in an important position to shape and deliver the UK's approach to this, working with the sector and policy leads across government.

- BEIS and UKRI should continue with plans to maximise the integration of UKRI into one organisation, working within the existing legislative framework.
- UKRI should continue to explore new models and innovative funding approaches to promote outcome-focused interdisciplinary research.

- UKRI should improve its analysis and communication of outcomes and impact. Across the portfolio of work there are strong examples, but the systems challenges incentivise output reporting.
- UKRI should move towards more timely publication of operational and spend data.
- UKRI should set out how it intends to respond to the objectives set out in the Levelling Up white paper.

# Annex

## Annex A – UKRI Independent Review Terms of Reference

Launched in April 2018, UKRI (UK Research and Innovation) is a non-departmental public body sponsored by the Department for Business, Energy and Industrial Strategy (BEIS). UKRI brings together:

- The 7 disciplinary research councils
- Research England, which is responsible for supporting research and knowledge exchange at higher education institutions in England
- The UK's innovation agency, Innovate UK

UKRI has been in operation for close to 4 years and so it is right that an independent assessment is made of how the organisation is performing, to provide assurance and to offer fresh challenge.

Departmental reviews of public bodies have generally followed the Cabinet Office Tailored Review process, however this review is part of a pilot of an adaption of that process as an independent review of UKRI.

### Goals

The review of UKRI will provide scrutiny of performance, assurance that UKRI is achieving the core objectives that led to its creation and an assessment of its readiness to contribute to the UK government's ambitions for the future of research and innovation.

### Purpose and scope

The review will consider the aims of UKRI – especially its strategic objectives - set out in the 2018 framework document. Following Tailored Review guidelines the review will address efficacy, efficiency, accountability and governance.

Addressing efficacy, the review will consider whether:

- UKRI has the right structure and delivery model for the functions it performs
- UKRI contributes effectively to the delivery of wider government objectives and is prepared to contribute to future ambitions
- the balance between accountability and independence is correct
- UKRI delivers effective outcomes for all citizens and stakeholders
- the board, Sponsoring Department and Ministers have the right data to inform decisions
- performance metrics are clear and accurate

Addressing efficiency, the review will consider whether:

- goals on efficiency from UKRI's creation have been met or are on track to be met
- there are plans and capacity to deliver more efficiently and effectively
- UKRI measures of performance compare well with benchmark organisations
- management organisation and processes are efficient
- IT infrastructure is fit for purpose and delivers efficiencies
- the organisation has plans and capacity/capability to invest further in IT infrastructure
- across all functions, UKRI has the skills it needs for the future

Addressing accountability and governance, the review will address whether:

- lines of accountability are clear and effective between UKRI and its sponsoring department (BEIS)
- strategy and policy responsibilities are clear between these organisations and with wider government departments
- accountability and governance are effective within UKRI and its constituent organisations
- the board of UKRI is effective in leading the organisation

The review will address other avenues pertaining to the themes above as they emerge.

### Timing

We envisage that the review will publish a final report by Summer 2022.

### Governance

The review will report to the Minister for Science, Research and Innovation.

The review will be led by Sir David Grant, supported by a secretariat within BEIS.

The review will consult widely, including advice from devolved administrations.

The review recognises that other related reviews are in progress and will consult with those reviews.

In conducting investigations and making recommendations, the review will take account of the requirements of the Public Sector Equality Duty.

## Annex B – Full table of recommendations

Cabinet Office Standard	Recommendations
<p><b>Efficiency</b></p>	<p>In delivering its efficiency plan, UKRI should aim for simplicity, integration, harmonisation and agility of its systems. These should be objectives of any monitoring framework or performance indicators used to monitor progress and delivery.</p>
	<p>In delivering its efficiency plans and developing its operating model, UKRI should clarify the roles and responsibilities between the Corporate Hub and the councils. This process should ask if the right functions are centralised or devolved and should explore appropriate reductions in size, for example in the Corporate Hub</p>
	<p>In delivering its efficiency plans, UKRI will need to invest in capability, IT systems and infrastructure in the short term that will improve efficiency in the long term, ensuring that the ambition set out in the UKRI DDaT Strategy 2020-23 is implemented. This will require UKRI to ensure that it retains the right technical and project delivery capability across the organisation.</p>
	<p>UKRI should appoint a chief information officer to drive the coherence and delivery of both SHARP and SBF to ensure the systems are able to interface appropriately and interdependencies and risks between the programmes are appropriately managed and mitigated. They should also be responsible for a coherent data strategy across the organisation.</p>
<p><b>Governance</b></p>	<p>The board should actively engage more with the operational risks and challenges discussed in this review. Matters of UKRI’s performance should be discussed at the full board level and not only delegated to the ARAP Committee.</p>
	<p>UKRI should review the ways of working of the Executive Committee to improve the speed of decision-making and efficient use of executive time. Clarity on the decision-making process should be reflected in the committee’s terms of reference with the understanding that ExCo decisions are binding for the collective.</p>
	<p>The relationship between the council members and the board should be reviewed with the aims of effectiveness, simplicity and clarity.</p>
<p><b>Accountability</b></p>	<p>BEIS should set out a clearer set of fewer objectives and agree key performance indicators for monitoring them.</p>



Cabinet Office Standard	Recommendations
	<p>Government should set out its routine data and information requirements from UKRI with clarity on management information needs, frequency and format.</p> <p>Should the Higher Education and Research Act 2017 be reviewed, consideration should be given to the number of ministerial appointments within UKRI, for example removing the council executive chairs from the list.</p> <p>The process for ministerial engagement on appointments at UKRI should be reviewed to improve the efficiency and timeliness of the process. For example, executive chairs could be removed from the Public Appointments Order in Council. Scrutiny should be carried out at the appropriate stage such that shortlisted candidates are considered appointable in principle.</p> <p>The relationship between RDI policy and delivery should be made more explicit and UKRI's role as a delivery organisation clearly set out.</p> <p>BEIS and UKRI, working with relevant departments, should agree a method of feeding government needs and priorities into UKRI to shape activities as appropriate.</p>
<b>Efficacy</b>	<p>BEIS and UKRI should continue with plans to maximise the integration of UKRI into one organisation, working within the existing legislative framework.</p> <p>UKRI should continue to explore new models and innovative funding approaches to promote outcome-focused interdisciplinary research.</p> <p>UKRI should improve its analysis and communication of outcomes and impact. Across the portfolio of work there are strong examples, but the systems challenges incentivise output reporting.</p> <p>UKRI should move towards more timely publication of operational and spend data.</p> <p>UKRI should set out how it intends to respond to the objectives set out in the Levelling Up white paper.</p>

## Annex C – List of advisors to the review

Advisor	Organisation
<b>Professor Graeme Reid</b>	Chair of Science & Research Policy, University College London
<b>Professor Hywel Thomas</b>	President, Learned Society of Wales
<b>Sir Adrian Smith</b>	President, Royal Society
<b>Sir Jim McDonald</b>	President, Royal Academy of Engineering
<b>Dame Sally Davies</b>	Master, Trinity College Cambridge, ex-UKRI board member
<b>Lord David Willetts</b>	Former Minister of State for Universities and Science, UKRI board member
<b>Professor Shearer West</b>	Vice-Chancellor, University of Nottingham
<b>Sir Harpal Kumar</b>	President, GRAIL Europe, ex-UKRI board member
<b>Professor Anne Ferguson-Smith</b>	Pro-Vice-Chancellor, University of Cambridge
<b>Professor Paul Boyle</b>	Vice-Chancellor, Swansea University

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