Independent Review of Research Bureaucracy

Final Report

July 2022

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Foreword

Just over a year ago, I was asked to lead this independent Review of Research Bureaucracy and tasked with identifying any unnecessary bureaucracy across the research system which has become a barrier to effective working and efficiency. I am now pleased to present the final report, which sets out the Review's findings and recommendations. This Report builds upon our interim findings, published in January 2022 where we identified a set of principles underpinning the approach to tackling research bureaucracy and identified key facets of the system, including application processes, assurance and in-grant management.

I am incredibly grateful to all those who contributed to the Review, including the Challenge Panel and Funders Group. We heard from people and organisations across the entire UK research system. There is no doubt that unnecessary bureaucracy has a detrimental impact on people working in research. The Review has concluded that there are a number of areas where tackling bureaucracy could make a difference to both productivity and culture in research organisations.

Our Terms of Reference tasked us to ensure that bureaucracy in the research system supports and enables a broad range of excellent research, rewards and incentivises diverse career progression, promotes a culture of transparency and research integrity, and demonstrates impact so we can make a long-term case for investment in research and innovation. The foundation for the Review is that our processes must be sufficiently robust to safeguard the use of public funds. Whilst our scope was broad, we were unable to examine bureaucracy arising from R&D and innovation funding for businesses, other than where universities and research organisations interact with Innovate UK. In addition, we recognise that there are other factors which have an impact on levels of bureaucracy but which were out of our scope of this Review, including the fact that Government Departments and funding organisations have annual budgets which forces them to manage their budgets tightly.

The Review recommendations demonstrate that the potential for change is considerable. The research system is complex and multi-faceted - the range of disciplines, types of research and funding approaches are a key feature and strength of the UK system. However, this complexity means that there is often no single 'solution' that can be applied everywhere. With this in mind, in developing the Review's recommendations, we have sought to avoid being overly prescriptive. In many cases, it will be for key actors in the research sector to develop the precise solutions following this Review. I am also keen that this Review should encourage a culture of greater innovation and experimentation within the system when it comes to making bureaucracy as light touch and as effective as possible.

I am putting these recommendations to government with a view to highlighting the potential for significant change in the system. It will be for those responsible for implementation to ensure they reflect on these recommendations and deliver on the spirit of this Review. And this is important because they will be accountable for driving change.

The publication of this report is a first important step towards a reset. This now needs to be taken up by government, funders, research organisations, researchers, technicians, research managers and others. I have also commented on the need to keep unnecessary bureaucracy at bay in the future. There is a job for government and research funders to be crystal clear about the rationale for the introduction of any new requirement. Closer working with the sector would help to identify the optimal approach to implementation where new requirements cannot be avoided.

I look forward to seeing the Government response that will follow publication of this final report. This will doubtless set out clear commitments and a process to address the Review's recommendations.

And finally, this report is only possible because I have had exceptional service and support from the Review team, who have worked incredibly hard over the last year and have ensured this is such a strong and comprehensive basis for the work that now needs to be done.

Professor Adam Tickell

Vice-Chancellor, University of Birmingham

Executive Summary

Unnecessary bureaucracy diverts and hampers research, and the work of individual researchers and research teams. Ultimately, it diminishes the returns from research funding. This is why the Prime Minister's package of science announcements on 27 January 2020 included:

…launching a major review of research bureaucracy and methods, including unnecessary paperwork, arduous funding applications and research selection processes. This will free up and support the best researchers to focus on ground-breaking, ambitious and meaningful research…

Following this, Professor Adam Tickell, now Vice-Chancellor of Birmingham University, was asked to lead this Review which launched in March 2021.

Seven Principles

The Review developed the following seven principles for cutting unnecessary bureaucracy:

Harmonisation	Reducing the volume of administration through the use of common processes between different funders to make essential work easier.
Simplification	Reducing the complexity of individual processes to address unnecessary bureaucracy.
Proportionality	Ensuring that the obligations placed on researchers and institutions are commensurate with the size of the risk or reward.
Flexibility	Supporting and embracing excellence wherever it is found and not excluding research that does not fit within narrowly defined parameters.
Transparency	Communicating the rationale for systems and processes which have a bureaucratic burden.
Fairness	Developing approaches to systems and processes that support fairness, rather than erode it.
Sustainability	Cutting bureaucracy in ways that avoid destabilising the system to deliver a more efficient system over the long term.

These principles are embedded in the Review recommendations and should inform the government response and future action across the sector.

Key Findings and Recommendations

The Review has focussed on aspects of the research system where there was consistent feedback on the need and scope for change. Perhaps inevitably, this has emphasised research funders' systems, processes and assurance. There are areas where cutting bureaucracy will involve recognising trade-offs and there will need to be careful consideration of how best to manage these. However, it is clear that universities and other research organisations, and individual researchers and their groups, must also play their part in driving efficiencies and delivering on the potential outlined in this Review.

The Review has identified the following six themes where there is scope for significant positive change:

Assurance

This comprises the information provided to funders and regulators to demonstrate that research is carried out in accordance with funding terms and conditions. The principle of 'ask once' should be paramount throughout the assurance system.

Findings

The Review has identified the following key issues with regard to assurance bureaucracy:

- Overall, there are too many requirements relating to assurance bureaucracy and they are often complex and duplicative;
- Uncertainty in the sector about how to manage assurance issues contributes to risk aversion and over-compliance in institutions' internal assurance processes;
- A lack of trust, coordination, partnership working and knowledge exchange on assurance throughout the research sector;
- An incremental growth of bureaucracy – changing priorities have meant that, over time, new assurance requirements have been introduced. However, few attempts have been made to remove or reduce redundant assurance requirements.

Recommendations

To address these issues we recommend that:

- Government departments that fund research should work together to ensure there is greater alignment of assurance approaches, removing duplication. UKRI should take forward action to achieve greater alignment and coordination across UKRI Councils;
- Government should facilitate closer working with other funders, including charity funders, to increase coordination and reduce assurance burdens on the sector;
- Funders and research organisations should develop collective approaches and resources to support institutions in managing their assurance processes; and
- Funding bodies should explore the function and benefits of self-certification and/or earned autonomy for institutions with a robust track record of assurance.

Applying for Funding

Funding applications were one of the most cited causes of unnecessary bureaucracy by organisations and individuals in the Review's call for evidence.

Findings

- The Review heard concerns from researchers and research managers about the length and complexity of application processes;
- The overall success rates for research grant applications are low - often around 20%. Given this, single stage processes which require applicants to provide all the information at the outset mean that for a majority of applicants this information is unused and ultimately wasteful;
- Two stage application processes may deliver improvements across the system but may present funders with resourcing challenges or take more time and UKRI and others are piloting these approaches now. The Review received a range of views on how best to manage the prospect that more streamlined application processes could lead to higher numbers of applications;
- There is already evidence of funders tackling these issues in a variety of ways, but there is scope to go much further.

Recommendations

To address these issues we recommend that:

- Funders should experiment with application processes to reduce burdens for applicants, (including two-stage application processes) where the information required increases in line with the likelihood of being funded;
- Funders should work together to increase standardisation across their application processes in terms of the use of language and the questions they ask where appropriate. UKRI should facilitate this across Research Councils in the first instance;
- Funders should review what adaptations will be needed to assessment processes to take account of changes to application models. This should include the information necessary for national security assessments alongside innovative approaches from the use of peer reviewer triage to limit the number of applications requiring full peer review to experimenting with new models such as randomly allocated funding;
- Funders should ensure that application processes support their commitments to equality, diversity and inclusion;
- Funders should remove the requirement for letters of support from applications in most circumstances.

Grant Implementation and In-Grant Management

Given the inherently unpredictable nature of research, there are a number of areas where more flexibilities may be beneficial, once a research project is underway:

Findings

- The period between issue of award letter and start of a research project can be too short, leaving little time for procurement, recruitment and financial administration;
- Conversely, the time taken to get agreement from research funding organisations to changes to a project or to the profile of funding can be too long;
- It is often unclear to funding recipients what the purpose is of information requested in project monitoring;
- Contracting and collaboration agreements are a major source of delays because many research organisations prefer to use their own version rather than standard formats such as Brunswick or Lambert Agreements.

Recommendations

To address these issues we recommend that:

- Funders and recipients should ensure there is adequate time for the completion of all necessary tasks (including providing assurance information) between the issue of the award letter and the start of the project;
- Universities and research organisations should wherever possible use standard templates for contracts and collaboration agreements, recognising that this would not just be faster, but would also facilitate third-party collaborations;
- Wherever possible, funders should build in flexibilities including no cost extensions within manageable parameters to reduce delays in addressing project changes and the number of queries funders receive;
- Ethical and other regulatory approvals should be the responsibility of the lead partner on a multi-institution research project and counterparties (including in the NHS) should not require additional duplicative approvals.

Digital Platforms

Every aspect of research bureaucracy depends on digital platforms and the extent of the sector’s reliance on them can heighten the impact of any flaws in their design or function.

Findings

- There is a challenge in creating digital platforms that are capable of supporting institutional diversity and keeping pace with change in UK research without being overly complex;

- There is scope for greater harmonisation of digital platforms. However, this will also be limited to a degree by the differing nature and objectives of individual funders;
- Greater inter-operability and data sharing between systems could significantly reduce bureaucracy;
- There is currently a window of opportunity to deliver vastly improved services across key funders as UKRI, NIHR and Wellcome amongst others move away from older platforms;
- Funders are continuing to drive forward programmes to reduce bureaucracy in their systems and processes. Through the Simpler and Better Funding programme, UKRI is piloting a new digital platform – UKRI Funding Service - which from 2024 will deliver end to end functionality for all Research Council grant applications.

Recommendations

To address these issues we recommend that:

- For the higher education sector, Jisc should lead on the creation of sector-wide groups responsible for overseeing the development and further integration of the research information ecosystem, including research management data;
- Funders, universities and regulators should ensure interoperability and improved data flows are considered as integral to the design and implementation of any new digital systems;
- For existing systems, approaches to improving the flow of data between different platforms should be explored using, for example, application programming interfaces, point to point integration and machine learning.

Institutional Bureaucracy

There are strong links between bureaucracy related to requirements of funders, regulators and government and each research institution's own systems, processes and approaches. Research organisations, particularly universities, need to address their own unnecessary bureaucracy to support the Review's aim of freeing up researchers to focus on research.

Findings

- Institutional bureaucracy was the most cited source of unnecessary bureaucracy by individuals in the Review's call for evidence;
- There is a culture of risk aversion within universities. Whilst much of this is understandable, it has a negative impact on the processes for decision making;
- Risk aversion has, in some cases, led to unnecessary approval hierarchies which can cause major delays and operational difficulties;

- Use of generalist professional services department to provide key elements of research support – for example, legal services – can lead to longer delays because of a lack of familiarity or confidence with handling research grant agreements or contracts.

Recommendations

To address these issues we recommend that:

- Wherever possible, research organisations should examine the feasibility of delegating research-related approvals to research managers and officers who are closer to research;
- Universities UK should bring universities together to find new platforms and methods for working together on research management issues such as increasing risk appetite, streamlining burdens including through greater standardisation;
- If they do not already have them, research organisations should establish “Trusted Funder” policies to enable projects to proceed at risk, within certain parameters.

Communications

There are a number of communications issues in relation to unnecessary bureaucracy. Funders can address antipathy towards necessary bureaucracy by communicating more clearly why it is required and what they do with the information. A lack of clarity can lead to “gold plating” by institutions who are trying to manage regulatory and other requirements.

Findings

- Frustration with necessary bureaucratic requirements may be related to how widely the rationale and role of particular R&D funding systems and processes are communicated and understood;
- There is also scope to increase awareness of existing tools and methods that can reduce bureaucratic burdens, e.g. persistent digital identifiers;
- Uncertainty about the introduction and approach to implementing new requirements could be addressed through proactive communication and engagement by funders and regulators;
- In addition, the review heard that government and funders could go further to engage with the sector on the specifics around implementation of new requirements to identify the most efficient approach;
- There were a series of specific concerns with regard to the approach to communications with the sector including use of jargon and inconsistent language, working to ensure communications are received by the right audiences (for example, not just Vice-Chancellors or Pro Vice-Chancellors of Research) and timeliness in relation to submission deadlines.

Recommendations

To address these issues we recommend that:

- Government, funders and regulators should undertake wide ranging consultation with research organisations prior to the introduction of new regulatory or other requirements;
- Government and funders should proactively communicate on new and emerging regulatory issues. The Research Collaboration and Advice Team (RCAT)[i] model providing support on national security matters is good practice in this regard;
- Funders should ensure important messages about research are sent to research office contacts as well as Vice Chancellor/Pro-Vice Chancellor Research.

Implementation and keeping bureaucracy at bay in the future

A government response to this Review is expected to follow in due course. This will set out more detail on how the issues identified in this Review will be tackled. As part of this, there should be consideration of the governance and other arrangements needed to ensure the longer term change required to fully deliver on this vision is in place. There should also be an ongoing discussion about monitoring and evaluation and how to keep bureaucracy at bay in the future.

Introduction

Research bureaucracy consumes large amounts of time, energy, and money. Much of this collective effort is necessary and contributes to the health and vibrancy of UK research. In a system that depends on hundreds of thousands of daily interactions across disciplines, organisations, and borders, and which benefits from billions of pounds of public funding every year, sophisticated processes and support are essential.

However, the Review has found that bureaucracy in research currently goes beyond the essential. If research is to fulfil its purpose, the systems and processes that underpin it must be both rigorous and efficient. If bureaucracy is limiting the progress, quality, or impact of publicly funded research, then public money is being wasted.

The challenge, therefore, is to ensure that research bureaucracy continues to provide the confidence that public and charitable funds are being properly spent, that laws and regulations are being adhered to, and that the UK has a healthy and fair research culture while simultaneously reducing the burden of bureaucracy on people and institutions. Researchers must feel empowered and supported by administrative infrastructure rather than constrained or disheartened by it.

To achieve this, we must ‘hide the wiring’ by making processes more efficient so that they do not impinge on research and remove processes or requirements that are unnecessary, ineffective, or obsolete.

The UK research system consists of hundreds of research organisations, funding bodies and ancillary institutions that vary in their size, focus, and internal structures. This diversity, while an undoubted strength, enlarges the overall bureaucratic burden by increasing the volume and complexity of research administration. Extensive co-operation across the research system and an understanding of the very different needs of the organisations within it will be crucial if we are to achieve significant, sustainable reductions in bureaucracy. We also acknowledge that the Review's findings and recommendations will have different implications for different types of organisation, including funders, regulators, universities, NHS Trusts, and public and non-profit research organisations.

This variety of organisations is matched by a similarly wide range of research funding models. Direct government funding (such as Quality-Related (QR) funding in England, Wales and Northern Ireland, and the Research Excellence Grant and Research Postgraduate Grant in Scotland) and competitive project funding (whether ‘responsive mode’ or challenge-led) have very different formats and requirements. The Review does not comment on the appropriate balance between these different models or the efficacy of the dual support system. However, it notes that core block-grant funding, which is used at universities’ discretion to fund a broad range of activities, is typically a comparatively ‘low bureaucracy’ mechanism.

The recommendations of this Review pose a system-wide set of challenges. However, the incentives for reducing bureaucracy are clear. If the UK is to further its status as a science

superpower, we must eliminate unnecessary barriers and fully enable the pursuit of ambitious, ground-breaking research across our institutions.

Reducing research bureaucracy will support a key objective in the Government's Integrated Review of sustaining strategic advantage through science and technology. Research and innovation are globally connected and competitive endeavours and the problem of excessive bureaucracy in research is not confined to the UK. By reducing bureaucracy, the UK has an opportunity to strengthen its attractiveness to mobile international researchers, boost the productivity and competitiveness of our research system, and drive our long-term economic growth.

The Review has had a UK-wide remit. This report has benefited from the close engagement and input of the Devolved Administrations, including policy and funding bodies. The recommendations throughout this report are designed to apply across the UK's research sector though their implementation will be subject to the different policy and funding responsibilities of the four nations.

Challenge and Context

This report does not propose the indiscriminate slashing of bureaucracy. Research bureaucracy is an important source of accountability, transparency, quality control, fairness, and safeguards for individuals and institutions. It is needed to demonstrate the proper use of public money and to show that research is delivering an appropriate return on the substantial investment that makes it possible. With this in mind, the report combines proposals for removing or reducing bureaucracy with new approaches to managing essential requirements and processes.

The Review has found that unnecessary bureaucracy exists in every part of the UK research system. It takes many different forms and has a wide-ranging impact on the efficiency and productivity of research. By shaping attitudes to risk, it can influence the type of research that is proposed, funded, and carried out. By imposing additional costs on time, effort, and resources, it can delay the delivery of research or even deter people from embarking on projects in the first place.

Drivers of Research Bureaucracy

Much of this bureaucracy is linked to the changing nature of UK research in the twenty-first century. Our research culture is more ambitious, outward-looking and collaborative than ever. Research institutions have forged partnerships with an astonishing range of public, private and voluntary organisations. These changes have yielded real benefits, particularly in the way that we address major societal challenges. However, they have also introduced additional administrative complexity. As we continue to adjust to this new environment, we must ensure that the bureaucratic tools used to assess, monitor, and regulate research are updated and streamlined.

These new operational requirements have been accompanied by funders and government departments' growing need for information to support research strategy and policy objectives. The importance of detailed data for decisions about thematic priorities, modes of programme delivery and resource allocation is well-recognised, but the methods used to obtain it must be as efficient and unobtrusive as possible.

The absence of an agreed or measurable definition of 'unnecessary' bureaucracy makes it difficult to calculate the financial impact of research bureaucracy. As a result, the Review has not tried to establish its monetary 'cost'; however, it has compiled a large evidence base that reveals the urgent need for action.

Quantifying the bureaucratic burden of research

A few studies have been conducted over the years to get to grips with the administrative burden in research. To provide some context, in the United States the average time taken to write and prepare a research proposal was estimated to be 116 PI (Principal

Investigator) and 55 CI (Co-Investigator) hours and it was found that the time spent on preparing a research proposal, did not impact the chance of success[ii]. Similar research in Australia looking at health-specific research funding found that preparing a new research proposal took researchers 34 days on average, and more time taken did not translate to success[iii]. These studies give an indication of the time needed to write a grant proposal. However, their findings may not be directly transferable to the UK's context due to their narrow focus, the lack of baseline measurement, due to the lack of agreement on what constitutes 'bureaucracy'.

Still, a few recent UK-based studies have indicated similar findings. A survey undertaken by the University and College Union (UCU) in 2016 asked for an estimate of total work time. 18,000 members of the UCU took part. For those under research-only contracts, around one third of their time was spent on research. A variety of tasks take up the remainder - from general admin (7%) to REF activities (2%)[iv]. It should be noted that participants self-reported their behaviour and experiences. These figures did not result from observing behaviour or experiences.

The UCU survey of 2016 also summarised the top 3 contributory factors to changes in workloads over 3-years as reported by contract type:

Contract type	**1st rank**	**2nd rank**	**3rd rank**
Teaching and research staff	Increased administrative work	Widening of duties considered within remit	Student expectations of staff availability
Teaching staff	Increased administrative work	Widening of duties considered within remit	Student expectations of staff availability
Research staff	Widening of duties considered within remit	Increased administrative work	Insecure employment status
Academic related professional services	Widening of duties considered within remit	Increased administrative work	Impacts of reorganisation or restructuring

There was a strong feeling amongst many who engaged with this Review that bureaucracy has significantly increased.

The Review's Approach

The Review was launched in March 2021 with the overriding objective to advise on a substantial reduction in unnecessary research bureaucracy in government and the wider sector, supporting our researchers to focus on research and related activities which contribute to a healthy research base.

The terms of reference for the Review are set out in Annex A.

The Review took a number of approaches in gathering evidence:

a. A range of stakeholder meetings, including virtual roundtables, were held. This helped build the evidence base summarised in the interim report, and in the development of the final report's recommendations;

b. Engagement has spanned the UK. Roundtables involved individual universities, membership organisations and representative groups, and non-Higher Education research organisations. Attendance included researchers, technicians, research managers and others in professional services functions, and academic and institutional leaders;

c. In addition, a call for evidence was published in August 2021 with just over 250 responses received from individuals and some research organisations (see separate annex). A survey of international comparisons was also undertaken through the UK's Science and Innovation Network;

d. Regular discussions were held with key players across Government, including with leads on Research and Development Strategy within Government Departments and with the Treasury, and with Devolved Administrations and funding bodies;

e. Throughout the Review there have been regular meetings of the Review's Challenge Panel and Funders Group.

The Review has not sought to prescribe a set of rules for cutting bureaucracy. It has instead sought to:

a. Identify areas in which the pendulum has swung too far in favour of caution, intrusive scrutiny, or requests for copious information;

b. Recommend changes to specific policies and practices that would reduce the overall burden without lowering standards or removing safeguards; and

c. Establish principles that can guide the design and implementation of future bureaucracy.

The growth of bureaucracy has been described as the accumulation of everyone's good ideas. Bureaucracy is not introduced with the intent of stifling innovation; rather, it is typically a response to an emerging need or challenge that results in new items being added to an

already long list of rules, regulations, and processes. Researchers have no ability to reject additional bureaucracy nor are there routine reviews of the individual or cumulative burdens placed on them. We must therefore find ways to remove or modify specific bureaucratic measures if they no longer serve their original purpose or where they have become redundant.

We must also establish mechanisms to monitor the level of bureaucracy in research and to ensure its growth is checked in the future, without those mechanisms imposing significant additional burdens.

The Review has taken a ‘whole-system’ approach incorporating research organisations, funders, regulators, Government departments, devolved administrations, advocacy groups and professional associations. In taking forward the Review, it has become clear that there is a strong shared commitment to remove excessive bureaucracy. This report is a call to action for the entire sector, to build on this commitment and take forward actions which will achieve lasting change.

Key Issues considered in the Review

Different types of organisation in the UK research system have contrasting experiences and perceptions of bureaucracy. Many bureaucratic processes – such as demand management of funding applications, the simplification of application formats, and the scale and frequency of audits – can have very different workload implications for different institutions. The question of how bureaucracy is distributed and where the burden falls will therefore provoke debate. In proposing reforms, we have resisted the temptation to move bureaucracy from one part of the system to another unless such changes will bring clear improvements in standards or efficiency or if the current burden falls disproportionately on certain institutions. In assigning responsibility for the implementation of its recommendations, the Review has considered the division of roles and resources across the system, the location of relevant expertise, and the needs of research and researchers.

While the report’s recommendations span the full spectrum of research and research management, two areas demand important caveats. International research partnerships, and clinical and health-related research both generate large amounts of bureaucracy. However, caution should guide any changes to their governance and regulation. Both have complex legal and assurance requirements; both involve collaboration between organisations that is necessarily subject to detailed administrative processes and documents; and both demand sophisticated approaches to accessing, storing, and sharing data. The report therefore recognises that not all funding processes or appraisal processes can be standardised. For example, research funded through Official Development Assistance programmes must meet a number of specific tests, including a primary purpose for development and international agreements on transparency. The Review does not stop short of making recommendations in these two areas and strongly endorses parallel initiatives such as the system-wide programme to ensure the Recovery, Resilience and Growth of UK clinical research delivery and NIHR’s

Busting Bureaucracy programme. However, it notes the specific issues and context that future reform must take into account.

The Trusted Research agenda, which seeks to protect the integrity of international research collaboration while preserving academic freedom, is a key priority for everyone involved in research. Current discussions between the Government and the devolved administrations and regulators, funders, and research organisations are focused on finding effective, pragmatic solutions to this very complex challenge. Any changes to the bureaucracy that stems from Trusted Research must focus on improving support for research organisations. Any measures to reduce research bureaucracy should not undermine work to more effectively identify and manage national security threats to research.

Support for research organisations must be a central pillar of any strategy to reduce bureaucracy's impact on research. The Review has found that excessive bureaucracy within research organisations is often a symptom of uncertainty. Helping research organisations to interpret and respond to new requirements – whether these concern assurance, funding applications, or grant management – is essential to the development of efficient, proportionate bureaucratic processes.

More efficient processes and more productive research will help in addressing global challenges. Universities and research organisations have a pivotal role to play in the response to climate change and environmental challenges – in discovering innovative solutions and in transitioning to being net zero institutions.

Reducing bureaucracy must not undermine efforts to improve Equality, Diversity and Inclusion (EDI). Detailed data collection, which is indispensable to the design and monitoring of EDI initiatives, invariably entails a degree of bureaucracy. There will consequently be a limit to the reductions that can be made in this area; however, organisations should aim to make EDI processes more efficient where possible. One way of achieving this will be to remove duplication: for example, universities' annual statements of research integrity contain information that is often requested elsewhere (such as in the UKRI assurance audits).

The Review calls for committed, system-wide action

As well as examining systems and processes, the report also considers the role of working culture – within institutions and across the sector as a whole – in shaping the structure and function of bureaucracy. In particular, it highlights the importance of trust – in both individuals and organisations – to empowering staff and organisations to make informed judgements based on their experience and knowledge.

Successfully implementing the report's recommendations will depend on much greater collaboration between funders, regulators, research organisations and Government (both UK and Devolved).

Finally, it should be stressed the Review does not claim to have all the answers. Its recommendations aim to provide a way forward without being overly prescriptive. Further

analysis and development will be needed to determine the right solution for different funders, programmes, and research organisations, which the Review's findings are intended to support. Nevertheless, the Principles articulated below should provide a guide.

Principles

The Review established 7 principles to guide its assessment of current research bureaucracy and provide a gauge for testing its recommendations. They are:

a. simplification,

b. harmonisation,

c. proportionality,

d. flexibility,

e. transparency,

f. fairness,

g. sustainability.

These principles were chosen following a wide-ranging review of relevant literature and early evidence submissions, then refined through conversations with stakeholders.

Six Key Themes

The Review divided its work into six key themes: assurance, funding applications, grant management and implementation, digital platforms, institutional bureaucracy and communications. These categories emerged during the early stages of consultation in spring 2021 and proved an effective framework for describing and analysing the main sources of research bureaucracy.

In each category, the report first outlines key findings on the nature and impact of research bureaucracy. It then presents recommendations, which vary in their level of detail and timeframe for implementation. Some are directed towards specific institutions and can be addressed immediately. Others are broader in scope and will require further consultation or testing through pilot programmes to finalise the specifics of implementation.

These broader recommendations are sufficiently flexible to accommodate the varying aims, needs, and constraints of different disciplines, funders, and research organisations. Some of the suggested approaches are already used in parts of the research system; where this is the case, the Review encourages their wider adoption.

The Review also calls for greater innovation and experimentation in the management of bureaucracy across the research sector.

As well as making recommendations for change, the report also recognises several existing work programmes led by funders, regulators, and research organisations that contribute to the aim of reducing bureaucracy. This work, which spans each of the six areas covered by the Review, represents a major collective effort to improve the research system’s efficiency and productivity.

Assurance

Overview

For the purposes of this report, 'assurance' refers to information that research organisations are required to provide to funders and regulators. This information is used to demonstrate that research is carried out in accordance with funding terms and conditions and any relevant statutory regulation; that it meets the highest ethical standards; that it is supported and governed by appropriate policies, controls, and infrastructure; and that it represents a good use of public money. Assurance spans the entire research lifecycle, from funding applications to post-project reporting.

The volume of assurance work facing research organisations and researchers has grown markedly during the last two decades. This is due, at least in part, to the proliferation of research-related regulation throughout that period, which is itself linked to new statutory requirements and to the rapid (and desirable) expansion of collaborative research.

Assurance processes sit within a multi-layered system where organisations have overlapping remits and requirements. This often leads to multiple parties asking for the same assurance data in different formats and at different times. This can create confusion, duplication, unnecessary burden, and a lack of trust.

In many cases, the rationale for specific assurance requirements are not well understood. This can lead to mistakes and inefficiency in research organisations' compliance processes.

There is widespread enthusiasm for reforming the research assurance system, making this a propitious time for change. A shared sense of purpose and joint working between government, funders and research organisations will be vital to creating a proportionate effective assurance regime.

Findings

Drivers and Forms of Bureaucracy Relating to Assurance

The Review has identified four main drivers for the increase in assurance-related bureaucracy:

a. An increasing number and complexity of assurance-related requirements. Examples of areas covered by assurance include, but are not limited to, data governance, ethics approvals, Trusted Research and export control, financial audit, the use of animals in research, and reporting and monitoring. The Review recognises the importance of each of these areas; however, an understanding of the cumulative volume of work that they produce must inform the design and implementation of compliance processes;

b. A widespread uncertainty in the sector about how to manage some of these issues, leading to risk aversion and over-compliance in universities' internal assurance processes;

c. A lack of trust, coordination, partnership working and knowledge exchange on assurance throughout the research sector. Funders, regulators, and government departments could do more to coordinate their approaches and processes, while universities must do more to share best practice and develop common policies;

d. The complexity created by the increasing prominence of funding programmes and research projects which either require extensive collaboration between multiple academic and non-academic partners or have detailed terms and conditions attached.

In practical terms, this bureaucracy often takes the form of duplicated effort. Again, this can be split into four broad categories:

a. Different funders and regulators asking for similar information but not sharing data (sometimes for legitimate reasons given current data protection requirements);

b. A dual reliance on project-level reporting and institutional audits or inspections. Both are necessary and serve different purposes in a robust assurance system. However, duplication between them should be eliminated wherever possible. We must ensure that their respective functions are clearly distinct from one another and understood by funders, regulators, and research organisations;

c. A failure to take research institutions' control environments into account when developing assurance processes and standards. An enormous volume of work that contributes to the overall integrity and security of the research system is therefore neglected and as result there is a lack of trust in the system;

d. Universities and other research centres (including NHS Trusts) developing their own processes and protocols in response to new challenges rather than collaborating with other organisations to share knowledge and develop best practice models.

The scale and nature of modern research make the further expansion of assurance work inevitable. We must therefore think carefully about the methods and approaches used to achieve compliance. In particular, we must avoid creating a "just in case culture" in which data is collected on the assumption that it may be needed in the future, rather than in response to a clearly defined requirement.

Different funders' assurance requirements create further complexity

The UK is fortunate to have many different funding bodies that support research. However, it increases the number of rules and requirements for research organisations to follow. The system can be simplified by aligning or combining assurance processes where practical and by enabling funding bodies and regulators to fulfil their assurance needs using data gathered by other organisations. While this already happens in certain contexts (such as the National Academies' reliance on UKRI's institutional audit process), the scope of such co-operation

could be extended significantly. Efforts are currently being made in this regard, including work already underway between UKRI, NIHR, and Wellcome.

In addition to disparities between funders, the Review has also found variation within organisations in the interpretation and enforcement of assurance rules. Such discrepancies should be eliminated to achieve the clear standards needed for effective compliance.

Consistency in the application of rules must be accompanied by a willingness to amend the rules themselves. A responsive assurance framework is needed in a sector defined by innovation and the ability to adapt to new challenges and circumstances. In practice, this means adjusting assurance methods and metrics in line with shifts in the wider research landscape. While there is a balance to be struck between stability and flexibility, the Review has concluded that the tools and standards used to assess compliance would benefit from more regular review and modification.

The timing of demands for information can be as important as the type and volume of information that is collected. As a general rule, data should only be sought at the point when it is needed (which is sometimes determined by data protection issues). During projects, demands for information such as progress reports, interim budget statements, and recruitment updates can disrupt the course of research (especially if not following an agreed reporting framework). For funding applications, candidates are often asked for assurance information – on topics such as data management, ethical approval processes and institutional policies – that is extraneous to the assessment and is only needed for successful bids.

The regulation governing research is complex, wide-ranging, and subject to frequent change. This can create uncertainty in research organisations, which often manifests itself in the ‘gold-plating’ of internal processes that adds to the bureaucratic burden. To support research organisations in their work on compliance, we must improve the exchange of knowledge and expertise across the sector; foster strong relationships between funders and research offices; make use of tools that can reduce duplication and raise standards; and offer detailed advice to research organisations.

Existing examples of collaboration on assurance issues – including those led by the Association of Research Managers and Administrators (ARMA), the Russell Group Research Integrity Forum, and regional university groups like GW4 – demonstrate the immense value of sharing ideas and expertise. These should be supplemented by comprehensive, sector-wide programmes.

This should include the development of new collective resources to support assurance work. The Review has considered the viability and potential of different types of resource, which would be available across the sector and would be particularly valuable to institutions with fewer research support staff that feel the burden of assurance bureaucracy most keenly.

The most ambitious of these ideas concerns online repositories or ‘clearing houses’ that would potentially enable universities to upload, store, and exchange assurance information. A provisional model presented in the ARMA report on due diligence for ODA-funded research in April 2021, which would prevent many different organisations from carrying out the same

checks on the same partners, is extremely promising. However, key questions must be resolved before it can be adopted. These concern security, long-term funding, location, compliance with data protection regulation, and how to ensure that the systems are adopted and supported throughout the sector.

Other forms of collective resource include templates and model clauses for assurance documents such as contracts, collaboration agreements, and approval forms. These are currently used in specific contexts and to a limited extent; they should be updated where necessary and shared across the entire sector as a priority. For large collaborative or consortium-based projects in particular, these have the potential to reduce the bureaucratic burden significantly.

Certain types of funding programme add to the scale and complexity of research organisations' assurance work through their reliance on grant-specific terms and conditions. These conditions can be added for a host of different reasons: from the desire to achieve specific objectives or types of impact to satisfying regulatory requirements, and from aiding strategic planning to answering parliamentary questions. While the structure and priorities of funding programmes are beyond the Review's scope, it is appropriate to note their role in determining the overall amount of assurance bureaucracy and to stress the need for these terms and conditions to focus on essential, rather than merely desirable information.

These bespoke terms and conditions can include stipulations relating to reporting and monitoring. Respondents to the call for evidence highlighted grants where extensive narrative reports were required in addition to uploading information on digital platforms. Again, while the aims and focus of certain schemes may make dual-track reporting necessary, its use should be minimised.

Changes made by funders to grant terms and conditions during the middle of a project have been cited as a significant bureaucratic burden by research organisations. While such changes will sometimes be unavoidable, they should only be implemented in extraordinary circumstances.

An additional layer of complexity and potential confusion was reported by those undertaking clinical and health-related research. Working across the interface of academic and NHS research, and beyond into social care brings a myriad of requirements from various stakeholders, collaborators and partners. Whilst the case for these was often recognised; overall coordination could be improved, and the potential for duplication was common which places additional demands on researchers. The Review acknowledges the work of UKRD and the NHS R&D Forum in highlighting and trying to address issues at the interfaces. Such collaborative activity is critical to driving further improvements.

Changes to inspection arrangements in the Animals in Science Regulation Unit in Summer 2021 raised a number of questions that require further attention. There have been a number of changes to process and requirements of licence holders which have had significant consequences for institutional staffing and arrangements in some centres. The need for an essential regulatory function and effective regulation to assure animal welfare is not questioned

however, there is a perception that this new additional burden and bureaucracy is not supporting such activity and may be a distraction.

A series of specific concerns were raised with the review in relation to research organisations in the public sector. These relate to the impact of Cabinet Office controls and procurement. There was a clear recognition of the need to safeguard the use of public money. The review heard concerns across controls for pay, procurement, digital systems, facilities management. Some research organisations reported that these controls do not have sufficient flexibility built in to enable research organisations to retain talent, buy the services, procure new systems and upgrade the infrastructure they need to fulfil their distinctive missions.

Work already underway to address assurance burdens

At present, universities on Innovate UK grants are subject to the same level of scrutiny as industrial partners, despite their risk profile being much lower. We therefore welcome Innovate UK's current review of their assurance regime, which aims to reduce the number of audits required of university grant holders. They are also exploring the possibility of developing agreed-upon procedures, which would establish fixed standards and processes through consultation with the sector instead of leaving research organisations to devise their own approaches to compliance.

NIHR are trialling a joint audit regime with other funders (initially limited to UKRI, with the aim of bringing in other organisations during the course of 2022/23 academic year) via the NIHR Assurance Unit. A cross-funder unit that allowed funders to use data obtained by other organisations for their own assurance purposes could significantly reduce assurance activities. This could also ensure that institutions have a common experience of grant assurance by eliminating the inconsistencies caused by each funder using different methods and standards.

Case Study: Trusted Research

Supporting Trusted Research implementation: In 2021, the new Research Collaboration Advice Team (RCAT) was announced by Department for Business, Energy and Industrial Strategy in response to the academic community's calls for better coordinated government support in managing national security risks. RCAT are the first point of contact within government for any query relating to the safety and security of international research collaborations, supporting universities and related research institutes to make informed decisions and improve practices.

RCAT advisers are regionally based and will be conducting an ongoing programme of outreach to raise awareness about government policy, relevant laws, regulations, and straightforward steps to mitigate risks.

RCAT forms one part of a series of initiatives to support the sector on security matters. Others include:

The Centre for the Protection of National Infrastructure (CPNI) STEM Universities Forum was formed in 2021 to share, in confidence, mutually beneficial information on secure

research collaboration. Forum members are UK STEM research intensive universities and organisations.

CPNI is also working closely with Universities UK (UUK) to help universities manage national security threats. For example, on a quarterly basis, CPNI, UUK and UKRI produce a national security focussed output in collaboration with a group of UUK member universities. Future issues will include best practice examples on implementing Trusted Research.

CPNI is collaborating with the Royal Society to produce a training package which helps raise awareness of Trusted Research and national security considerations. CPNI has also participated in a series of webinars with the Royal Academy of Engineering and Royal Society to discuss and raise awareness of Trusted Research.

Summary of Conclusions

The principle of ‘ask once’ should be paramount throughout the assurance system. Data should be reused and shared wherever permissible and possible. Assurance information should only be sought when there is a clear reason for doing so. This reason should also be understood by the institution or individual from whom the information is requested.

The funders, regulators, and Government departments that seek assurance information must make every effort to harmonise their processes and standards. In practice, this means both establishing common approaches and finding ways to share information and assurance data. This consistency will be key to achieving proportionality in assurance, which is impossible to measure without prior agreement on common methods and standards. It is also a necessary first step towards joint assurance processes, which should be the longer-term goal for the sector.

Institutional processes should be preferred over project-level reporting and monitoring wherever appropriate and possible, building greater trust across the system. However, the need for project-level monitoring is appreciated in some instances and funding models such as NIHR contracted research.

A change in culture is necessary whereby the sharing of expertise and resources between research organisations becomes routine. This will lower the burden on the sector by both reducing duplication of effort and introducing greater standardisation.

Assurance practices must be reviewed regularly to check that they remain relevant, rigorous and proportionate.

Recommendations

To address the review findings, we recommend that:

Recommendation 1: There should be coordination across Government departments that fund research to ensure there is greater alignment of assurance approaches, including greater alignment and coordination across UKRI Councils.

In addition to the Department for Business, Energy & Industrial Strategy (to which UKRI reports), these include the Ministry of Defence, the Foreign, Commonwealth & Development Office, and the Department of Health and Social Care. The need for greater consistency between departments and funders was highlighted in the National Audit Office's report on Cross-Government Funding of Research and Development in 2017. However, much work remains to be done. This should include consultation with the Devolved Administrations. It should also involve consultation with the NAO, Cabinet Office, the HMT Evaluation Task Force and the Government's Counter Fraud Function.

Recommendation 2: Government Departments, in consultation with the Devolved Administrations, should convene discussions with other major funders of R&D in the UK with the aim of reducing the assurance burden on the sector.

The Review recommends that these meetings focus on four key areas:

a. The burdens that government in the round places directly on research organisations and institutions or via funders which are then passed on to the sector. There will be a particular challenge to avoid the introduction of new unnecessary requirements. Finding ways to address this will be an important consideration for the government response.

b. Completing the centralisation of UKRI's audit function to eliminate inconsistencies between individual Research Councils and Innovate UK. While UKRI has a designated audit and assurance team, individual councils have retained control over specific areas in which they carry out their own checks.

c. Collaboration between funding bodies to establish consistent audit methods and standards, with a view to establishing joint audits in the longer term. As well as reducing the amount of work required from research organisations, the increased clarity of expectations resulting from co-ordinated approaches should also improve the quality of the data collected. The announcement of a joint audit pilot between NIHR and UKRI (see above) is an extremely positive step in this direction. However, the Review calls on all funders of research in the UK to participate in similar pilots, as well as looking at new ways to share assurance data.

d. The sector's ultimate goal should be to use universities' independent audit results and control environments to satisfy the requirements of funders, regulators, and government departments. However, the Review has concluded that this option is not yet practical due to the level of assurance issues in the sector and the absence of an overarching body to whom research organisations could submit this information.

Recommendation 3: Funders and research organisations should develop collective approaches and resources to support institutions in managing their assurance processes. As an early step, BEIS working with UKRI and Trusted Research leads across Government should engage with the ARMA project to ensure that its recommendations and subsequent output design is fit for purpose in addressing the Trusted Research agenda. The ARMA study is due to be published in Autumn 2022.

Collective resources should be just one part of a broader commitment by research institutions to work together on assurance. A unified approach to assurance is not only essential to the success and sustainability of new resources, but will also determine our ability to respond to new challenges in the future.

Centralised databases or repositories can boost the efficiency and quality of assurance. However, further analysis is required before they can be recommended without hesitation. ARMA's study builds on a previous project on due diligence around ODA funded research activity and seeks to resolve the outstanding questions concerning financial sustainability, ownership, data management, and ensuring research organisations' buy-in, as well as widening the scope of the work.

Recommendation 4: In the longer term, funding bodies should explore the potential benefits of self-certification and/or earned autonomy as a means of streamlining assurance requirements for institutions with a strong track record of robust assurance.

These approaches would allow research organisations to declare their compliance against a range of policies and processes, with random sampling used to verify claims and/or reduce assurance burdens for those organisations who have a track record on assurance.

Recommendation 5: Central government should engage with sponsoring departments and public research organisations (PROs) to examine the impact and effectiveness of public sector controls and procurement rules on PROs capacity to deliver their mission.

Recommendation 6: UKRI should press forward with its implementation of the Research Commercialisation Monitoring Framework which will drive improvements in the quality of data through the linking of datasets.

There are a great range of data collection processes that should be considered in the round. If better linked together it would reduce duplication of effort and burdens on universities. A good step forward in this direction has been the development of the UKRI Research Commercialisation Monitoring Framework.

Recommendation 7: The National Audit Office (NAO) and UKRI should review the level of transaction testing in UKRI institutional audits to establish whether this is still appropriate.

The level of transaction testing in UKRI's institutional audits – the number of individual projects and samples that are studied to evaluate compliance – has increased significantly since 2016-17 in response to guidance from the National Audit Office.

Recommendation 8: UKRI should review the variations in standards and methods used by Innovate UK Monitoring Officers with a view to developing new principles to increase consistency.

This was an issue raised by a number of research organisations who have reported variations in the standards and methods used by Innovate UK's Monitoring Officers.

Applying for Funding

Overview

Funding applications were one of the most cited causes of excessive bureaucracy in the call for evidence by individuals and organisations. This is unsurprising given the scale of UK funding programmes and their importance for the quality, impact, and sustainability of research. In 2020/21, UKRI alone received nearly 22,000 applications to their standard research and innovation schemes (excluding those relating to Covid-19). Drafting, processing and assessing these proposals inevitably consumes huge amounts of time and resources from across the research system.

Most of these applications are unsuccessful. In 2020/21, UKRI's overall success rate was 21%, down from 24% the previous year; the average success rate for the Leverhulme Trust's six most popular schemes in 2020 was 18%; the overall success rate for applications to NIHR research programmes and funding schemes is 25%. For some funders and funding calls, success rates can be as low as 5%. These statistics emphasise the importance of limiting the amount of wasted work on funding bids by removing unnecessary bureaucracy.

A degree of bureaucracy is needed to guarantee the fairness and rigour of assessment processes. However, the Review has identified many cases of bureaucracy that appear unnecessary or disproportionate, the removal of which should improve both the speed and quality of evaluation. For all funding schemes, the design of application forms and review processes should focus primarily on the information needed to make a funding decision.

We should promote a culture of innovation in which new funding processes and formats can be proposed and tested. When thinking about assessment, a balance must be struck between supporting radical new ideas and maintaining necessary standards, safeguards, and the protection of the public purse.

The compressed application and assessment processes used for Covid-19 funding calls were developed and implemented in exceptional circumstances. Although not a sustainable model in the longer term, the lessons learned will provide useful insights for the future.

Findings

The Review's evidence-gathering has identified the following issues in funding applications: the lack of proportionality against high failure rates; the length and complexity of application forms, which is sometimes the result of duplication within them; the lack of consistency in formats and guidance across different funding bodies; and the time it can take between application submission and the announcement of outcomes. There are further issues around the peer review process and how demand is managed. However, there are also important considerations around fairness and avoiding unintended consequences when considering alternative approaches.

High failure rates in funding schemes are a strong argument against asking applicants to submit full proposals at the outset of the assessment process unless it is strictly necessary.

Writing applications takes time that could otherwise be dedicated to research. We must therefore ensure that the work involved in developing proposals – and the associated bureaucratic burden – is commensurate with both the likelihood of success and the level of funding available.

Long, complex application forms not only affect the development of proposals, but also prolong the assessment. Scoring applications that contain many different sections is time-consuming and frequently contentious, particularly if reviewers are asked to comment on questions and criteria that lie beyond their immediate expertise. Enabling reviewers to concentrate on the quality, significance and originality of the research - as expressed in the ideas, methodology, context, and impact - could significantly reduce the bureaucracy of assessment. The guiding principle should be to retain only those elements that are essential for assessment or assurance.

There is inconsistency of application formats, processes, systems and guidelines across different schemes, subject areas, and funding bodies. This inconsistency has implications not only for potential applicants but can act as a barrier to interdisciplinary research.

The length of time between application submission and the announcement of outcomes can be too long. For example, it is possible for 18 months to pass between first concept and starting a project (time spent writing the grant, waiting for decision, post-award procedures including recruitment etc.) and in some cases projects may be out-dated and staff may have moved on by the time the research starts.

In addition to the content and format of application forms, the process of external peer review – which is essential to the funding system – is a major source of delays. These are caused by the difficulty of recruiting peer reviewers, the high volume of submissions to certain schemes, and the amount of time needed to carry out initial clerical checks. The intractability of these problems suggests that reducing the number and length of applications distributed for peer review will be the most effective way of easing the bureaucratic burden of assessment.

Demand management is a mechanism where a funder places caps on the number of bids that any one institution can submit to a funding call. This can be beneficial in raising the quality of research applications and reducing the administrative and peer review burden for funders. However, demand management can also require significant additional work for universities and research organisations and may simply move bureaucracy around the system, as well as potentially duplicating the work undertaken by funders. While there are undoubtedly circumstances in which it is necessary, it should only be used when clearly justified by the funding call's aims, scale, and format and when the aggregate impact on the research system is, at least, neutral.

In the design of funding calls, 'fast failure' – where unsuccessful applications are identified and removed early in the assessment process avoiding future nugatory work - should underpin approaches to the development and assessment of proposals. Waiting months for outcomes lessens the dynamism of the research system and brings large opportunity costs by preventing applicants from pursuing other ideas, projects and collaborations. In rapidly evolving fields,

delays can be fatal to innovation and threaten the very viability of research. In every discipline, excessive costs of failure – whether in terms of time, resources, or reputation – can lead to systemic risk aversion and the preponderance of incremental rather than ground-breaking research.

To enable fast failure, application forms should focus on the information that reviewers and panels need to make a funding decision. While additional assurance documents – such as data management plans, detailed budget justifications, and descriptions of ethics approval processes – are required before funding is released, they typically play little or no role in the assessment and are often completed using boilerplate text. Collecting assurance information at a later point in the application/award cycle would minimise the wasted effort associated with unsuccessful bids for applicants, organisations, and funders. It should be noted that there may be exceptions to ensure security risks are assessed.

Revised, streamlined processes must avoid unintended consequences. In the Review's evidence gathering concerns were raised that any process that makes applications "simpler" has the risk of only giving grants to "safe pairs of hands" or centres of excellence. This would have a negative impact on small institutions and researchers not in established successful research organisations. The reduction of burden should not lead to funders avoiding risks.

Similarly on the principle of fairness, anonymised review processes could help counter unconscious bias. Although questions about the viability of anonymised proposals still need to be resolved (including how to guarantee anonymity in smaller disciplines, how to help researchers adapt to new styles of proposal writing, the pertinence of an applicant's track record to certain funding schemes and ensuring that higher classification research is being conducted by appropriately vetted researchers in a secure environment). Some initial pilots have been received positively by applicants and reviewers and further development and testing is required.

It should be noted that a number of respondents to the Review's call for evidence and in meetings raised the issue of resubmissions – where resubmissions for applications to responsive mode schemes that score above a certain threshold would be permitted. However, others noted that inviting resubmissions above a certain 'score', without additional funding, could add to funder (and therefore reviewer and academic panel member) workload when assessing them in future rounds, particularly if large numbers are invited to resubmit. Re-submissions could, however, be prioritised based on funder priorities or areas lacking investment.

A further issue that has been raised concerns 'return for amendment' when clerical checks highlight a compliance/format issue with an application (even if this issue is very minor and does not significantly influence the assessment). This can be an additional source of delays.

Work already underway to address funding application burdens

UKRI's Simpler and Better Funding programme will include recommendations that will simplify application and assessment processes.

UKRI is also currently developing a set of principles to govern the future use of demand management.

The NIHR's Busting Bureaucracy programme includes standardised application forms and reducing the information requested at each application stage. A proportionate approach to peer review has reduced the numbers of reviews sought where appropriate. In addition, peer review forms are targeted at specific areas and the application information issued for assessment has been reduced. Further work is planned to extend this approach.

Case Study: EPSRC 'New Horizons'

The EPSRC's 'New Horizons' funding call expressly aims to simplify the application process and shorten assessment periods. Designed to support 'new research ideas that are speculative, high risk, with potential for a high reward' through grants of up to £250,000, it uses a two-stage process and dispenses with postal peer review, relying on panels for both stages. The first stage is anonymised and is structured around three questions that must be answered in a one-page case for support: a) What is the research idea? b) Why is the idea speculative and high-risk? c) If the idea is successful, what is the potential reward and why is this exciting?

Case Study: NIHR Invention for Innovation (i4i) Programme

The NIHR Invention for Innovation (i4i) Programme launched a pilot FAST funding scheme, providing accelerated, simple funding to allow innovations to be further explored for follow-on investment. This scheme is intended to address the needs of innovation projects that require a quick 'yes' or 'no' answer or potential 'fail fast' moment. The scheme features five key themes: simplified bureaucracy, velocity, light-touch due diligence, and removing barriers to access rapid grant funding.

Features include: Funding open to all organisations registered in England - small and medium enterprises (SMEs), higher education institutions (HEIs), NHS, and not-for-profit organisations. An overall review and decision period of approximately six to eight weeks. 90% of project costs paid upfront, capped at a minimum £15,000 and maximum £50,000. Funding follows standard NIHR guidelines. Short online application form responding to three questions. Subject to some light touch due diligence, projects must start within three weeks of award and be completed within six months.

Summary Conclusions

The impact of applying for funding on the wider research system, in terms of the time and resources devoted to it, must be minimised. Funders should apply the principle of proportionality to all funding calls, aligning the work required to the level of funding while ensuring high-risk collaborations can be identified and managed at an early stage.

The current application process is generating too much wasted effort and bureaucracy overall, with all information being asked of all applicants at the outset. In many cases, the process takes a long time, with delays having a detrimental impact on research. The successful implementation of changes to application and assessment processes will depend on co-operation of funders.

Recommendations

To address the review findings we recommend that:

Recommendation 9: Funders should experiment with application processes to reduce burdens for applicants, (including greater use of two-stage application processes) where information required increases in line with likelihood of being funded.

Wherever possible, funding calls should move away from one-stage applications where all the relevant information is submitted at the same time. One-stage applications will need to be retained for certain thematic, rapid-response or otherwise timebound schemes, but this should be the exception rather than the norm.

Two-stage application models

There are two types of two-stage application that could replace the one-stage model. As described in the case studies above, these are already used by some funders and have elicited positive feedback.

The first involves both stages being assessed, with the first stage limited to a brief project summary. This would allow an expert panel to conduct an initial triage, with only a small proportion of applicants invited to submit a full proposal. A comparable process of down-selection is already used by major scientific journals.

Alternatively, applicants could be asked to submit a full case for support at the first stage that focuses exclusively on the information required to make a funding decision (such as the research idea, methodology, outcomes and impact). Assurance information would only be requested from successful applicants at the award stage (understood here as the second stage).

Recommendation 10: Funders should work together to increase standardisation across their application processes in terms of the use of language and the questions they ask where appropriate. UKRI should facilitate this across Research Councils in the first instance.

Recommendation 11: Funders should review what adaptations will be needed to assessment processes to take account of changes to application models. This should include considering innovative approaches from the use of peer reviewer triage to limit the number of applications requiring full peer review to experimenting with new models such as randomly-allocated funding.

Funders should review what adaptations will be needed to assessment processes to take account of changes to application models. This should include considering innovative approaches from the use of peer reviewer triage to limit the number of applications requiring full peer review to experimenting with new models such as randomly-allocated funding.

Lottery (or randomised) funding systems were highlighted in the call for evidence and in discussions as a mechanism which could be considered further. Such systems use a short application format to screen for eligibility, and those passing checks are randomly allocated funding until the full budget for the scheme is used. A number of funders have experimented with such approaches to date including; Health Research Council for New Zealand , Volkswagen Foundation, Swiss National Science Foundation and the Austrian Science Fund. The results of these experiments and findings have been variable and no clear answer on their use and effect on bureaucracy has been established. All highlight the need for further work and the potential for wider adoption[v].

Recommendation 12: Funders should ensure that application processes support their commitments to equality, diversity and inclusion.

Any changes to the type and volume of information collected at the point of application must not undermine funders' commitment to equality, diversity and inclusion (EDI). It would not be acceptable, for example, to capture EDI information at the point of award, as data is needed for both successful and unsuccessful applicants. However, the bureaucracy associated with supplying EDI information should be minimised, for example by asking applicants to supply this information when they first register on funders' online portals and storing it (as is already the case with UKRI and NIHR).

Since the publication of the R&D People and Culture Strategy in July 2021, there has been very welcome activity to explore the use of a narrative CV format across a range of UK funders. The review recognises and encourages the work by the Joint Funders Group and separately through Universities UK's "alternative uses" group to drive forward good practice and inform aligned approaches.

Clear principles should govern the use of demand management by funders. These should also be explained in guidance notes in promotional material when funding calls are announced.

Recommendation 13: Funders should remove the requirement for letters of support from applications in most circumstances.

Letters of support should be removed from applications unless they are needed as proof of the ability to deliver the proposed research; for example, by demonstrating an institution's support for a candidate who is not yet employed by that institution or confirming a partner organisation's participation in a project. In such cases, a pro-forma or similar should be provided by the funder for applicants to complete, rather than requiring new letters for each project. Funders should also look at whether signatures and approvals in funding application portals need to be sequential. This can impose a lot of pressure on certain roles (such as Heads of Department, who may have multiple statements to provide).

Grant Implementation and In-Grant Management

Overview

Research is inherently unpredictable. New lines of inquiry may open or experiments may fail; staff members may leave; unexpected opportunities for impact and public engagement may arise. While grant management processes cannot allow researchers unlimited freedom, they should be sufficiently flexible to accommodate uncertainty and give research the space to flourish.

Research outputs and outcomes would suggest the UK has high standards of grant management and governance. However, levels of bureaucracy relating to grant management are considerable. There is also concern in the sector that, at times, processes may favour certainty over risk-taking and genuine experimentation.

It can be very difficult to get research off the ground once funding has been confirmed. Processes such as recruitment, procurement, ethics approval, contract negotiation, and financial administration are often beset by delays. However, people and organisations in every part of the research system can play a part in reducing the complexity of these processes.

Innovation in the UK is often driven by collaboration between research organisations and a host of commercial, charitable, and public sector partners. The rapid growth in the scale and diversity of research collaboration in recent decades has been overwhelmingly positive but has been accompanied by a raft of bureaucratic challenges. Responses to these challenges have often been developed at the institutional rather than the sector level, leading to a fragmented system of disparate standards and approaches that exacerbates the difficulties of setting up multi-party projects. Devising shared principles, methods, and resources to aid the management of research collaboration should be a priority for the sector going forward.

Findings

The likelihood of unforeseen circumstances affecting research is heightened by the long period that can separate the submission of a funding application from the start of the project. However, the period between the issue of the award letter and the start of a research project is frequently short. This can cause challenges for researchers. For many projects, putting in place the relevant procurement, recruitment, and financial administration within a short period poses a significant challenge.

Once a project is underway, the amount of time taken to make decisions on grant management actions (such as no-cost extensions and reallocation of budgets) is often excessive. The reasons for this, which can include funder staff capacity, uncertainty over rules and policies or repeated requests for clarification, vary from case to case. We also recognise that Government Departments and UKRI are constrained by rules which require them to spend their budgets within the financial year, making it more difficult for them to be flexible on timing. However, no-cost extensions and allowing principal investigators (PIs) to make changes that are neither intellectually nor financially material would be transformative.

For some grants and awards, in-project monitoring can be extensive. They cover diverse topics such as recruitment, protocol and personnel changes, ethics approvals, budget status, interim findings and general progress. While the themes and objectives of certain funding schemes mean scrutiny is necessary, the Review has found that some information is sought without a clear motive for doing so.

Contracts and collaboration agreements, in particular, have been cited as a major source of delays. The sector has worked together to develop common standards and resources in this area, resulting in the 'Brunswick' and 'Lambert' template agreements. However, the Review has found that research organisations often prefer to use their own bespoke contract documents instead of templates.

This is partly attributable to changes in the wider political and legal landscape that were not covered by the original agreements, including Brexit, GDPR, and the National Security and Investment Act. However, the Review has also found evidence of endemic risk aversion within research organisations that can lead to protracted negotiations over comparatively minor details.

The resulting delays are particularly acute in projects governed by multiple documents (such as site agreements, material transfer agreements, and data sharing agreements) and where there are multiple partners (including universities, NHS Trusts, commercial companies and local government).

Amendments are frequently requested by research organisations to template contracts even when the funding terms and conditions forbid them. An example of this is the standard Department of Health and Social Care contract used by NIHR (which awards contracts for research instead of providing grants).

Disputes over data access and sharing, and information governance have also been highlighted as a common occurrence in contract negotiations, often due to differing interpretations of the responsibilities of data processors and data controllers.

All these issues are amplified in institutions without a designated research contract team with relevant experience and expertise The Review has heard that centralised legal departments (or those with a commercial focus) are more likely to dispute the terms of standard research agreements due to their lack of familiarity with both the documents' content and the wider context.

We have identified two issues arising from approval processes: (i) that approvals are not always adapted to reflect different levels of risk; and (ii) that duplication can arise when projects involve multiple partners. There is a perception that duplication or overlap is a particular concern in clinical research, where project sponsors (typically universities or NHS Trusts) sometimes run parallel processes to external regulators (such as the MHRA and HRA). Further, sections in Integrated Research Application System (IRAS) duplicate some information provided in the funding application and protocol documents. (IRAS is a single system for applying for the permissions and approvals for health and social care / community care research in the UK).

This duplication could potentially be addressed through improved data standards and interoperability that allows sections from funded applications to be transferred to other portals and platforms. However, any changes must recognise the importance of maintaining the highest standards of probity and public confidence in clinical and health-related research. In addition, a greater range of stakeholders will result in additional pressures and requirements for extensive engagement across stakeholder groups (including Patient and Public Involvement). On further point, requirements and processes for accessing NHS costs via the Schedule of Events Cost Attribution Template (SoECAT) system were highlighted as a source of delay and confusion in some settings.

Activity that involves negotiation and agreement with a range of stakeholders and institutions will always result in additional pressures. The Review heard that collaborative research could drive the need for bespoke agreements, and this can take time to achieve with local preferences often determining the approach taken.

Work already underway to address burdens associated with grant management

The Health Research Authority has introduced a fast-track ethics review process for global clinical and phase I trials in any disease area. This reports to deliver a rapid review and outcome in roughly half the time of a usual ethics review.

The NIHR issues an initial ‘letter of intent’ to successful applicants which confirms the intention to award funding upon acceptance of the terms and conditions set out in the Standard Research Contract and pending agreement to the suggested amendments recommended by the Funding Committee. This is intended to speed up the start of NIHR research by encouraging recipients to feel assured in setting up studies before contracts are finalised. It also sets out a clear timeframe for each step towards the agreement of the contract. In practice very few institutions have been able to accept this as a commitment in practice and start set-up activities.

The NIHR has developed and implemented a standardised approach to risk assessment in relation to monitoring awards across the NIHR (with risk defined as “the risk to NIHR, DHSC and the Secretary of State inherent in the project, its aims and objectives and its deliverability”). The NIHR Standard Operating Procedure for monitoring and reporting activity sets the overall aim of ensuring that monitoring and reporting is conducted in a risk based, proportionate way which minimises the burden on award holders, consistent with the need to ensure contract delivery, accountability for the use of public funds and compliance with statutory requirements. All NIHR funding streams use the same overall approach to risk assessment, but individual programmes and awards may have specific requirements. The intensity of monitoring is tailored to the risk level assigned to the award, thereby ensuring monitoring activity is focused where it is most needed, making the process as efficient as possible both for award holders and NIHR. Some formal progress reports have been replaced with telephone calls or similar, with NIHR staff capturing key information via Management Information Systems, rather than requiring researchers to draft and submit reporting documentation.

In March 2021, the UK government and devolved administrations set out a vision for the future of clinical research delivery - 'Saving and improving lives: the future of UK clinical research delivery'[vi]. This was followed in June 2021 by the publication of 'The Future of UK Clinical Research Delivery: 2021 to 2022 implementation plan'[vii]. The whole UK research ecosystem is working together on a coordinated and coherent programme of work that has been developed to ensure the Recovery, Resilience and Growth (RRG) of UK clinical research delivery.

Case Study: MHRA and HRA combined approval process

The Medicines and Healthcare products Regulatory Agency (MHRA) and the Health Research Authority (HRA) implemented a combined approval process for Clinical Trials of Investigational Medicinal Products (CTIMPs) in early 2022. It provides CTIMP and Investigational Medical Device trials applicants and sponsors a single application route and joined-up review, leading to a single UK decision in a faster overall timeline than the previous separate process. In addition, all trials submitted through combined review can be automatically registered on ISRCTN Registry when full approval is granted. This is free of charge and saves research team's time.

The MHRA also issued a "Consultation on proposals for legislative changes for clinical trials" in January 2022, with over 2,200 responses submitted. Findings and plans are yet to be announced however the intention is to improve and strengthen the UK clinical trials legislation to help make the UK the best place to research and develop safe and innovative medicines. This includes streamlining approvals, enabling innovation, enhancing transparency, enabling greater risk proportionality, and promoting patient and public involvement in clinical trials.

Case Study: The Lambert toolkit

The Lambert toolkit[viii] is designed to assist academic or research institutions and industrial partners who wish to carry out research projects together.

The objectives of the toolkit are to: facilitate negotiations between potential partners; reduce the time, money and effort required to secure agreement; and provide examples of best practice

The toolkit consists of: a decision guide; 7 model research collaboration (one to one) agreements; 4 consortium (multi-party) agreements; heads of terms and variation agreements for both collaboration and consortium agreements; supporting guidance notes.

The model agreements are starting points and their use is not compulsory. Each model agreement envisages a different set of circumstances and are not sector specific, allowing for flexible use. However, the model agreements can be adapted to meet the particular circumstances of individual projects.

Case Study: The Brunswick agreements

The Brunswick Group developed a number of template agreements for use between two universities or similar not-for-profit organisations. The aim of the templates is to remove the need to spend time on drafting and negotiation in the majority of cases. Development of the template agreements is led by ARMA[ix]. Revised agreements are based upon both the original Brunswick agreements and a suite of agreements which had been generated and agreed for use by all Scottish universities and have been subject to consultation with both Russell Group and Brunswick Group Universities. The current agreements cover: Material Transfer, Research Collaboration, and Studentship.

Summary Conclusions

The administrative processes used to initiate, support, and monitor funded projects must be able to accommodate the contingencies of research. As with assurance processes, they should also be adapted as circumstances change and new priorities and funding models emerge.

In the short term, efforts should focus on improving the documents and mechanisms used to regulate collaboration between institutions.

Any attempt to make changes in this area must involve, and consider the needs of, the entire sector, and broader issues such as national security. Initiatives led by particular interest groups will worsen the fragmentation in the research system that is a major barrier to reform.

Grant management is an area in which it can be particularly difficult to reconcile the needs of researchers and research organisations with those of funders, regulators, and Government departments. However, the Review has identified several areas in which changes can be made without adversely affecting certain parts of the research system.

Recommendations

To address the review findings we recommend that:

Recommendation 14: Funders and recipients should ensure there is adequate time for the completion of all necessary tasks (including providing assurance information) between the issue of the award letter and the start of the project.

This is already the case with some funders: for example, Wellcome-funded projects can start up to a year after the award letter has been sent out.

Recommendation 15: Universities and research organisations should, wherever possible, use standard templates for contracts and collaboration agreements, recognising that this would not just be faster, but would also facilitate third-party collaborations. This could build on existing work carried out by the Russell Group.

Amendments to these templates by individual institutions, or the use of non-standard templates for collaboration agreements and contracts, should be the exception rather than the norm. While uniformity will clearly not be possible, a fundamental shift is required in universities and other research providers concerning their willingness to accept standard contract clauses and use model agreements.

Recommendation 16: Wherever possible, funders should build in flexibilities, including no-cost extensions within manageable parameters, to reduce delays in addressing project changes and the number of queries.

Recommendation 17: Ethical and other regulatory approvals should be the responsibility of the lead partner on a multi-institution research project and counterparties (including the NHS) should not require additional duplicative approvals.

Where this is not already the case, the confirmation of approval should be deemed sufficient for all partner organisations. In cases where approval must be obtained from an external body as a statutory obligation (such as the Health Research Authority), the external approval should satisfy the requirements for the host organisation and any other parties involved in the project.

Recommendation 18: Universities and NHS Trusts should work to develop forms of collaboration that eliminate duplication of effort and improve support for researchers working across the interface.

Some universities have joint research offices. However, the Review has been told that researchers are often required to complete duplicate activities and notifications without appropriate automatic transfers between institutions.

Digital Platforms

Overview

Every aspect of research delivery and its associated bureaucracy depends on digital platforms, from submitting and assessing applications to reporting on research outcomes, and from collating audit and compliance data to sharing information about new funding schemes. Effective digital infrastructure can therefore transform the experience and perception of research bureaucracy. By the same token, the extent of our reliance on these platforms heightens the impact of any flaws in their design or function.

Technological advances can promote efficiency by providing new ways of capturing, using, and sharing data.

The Review has identified two particular challenges for digital research platforms: interoperability and ‘future-proofing’. In a large, complex system, the incompatibility of different platforms can create a significant bureaucratic burden. While universal standards across all platform providers operating within the UK research sector would not be appropriate, greater interoperability should be a key objective. This could include the wider adoption of existing technological mechanisms that improve data transfer (with appropriate agreements in place), such as persistent digital identifiers (PIDs) and the adoption of key data standards.

The unpredictability of research complicates the development of its supporting infrastructure. In the absence of certainty, we must prioritise flexibility. For digital platforms, this means using technology that can be adapted and updated in the future to support innovation without compromising core-functionality.

The difficulty of designing and implementing new digital systems for research should not be underestimated and mistakes are also difficult to rectify once a system has been launched. This means that work on new platforms should prioritise diligence and rigour over speed and incorporate appropriate engagement from a representative group of stakeholders.

Findings

In developing and building digital research platforms, research organisations and developers face a problem; how to create systems capable of supporting the institutional diversity and rapid pace of change in UK research without being unwieldy. If these questions are not adequately resolved, platforms can swiftly become obsolete or not fit for purpose.

While consolidation and standardisation should be pursued where possible, we must be realistic about what can be achieved. In a system comprising hundreds of research organisations and funders, a single, cross-funder digital portal for applications and reporting would be inappropriate and impractical.

Efforts may be better focused on building more extensive links between different systems, governed by appropriate data-sharing agreements. Data silos – where the format or location of raw data means that they can only be used by certain departments or institutions – are a major

barrier to efficiency. Creating effective pipelines that improve the flow and accessibility of data has the potential to cut bureaucracy dramatically. As well as limiting the number of requests made to organisations and individual researchers for information, it can also eliminate the need for manual data entry (which increases both the risk of error and the time needed to complete tasks).

In this sense, we are entering a potentially decisive period in the development of the UK's digital research infrastructure. Several leading organisations, including UKRI, NIHR and Wellcome, are moving away from older platforms. We must think collectively about how to connect these new systems to enhance the delivery and management of research, support future innovation and growth, and reduce the bureaucratic burden on researchers. Research organisations, funders, software developers and expert umbrella organisations like Jisc must all participate in this process.

The development of sustainable data assets across the processes and associated systems focused on research management is a critical driver for reducing bureaucracy. There is significant potential for efficiency and innovation from more standardised data processes, viewing data as a stand-alone asset, and as key to reducing bureaucracy.

There is significant innovation potential, for example through responsible linkage, quality and metadata standards, application programming interface or machine-learning applications, from which persistent, accessible, interoperable, efficient and cost-optimised processes for research management may be developed.

As well as thinking about systems, organisations and individual researchers should be urged to take responsibility for improving data flows by using existing digital tools. Persistent digital identifiers (PIDs) such as ORCID, ROR, RAiD, Crossref and DataCite enable the automatic transfer of data between platforms, allowing fields to be pre-populated and minimising manual data entry. However, a report published in 2021 established that the potential benefits of PIDs are not yet fully realised due to "inconsistent coverage, poor adoption, and relatively low levels of integration in information systems". As with shared databases and template documents, the value and success of these resources will ultimately be determined by the degree to which the sector engages with them.

As well as facilitating the exchange of information between platforms, the Review has also identified changes that can be made to individual systems. The majority of these relate to duplication and demands for surplus information in online forms. Duplication has been highlighted in application forms where the same or similar information is requested in more than one place. The 'Objectives' and 'Summary' sections of J-eS, which require applicants to upload condensed versions of information provided in the Case for Support, have been cited as one example of this. The issue of surplus information has been mentioned most frequently in relation to reporting, where data fields are not always tailored to the aims and themes of particular projects.

Work already underway to address burdens associated with digital platforms

The ongoing development of the UKRI Funding Service offers a unique opportunity to reshape the function of digital research platforms in the UK.

The NIHR has an ambitious digital, data and technology strategy which is driving systems consolidation, interoperability and automation and embedding the principle of "ask-once, use multiple times" across the NIHR. This includes comprehensive review and developments to funding award and management systems.

Greater inter-operability and data sharing also provides an opportunity for greater visibility and transparency of UK research. For example, UK Collaborative on Development Research (UKCDR) use the interoperability of data to show UK's international ODA R&D partnerships with different countries through the Mapping ODA research and innovation (MODARI) platform, jointly funded by UK R&D funding agencies[x].

Case Study: UKRI's Simpler and Better Funding Programme

UKRI's Simpler and Better Funding (SBF) programme is creating a funding service that is easy to use and supports everyone involved in research funding. The goal is that UKRI operates a single, consistent user-centred service that reduces the burden of finding, applying for and managing research funding, gives UKRI evidence to support funding the best ideas, can respond and adapt easily to change. The new UKRI Funding Service is being developed in a user-centred, iterative way. This means the early development and testing of processes and functionality, and a cycle of continuous learning from external and internal users to revise and enhance the service.

All UKRI Research Councils have launched a pilot Opportunity on the platform. SBF is collaborating with Councils to onboard more Opportunities in 2022/23, to test new features and model how the new service will operate. During this phase, the UKRI Funding Service will run in parallel to UKRI's current online systems for managing funding while SBF introduces more standardised content and policies and reduces unnecessary manual processes. From 2024, Research Council Opportunities will be delivered and managed end-to-end in the new Service. The SBF programme will run to March 2025, continuing to iterate and develop the platform and making our processes more efficient, whilst also bringing Innovate UK and Research England onto the new UKRI Funding Service.

Summary Conclusions

Creating digital platforms that meet the needs of different disciplines, organisations and end-users is complex and time-consuming. As we make the transition to new platforms, researchers and research organisations may therefore encounter temporary bureaucratic obstacles. However, if implemented successfully, these platforms could transform the administration of research in the long term. At this key point in the evolution of our digital

research infrastructure, the Review calls on the sector to work together to ensure that this potential is fully realised.

There is a symbiotic relationship between improving digital platforms and enhancing bureaucratic processes. Technological advances can be a catalyst for administrative innovation, while an understanding of bureaucratic requirements is vital to the design and operation of new digital systems. The concurrent development of multiple digital platforms should therefore encourage imaginative thinking on how to reduce the bureaucracy described in other sections of this report.

Design is as important as functionality. Users' experience of digital interfaces has a profound impact on their attitude to the bureaucracy that the platform serves.

The potential of digital tools to improve the performance and efficiency of bureaucracy is severely limited if researchers do not know they exist or are unsure how to use them. The responsibility for training researchers on how to find and make the most of these tools should be shared by research organisations, funders, and umbrella organisations such as Jisc.

Recommendations

To address the review findings we recommend that:

Recommendation 19: For the higher education sector, Jisc should lead on the creation of sector-wide groups responsible for overseeing the development and further integration of the research information ecosystem, including research management data.

The Review endorses the proposal for a PID consortium made by MoreBrains in their report : 'The case for investment in a UK persistent identifier strategy: Resilience, insight, and leadership in global research and innovation'[xi] and would recommend extending this model to other facets of digital research platforms as appropriate. As the designated umbrella body for digital services and solutions, Jisc should take a leading role in co-ordinating this activity for the higher education sector.

In addition, the review makes a number of recommendations to drive improvements on digital platforms:

Recommendation 20: For existing systems, approaches to improving the flow of data between different platforms should be explored, using for example application programming interfaces, point to point integration, and machine learning.

Recommendation 21: The review strongly encourages the use of persistent digital identifiers to drive wider adoption.

Recommendation 22: Funders and platform providers should focus in the short to medium term on the creation of common data taxonomies, and the standard questions they will ask. This would make it far easier to repurpose applications for other schemes and funders, to share assurance data, and to conduct 'big picture' analyses of research outcomes in the UK, which are currently inhibited by the multitude of systems and interfaces.

Recommendation 23: Funding bodies and owners of reporting platforms should review the structure and content of current online forms as a priority, with the aim of removing sections that are unnecessary or unclear

Recommendation 24: Where relevant, there should be more active, coordinated engagement by funders with the research platform providers that will help address issues and lead to better, harmonised approaches. End-user representation should also be included.

Institutional Bureaucracy

Overview

For the Review, institutional bureaucracy refers to systems, processes, and approaches within research organisations, as opposed to those imposed by funders, regulators, and Government departments.

There is, however, an obvious correlation between the requirements of bodies in the wider research landscape and research organisations' internal bureaucracy. Many of the issues outlined here are therefore closely linked to those discussed elsewhere in the report.

The impact of new rules and regulations on institutions varies enormously. Smaller or less research-intensive organisations have far fewer resources to devote to compliance.

However, several aspects of institutional bureaucracy are shared by a significant number of organisations, in particular universities.

Senior leaders in universities play a vital role in determining their institution's approach to risk and in empowering staff at lower grades to find solutions to bureaucratic challenges.

Research organisations are affected by the internal workings of other organisations at every stage of the research lifecycle. Given the scale and bureaucratic complexity of research collaboration that has already been highlighted, greater standardisation in institutional processes and standards would bring obvious advantages.

Findings

Institutional bureaucracy was one of the most frequently cited issues by individuals in the call for evidence and was a common theme in stakeholder meetings. These references covered a wide range of topics and activities, including preparing and submitting applications, ethical review, due diligence processes, and various aspects of project implementation.

Inefficiencies in institutional processes, structures, and decision-making were often traced to risk aversion in research organisations.

The root causes of risk aversion are difficult to isolate. However, stakeholders cited a link with increasingly complex regulatory frameworks for research and the associated fear of sanction.

Research organisations struggle to determine what is sufficient, in terms of resources and processes, to meet new regulatory or assurance requirements. This can be due to the nature of the issues, a lack of in-house expertise, and the innate difficulty of managing problems that are often 'low volume, high impact'. Divergent responses to export control across the sector are an example of this phenomenon - some organisations have created new teams, while others have added it to the responsibilities of existing staff.

The impact of risk aversion is most apparent in setting up externally funded projects. Research can be delayed if institutions are unwilling to allow set-up procedures - such as recruitment and

procurement - to begin 'at risk' without the final contract or grant agreement having been signed. For collaborative or consortium-based projects in particular, this can create major obstacles and effectively shorten the allotted funding period. While some research organisations have introduced 'trusted funder' policies that enable these processes to start as soon as an award is announced, approaches are mixed across the sector.

Complex approval hierarchies within organisations were also cited as contributing to delays and significant operational difficulties.

Universities that use generalist professional service departments to provide key elements of research support - relying, for example, on central legal services rather than a designated research contracts team - often reported longer delays in research-related administration. This may be due to central teams' limited capacity and their relative lack of familiarity with the subject matter.

In every organisation, research administration depends on a wide range of professional services departments including Research Services, Finance, Human Resources, Legal Services, Procurement and Estates. Effective collaboration between these departments is vital. This should be underpinned by regular communication and could be extended to joint training, secondments, and co-location where feasible.

In the same vein, the nature and frequency of researchers' interactions with professional services staff shapes their experience and perception of institutional bureaucracy more than any other single factor. Internal bureaucracy and internal communication may be considered to be largely synonymous: effective communication not only enhances process efficiency by increasing the speed and quality of compliance but is also a key source of ongoing process improvement.

Case Study: University of St Andrews

The University of St Andrews adapted their due diligence checks on international partners so that the process was proportionate to the level of risk. Having established that many of the non-financial questions in the full UKRI template survey were not relevant in many cases, causing confusion among partners and delays to the research, they used tailored versions of the questionnaire that reflected the partner’s area of expertise and their contribution to the project. This approach, which was in place at the time of their most recent three-year UKRI institutional audit, improved efficiency and minimised the impact on researchers and partner organisations.

Case Study: University of Southampton

The University of Southampton's system for Ethics and Research Governance Online – ERGO – is a standalone web-based platform, developed in-house for the ethical review of research projects undertaken by the University's 20,000+ research staff and students.

ERGO, and now ERGO II, brings together the review of legal compliance, insurance, financial probity, health & safety, information management, cultural heritage, security sensitivity, human tissue and the environment. It includes a novel, dynamic questionnaire that helps researchers determine whether ethics approval is needed and categorises their projects by risk to calculate the number of reviewers required in the appropriate committees. The system automatically allocates reviewers based on availability and the risk category of the project, thereby dramatically reducing waiting times especially for lower risk applications.

The system has saved academic and administrator time valued at over £150,000 annually. [xii]The intuitive interface has removed the need for user training, leading to additional savings and rapid take-up. The administrative burden on the central Research Integrity and Governance team has also drastically reduced. ERGO has removed the need for printing, storage space, time-consuming scanning and archiving of finished applications, and constant manual update of the research ethics database. ERGO also ensures compliance with clinical trials regulations, which are managed by experts centrally due to their specialist, high-risk nature.

Summary Conclusions

As the reach, capacity, and architecture of the UK research system have expanded, so have the breadth and complexity of the bureaucratic measures used to manage it. Adapting to this new environment and optimising the relevant internal processes is an ongoing task for research organisations.

While shifts in the external landscape present obvious challenges, research organisations must take responsibility for reducing their internal bureaucracy through changes to processes and working culture.

The greatest scope for improvement lies in research organisations' attitude to risk. Excessive caution is a consistent feature of institutional processes that have been identified as hindering the progress of research.

As with other areas of the report, successfully tackling the issue of institutional bureaucracy will depend on research organisations working together to share ideas and best practice.

Recommendations

To address the review findings we recommend that:

Recommendation 25: Wherever possible, research organisations should examine the feasibility of delegating research-related approvals to research managers and officers who are closer to research.

There is untapped potential in research organisations which should draw on the knowledge and experience of junior staff, who typically have a more immediate and detailed understanding of bureaucracy's impact on research. In addition, research organisations should review the provision of training to all members of staff who support research across all key areas and requirements.

Recommendation 26: Universities UK should bring research organisations together to find new platforms and methods for working together on research management issues such as increasing risk appetite, streamlining burdens including through greater standardisation.

If system-level improvements to application, assurance, and grant management processes are not mirrored by new approaches within research organisations, the benefits to researchers will be negligible. A sector-wide discussion about risk appetite will also be necessary for joint resources. While there are clear limits to what can be achieved – homogenisation would not be feasible and organisations must retain the autonomy to design their own processes – the potential for closer alignment should be explored in more detail. This should be carried out in conjunction with a focus on data interoperability and the sharing of best practice for research assurance.

Recommendation 27: If they do not already have them, universities should establish 'Trusted Funder' policies to enable projects to proceed at risk depending on the source and size of the grant.

While research organisations are understandably wary of incurring upfront costs before funding has been released, in certain circumstances it can reduce delays caused by recruitment and procurement. Some universities are now willing to set up project spending codes at the point when the award is announced, rather than waiting for the official offer letter – this allows recruitment to begin.

Communications

Overview

The scope, content, and frequency of communication plays an important role on how bureaucracy impacts on researchers. Good communication enables institutions and researchers to better manage the complexity of new funding models, regulation, and assurance requirements.

In our evidence sessions, it was clear that many researchers do not understand why they need to provide certain information. Much of the information is necessary and enables the effective functioning of the research system. Greater and clearer communication with researchers about the purpose of information requests could reduce irritation with the system and improve their understanding and 'buy-in'.

As well as helping research organisations to operationalise bureaucracy, communication also influences the perception of burden among researchers. The importance of perception was highlighted in KPMG's Review of TRAC in 2021[xiii].

The Review principles of transparency and fairness are underpinned by effective communication. Ambiguity has been cited as a primary cause of the risk aversion and 'gold-plating' that can lead to excessive or unnecessary bureaucracy in research organisations. Strong communication is also crucial to the fairness of the research system and ensuring that it is accessible to all.

Findings

The Review has identified a number of ways in which communication can better support researchers and organisations in dealing with bureaucracy:

a. Clear, consistent use of language and avoidance of jargon;

b. Extensive consultation prior to the introduction of bureaucratic measures that considers their likely impact on different types of research organisation and project;

c. A proactive approach from funders and regulators that offers support for research organisations in interpreting, understanding and managing new statutory and regulatory requirements;

d. Identifying all relevant stakeholders within research organisations and tailoring the style and content of communications material accordingly;

e. Allowing sufficient time between the announcement of funding opportunities or new regulations and the deadline for submission or implementation;

f. Increasing awareness of existing tools and methods that can reduce the bureaucratic burden, such as persistent digital identifiers;

g. The issue of inconsistent or esoteric language has been raised most frequently in relation to funding call guidance notes. Every effort must be made to simplify instructions and not assume prior knowledge of the system. As well as reducing the time needed to interpret guidance notes, this would ideally also improve the quality of applications. Clarity is particularly important for researchers at the start of their career who may be unfamiliar with the funding system and its terminology;

h. The Review acknowledges that consultations can themselves prove bureaucratic if not managed carefully. However, it is vital to understand the implications of new rules and assurance mechanisms for different parts of the system in order to prevent unintended consequences. Given this, funding bodies and others must also consider how to undertake and target consultations with minimum disruption to the sector;

i. Engagement should continue after new rules have been introduced. Ongoing advice from funders and Government can be critical in enabling organisations to proceed with new requirements effectively. The founding of the Research Collaboration Advice Team (RCAT) - supporting security-related issues - is a significant step forward in this regard, but should only be one strand of a wider programme of support;

j. It is also important that communication targets the right people within institutions. Research organisations should work with Universities UK (who compiled a list of contacts for the Research Collaboration Advice Team) to ensure that such information is available and up to date;

k. The period between the announcement of funding schemes and the submission deadline is often very short, which can be a barrier to prospective applicants and create the impression that certain calls are "closed shops". While compressed timescales will sometimes be unavoidable, they should be the exception rather than the norm. This is vital to the credibility, transparency, and overall performance of the system and is particularly important for large or otherwise complex bids in which universities need sufficient time to manage their own processes.

Case Study: Queen's University Belfast

To ensure the full diversity of their research base is represented in the strategic decision-making process, Queen's University Belfast has developed an integrated decision-making and feedback structure. Over the past 12 months, they have consolidated different groups to address and streamline research bureaucracy. At its centre, is a Research and Innovation Committee that monitors development and implementation of the University Research and Innovation strategy, and acts as a conduit for research staff at all levels to engage with, inform and enhance strategic decision making around research priorities, whilst also horizon scanning and developing new initiatives as the strategy adapts in real time. Faculty input spans Deans of Research to Post-Graduate Researchers. In addition to the committee's activity, Research and Innovation 'town hall' events take place 2-3 times per year. Led by the Pro-Vice Chancellor for Research and

Enterprise, these are an opportunity for a wider range of voices to hear the latest updates from university leadership, and to ask questions directly.

Case Study: North East Regional Research Development Network

The Universities of Durham, Newcastle, Northumbria, Sunderland and Teesside are working together to maximise the value of their collective knowledge and share best practice.

One example of this collaboration is the North East Regional Research Development Network. A forum to discuss issues of common interest. Each university sends two or three members to the Network's quarterly meetings. Each university Chairs and manages the group for a year, and this then rotates.

Examples of issues discussed include: a collective research response to the Covid-19 pandemic. The group was able to rapidly share information on funding opportunities, areas of interest and potential regional collaboration. Other issues included: each University's research strategy and opportunities for collaboration; ODA funding; supporting and collaborating on proposals for Centres for Doctoral Training; internal peer review schemes; bridging funding for those on short-term research contracts; optimising research services post-pandemic; ensuring EDI in research development services; sharing experiences of purchased research management systems.

Summary Conclusions

The research system consists of organisations with different remits, structures, and obligations. Good communication ensures that the aims and focus of bureaucracy in each type of institution - from universities and other research organisations to funders and regulators - are understood throughout the system. It can also shine light on areas where contrasting views and experience of bureaucracy could potentially result in conflict or inefficiency.

By clarifying the underlying rationale of bureaucracy, good communication enables individuals and organisations to comply with its requirements while mitigating its impact on research. More broadly, communication helps to foster a shared sense of purpose throughout the sector that is vital to address the complex challenges of modern research. Even where there are enhanced requirements due to the location or type of research, for example on Official Development Assistance funded projects, requirements should be clear and predictable.

Communication must be delivered through multiple channels to be effective. The sheer size of the research system means that we cannot rely on a single announcement, publication, or social media platform if we want to share information widely. The impact of poor communication on the function and perception of bureaucracy is significant: it not only

increases the likelihood of mistakes and wasted effort, but also undermines the fairness of the system by disadvantaging certain researchers and institutions.

Recommendations

To address the review findings we recommend that:

Recommendation 28: Government, funders and regulators should undertake wide ranging consultation with research organisations prior to the introduction of new regulatory or other requirements.

Recommendation 29: Government and funders should proactively communicate on new and emerging regulatory issues. The RCAT model is good practice in this regard.

Funders and institutions should not assume that researchers understand why they are being asked for information and should explain clearly why it is necessary. Engagement and/or formal consultation should aim to identify any potential challenges with implementation. Expectations around reporting should be clear from the outset and understood by all parties. Unintended consequences and effects elsewhere in the system must be considered before formal communications are drafted and issued. As part of a broader effort to develop cross-funder co-operation, funding bodies should work together to develop consistent terminology for guidance documents.

Recommendation 30: Funders should ensure important messages about research are sent to research office contacts as well as Vice Chancellor/Pro-Vice Chancellor Research.

Research office contact details should be held by all funders. Responsibility for collating and updating these contact details should lie with the whole sector. Similarly, funders should not solely communicate with investigators on projects - research offices should be copied into all messages as standard practice. Funders should provide clear contact points at every stage of their processes.

The remit and function of existing forums for discussion between universities and funders (including the UKRI Research Organisation Consultation Group) should be expanded.

Recommendation 31: The transparency principle applies as strongly to internal university bureaucracy as it does to requirements imposed by funders, regulators and Government departments. The justification for internal bureaucracy should always be clear to researchers.

Recommendation 32: In the interests of fairness and quality, funding bodies should make every effort to ensure that enough time is left between the announcement of calls and application deadlines. They should also avoid setting deadlines that are liable to disadvantage certain applicants (e.g. during or immediately after school holidays).

Next Steps and Oversight

Accretion of unnecessary bureaucracy has happened over many years. A reset will take time. However, there is significant activity already underway and a broad recognition of the need to address the problem across government, funders and research organisations.

It will be important to maintain the momentum and expectation that this Review has generated. Early action and effective communication to the sector will demonstrate what is changing and what will be different as a result.

There must be shared ownership across the research sector not just of the issues and recommendations presented in this Review, but also in keeping unnecessary bureaucracy at bay in the future.

There are a number of next steps that should be considered:

a. Leadership and coordination:

    i. Cross government leadership including the Devolved Administrations and other bodies such as regulators will be needed to implement these recommendations. It will need effective leadership and coordination of action.

    ii. The Funders Group established to support the Review could be retained and its membership reviewed to ensure there is cross-sector, operational and end user representation. This could share ideas about best practice and provide oversight of bureaucracy in the system, as well as working together on shared initiatives (such as increasing data interoperability). In addition, other existing forms of governance and coordination should now consider the bureaucratic impact of their policies and their implementation - this should be a standing item.

    iii. There should be effective joining up with other complementary activities, such as the implementation of the Government's People and Culture Strategy, the Review of the Concordats, the outputs of the other independent reviews that have been running in parallel, the outcomes of the Future Research Assessment Programme, and other activities involving the Devolved Administrations.

    iv. Implementation of the recommendations in this report should be guided by the Review's 7 principles.

b. Communication and consultation:

i. Funders and research organisations should communicate and champion efforts to reduce bureaucracy through different communication channels.

ii. Funders and other bodies should explore mechanisms to encourage on-going identification and reduction of research bureaucracy.

c. Monitoring and measuring success:

i. There should be arrangements established to revisit the extent to which recommendations have been taken forward and bureaucracy held at bay.

ii. There should be light-touch periodic monitoring or surveying to measure the success of the implementation of the Review's recommendations. This might involve gathering views of different people in different departments, funders, researchers, institutions, and organisations, focussed in the main on the perspectives of those delivering and managing research. The potential use of metrics to support this monitoring of implementation should also be explored.

iii. It should be combined wherever possible with wider initiatives, such as those mentioned above, in assessing the overall health of the research system.

Annexes A-C

Annex A: Terms of reference

The Prime Minister's package of science announcements on 27 January 2020 included "…launching a major review of research bureaucracy and methods, including unnecessary paperwork, arduous funding applications and research selection processes. This will free up and support the best researchers to focus on ground-breaking, ambitious and meaningful research…..".

Unnecessary bureaucracy diverts and hampers research, and the work of individual researchers and research teams, and diminishes returns from research funding.

While data can help us understand what we are achieving and how we can best support high quality research and impact, our starting point is that the bureaucracy imposed by government, funders and universities is too great and should be reduced, with significant consequent benefits for all actors in the system.

Further, we share the concerns of many in the research community that the balance between individual judgement and formal assurance and monitoring mechanisms has tipped too far in the direction of the latter, with significant bureaucracy now impeding the research process itself. We want to empower researchers and innovators to act with the flexibility, time, and purpose needed to pursue creative and ambitious research directions.

The Minister for Science, Research and Innovation has commissioned Professor Adam Tickell, Vice-Chancellor of the University of Sussex, to lead this review. The overarching goal of this review is to advise on a substantial reduction in unnecessary research bureaucracy in government and the wider sector, supporting our researchers to focus on research and related activities which contribute to a healthy research base.

Our ambition is to reduce research bureaucracy so that only essential elements remain, resulting in a major improvement in the quality of the working lives of individuals and teams conducting research.

The goals of the review will be to:

i. Identify the reasons behind real and perceived growth in research bureaucracy over recent decades, learning lessons from the past while challenging our collective assumptions about what is really necessary;

ii. Identify a wide range of specific reductions in overall research bureaucracy and in the bureaucratic tasks that researchers themselves undertake, which will be for government, funders and research organisations to consider and implement; they should consider objective measures of success from the point of view of frontline research staff;

iii. Ensure that government can continue to fulfil the requirement at an appropriate level of aggregation that can demonstrate impact and value for public money spent on research and provide evidence to support efficient and effective future investment;

iv. Support the wider UK research system to work more productively through this review;

v. Identify effective funding models, processes and infrastructure, whether existing or new, that will support the UK research environment to be more dynamic, diverse and transparent;

vi. Ensure mandatory national security considerations and the protections in Trusted Research are embedded in research.

This review and its outputs will support the goals of the Government's Research and Development Roadmap.

PURPOSE AND SCOPE

The review will identify and tackle unnecessary bureaucracy and its causes from a system-wide perspective. Measures of the success of the review and its implementation will be:

- The resource spent by government and research organisations on administering the grant system should be proportionate and value for money.

- A significant reduction in unnecessary reporting and monitoring systems within institutions and the wider system, maintaining only those that add value to our system, and with all parties accepting the resultant reduction in tracking of spending and impact.

- A clear refocusing of remaining bureaucracy onto the highest priority areas – including to enable a broad range of excellent research, to reward and incentivise diverse career progression, to promote a culture of transparency and research integrity, and to demonstrate impact so we can make a long-term case for investment in research and innovation.

The review will recognise that all parties - government, funders, higher education institutions and research organisations - need to play their full part in this agenda. The aim should be to reduce bureaucracy, not move it to another part of the system.

The review will focus primarily on Higher Education Institutions and research organisations. Research undertaken by businesses, beyond university-business R&D interaction, is enormously important but outside the scope of this review.

The review will build on initiatives already being undertaken by funding bodies and research organisations, including UK Research and Innovation's 'Reforming Our Business' programme, and informing the forthcoming review of the Research Excellence Framework.

TIMESCALE

We envisage the review producing interim findings around autumn 2021, and then final conclusions available by early 2022.

GOVERNANCE AND REPORTING

Professor Tickell will report to the Minister for Science, Research and Innovation, and be supported by a Challenge Panel with diverse representation from across the research system.

Annex B: List of stakeholders consulted

(Separate document)

Annex C: Analysis and summary of Call for Evidence responses

(Separate document)

[i] RCAT notice: https://www.gov.uk/government/publications/research-collaboration-advice-team-rcat-privacy-notice/research-collaboration-advice-team-rcat-privacy-notice

[ii] Von Hippel. T., Von Hippel. C. (2015). To Apply or Not Apply: A Survey Analysis of Grant Writing Costs and Benefits. DOI: https://doi.org/10.1371/journal.pone.0118494

[iii] Herbert. D., Barnett. A., Clarke. P., and Graves. N. (2013). On the time spent preparing grant proposals: an observational study of Australian researchers. DOI: http://dx.doi.org/10.1136/bmjopen-2013-002800

[iv] Workload is an education issue: UCU Workload Survey report 2016 https://www.ucu.org.uk/media/8195/Workload-is-an-education-issue-UCU-workload-survey-report-2016/pdf/ucu_workloadsurvey_fullreport_jun16.pdf

Activity (some aggregated for clarity)	Average % of working hours of research only staff	Average % of working hours of teaching and research staff
Research activities including reading, self-directed and study design	35%	14%
Writing papers and reports	15%	4%
Department and general admin and internal QA	7%	9%
Supervision (postgraduate students)	7%	5%
Grant writing	6%	3%
Supervision (staff)	5%	2%
Departmental meetings and communications	5%	6%
External meetings, communications and conferences	8%	3%
Networking	3%	2%
Peer review	3%	2%
REF activities	2%	2%
Funder engagement (meetings and written communication)	4%	1%
Performance measurement (own)	2%	2%
Teaching preparation, lectures, tutorials, course review and development	N/A	29%
Student admin and consultations, marking and pastoral care	N/A	18%

NB. The survey asked respondents to estimate how much of their total work time was spent on each of a defined list of tasks, using an allocation model approach. Members employed on each contract type (teaching and research, teaching focused, research only and non-academic / academic related) were assigned different and specific sets of tasks against which to plot their time.

[v] Liu. M., et al. (2020). The acceptability of using a lottery to allocate research funding: a survey of applicants

[vi] https://www.gov.uk/government/publications/the-future-of-uk-clinical-research-delivery

[vii] https://www.gov.uk/government/publications/the-future-of-uk-clinical-research-delivery-2021-to-2022-implementation-plan/the-future-of-uk-clinical-research-delivery-2021-to-2022-implementation-plan

[viii] https://www.gov.uk/guidance/university-and-business-collaboration-agreements-lambert-toolkit

[ix] https://arma.ac.uk/updated-brunswick-agreements/

[x] https://www.ukcdr.org.uk/what-we-do/our-work/data-on-uk-funded-research-and-innovation/

[xi] https://zenodo.org/record/6012367#.YozwKajTU2w

[xiii] https://www.trac.ac.uk/news/review-of-trac-2021/