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Science and Technology
Committee

**Setting up UK Research
& Innovation**

Eighth Report of Session 2016–17

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to the report*

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Science and Technology Committee

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Summary

The Government plans to create ‘UK Research & Innovation’ (UKRI)—a new body with nine ‘councils’, comprising the seven research councils, Innovate UK and Research England (another new body, taking over the university research grant-funding role from the Higher Education Funding Council for England (HEFCE)). UKRI will be established through the Government’s Higher Education and Research Bill. We have examined the proposals, as they have developed, since last year, and in October 2016 we took evidence from Sir John Kingman, the recently appointed interim Chair of UKRI. We have identified in this report a number of issues that we hope the incoming UKRI Chief Executive, as well as the Government, will address as the new organisation is set up and begins to operate in 2018. Importantly, the Government should set out the metrics it proposes to use to monitor, and report on, the success of UKRI.

Provisions in the Bill for maintaining a ‘reasonable balance’ between the two funding streams of ‘dual support’ (where the research councils fund specific research projects and the higher education funding councils allocate block grants to research departments) are necessary measures because these funding streams will both be placed within the oversight of the same organisation. The science and research community is rightly worried, however, that the recognised benefits of ‘dual support’, and an appropriate balance between the two allocations, could be vulnerable over the years ahead under different ministers. The Government should ensure that UKRI disaggregates its spending under the two funding streams in its annual reporting, to demonstrate the maintenance of this essential safeguard.

The Government is having to develop processes and guidelines to facilitate and replicate the current close relationship between research and teaching in universities. The production of these guidelines should be an urgent priority to help allay uncertainty, and UKRI and the new Office for Students should report on how well these arrangements work in practice.

The creation of UKRI could make it easier for the Government to communicate its strategic vision for publicly-funded research, and provide a mechanism for the research community to inform and influence Government. Whether such a two-way dialogue is effective will depend on how well a ‘revamped’ and ‘strengthened’ Council for Science and Technology (CST) balances these different perspectives while protecting the Haldane principle. To make that more likely, the Government should publish the minutes of the CST’s deliberations on UKRI’s strategy and priorities.

The continued separation between the budgets for Innovate UK and the research bodies within UKRI will help prevent the science budget being used to bolster Innovate UK’s budget, and will help entrench Innovate UK’s distinct business focus. There could be a risk that research priorities and funding will be excessively influenced by the proximity of Innovate UK to the research councils and Research England within UKRI. The CST should be charged with proactively monitoring this. UKRI must report its Innovate UK spending separately.

The final structure for UKRI is yet to be determined. That structure will need to balance the need to produce a coherent and strategically-oriented research and innovation body with the need to encourage the expertise embedded in the nine individual ‘councils’ to be heard.

UKRI will bring together UK-wide and England-only funding responsibilities. This will inevitably weaken UKRI’s strategic role in setting UK-wide research priorities, although the Government’s assurances on protecting the balance of dual support funding at least over the current 2016–17 – 2019–20 Spending Review period will help minimise the consequences of such risks. If the Higher Education and Research Bill remains as currently amended, the Government will have to exercise its obligation to appoint UKRI board members with experience of the devolved nations with great care, to minimise the disconnect between UKRI’s UK-wide and England-only remits.

1 Introduction

1. We published our first report of this Parliament, in November 2015, on the *Science budget*.¹ Our aim was to examine the case for enhancing the science budget in the run up to that month’s Autumn Statement and Spending Review, and we urged the Government to produce “a long term ‘roadmap’ for increasing public and private sector science R&D investment in the UK to 3% of GDP”.² The Government subsequently set a science budget for the Spending Review period that was an improvement on the previous cash-flat budget, by keeping it stable in real terms through the addition of a new Global Challenges Research Fund.³ Last month, the Prime Minister announced an extra £2 billion a year of government expenditure for research by the end of the current Spending Review period,⁴ although the details of this initiative have yet to be provided.

2. In our *Science budget* report we also addressed a number of developments that could potentially change the way the science budget, and indeed the separate innovation budget, would be delivered. Sir Paul Nurse, a former President of the Royal Society, had been commissioned by the previous Government to review the research councils, which together deliver one of the two strands of the ‘dual support’ system for funding university research (where the research councils fund specific research projects, while the Higher Education Funding Council for England (HEFCE) allocates block grants to research departments on the basis of the quality and size of their research work).

3. In November 2015 the Government published its higher education Green Paper, which included a commitment to “maintain the dual support system through dual funding streams”, but also stated that “HEFCE would no longer have a role in [...] allocating grant-funding for teaching and research”.⁵ Instead, it raised options for how the HEFCE role would be taken forward by Research Councils UK or potentially another body.⁶

4. Sir Paul Nurse’s report, published a fortnight after the Green Paper, recommended bringing the research councils together in a new overarching body—Research UK, a successor body to Research Councils UK—to allow research to be planned more strategically and more readily allow inter-disciplinary work. Nurse also envisaged that the new body would have closer links to government, possibly through a new ‘Ministerial Committee’ chaired by a senior Cabinet member. He also recommended that the dual support funding system should remain. Furthermore, he urged that if Government plans were taken forward to move Innovate UK into Research UK, the integrity of the science budget ‘ring fence’ (which excludes Innovate UK) should be maintained.⁷ Previously, Professor Dame Ann Dowling, President of the Royal Academy of Engineering, had reviewed business-university research links, and had made recommendations for reducing its complexity and for providing clearer advice to businesses.⁸

1 Science and Technology Committee, [The science budget](#), First Report of Session 2015–16, HC 340

2 [The science budget](#), First Report of Session 2015–16, HC 340, Chapter 3

3 HM Treasury, [Spending Review and Autumn Statement 2015](#), Cm 9162 (November 2015), p48 and para 2.69

4 [Prime Minister announcement at CBI Annual Conference](#), 21 November 2016

5 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice Green Paper](#), Cm 9141 (November 2015)

6 [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice Green Paper](#), Cm 9141 (November 2015), Part D

7 Sir Paul Nurse, [Ensuring a successful UK research endeavour: A Review of the UK Research Councils](#) (November 2015)

8 [The Dowling Review of Business-University Research Collaborations](#) (July 2015)

5. We took evidence from Sir Paul Nurse in December 2015 on his review recommendations, and in January 2016 from Sajid Javid MP, the then Secretary of State for Business, Innovation and Skills, on the science budget and the Government’s Green Paper proposals. In advance of Budget 2016, we wrote to the then Chancellor, George Osborne MP, to reiterate the importance of maintaining science funding and to emphasise the need to “avoid any prolonged uncertainty” by reaching decisions quickly on the Dowling Report, the Nurse Review and the higher education Green Paper.⁹

6. We subsequently sought to monitor the science, research and innovation sectors’ concerns in these areas by holding two seminars at the Royal Society, in May and June 2016. We wrote to the then Business Secretary in May to highlight “three broad concerns” from our first seminar “which will need to be at the heart of any changes the Government introduces”:

First, the need to protect the existing vital strengths of the current science and innovation system—the ‘dual support’ funding system and the focus on ‘excellence’, and the synergies of teaching and research in our university system. Second, the need to get leadership structures right, both in the way research/innovation is taken forward and in the way that Government sets priorities. Third, a need for a whole-system vision that will overarch the changes.¹⁰

7. The higher education and research White Paper, subsequently published in May 2016, announced the establishment of UK Research & Innovation (UKRI)—a new body with nine ‘councils’ comprising the seven research councils, Innovate UK and Research England (another new body, taking over the research grant-funding role from HEFCE, as envisaged in the Green Paper). A new Office for Students (OfS) would take on the higher education regulatory role currently exercised by HEFCE.¹¹ We invited Jo Johnson MP, Minister of State for Universities, Science, Research and Innovation, to our second seminar in June 2016, from which we were able to distil four “high-level issues which will need to be examined and clarified over the months ahead”:

First, the need to articulate more clearly the Government’s vision for the future research and innovation system and what it can achieve beyond the current system’s performance, so that UKRI will become more than the sum of its parts. It must explain not only why the changes could ultimately be worthwhile, but how we will protect our science and innovation ecosystem from any unintended harm during the process. There should be appropriate metrics to monitor any changes in the quality and impact of research and innovation, including business/university synergies.

Second, whether the establishment of the Office for Students and a Teaching Excellence Framework enhances or undermines the beneficial link between teaching and research in universities (there appear to be conflicting perspectives on this). Crucially, we will need to know who will have responsibility for ensuring the health of the whole system, from individual disciplines through to our world-leading institutions.

9 [Letter to Chancellor of the Exchequer](#), 7 March 2016.

10 [Letter to BIS Secretary of State](#), 13 May 2016

11 [BIS, Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016

Third, how the impact of Innovate UK will be secured when it is brought into UK Research and Innovation, and its distinct business-facing focus retained. It is vital that Innovate UK can be more than simply a vehicle for commercialising research funded by the Research Councils, but is supported to not just to continue its work with pioneering businesses and SMEs but to accelerate it.

Fourth, the structure must provide robust and coherent structures which do not depend on the individuals involved in the future to make them work. There will need to be clarity about the relationships between the executive chairs of the research councils, the new UKRI board and chief executive, and the [Science] Minister, as well as each's responsibilities and powers under the new system. [...] Getting the leadership structures right, both in the way research and innovation is taken forward and in the way that Government sets priorities, is of paramount importance. While the quality of the leadership matters, the structures we set in place must safeguard the autonomy and the strong voices of the existing research councils while achieving the stated goal of better interdisciplinary working. A key test of how well the system operates will be any longer term decisions on the way that Nurse's recommendation for a 'Ministerial Committee' interface is taken forward.¹²

8. Stakeholders have since raised particular concerns about the Higher Education and Research Bill, which has formally introduced the Government's structural changes to the science and innovation institutions. The Bill, amended in the Public Bill Committee,¹³ received its Third reading on 21 November¹⁴ and is currently in the Lords.

9. In October, we were able to put some of the issues to Sir John Kingman, the recently appointed interim Chair of UKRI.¹⁵ There remains, nevertheless, a number of areas of concern from our earlier work which will have to be addressed as UKRI is set up and begins operating in the months ahead, not least by the soon-to-be-recruited UKRI Chief Executive. In this report we address three key areas which the Chief Executive, along with the Government, will need to keep in focus: the integrity of the dual support system (Chapter 2); the greater focus on inter-disciplinary research and its potential impact (Chapter 3); and innovation (Chapter 4). In Chapter 5 we examine the UKRI governance issues that will need to be addressed by the new CEO, and the Government, to ensure that the concerns that have been raised do not materialise.

12 [Letter to Minister for Universities and Science](#), 14 June 2016

13 [Higher Education & Research Bill: As amended in the public bill committee](#), October 2016

14 [Higher Education and Research Bill, Third Reading](#), 21 November 2016

15 [Letter from Minister for Universities and Science](#), 27 May 2016

2 Dual research funding

Dual support

10. In our November 2015 report on the *Science Budget*, we noted that the ‘dual support’ system had produced “a world class and highly efficient system for scientific research”.¹⁶ The White Paper similarly emphasised its importance:

The dual support funding system, described by Sir Paul Nurse, as ‘one of the bedrocks of UK research’, was also identified as critical to the UK’s world-leading reputation. Dual support combines project funding for excellent research proposals, which is forward looking and assessed through peer review, with formula based quality-related research funding that rewards performance retrospectively based on peer review and proven impact from the research.¹⁷

11. Under the Government’s proposals, HEFCE will no longer have its current role in regulating higher education institutions or allocating grant funding for teaching and research in England.¹⁸ Its research funding role—one arm of the dual support system—will become the remit of a new body called Research England, which will in turn become part of UKRI (paragraph 7). Because UKRI will also encompass the seven research councils—the other arm of dual support—it will subsume both of the dual support funding streams within the one organisation.

12. The Government argued that this will not compromise dual support:

A landscape without HEFCE does not mean an elimination of dual funding [...] We are committed to the retention of the dual support system as part of a reshaped research funding landscape.¹⁹

In January 2016, Sajid Javid MP, the then Business Secretary, told us that spending on the dual support funding mechanism “can be hypothecated and allocated to a particular stream, so I do not see a particular problem with that”.²⁰

13. Nevertheless, the “perceived potential” for dual support to be undermined was one of the two “most frequently raised risks” in the responses to the Green Paper consultation.²¹ Many respondents, the Government noted, were concerned that:

[HEFCE] Quality-Related research funding may come under pressure if delivered by the same organisation as competitive research council funding, and called for the current balance between the streams to be maintained.

16 Science and Technology Committee, [The science budget](#), First Report of Session 2015–16, HC 340, para 64

17 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016

18 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice Green Paper](#), Cm 9141, November 2015, p70

19 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice Green Paper](#), Cm 9141 (November 2015), p 70

20 Oral evidence taken on 19 Jan 2016, [HC 761](#), Q40 [Sajid Javid]

21 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#), May 2016, p50

These respondents argued that strict separation of the governance, management and delivery mechanisms of the two streams would be required.²²

14. Sir Paul Nurse emphasised in December 2015 that the funding streams should be separate: “They operate in different ways [...] It is very important to maintain the two separate systems.”²³ Professor Philip Nelson of Research Councils UK believed that “some safeguards need to be put in place” for the dual support system within UKRI.²⁴

Balanced funding

15. In our *Science Budget* report and following our seminars (paragraph 6), we warned that “any significant changes to [...] the balance of funding between research councils and university funding councils would require a clear justification, which has yet to emerge”.²⁵ The Government’s subsequent White Paper envisaged an “appropriate balance” between the two funding streams:

The Secretary of State will continue to allocate the dual support budgets separately in an annual grant letter. As a further protection, future legislation would strengthen the commitment to the dual funding system by requiring the Secretary of State in allocating research funding to UKRI to consider whether there is an appropriate balance between the UK-wide competitive project funding and the England-only research funding, taking advice from UKRI and the OfS. The effect of this will be to enshrine the principle of dual support in legislation for the first time.²⁶

The Higher Education and Research Bill envisages a “reasonable balance” of funding:

The Secretary of State must have regard to the ‘balanced funding’ principle [...] which ensures a reasonable balance of funding between the functions exercisable by the science and humanities [research] councils and the support provided by Research England.²⁷

16. Rebecca Endean, Director of Science & Research in the Department for Business Energy and Industrial Strategy (BEIS), emphasised that the Bill’s provisions mean that “for the first time ever, Ministers will need to have due regard to the fact that both sides of the dual funding system should be balanced”.²⁸ How a ‘reasonable balance’ is determined, however, has worried stakeholders. The Russell Group was concerned about how the balance would continue to be protected:

22 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#) (May 2016), p53

23 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q27 [Sir Paul Nurse]

24 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q50 [Professor Nelson]

25 Science and Technology Committee, [The science budget](#), First Report of Session 2015–16, HC 340, para 64; [Letter to BIS Secretary of State](#), 13 May 2016

26 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, p74

27 [Higher Education and Research Bill - Explanatory Notes](#), 19 May 2016; Clause 97 in the [Bill agreed in the Commons](#), 21 November 2016

28 Q21

How the principle of ‘reasonable balance’ in funding for the research councils and Research England is determined will be critical in order to ensure [Quality-Related] funding is not eroded over time [...] Enshrining transparency as a key principle of UKRI would allow for scrutiny and help to protect funding, but a stronger mechanism may also be needed by which evidenced justification would have to be provided for altering the balance between the two funding streams.²⁹

17. On 21 November 2016, the Science Minister was able to give some assurances on the transparency of the funding streams during the report stage of the Bill, and explained that the balance of funding allocations would be protected across the Spending Review period:

It is important that UKRI retains some flexibility to manage its funds to meet immediate financial pressures, to ensure best value from its resources and to meet the aspirations for seamless administration of multi- and interdisciplinary research and joint research and innovation projects. Small-scale, practical and mutually agreed virement is essential for any organisation that is managing a large portfolio of innovative, complex projects. [...] The Secretary of State would not agree to UKRI viring money in such a way as to result in a net change in Research England’s hypothecated budget over a Spending Review period. This will be made clear in guidance to UKRI.³⁰

18. The Prime Minister announced on the same day a welcome additional £2 billion a year for research and development by 2020–21.³¹ Jo Johnson told the House that a new Industrial Strategy Challenge Fund would be managed by Innovate UK, the research councils and, once established, by UKRI.³² Press reports speculated whether the research element of the additional funding would reflect the current dual support split. Professor Graeme Reid of UCL was reported as saying: “With so much new investment, the Government’s commitment to a balanced funding system is being tested. This is a chance for ministers to demonstrate that they are serious about preserving that balance.”³³

19. Provisions in the Higher Education and Research Bill for maintaining a ‘reasonable balance’ between the two funding streams of ‘dual support’ are necessary measures because these spending streams will be placed within the oversight of the same organisation. The Government’s assurances on this are welcome, but the science and research community is rightly worried that the widely recognised benefits of the dual support research funding system, and an appropriate balance between the two allocations, could be vulnerable over the years ahead under different ministers. *To help allay any concerns about this, the Government should ensure that UKRI disaggregates its spending under the two funding stream in its annual reporting, to demonstrate the maintenance of this essential safeguard. If the Government, in the future, should see a need for adjusting the spending division, it should bring forward proposals for doing so and explain its rationale in a public consultation.*

29 Russell Group, [UKR0006](#)

30 Higher Education and Research Bill, Report stage, [HC Deb 21 November 2016](#), col 679

31 [Prime Minister announcement at CBI Annual Conference](#), 21 November 2016

32 Higher Education and Research Bill, Report stage, [HC Deb 21 November 2016](#), col 677

33 [“What will an extra £4.7 billion do for UK science and innovation?”](#), The Guardian, 24 November 2016

Research and teaching

20. As part of the Government's proposals in the Higher Education and Research Bill, the Office for Students (OfS) will take on HEFCE's regulatory role for higher education and be under the jurisdiction of the Department for Education (DfE), while UKRI (through Research England) will take responsibility for HEFCE's research funding role and be within BEIS's oversight.

21. Respondents to the Green Paper wanted "the links between teaching and research in institutions [to be] preserved".³⁴ HEFCE director David Sweeney highlighted that "moving the policy people from HEFCE into [UKRI] does not deal with the fact that the core support function for institutions will lie somewhere else".³⁵ The Russell Group emphasised that "strong strategic links at all levels of UKRI and the OfS (and BEIS and DfE) will be crucial in ensuring higher education continues to benefit from clear strategic leadership and prevent a decoupling of teaching and research".³⁶

22. The Royal Society of Chemistry were worried that "the separation of teaching and research in the new HE architecture will mean that the benefits of research informing teaching and learning practices could be lost".³⁷ David Sweeney noted that to guarantee the best teachers and talent pipelines there have to be opportunities to do research, and was concerned that "to deliver the national priority of more STEM teaching, you have to look at teaching and research together".³⁸ Stakeholders at our seminars also highlighted this issue.³⁹

23. The Government argued that the "higher education and research reforms are intended to balance the incentives on institutions and establish parity for academics who build a career in teaching as well as in research" by recognising "those institutions that already use research skills explicitly to enhance their teaching, while encouraging more institutions to ensure their teaching is informed by the latest in scholarship, research and professional practice".⁴⁰ The Government's White Paper and its *Case for the Creation of UKRI* envisaged the OfS and UKRI cooperating with each other to ensure a "coordinated and strategic approach".⁴¹ The two bodies will share information and data, and "work together on areas of shared interest", including:

UKRI and OfS working together to assess the financial health of the HE sector in England, ensuring that UKRI has access to information on overall financial health so its funding decisions safeguard research sustainability; UKRI and OfS working together in the area of knowledge exchange; UKRI working with OfS on the assessment process for Research Degree Awarding

34 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#) (May 2016), p54

35 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q47 [David Sweeney]

36 Russell Group ([UKR0006](#))

37 Royal Society of Chemistry ([UKR0008](#))

38 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q53 [David Sweeney]

39 [Letter to BIS Secretary of State](#), 13 May 2016

40 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, p75

41 BIS, [Case for the creation of UK Research and Innovation](#) (June 2016), p5 ; [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, p74

Powers; and UKRI and OfS sharing data to inform research and evaluation studies; and providing regular assurance to satisfy respective accountability responsibilities.⁴²

24. Sir John Kingman acknowledged the importance of collaboration at departmental level between DfE and BEIS, and emphasised UKRI's role in fostering relationships with the wider "research ecology"⁴³:

If that relationship starts to fray for any reason—a personality reason or whatever—we would have a problem. I see no reason to believe that should be the case, and it certainly is not the case at present.⁴⁴

25. On 15 November 2016 the Government published *Joint working between OfS and UKRI*, in which it provided details on how the two organisations "will work actively together across their respective remit".⁴⁵ This cooperation would focus on seven key areas: skills, capability and progression; knowledge exchange; infrastructure funding; financial sustainability and efficiency of the HE system and providers; accountability and assurance; evidence gathering and system intelligence; and the Teaching Excellence Framework and Research Excellence Framework:

Government will work with [OfS and UKRI] to develop appropriate governance arrangements that embed joint working principles and practices. Each organisation will have a framework document with its partner department, and these will be developed to ensure a consistent approach to joint working. The two organisations will also have a memorandum of understanding between them, which sets out the details of how they will work together, including formal structures for regular engagement and information sharing agreements.⁴⁶

26. In creating the OfS and UKRI, the Government will divide responsibilities at departmental level between the DfE and BEIS. Revising Jo Johnson's role to be a minister in both of those departments is a necessary consequence of these changes, and he will have a critical responsibility to prevent the split remits of university teaching and university research creating sub-optimal policy-making. The Government is having to create and develop processes and guidelines to facilitate and replicate the close relationship between research and teaching that currently already exists in our universities. *The Government should produce those guidelines as a priority to help reduce uncertainty, and work with UKRI and OfS to develop appropriate processes for monitoring how well joint working operates in practice. It should also require the two new organisations to include progress against the seven identified cooperation areas in their annual reporting.*

42 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, p74

43 Q30

44 Q33

45 DfE & BEIS, [Higher Education and Research Bill: Joint working between OfS and UKRI](#) (November 2016), p3

46 DfE & BEIS, [Higher Education and Research Bill: Joint working between OfS and UKRI](#) (November 2016), p4

3 Inter-disciplinary research

Inter-disciplinary research and a combined voice

27. The Government expects the bringing together of the research councils within an overarching body to facilitate multi-disciplinary research. It emphasised that “the challenges facing the world are complex, and increasingly require multi- or inter-disciplinary approaches”.⁴⁷ This has raised concerns about councils’ autonomy and the protection of the Haldane Principle—where decisions on individual research proposals are best taken by researchers themselves through peer review, rather than Government.⁴⁸

28. A review by HEFCE in July 2015 noted that “UK interdisciplinary research is growing in intensity, in line with a global trend”⁴⁹, while its 2014 *Triennial Review of the Research Councils* concluded that:

There was strong consensus that the research councils operate effectively in fulfilling their functions, spend a low proportion (by international standards) of their budget on administration and that the case for merging or otherwise reducing the number of councils did not outweigh the significant costs and disruption that this would cause. The most prominent area of concern raised in this theme was interdisciplinary work where, despite some improvements in recent years, many respondents considered that significant numbers of high quality proposals were still not being funded.⁵⁰

29. Sir Paul Nurse’s review proposed the creation of Research UK which would allow “independent research councils operating as they are, but with a cover that allows cross-cutting activities to be looked after more effectively”.⁵¹ Responses to the Green Paper showed that “the most frequently discussed potential benefit of [the proposal to bring the research councils under a single overarching body] was increased support for multi-disciplinary and inter-disciplinary research”.⁵² Sir Paul Nurse rejected the possibility of merging the research councils, however, because, as he told us in December 2015, this would “be disruptive, it would reduce agility [...] and getting good leadership would be more difficult. At the moment the research councils are close to their own communities, and [a merger] would distance them from their communities.”⁵³

30. Sir John Kingman told us that “while the research councils have worked hard on this [inter-disciplinary] agenda, the risk is that the organisational silos could cause some of the most interesting work to fall between the cracks”.⁵⁴

31. The Government believed that bringing the research councils together in UKRI would also provide “a strengthened, unified voice for the UK’s research and innovation funding system, facilitating the dialogue with Government and partners on the global

47 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016

48 [HC Deb 20 December 2010](#), col 138WS

49 HEFCE, [A review of the UK’s interdisciplinary research using a citation-based approach](#) (July 2015)

50 BIS, [Triennial Review of the Research Councils](#) (April 2014), para 234

51 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q5 [Sir Paul Nurse]

52 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#) (May 2016), p51

53 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q5 [Sir Paul Nurse]

54 Q3

stage”.⁵⁵ Sir Paul Nurse’s report, published in November 2015, concluded that “a stronger strategic voice for research within Government would be fostered if the research councils worked together more closely to both share and reduce the administrative burden and to develop and implement common strategy for engagement with Government”.⁵⁶

32. The Government reported that one of the most frequently raised risks identified by respondents to the Green Paper consultation was the potential for the “autonomy of research disciplines to be undermined in a streamlined system”.⁵⁷ Professor Stephen Curry of Imperial College wrote that “the proposed arrangements invest a great deal of power in the chair and chief executive of UKRI”⁵⁸ while Professor Philip Nelson from Research Councils UK told us that:

Currently, we have very strong governance arrangements. The [research] councils are corporate bodies, and as such are very effective bodies [...] Some of the community are nervous that that might get diluted in some way, and we share that nervousness.⁵⁹

David Sweeney from HEFCE saw disadvantages in a weaker focus on individual research council perspectives:

The advantage at the moment is that the Minister gets advice from people who understand project funding and from people who understand block grant funding. He gets multiple sets of advice. Once you put everything into Research UK and it has to provide one piece of advice, it becomes trickier to tease out all the issues around the balance between the two sides.⁶⁰

33. The White Paper in May 2016 stated that “the key principle underpinning [the UKRI] structure is the requirement to protect the autonomy of research and innovation leaders”.⁶¹ It gave an assurance that the new body would retain the names and brands of the research councils and Innovate UK, while “preserving the symbolic property associated with them such as their seals and insignia”.⁶² Press reports have described concerns in some quarters about a possible loss of historic royal charters.⁶³ Rebecca Endean from BEIS told us that “there will be nine separate councils with individual autonomy and decision-making in relation to their discipline areas. That is very clearly specified in the Bill.”⁶⁴

55 BIS, [Case for the creation of UK Research and Innovation](#) (June 2016)

56 Sir Paul Nurse, [Ensuring a successful UK research endeavour: A Review of the UK Research Councils](#) (November 2015), p12

57 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#) (May 2016), p50

58 “[Why the Higher Education and Research Bill must be amended](#)”, The Guardian, 18 October 2016

59 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q46 [Professor Phillip Nelson]

60 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q50 [David Sweeney]

61 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, p74

62 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016

63 ‘[Oppose the UK Higher Education and Research Bill](#)’, Nature, 4 October 2016

64 Q21

Global Challenges Research Fund

34. One important area of inter-disciplinary or cross-cutting research work will be the Global Challenges Research Fund, announced in the 2015 Spending Review. Research expenditure for this Fund will count as part of the UK's Official Development Assistance spending commitment and will be administered by the research councils and others.⁶⁵

35. The Government believed that the research councils, in their current form, would not be able to collaborate in managing this Fund because “it is not within the remit of any of the research councils to hold, manage or distribute the necessary inter- and multi-disciplinary grants”.⁶⁶ It argued that “a single legal structure will remove the need for Government to intervene with partner bodies to develop workaround solutions to the limitations imposed by the current landscape”.⁶⁷ Rebecca Endean of BEIS explained that UKRI would “hold the Global Challenges Fund centrally, if that is what the new [UKRI] board and new CEO want to do, but we have also made sure there is a provision [in the Bill⁶⁸] that will enable one council to act on behalf of others, so you could charge one of the individual councils to deliver multidisciplinary funds”.⁶⁹

36. Green Paper respondents generally welcomed the Global Challenges Research Fund, “subject to an appropriate balance being struck between discipline-specific and interdisciplinary budgets, and transparent criteria and processes for administering it being put in place”.⁷⁰ Sir John Kingman believed that the Fund was a positive step, and wanted individual research councils to be involved more generally in interdisciplinary research work.⁷¹

Government oversight and ministerial involvement

37. Some were concerned specifically about Sir Paul Nurse's recommendation for creating a 'Ministerial Committee' with strategic oversight of UKRI, to guide the Government's science strategy and its communication with the research community.⁷² Sir Paul Nurse told us that he thought “the research councils were perhaps too often second-guessing the Government's needs and wishes”.⁷³ His review suggested that a means to counter this would be a Ministerial Committee chaired by a senior Minister with cross-cutting cabinet responsibilities, with the Council for Science and Technology (CST) acting as an independent advisory group for that Committee.⁷⁴ The *Triennial Review of the Research Councils* previously recommended greater transparency of CST's work.⁷⁵ Sir Paul argued that there was a need “to involve the political class” in discussions about research and believed that a Ministerial Committee would meet a need for “a very strong place for

65 HM Treasury, [Spending Review and Autumn Statement 2015](#), Cm 9162 (November 2015), p28

66 BIS, [Case for the creation of UK Research and Innovation](#) (June 2016)

67 BIS, [Case for the creation of UK Research and Innovation](#) (June 2016), p8

68 Clause 92 in the [Bill agreed in the Commons](#), 21 November 2016

69 Q56 [Rebecca Endean]

70 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#) (May 2016), p51

71 Q34

72 Sir Paul Nurse, [Ensuring a successful UK research endeavour: A Review of the UK Research Councils](#) (November 2015)

73 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q7 [Sir Paul Nurse]

74 [Ensuring a successful UK research endeavour: A Review of the UK Research Councils](#) (November 2015), p32

75 BIS, [Triennial Review of the Research Councils](#) (April 2014). The CST meets quarterly and comprises senior figures from science, engineering and teaching, drawn from business and academia.

that debate to occur. I have confidence that that will deliver a better outcome than the somewhat more diffuse debates, which can be over-influenced by individuals and are not transparent. It will be a much better way to deliver the Haldane principle.”⁷⁶

38. A separate concern was that a greater focus on strategic, often multi-disciplinary, research could allow the Government to have too great an influence over research decisions, breaching the Haldane principle. Responses to the Green Paper raised concerns about potential increased political influence over research strategy and argued that any ministerial committee should be “bi-directional” and that “safeguards would be needed to ensure that funding decisions continue to follow Haldane principles”.⁷⁷

39. Some, including Lord Rees (a former president of the Royal Society), have expressed concerns about what they see as a reduction in research councils’ autonomy under UKRI.⁷⁸ Our seminars at the Royal Society flagged up the need to ensure that the Haldane principle continued to guide the allocation of public research funding.⁷⁹ Others did not share that view, however, including Professor Ottoline Leyser of the University of Cambridge who believed that the current framework “Balkanizes the system and leads to competition between councils for funding, rather than cooperation”.⁸⁰

40. Sajid Javid indicated to us in January 2016 that rather than Nurse’s ‘ministerial committee’ a “strengthened” CST could be used⁸¹ (BEIS officials called it a “revamped” CST).⁸² That option was subsequently announced in the White Paper: A reformed CST would “strengthen its links with Government”. The document stated that “refreshed terms of reference would give CST responsibility for carrying out horizon-scanning to identify and advise on risks and opportunities relating to science, technology and disruptive innovation, as well as periodically evaluating what Government’s overarching priorities for science and technology should be”.⁸³ Rebecca Endean from BEIS explained that the Government’s view was that “another ministerial committee was possibly not the best way of achieving the aim of ensuring that the best scientists are actively engaged in making Government policies of the day”.⁸⁴

41. In response to concerns about a possible weakening of the Haldane principle, Rebecca Endean explained that the Government was “fully committed to the principle that funding decisions should be taken by experts in their relevant areas, and we have ensured this is reflected in the design of UKRI”.⁸⁵ This followed repeated Government commitments to the Haldane principle in the Green paper⁸⁶ and subsequently. Sir John Kingman argued that UKRI could actually strengthen the principle:

76 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q19 [Sir Paul Nurse]

77 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#) (May 2016), p51

78 “A stronger voice for U.K. science - but at what cost?”, *Science Magazine*, 13 October 2016; [“HE Bill faces ‘strong concerns’ from UK peers despite changes”](#), *Times Higher Education*, 16 November 2016.

79 [Letter to BIS Secretary of State](#), 13 May 2016

80 “A stronger voice for U.K. science - but at what cost?”, *Science Magazine*, 13 October 2016

81 [Letter from Sajid Javid](#), 7 January. See also [Letter to BIS Secretary of State](#), 13 May 2016.

82 Q53

83 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016

84 Q53

85 DfE & BEIS, [Higher Education and Research Bill: UKRI Vision, Principles & Governance](#) (October 2016), p5

86 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#) (May 2016), p69

The Haldane principle does not say that Ministers shall have no involvement. Ministers have always taken decisions on the allocation of funds between the councils; they have also always been involved in very big capital decisions. That will not change under this Bill. What will change is that UKRI is firmly established with a remit to advise Ministers on all those questions, which is a new feature of the scene that I think implicitly strengthens the Haldane principle.⁸⁷

42. Research councils working within UKRI could help deliver the multi-disciplinary research work that policy-making increasingly needs. It appears to be an essential prerequisite for the new Global Challenge Research Fund. The creation of UKRI could make it easier for the Government to communicate its strategic vision for publicly-funded research, and provide a mechanism for the research community to inform and influence Government. Whether such a two-way dialogue is effective will depend on how well a ‘revamped’ and ‘strengthened’ Council for Science and Technology balances the different perspectives while protecting the Haldane principle. *To make that more likely, and to give stakeholders confidence that the CST is fulfilling its role, the Government should publish the minutes of the CST’s deliberations on UKRI’s strategy and priorities.*

4 Innovation

43. The Government's July 2015 Productivity Plan included a commitment for universities to "continue to increase their collaboration with industry to drive research commercialisation, and increase the income they earn from working with business and others to £5 billion per annum by 2025".⁸⁸ Professor Anne Dowling's review addressed how industry/university links could be improved (paragraph 4). She found that "public support for the innovation system is too complex" and that "Government strategy on innovation needs to be better coordinated and have greater visibility".⁸⁹ Sir Paul Nurse believed, similarly, that commercial businesses which are "science intensive" find the research landscape "rather complicated to interact with: The research councils often have different rules, acronyms and names for similar activities".⁹⁰ The Dowling review urged that "when developing industrial strategy and other long-term sectoral strategies, government and business should consult universities as key partners".⁹¹

44. Sir Paul Nurse emphasised that:

Common practice could simplify the outsider's view of the research councils and how they operate, because they sometimes have to interact with more than one research council, particularly for business. [...] We see knowledge being generated in the research councils, some of which is going to be important for application and subsequent development.

He believed that the creation of UKRI would improve matters "simply by making sure there are better connections".⁹²

45. The creation of UKRI will bring Innovate UK and the two bodies that fund university research together within a single organisation. The White paper envisaged that this would lead to "the creation of a more agile and responsive system, with a stronger emphasis on multi- and inter-disciplinary research, [which] will ensure that the funding landscape is well equipped to meet tomorrow's commercial challenges".⁹³ Rebecca Endean from BEIS told us that "UKRI can play a key part in delivering any industrial strategy".⁹⁴

46. The White Paper noted that "respondents to the stakeholder survey on Innovate UK emphasised its vital role in supporting business-led innovation and the potential to increase the commercial exploitation of the UK's excellent research".⁹⁵ Sir John Kingman emphasised that "the world is simply not divided between the pure pursuit of knowledge in universities over here and exciting innovation in companies over there: There is a very interesting and important territory in the middle where both Innovate UK and the research councils are rightly active."⁹⁶

88 HM Treasury, [Fixing the foundations: Creating a more prosperous nation](#), Cm 9098, July 2015

89 [The Dowling Review of Business-University Research Collaborations](#) (July 2015), p3

90 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q33 [Sir Paul Nurse]

91 [The Dowling Review of Business-University Research Collaborations](#) (July 2015), p7

92 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q32 [Sir Paul Nurse]

93 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, p75

94 Q37

95 [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, p67

96 Q35

47. The Minister for Universities, Science, Research and Innovation, Jo Johnson, told the House in November 2016 that:

Incorporating Innovate UK [in UKRI] will bring benefits to businesses, researchers and the whole UK. It will help businesses identify possible research partners and mean that research outputs are better aligned with their needs. Researchers will benefit from greater exposure to business and commercialisation expertise, and it will deliver a more strategic, agile and impactful approach across UKRI's portfolio.⁹⁷

48. In the White Paper the government outlined how Innovate UK would retain its distinct qualities within UKRI:

Innovate UK will be a separate Council within UKRI, led by an Executive Chair, with a mandate to continue working closely with businesses in order to ensure that UKRI is helping deliver commercial impact and a competitive advantage for the UK economy. Its business facing focus would be enshrined in future legislation, which would replicate the functions in Innovate UK's current charter.⁹⁸

49. The Green Paper's respondents had highlighted concerns that, within UKRI, "a greater proportion of Innovate UK's resources would be diverted towards academically focused early-stage research".⁹⁹ Universities UK worried that "Innovate UK may become, whether deliberately or by drift, a commercialisation arm for research funded by the [research] councils." Universities UK emphasised that Innovate UK has "a very specific focus that is qualitatively distinct from the existing research councils or the research functions of HEFCE", and were concerned that the "business-facing role of Innovate UK does not sit comfortably with the university-facing role of the research councils".¹⁰⁰

50. Green Paper respondents identified a risk that "curiosity-driven 'blue sky' research would be scaled back if the focus was put on projects with immediate commercial reward."¹⁰¹ Responses emphasised that research and innovation were different activities and "care would be needed to reconcile these differences in a combined organisation; for example academics' desire to publicise research whereas businesses are more likely to want to maintain commercial confidentiality".¹⁰²

51. David Sweeney of HEFCE noted that "only a fraction" of university-business interactions happen through Innovate UK:

By far the most university business partnerships happen through universities themselves, without Innovate UK funding. Only 16% of Innovate UK funding goes into the research base. About 40% of their projects have an

97 Higher Education and Research Bill, Report stage, [HC Deb 21 November 2016](#), col 678

98 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, p76

99 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#), May 2016, p53

100 Universities UK submission to Higher Education and Research Bill Committee, [HERB 06](#), para 72

101 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#), May 2016, p51

102 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#), May 2016, p53

academic input, but there is a far higher number of direct relationships between universities and businesses that put the people who have issues directly in touch with the academics and universities that can solve them.¹⁰³

52. Some respondents to the Green Paper cautioned that the disparity in the size of the research and innovation budgets could affect Innovate UK's influence.¹⁰⁴ Respondents stressed that Innovate UK must “retain its own funding; retain its clear voice as the business-facing element of government support for innovation; and continue to function as a flexible and responsive funder of innovation”.¹⁰⁵

53. Following our seminars at the Royal Society, we warned the Government in May 2016 about the need to “guard [Innovate UK] against being too reliant on the push from research, rather than the pull from business. It should not become the commercial arm of the research councils”. We also warned that funding for the research councils and Innovate UK should be kept separate: “The ring-fenced science budget currently encompassing the research councils must not be diluted by being required in the future to also fund Innovate UK”.¹⁰⁶

54. Lord Selborne, Chair of the Lords Science & Technology Committee, wrote to the Government stating that it “must as a minimum ensure that three key features of Innovate UK are protected: its autonomy, its funding and its business-facing focus.”¹⁰⁷ In his response to the Lords Committee, Jo Johnson stated that “Innovate UK is not, and will not become, the commercialisation arm of the research councils, and this reform is not narrowly focused on commercialisation” and added that the Government has “included multiple safeguards, such as specifying its business-focused mission on the face of the Bill, specifying a board which balances both research and business interests and which will include a specific innovation champion”.¹⁰⁸

55. The Government has acknowledged that “substantial innovation already happens across the UK which is not informed or impacted by the research base”, but that “aligning and creating a combined research and innovation support landscape will facilitate opportunities for businesses and innovators to take forward their ideas more easily.”¹⁰⁹

56. The Science Minister also told the House in November 2016 that:

I recognise the importance of Innovate UK maintaining its business-facing focus. That is why the Bill will protect Innovate UK's distinctive focus and autonomy in the delivery of its functions. [...] It will retain its separate budget, set out via a grant letter from the Secretary of State. The Secretary of State will appoint both academic and business representatives to the UKRI board, including a member to lead in promoting and championing innovation and business interests.¹¹⁰

103 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q48 [David Sweeney]

104 [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#), May 2016, p53

105 [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#), May 2016, p52

106 [Letter to BIS Secretary of State](#), 13 May 2016

107 [Lords Science and Technology Committee letter to Minister for Science and Universities](#), 30 June 2016

108 [Letter to Lords Science and Technology Committee from Minister of State for Universities and Science](#), August 2016

109 BIS, [Case for the creation of UK Research and Innovation](#), June 2016, p8

110 Higher Education and Research Bill, Report stage, [HC Deb 21 November 2016](#), col 678

Sir John Kingman assured us in October 2016 that he is “very committed to the distinct mission of Innovate UK [...] I completely agree, as do Ministers, that Innovate UK is not somehow the commercialisation bit of the research councils.”¹¹¹

57. The continued separation of the budgets for Innovate UK and the research bodies within UKRI will help prevent the science budget being used to bolster Innovate UK’s budget, and will help entrench Innovate UK’s distinct business focus. The Government’s aim in bringing Innovate UK into the new UKRI organisation is to produce a closer, more joined-up, link between research and innovation, to help ensure that research with economic potential is commercialised. There could be, on the other hand, a risk that research priorities and funding will be excessively influenced by the proximity of Innovate UK and the research councils and Research England within UKRI, so that basic research without immediately apparent commercial potential is not given sufficient weight. *The CST (paragraph 40) should be charged with proactively monitoring the linkages between UKRI’s innovation and research work, and should report publicly on its assessment of the sustainability of the balance of applied and basic research. Our recommendation above on the need for separate transparent reporting on spending via the two dual support streams (paragraph 19) should be applied similarly for reporting Innovate UK spending.*

5 Governance and structures

58. The risks and concerns that we have identified, in Chapters 2–4 above, will require UKRI to have appropriate and robust structures. Campaign for Science & Engineering (CaSE) emphasised that the individuals recruited to key roles in the new UKRI will also be “a key factor [...] in getting buy-in from the research and innovation sectors”.¹¹²

59. Responses to the Green Paper highlighted that “high profile discipline leadership roles with significant autonomy would be required to attract researchers of the necessary calibre”.¹¹³ The British Academy told us:

Under the right leadership and strategic direction, this organisation could catalyse a more strategic, agile and interdisciplinary approach to addressing global challenges. The UKRI Board should draw on individuals of the very highest calibre, including both national and international talent and expertise to raise further the international profile of UK research and innovation.¹¹⁴

We warned ministers in June that UKRI must also provide “robust and coherent structures which do not depend on the individuals involved in the future to make them work”.¹¹⁵

The UKRI Board

60. In *The case for the creation of UKRI*, the Government stated that “UKRI’s Board will have responsibility for leading on the overall strategic direction, cross-cutting decision-making and providing advice to the Secretary of State on the balance of funding between research disciplines.”¹¹⁶ The White Paper set out the role that ministers would have in making appointments to the UKRI board:

As with current arrangements for the research councils, HEFCE and Innovate UK, the Secretary of State will appoint all of UKRI’s board members. The majority will be non-executives with significant expertise in research or business, ensuring a strategic focus at the head of the organisation that spans blue skies research and business-led innovation. Future legislation will ensure consideration of the balance of research and business experience in the appointment of Board members.¹¹⁷

One member of the UKRI Board will “lead in promoting and championing innovation and business interests and providing strategic support to the Innovate UK Executive Chair, also sitting on the council of Innovate UK”.¹¹⁸

112 [“A closer look at the HE white paper”](#), Campaign for Science and Engineering, 17 May 2016

113 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#), May 2016, p52

114 The Royal Society, British Academy, Royal Academy of Engineering, and The Academy of Medical Sciences ([UKR0013](#))

115 [Letter to Minister for Universities and Science](#), 14 June 2016

116 BIS, [Case for the creation of UK Research and Innovation](#), June 2016, p27

117 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, p70

118 BEIS ([UKR0017](#))

61. Following our seminars earlier this year, we stressed that “there will need to be clarity about the relationships between the executive chairs of research councils, the new UKRI board and chief executive, and the [Science] Minister, as well as each’s responsibilities and powers under the new system.” We stressed the need for the structures to “safeguard the autonomy and the strong voices of the existing research councils while achieving the stated goal of better inter-disciplinary working”.¹¹⁹

62. There is a concern, however, that the lack of direct representation of the constituent council’s executive chairs could lead to the board becoming isolated. The Nurse Review recommended the creation of a committee of Executive Chairs of the research councils, to provide a link to UKRI’s governing board. The national academies were concerned that the governance arrangements proposed in the White Paper and the Bill do not include such an Executive Committee.¹²⁰ The Government responded to such concerns by saying that this body would indeed be set up, to allow the nine councils of UKRI to coordinate:

As the [UKRI] Board will be responsible for holding the research councils, Innovate UK and Research England (the nine ‘Councils’) to account, it must be independent of them. The Board will therefore not comprise the Heads of the Councils (Executive Chairs). It will be critical for the Board to work closely with the Executive Chairs and ensure highly effective coordination across UKRI and its key partners. Therefore, the Executive Chairs of the Councils—along with the CEO, [Chief Finance Officer] and other senior directors of UKRI—will together sit on an Executive Committee, to support engagement with the Board and cross-council working.¹²¹

Sir John Kingman echoed this rationale when he told us:

It is very important to remember that the role of UKRI in relation to the research councils is to hold them to account. If the board of UKRI consisted of the heads of the research councils [...] you would have the people being held to account holding themselves to account.¹²²

I want to make sure that around the chief executive is a small high-quality team that can act almost as a kind of intelligent shareholder in the nine funding bodies.¹²³

63. The Government argued that structural “fluidity” would be “particularly important for enhancing support for multi-disciplinary and inter-disciplinary research, and research addressing societal needs and emergencies which span a range of research disciplines and require a number of organisations to work together”.¹²⁴ Crucial to a successful structure, the Nurse review concluded, would be creating ‘a research endeavour’ which is “permeable and fluid, allowing the ready transfer of ideas, skills and people in all directions between

119 [Letter to Minister for Universities and Science](#), 14 June 2016

120 The Royal Society, British Academy, Royal Academy of Engineering, and The Academy of Medical Sciences ([UKR0013](#))

121 BEIS ([UKR0017](#))

122 Q13

123 Q4

124 BIS, [Case for the creation of UK Research and Innovation](#), June 2016, para 16

sectors, research disciplines, the span of the research endeavour, and its potential beneficiaries.”¹²⁵ The White paper emphasised a need “to reduce bureaucracy, freeing up research and innovation leaders to focus on strategic decision-making”.¹²⁶

64. The Government told us in October 2016 that it was working with the interim UKRI Chair “to explore detailed organisation design options [...] [to] inform the final design which will be refined and agreed in partnership with the UKRI Chief Executive and Board once appointed”.¹²⁷ The Government emphasised “the importance of subsidiarity, with decisions needing to be taken at the lowest effective level and leaders in particular fields of activity given full responsibility for decisions in their areas”.¹²⁸ Rebecca Endean confirmed press reports that BEIS was working with Deloitte “to work with us and all the existing CEOs to look at the options”, in order to have “well thought-out proposals for what the organisation should look like”.¹²⁹

65. In the meantime, Sir John told us that he intended UKRI to be a “small strategic organisation that sits over the existing bodies”. He did not want “to allow the organisation to build itself into an unnecessary bureaucracy”.¹³⁰ He would not take “irrevocable decisions about the structure until the new chief executive is in place, because it will be their organisation”.¹³¹

66. The UKRI interim Chair expects the incoming CEO to formulate a final structure for the organisation. *That structure will need to balance the need to produce a coherent and strategically-oriented research and innovation body with the need to encourage the expertise embedded in the nine individual ‘councils’ to be heard. The structure will, as we have indicated in the Chapters above, also have to continue to protect the dual support funding system, guard the close relationship between research and teaching, and facilitate an effective (and Haldane compliant) two-way dialogue between the research and innovation communities and the Government.*

UKRI’s role beyond England

67. While UKRI brings together the key research and innovation funding bodies for England, the picture is more complicated in the devolved administrations, where the national higher education funding bodies remain in place. These bodies allocate resource funding for university research departments and provide capital match-funding to complement HEFCE’s capital allocations.¹³² Responses to the Green Paper, the Government noted, emphasised that this “would need careful consideration”.¹³³ David Sweeney of HEFCE told us:

125 Sir Paul Nurse, [Ensuring a successful UK research endeavour: A Review of the UK Research Councils](#) (November 2015)

126 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016

127 BEIS (UKR0017)

128 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016

129 Q17

130 Q4

131 Q16

132 BIS, [The Allocation of Science and Research Funding 2016/17 to 2019/20](#) (March 2016), p11; Audit Scotland, [Audit of higher education in Scottish universities](#) (July 2016), paras 13-25; BIS/Policy Impact, [Interactions between research capital and other research resources in UK Higher Education Institutions](#) (June 2013), sections 5-6.

133 BIS, [Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice, Summary of Consultation Responses](#), May 2016, p54

We talk a lot with our fellow funding bodies in the other nations, but the decisions are influenced by the devolved governments. There is a very limited extent to which we can harmonise. Essentially, there is not a terribly joined-up position.¹³⁴

This has been an issue during the passage of the Higher Education and Research Bill.¹³⁵ A concern was that UKRI might not take sufficient account of the research priorities of the devolved administrations or the remaining national university funding councils. The Nurse review concluded that “there is a need to solicit and respond to distinct research priorities and evidence requirements identified by the devolved administrations, and I recommend this is best done through regular dialogue between relevant UK and devolved Government departments”.¹³⁶ A related concern was that unless the ‘balanced’ funding between the two arms of the dual support system (paragraph 15) was maintained, any shift of funding away from Research England towards the research councils could undermine the funding for the remaining devolved funding councils. The Russell Group worried that “moving funds between these [two dual support] budget lines would have knock-on implications for different universities depending on their location in the UK”.¹³⁷

68. The Government told us in October 2016 that it expected to see “arrangements in place to ensure that UKRI, and in particular Research England, retain strong links to the other devolved higher education funding bodies and the Office for Students to enable joint working on areas of shared interest”.¹³⁸ The legislation, the Government stated, would give Research England “the power to work jointly with its devolved counterparts, mirroring HEFCE’s powers under current legislation”.¹³⁹

69. The Government amended the Bill on 21 November to require ministers, in appointing UKRI members, “to have regard to the desirability of the members including at least one person with relevant experience in relation to at least one of Wales, Scotland and Northern Ireland”.¹⁴⁰ Ministers resisted calls, however, to require UKRI to consult the devolved administrations on research and innovation priorities, because it did not want “to bind UKRI into a restrictive process of consultation”.¹⁴¹

70. Sir John Kingman, the UKRI interim Chair, told us that “a rich web of relationships” would be needed, “because you have very important research institutions in all the devolved administrations”. He emphasised, however, that he would “rather not have a [UKRI] board that is simply representatives: I want a board that is very strong in its own right”.¹⁴² “If a feeling were to get about that we were somehow neglecting any of the devolved administrations,” he told us, “it would be a total failure on our part”.¹⁴³

134 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q50 [David Sweeney]

135 Report stage [21 November 2016](#)

136 Sir Paul Nurse, [Ensuring a successful UK research endeavour: A Review of the UK Research Councils](#) (November 2015), p24

137 Russell Group ([UKR0006](#))

138 BEIS ([UKR0017](#))

139 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, p74

140 HC Deb 21 November 2016, [Amendment 35](#) (now Sch 9 2(6) in the [Bill agreed in the Commons](#), 21 November 2016)

141 Higher Education and Research Bill, Report stage, [HC Deb 21 November 2016](#), col 679

142 Q14

143 Q15

71. UKRI will bring together UK-wide and England-only funding responsibilities. University research funding will remain a mostly devolved matter, outside UKRI's remit. This will inevitably weaken UKRI's strategic role in setting UK-wide research priorities. The Government's stated objective of protecting the balance of 'dual support' funding at least for the current Spending Review period (paragraph 17) will help minimise the consequences of these risks. *If the Higher Education and Research Bill remains as currently amended, the Government will have to exercise its obligation to appoint UKRI board members with experience of the devolved nations with great care, to minimise the disconnect between UKRI's UK-wide and England-only remits.*

UKRI's interim Chair and CEO

72. In May 2016, the Government announced Sir John Kingman, previously Second Permanent Secretary at the Treasury, as the interim Chair of UKRI.¹⁴⁴ Sir John would work "on an interim basis to set up the new organisation in shadow form".¹⁴⁵ The Government expect UKRI to "begin formal operations in the financial year 2018–19". Sir John's role as interim Chair "ends in April 2018".¹⁴⁶ Jo Johnson informed us in May 2016 that "the competition [for the permanent UKRI chair] would run next year [ie 2017], so that the permanent Chair and other key appointments are in place for the formal launch of UKRI".¹⁴⁷

73. The Government told us that its "early priorities for establishing UKRI are to appoint strong leadership for UKRI—including a Chief Executive and a governing Board to lead and shape the implementation of UKRI—and to engage stakeholders so that their views on UKRI can be fed into the detailed design process".¹⁴⁸ From Sir John's perspective, he saw his role as getting the organisation "to a point where it can function, be effective and be seen to add value".¹⁴⁹ He emphasised that "Paul Nurse did not in any sense describe a broken system" and that "the questions he raised were not really about whether or not those organisations were fundamentally effective but about strategic prioritisation across the system".¹⁵⁰

74. Sir John outlined his capacity for the role:

I have spent most of my career in the Treasury, in the course of which I worked over a very long period on science and innovation policy and funding, both public funding for science but also on issues like R&D tax credits and wider issues around the innovation environment. I think I worked on five Spending Reviews for science and numerous Budgets.

... and what his role would not involve:

I am not competent to be the brains of the operation in terms of actual scientific decision making, and I do not think that will ever be the role of the non-executive chair of UKRI. The nonexecutive chair is

144 ["John Kingman to lead creation of new £6 billion research and innovation body"](#), Gov.uk, May 2016

145 ["John Kingman to lead creation of new £6 billion research and innovation body"](#), Gov.uk, May 2016

146 [BEIS \(UKR0017\)](#)

147 [Letter from Minister for Universities and Science, May 2016](#)

148 [BEIS \(UKR0017\)](#)

149 Q1

150 Q3

there to ensure that the organisation is delivering—I hope I am competent to do that—and specifically to make sure that by April 2018 we have an organisation that is credible and able to do its job.¹⁵¹

Press reports have speculated that the recent announcement of an additional £2 billion a year for science and innovation spending was influenced by Sir John.¹⁵²

75. Sir John was “very focused on recruiting the chief executive”,¹⁵³ and hoped to announce the appointment by Christmas 2016.¹⁵⁴ The Government declared in its White Paper that the “high profile global roles” of the Chief Executive and permanent Chair would “attract the highest calibre candidates”.¹⁵⁵ Sir John told us that he wanted to find someone “who, as well as their scientific credibility, is able to talk outwards to the wider world: the political world, the business community, the media, Parliament and so on. This needs not to be an inward-facing organisation”.¹⁵⁶

What will success look like?

76. We have in this report highlighted particular areas that the Government and an embryonic UKRI will need to focus on, to make the new structures a success and to avoid some of the potential concerns that have been raised.

77. The Government’s plans also identified potential efficiency gains and cost savings. The 2014 *Triennial Review of the research councils* found that a number of their back-office processes, procedures and administrative functions were duplicated.¹⁵⁷ Sir Paul Nurse believed that “the research council leadership had too much administrative bureaucracy”.¹⁵⁸ The Government argued that the creation of a “single new [Non-Departmental Public Body] [...] will help to maximise the effectiveness of the system, improving value for money”.¹⁵⁹ The White Paper highlighted in May 2016 that:

[An] advantage arising from bringing together research and innovation funders into a single organisation is that the centralisation of administrative functions, including grant application systems, will simplify processes for funding recipients. This will build on recent developments of an integrated and simplified grant system being led by Innovate UK. This is expected to be of particular benefit to small and medium sized enterprises, the group most likely to experience challenges in navigating the current funding landscape.¹⁶⁰

151 Q1

152 [“What will an extra £4.7 billion do for UK science and innovation?”](#), The Guardian, 24 November 2016

153 Q1

154 Q62

155 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, para 32

156 Q12

157 BIS, [Triennial Review of the Research Councils](#), April 2014, p 119

158 Oral evidence taken on 15 Dec 2015, [HC 677](#), Q6 [Paul Nurse]

159 BIS, [Case for the creation of UK Research and Innovation](#), June 2016, p4

160 BIS, [Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice](#), Cm 9258, May 2016, p76

The Government estimated that setting up UKRI would entail £4 million of transitional costs falling in 2017–18, but then annual net savings of £1 million from 2018–19 onwards (costs of £4 million for “additional functions” and £5 million a year of “administrative annual saving”).¹⁶¹

78. Following the EU Referendum, however, a more significant funding issue has arisen. In our recent reports on the *EU regulation of life-sciences* and on the *Implications and opportunities for science and research of leaving the EU*, we noted that “the UK was a significant net financial contributor to the EU overall, but a net receiver of EU funding for research”, and that “if, despite the clear attractiveness of the UK as a research location, EU research funding was withdrawn after the exit negotiations, new funding could come from research collaborations outside the EU and from the Treasury reallocating funds previously sent to the EU”.¹⁶² Last month, the Prime Minister announced that science and research would receive an extra £2 billion a year by the end of the current Spending Review period.¹⁶³ Some have argued that the timing of the creation of UKRI is unhelpful because of the uncertainties around Brexit.¹⁶⁴ The UKRI interim Chair told us that, on the possible implication of Brexit, “UKRI, even in its nascent form, absolutely needs to be part of those conversations”.¹⁶⁵

79. Following our seminar at the Royal Society in May 2016, we highlighted the importance of “monitoring the effectiveness of the system [after the changes] for research and for innovation”.¹⁶⁶ With so much more now at stake in terms of the uncertainty about the risks and opportunities of Brexit for science and research, we asked Sir John Kingman how he would define success in his role. He told us:

We will need to think carefully about how our performance is objectively measured, but fundamentally it will be quite clear. This is a well-observed community of intelligent participants. Either we will be adding value or we will not be adding value. I hope and believe that we can add value.¹⁶⁷

80. **In order to maintain the UK’s position at the forefront of scientific research it is vital that the reorganisation of the UK research landscape delivers measurable benefits in return for the inevitable disruption caused by the proposed restructuring. To achieve this, the board and CEO of UKRI must command confidence from the research community by defining their measures of success, demonstrating UKRI’s effectiveness in achieving this, and by showing willingness to adapt, renew and revise their approach if success on these terms is not realised. *The Government should set out in its response to our report the metrics it proposes to use to monitor the success of UKRI and the changes to the research, science and innovation landscape.* We intend to ask the incoming CEO about their priorities and their assessment of the relevant success indicators. We also intend to continue to monitor the creation of UKRI and its early operation, to ensure that the issues we have raised in our report continue to be addressed.**

161 BIS, [Case for the creation of UK Research and Innovation](#), June 2016

162 Science and Technology Committee, [Leaving the UK](#), Seventh Report of Session 2016–17, HC 502, para 2

163 [“Theresa May to promise £2bn a year for scientific research”](#), The Guardian, 21 November 2016

164 [“Leading scientists clash over sweeping UK research reforms”](#), Nature, 13 October 2016; [“If it ain’t broke, don’t fix it”](#), Research Professional News, September 2016

165 Q27

166 [Letter to BIS Secretary of State](#), 13 May 2016

167 Q5

Conclusions and recommendations

Dual research funding

1. Provisions in the Higher Education and Research Bill for maintaining a ‘reasonable balance’ between the two funding streams of ‘dual support’ are necessary measures because these spending streams will be placed within the oversight of the same organisation. The Government’s assurances on this are welcome, but the science and research community is rightly worried that the widely recognised benefits of the dual support research funding system, and an appropriate balance between the two allocations, could be vulnerable over the years ahead under different ministers. *To help allay any concerns about this, the Government should ensure that UKRI disaggregates its spending under the two funding stream in its annual reporting, to demonstrate the maintenance of this essential safeguard. If the Government, in the future, should see a need for adjusting the spending division, it should bring forward proposals for doing so and explain its rationale in a public consultation.* (Paragraph 19)

2. In creating the OfS and UKRI, the Government will divide responsibilities at departmental level between the DfE and BEIS. Revising Jo Johnson’s role to be a minister in both of those departments is a necessary consequence of these changes, and he will have a critical responsibility to prevent the split remits of university teaching and university research creating sub-optimal policy-making. The Government is having to create and develop processes and guidelines to facilitate and replicate the close relationship between research and teaching that currently already exists in our universities. *The Government should produce those guidelines as a priority to help reduce uncertainty, and work with UKRI and OfS to develop appropriate processes for monitoring how well joint working operates in practice. It should also require the two new organisations to include progress against the seven identified cooperation areas in their annual reporting.* (Paragraph 26)

Inter-disciplinary research

3. Research councils working within UKRI could help deliver the multi-disciplinary research work that policy-making increasingly needs. It appears to be an essential prerequisite for the new Global Challenge Research Fund. The creation of UKRI could make it easier for the Government to communicate its strategic vision for publicly-funded research, and provide a mechanism for the research community to inform and influence Government. Whether such a two-way dialogue is effective will depend on how well a ‘revamped’ and ‘strengthened’ Council for Science and Technology balances the different perspectives while protecting the Haldane principle. *To make that more likely, and to give stakeholders confidence that the CST is fulfilling its role, the Government should publish the minutes of the CST’s deliberations on UKRI’s strategy and priorities.* (Paragraph 42)

Innovation

4. The continued separation of the budgets for Innovate UK and the research bodies within UKRI will help prevent the science budget being used to bolster Innovate UK's budget, and will help entrench Innovate UK's distinct business focus. The Government's aim in bringing Innovate UK into the new UKRI organisation is to produce a closer, more joined-up, link between research and innovation, to help ensure that research with economic potential is commercialised. There could be, on the other hand, a risk that research priorities and funding will be excessively influenced by the proximity of Innovate UK and the research councils and Research England within UKRI, so that basic research without immediately apparent commercial potential is not given sufficient weight. *The CST should be charged with proactively monitoring the linkages between UKRI's innovation and research work, and should report publicly on its assessment of the sustainability of the balance of applied and basic research. Our recommendation above on the need for separate transparent reporting on spending via the two dual support streams should be applied similarly for reporting Innovate UK spending.* (Paragraph 57)

Governance and structures

5. The UKRI interim Chair expects the incoming CEO to formulate a final structure for the organisation. *That structure will need to balance the need to produce a coherent and strategically-oriented research and innovation body with the need to encourage the expertise embedded in the nine individual 'councils' to be heard. The structure will, as we have indicated in the Chapters above, also have to continue to protect the dual support funding system, guard the close relationship between research and teaching, and facilitate an effective (and Haldane compliant) two-way dialogue between the research and innovation communities and the Government.* (Paragraph 66)
6. UKRI will bring together UK-wide and England-only funding responsibilities. University research funding will remain a mostly devolved matter, outside UKRI's remit. This will inevitably weaken UKRI's strategic role in setting UK-wide research priorities. The Government's stated objective of protecting the balance of 'dual support' funding at least for the current Spending Review period will help minimise the consequences of these risks. *If the Higher Education and Research Bill remains as currently amended, the Government will have to exercise its obligation to appoint UKRI board members with experience of the devolved nations with great care, to minimise the disconnect between UKRI's UK-wide and England-only remits.* (Paragraph 71)
7. In order to maintain the UK's position at the forefront of scientific research it is vital that the reorganisation of the UK research landscape delivers measurable benefits in return for the inevitable disruption caused by the proposed restructuring. To achieve this, the board and CEO of UKRI must command confidence from the research community by defining their measures of success, demonstrating UKRI's effectiveness in achieving this, and by showing willingness to adapt, renew and revise their approach if success on these terms is not realised. *The Government should set out in its response to our report the metrics it proposes to use to monitor the*

success of UKRI and the changes to the research, science and innovation landscape. We intend to ask the incoming CEO about their priorities and their assessment of the relevant success indicators. We also intend to continue to monitor the creation of UKRI and its early operation, to ensure that the issues we have raised in our report continue to be addressed. The Government should set out in its response to our report the metrics it proposes to use to monitor the success of UKRI and the changes to the research, science and innovation landscape. (Paragraph 80)

Formal Minutes

Wednesday 7 December 2016

Members present:

Stephen Metcalfe, in the Chair

Chris Green

Carol Monaghan

Dr Tania Mathias

Derek Thomas

Draft Report (*Setting up UK Research & Innovation*), proposed by the Chair, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 80 read and agreed to.

Summary agreed to.

Resolved, That the Report be the Eighth Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

[Adjourned till Wednesday 14 December at 9.00 am

Witnesses

The following witnesses gave evidence. Transcripts can be viewed on the [inquiry publications page](#) of the Committee's website.

Wednesday 12 October 2016

Question number

Sir John Kingman, Interim Chair, UK Research and Innovation, and **Rebecca Endean**, Director, Science and Research, Department for Business, Energy and Industrial Strategy

[Q1-63](#)

Published written evidence

The following written evidence was received and can be viewed on the [inquiry publications page](#) of the Committee's website.

UKR numbers are generated by the evidence processing system and so may not be complete.

- 1 Association of Medical Research Charities ([UKR0007](#))
- 2 Department for Business, Energy and Industrial Strategy ([UKR0017](#))
- 3 GuildHE ([UKR0003](#))
- 4 Institute of Physics ([UKR0015](#))
- 5 Met Office ([UKR0010](#))
- 6 MillionPlus ([UKR0011](#))
- 7 Political Studies Association of the UK ([UKR0001](#))
- 8 Royal Society of Chemistry ([UKR0008](#))
- 9 Russell Group ([UKR0006](#))
- 10 The London School of Economics and Political Science ([UKR0009](#))
- 11 The Royal Society of Edinburgh ([UKR0016](#))
- 12 The Royal Society, Royal Academy of Engineering, British Academy and The Academy of Medical Sciences ([UKR0013](#))
- 13 UK academics engaged with Responsible Research and Innovation ([UKR0014](#))
- 14 Universities Allied for Essential Medicines ([UKR0002](#))
- 15 Universities Scotland ([UKR0012](#))
- 16 University Alliance ([UKR0004](#))
- 17 University of Oxford ([UKR0005](#))

List of Reports from the Committee during the current Parliament

All publications from the Committee are available on the [publications page](#) of the Committee's website.

The reference number of the Government's response to each Report is printed in brackets after the HC printing number.

Session 2016–2017

First Report	EU regulation of the life sciences	HC 158
Second Report	Digital skills crisis	HC 270
Third Report	Satellites and space	HC 160 (HC 830)
Fourth Report	Forensic Science Strategy	HC 501 (HC 845)
Fifth Report	Robotics and artificial intelligence	HC 145
Sixth Report	Evidence Check: Smart metering of electricity and gas	HC 161 (HC 846)
Seventh Report	Leaving the EU: implications and opportunities for science and research	HC 502
First Special Report	Satellites and space: Government Response to the Committee's Third Report of Session 2016–17	HC 830
Second Special Report	Forensic Science Strategy: Government Response to the Committee's Fourth Report of Session 2016–17	HC 845
Third Special Report	Evidence Check: Smart metering of electricity and gas: Government Response to the Committee's Sixth Report of Session 2016–17	HC 846

Session 2015–2016

First Report	The science budget	HC 340 (HC 729)
Second Report	Science in emergencies: UK lessons from Ebola	HC 469 (Cm 9236)
Third Report	Investigatory Powers Bill: technology issues	HC 573 (Cm 9219)
Fourth Report	The big data dilemma	HC 468 (HC 992)
First Special Report	Royal Botanic Gardens, Kew: Government Response to the Committee's Seventh Report of Session 2014–15	HC 454
Second Special Report	Current and future uses of biometric data and technologies: Government Response to the Committee's Sixth Report of Session 2014–15	HC 455

Third Special Report	Advanced genetic techniques for crop improvement: regulation, risk and precaution: Government Response to the Committee's Fifth Report of Session 2014–15	HC 519
Fourth Special Report	The science budget: Government Response to the Committee's First Report of Session 2015–16	HC 729
Fifth Special Report	The big data dilemma: Government Response to the Committee's Fourth Report of Session 2015–16	HC 992