Independent review of the DSIT business case and approvals process

Final report and recommendations

The Rt Hon Lord Willetts FRS

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Permanent Secretary foreword

A year ago, the Prime Minister set up the Department for Science, Innovation and Technology (DSIT) with a mission to make the UK the most innovative economy in the world and cement our place as a science and technology superpower.

To do this effectively relies on us building a department that is equipped with the right capabilities. In particular, we must aspire to be faster and more agile because we need to respond to rapidly accelerating technological development right across our remit.

I am the Accounting Officer for DSIT, with personal responsibility for justifying our use of public funds. I take that responsibility seriously, and we should not be afraid of assessing spending proposals thoroughly and robustly. However, we know that our business case processes have become too cumbersome, and are particularly ill-suited for the deliberate risk-taking that is necessarily involved in spending money on R&D.

This is why I am very grateful to Lord Willetts for his thorough examination of our business case process and for his practical suggestions for how we can improve. I am personally committed to making this change real in DSIT, taking advantage of this moment to help us shift to faster, simpler and more decisive oversight of our expenditure. This will require us all to work differently. I hope this change will also free up time for our people to focus on thinking and delivering, in both the core Department and our public bodies.

The publication of this report today, alongside the Government Response to the Tickell Review of Research Bureaucracy, signals our desire to improve the system on all fronts: expediting grants, accelerating investment decisions, reducing micromanagement, and minimising overhead burdens.

Finally, although the scope of Lord Willetts’ review has been DSIT’s use of business cases, I hope these changes will have much wider impact, serving as a blueprint for how Government can improve and streamline its business case processes so that we can all deliver better outcomes for the taxpayer.

Sarah Munby

Permanent Secretary, Department for Science, Innovation and Technology

Introduction

The formation of DSIT is an opportunity to ensure that spending on Science, Innovation and Technology is being managed as effectively as possible. The Treasury rightly requires careful scrutiny of public expenditure, but the Business Case (BC) processes inherited from BEIS and DCMS were designed for very different types of spending and are impeding the new Department's capacity to fulfil its ultimate mission: to promote research and apply it to grow the economy and deliver improved public services. The R&D Business Case and Approvals Action group was formed in November 2023 to advise on how DSIT could reform its business case processes. Officials have worked with great speed and commitment for which I am very grateful. I have been most encouraged by how keen both DSIT and the Treasury are to get new better arrangements and their constructive support with this review to see BCs working more effectively.

The business case is a key tool for managing public spending. The BC can provide the framework for transparent and evidence-based decision-taking. It obliges departments to think through what outcome they are trying to achieve and how. It can help Government avoid committing resources to projects that should not proceed. But the BC was developed for conventional public spending – buying services and building stuff - not for promoting inherently uncertain Science and Innovation. It assumes more capacity to forecast costs and benefits than is possible when the Government is funding innovative and risky R&D. Moreover, the BC became in BEIS and DCMS a slow, time-consuming, labour-intensive bureaucratic process, producing long reports which make it hard to extract the key information and issues for decision – a source of frustration to the Treasury itself. Such processes are a significant barrier to delivering the Government's Science Superpower strategy. The creation of the new Department for Science Innovation and Technology is an opportunity to replace the legacy processes with a much more agile regime more suited for discovery science and innovative technologies.

The costs of business cases today

The Green Book Central Government Guidance on Appraisal and Evaluation sets out that the required framework is the Five Case Model[1], where five separate streams of work assess separately the economic, financial, commercial, management, and strategic elements. Within DSIT, each dimension has their own departmental "key-holder" who asks for more information and more assurance. The whole process in DSIT can take well over a year[2], holding up the implementation of decisions when our main competitors can move faster. It absorbs a lot of high-quality staff time generating long documents of over a hundred pages which are hard to read and add little value. One sample of DSIT business cases averaged 249 pages including annexes, though they can go up to 400 pages. BCs are supposed to have a 40-page word limit but this is rarely adhered to and the core report alone regularly comes in at double that length. One senior official estimated the time from an original idea, arising in Research Councils, to execution of a programme at over two and a half years with 13 specific approvals required. Although some of this time is needed for various elements of policy and implementation design that feed the Business Case, undoubtedly the process itself is adding much more time than it should. Everyone says the process should be shorter but all the scrutineers try to show they are adding value by suggesting a new point or a new question so it steadily grows. It appears to be more extensive and bureaucratic than even five years ago. Other departments also wrestle with problems with BCs but the model carries particular challenges to the role of the new DSIT which is the focus of this report. However, the problems we investigate are likely to apply to R&D programmes run by other departments so our wider recommendations may also be relevant to them.

A series of meetings with officials for this review have brought out refreshingly honest accounts of the problems they experience. The current process – particularly the rationale for each of the five cases – is unclear to many officials, whose overwhelming feedback is that it is "too long". Although DSIT has managed a transition from legacy BEIS and DCMS processes, the lack of a considered and clearly communicated DSIT vision on BC approvals has left officials unclear about their specific roles and how best to add value. Each of the five separate streams of work is assessed separately so that a lot of material is repeated across them. Policy leads tend to draft in prose, when a table of numbers might more accurately summarise the information. Moreover, officials writing BCs often do not have the experience or confidence to ignore certain sections/stages of the process when they are irrelevant to their case.

UKRI, DSIT's largest arm's length body (ALB), suggests that it takes on average 17 months to develop an investment proposal and make a decision, assuming both an Outline Business Case (OBC) and Full Business Case (FBC) are required. Based on a small sample of 18 cases originating from UKRI for which we have a final approval date[3], the formal approvals process

[1] https://assets.publishing.service.gov.uk/media/623d99f5e90e075f14254676/Green_Book__2022.pdf
[2] Especially when cases originate in arm's-length bodies, such as UKRI, with the need to clear their internal processes as well as DSIT, and potentially HMT as well.
[3] The data on UKRI processes is sourced from the UKRI business case hub and the DSIT sponsorship team, and covers cases for which there is a full dataset from Q1-2021 to Q2-2023.

for these projects takes around 9 months (207 working days) on average: 89 average working days for an OBC, and 118 working days for an FBC[4]. This time is split between different organisations as follows: 29 working days on average being reviewed and approved in UKRI committees; 46 days in the three DSIT stages, and 29 days in HMT[5]. There is now an emerging use of external consultants helping partner bodies get business cases through the civil service. If, however the use of outside consultants were discouraged it would bring out more clearly the high and perhaps unsustainable civil service staff resource absorbed by BCs.

UKRI has established a dedicated business case hub to support delivery, however staffing pressure still exists to develop business cases, particularly for economic cases. In comparison, UKSA is a much smaller DSIT agency with an annual budget of about £600m, the bulk of which is spent through a triennially negotiated settlement with ESA. UKSA estimates that in this Spending review period it has written 52 BCs (equivalent to approximately one BC for every 7 people in the agency) including internal BC not all of which went up to the main departmental review committees.

Within DSIT some cases are reported to require at least 10 specific approvals points from idea to execution, involving at least 20 people. There is a lot of lag-time and too many iterative stages of review which all decrease the speed at which DSIT can make decisions. In addition the review has identified the following impediments:

- There are superfluous information requirements in the DSIT BC template.
- There are different approvals routes, with defined delegated authority limits. But it is not clear when and how officials can use expedited routes and who approves divergence from the standard, so they can spend time to agree with DSIT and HMT secretariats the appropriate approvals route. This is a classic example of an attempt to create a simple route adding new complexity and uncertainty – “complification”, the bane of Whitehall’s attempts at reform.
- Teams are dutifully doing both an Outline Business Case and Full Business Case, despite there often being very little differentiation between the two.
- Cases with a tail into the next Spending Review (SR) have a disproportionate amount of attention. For example, a case worth £200m could have the same level of scrutiny in the department as one with £20m committed into the next SR.
- There is a lack of flow-through from Spending Review proposals to the Business Case, resulting in teams duplicating stages of the work such as the Strategic Case.

[4] This has been calculated by adding together the average time taken for an OBC and FBC (Strategic Outline BCs happen very infrequently). The reason for this approach is that there are very few cases with full data for both OBC and FBC. Note that some projects only require single-stage FBCs which face more scrutiny, increasing the average FBC approval time. This time does not include the time spent drafting the case, which UKRI estimate is 4 months per iteration.

[5] InvestCo mandate that cases are submitted 20 working days (WDs) before the meeting date; this is used to infer the length of the Meeting Process. 6 WDs is an average of the time between UKRI ExCo and 20 WDs before the InvestCo meeting. Sometimes, Exco approval comes after the submission to InvestCo, and ExCo approve the case within 20 WDs of the meeting, in which case the time between ExCo and the target submission date is negative. In other instances, cases are approved by ExCo but are waiting (sometimes weeks) for the InvestCo slot.

As a result, BCs take up an excessive amount of time and effort of officials with expertise in particular technologies and sectors, who are diverted away from effective delivery. BCs also lag behind the speed at which technology changes. So for example a plan was put forward in Spring 2021 to promote UK capacity in Convergent Screen Technologies for our creative industries. Knowing that the BC was likely to take at least two years to obtain the requisite approvals, the team had to remove all mention of specific technologies and focus instead on the design of the facilities. Had specific technologies been mentioned, they would have been obsolete long before the BC could be approved.

Slow BC processes make it harder to use public spending to promote private investment as the Department cannot match the speed of decision-taking in the private sector. It also means that we cannot react to international competitive challenges – such as new initiatives launched elsewhere to attract internationally mobile investment or foreign attempts to recruit high performing teams. Singapore, Ireland and Canada for example are reported to be on the lookout to recruit key teams based in the UK. We put £50m in to fund the Graphene centre at Manchester ten years ago very quickly as the team had been offered $100m to move to Asia. It would be much harder now to move fast enough to see off such a competitive challenge. More recently there have been encouraging examples of moving at speed such as the work of the vaccine taskforce, though Dame Kate Bingham's subsequent account includes a typically trenchant critique of business cases ("Using the Procrustean Bed of the Whitehall business cases, with all its unnecessary repetitions, wasted time").[6] Since then AI initiatives have also been delivered at pace. But those successes depended on intensive special efforts by officials: such pace should instead be achievable with streamlined processes applied to all BCs.

The Green Book is an admirable attempt to set out a consistent framework of analysis across all different claims on public resources. But there is a trade-off between comprehensiveness and applicability to the particular and unusual function of Government in promoting science, innovation and technology. The over-riding Green Book requirement is to be SMART – "specific, measurable, achievable, relevant and time-constrained." This is hard to achieve for most DSIT programmes, as it is intended to relate to impact, rather than just output. This is not some specific British problem. Bruising encounters between American scientists and sceptical Congressional Committees show some very spirited responses to the challenge of justifying public spending on science in conventional terms. The great American astronomer John Bahcall was pressed about the likely results from federal spending on the planned Hubble telescope and replied:

> *"I believe that the most important discoveries will provide answers to questions that we do not yet know how to ask and will concern objects that we cannot yet imagine."*

This is some way from the SMART model of appraising public spending.

The lack of a suitable framework for assessing Science, Innovation and Technology leaves officials with the difficult task of reconciling the case for transformative R&D investment with

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[6] The Long Shot – The Inside Story of the Race to Vaccinate Britain – Kate Bingham, Tim Hames. Ch6 The Ways of Whitehall – pg 98.

the framework designed for more conventional spending programmes. There are some specific DSIT spending decisions which do fall under these more conventional requirements, such as buying a computer system, and in such cases traditional BCs may still be appropriate though they will usually be part of a wider programme. But often officials are trying to explain the case for R&D using a framework into which it does not fit – making the case particularly long and contorted. They waste a large amount of time and effort constructing detailed accounts of future costs and benefits far removed from the reality of scientific advance and technological innovation. This misalignment between the framework and the reality of R&D business cases, is also leading to teams seeing the BC as a defensive audit tool, instead of the decision-making framework it is meant to be. Indeed the BC often comes after real decisions have been taken in Comprehensive Spending Reviews (CSRs) or international negotiations. So they become retrospective, slowing down implementation of decisions already taken. Inside a big fat business case there is a slim useful decision-making note trying to get out. It should be liberated. That is the purpose of the following six recommendations of this review.

Recommendations

Recommendation One: A New Simple DSIT Template for Business Cases now

DSIT, with the agreement of the Treasury, urgently needs to break free from these costly and ineffective processes. A BC should take 6-12 weeks to write not 6-12 months. Ministers and senior officials do not have the time to read long documents which anyway hide the key issues and make effective decision-taking harder. We need to go back to basics. Simplicity will help reduce the time for those writing it, help the keyholders find the evidence they are actually looking for, and give the decision makers a chance of actually being able to read a BC in its entirely and consider it properly. We should be bold and cap business cases at 12 pages. That can only be achieved if DSIT removes the old 40 page template listing issue after issue to address. The five-part model is a valuable framework and should be kept – the whole purpose of this review is to live up to the Treasury's legitimate expectations instead of burying them in bureaucracy. The old template should be replaced by the following outline guidance:

Strategic case:

Why does it matter? What is it you want to do and why and how does it fit with strategic objectives of DSIT and the Arm's Length Body?

Economic case:

The options analysis to show Value for Money. What are the benefits you're striving for? How will you know you've succeeded?

Financial Case:

Is it affordable? Key is a table showing financial profile and 10/50/90% confidence on total cost RDEL and CDEL (Resource and Capital Departmental Expenditure Limits) with evidence it is affordable within the funding line of an agreed CSR programme. If there is a tail into the next SR there has to be an explanation of the mitigation if the SR doesn't come good.

Commercial Case:

Capacity and delivery. How are you going to procure it/contract for it? Where a tried and trusted approach is being replicated a procurement strategy can be referenced not spelt out.

Management case:

Key milestones (again with 10/50/90% confidence) and key risks and mitigations.

Examples of prompt initiatives now with new crisp short BCs should be celebrated by Ministers and senior officials.

Senior officials may wish to see other documents such as programme schedules or breakdowns of key elements but these should exist anyway in the planning of a well-run project, and that information does not need to be in the actual business case. There should be references wherever possible to prior policy documents rather than writing new material. There should be a commitment to monitoring and evaluation, probably in the management case, but a plan for monitoring and evaluation could be finalised after the key BC decision. There may be a need to show governance in which case a diagram may be more effective than lengthy prose. There are also wider legal requirements such as Equalities legislation and for these a small central DSIT unit familiar with these should work with the programme team to write a short annex if necessary. Whenever possible prior relevant Departmental policy commitments which already comply with these requirements should be used rather than conducting a new analysis.

The central unit can also help advise on how to write a BC. One explanation of problems with BCs is that as they are widely disliked they are farmed out to new recruits who then work on them with all the thoroughness of the novice trying to impress but with little experience of what is actually needed. Or, as they are often quite specific, the relevant expert may find she is writing her first one. There is already some guidance and support to staff writing BCs but this should be automatically available and up-dated in the light of the new more accessible template. It is also an opportunity for DSIT to invest in boosting the capacity of staff to do the new model BCs.

The Treasury state that:

> *"Business cases should carry sufficient weight and be prepared with expertise and knowledge of the expectations that Parliament holds for the use of public funds to allow the Accounting Officer to take the view their duties are met through their scheme of delegation and governance procedures such that no separate Accounting Officer assessment may be needed as standard. Parliament expects that all spending of public money must meet the Accounting Officer standards of regularity, propriety, value for money and feasibility."*

However it is not proportionate for every bit of spending to have a formal Accounting Officer assessment – another extra stage in the current process.[7] There is a difficult balance here and the Treasury would need to be consulted further. It might be that this further delegation by the permanent secretary would only be possible if some specific issues – risk of fraud for example

[7] Recognising the government has accepted the Public Accounts Committee recommendation that an AO assessment is required for projects or programmes which form part of the Government's Major Projects Portfolio (GMPP), and is best practice for significant novel and contentious proposals - in line with Accounting Officer assessment guidance: https://assets.publishing.service.gov.uk/media/646632530b72d3000c34478a/AOA_guidance_May_2023__3_.pdf

– are included clearly as part of the BCs where they are a relevant issue. Adding such an extra responsibility to the BC might be justifiable if a whole separate process could be removed.

1. Our first recommendation is that current DSIT guidance on business cases is withdrawn and new simple DSIT guidance substituted that caps Business Cases at 12 pages. The new guidance would need to be agreed with the Treasury and meet their requirements such as Managing Public Money. The aim should be that the new guidance should be agreed and clear access to advice should be available within the Department by the end of February.

Recommendation Two: Fewer more strategic business cases for whole programmes

There should also be many fewer business cases, covering wider programmes. One of the main roles of Government spending on R&D is to bear and lower risk so that follow on commercial investment is encouraged. One way commercial VCs handle risk is to hold a portfolio. The smaller the unit of analysis requiring a business case the harder it is to run a portfolio approach. Then the Government becomes more risk averse than commercial investors, obviating one of the main points of the exercise. Instead DSIT and the Treasury should take a portfolio approach to their investments in R&D, where a degree of "failure" is an important part of the pursuit of significant social and economic returns (e.g. testing a new therapy and finding it does not work adds to our total knowledge of what works and what doesn't). Indeed there is a key question here of the new Department's appetite for risk. It can be best addressed through its role in assessing these larger more expansive BCs which may themselves spread risk better than the current BCs for smaller individual projects.

A good example of the potential of this approach is the Industrial Strategy Challenge Fund (ISCF) which was agreed as a total programme. It eventually comprised 23 specific challenges, deploying £2.3b of public funding – with over £3b of matched funding from the private sector. It ended up with an individual BC for each specific challenge. The PAC – sometimes claimed to be the culprit driving the need for these elaborate BCs – specifically criticised this complexity in their April 2021 report on the programme:

> *"The Department and HM Treasury set the governance arrangements for UKRI's oversight of the Fund, including the requirements for approving new challenges. UKRI, the Department and HM Treasury each approve business cases for challenges in turn—as a result business cases can take over a year to approve. One consequence of this delay is that funding is slow to be allocated. In addition to delaying getting funding to those delivering approved projects, this could create extra financial pressures in the later years of the programme as funded activity builds up."*

This is encouraging evidence that the PAC and the NAO might be receptive to the reform of DSIT BCs. Indeed our report could be seen as a further step in the spirt of Recommendation 7 in that PAC report:

> *"The Department and HM Treasury should, by July 2021, review the conditions they place on UKRI to manage the Fund with a view to supporting more efficient decision making. The Department and HM Treasury should write to the Committee to explain the changes they have introduced together with their intended impact."*

ARIA is an important model. To enable it to move fast and flexibly it has one BC for its entire spending programme. We are not proposing that other agencies have ARIA's degree of freedom but there should be much broader business cases covering wider programmes not specific projects. And new BCs also cover repeats. So for example a further round of spending on a programme already launched to get more post-graduates into AI has been subject to a new business case. Instead the original BC should recognise the possibility that a programme is continued if it evaluates well without a new BC – subject to any Treasury conditions on extending into a new CSR.

When R&D business cases cover a portfolio in a broad programme not a specific project, there is then a need for a subordinate control process. This does not require a further business case. (One of the problems with the current model is that BCs multiply at ever more junior levels – spending £1m may require one in some areas.) Instead we need a clearly distinguished and identifiable subordinate decision – a “commitment to spend” for the management decision covered by an overall business case. It may involve for example seeking permission to commit to spend for each of several different interventions aimed at achieving the overall objective of the BC. They may be complementary or may be alternatives to spread risk. Much less analysis and governance is needed because the direction and funding has been set in the BC: it is a management judgement about the detail of the interventions.

A “Permission to commit” note would cover:

- consistency with the 12-page over-arching BC;
- sign off that the project meets controls on budget, commercial approach, management approach including evaluation, etc;
- who is responsible and where governance lies;
- the points at which scrutiny will be applied across the project lifecycle.

2. So our second recommendation is for over-arching business cases covering an entire strategy or programme with operational spending decisions taken with separate commitment to spend decisions for projects under it.

Recommendation Three: Increase Delegated Authority Limits at every level

DSIT's approach to approving R&D investment is underpinned by HM Treasury (HMT) rules for the administration of public money and Cabinet Office functional spend controls. HMT has overall responsibility for public spending but delegates spending authority to DSIT's accounting officer, the Permanent Secretary, within certain boundaries.

All DSIT investment decisions are subject to business case approval by the Investment Committee (which is chaired by the Permanent Secretary). This is judged by criteria that include Whole Life Cost (WLC), and/or are considered novel, contentious, or repercussive (NCR). Additional HMT scrutiny and approval is required for projects which have a WLC beyond the department's current delegated approval limit (DAL), or if they commit significant sums into future SR periods, and/or where a case is NCR.

Proposals with a lower WLC that are not novel, contentious, or repercussive are approved by the relevant DG through processes at group level. In the Science, Innovation and Growth Directorate, the approval process is via Sponsor Planning and Operational Review (SPOR - advisory) and Planning and Allocations Group (PAG - decision). Within DSIT there are therefore a range of approvals processes differentiated based on the Whole Life Cost of the proposal, extent of commitment into the next SR period, and whether it is NCR.

DSIT is in the process of agreeing new DALs with HMT. There is an expectation of a new much higher Delegated approval limit. These proposed reforms are very welcome and have the potential to reduce decision-making times significantly as fewer cases will need additional HMT review on top of departmental consideration. This is particularly pertinent where it relates to commitment to include greater flexibility on scrutinising spending with a tail into future SR periods, as science and research development are inherently lengthy processes, often requiring sustained funding timelines. Early estimates predict that if everything else remained the same (the increased DALs do not create new assurance demands for example), then increasing DSIT's delegation limit could decrease decision-making times for each case by up to 30%, based on the approval times of a sample of cases which have gone to the Treasury since 2020.

There also needs to be clear agreement with the Treasury on what constitutes novel, contentious, or repercussive. This must not become a catch-all. Accounting Officers must be confident that they can defend their interpretations of NCR to Parliament and the NAO and should be supported by HMT in this. All research and innovation is in some way 'novel' so we need to be careful not to take too extensive an interpretation of NCR. As these NCR projects get the most visibility and attention decision-takers may not get a good sense of the overall balance of risk across the portfolio. It would be better if NCR items were identified but included within overall programme BCs.

Increasing DSIT's DALs will help slash the time to make R&D investment decisions for DSIT programmes. But to maximise the potential of the increased DALs and go further still, DSIT's own internal processes need similar reform. If DSIT continues to require business cases for small packets of public spending, applying the full panoply of the conventional model, it will not reap the full benefits of the Treasury's bold decision to increase its delegated authority limits so substantially. So there needs also to be matching proposals for more delegation within DSIT. This would be in line with the recommendations of the RDI landscape review that DSIT ALBs should have a well-defined mission and purpose, and should be given the autonomy and spending power necessary to achieve their objectives.[8] DSIT should however retain some discretion to reduce delegated spending limits if it has serious concerns about the performance of an individual ALB.

There are better means than narrow delegations requiring many small business cases for achieving overall DSIT shaping of strategy - such as clear authoritative statements of Government policy or letters from senior officials or ministers setting out strategy. It is hard to run ALBs efficiently if there are many different jam jars of funding each with its own BC. It also makes sense for delegation to move to the level where there is genuine understanding of the substance of the decision together with responsibility for implementing it.

3. So our third recommendation is that the Treasury's significant increase in DSIT delegated authority limits should be matched with a proportionate increase in DSIT delegated authorities to its ALBs with their own accounting officers enabling ALBs to operate with fewer BCs.

[8] Research, development and innovation (RDI) organisational landscape: an independent review – Sir Paul Nurse - https://www.gov.uk/government/publications/research-development-and-innovation-organisational-landscape-an-independent-review

Recommendation Four: Review Science and Technology references in the Green Book and produce Supplementary Guidance

The Green Book is an admirable attempt at a comprehensive overarching model for assessing public expenditure. However, it is not designed for science, innovation and technology programmes. Several departments have worked with the Treasury to design supplementary guidance to the Green Book. These documents interpret and apply the generic principles of the Green Book to different issues (e.g. climate, crime, regulation). However, there is no similar Green Book supplement on R&D. The Treasury and DSIT should work together on this with immediate effect.

The Green Book treats technology as an exogenous and unpredictable source of risk. It never appears as something which we have any capacity to invest in and shape as a source of economic benefit and better public services. So for example the first reference to technology in the Green Book is in the discussion of external risks: "These risks affect all society and are not connected directly with the proposal. They are inherently unpredictable and random in nature. They include technological disruption…" This reflects the old doctrine that technology is just something that happens to us unpredictably, representing threat rather than opportunity. It is very odd to expect ministers and officials in a department which has got technology in its name to develop deliberate public policy for technologies when that is not how the key guidance treats technology.

There is now a substantial economic literature about the case for this type of research spending. A medium-sized economy such as the UK may only make a small proportion of the world's advances in science and technology but operating at the frontier of knowledge increases our capacity to absorb advances made elsewhere. A world class R&D system attracts overseas investment – it is indeed a factor in a quarter of overseas FDI in the UK. It can lead to a high value commercial innovation and technology sector - the Chancellor proudly cites its £1t value, much greater than France and Germany.[9] We have to assume that these kinds of issues are addressed in the decision about the total public spending allocated to science and tech in the CSR: it seems unnecessary to rehearse them in every business case but sometimes these wider questions are raised as a challenge to a very specific case. BC authors may feel obliged to answer questions such as:

> *"You must explain why Space should have priority over NHS spending."*
>
> *"You must explain why this programme is good for economic growth and should be supported even though there is not a national requirement."*

[9] UK tech sector retains #1 spot in Europe and #3 in world as sector resilience brings continued growth - https://www.gov.uk/government/news/uk-tech-sector-retains-1-spot-in-europe-and-3-in-world-as-sector-resilience-brings-continuedgrowthcontinued-growth#:~:text=Consistent%20growth%20across%20UK%20tech,after%20the%20US%20and%20China

These are legitimate strategic questions but may not fall under the scope of a BC. Indeed they are often already answered either in CSR decisions or other Government policy documents. It is not always clear to authors of BCs at which level they are operating and the new Green Book guidance as well as the new BC template could help here.

The Green Book's current approach is also very different from the security perspective conveyed in for example the Integrated Review which sets out as its first over-riding objective:

> *"Sustaining strategic advantage through science and technology, incorporating it as an integral element of national security and international policy to firmly establish the UK as a global S&T and responsible cyber power. This will be essential in gaining economic, political and security advantages."*

These two very different approaches are the reason why one Cambridge tech entrepreneur asked, "Why is it that the security agencies are so clear about the significance of my technology that they don't want me to have any funding from certain countries but other parts of Government are so doubtful they can possibly assess its value that they won't fund it themselves?". The current Green Book methodology is increasingly being trumped in Whitehall by the Integrated Review strategy with its very different analytical framework. The Integrated Review may well favour overall R&D activity which is prominent in the strategy but its framework for setting priorities and deciding on programmes may not match the classic Green Book model. The spread of the security perspective across so many more issues involving science, innovation and technology means that one of the most important challenges for good effective management of public spending is to incorporate the increasingly significant security perspective in public spending analysis. It would be of great value if the proposed new Green Book guidance explicitly tackled this considerable intellectual task.

The value and appraisal of spending on science, innovation and technology are intermittently understood but not reflected in the key documents governing spending on R&D. One way to tackle this problem is to use primary legislation to detail the acceptable level of risk for areas of public spending and to free them from these disciplines. This is the ARIA model and we want it to succeed. But there is a danger it implies that ARIA carries the only public spending on high-risk high return research. This would very significantly curtail the potential of other agencies such as UKRI. And it would be very time-consuming if primary legislation were the only solution when it should be possible to design a Green Book regime which works for Science and Tech – and a suitable Cabinet Office regime as well. There is a welcome readiness in the Treasury and DSIT now to do this and it should be undertaken as a matter of urgency.

4. So our fourth recommendation is that DSIT and HMT work together to review Green Book references to science and technology and to produce supplementary guidance to support assessment of science and technology business cases.

Recommendation Five: Business Cases should be an input to CSRs

It is bad for the credibility and effectiveness of Government if ministers announce things and then nothing happens because buried in the small print is “subject to business case approval”. That could mean no actual spending is possible for two years after an announcement.

The case for a new programme is assessed in the CSR when a budget line is agreed and a new programme is announced. But the BC approval often comes after that. Indeed Whitehall spent a lot of 2022 working through business cases for programmes already agreed in the 2021 CSR, delaying implementation of decisions ministers thought they had already taken. The problem was that a host of business cases were needed for programmes agreed in the CSR and the departmental machine struggled to work through them all. Some 2021 CSR decisions did not get BC approval until 2023. Businesses then faced a flood of launches of new programmes often with a narrow time window for applying for grants or funding. That stretches the capacity of a start-up or scale up business to understand what help may be available from Government programmes. After that brief flurry the constraint now is that little can be committed before the next spending review. The three year spending period may therefore lead to a concentration of grant activity in the middle year. Programmes briefly flourish like flowers in an Arctic Summer rather than being reliable evergreens which businesses can become familiar with.

Business Cases are a key part of the problem. The BC comes at the wrong time – too late for the big decisions, which are taken in the CSR, and too soon for proper appraisal of performance. Much of the Business Case is about creating a thick file of evidence for CSR decisions already taken, rather than actually progressing thinking. It is more like an audit tool than a problem-solving one. Audit is important – but it is very inefficient to have it in this form at this stage. It would make a lot of sense to move the business case process ahead of the SR, so when the most senior decision makers decide that’s it. It would mean more work in the run up to the SR, but in practice a lot of that work happens anyway. And critically, it stops BCs becoming an audit tool and keeps them as decision-making tools. BCs would need to set out how the spend in each priority area would be scaled up or down, so that if the SR did not provide the funds for all the activity requested there wouldn’t need to be a new business case developed.

This recommendation has encountered some scepticism in the Department. Even if BCs are to be much simpler and shorter there is concern that it would be hard to produce them for each line of a budget that could total £40b over a three year spending period. Officials also observe that large numbers of ideas are assessed at SR that are never actually proceeded with, so there is a risk of significant wasted time. The Department would need flexibility to move its budget around to respond to new ideas and developments after these BCs had been agreed. And the CSR BCs might be outlines which are fleshed out subsequently. These are valid points though there are circumstances where aligning BCs and CSR could work. The decision on spending in the CSR would then be a key step in the approvals process, not the starting gun. This would significantly increase the capacity of Government to move fast after a CSR and partner with the private sector as a patient funder.

5. Our fifth recommendation is that wherever possible outline business cases should be prepared in advance of the CSR as an input to it.

Recommendation Six: Engage with Cabinet Office and NAO

To some extent BC processes are also influenced by Cabinet Office controls on for example pay and also procurement processes. They have a strong role in some commercial decisions, ensuring departmental scrutiny of future 3rd party contract activity. The new procurement legislation could help bring extra flexibility here. The Cabinet Office is also keen to promote the use of new technologies, notably but not only AI, to improve the efficient delivery of public services. It should be an ally in promoting their development and use.

The NAO looms over discussions of the BC problem. One reason cited for the growth of BCs is the fear that the NAO will come calling and ask for lots of detailed evidence to justify a public spending decision. BCs then come to look like defensive medicine – designed to protect from future challenge. In particular there is concern that the NAO's value for money framework is too narrow. This is very similar to the issue with the Treasury Green Book. However there is no systematic evidence of the NAO being harsh on risky spending on science, innovation and technology. Indeed as we have seen there is evidence that it is instead concerned about slow and cumbersome processes.

However, the NAO's recent report on Net Zero activity across government wanted more centralisation and a single point of control. This is hard to do in practice and could create new inefficiencies. For example, AI investments and Net Zero will overlap and that's a good thing. So being accountable to them through major BCs may be a better way forward than the model they envisage for Net Zero.

The NAO does also have concerns about some issues such as fraud and that is exactly the kind of issue where BCs should anyway be stronger. The NAO should be consulted on this exercise with the aim perhaps of an exchange of letters on how any new DSIT model will work. And if the Government decides to review references in the Green Book in relation to science and technology and draft supplementary guidance, this is another opportunity to engage with the NAO which might wish to assess how its own VFM framework applies to innovation spending on science, innovation and technology.

6. So our sixth and final recommendation is that successful implementation of these proposals should involve the NAO and the Cabinet Office as well as the Treasury.

Conclusion: The new Department and its culture

The Business Case process has grown in what can feel like a low-trust environment, with teams needing to ‘prove’ each step has been undertaken, resulting in a strong tendency towards over-documentation, duplication and excessive scrutiny. DSIT is trying to move away from a culture of scrutiny for scrutiny's sake and to take a more considered approach to risk. There is a much more powerful alternative account of the new department which is a cadre of mutually respecting professionals working in DSIT and its partner bodies. Changing the process will require those who operate it to change their own behaviours. This report should be seen as contributing to building that wider culture on the first anniversary of the creation of DSIT.

The Rt Hon Lord Willetts FRS

February 2024

Summary of Recommendations

1. Current DSIT guidance on business cases is withdrawn and new simple DSIT guidance substituted that caps Business Cases at 12 pages. The new guidance would need to be agreed with the Treasury and meet their requirements such as Managing Public Money. The aim should be that the new guidance should be agreed and clear access to advice should be available within the Department by the end of February.
2. Over-arching business cases should cover an entire strategy or programme with operational spending decisions taken with separate commitments to spend which fall under it.
3. The Treasury's significant increase in DSIT delegated authority limits should be matched with a proportionate increase in DSIT delegated authorities to its ALBs with their own accounting officers enabling ALBs to operate with fewer BCs.
4. DSIT and HMT work together to review Green Book references to science and technology and to produce supplementary guidance to support assessment of science and technology business cases.
5. Wherever possible outline business cases should be prepared in advance of the CSR as an input to it.
6. Successful implementation of these proposals should involve the NAO and the Cabinet Office as well as the Treasury.

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