National Audit Office

INSIGHT

Government's approach to technology suppliers: addressing the challenges

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Key facts

£14bn

estimated minimum UK public sector annual spend on digital programmes and technology, based on independent estimates

6,000

people in the commercial function who support a range of commercial activity, including digital

28,000

people working on the digital and data areas in government

120	people in the Crown Commercial Service who have a digital commercial focus
4	people in the Central Digital and Data Office recently dedicated to digital commercial activity
15	people in the Government Commercial Function focused on government's 19 strategic digital suppliers
£3 billion	increases in cost to reset programmes and operate legacy systems for longer than planned, in five digital change programmes we have looked at
£9 billion	annual value of digital procurement through Crown Commercial Service frameworks in 2022-23

Summary

1 The effective use of technology suppliers is essential to the success of government's ambitions to improve and digitally transform its services and operations. But repeated delays and cost overruns in digital delivery undermine government's ability to achieve its policy objectives. Expenditure on digital procurement is significant: at least £14 billion is spent annually.[1] Digital spend in government ranges from the design and implementation of new policy initiatives such as Universal Credit, to maintaining and replacing critical services like the Police National Computer, and the purchase and renewal of commodity items, for example, laptops. With such an extensive digital estate to develop and maintain, every major operational system, from borders to tax to welfare, depends on the successful performance of its suppliers.

2 Digital procurements share characteristics with all major government procurements, including those for capital infrastructure. But added complexities, such as integration with existing business and technical environments, make the difficulties even more acute and hard to understand. The Government Commercial Function (GCF) is a cross-government network of around 6,000 civil servants who procure, or support the procurement of, goods and services for government. It employs, via the Government Commercial Organisation, middle- and senior-ranking procurement officials in departments. It is responsible for government's overall commercial performance and provides strategic direction, guidance and develops capability. It has 15 people responsible for managing relationships with government's largest digital suppliers. GCF also includes the Crown Commercial Service (CCS), which establishes frameworks for public organisations to buy goods and services. The Central Digital and Data Office (CDDO) is government's centre of expertise in digital and data but has no formal responsibility for digital procurement. As of July 2024, CDDO sits within the Department for Science, Innovation & Technology (DSIT).

3 Our work over the last decade has shown that government's attempts at digital transformation have had mixed success. Former flagship major transformation programmes have failed to deliver results as expected. The centre of government sets the overall direction, culture and conditions, but individual departments award contracts to suppliers and subsequently manage them. It is at this departmental level where problems, arising from the overall commercial and contracting environment and processes, are most likely to manifest themselves. There is no single area focused on highlighting and addressing how departments can improve the use of suppliers in digital transformation programmes.

1 The £14 billion estimate includes spending in central government departments and in devolved governments.

4 Moreover, some technology markets have experienced fundamental shifts and are now dominated by very large suppliers, such as the increasing reliance on 'big tech' for providing cloud services and artificial intelligence capabilities.[2] Digital services are rapidly changing in nature and are increasingly underpinned by technology and services which are subscription-based and which government does not ultimately control. This calls for an approach which responds to this changing environment.

5 This report sets out lessons for the centre of government and departments to learn from government's approach to digital procurement. We focus on major procurement of technology to support business change, including the digital transformation of government, and planning for technology of the future. We refer to these major policy and business change procurements as 'digital programmes' and 'digital procurement' throughout this report. We exclude the more straightforward technology services and commodity items purchased for operational needs. We do not evaluate individual supplier performance because it is difficult to make such an assessment in isolation of the environment and conditions under which suppliers are expected to deliver.

6 In pulling together these lessons, we have reviewed our published reports and interviewed senior digital and commercial leaders from across government and major technology suppliers. We build on our 2021 report, *The challenges in implementing digital change*, our 2021 guidance on *Managing the commercial lifecycle*, and our 2024 report, *Efficiency in government procurement of common goods and services*. We have assessed good practice and consulted with experts from industry to highlight the nature of the challenges and understand why government has found them difficult. Our scope and evidence base are set out in Appendix One. Our report aims to add impetus to the work addressing government's known need to deliver practical improvements in how commercial and procurement activities can support digital change.

Key findings: lessons for government

7 Government has strengthened central expertise over the last decade in its commercial and digital functions. It has made progress in developing its commercial profession, but our reviews of digital commercial activity suggest that too often departments fall short of good practice. In April 2021, government created CDDO to lead its overall digital, data and technology function. In June 2022, CDDO published *Transforming for a digital future: 2022 to 2025 roadmap for digital and data*, which sought to address some of the underlying digital problems. The roadmap included actions to deal with the challenges of legacy systems and reforms to central processes, including those in finance and commercial to unlock digital transformation (paragraphs 1.9 and 1.19 to 1.21).

2 'Big tech' is a term that refers to the largest and most dominant global technology companies. 'Cloud' refers to services hosted by third parties and accessed by users over the internet.

8 Procurement remains particularly difficult for digital change programmes. Many of the difficulties which we outline in this report are critical in procurement for any major project or programme. However, they are even more pivotal in digital procurement, for example because of the increased uncertainties which typically characterise digital programmes, including 'unknown unknown' risks. As a result, government's expectations of what suppliers can contribute for what cost can be unrealistic from the outset. Current arrangements, which are more suited to commodities or traditional outsourcing, are applied to business change programmes, creating tensions between commercial guidelines and the requirements of digital transformation (paragraphs 1.7 to 1.8, 2.13, 2.14 and Figures 5 and 6).

9 Government's commercial approaches to the use of technology suppliers have contributed to its mixed track record on its attempts to modernise delivery. We have reported on several large digital change programmes, including the Emergency Services Network, Electronic Monitoring, Universal Credit, the National Law Enforcement Data Service, and Digital Services at the Border. These all took commercial approaches to working with suppliers that were a factor in their programmes running into difficulties, contributing to significant delays to modernisation (totalling at least 29 years), and with more than £3 billion of cost increases (at least 26% of the original forecast), requiring a reset to the programmes concerned and continuing to operate legacy systems for longer than planned (paragraph 1.6 and Figures 3 and 4).[3]

10 There is not yet a shared strategic approach across government to dealing with a few very large suppliers who now dominate technology markets. This is particularly significant given the rapidly changing nature of technology and services. Digital services markets can be highly concentrated due to scale benefits. For example, just three very large multinational providers now have a combined global market share of over 60% of cloud services provision. Moving from one cloud infrastructure provider to another can be challenging and disruptive and it is overly simplistic to treat large providers as if they are offering generic services that departments can easily switch between at will. Addressing these considerations calls for a strategic approach from government, building on the current collaborative central approach involving CDDO, CCS and GCF (paragraphs 1.12 to 1.18).

3 The £3 billion amount includes costs shown in a variety of different formats and different price bases, as estimated in the latest available National Audit Office report, and may not reflect current expected or final cost of each programme.

The centre of government needs to create a better approach for digital procurement

11 The centre of government has not aligned responsibilities, skills and resources to lead government's digital procurement activities. GCF has to cover a large spectrum of commercial activity and does not have the extent of digital skills needed to reflect the distinct procurement challenges of digital programmes and operations. CDDO leads on digital and data policy but, while it has relevant digital expertise, it does not have responsibility for digital procurement in government, is much smaller than GCF and is not resourced for more extensive engagement on digital procurement. Non-technical leaders are not given enough digital procurement support to manage digital change programmes effectively. This lack of specialist digital commercial focus creates major challenges to the efficient and effective organisation, delivery, and ongoing maintenance of government services and their related digital infrastructure. We have not seen evidence of government undertaking a formal assessment of its digital procurement skills needs or creating a plan to recruit and retain people with digital procurement skills (paragraphs 2.18 to 2.20 and Figure 9).

12 GCF leads on the 'One Government' relationship with strategic suppliers but is not set up to be government's overall single voice. The Markets, Sourcing and Suppliers team within GCF takes the lead on government engagement with the largest 19 digital suppliers. Available estimates from third parties suggest that government spends at least £14 billion annually on digital procurement, but government has not been able to provide a more precise figure. Government has negotiated memoranda of understanding with individual suppliers to be treated as a single customer for the purposes of volume discounts, which it regards as a strategic approach to relationship management. But there is insufficient information about the pipeline of demand from departments for digital services; no evaluation to compare it against suppliers' appetite; and, under the current system, very little information on supplier performance is available to inform decisions about future sourcing and contract awards. This means that GCF does not have the data to evaluate future demand which is needed to credibly inform decisions to take full advantage of government's buying power when negotiating with large technology suppliers (paragraphs 1.3, 1.9 and 1.13).

13 Government does not have sufficient skills and capability to manage the diverse breadth and depth of digital commercial needs, and this is particularly evident in the poor outcomes of major digital change programmes. Management of digital suppliers calls for skills and processes over and above those required by generic commercial considerations, but commercial directors told us that currently, the focus of government is mainly on procurement processes, and very limited resource or priority is given to managing suppliers post-contract award. To ensure better outcomes for its digital modernisation plans government will need to invest in capability to improve its understanding of digital markets, its technical expertise and how better to partner with suppliers (paragraph 2.22 and Figure 9).

14 Existing procurement guidance does not address all the complexities of digital commercial issues for major business change. Having consulted widely across government and its digital commercial suppliers, we found a high level of agreement among digital and commercial leaders regarding the inherent difficulties of current procurement practices. GCF has supplemented its general commercial guidelines with sector-specific 'playbooks' including the digital playbook published jointly with CDDO. While this is a start, it would benefit from greater departmental and external input on the more complex issues. There is also an opportunity for GCF, CCS and CDDO to provide more detailed advice and guidance to departments on specific areas where there could be scope to negotiate further with major cloud suppliers, such as on navigating the complexity of pricing options, term length and flexibility, or service levels (paragraphs 1.15, 2.3 and 2.4).

15 Current government processes from business case development to contract award do not work well for digital programmes. Departments can present investment cases without a detailed assessment of technical feasibility, for which there is no detailed central government guidance. Without such assessments, funding allocation at the centre can be based on departments' conceptual or simplistic high-level assumptions. This results in limited technical evaluation of contracts with technical risks downplayed. Complexities which emerge after contracts are signed can be too fundamental to be dealt with through a change control process. A poorly defined requirement and an over-emphasis on acquiring the minimum requirement or cheapest resource, rather than aiming for best value for money over the lifetime of the contract, can prevent government from exploring innovative business and technical solutions (paragraphs 1.6 and 2.4 to 2.6).

16 Ongoing supplier management is essential to managing supplier relationships and ensuring that suppliers are delivering the expected value. Technology suppliers play a vital role in supporting and modernising the public sector, and a mature relationship is required. In our guidance on *Managing the commercial lifecycle*, we identified a need for organisations to improve how they actively look at the quality of performance and delivery to supplement routine monitoring. Interviewees told us that, too often, departments dedicate substantial resources to putting a contract in place but insufficient attention and resources to managing the contract after award. This can reduce the value government obtains and lead to relationships with suppliers that become transactional and adversarial. Overall, government struggles to act as an intelligent client and manage suppliers and contracts effectively and in a constructive spirit of partnership (paragraphs 2.8, 2.11, 2.13 and 2.15).

Departments need to better understand and manage the complexities of digital procurement

17 Departments do not make full use of their digital expertise when procuring for technology-enabled business change. Commercial teams in departments lead, and make most of the decisions on, digital procurements often without the benefit of digital expertise. They are also not responsible for managing business systems. This leads to a lack of real ownership for the quality and costs of developing and running systems and services. Although some departmental digital teams have people with both digital and commercial skills, several chief digital and information officers (CDIOs) told us they can be excluded from advising on digital change procurements. Sometimes the CDIO is only involved too late, after a business case has been agreed or contracts have been signed. When specialists try to include key functional and non-functional requirements considered essential for the integrity and ongoing maintenance of systems, these can be removed by commercial teams as 'savings' to the contract.[4] This has contributed to the deterioration of many legacy systems over time. Ensuring the involvement of digital specialists earlier in the lifecycle coupled with digital commercial training could also reduce the tendency for digital procurements to exacerbate legacy issues, cost more than expected and to under-deliver (paragraphs 1.12 and 3.3 to 3.7).

18 Digital specialists within government feel constrained from participating in early market engagement with digital suppliers. Commercial and digital leaders in departments told us commercial teams across government can be reluctant to allow digital specialists to engage with suppliers to undertake up-front exploration of what is feasible and possible before a contract is scoped and awarded. Yet technical specialists and suppliers are fundamental to the design, delivery and maintenance of essential policies and services, and a source of innovative solutions. The new Procurement Act 2023 has mechanisms to allow early market engagement, but this is unlikely to make a practical difference without detailed guidance and a change in culture. Since 2011, a network of Crown Representatives has provided a focal point for engaging with strategic suppliers, but with few levers to affect delivery or bring about improvements (paragraphs 2.8 to 2.10 and 2.12).

4 'Non-functional requirements' define the required characteristics of a system covering aspects such as performance, reliability, security, availability, interoperability, scalability and maintainability.

19 Departments often enter into contracts for digital development work without sufficiently understanding the complexities posed by the existing environment. Setting requirements for digital programmes can be particularly difficult, but pressure to deliver quickly can result in contracts being awarded before the true requirement is fully understood. The consequences include buyers misunderstanding what the market can deliver, and unrealistic timetables which cannot be met. We have also seen instances where government focuses too narrowly on the nature of the technology being deployed at the expense of the policy or operational aspects. Agile programme approaches are sometimes misapplied to business change programmes, leading to programmes starting out with only a high-level understanding of the requirement or intended outcome.[5] There is a risk that the current project-by-project, contract-by-contract approach to digital programmes across departments increases cost and complexity while failing to contribute to the wider transformation and modernisation of government (paragraphs 3.7 to 3.12).

20 Departments' approaches to contract design can negatively affect successful digital delivery. Attempts by departments to outsource risk downplay the reality that government will still be held accountable for any failures. Stakeholders told us that government makes considerably less use of outcome-based contracts than the private sector, and that this situation limits suppliers' ability to provide solutions to the underlying business problem. Departments can also opt for mechanisms such as pricing structures which limit the flexibility for suppliers to use their expertise to help government deliver the desired outcomes. Most large programmes will use multiple contracts, and government must decide how to allocate the work between these. Several large programmes have run into difficulties because the chosen allocation was not optimal or proved hard to integrate into a coherent whole. These issues can discourage suppliers from bidding or from putting their best people on a government contract (paragraphs 3.17 to 3.21).

5 Agile methodology is an iterative and incremental approach to delivery frequently used in software development projects. In our guide on *The use of Agile in large-scale digital programmes*, available at: https://www.nao.org.uk/insights/use-of-agile-in-large-scale-digital-change-programmes, we said: "Agile approaches in the public sector have run into difficulties when applied to more complex digital business change programmes. The way Agile is applied at large scale is often found wanting, such as in transformations which involve migration from legacy systems and where a wide range of interactions, interfaces, dependencies and other complexities are the norm."

Concluding remarks

21 Government has a long-standing need to improve its use of technology suppliers, and its slow progress in doing this has contributed to poor outcomes in its attempts to modernise government. Our past reports have highlighted where the commercial approaches taken have contributed to delays and increased costs of major digital programmes. The external market environment is also changing. Traditional models of outsourcing or creating government-owned assets are giving way to subscription-based models such as the use of cloud services, and government has been slow to adapt how it engages with and manages suppliers. It needs to define a comprehensive sourcing strategy for the digital age which takes into account how to deal with 'big tech' and global cloud providers that are bigger than governments themselves, while aligning with policies on research and innovation.

22 Departments find it challenging to acquire the right blend of digital and commercial skills, but do not make as much use as they could of existing digital expertise. Commercial teams have insufficient digital expertise and typically adopt a generalist model, with limited use of a more strategic approach and specialist capabilities. There is a critical role for the centre of government to provide strategic direction on managing relations with suppliers. The centre can also do more to help departments with guidance to make their processes and their engagement with suppliers more effective and help them become more intelligent clients. Our recommendations are aimed at supporting government to take these steps to achieve better outcomes and prevent further waste of money and delays to improvements in public services. The creation of the new digital centre of government provides an opportunity to make the systemic changes that are needed.

Recommendations

23 In view of government's decision to locate responsibility for the digital centre in DSIT, to provide effective leadership for government's digital commercial activities, the digital centre, GCF and CCS should consider who should take responsibility for addressing the issues in this report and the recommendations below:

a **decide who should take ownership of the strategic relationship with suppliers and responsibility for collecting and analysing data about government's overall digital commercial activities,** ensuring clarity on what is done centrally to gather demand and supply data, assessing the demand pipeline against supplier capacity and evaluating what that means for government's use of suppliers;

b **produce a sourcing strategy including how government is better able to maximise its ability to negotiate with 'big tech' and strategic suppliers;**

c **identify what actions it needs to take to secure improvement in governance, processes, guidelines and supplier engagement,** to ensure that contracts for different categories of digital activities reflect a planned approach that addresses the business problem to be solved;

d **work with departments to identify what further negotiation levers they would find useful beyond headline volume and pricing agreements.** This should include guidance for contracts for digital procurement setting out how best to navigate options and negotiate on aspects such as payment terms and flexibility to ensure that departments are not paying more than necessary; and

e **address recruitment shortfalls and develop a plan to better equip and train decision-makers with responsibility for initiating digital commercial and contracting.** This should include education on legacy data and systems, the importance of understanding the business requirement at a sufficient level of detail, and the risks of 'build before buy' and of opting for unproven technology.

24 Individual departments and public bodies should:

f **ensure that CDIOs are responsible for overseeing commercial contracting involving technology suppliers, supported by their own departmental digital commercial teams.** Large digital change programmes should not have business cases approved and contracts agreed without digital experts agreeing that requirements have been properly understood and articulated and are deliverable;

g **strengthen their intelligent client function for digital change** to identify and develop key requirements before tenders and bid processes commence, improve how policymakers and technical specialists work together with procurement specialists, and ensure that digital specialists take the lead on technical supplier engagement; and

h **set up the capability needed to improve data and processes to inform decision-making,** including a pipeline of supply and demand to help the centre of government in building a more strategic approach to suppliers.