



National Audit Office

Report

by the Comptroller
and Auditor General

Cabinet Office

Digital transformation in government

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National Audit Office

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Digital transformation in government

Report by the Comptroller and Auditor General

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Sir Amyas Morse KCB
Comptroller and Auditor General
National Audit Office

27 March 2017

This report examines the role of Government Digital Service in supporting transformation and the use of technology across government.

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Key facts

£150m

Government Digital Service (GDS) budget for 2016-17

£1.3bn

reported savings from spending controls since 2011

57%

proportion of GDS budget over the next four years allocated to developing platforms

£455 million funding for GDS agreed in the 2015 Spending Review for the period April 2016 to March 2020

25 digital exemplars identified in 2012

12 digital exemplars assessed by GDS in March 2015 as demonstrating positive net present value (of 22 where data were available)

1% share of reported savings from spending controls for applications below £1 million

3,000 civil servants to be trained through the digital academy each year

Preface

Building blocks for transformation

1 Five years ago, we highlighted the importance of three major themes in tackling government's challenges:

- taking a structured approach to reducing costs;
- improving financial management; and
- using information effectively.

We argued that without significant progress in all three areas, government would not be able to transform services and achieve sustainable improvements and savings.

2 Our work over the last five years has identified some improvements in these areas. Across government, there is a much deeper understanding of the challenges and opportunities of transformation. But our work also shows that attempts to transform government have had mixed success. Many public services appear increasingly unsustainable. Those responsible for major programmes have continued to exhibit over-optimism and make slow progress towards their objectives.

3 Government's recent experience has highlighted several important building blocks for transformation:

- **Strategic business planning and management**

Our report *Government's management of its performance: progress with single departmental plans* found that a strong planning framework is needed to counter problems in delivering new services successfully.¹

- **Building and deploying capabilities**

Our report *Capability in the civil service* highlighted the importance of getting the right skills and experience to support new ways of working.²

- **Improving the use of technology and data**

Our work on major transformation programmes has shown how difficult it is to use technology effectively to enable transformation.

- **Managing evolving programmes and portfolios**

Our work on major programmes has also shown how difficult it can be to assure and manage major transformation programmes, balancing more iterative approaches with robust programme and project management disciplines.

1 Comptroller and Auditor General, *Government's management of its performance: progress with single departmental plans*, Session 2016-17, HC 872, National Audit Office, July 2016.

2 Comptroller and Auditor General, *Capability in the civil service*, Session 2016-17, HC 919, National Audit Office, March 2017.

4 These building blocks will help to counter tendencies to make decisions for tactical reasons without addressing wider considerations. They allow departments to balance short-term spending targets with long-term strategies. At the same time, better information and access to expertise will help to support and assure complex programmes.

Role of the centre of government

5 The centre of government plays a critical role developing the building blocks for transformation. In our reports on the centre of government, we outlined a range of ways for the centre to work with the rest of government, and showed how the centre's role constantly evolves in response to new demands.³

6 In particular, the centre has to achieve a difficult balance between supporting government departments and using more formal mechanisms to influence transformation. On the one hand, spending controls and strict standards can be blunt instruments; on the other hand, flexibility can sometimes be used as an excuse for poor control and coordination.

About this report

7 The last five years have shown how difficult it can be to get transformation right and how important it is to build the necessary capabilities and business planning processes across government. Our work will track how government puts in place the fundamental building blocks for transformation and ensures that work is prioritised effectively in the face of these challenges.

8 In this report, we consider the impact of digital transformation in government and the role of Government Digital Service (GDS). GDS's experience is an important illustration of how the centre of government can take different approaches to working with the rest of government, striking a balance between supportive and formal approaches.

³ Comptroller and Auditor General, *The centre of government*, Session 2014-15, HC 171, National Audit Office, June 2014; Comptroller and Auditor General, *The centre of government: an update*, Session 2014-15, HC 1031, National Audit Office, March 2015.

Summary

1 Government faces significant challenges in providing public services. Continuing austerity has put additional demands on departments, which are already trying to tackle complex reforms with fewer staff and smaller budgets. Our work across government has highlighted the problems this can create for financial sustainability and the need to transform public services.

2 In 2011, the Coalition Government launched its Government ICT Strategy and set up Government Digital Service (GDS) as a centre of digital expertise within the Cabinet Office. Since then, GDS has worked to improve the quality of online information and help transform services so that they meet users' needs.

3 Transformation has not been straightforward. While many government services are now available online, departments and GDS have struggled to manage more complicated programmes and to improve the complex systems and processes that support public services.

4 In February 2017, the government published its Government Transformation Strategy. The strategy sets out GDS's new approach to supporting transformation across government and its aims for the current spending review period.

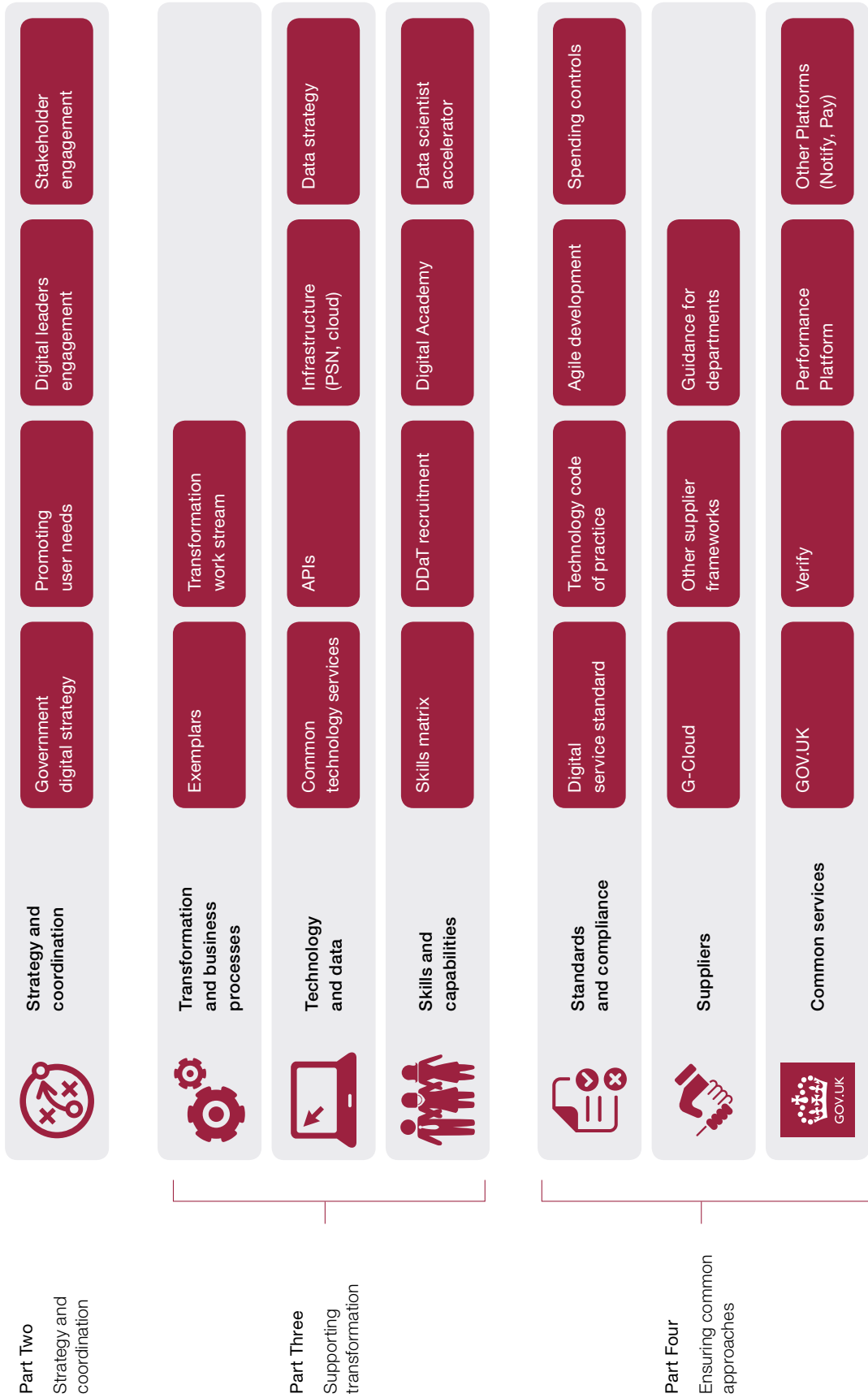
5 In this report, we review the role of GDS in supporting transformation and the use of technology across government. Our report is structured as follows:

- Part One describes how GDS has evolved and sets out some of the questions that a central technology function needs to consider.
- Part Two considers GDS's role in coordinating and setting strategy across government.
- Part Three looks at how GDS has supported other departments, including by promoting new technologies and uses of data.
- Part Four examines how GDS has developed a more common approach to digital development across government through setting standards, establishing reusable central systems and controlling spending.

6 **Figure 1** overleaf outlines how our report considers GDS's activities.

Figure 1
Government Digital Service's activities by area

Government Digital Service (GDS) undertakes a range of activities relating to technology and transformation



Source: National Audit Office. See Glossary for fuller explanation of abbreviations

Key findings

Coordinating and setting strategy

7 GDS has successfully reshaped government's approach to technology and transformation. In its early years, GDS showed that government could quickly introduce digital service standards for users based on those used for GOV.UK. In our previous work, we have found that methods promoted by GDS, such as agile development, are used widely across government, and that digital leaders are perceived as breaking down traditional barriers between IT and other functions (paragraphs 1.6 to 1.8 and Figure 8).⁴

8 GDS has found it difficult to redefine its role as it has grown and transformation has progressed. GDS has expanded significantly. In 2015, it received £455 million in funding over the four years of the current spending review period. At the same time, departments have moved ahead with transformation programmes. We found widespread views across government that GDS has struggled to adapt to its changing role. In July 2016, GDS's Advisory Board identified a need for a high-level vision for GDS (paragraphs 1.14 to 1.16, 2.6, 2.7, 2.15, Figures 3 and 4).

9 The 2017 Government Transformation Strategy has relaunched GDS's approach to supporting transformation across government. GDS intends to support end-to-end transformation. It will continue its work on improving digital services for users and developing new central systems for cross-government use, but will also tackle the more immediate challenges of changing existing services, systems and processes (paragraphs 1.3, 1.4, 1.12 and Figure 6).

Supporting transformation across government

10 Initially, GDS supported exemplars of digital transformation. In 2012, it identified 25 services across government for end-to-end service redesign. It aimed to show how new approaches could make it easier for people to access services online and help remove unnecessary costs. By March 2015, 15 of the exemplars were providing live online services and a further five were available to the public in trial form. Other services have since become available (paragraphs 3.2 to 3.4).

11 Major transformation programmes have had only mixed success. In a lessons learned exercise in 2015, GDS identified positive net present values for only 12 of the 22 exemplars for which data were available. In nearly two-thirds of the exemplars, GDS found that improvements in online services did not result in existing systems being reconfigured or becoming more efficient (paragraph 3.5).

⁴ See National Audit Office, *A snapshot of the use of Agile delivery in central government*, September 2012 and National Audit Office, *The digital skills gap in government – Survey findings*, December 2015.

12 GDS is now adopting a more collaborative and flexible approach to supporting departments. GDS will base its approach on individual departments' circumstances and take account of the importance of managing existing systems. It announced plans in September 2016 to take responsibility for a cross-government digital academy, aiming to train 3,000 civil servants a year. It is trialling work with the Complex Transactions Team and Infrastructure and Projects Authority to offer multidisciplinary advice on areas such as IT contracts (paragraphs 2.4, 2.7, 2.8, 3.16 and 3.17).

13 Roles and responsibilities are evolving. In March 2016, the Infrastructure and Projects Authority established a cross-government Transformation Peer Group to share good practice between departments. It is not yet clear what role GDS will play in relation to the group, or the extent of its responsibility for transformation as opposed to digital services and technology. We also identified areas where GDS might address gaps, including taking a stronger role in managing data-sharing and monitoring security (paragraphs 3.6 to 3.15 and Figure 9).

Developing a common approach

14 GDS has established strong controls over spending and service design. GDS reported that controls have reduced spending on IT by £1.3 billion over five years to April 2016. Digital expenditure of over £100,000 is subject to these controls. Our analysis shows that requests for approval for amounts of up to £1 million accounted for 47% of the time GDS staff spent on spending controls but only 1% of savings in 2015-16 (paragraphs 4.2 to 4.5, Figures 10 and 11).

15 GDS has not sustained its framework of standards and guidance. We found instances of overlapping guidance, for example blogs as well as service manuals being used to communicate guidance on contract management or the use of application programming interfaces. In some cases, guidance had been removed and web links broken. Standards were set as broad principles, leaving scope for interpretation and disagreement. GDS has not provided detailed guidance on how to implement standards in practice (paragraphs 4.7 to 4.9, 4.12 and Figure 12).

16 The combination of strict controls and uncertainty about guidance has made it difficult for departments to understand assurance requirements. Spending controls can play an important role in enforcing consistency and ensuring that departments adopt standards. However, it is difficult to understand the status of different forms of guidance, and departments told us it can be hard to anticipate how GDS will interpret their performance against standards. GDS is now introducing approvals and assurance mechanisms that consider departments' overall portfolios and reduce burdens from controls (paragraphs 4.2, 4.6 and 4.9).

17 Cabinet Office controls have helped to increase flexibility in departments' IT contracts. GDS has worked with the Crown Commercial Service to diversify the supplier base. GDS has also introduced frameworks such as G-Cloud and the Digital Services Framework, now replaced by the Digital Outcomes and Specialists framework, to improve contracting with small and medium-sized enterprises (SMEs). Government data show that up to November 2016, 64% of sales were to SMEs via the G-Cloud framework. However, most spending continues to be with large enterprises; in 2015-16, we found that they accounted for 94% of spending, one percentage point lower than in 2012-13 (paragraphs 4.11 to 4.14).

18 Take-up of Verify has been undermined by its performance and GDS has lost focus on the longer term strategic case for the programme. The current business case is based on reducing duplication or simplifying the way new services are developed. But Verify has been difficult for some people to use, departments have taken longer and found it more difficult to adopt than expected, and GDS has had to soften its approach to mandatory use. Nine of the 12 services using GOV.UK Verify can now be accessed using both Verify and a department's chosen way of allowing users to log-in to services. This parallel access undermines the current business case and risks creating confusion for service users. Verify presents a strategic opportunity to improve the way that personal data is used across government enabling better use of data, based on a single secure view of identity. But this strategic case has not been sufficiently developed, tested and communicated (paragraphs 4.19 to 4.28, Figures 13 and 14).

Conclusion

19 GDS's early impact across government shows that there is a key role for it as a central function responsible for promoting new approaches and developing expertise. The importance of technology and data in supporting transformation is now widely accepted across government. Both GDS and departments are learning from their experiences of the last five years.

20 There is, however, a long way to go. Digital transformation has a mixed track record across government. It has not yet provided a level of change that will allow government to further reduce costs while still meeting people's needs. GDS has also struggled to demonstrate the value of its own flagship initiatives such as Verify, or to set out clear priorities between departmental and cross-government objectives.

21 GDS's renewed approach aims to address many of these concerns as it expands and develops into a more established part of government. But there continues to be a risk that GDS is trying to cover too broad a remit with unclear accountabilities. To achieve value for money and support transformation across government, GDS needs to be clear about its role and strike a balance between robust assurance and a more consultative approach.

Recommendations

22 As GDS embarks on the next phase of its work to support transformation in government, we recommend that:

- a Roles, responsibilities and plans for delivering the new transformation strategy are more clearly defined.** GDS, departments and other parts of the centre of government should clarify responsibilities for transformation, including the role of the Transformation Peer Group. GDS should undertake a further phase of planning with clear costs, timescales and monitoring arrangements.
- b GDS works closely with the rest of government to establish common principles for balancing departmental and cross-government priorities.** GDS should develop a more systematic analysis of what needs to be done centrally rather than by departments, in particular in strengthening government's approach to the effective use and management of data. It should review its continuing development of central infrastructure such as Verify to ensure that it meets a proven need.
- c GDS improves the clarity, relevance and consistency of guidance and technical standards.** It should work with departments to develop more detailed technical standards, in particular relating to maintaining or migrating existing systems. It should make clear the relative status of guidance documents and publish how and why changes are made over time.
- d GDS should ensure consistent monitoring and robust assurance of performance and spending.** It should track performance against clear technical and programme measures, working with the centre of government to establish proportionate but robust approvals and controls over spending.

Part One

Understanding GDS

1.1 In this part, we describe how Government Digital Service (GDS) was created in 2011, and how it has evolved. We set out some of the key questions GDS faces in supporting transformation across government.

Background

The creation of GDS

1.2 Successive governments have tried to transform public services through better use of technology. For example, in March 1999, the Cabinet Office's Modernising Government programme set out a vision for joined-up government, including moving public services online. Around 30 major cross-government strategies and initiatives followed over the next decade.⁵

1.3 In 2010, the Coalition Government commissioned a review on how government internet services could be transformed over the next few years.⁶ The review recommended: creating a single portal for all government services; opening up government information and transactional services for third-party access; and creating a single team in the Cabinet Office to take overall responsibility for digital channels, under a chief executive officer for digital.

1.4 Based on these recommendations, government proposed that all services would become 'digital by default'. In 2011, it set up GDS with the authority to:

- coordinate government digital activity and deliver on the recommendations of the review;
- transform the way people access government information by using digital technology to deliver services that put the user first; and
- give people the smartest and most cost-effective service possible.

1.5 The Government Digital Strategy in November 2012 set out in more detail the actions government would take to achieve these aims. It asked departments to produce their own digital strategies to support these.

⁵ The evolution of initiatives between 2000 and 2010 is outlined in our report: Comptroller and Auditor General, *Information and communications technology in government: landscape review*, Session 2010-11, HC 757, National Audit Office, February 2011.

⁶ Martha Lane Fox, *Directgov 2010 and beyond: revolution not evolution*, October 2010.

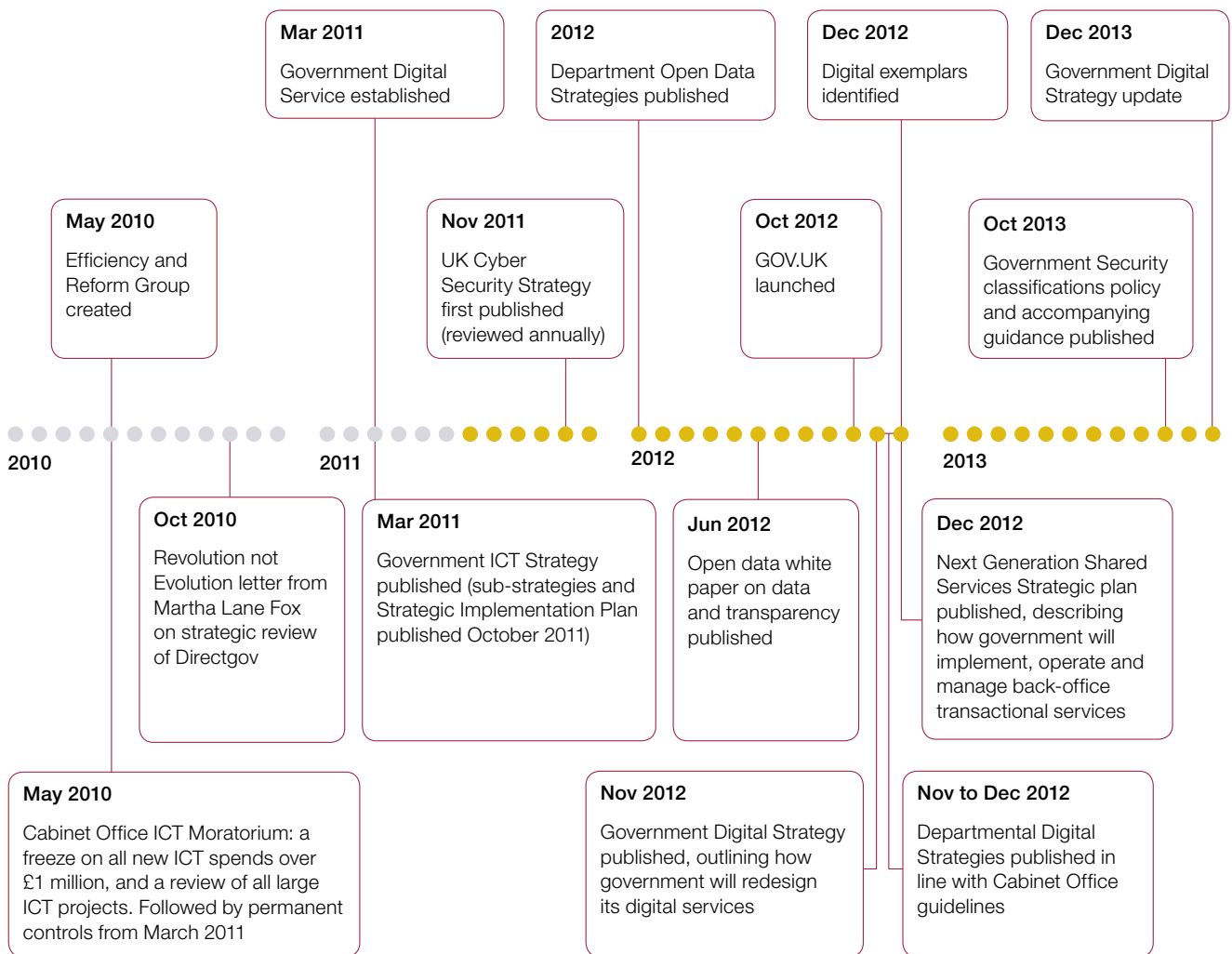
Evolution of GDS's strategy

1.6 GDS has supported transformation across government in several distinct phases (**Figure 2**).

Figure 2

Major developments and policies, 2010 to 2017

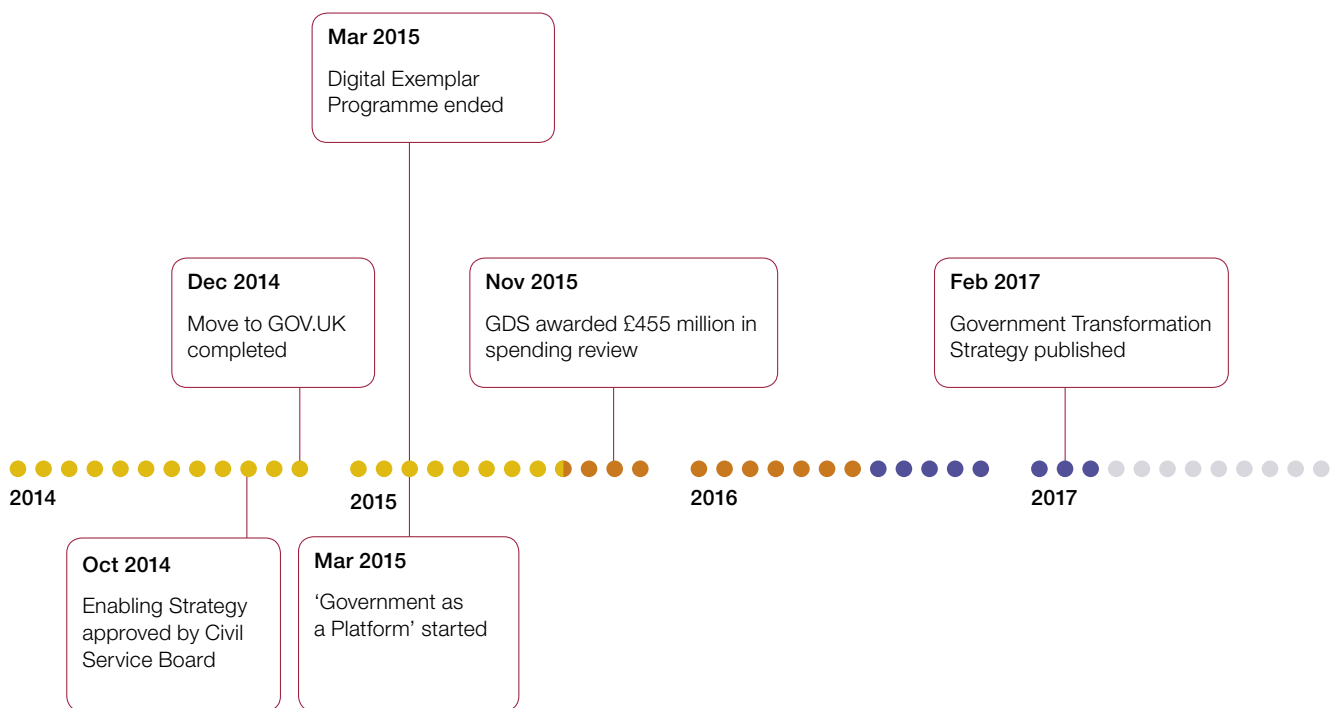
GDS is entering a new phase in its development



GDS leadership periods

- Mike Bracken, Executive Director of GDS (Jul 2011 to Sep 2015)
- Stephen Foreshow-Cain, Executive Director of GDS (Sep 2015 to Jul 2016)
- Kevin Cunningham, Director General of GDS (Aug 2016 to present)

Source: National Audit Office



1.7 Between 2012 and 2015, GDS's approach to supporting transformation was based around 25 exemplars in departments. Early on GDS created a single government website (GOV.UK) and migrated department websites to it. GDS aimed to use similar approaches to transform all large transactional services across government, starting with the exemplars.

1.8 GDS and government organisations more widely have achieved some important successes since 2011. For example:

- Government departments and arms-length bodies quickly adopted new approaches to the development and use of technology. In our 2012 report *A snapshot of the use of Agile delivery in central government*, we identified 33 projects across 16 organisations that were using agile methods.⁷
- New digital leaders integrated technology more closely in organisations. In our 2015 survey *The digital skills gap in government*, three-quarters of respondents agreed that digital leader roles were breaking down barriers between IT and other business functions.⁸
- GDS demonstrated that common standards for government websites could be applied quickly through the introduction of GOV.UK. GDS sees GOV.UK as a key enabler for wider service transformation.

1.9 In other areas, GDS has been less successful. For example, in our 2015 report *Early review of the Common Agricultural Policy Delivery Programme*, we found that GDS and the other organisations involved had struggled to work together effectively.⁹

1.10 The outcome of the Exemplar Programme showed how the web interfaces with the customer can be much improved but also illustrated the difficulty of transforming services within departments' existing service environments.

1.11 GDS recognised the need to take a new approach for the spending review period starting in 2015. In late 2014, it began to develop a new strategy called the Enabling Strategy to support transformation. In April 2015, the focus of this strategy narrowed to developing or reusing common technology and shared platforms.

⁷ National Audit Office, *A snapshot of the use of Agile delivery in central government*, September 2012.

⁸ National Audit Office, *The digital skills gap in government – survey findings*, December 2015.

⁹ Comptroller and Auditor General, *Early review of the Common Agricultural Policy Delivery Programme*, Session 2015-16, HC 606, National Audit Office, December 2015.

A new strategy

1.12 The Government Transformation Strategy, published in February 2017, has five overall goals. It focuses on:

- business transformation;
- growing the right people, skills and culture;
- building better tools, processes and culture for civil servants;
- making better use of data; and
- shared platforms and business capabilities.

It is also seeking to establish a whole-government approach to transformation, laying the ground for broader transformation across the public sector. It recognises that large-scale transformation is a major challenge, requiring many bodies to coordinate their work while maintaining existing services.

1.13 The strategy describes how digital technology can improve services and save money. It is not yet clear how GDS will measure the strategy's progress or set a baseline for this. There is little detail on cost and timescales for delivery, and the strategy does not refer to any future detailed work or planning. Without further detail, it is difficult to assess the strategy's impact or the likelihood of success.

GDS spending

1.14 GDS has grown rapidly since 2011. Its budget increased from £37 million in 2012-13 to £96 million in 2015-16 (**Figure 3** overleaf). Although its budget increased to £150 million in 2016-17, GDS expects to underspend against this by £45 million, largely because of lower than expected take-up of centrally provided services.

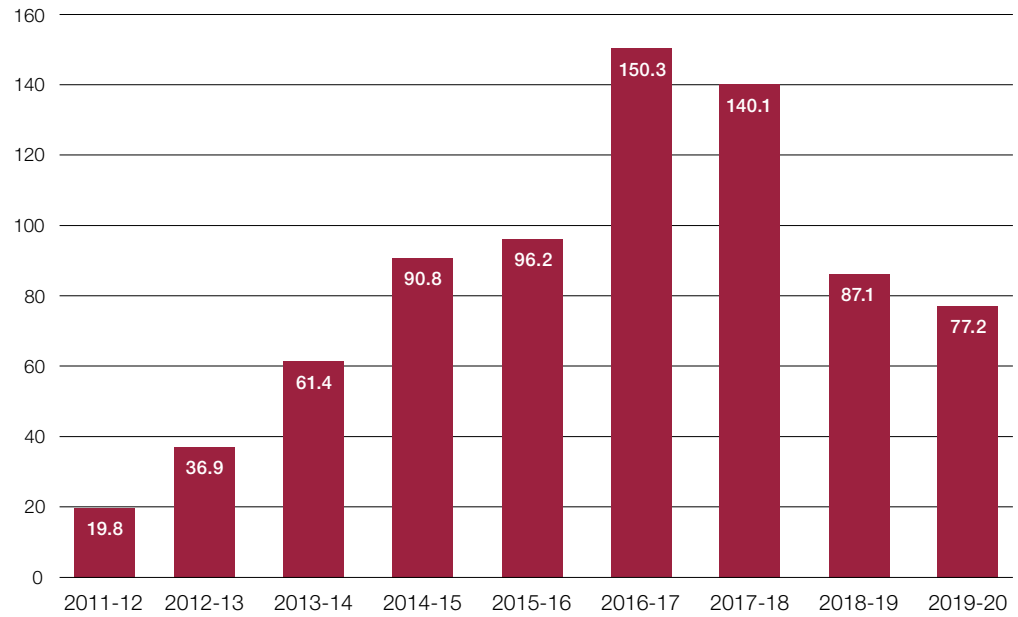
1.15 Increasing budgets have resulted in rapid growth in staff numbers. GDS staff numbers reached 653 by the end of March 2016. Headcount is forecast to increase further, to 911 staff by the end of the 2016-17 financial year (**Figure 4** on page 19). This rapid expansion has meant that GDS has had to rely heavily on interim staff. GDS estimates that interim staff made up around 20% of its workforce until March 2015. Use of interims peaked at 41% between January and March 2016, to support work on central services following the 2015 Spending Review.

Figure 3

Government Digital Service budget, 2011-12 to 2019-20

GDS's budget increased to over £150 million in 2016-17

GDS budget (£m)



Notes

- 1 GDS received funding of £455 million in the 2015 Spending Review, covering expenditure for the four years from 2016-17.
- 2 Of the £54 million increase in funding between 2015-16 and 2016-17, £43 million (80%) is ring-fenced for Verify, Government as a Platform and Common Technology Services.
- 3 Verify is expected to become self-funding in 2018-19. Of the £53 million decrease in GDS's funding between 2017-18 and 2018-19, two-thirds (£36 million) relates to removal of revenue programme funding for Verify.

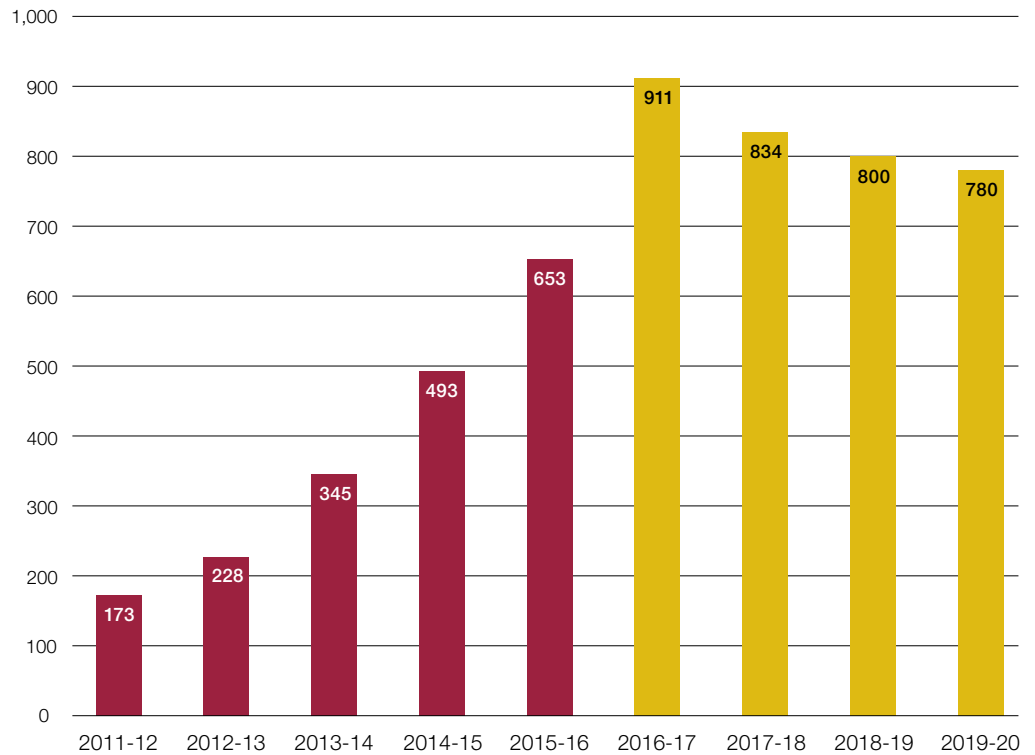
Source: Government Digital Service budget data

Figure 4

Government Digital Service staff numbers, full-time equivalent

GDS numbers have increased rapidly since it was set up

Full-time equivalents



■ Actual full-time equivalents at the time of the 2015 Spending Review

■ Budgeted full-time equivalents at the time of the 2015 Spending Review

Notes

- 1 Total full-time equivalent (FTE) staff include civil servants and interim staff. The number of interim staff prior to 2015-16 is based on an estimate by GDS, as it does not hold data on this.
- 2 The planned reduction of 131 staff between 2016-17 and 2019-20 reflects a reduction of 170 FTEs in GDS's 'core' programmes (all GDS's activities except three ring-fenced programmes: Common Technology Services, Government as a Platform and Verify) offset by an increase of 39 FTEs in its three ring-fenced programmes.

Source: National Audit Office analysis of Government Digital Service data

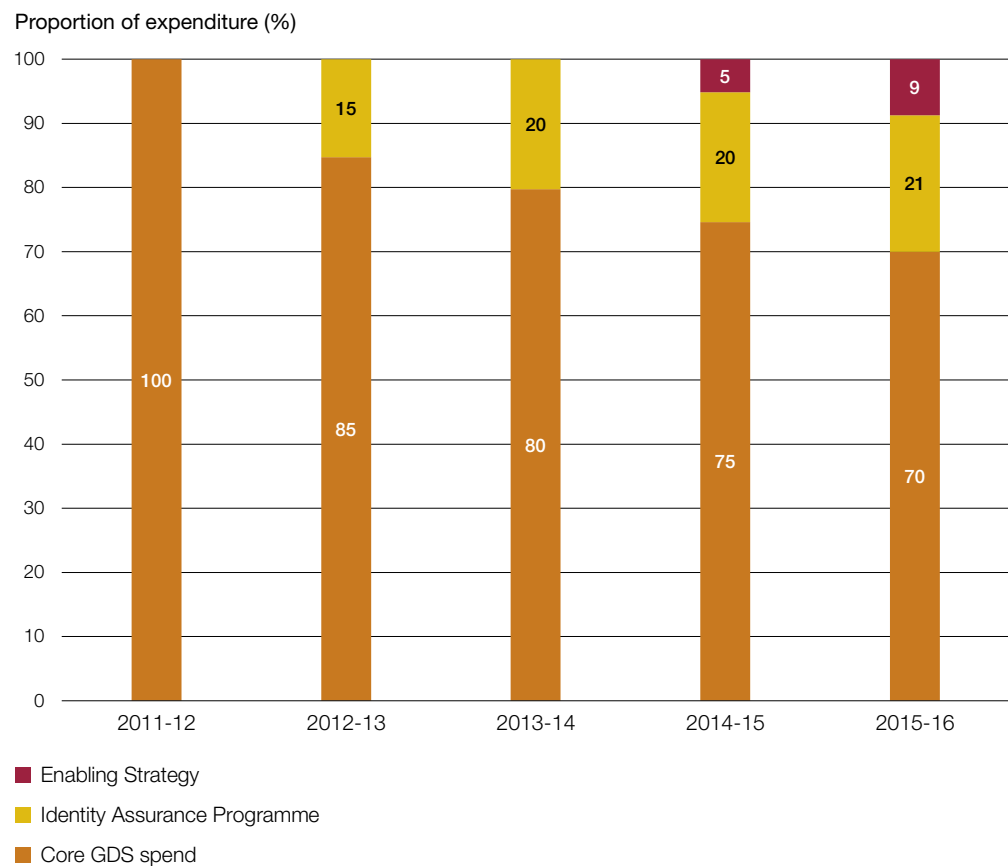
1.16 GDS has been spending more of its money on developing and running central services such as Verify, an identity assurance platform (**Figure 5**). In November 2015, GDS received £455 million for the 2016 to 2020 spending review period.

1.17 GDS will continue to develop common services. From 2016-17 to 2019-20, over half of its budget is allocated to common services (**Figure 6**).

Figure 5

Government Digital Service expenditure, 2011-12 to 2015-16

GDS started to spend money on common services (excluding GOV.UK and Verify) in 2014-15 through work on its Enabling Strategy



Notes

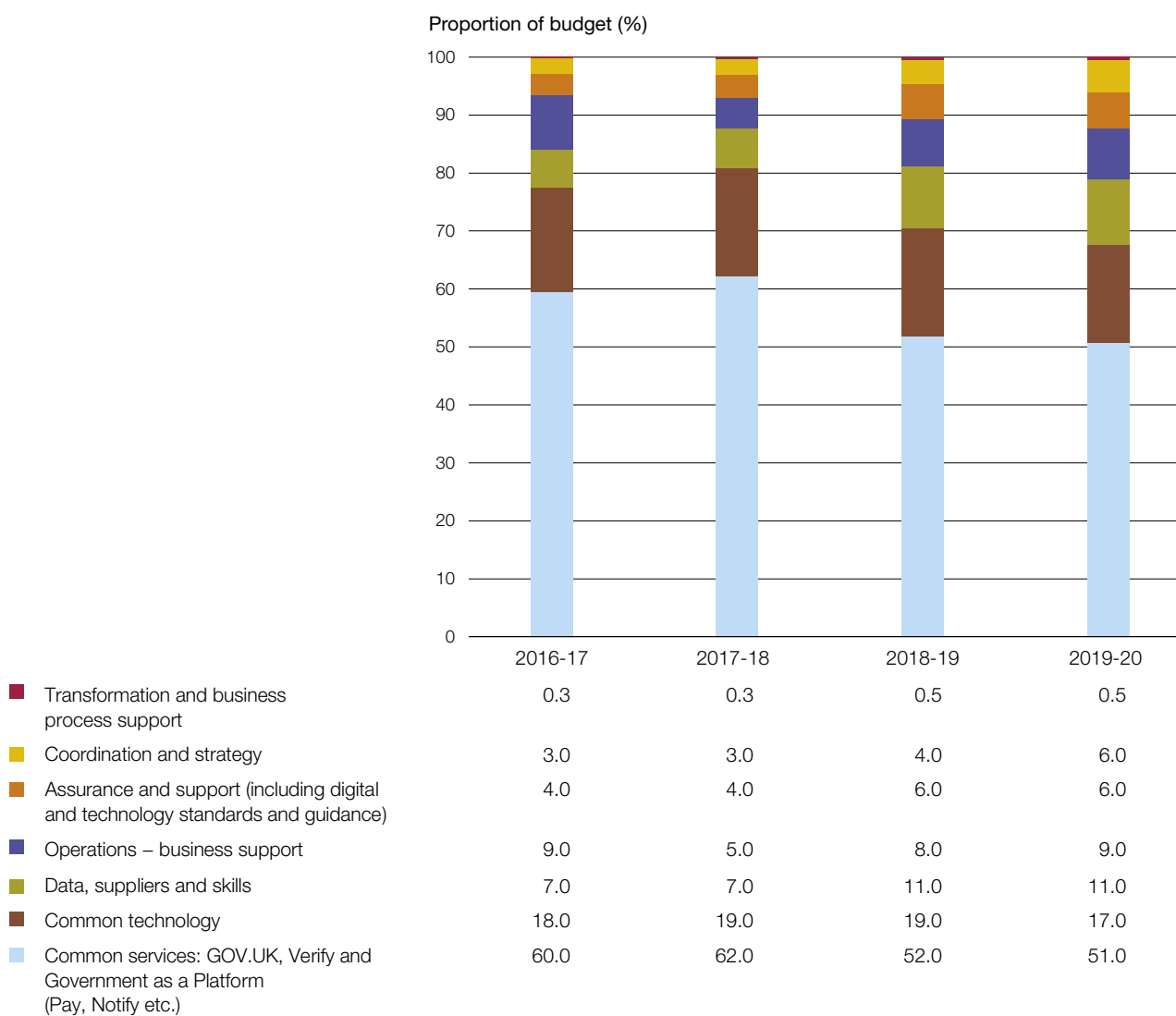
- 1 GDS set up what was called the Enabling Strategy programme in October 2014 to develop business cases for building services at the centre that can be used across government. In September 2015, work on Enabling Strategy was subsumed into work on the Government as a Platform programme and Common Technology Services. Expenditure on common services via the Enabling Strategy excludes spending on GOV.UK.
- 2 The Identity Assurance Programme became known as Verify when it was launched (in public beta – publicly available but still being tested) in October 2014.
- 3 It is not possible to analyse expenditure in further detail, or using the categories in Figure 7, as before 2016-17 GDS did not split its staff costs into specific programmes.

Source: Government Digital Service management information

Figure 6

How Government Digital Service has allocated its budget, 2016-17 to 2019-20

GDS will use over half of its budget to build and maintain common services for government

**Notes**

- 1 The proportion of GDS's budget allocated to common services falls in 2018-19 because it is assumed that GOV.UK Verify will become self-funding from this year.
- 2 Reflects the net position after departmental income.
- 3 GDS plans to spend £260.7 million of its £454.7 million budget (57%) on common services (GOV.UK, Verify and Government as a Platform) between 2016-17 and 2019-20.
- 4 Numbers may not sum due to rounding.

Source: National Audit Office analysis of Government Digital Service budget data

Key questions for GDS

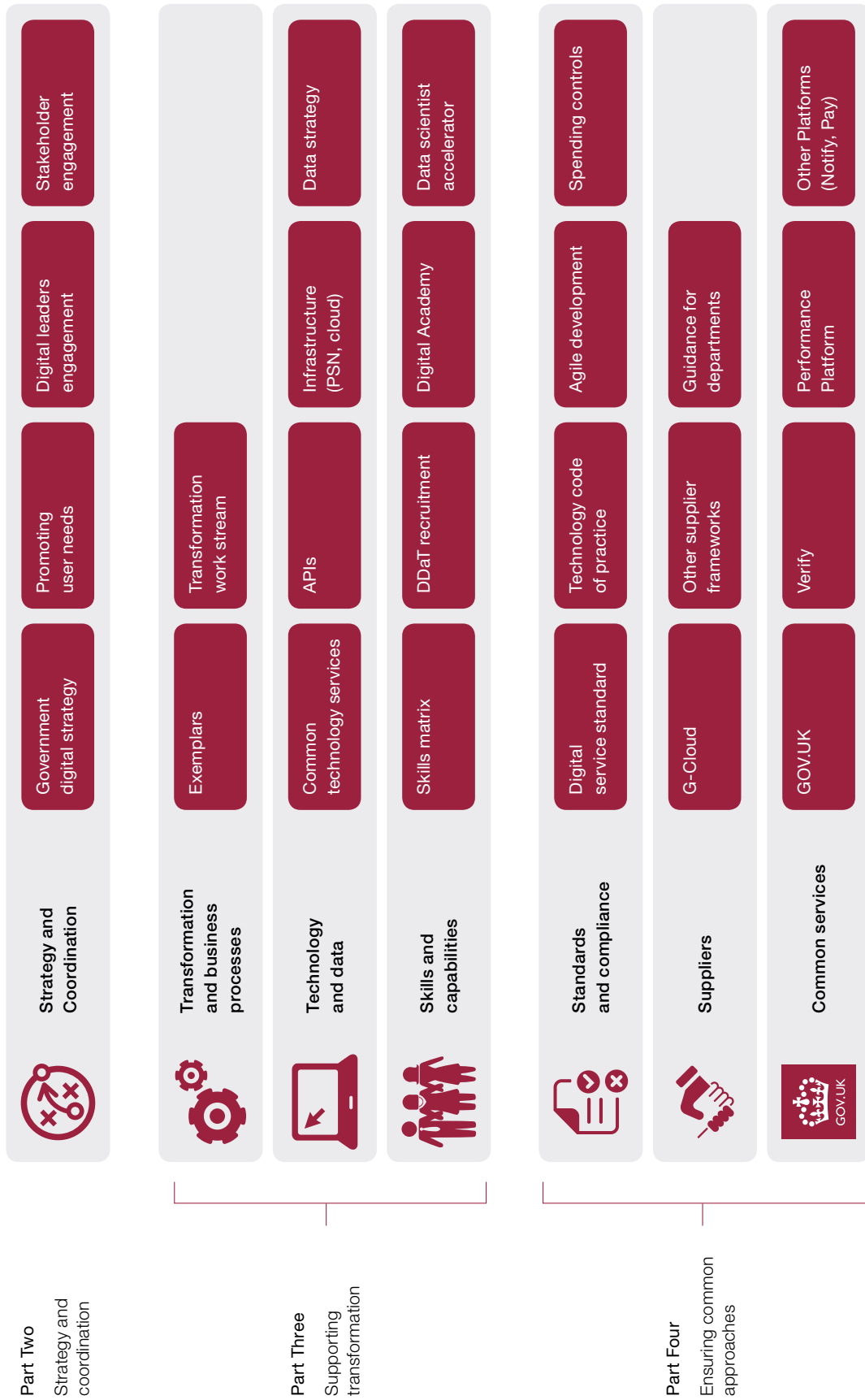
1.18 As we showed in our reports on the centre of government, central functions like GDS can work with wider government in different ways.¹⁰ In this report, we consider what the experience of the last five years tells us about the role of GDS and how it might better support transformation:

- In Part Two, we look at how GDS has shaped government's digital strategy, and the challenges for defining its own role and prioritising its activities.
- In Part Three, we consider how GDS supports transformation, and the challenges in approaches to transformation and technology.
- In Part Four, we review GDS's use of standards and controls, and consider the balance between support and more formal enforcement activities.

1.19 **Figure 7** shows how our report covers the wide range of roles that GDS has had within government since 2011.

¹⁰ Comptroller and Auditor General, *The centre of government*, Session 2014-15, HC 171, National Audit Office, June 2014; Comptroller and Auditor General, *The centre of government: an update*, Session 2014-15, HC 1031, National Audit Office, March 2015.

Figure 7
Summary of Government Digital Service activities



Source: National Audit Office. See Glossary for fuller explanation of abbreviations

Part Two

Strategy and coordination

2.1 In our June 2014 report *The centre of government*, we identified core roles for the centre in setting out a clear operating model for government and presenting a coherent view of government activity.¹¹ In this part, we examine Government Digital Service's (GDS's) role in setting strategy and consider its recent experience of:

- developing a clear strategy for government;
- setting out GDS's own role;
- monitoring progress; and
- establishing processes and responsibilities for reassessing objectives.

Developing a clear strategy

2.2 The Cabinet Office and GDS released or updated several strategies between 2011 and 2013 (see Figure 2 on pages 14 and 15). The 2012 Government Digital Strategy outlined how government intended to redesign its services, including 14 actions (later rising to 16) for departments and the Cabinet Office.

2.3 GDS's experience over the last five years highlights challenges relating to the clarity, completeness and interpretation of the strategy:

- **Relationship between transformation and technology**

The 2012 Government Digital Strategy had a broad vision of transformation driven by users' needs and the better use of technology. But as we noted in our 2015 briefing *Lessons for major service transformation*, transformation is poorly and inconsistently understood across government and prone to challenges in defining scope and managing performance.¹²

¹¹ Comptroller and Auditor General, *The centre of government*, Session 2014-15, HC 171, National Audit Office, June 2014.

¹² Comptroller and Auditor General, *Lessons for major service transformation*, National Audit Office, May 2015.

- **Role of existing systems**

The Government Digital Strategy set out a commitment to redesign government services and move them online. But it did not guide departments on how to manage decisions relating to legacy IT systems. In our 2013 report *Managing the risks of legacy ICT to public service delivery*, we highlighted the challenges of transforming services that use legacy systems.¹³

- **Interpretation of requirements by departments**

In our 2013 report *Universal Credit: early progress*, we found that, in the early stages of the Universal Credit programme, the Department for Work & Pensions had taken an unnecessarily strict interpretation of which activities should be conducted online. This led to problems in balancing security with user requirements.¹⁴

2.4 GDS has recognised the importance of understanding how to manage the existing environment and systems in transformation. It aims to take a more flexible approach to supporting transformation given the different challenges and levels of readiness in departments. GDS has launched its aim to ‘support, enable and assure’ transformation via online public communications.

2.5 GDS’s new approach is still emerging. It is not yet clear how GDS will prioritise its activities over the next few years, or how it will develop a plan to support its new approach. GDS told us that, in January 2017, it started to work with digital leaders across government to understand the current position and where it needs to get to by 2020. At the time of our assessment, there were no outputs from this process available for review.

Setting out GDS’s role

2.6 GDS took an active role early on by communicating the need to change to digital services. It created a single government website, GOV.UK; supported exemplars in departments; and enforced strict controls on IT spending and certain service standards. In our review, several departments recognised the positive impact of this ‘disruptive’ role.

¹³ Comptroller and Auditor General, *Managing the risks of legacy ICT to public service delivery*, Session 2013-14, HC 539, National Audit Office, September 2013.

¹⁴ Comptroller and Auditor General, *Universal Credit: early progress*, Session 2013-14, HC 621, National Audit Office, September 2013.

2.7 GDS's role in supporting transformation is not set out clearly in the new Government Transformation Strategy. The Infrastructure and Projects Authority (IPA) has sponsored a cross-government Transformation Peer Group, now co-chaired by GDS, which shares good practice and analysis of transformation programmes.¹⁵ At the same time, GDS has taken the lead in developing the Government Transformation Strategy. We found that responsibilities between GDS, the IPA and departments are not clearly defined. It is not clear who is responsible for driving business transformation in government to address issues such as culture and process change, which were highlighted in the Government Transformation Strategy. It is also unclear how they will do this.

2.8 Roles may take some time to emerge. GDS and the IPA have already been working together to coordinate support for departments. For example, GDS and IPA, together with the Complex Transactions Team, provided multidisciplinary advice to the Department for Environment, Food & Rural Affairs on replacing IT contracts.¹⁶

Monitoring performance

2.9 Until March 2015, GDS reviewed performance quarterly against the actions outlined in the Government Digital Strategy (**Figure 8**). It required departments to provide regular management information on major transactional services. GDS has also monitored exemplars in departments and published the results of service assessments.

2.10 However, GDS has encountered challenges in sustaining its approach. For example, GDS publishes data on 802 government services on an online Performance Platform. But only 118 services publish data on costs per transaction and not all services publish required data on digital take-up, the completion rate for online transactions or user satisfaction. In an internal review in 2015, GDS found that there was a lack of clarity about the purpose of the Performance Platform. Some data have not been updated since March 2016.

2.11 GDS is now exploring how to track the success of its new strategy. It is reviewing the Performance Platform's role in providing information about service performance across government. GDS told us that it has commissioned an independent review, to be carried out by external consultants and its Advisory Board, to assess progress (successes and challenges) to date.

2.12 Internally within GDS, there have been limitations in the oversight of the organisation's work. The Executive Management Committee within GDS is responsible for overseeing performance and setting strategic direction. We reviewed board minutes and performance dashboards from each of four business groups (operations, digital, data and technology).¹⁷ We found that objectives and results presented to the board were sometimes vague and did not always include baselines or targets. This made it hard to assess progress.

¹⁵ The IPA reviews major projects.

¹⁶ The Complex Transactions Team is a Cabinet Office team that supports departments in their most complex and challenging deals.

¹⁷ The group structure changed in January 2017. There are now six business groups reporting to a new Management Committee.

Figure 8

Government Digital Service's assessment of progress against the Government Digital Strategy

GDS tracked progress against actions until March 2015

Action from strategy	Examples of progress reported
1 Digital leaders for all departments	Digital leaders appointed across all departments.
2 Services involving over 100,000 transactions led by a skilled manager	Service managers assigned to digital projects across departments. All Department for Work & Pensions (DWP) service managers have either completed the GDS's service manager training or have been through DWP's own digital academy.
3 Departments to ensure sufficient digital capability in-house	A number of departments have set up and expanded specialist central digital teams within their own departments.
4 Cabinet Office to support improved digital capability	By summer 2014, the GDS Recruitment Hub helped departments recruit over 100 technology and digital experts to leadership positions across departments.
5 Services with over 100,000 transactions to be redesigned	As at December 2014, 16 redesigned services are in use and a further four are expected by the end of March 2015.
6 All new or redesigned transactional services meet Digital by Default Service Standard	Digital Service Standard came into force in April 2014. Between April and the end of December 2014, GDS ran 71 assessments for services handling over 100,000 transactions.
7 All departments to move to GOV.UK	All sites moved over by December 2014.
8 Departments to raise awareness of digital services	More than half of voter registrations and Carer's Allowance applications now made online.
9 Cross-government approach to assisted digital	Published Government Digital Inclusion Strategy in April 2014.
10 Rationalisation of ICT procurement	The Digital Marketplace replaced Cloudstore in 2014. The Digital Services Framework provides access to a diverse range of suppliers. GDS is encouraging departments to use shorter and more flexible contracts.
11 New suite of common technology platforms	Verify entered public beta (publicly available but still being tested) in October 2014.
12 Removal of legislative barriers to digital development	HM Revenue & Customs (HMRC) undertook policy analysis on its digital self-assessment exemplar to ensure it aligned with policy and legislation.
13 Departments to supply consistent set of management information for transactional services	Performance Platform makes public for the first time detailed information about the performance of transactions which citizens have with government.
14 Policy teams will use digital tools and techniques to engage with the public	In 2014, Cabinet Office's Government Innovation Group ran targeted activities to increase engagement with wider audiences using social media and GOV.UK channels in support of open policymaking.
15 Cross-sector collaboration to increase number of people online	HMRC provided funding in 2014 to help the digital inclusion team at GDS undertake cross-departmental research to further understand demographics, needs and characteristics across the UK.
16 Open up government data and transactions	DWP completed a feasibility study in 2014 into secure communications and data transfer between the Department, its customers and third-party stakeholders.

Source: National Audit Office review of *Government Digital Strategy: Annual Report 2014*, and progress reports published by Government Digital Service

2.13 GDS has recognised this issue. In August 2016, board minutes noted that there was still work to be done to ensure that objectives and results aligned with the organisation's objectives and could be measured against hard progress measures.

Reassessing objectives

2.14 Changes to GDS's strategy, whether they are major shifts or minor changes, require GDS to reassess its priorities and approach. GDS has several channels for discussions with technology and transformation leaders across government, to support decision-making. In particular:

- **Leaders Networks**

GDS runs three networks of digital, technology and data leaders, made up of representatives from each main department. Their objectives include supporting delivery of the government's digital strategy; providing a voice for departments in policy development; and providing an opportunity to share learning and best practice.

- **Advisory Board**

To support it in delivering its strategy, GDS has an Advisory Board made up of external industry experts. The Board meets quarterly and has existed in its current form since April 2016, when it replaced the previous Digital Advisory Board. The terms of reference for the GDS Advisory Board include: supporting and challenging GDS, departments and agencies to ensure that users' needs remain at the forefront of strategy and delivery; and reviewing government's progress and ability to deliver against the commitments made in the new Government Digital Strategy.

2.15 There is evidence that the Advisory Board provides valuable challenge and advice to GDS. For example, in its second meeting, in July 2016, it stressed the need for a 'high-level vision' for GDS, stating that this was essential for it to provide the correct advice.

2.16 In May 2016, GDS carried out a prioritisation exercise, ranking its objectives in order to decide where to allocate resources. The Executive Management Committee used criteria – including alignment with GDS's vision and strategy – to prioritise objectives. The prioritisation exercise was intended to be carried out quarterly, but this was delayed until October 2016 following GDS's change of leadership in the summer.

2.17 However, our review of minutes from the Executive Management Committee found mixed evidence about the level of guidance that GDS is providing on priorities for specific programmes. The minutes for four months from September 2016 noted that the Digital Group (which covers Verify and other common services) had to ask the Board to clarify current priorities, to ensure it assigned staff to the right areas.

Part Three

Supporting transformation

3.1 A central function can work with departments in two broad ways. It can support others by helping to build capability and providing advice, and it can introduce more formal controls, in some cases centralising and managing shared services directly. In this part, we consider how Government Digital Service (GDS) has provided support for transformation and helped to:

- demonstrate and adopt new approaches to transformation;
- identify better uses of technology and data; and
- develop skills and capability across government.

Adopting new approaches to transformation

The Exemplar Programme

3.2 As part of the 2012 Government Digital Strategy the Cabinet Office and departments identified 25 high-volume transactional services for end-to-end service redesign. These services, known as the Exemplar Programme, were expected to be made available to the public by March 2015.

3.3 GDS aimed to use the programme to demonstrate how new approaches could be used to transform services and build relevant skills and experience. GDS saw improving the customer experience as an important way of encouraging people to use online channels as their first choice. The programme's aim was that departments would redesign all services handling over 100,000 transactions each year.

3.4 The programme was successful in delivering some new services and improving the user experience of some existing services. The programme concluded in 2015 with 15 of the 25 exemplars available as live services and a further five accessible to the general public in trial form. Some of the remaining services have since become available.

3.5 However, the programme achieved only mixed success overall, for the following reasons:

- **Lack of end-to-end transformation**

GDS's analysis indicates that only six of the live exemplars and two of the publicly available trials had provided an integrated service by March 2015. Full transformation and digitisation was not achieved, either for the citizen or for government.

- **Mixed impact**

GDS analysed whether the value of expected benefits for those exemplars over a 10-year period exceeded the costs of development. In 12 cases the benefits exceeded the costs, but in 10 cases the costs outweighed the benefits. No data were provided by departments for the remaining three exemplars.

- **Challenges of working together**

In our report *Early review of the Common Agricultural Policy Delivery Programme*, we identified conflicting objectives between the main stakeholders in delivering the rural payments digital exemplar.¹⁸ To differing degrees, many of the departments we interviewed raised similar concerns about GDS's support for exemplars.

The Transformation Peer Group

3.6 Immediately following the close of the Exemplar Programme in March 2015, there were no new cross-government initiatives from GDS to support business transformation. In March 2016, the IPA set up the Transformation Peer Group with senior digital leaders in government. The group's purpose is to work with department senior leaders responsible for transformation to provide peer support. Seven priority actions for the Transformation Peer Group were drawn up, including developing a transformation roadmap, sharing best practice and analysing areas in greater detail.¹⁹

3.7 The Transformation Peer Group recognises the need for departments to engage with its work to tackle cross-government issues and share good practice. It performs an important function but has limited funding and limited dedicated resources, which means it has a relatively constrained role in supporting transformation across government.

¹⁸ Comptroller and Auditor General, *Early review of the Common Agricultural Policy Delivery Programme*, Session 2015-16, HC 606, National Audit Office, December 2015.

¹⁹ The Transformation Peer Group is described as "an informal group of the leaders of some of the most significant transformations across government". Source: Cabinet Office internal document, *Framing the conversation*.

Technology and data

3.8 While the Exemplar Programme tested the opportunities offered by designing services around users' needs or using new approaches, GDS is now supporting improvements in technology beyond online user services. In principle, this approach could help to address concerns about the lack of end-to-end transformation of the exemplars and the management of legacy systems.

3.9 GDS's Common Technology Services unit was set up in August 2015 and grew out of work undertaken on technology infrastructure. The unit is involved in four areas: designing and developing cross-governmental standards and blueprints; sourcing pre-packaged products and services; helping to implement new technical services based on departments' needs and capability; and operating some central services through third parties. GDS has helped to manage common infrastructure such as the Public Services Network (PSN), and has promoted the use of new technologies and products such as cloud services.

3.10 With such a broad remit, GDS faces a significant challenge in meeting possible needs for technical support in areas demanding a deeper technical knowledge and understanding of the existing government landscape. There is limited guidance on replacing or reconfiguring legacy systems to support transformation programmes. GDS has only recently published guidance on using application programming interfaces (APIs) to link administrative systems, despite an emphasis on APIs when GDS was first set up.

3.11 The challenge of meeting so many competing demands has led to gaps in GDS's ability to provide support. For example, it has only a single individual to support and share guidance with departments on security in digital services. Current government policy is to phase out the use of PSN and for departments to assess their own network requirements. There has been limited guidance for departments on managing the transition or monitoring potential risks.

3.12 GDS has recognised the need to respond to cross-government demands. For example, it is looking to increase guidance on moving off PSN and has started initiatives on email security, including, from April 2017, central monitoring of email vulnerability levels for departments.

Data

3.13 GDS established a data team to improve infrastructure around data, develop policy and promote open data. It also supported the drafting of provisions in the Digital Economy Bill to support better data sharing. GDS created a role of Chief Data Officer for government in March 2015. This role disappeared in August 2015; however, the government announced a new role in the recently published Government Transformation Strategy. GDS has also worked with other organisations, such as the Office for National Statistics, to build capabilities in analytics across government.

3.14 Many important and difficult aspects of data use still need to be addressed. We recently reported on weaknesses in data and information security.²⁰ While GDS has concentrated on developing ‘registers’ (canonical lists, such as countries or local authority areas), there is little strategic overview of the data needs of departments and no common view of how best to assess privacy concerns, consent and security (**Figure 9**).

3.15 In the new Government Transformation Strategy, GDS has restated the importance of using data to support transformation in government. Departments have told us they would welcome central support for their underlying data problems and use of data for new services. It is not yet clear how GDS plans to take forward its work in this area.

Skills

3.16 Government is managing specialist skills across all departments through ‘functions’. The aim is for each specialism to close the gap between the skills it needs and the skills it has (the ‘capability gap’) by providing a common approach to recruiting, developing and deploying specialists and creating broader cross-government career paths.²¹

3.17 GDS announced in September 2016 that it would take over the digital academy launched by the Department for Work & Pensions. It aims to train 3,000 civil servants a year. GDS is creating common definitions and titles for 40 job roles by March 2017. These definitions will then be rolled out across government.

3.18 Digital functions are seeking flexibility on pay to attract and retain expert staff, linking enhanced pay to specialist competency frameworks. It is too soon to judge the impact of these frameworks.

20 Comptroller and Auditor General, *Protecting information across government*, Session 2016-17, HC 625, National Audit Office, September 2016.

21 Comptroller and Auditor General, *Capability in the civil service*, Session 2016-17, HC 919, National Audit Office, March 2017.

Figure 9

Overview of GDS's activities to support data transformation

Data strategy	Data architecture	No overall data strategy to provide clarity of overall purpose. Focus so far on open data, Personal Data Exchange and GOV.UK.
	Map of current data environment	Previous mapping attempts failed because of fragmented landscape and burden of detail.
	Map of future state	No overall view of future state for data for services, sharing, data security and privacy. Broad themes set out in 2017–2020 Transformation Strategy and also in September 2015 blog (for example, better use of data, modernising data infrastructure). Input on data-sharing provisions for the Digital Economy Bill.
	Roadmap to future	No overall roadmap setting out a planned approach to using, improving, consolidating and migrating of legacy systems leading to departments creating own solutions.
Governance	Compliance	New Chief Data Officer role and a Data Advisory Board proposed to lead and coordinate on data use. Builds on earlier Data Leaders Network. Work on national data 'registers' accessible to public sector and other users but no mandate to enforce compliance.
	Standards and interoperability	Data standards assurance limited to technology-related proposals from departments through spending controls.
	Maintenance of roadmap	
Guidance	Principles	Technology Code of Practice sets out principles for 'making things open' and 'making things secure' and includes guidance on 'open data principles'. Provision of some guidance on registers.
	Standards	Formats for service users for registers established. No standards for data handling, usage, quality, governance, data design, security, reuse and sharing.
	Good practice	The 2017 Transformation Strategy plans further guidance and assurance to public bodies on balancing use of data with protection of data and aims to further embed common security standards.

Source: National Audit Office assessment. Table derived from standard practice guidelines

Part Four

Ensuring common approaches

4.1 In this part, we examine how Government Digital Service (GDS) has used more formal or direct interventions to transform government, including:

- using spending controls to encourage departments to comply with new policies;
- developing and assuring compliance against standards; and
- centrally building common services or platforms.

Spending controls

4.2 Spending controls are one way that the centre of government can ensure that approaches to delivering technology solutions are consistent across government. Controls can be used to: meet savings targets by preventing unnecessary spending; improve transparency about spending; and enforce common standards and approaches.

4.3 Government introduced digital and technology spending controls in March 2011 following spending restrictions imposed in May 2010. These controls form part of a wider framework of expenditure controls that HM Treasury and the Cabinet Office use, alongside departments' own internal arrangements. Departments submit digital and technology spending requests to GDS for approval at key stages in a project or programme according to the type of expenditure. Digital projects – ie those that directly affect online services – are subject to much lower financial thresholds than spending on administrative systems (Appendix Three).

4.4 Spending controls have delivered savings and made spending decisions more open. In January 2013, we concluded that the Efficiency and Reform Group's actions on spending controls had helped departments make substantial cuts in spending.²² Departments submit around 500 spending requests each year, with these expected to show how proposals comply with standards.²³ For the five years to April 2016, GDS reported savings of £1.3 billion through spending controls (**Figure 10**).²⁴

²² Comptroller and Auditor General, *The impact of government's ICT savings initiatives*, Session 2012-13, HC 887, National Audit Office, January 2013.

²³ GDS data since April 2014.

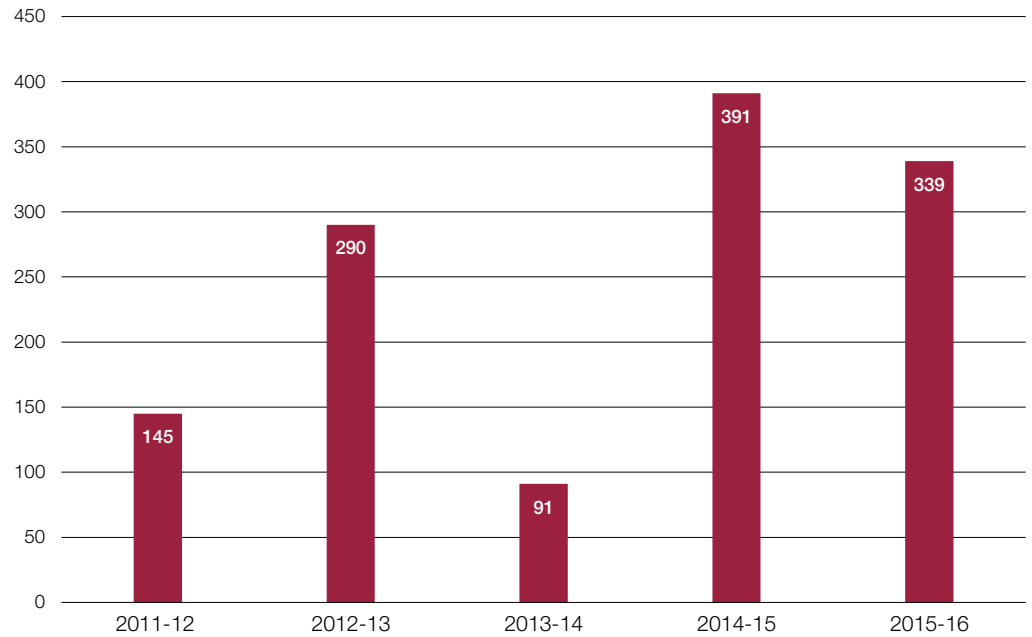
²⁴ Over this period, GDS also reported savings of £0.6 billion through wider initiatives, for example migrating websites to GOV.UK.

Figure 10

Financial savings from spending controls over time

GDS has reported savings totalling £1.3 billion from its spending control interventions

Financial savings (£m)

**Notes**

- 1 The Government Internal Audit Agency conducts a validation exercise for savings. This review is to provide assurance that the numerical parts of savings and disposals are accurately calculated and backed up with reasonable evidence and that the way claims are made is reasonable and fair. The Agency selects and reviews a sample of projects where savings have been claimed and identifies adjustments to claimed amounts where necessary. We discuss the process in more detail in our report: Comptroller and Auditor General, *The impact of government's ICT savings initiatives*, Session 2012-13, HC 887, National Audit Office, January 2013.
- 2 For its review of 2015-16 savings, the Government Internal Audit Agency concluded that it was able to offer moderate assurance that the evidence base supports claimed savings and assertions with some weaknesses. The Agency gave moderate assurance because claimed savings are based on business case projections and the actual cost reductions will not be realised and confirmed until each project is completed.

Source: National Audit Office analysis of Government Digital Service's savings calculations

4.5 While spending controls can play a valuable role in strengthening cross-government approaches, the process raises the following concerns:

- **Linking savings to transformation**

In January 2013, we assessed that less than half (41%) of spending control savings were likely to be sustainable over the longer term.²⁵

- **Ensuring proportionate effort is spent on controls**

GDS data shows that requests of up to £1 million accounted for 47% of its spending controls team's time on spending controls. At the same time, these requests produced only 1% of the financial savings claimed in 2015-16 (**Figure 11**).

- **Reducing burdens on departments**

Although GDS generally meets the agreed targets for assessing applications, when combined with other approval processes, the overall process can be long and require repeated reviews.

- **Ensuring departmental compliance**

Departments regularly submit spending proposals for GDS approval at a late stage in the development of programmes and projects. Our examination of 2016-17 data found that 40% of programmes and projects relating to applications received at the full business case stage had not been reviewed previously by GDS.

4.6 GDS is piloting a new approach to spending controls so that it can target limited resources more effectively and reduce the burden on departments. The new model – to be implemented more widely from April 2017 – involves reviewing departments' 18-month plan for future technology and digital projects. GDS plans to make greater use of department-led peer review to help overcome the relatively small size of its own assurance teams.

Standards

4.7 One major role of GDS over the last five years has been in establishing common standards across government for digital services and technology. GDS has developed two sets of principles to guide a consistent approach to standards:

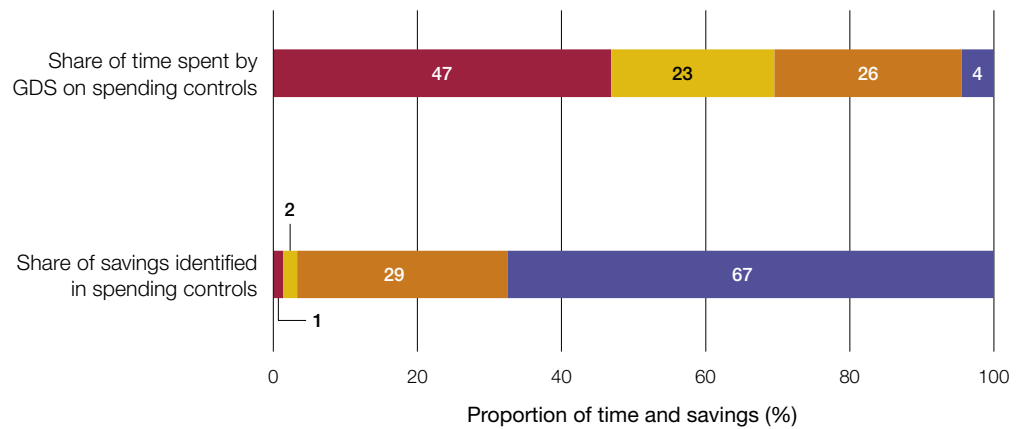
- The Digital Service Standard describes principles for building digital services. GDS has assessed services against the standard since April 2014. Services with more than 100,000 transactions annually are assessed at three stages in their development before being accepted on to the GOV.UK website as a live service.
- The Technology Code of Practice sets out broad principles for how departments should develop their technology architecture to make sure that what they do is sharable, easy to maintain, based on users' needs and not reliant on a single external supplier. It was first introduced in 2013.

²⁵ Comptroller and Auditor General, *The impact of government's ICT savings initiatives*, Session 2012-13, HC 887, National Audit Office, January 2013. Sustainable savings are defined as long-term savings that are likely to occur every year for the foreseeable future.

Figure 11

Comparison of time spent on spending controls and source of financial savings by request size

Smaller applications – many relating to digital projects – take up nearly half of the GDS spending controls team’s time but most financial savings result from review of larger applications



- Less than £1 million
- £1 to £5 million
- £5 to £50 million
- £50 million or more

Notes

- 1 Share of time spent by GDS’s spending controls team on spending controls by size of request is based on GDS records of spending approval requests received between April 2014 and October 2016.
- 2 Share of savings identified in spending controls is based on spending approval requests for which savings were claimed in the 2015-16 financial year.
- 3 Spending applications are reviewed by a team of eight people within GDS’s Standards Assurance team.
4. Categories within bars may not sum to 100 due to rounding.

Source: National Audit Office analysis of Government Digital Service data

4.8 The use of common standards (enforced by spending controls) has helped to ensure greater consistency between services. Between April 2014 and December 2016, GDS completed 283 assessments under the Digital Service Standard and departments achieved a 66% pass rate.

4.9 However, the application of standards has raised several concerns:

- **Uncertain interpretation**

In our interviews with departments, they noted that it can be hard to anticipate how GDS would interpret their performance against the standards, given the broad nature of the principles and lack of detailed guidance.

- **Lack of clear framework for technology**

The Technology Code of Practice is not supported by a comprehensive framework that both explains what government technology should look like and gives detailed guidance on how departments should implement technology change (**Figure 12**).

- **Overlapping guidance and version control**

The technical guidance that is available does not have a rigorous structure or version control, which makes it less accessible and risks it being seen as less credible. For example, guidance on application programming interfaces – which allow computers to talk to one another – can be found in the Government Service Manual, briefly in the Technology Code of Practice (under the principle of making things interoperable) and in at least 11 blogs since 2012. Our review of the GDS webpages found that some guidance had been removed and links broken within technology blogs.

4.10 In May 2016, GDS established a new technology policy team to oversee the code of practice, and develop supporting guidance and monitor how it is implemented. GDS also aims to strengthen its future technology support to departments through sharing best practice, particularly in replacing existing technology and reusing technology.

Changing the supplier mix

4.11 GDS has worked with the Crown Commercial Service to diversify the digital and technology supplier base. It has also aimed to reduce reliance on large suppliers whose long-term contracts have, it believes, locked out competition and reduced in-house skills and capability within departments. Through spending controls, GDS has restricted signing of technology contracts worth over £100 million and tried to reduce the length of departments' contracts.

4.12 As we noted in our report *Managing and replacing the Aspire contract*, government's new approach will require departments to recruit staff with skills in managing multiple suppliers and integrating services.²⁶ Approaches to managing major IT contracts are evolving. GDS has had to clarify its guidance in response to confusion about requirements for adopting different contracting models.

²⁶ Comptroller and Auditor General, *Managing and replacing the Aspire contract*, Session 2014-15, HC 444, National Audit Office. July 2014.

Figure 12 Technology standard and guidance

GDS has yet to develop a comprehensive approach

		Current arrangements
Strategic architecture	Reference architecture	No overall cross-government organising framework for developing and maintaining solutions, products and patterns.
	Map of current systems	No detailed map of IT systems (including legacy arrangements).
	Map of future state	No overall view of, or roadmap towards, a future state (taking account of legacy arrangements); but some new systems being built from the centre.
	Roadmap to future	
Governance	Compliance	Technology governance is substantially operated through the spend controls process but the absence of a documented target state and roadmap limits the criteria that GDS can use to assess departments' proposals.
	Standards and interoperability	
	Maintenance of roadmap	
Guidance	Principles	Guiding principles in the Technology Code of Practice.
	Standards	Some standards developed for open technical standards on GDS Standards Hub and blogs.
	Good practice 'patterns'	Some specific developments linked to Government as a Platform. But information on 'patterns' and 'technical positions' is otherwise limited (and a lack of detailed guidance on updating legacy systems).

Note

1 The Government as a Platform programme is referred to in paragraph 4.16. Platforms are a way of describing systems which can be shared.

Source: National Audit Office analysis of Government Digital Service information. Table derived from standard practice guidelines

4.13 GDS has also tried to make it easier for departments to contract with small and medium-sized enterprises (SMEs) by implementing procurement frameworks such as G-Cloud and the Digital Services Framework, the latter now replaced by the Digital Outcomes and Specialists Framework.²⁷ Both are hosted through the Digital Marketplace, an online catalogue of digital and technology services for the UK public sector. Government data show that up to November 2016, 64% of sales by volume were to SMEs via the G-Cloud framework.

²⁷ See also: Comptroller and Auditor General, *Government's spending with small and medium-sized enterprises*, Session 2015-16, HC 884, National Audit Office, March 2016.

4.14 While new digital and procurement frameworks targeting SMEs have had some impact, most government procurement with digital and technology suppliers continues to be with large organisations. In 2015-16, 94% of such spending was with large enterprises, a fall of less than one percentage point since 2012-13.²⁸

Establishing common services

4.15 As well as enforcing standards across departments, a central function can sometimes centralise specific activities and provide shared services across government. Early on, GDS recognised the opportunity to have a standard platform for government websites in GOV.UK.

4.16 Over time, GDS has expanded its development of centrally developed systems, which it is calling common platforms. Since 2015, it has adopted a Government as a Platform strategy which aims to create a wider system of centrally coordinated shared reusable components. GDS is developing several platforms centrally, including:

- GOV.UK Verify, to provide a single, common identity assurance platform for users to prove who they are when accessing government services online;
- GOV.UK Pay, to provide an online interface for users to pay government, using a range of online methods, regardless of what service they are using; and
- GOV.UK Notify, to enable departments to send text messages, emails or letters to keep users updated on the progress of their transactions with government.

4.17 GDS has made progress in developing the platforms. However, establishing common services or platforms is difficult. GDS needs to overcome specific concerns about:

- **Establishing the need for new platforms**

In 2014, the Civil Service Corporate Management Board asked GDS and HM Treasury to work with departments on the case for adopting a cross-government approach. They stated that “a first principle for delivering any of the building blocks of Government as a Platform would be to reuse previous work done by departments”. But so far the main working components are newly built platforms.

- **Contribution to overall transformation**

In principle, development effort is reduced when new services can make use of existing common components. GDS’s new platforms are attempting to aggregate demand. The underlying applications (such as text message notification) are already commercially available and used in existing services. It is not clear how new platforms are meeting the greatest need and the direct benefits of aggregation are small.

²⁸ Government data. The Crown Commercial Service collects data on procurement spending using a third-party system called Bravo. Bravo collects data from departments’ invoices, identifies SMEs within the data using Dun & Bradstreet classifications. The data in Bravo are known to be incomplete but this is gradually improving as more government departments are added to it and inconsistencies resolved.

4.18 In past reports on shared services and functions, we have noted similar challenges for centrally managed activities. Lack of clarity of purpose and a poor understanding of wider government requirements can lead to unanticipated problems with performance, slow or limited adoption of the service, and poor realisation of business case benefits. Because of its larger scale and significance, we consider these risks in greater depth for GOV.UK Verify.

GOV.UK Verify

Background and aims

4.19 Verify provides a single route for people to prove their identity and access government services online. Verify plans to replace identity checking for citizens through the Government Gateway; in previous reports we found that without investment, weaknesses in Government Gateway would leave it increasingly exposed to attack.²⁹

4.20 The Verify service requires the citizen to register with a commercial identity provider through GOV.UK. Providers validate citizens' identities and confirm identity to the service that the citizen wants to use. This approach was chosen to avoid creating a single database of users and to stimulate a market for identity assurance services.

4.21 Verify aims to help departments create new digital services online. Government expects Verify to offer more consistent and higher levels of security, a more uniform user experience and to reduce costs to departments from having a range of different paper-based processes. Verify began public trials in October 2014. The central estimate of the business case forecasts that 25 million people will use the service by April 2020.

4.22 The Government's 2017 Transformation Strategy reconfirmed its commitment to common platforms and Verify. GDS is trying to increase take-up of Verify across departments and in local government. It is also renegotiating contract terms with verification providers and exploring how it might expand opportunities for the private sector to use and pay for the service.

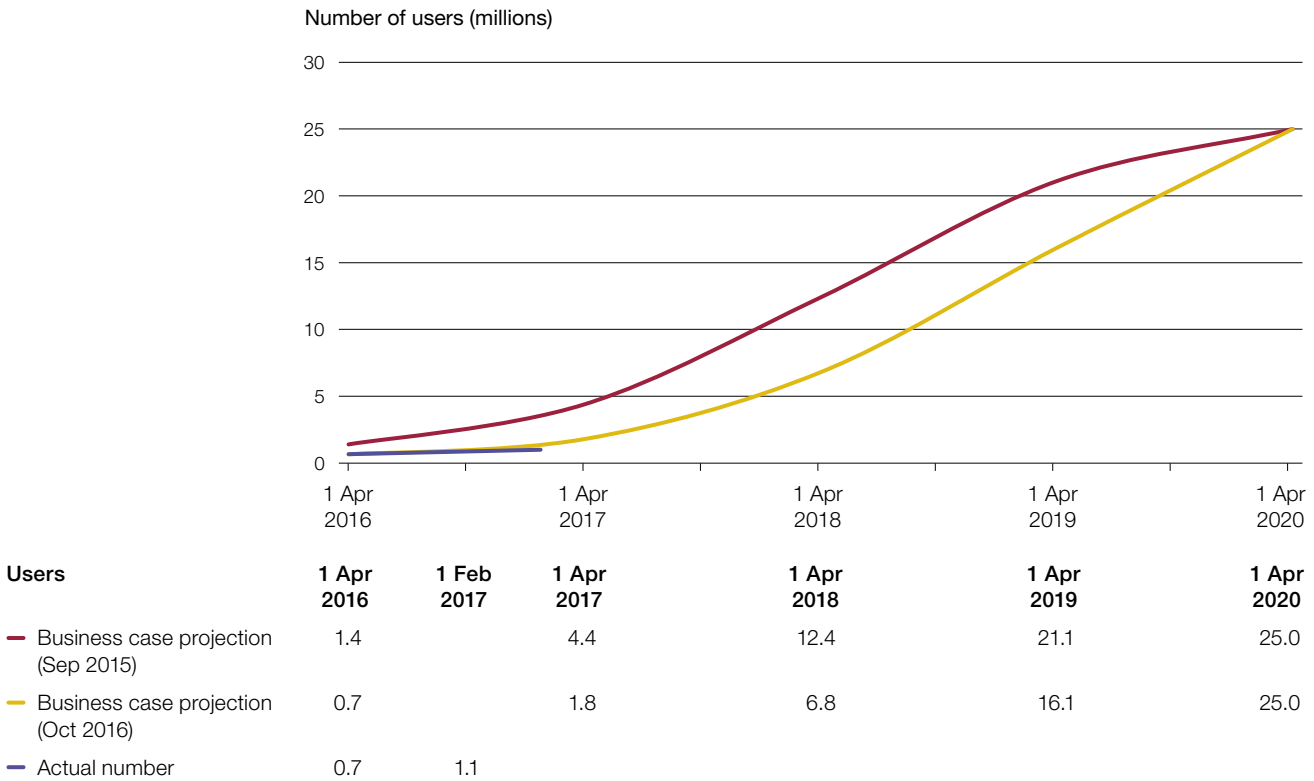
Struggling to achieve targets

4.23 To achieve the target of 25 million users by April 2020, GDS needs the profile of users to increase at a much sharper rate from April 2019. The September 2015 business case predicted 4.4 million users by the end of March 2017. This projection was reduced to 1.8 million in the October 2016 business case. As of February 2017, Verify had 1.1 million user accounts (**Figure 13** overleaf).

²⁹ Comptroller and Auditor General, *Identity Assurance Programme: Briefing Paper*, National Audit Office, December 2014; and Comptroller and Auditor General, *Digital Britain One: Shared infrastructure and services for government online*, Session 2010–2012, HC 1589, National Audit Office, December 2011.

Figure 13
Projected GOV.UK Verify take-up

Take-up projections in the most recent business case are significantly more backloaded



Note

1 The actual number of users includes 185,000 basic accounts created as part of a trial in July 2015. Basic accounts are unverified and do not allow account holders to access live services.

Source: National Audit Office analysis of Government Digital Service information

4.24 Verify has not achieved the volume of users in the central forecast of the business cases, in part due to slower development of digital services across government, and fewer than expected services being ready to adopt Verify as the primary access route. In 2014, GDS expected over 100 departmental services to be using Verify by 2016. In October 2016, GDS predicted that 43 services would be using Verify by April 2018. In February 2017, 12 services were using Verify.³⁰ None of the nine services that were in the pipeline for connecting to Verify during the remainder of 2016 was ready to do so by that date.

4.25 Even services that do use Verify are continuing to use alternative methods to access services online. Of the 12 departmental services connected to Verify as of February 2017, nine also allow access by other means including, for one department, an enhanced version of the existing Government Gateway.

30 Verify Service Dashboard, GOV.UK, available at: www.gov.uk/performance/govuk-verify.

4.26 Reduced take-up means that Verify will need to be centrally funded for longer, and reduces the incentive for the identity providers to lower their prices over time.³¹ It is not clear how or when GDS will determine whether continuing with Verify will achieve projected benefits.

4.27 The use of multiple routes to accessing services online undermines the business case for Verify. In October 2016, GDS modelled the scenario of no additional HMRC users and found that this would reduce benefits by £78 million over four years leading to a net cost of £40 million.³² It also modelled that failure to achieve sufficient volumes to reduce the commercial costs of the service in 2018-19 could lead to a net cost of £70 million in present value terms over four years. Although GDS has estimated a large positive net present value once indirect benefits and a longer time frame are included, the business case is highly reliant on assumptions about savings in departments, and it is not clear whether these are reasonable.

Challenges for adoption of Verify

4.28 Adoption of Verify has been impeded by problems experienced by users and services. Citizens are not always able to register with the commercial providers due to lack of online ‘proof’ of identity. Data show that a significant number of users drop out before they submit a full application to verification providers. Providers’ performance in verifying applications successfully is below the 90% target set out in the September 2015 business case (**Figure 14** overleaf).

4.29 People who have successfully verified their identity may still be unable to access a government service. Even when registrations are successful and the users’ credentials are passed to departments, some departments have difficulty matching the credentials to those stored in a different way in their existing legacy systems. GDS has told us that it does not track the success rate for verified user identities being accepted by the departmental service the user is trying to access.

4.30 Verify is also only a limited part of what departments need to do to provide secure online services. Many departments still need their own means of checking users or particular transactions. Departments are therefore incurring additional costs. As well as providing a contributing cost of £1.20 for each successful confirmation of identity, departments are bearing indirect costs – for example in helping users through the process of verification using Verify and developing new matching software and processes for Verify records. Combined with performance problems, this means that departments face weak incentives to adopt Verify.

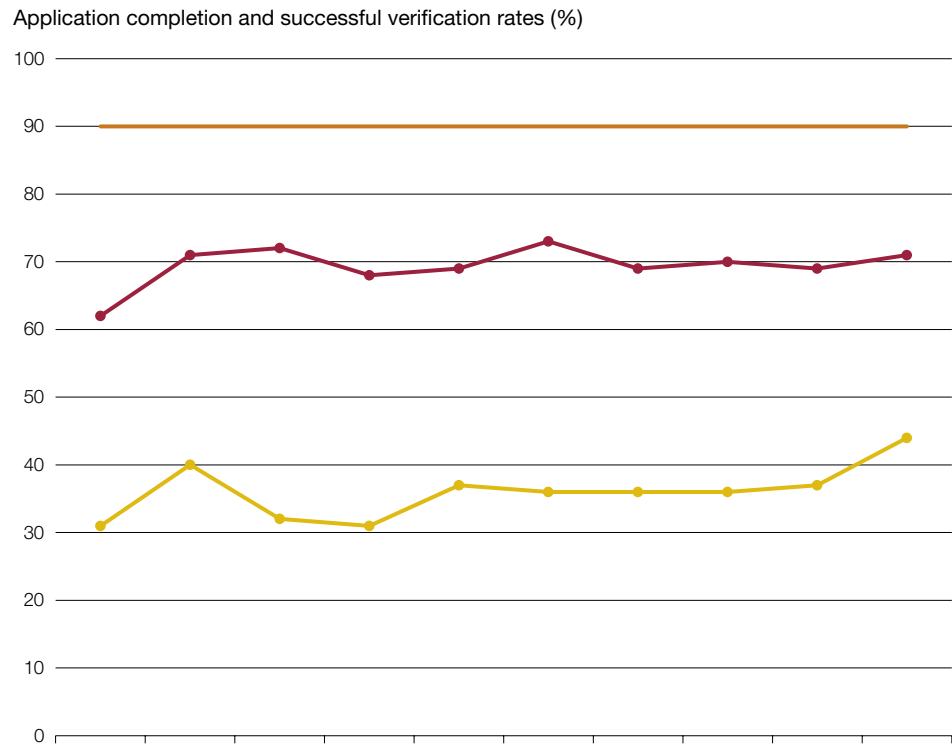
31 GDS pays each identity provider a set fee for each successful confirmation of identity, and recoups a contribution (currently £1.20) from any government body where a verified identity is subsequently used to access a departmental service during the year.

32 GDS included this as a specific scenario in its sensitivity analysis as, at the time, GDS estimated that HMRC would contribute over a third of Verify’s users by March 2017.

Figure 14

GOV.UK Verify: operating performance (April 2016 to January 2017)

Verification success rates are below target and there is significant drop-out at the application stage



	1 Apr 2016	1 May 2016	1 Jun 2016	1 Jul 2016	1 Aug 2016	1 Sep 2016	1 Oct 2016	1 Nov 2016	1 Dec 2016	1 Jan 2017
● Successful verification rate	62	71	72	68	69	73	69	70	69	71
● Application completion rate	31	40	32	31	37	36	36	36	37	44
— Successful verification target	90	90	90	90	90	90	90	90	90	90

Notes

- 1 The completion rate (yellow line) measures the number of visits to the Verify website which result in the creation of a verified identity from the point that a user selects 'start now' on the GOV.UK Verify website to completion of the session. A single user could make multiple visits before completing an application to have their identity verified.
- 2 The verification rate (the red line with the target orange line) measures provider performance in successfully validating the identity of users who completed an application.

Source: National Audit Office analysis of Government Digital Service performance information at: www.gov.uk/performance/govuk-verify

Revisiting the case for Verify

4.31 The challenges faced since 2012 provide lessons for how GDS develops its plans for Verify and other central services:

- **Establishing a clear case**

Verify presents an opportunity to improve the way that personal data is used across government enabling better use of data between departments and wider government, based on a single secure view of identity. But the current business case is based on reducing duplication or simplifying the way new services are developed.

- **The importance of adequate early analysis or ‘discovery’**

Our review shows that GDS could have done more to understand the existing landscape of department services to support their early work on identity assurance for individuals. For example there was no full analysis of how existing services identified customers or analysis of the way in which customer data is held in existing services or how this might affect the user journey from Verify to completion of the service transaction. Such analysis may have provided more understanding about likely rate of take-up and the type of incentives required for departments to use Verify.

- **Consideration of options**

The Verify business case ruled out development of Government Gateway as an alternative to Verify, based on strategic, technical and contractual grounds saying that to change this service would involve ‘disproportionate and duplicative investment’. Government Gateway currently hosts 138 live public sector services, and the Gateway is being improved. GDS has not reassessed the cost and security implications of an improved Gateway service.

- **Assessment of options**

GDS’s estimate of savings is heavily dependent on avoided costs in departments. Estimates of avoided costs are high, based on rejected applications in spending controls. However, it is not clear that these are good benchmarks; rejected applications are likely to be high cost and savings may be due to traditional controls over spending rather than avoiding duplication through Verify.

4.32 GDS is now exploring ways to increase the use of Verify. For example, recognising that the current verification process is unnecessarily difficult for some services, GDS is considering ways to expand Verify to provide a lower level of assurance for services that do not need high levels of identity verification.

4.33 It is not yet clear whether Verify will be able to overcome the limitations that have prevented its widespread adoption across government, or whether attempts to expand in other ways will be successful in encouraging departments to adopt it. Take-up and cost projections remain optimistic and there will always be many services that do not use the current Verify service (for example, medical services with higher assurance requirements or businesses using tax services).

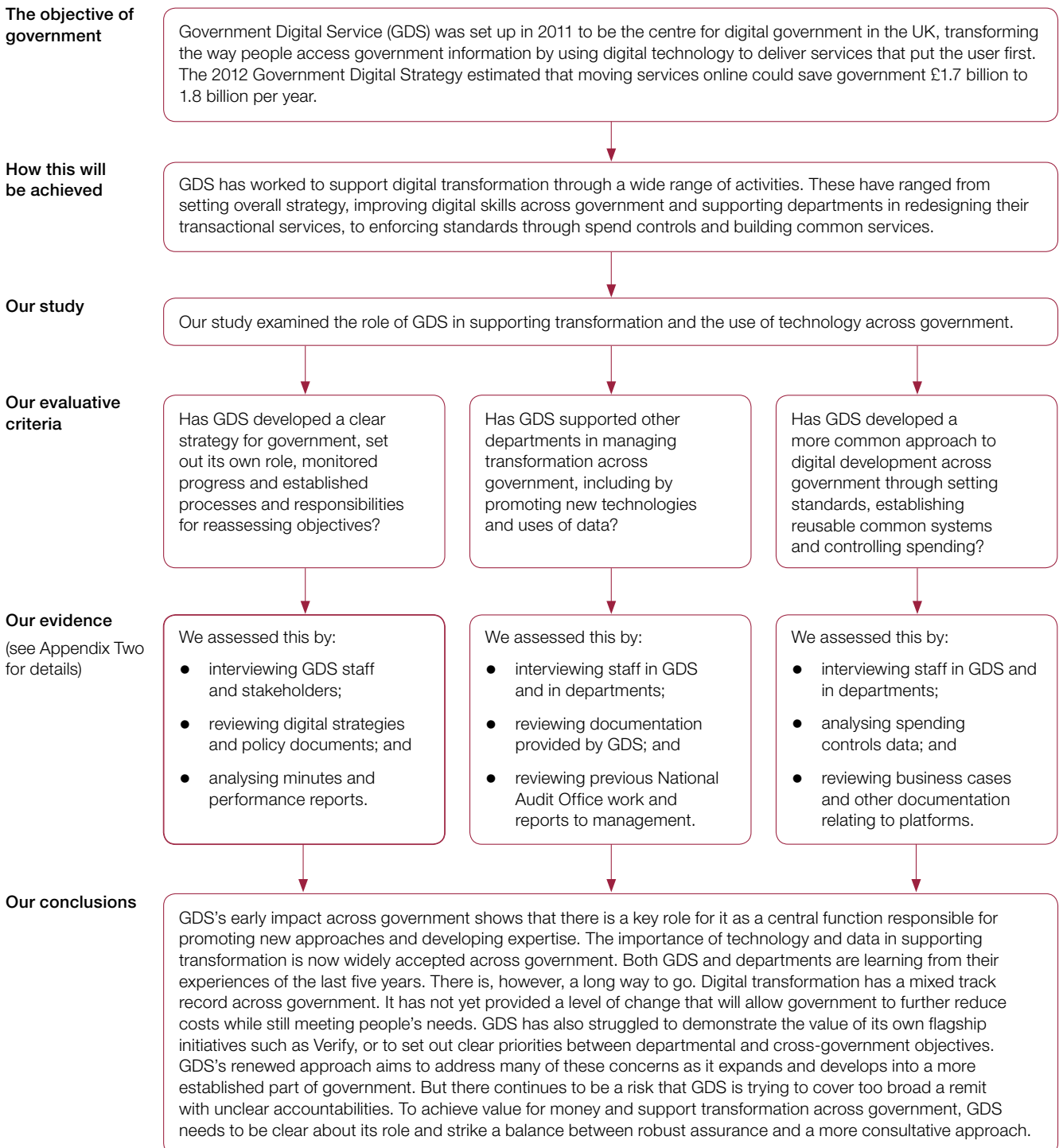
Appendix One

Our audit approach

1 This report examines the role of GDS in supporting transformation and the use of technology across government. We reviewed whether:

- GDS has developed a clear strategy for government, set out its own role, monitored progress and established responsibilities for reassessing objectives;
- GDS has supported other departments in managing transformation across government, including by promoting new technologies and uses of data; and
- GDS has developed a more common approach to digital development across government through setting standards, establishing reusable common systems and controlling spending.

2 Our audit approach is summarised in **Figure 15**. Our evidence base is described in Appendix Two.

Figure 15**Our audit approach**

Appendix Two

Our evidence base

1 Our findings on how GDS has supported digital transformation in government are based on analysis of evidence collected between October 2016 and January 2017. Our audit approach is outlined in Appendix One.

2 We examined the creation of GDS and its changing role by:

- reviewing digital strategies and policy documentation from 2010 to 2017;
- conducting interviews with senior staff in GDS to understand its changing approach – we also met with the Infrastructure and Projects Authority to understand its work on transformation and its relationship with GDS;
- analysing GDS's budget and headcount data for the period 2011-12 to 2019-20 to understand its resource allocation – we also analysed GDS's data on spending from 2011-12 and its budget allocation data for the 2015 Spending Review period;
- analysing minutes of GDS's governance boards and advisory groups, and published performance reports, to review how it monitors progress against its strategy and assesses its priorities and objectives; and
- interviewing senior digital and technology officers from departments undergoing digital transformation on the role of GDS and support it has provided.

3 We assessed how GDS supported others in managing transformation by:

- conducting interviews with GDS and departments to gain their views on their common technology services and data;
- reviewing GDS documentation relating to the exemplars;
- reviewing Cabinet Office documentation relating to the Transformation Peer Group;
- reviewing the results of our digital skills survey and the findings from our forthcoming report on civil service capability; and
- analysing GDS's work on data against our data framework.

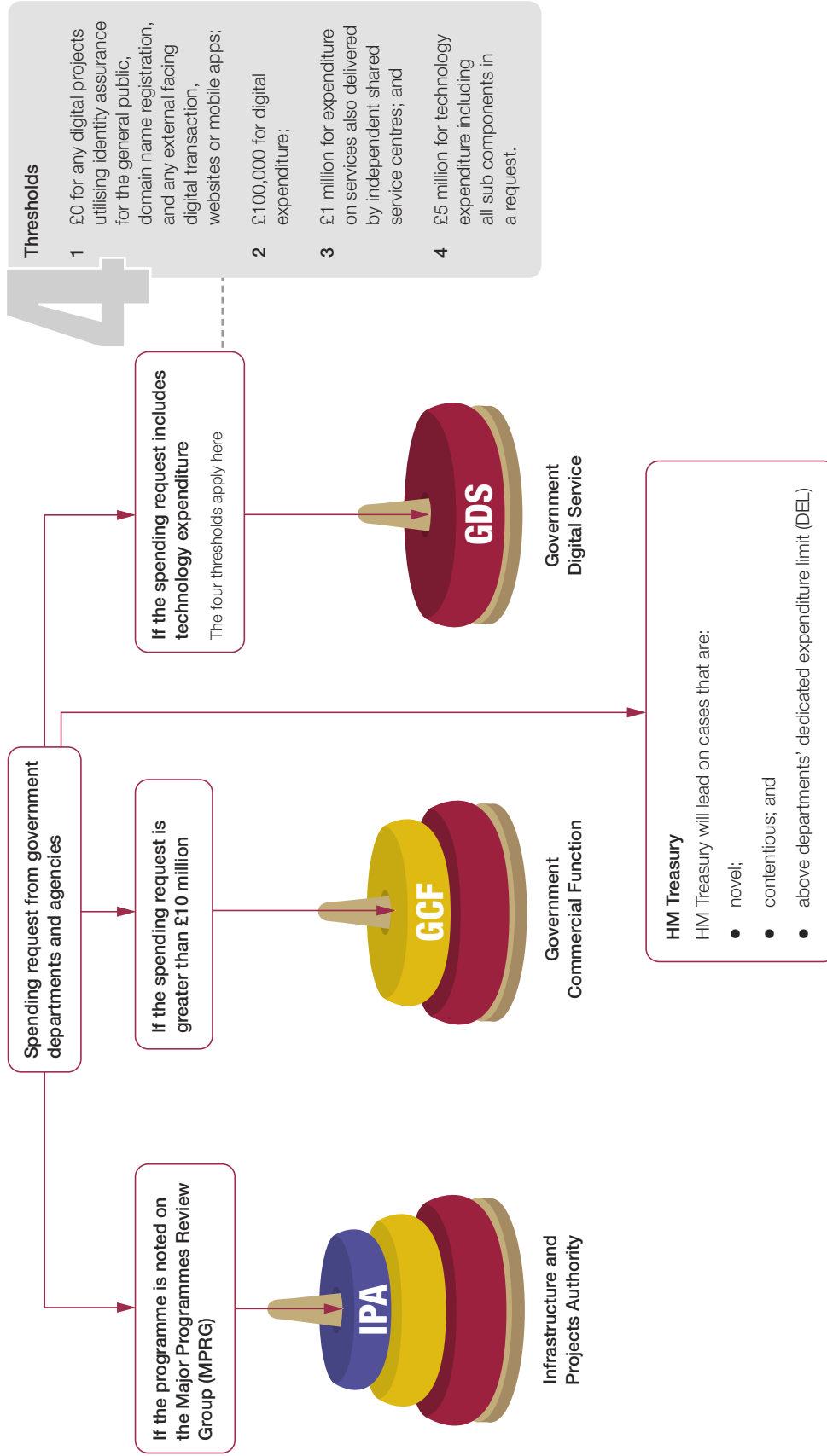
4 We assessed how GDS had used more formal interventions to achieve transformation by:

- analysing GDS spending control case-level data, available from April 2014, to compare the characteristics of spending control requests, processing times and outcomes;
- reviewing 10 spending control requests representing a range of departments and types of decisions; and, for one of these cases, mapping the interaction between the department and GDS over time;
- analysing data on financial savings claimed from spending controls (data which had been subject to review by the Government Internal Audit Agency);
- interviewing GDS officials in the Standards Assurance Team, Government as a Platform and GOV.UK Verify programme teams to: establish how these teams have developed guidance and implemented spending controls and assurance against standards; and assess progress in implementing the platform programmes; and
- reviewing documentation and online material, including guidance on spending controls and programme business cases; and assessing the nature and extent of digital and technology guidance available through GDS webpages and analysing data on service assessments.

Appendix Three

Spending controls processes

Figure 16
Spending controls process



Notes

- 1 The Minister for the Cabinet Office gives final approval for technology spending over £5 million and commercial spending over £10 million.
- 2 The figure summarises GDS spending controls as at 1 March 2017. For full details of GDS and other Cabinet Office controls, see Cabinet Office and Efficiency Reform Group, Cabinet Office controls, 2017. Available at: www.gov.uk/government/publications/cabinet-office-controls.
- 3 A new Cabinet Office assurance model for department spending is expected to be implemented later in 2017 which makes less use of standard thresholds.

Source: National Audit Office analysis of information provided by Government Digital Service

Glossary

Term	Meaning
Key terms	
Digital	Described in the Government Transformation Strategy as adopting “the tools, technology and approaches of the internet age”. Narrower interpretations refer solely to online web-based services. Wider interpretations can include modern approaches to redesigning end-to-end systems and processes around users’ needs.
Transformation	The Government Transformation Strategy states: “when we say transformation, we mean a significant step change in the way a government organisation delivers its service and in the way it operates.” Transformation can be used more widely to denote any major change programme, and is sometimes used to describe major headcount reductions that might not substantially redesign services.
Digital transformation	Describes transformation involving a significant change in technology. As many transformation programmes are likely to be enabled by changes in technology in some way, the term usually suggests a central role for technology in achieving transformation. Narrower interpretations assume a major role for online web-based services in changing operations. Broader interpretations include a wider approach to transformation starting from users’ needs.
Other terms	
Agile development	An approach which emphasises undertaking work in short, iterative phases. At the end of each phase, a working product is produced which users can test and provide feedback to help improve functionality in subsequent iterations. The development team can accommodate changes in requirements or technology because the system is built up incrementally.
Application programming interface (API)	A set of commands, functions, protocols and objects that programmers can use to create software or interact with an external system. It provides developers with standard commands for performing common operations so they do not have to write the code from scratch.
Digital by default	The 2012 Government Digital Strategy defines this as “digital services that are so straightforward and convenient that all those who can use them will choose to do so while those who can’t are not excluded”.

Term	Meaning
Digital, data and technology (DDaT)	One of the 25 professions in the civil service. Each profession develops its own competency framework and promotes raising standards, career development opportunities and collaboration across the civil service.
Exemplars	Twenty-five major public services identified in the 2012 government and departmental digital strategies for end-to-end service redesign using the Digital Service Standard. The aim was to apply the learning gained to increase digital capability across the civil service and complete the redesign of all other transactional services handling over 100,000 transactions each year by the end of the subsequent spending review period.
G-Cloud	A set of centralised procurement frameworks with suppliers for technology and specialist services, which public sector organisations can buy online through the digital marketplace without having to enter into full tendering exercises.
GOV.UK	The single website for central government, which was launched in 2012 to replace Business Link, Directgov and the separate websites of individual government departments.
GOV.UK Verify	An identity assurance platform for online government services. It adopts a federated approach whereby a user creates an account with one or more private sector identity providers of their choice which have been approved by GDS as meeting certain standards.
Identity assurance	A process that determines, to a required level of assurance, whether an identity exists and belongs to the person who is claiming it.
Public Services Network (PSN)	A single, secure 'network of networks' for internal government use to facilitate the sharing of information between public sector organisations.
Small and medium-sized enterprise (SME)	The government defines SMEs as businesses with fewer than 250 employees, with a turnover of less than, or equal to, 50 million euros, or a balance sheet total of less than, or equal to, 43 million euros.

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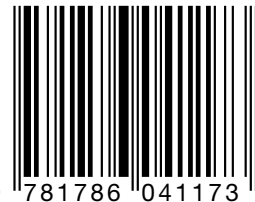


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