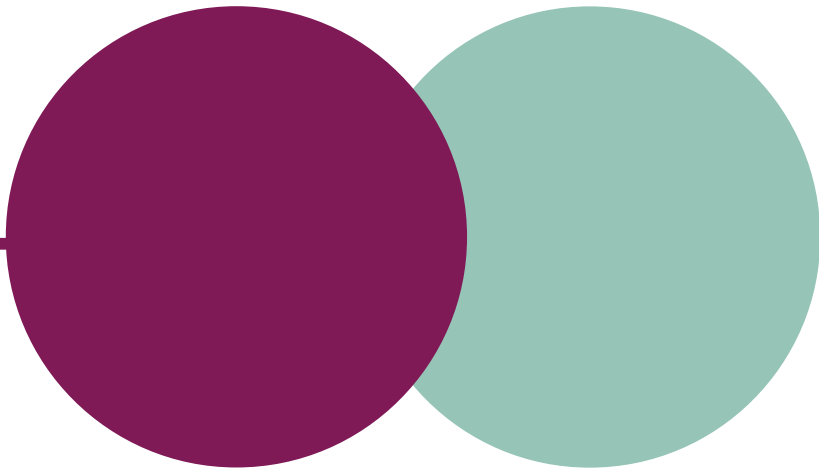




National Audit Office



# The challenges in implementing digital change

Cross-government

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**REPORT**

**by the Comptroller  
and Auditor General**

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**SESSION 2021-22**

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## Summary

**1** Our way of life is now increasingly digital, and technology is almost always a feature of large-scale government business change programmes. Current and future public services are dominated by digital change. This is clear in much of government's thinking about how to build back public services following the COVID-19 pandemic, as well as in longer-term policies and strategies. In addition, the public increasingly expects the government to make effective use of technology, so public bodies have little choice but to deliver high-quality digital services.

**2** When large digital business change programmes run into difficulty, the technology solution is often cast as the primary reason for failure. There is rarely a single, isolated reason which causes critical programmes to fail. Many of these programmes face intrinsic business challenges as well as technical challenges. Our findings point to a range of problems, including: shifting business requirements; over-optimism; supplier performance; and lack of capability at the senior and operational level. Only a small proportion of permanent secretaries and other senior officials have first-hand experience of digital business change and as a result many lack sufficient understanding of the business, technical and delivery risks for which they are responsible. This means that many of the problems stem from the inability of senior decision-makers to engage effectively with the difficult decisions required to implement technology-enabled business change.

**3** Pressures on public finances mean there is an urgent imperative for those designing and delivering digital business change programmes to learn from the mistakes and experiences of their predecessors. If they do not do so, these programmes will continue to fail. This report sets out the lessons for the centre of government and departments to learn from the experience of implementing digital change. It will be particularly useful for senior decision-makers who may not have direct technical experience or who have not yet grasped the scale of the challenge. We have focused on operational business change programmes with a significant technical component, by which we mean programmes which deliver a service that users interact with electronically. In pulling together these lessons, we have reviewed our published reports and interviewed senior digital leaders across government and the private sector. We have assessed good practice and consulted with experts from industry, academia and think tanks to highlight the nature of the challenges and understand why government has found it hard to apply the lessons of experience. Our scope and evidence base are set out in Appendix One.

### **Findings: lessons for government**

**4** Having consulted widely across government and its commercial suppliers, we found a high level of agreement among digital leaders regarding the challenges they face in delivering digital business change programmes. These programmes share characteristics and challenges with all major programmes, but added complexities make the difficulties even more acute and have often been poorly understood. We hope that our report will add further impetus to the work being carried out in government and support practical improvements in digital change programmes.

**5** We have identified lessons for government digital programmes in six categories, which are essential to get right at the outset. These are critical in any major project or programme, but in digital change the initial and pre-deployment stages are even more pivotal than usual because of the increased uncertainties which typically characterise them, including 'unknown unknown' risks. If the delivery implications are poorly understood the level of ambition can be unrealistic from the outset. Successful delivery of digital business change programmes requires organisations to equip non-technical leaders with the right skills, and design suitable approval and governance frameworks.

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Lessons for government digital business change programmes: things to get right at the outset

**Understanding aims, ambition and risk**



Avoid unrealistic ambition with unknown levels of risk.

Ensure the business problem is fully understood before implementing a solution.

Plan realistic timescales for delivery, which are appropriate to the scope and risk of the programme.

**Engaging commercial partners**



Spend enough time and money exploring requirements with commercial partners at an early stage.

Adopt a more flexible contracting process that recognises scope and requirements may change.

Work towards a partnership model based on collaboration with commercial suppliers.

**Approach to legacy systems and data**



Plan better for replacing legacy systems and ensure these plans are appropriately funded.

Recognise the move to the cloud will not solve all the challenges of legacy.

Address data issues in a planned and incremental way, to reduce the need for costly manual exercises.

**Using the right mix of capability**



Be clear about what skills government wants to develop and retain, and what skills are more efficient to contract out.

Better align political announcements, policy design and programme teams' ability to deliver through closer working between policy, operational and technical colleagues.

**Choice of delivery method**



Recognise that agile methods are not appropriate for all programmes and teams.

When using agile methods ensure strong governance, effective coordination of activities and robust progress reporting are in place.

**Effective funding mechanisms**



Ensure that requirements for both capital and resource funding are understood and can be provided for.

See technology as part of a service that involves people, processes and systems in order to better consider the economic case for investment.

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## Concluding remarks

**6** Initiating digital change involves taking a difficult set of decisions about risk and opportunity, but these decisions often do not reflect the reality of the legacy environment and do not fit comfortably into government's standard mechanisms for approval, procurement, funding and assurance. We found that digital leaders understand these issues well and bring much needed expertise to the public sector, but they often struggle to get the attention, understanding and support they need from senior decision-makers.

**7** Despite 25 years of government strategies and countless attempts to deliver digital business change successfully, our reports show a consistent pattern of underperformance. This underperformance can often be the result of programmes not being sufficiently thought through before key decisions on technology solutions are made. This means that there is a gap between what government intends to achieve and what it delivers to citizens and service users, which wastes taxpayers' money and delays improvements in public services. If government is to improve its track record in delivering digital business change, it must learn the hard-won lessons of experience and equip its leaders to act effectively.

## Recommendations: Actions for government

**8** We do not underestimate the challenge involved in digital change, particularly given government's vast legacy IT estate and the need for government to deliver services where there is no counterpart model in the private sector from which government can draw. But there is widespread support from stakeholders for the centre of government to learn from the lessons we have identified in this report and make the required changes. The new Central Digital and Data Office, along with the Government Digital Service and the Cabinet Office, should work to provide clear leadership for this agenda, in particular:

- a** **revise existing training programmes to better equip and train all decision-makers with responsibility for digital transformation programmes.** This should include education on legacy systems, the importance of data and the risks of 'build before buy' and of opting for unproven technology;
- b** **work with HM Treasury to review existing business case funding and approval processes for digital programmes to:** remove the incentives to state with full confidence those things which are still unknown; ensure that uncertainties associated with assumptions are made clear, together with when these uncertainties will be better understood; understand what the final product should look like, and the path to get there; be clear on what risks represent 'unknown unknowns'; and ensure professional independent technical assurance mechanisms are in place, to support those responsible for approving programmes; and
- c** **disseminate and apply lessons learned** from the successes and failures of the past and seek to understand why digital strategies have made poor progress.

- 9 Individual departments and public bodies should:
- d **carry out proper evaluation and assurance in the early stages of a digital programme** to understand its complexity and scope, assess how realistic the chance of success is and reflect this in the programme approach;
  - e **ensure senior digital, data and technology colleagues have wider influence** on all change programmes with digital components, by providing strategic direction and oversight at key decision points in the process;
  - f **strengthen their intelligent client function for digital change** including identifying and developing key requirements before tenders and bid processes commence and taking the lead on supplier engagement;
  - g **maximise the chances of effective digital delivery by ensuring that business leaders have sufficient skills, commitment and time** to engage in all aspects of governance and decision-making;
  - h **produce departmental strategies and plans for how to manage the legacy IT estate** so that maintenance, support and decommissioning are systematically addressed and required funding is ringfenced; and
  - i **ensure that agile principles and approaches are appropriately applied** within the context of significant business programme change, for example by developing interim and target operating models, and having appropriate business and technical architecture in place.