

Transforming for a Digital Future: Government's 2022-25 Roadmap for Digital and Data

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Foreword from the Parliamentary Secretary for the Cabinet Office, Heather Wheeler MP

Technology has revolutionised every aspect of our society and our economy, including the way that we deliver our public services, helping to make people's lives easier and safer. The onset of the Covid-19 pandemic has seen further strides in the use of innovative new technology, such as the NHS COVID Pass which enabled UK citizens to travel, ensuring their health and safety.

Our ambition is to go beyond these pockets of brilliant practice. We must deliver policy that has a real impact on people's lives - not just in a crisis, but every day and for everyone. When people order their groceries, book a holiday or check their bank accounts, they expect and receive a seamless and easy experience. The same should be true of government services.

As the Parliamentary Secretary with responsibility for digital government, I have the privilege of introducing the Government's 2022-25 Roadmap for Digital and Data, Transforming for a Digital Future. This sets out our ambitions to transform digital public services, deliver world-class digital technology and systems, and attract and retain the best in digital talent. We must also drive value for money to the taxpayer, by transforming our ways of working to enable the civil service to work smarter and faster and deliver on our ambitions for widespread digital transformation.

The UK has immense potential. We have some of the best digital talent anywhere in the world. Through this work we will capitalise on our great strengths, bolster our economy, bring society closer together and improve services for people across the country.

Message from Paul Willmott, Executive Chair, Central Digital and Data Office

Digital and data are the essential building blocks of all successful organisations. It's only possible to make effective decisions, meet customer needs and respond to new challenges and opportunities when you have modern technology, real-time access to high quality data, a cadre of skilled digital talent and the right conditions for innovation to thrive.

People expect government services to be as good as the best online experiences in the private sector. Rising to meet these expectations will require change on a scale that government has never undertaken before.

This roadmap is an ambitious statement of intent. It represents a new era of collaboration on digital transformation and marks a step-change in the digital and data agenda. Written collaboratively, it sets out a collective vision under-pinned by real, tangible commitments and actions, to be delivered by all government departments.

I want to take this opportunity to thank our partners across government for bringing this one collective roadmap together. Digital impacts everything we do. As we recover from the COVID pandemic, we must continue to collaborate and transform our digital capabilities, and deliver our ambition of providing world-class digital services to the public.

The barriers that the government faces in achieving digital transformation are significant, however the opportunity it presents is immense, and will ensure UK society reaps the benefits for decades to come.

About the Government's 2022-25 Roadmap for Digital and Data

This roadmap sets out a common cross-government vision for 2025 and a set of specific actions we will collectively take to achieve it. It has been written collaboratively by the Central Digital and Data Office (CDDO) and central government departments.

As set out in a [report](#) by the National Audit Office in 2021, previous attempts at digital transformation in government have had mixed success. Previous strategies have lacked specificity, cross-government endorsement, clear lines of accountability and business ownership. Subsequently, former flagship programmes have slowly shut down and failed to deliver results.

This roadmap is designed to be different. The creation of the CDDO has marked a new era of digital transformation in government, a hallmark of which is true collaboration and Permanent Secretary leadership for the Digital agenda on a scale never seen before. This roadmap has been developed with government's most senior leaders alongside digital experts from across and beyond government. Together, we have worked to develop commitments that are concrete, measurable and ambitious, but also achievable, with robust plans in place to work across all departments to track and support progress.

This roadmap is for central government departments and does not directly apply to local government or the devolved administrations. However, CDDO and the Department of Levelling Up, Housing and Communities are jointly engaging local government to help create alignment with these plans by supporting reform of local services and, where appropriate, encouraging join up with central government services. CDDO is also working closely with the devolved administrations to ensure there is close alignment between the government roadmap and their existing plans.

Background

The government has a set of ambitious priorities, from [Net Zero](#), the plan to decarbonise our economy to net zero by 2050, to [Levelling Up](#), the programme to spread opportunity more equally across the UK. These priorities and many others could be delivered more quickly and more effectively through wider use of digital and data. Digital refers to a technology-enabled way of working that uses modern tools, techniques and capabilities. Whilst Data, refers to digital information about people, things and systems, as set out in the [National Data Strategy](#).

Improving the way we use digital and data will enable the government to operate more efficiently. This government understands the pressures people are facing with the cost of living. As we recover from the COVID-19 pandemic and Build Back Better, it's more important than ever that government delivers savings for the taxpayer. Digital and data are central to building this more efficient government. We see this in organisations in the public and private sector which have become more productive after embracing digital transformation and in the digital services and modern technology they operate running more efficiently and at lower cost. Effective flows of data help to drive these intelligent digital services and better decisions on investment, whilst digital ways of working and highly skilled workforces allow smaller teams to work smarter and faster.

As we seek to deliver the government's commitment to spread opportunities across the UK by Levelling Up, shifts to more digitally-enabled ways of working will help, enabling the Civil Service to work across locations and recruit more equally from across the UK, rather than concentrating jobs in London and the South East. A smarter, more efficient digital government will help grow Britain's digital economy and attract the best and brightest talent from across the world and great, accessible, digital services will enable everyone across the UK to access the information and services they need, like starting a business. This will allow us to keep pace with global leaders and enable the UK to reclaim its position as a world leader in digital government.

Leading digital governments offer better and more efficient digital services that help to create lower carbon footprints. We will harness these benefits, reducing the reliance on face-to-face services and cutting the use of paper across government. Step changes in our approach to building and buying technology can also reduce waste, allow us to operate more sustainably and enable development of sophisticated models that help predict and guide our responses to climate change.

Finally, as set out by the Prime Minister in the [Government Cyber Security Strategy](#), cyber resilience is vital to the security and prosperity of the UK. The threat we face is real and growing. Government organisations are a routine target for cyber attacks. If successful, attackers can disrupt vital services, steal sensitive data or spread misinformation. The government set out its approach to building a cyber resilient public sector in the Government Cyber Security Strategy; this roadmap complements it by explaining how we will bring in the cyber skills we need and build systems and services that are secure by design.

Where are we today?

We have come a long way in the past decade. There are now thousands of digital, data and technology professionals working in highly effective teams across government. Departments are often able to deliver high volume digital services to a good standard, manage complex technology estates well, and innovate and respond rapidly as citizens' needs change.

Departments are also investing in cutting-edge technology to solve complex problems. For instance, the [National Digital Twin Programme](#) is creating a national ecosystem of connected digital twins including one which models the impact of flooding driven by climate change. Meanwhile HM Revenue and Customs is working with a UK start-up to integrate blockchain technology into supply chains to increase efficiency and security.

The COVID-19 pandemic proved that government could work faster to meet policy objectives through digital delivery. The Vulnerable People Service, delivered by the Government Digital Service, built the infrastructure to share data across central government, local government and wholesalers in just days, enabling the delivery of over 4.2 million supply packages to some of the most vulnerable people in our society.

However, in many areas, the UK government still lags behind other sectors. Our services are often slow, difficult to use and expensive to deliver. Departments operate many competing digital identity solutions as well as duplicative identity verification transformation programmes. Data quality is inconsistent and frequently poor and effective data sharing between departments is limited. We are held back by costly and outdated technology and we do not leverage our scale in technology procurement. We are failing to attract top digital talent or to build capability in-house at scale and our leaders are not yet as skilled in digital leadership as they need to be. Our funding structures and ways of working do not enable or incentivise agile delivery methodologies.

We have significant challenges to overcome. We need to address years of uneven progress and siloed development in individual departments which have led to varying levels of digital maturity across government. We need to deal with the costly issue of legacy IT that has been allowed to build up over multiple financial cycles and is now a barrier to the delivery of great policy and services. We need to address the skills gap that we see at all levels of the civil service and compete more effectively with the private sector for skills, or our lack of skills will continue to hold us back and prevent us achieving our ambitions.

Government is committed to addressing these problems. Significant financial investment has already been made in previous years, and in the [2021 Spending Review](#) we committed to investing an additional £8bn in digital, data and technology transformation by 2025. This will mean outdated and inefficient legacy systems can be replaced, delivering better services and greater value for taxpayers. This ambition and investment now needs to be backed by a clear vision and a specific plan to transform the whole of government.

Where will we be by 2025?

Our vision is that by 2025, the UK government will be a transformed, more efficient digital government that provides better outcomes for everyone.

This means we will:

- **Exceed public expectations.** We will create user-centric policies and public services that are more efficient, fit for the digital age, centred on user needs and deliver the right outcomes.
- **Equip civil servants for a digital future.** We will upskill civil servants in digital capabilities and digital delivery, with access to the right data and tools to do their jobs effectively.
- **Enhance government efficiency and security.** We will create a more joined-up and efficient government that uses common building blocks to deliver services quickly, cheaply and securely. We will enable and encourage digital innovation.

What does this mean for the Public?

Digital transformation will make accessing public services far quicker and simpler. Millions of people interact with the government every week, be it to set up a business, renew their driving licence, or to access a benefit they're entitled to, such as Universal Credit. Just as in other parts of life, those interactions are increasingly happening online.

Delivering this relies on having fast and efficient digital systems, high quality data and highly-skilled digital experts working across government. Digital transformation will ensure that government programmes are well designed, run and tested, making them quicker and easier, reducing the number of errors made, and saving the taxpayer money.

What does this mean for the Government?

Leveraging the power of digital and data will make government more efficient and sustainable, with less duplication and waste. Processes and systems will run more efficiently and policy and programmes will be delivered with greater precision and impact.

Improving the quality of the data government holds and making more effective use of it will enable better, data-driven decisions. It will facilitate the sharing of evidence and insights across the UK. Better evidence for decision-making will mean government makes fewer mistakes, reducing the amount of money wasted and instead investing more in delivering the right outcomes.

How will this make Government more efficient?

Digital is recognised in the private sector as the core driver of efficiency, but we are not yet harnessing its potential across the UK government. Private companies have reduced costs, sped up delivery times and improved user experience by focusing on end-to-end digital transformation of services, using agile, product-centric ways of working and investing in modern technology and systems.

This roadmap sets out a series of actions that will realise efficiency opportunities for government and deliver value for the taxpayer. Digital transformation of government will enable teams to work in a more streamlined and efficient way, reducing duplicated work and automating manual processes, in order to support delivery of the plans recently announced by the Prime Minister to return Civil Service headcount to 2016 levels. Initial analysis indicates that potential savings include:

- Over **£1bn** through digital transformation of services, by eliminating the unnecessary costs of paper-based services and processes¹.
- **£101m net per year** by the end of 2025 through the rollout of a competitive digital remuneration framework, reducing attrition rates of highly sought after specialists and our dependence on expensive contractor and consultant labour.
- Significant savings by leveraging government's combined purchasing power and reducing duplicative procurement, to shift to a 'buy once, use many times' approach to technology.

Actions to deliver against these savings are detailed in the specific missions that are at the centre of the roadmap.

¹ Investment in Digital Transformation would be required to deliver these savings. For example - We estimate that approximately half of the Top 75 services have additional funding for transformation through recent financial events. Estimate includes all services available via GOV.UK

What will it take?

To reach our vision for 2025 and drive efficiencies, we must deliver against six cross-government missions.

1. Mission One - Transformed public services that achieve the right outcomes
2. Mission Two - One Login for Government
3. Mission Three - Better data to power decision making
4. Mission Four - Secure, efficient and sustainable technology
5. Mission Five - Digital skills at scale
6. Mission Six - A system that unlocks digital transformation

Mission One: Transformed Public Services that Achieve the Right Outcomes

Sponsored by Jo Farrar, Chief Executive of HM Prison & Probation Service and Second Permanent Secretary at the Ministry of Justice

1. By 2025, at least 50 of the government's top 75 identified services will move to a 'great' standard, against a consistent measure of service performance.
2. For key government priorities, the government will embed digital approaches and cross-functional teams into policy design and delivery.

Mission Two: One Login for Government

Sponsored by Jim Harra, Permanent Secretary at HM Revenue and Customs

3. All departments will confirm an adoption strategy and roadmap for One Login for Government by April 2023 and their services will have begun onboarding by 2025.

Mission Three: Better Data to Power Decision Making

Sponsored by Professor Sir Ian Diamond, National Statistician and Chief Executive of the UK Statistics Authority

All departments:

4. Will work to make all 'critical' data assets available and in use across government through trusted APIs and platforms such as GDX and IDS.

5. Will have access to a Data Marketplace (including a Data Catalogue, standards and governance models) to rival best practice across public and private sectors.
6. Agree to co-develop and adopt a single data ownership model for 'critical' data assets.
7. Will ensure that 50% of 'high priority' data quality issues are resolved within the period defined by a cross-government framework.

Mission Four: Efficient, Secure and Sustainable Technology

Sponsored by Laurence Lee, Second Permanent Secretary at the Ministry of Defence

8. All departments agree to promote a 'buy once, use many times' approach to technology, including by making use of a common code, pattern and architecture repository for government.
9. All 'nationally important' systems will be resilience tested annually and will be hosted, or plans will be developed for them to be hosted, in appropriate environments aligned to the cross-government cloud and technology infrastructure strategy.
10. All 'red-rated' legacy systems identified through an agreed cross-government framework will have an agreed remediation plan in place.
11. All new services shall comply with the common approach to Secure By Design.
12. CDDO and departments will jointly create and agree to increase mobile access to government services through creation of a mobile app strategy.
13. Government will systematically identify and capture opportunities arising from emerging technologies, such as artificial intelligence, blockchain and quantum computing.
14. All departments will increase sustainability throughout the lifecycle of their technology and services.

Mission Five: Digital Skills at Scale

Sponsored by Matthew Rycroft, Permanent Secretary at the Home Office

15. Departments will strengthen their offer to existing and prospective talent by aligning role definitions to the DDaT capability framework, aligning to the DDaT Pay Framework as appropriate* and embedding a government wide recruitment standard which reduces average time to hire to 30 days.
16. >90% of senior civil servants will be upskilled on digital and data essentials, with learning embedded into performance and development standards.

17. >90% of DDaT professionals will undertake DDaT related training at least once a year and will record their skills, to support the prioritisation of DDaT learning interventions and associated investment.
18. All departments will set an objective to reduce their digital and data vacancies to ≤10% of total DDaT headcount.
19. All departments will have a roadmap and committed date for reflecting the diversity of the UK population across their DDaT workforce.

**The Civil Service operates a delegated pay model. As set out in the [22/23 Civil Service Pay Remit Guidance](#), departments are required to submit a business case to the Cabinet Office for ministerial approval to implement the DDaT pay framework within their organisation. CDDO will support departmentally led DDaT pay reform as appropriate.*

Mission Six: A System that Unlocks Digital Transformation

Sponsored by Cat Little, Director General Public Spending at HM Treasury

20. CDDO will work with HMT, Finance, Commercial and IPA to address systemic barriers to digital transformation including financial processes, business case and impact tracking challenges. CDDO will support departments to fully implement these.
21. All departments will, as a minimum, meet the definition of “good” for product-centric organisational structures and agile ways of working when self-assessed against the new Digital, Data and Technology Functional Standard.

How will we track progress?

This roadmap has been developed by the Digital and Data Board, a forum of Permanent Secretaries. The Digital and Data Board will provide overall governance for the strategy, review and report on progress every 6 months, and monitor efficiency savings.

Each mission is led by a Permanent Secretary level sponsor and will be governed through a dedicated steering group of senior civil servants, including Chief Digital Information Officers, Chief Technology Officers, and Chief Data Officers. This is a collective plan and statement of intent from all departments with ultimate responsibility for delivery residing with the Permanent Secretary or Accounting Officer in each department.

Each cross-government commitment is being translated into quantifiable, department-level targets against which progress will be measured. Quarterly Business Reviews, chaired by CDDO and HM Treasury, will be conducted to understand progress and blockers against targets, using departmental data to track key performance indicators and maturity indicators, including progress against efficiency savings.

CDDO's spend controls function, which through delegated authority from HM Treasury approves and assures digital spend in departments, will work with departments and HM Treasury to align criteria for spend approval to the roadmap. This will help ensure that any newly approved spend will support delivery of both the strategy missions and departmental priorities.

Annex: Top 75 Services

Mission One: Transformed Public Services that Achieve the Right Outcomes

1. By 2025, at least 50 of the Government's top 75 identified services will move to a 'great' standard, against a consistent measure of service performance.

The Central Digital and Data Office will work with partners across government to transform the critical services which are frequently used by citizens, businesses and civil servants.

By 2025, these prioritised services will have great user experience and efficient processes that reduce their cost to run.

This list has been developed collaboratively by digital leaders across government, including the Permanent Secretary-level Digital and Data Board, focussing on high priority services for citizens and government. Services have been chosen based on importance, frequency of use, and volume of users. We will continue to work with departments to review and update this list, as the methodology is refined and more data is available.

Department for Work and Pensions

- Move to Universal Credit
- Apply for Personal Independence Payment
- Manage Your Child Maintenance Case Online
- Claim Employment and Support Allowance
- Claim Jobseekers Allowance
- Get Your State Pension
- Claim Your State Pension
- Claim Pension Credit
- Claim Carer's Allowance
- Claim Disability Living Allowance For A Child
- Claim Maternity Allowance
- Claim Attendance Allowance
- Claim Access To Work
- Apply for Bereavement Support Payment
- Claim Funeral Expenses
- Plan for Retirement

Her Majesty's Revenue and Customs

- Apply for or Add To A Child Benefit Claim
- Report Medical Insurance Benefits and Expenses To HMRC
- Check Your Income Tax or Make A Refund Claim
- Pay Your Self Assessment Tax Bill
- Claim A Repayment From HMRC (Form P800)

Department for Business, Energy and Industrial Strategy

- Register and Apply for The Queen's Awards For Enterprise
- Register as A Biomass Supplier, Submit Reports And Payment

- Register for Combined Heat and Power Quality Assurance and Submit Installation Data
- Register and Apply To List Energy Efficient Products
- Register for An Exemption From Minimum Energy Efficiency Standards for Landlords
- Register to Use The Emission Trading Registry And Report Greenhouse Gas Emissions

Home Office

- Cross The Border
- Apply For Skilled and Student Visas
- Apply For A Standard Visitor Visa
- Apply For A Basic Dbs Check (Disclosure & Barring Service)
- Apply For A UK Passport
- Renew, Update or Replace An Adult Passport
- Apply to The EU Settlement Scheme
- View and Prove Your Immigration Status
- Find out if You Can Apply to Settle in the UK
- Request A Birth/Death Certificate (GRO)

Department for International Trade

- Export Support Service (ESS)
- Learn to Export Service
- Licensing for International Trade and Enterprise (LITE)

Foreign, Commonwealth and Development Office

- Use the Travel Advice Service

Department for Transport

- Manage My Driving Licence
- Apply For A Provisional Licence
- Apply For A Driver Digital Tachograph Card
- Tax Your Vehicle

Department for Education

- Use The National Careers Service
- Manage Apprenticeships
- Compare School Performance Tables
- Get Into Teaching
- Get Information about Schools

Ministry of Defence

- Request a Historical Service Record

Student Loans Company

- Apply For Student Finance
- Manage My Student Loan Balance

Ministry of Justice

- Managing Offenders In Custody (NOMIS, Send Money To A Prisoner, Visit Someone In Prison, Quantum Replacement)
- Managing Offenders In The Community (OASys, Delius)
- Get Legal Aid (CCMS, Apply For Legal Aid)
- Secure Exchange of Information and Mail across the CJS (CJSM / CJSE)
- Create and use an LPA
- Claim compensation if You were the victim of a Violent Crime (CICA Apply)

Department for Environment Food and Rural Affairs

- Apply for an Exemption from Avian Influenza Disease Control Restrictions
- Buy a Rod Fishing Licence for England & Wales
- Check for Flood Risk, Warning, and Levels
- Apply for Rural Grants and Payments
- Submit and Managing Chemical Registrations and Notifications
- Create a UK Catch Certificate For Fish And Shellfish
- Pay to Drive through Clean Air Zones
- Get an Export Health Certificate
- Notify Authorities Of Imports Of Products, Animals, Food and Feed System
- Register or Renew a Business As a Waster Carrier, Broker, Or Dealer

Cabinet Office

- Manage My Civil Service Pension
- Apply for a Civil Service Job
- Access the Learning Campus (Book and Track Learning and Training)
- National Security Vetting Service

Department for Levelling Up, Housing and Communities

- Signing Up to Register to Vote
- Apply for a Voter Card