



Department  
for Environment  
Food & Rural Affairs

A photograph of four young green seedlings of varying heights growing out of a layer of dark brown soil. The background is a soft-focus green bokeh. A white diagonal line separates the image from the text below.

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# Defra digital and data transformation strategy 2023 to 2030

# Foreword

High quality data and strong digital services underpin the delivery of Defra group's ambitious outcomes. They require modern technology, people with data and digital skills and, above all, ways of working that encourage innovation across Defra group.

Our digital and data transformation strategy addresses these requirements through six missions. They reflect our collective ambition for people to interact with us with greater confidence and ease, whenever and wherever they engage with Defra group, and to access seamless, better, more integrated services. I want to thank colleagues for shaping these and championing them across the group.

They build on the progress we have made, whether it is delivering new digital services such as Export Health Certificates, replacing legacy technology, establishing our Digital Robotic Automation Centre and building our Data Analytics and Science hub. Yet they also reflect the potential to scale up what we are doing and extend into new areas, applying data and digital everywhere in our work.

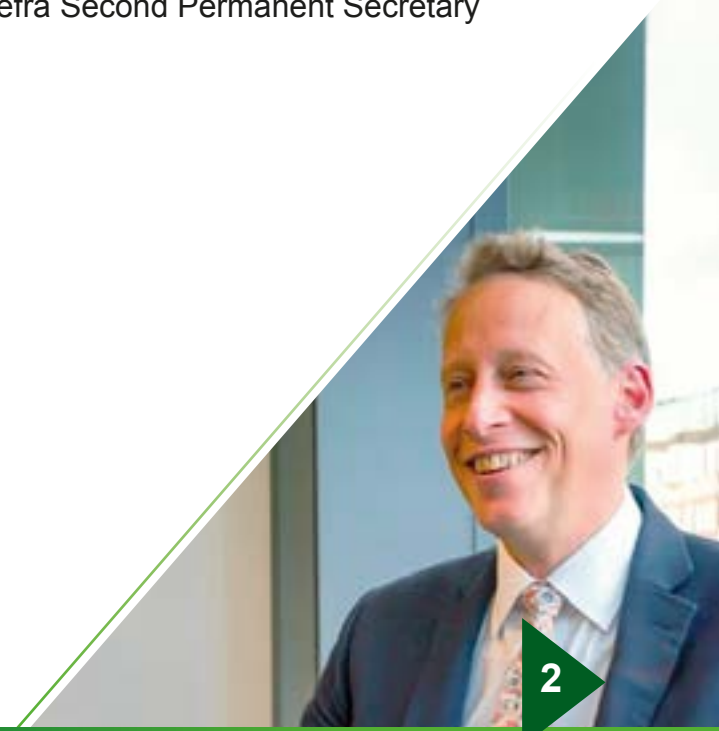
This strategy is a vital part of building a Future Defra designed to deliver. To drive major change in the country and influence the world, we need to change what we do and how we work.

That is why we are building stronger, closer partnerships across Defra group, using data and science to shape and pursue ambitious outcomes, delivering more efficient and effective services that make the best use of technology, digital, data and automation, and equipping our people with the skills to thrive now and in the future.

This strategy is ambitious. It represents stronger, closer partnerships across Defra group between operations, digital, policy and our corporate service functions to change how we design and deliver services. It builds on what we are doing but marks a step change in collaboration across Defra group and with partners outside. I'm excited by what we can achieve.

The barriers that we face to achieve data and digital transformation across Defra group are significant, but the opportunities are immense. This strategy, under-pinned by real, tangible commitments and actions, sets out how together we can use data and digital to better protect and improve the environment, and reform the food, farming, fisheries, water and waste sectors now and for generations to come.

Nick Joicey  
Defra Second Permanent Secretary



# Introduction

Defra group's vision is

**“we will work together to make our air purer, our water cleaner, our land greener and our food more sustainable, both domestically and internationally, alongside growing a green economy.”**

Defra group's mission is

**“to restore and enhance the environment for the next generation, leaving it in a better state than we found it.”**

The Future Defra Story describes how we need to change to do this. It lays out how we need to work together to collectively deliver better outcomes for the environment and for users.

This digital and data transformation strategy is an integral part of the Future Defra Story and a large part of the digital transformation is how we will need to work differently to achieve our goals in a digital age.

It is not a Digital, Data and Technology Services (DDTS) technology strategy, it is a Defra group strategy, and its commitments cover the core department and its main ALBs (arm's length bodies: Animal and Plant Health Agency, Environment Agency, Natural England, Rural Payments Agency, and Marine Management Organisation). Other Defra group public bodies and agencies may also choose to adopt elements of the strategy or come on board at later stages.

The strategy is complemented by but will not duplicate the parallel work in Group Corporate Services Transformation, to reduce the administrative burden on our people and make it easy for everyone to do their jobs and collaborate across Defra group.



# Ambition

The Future Defra Story sets out why Defra group needs to change to meet the global challenges and opportunities we face to create a great place for living.

## Future Defra has three pillars:

- ambitious outcomes
- efficient working
- thriving people

For the digital and data transformation strategy this means:



### Ambitious outcomes

- we are digital first and our services are accessible, maximising our outcomes
- services are designed around user needs and offer a seamless user experience regardless of organisational boundaries
- Defra group is a leader in sustainable technology and is an exemplar to other government departments and industry



### Efficient working

- digital and technology opportunities are considered alongside operational and user needs, enabling Defra group to rapidly react to changes in policy and the external environment
- we make best use of digital, data and technology through a culture of reuse to drive efficiencies, increase effectiveness, lower security risk, and improve value for money



### Thriving people

- our decision-making processes and accountabilities are simplified to enable consensus on investment priorities
- our people have the right tools to work and collaborate effectively, making it easier to do their jobs
- we create the culture and conditions for success by equipping our staff with the skills, capabilities, and communities to thrive in a digital workplace
- we work in multidisciplinary outcome focused groups that are collectively developing policy, processes, and services



# Digital transformation vision

## Vision

Defra is a leader in sustainability for our environment, food and the rural economy and delivers great services.

- it is easier for citizens and businesses to do the right thing and to interact with Defra group
- it is easier for our people to do their jobs and collaborate across the group
- policies and services are driven by data, designed with users, and powered by sustainable technology

To achieve our vision, we must change our ways of working, we need:

- fewer decision-making groups, with an increased focus on outcomes. Clear cross group decision-making processes, accountabilities, and architecture guardrails
- empowered service owners and skilled senior digital leaders on all top-level decision-making boards in each organisation

- regular monitoring of service performance using common metrics
- multidisciplinary team working to be the norm - collectively developing and delivering policy, processes, and services
- to develop our ability to use insights from data (alongside operational realities) and technology innovation to inform policy, organisation, and service design decisions
- to be able to rapidly respond to change but prioritise doing the right thing – not the quickest
- to fund services not projects – both capital and resource funding are understood and provided for in all business cases

It will take collective focused effort across the whole Defra group to achieve this vision, which will be a multi-year endeavour

## Our six missions

- **Mission 1:** transformed services that deliver the right outcomes for people and the environment
- **Mission 2:** putting in place common business capabilities and modern delivery practices to realise better digital services
- **Mission 3:** make better use of data to power decision-making and services
- **Mission 4:** efficient, secure, and sustainable technology and services
- **Mission 5:** digital confidence and skills at scale
- **Mission 6:** removing the barriers to transformation

# Mission 1: transformed services that deliver the right outcomes for people and the environment

Mission one is about achieving Defra group's ambitious outcomes by redesigning our services, and how we develop them to improve the user experience – increasing take-up, value for money, and effectiveness.



The implementation of this mission will be led by Defra group ALBs to improve and transform their services. They will identify and assess their priority services to develop roadmaps to meet the Central Digital and Data Office (CDDO) 'great' standard. Digital people will work alongside operational and policy colleagues to develop and improve services alongside process and policy changes.

We will know we have been successful when we see an increase in the number of our services meeting CDDO functional and service performance standards, including increased user satisfaction. Longer term we will start to see a reduction in the number of services (currently over 600), and we will better understand and see an increase in the value of outcomes (environmental, flood protection and biosecurity) achieved through our services.

Ultimately it should make it easier for citizens and businesses to do the right thing and to interact with Defra group, as well as enable our people to work more efficiently.

## Some key 2025 milestones

By 2025 we will have:

- 1 Trained service owners will be in place for all Defra group priority services
- 2 At least six of Defra group's top nine highest volume services delivered to CDDO 'great' standard
- 3 Replaced 20% of Defra group's paper forms with accessible digital alternatives as part of wider end-to-end business service improvements

[Watch a video about how we are transforming our services in Defra group](#)

# Mission 2: putting in place common business capabilities and modern delivery practices to realise better digital services

Mission two is about making best use of digital, data and technology to drive efficiency, effectiveness, and improving value for money through re-use.



This means designing solutions so components can be reused across Defra group and using cross-government solutions where possible. This will help us:

- respond quicker to user demands
- remove duplicated effort
- reduce costs
- minimise the impact of our technology on the environment
- provide a more consistent user experience

We will know we have been successful when we see a greater number of services using common components, a reduction in the size of the technology estate, and an increase in how quickly we can deploy technology solutions to deliver Defra group's outcomes.

This will help us become an organisation that can rapidly react to change.

## Some key 2025 milestones

By 2025 we will have:

- Two exemplar platforms of common business capability will have been delivered for use across the Defra group:
  - a new grants platform
  - an identity management platform for all Defra customers linked to the Cabinet Office's OneLogin for Government
  - and work will have started on a payments service that could be used by any public facing business service across Defra group

[Watch a video about how we are using common platforms in Defra group](#)

# Mission 3: make better use of data to power decision-making and services

Mission three aims to provide strategic direction and governance to enable us to develop the technology, skills, and culture for better use of data across Defra group.



The insight we derive from data is integral to everything we do.

To deliver our ambition for data, teams in operations, policy and technology must work together to agree a common data framework. This includes standards that can be practically applied in the real world as well as addressing skills shortages in the data space.

Our initial focus will be on setting the foundations to address data ownership, maturity, and quality. Without these we won't be able to unlock the benefits of predictive analytics and artificial intelligence in the longer term.

Given its importance and scale, a separate more detailed Defra group data strategy will be developed by a new Chief Data Officer.

The Defra group data strategy will look at how we make our data more accessible and reusable, so we can share and exploit data better.



## Some key 2025 milestones

By 2025 we will have:

- 1** A data capability and transformation programme underway, led by the Chief Data Officer, to ensure data is consistent and coherent and enables the effective sharing and use of data across Defra group
- 2** Used the Defra group data transformation strategy to steer the Spending Review 2024 (SR24) bid to align strategic data investment to level-up data maturity for essential data to support our outcomes and future ambitions
- 3** A modern data publishing platform linked to the cross-government marketplace will have been developed to provide interactive access to Defra group's open data across government and the public

**Watch a video about how we are using data to improve services in Defra group**



# Mission 4: efficient, secure, and sustainable technology and services

Mission four focuses on sustainability as well as the security, maintenance, and support of our systems:

- pioneering more robust measures and practices for ensuring that our technology is environmentally, economically, and technologically sustainable
- reducing security risks and improving security culture



We want to continue building on the work already underway to modernise our technology estate and lower maintenance costs. We also want to reduce security risks associated with cyber-attacks and operational failure.

Another core part of this mission is sustainable technology. The aim is to ensure Defra group will be a recognised role model in sustainable technology and an exemplar to other government departments and to industry.

We will know we are successful when:

- we see a reduction in our security risk
- we have set our security risk appetite and tolerance position, and we actively manage against these
- we have upskilled people and recruited specialists to enhance our sustainability capabilities, embedding it into our working practices so it is a natural part of everyday decision-making and how we do things

## Some key 2025 milestones

By 2025 we will have:

- 1** Completed a resilience audit of Critical National Infrastructure and Nationally Important Systems
- 2** Established a Defra group security strategy and associated security implementation plan. Targeted security projects will be funded within our SR24 submission
- 3** Ensured that 100% of IT projects and programmes are assessed for sustainability impacts, benefits, and included in design/delivery performance indicators

[Watch a video about how we are making our technology more sustainable in Defra group](#)

# Mission 5: digital confidence and skills at scale

Mission five is about creating the culture and conditions for success by equipping staff with the skills, capabilities, and communities to thrive in the digital era.



The aim is to ensure Defra group staff are confident and empowered to lead and operate in a digital world and we attract, grow, and retain digital talent from diverse backgrounds.

We will need to work collaboratively across Defra group to understand the most urgent digital learning needs for key groups of people and build the roadmap to develop and deploy this targeted learning.

We will know we have been successful when we see an increase in the number of staff who feel confident and empowered to use digital and data in their role and an increase in retention and growth of Digital, Data and Technology (DDaT) skills.

This will allow us to become a destination organisation for DDaT professionals, investing in our people so they can enjoy their job and feel valued.

## Some key 2025 milestones

By 2025 we will have:

- 1 Provided training for service owners of Defra group's highest priority services
- 2 Identified additional priority groups requiring digital skills to support the digital transformation strategy and have a plan to provide the learning
- 3 Doubled the Digital Academies offer to target the top 4 most hard to recruit DDaT roles

[Watch a video about how we are building digital skills using academies in Defra group](#)

# Mission 6: removing the barriers to transformation

Mission six is about how we address internal barriers (for example, governance, structures, accountabilities, policies, and processes) to digital transformation as well as systemic barriers (for example, resource versus capital funding).



The aim is to make it easier to work across Defra group and to fund, design, develop and deliver improvements to our services.

It will be one of the most challenging of all the missions for us to tackle and is integral to the Future Defra Story and Defra transformation. Improving the services and technology we have today would only provide a short-term benefit, if we don't tackle the barriers (whether they are financial, structural, or cultural) to continual improvement of our services. There will be difficult choices, compromise, and change needed by all parts of Defra group to be successful.

To identify and remove internal blockers to achieving Defra group outcomes and digital transformation ambitions, the Defra group operating model will need to support:

- matrix management and flatter decision-making structures
- changes in accountability and resourcing – including skilled senior digital leaders on all top-level decision-making boards in each organisation

- greater service ownership, upskilling, and empowerment of service owners across Defra group
- strengthening our understanding of and governance over change, to better enable us to rationalise our services and ensure digital is fully considered when a new service is designed, let alone launched
- outcome focused delivery groups making design and investment decisions
- creation of a mechanism to co-ordinate between outcome delivery groups
- switching our focus to funding services not projects
- investing and growing our ability to use technology innovation insight strategically – to guide how we adapt our policies, skills, process, technology, and information across the group to live in a rapidly changing digital age

We will know we have been successful when we have increased the number of standing digital teams, simplified governance, and outcome delivery groups are the main design and investment decision-making groups.



We won't get everything right first time and there will be lessons along the way. We will need to test and learn what works and what doesn't. This new way of working will need to be adopted by all parts of Defra group including policy teams, corporate services, change projects, programmes and ALBs. It will be an important part of Defra group's wider transformation.

## Some key 2025 milestones

By 2025 we will have:

- 1 Ensured our SR24 bid supports the digital and data transformation strategy
- 2 Piloted new ways of working with Defra Transformation, policy, DDTS and ALBs that are service-centric and user focused
- 3 Ensured our main ALBs have either weaved digital transformation into their business strategy or developed an aligned digital strategy and these will align to SR24

# Glossary

## **Arm's length bodies**

Are a category of public body (including executive agencies, non-departmental public bodies, and non-ministerial departments) who deliver advice and services as part of Defra group. For this digital and data transformation strategy and the milestones to 2025 the arm's length bodies included are: Animal and Plant Health Agency, Environment Agency, Natural England, Rural Payments Agency, Marine Management Organisation. Other Defra group public bodies and agencies may also choose to adopt elements of the strategy or come on board at later stages.

## **Capability**

A capability is used to describe what we do (but not how). Capabilities are often categorised as: business capabilities, which describe what the organisation does; people capabilities, which describe the skills, experience and capacity people have or need to do their job; enabling capabilities (such as technology and data) that support both business and people capabilities.

## **Common component**

A common component is a software or technical system that is created once and reused many times in different services or business contexts. They are building blocks which can be used to deliver services.

## **Defra group**

Includes all those working in 'core Defra' and the main Arm's Length Bodies of the group (see above). 'Core Defra' includes policy, science and analysis, strategy, and group corporate services teams.

## **Essential data**

Is data provided by or acquired by a government department or agency to provide an essential process or purpose, which is a responsibility of the provider government department or agency.

## **Multidisciplinary teams**

Teams that combine or involve more than one discipline or profession (for example, Policy, Operations and Technology teams) to explore problems/opportunities to design policies and services that deliver policy intent and achieve Defra group outcomes.

## **Outcomes**

Outcomes are the desired results or consequence of the actions and decisions of an organisation. The Defra group outcome framework sets out our shared vision, the critical real-world outcomes we seek to achieve as a group and how we will measure them.

## **Platform**

A platform is something you can build a product or service upon. Platforms are typically groups of technologies that, collectively, provide the basis on which applications, products, services, processes can be built.

## Product

A product is a thing that helps to meet one or more user needs. A digital product is usually a piece of software. Products can vary in size and can be grouped together and integrated to create a service. Typically, a service is a larger collection of products which are grouped together to help a user to achieve an outcome.

## Service

When we talk about a service, we mean all the things that government collectively provides to deliver an outcome for all of its users. A service is a collection of 'things' that users interact with that help them achieve their goals. 'Things' could be, for example, digital products, call centres that offer support, business processes and back-office elements that are not visible to end users, communications, interaction with users – any constituent part of a whole service.

## Service performance reporting

A consistent mechanism for measuring and reporting on business services across the Defra group. It will include indicators for external and internal user satisfaction and compliance with accessibility and service standards.

## Service/product- centric

Product-centric delivery involves structuring organisations around product or service ownership. This means:

- there are single accountable owners for end-to-end products and services
- cross-functional teams work to drive improvements against agreed objectives and measurements

## Technology

Technology covers the systems, tools, platforms, and applications we build, maintain, and buy. Technology exists to support products, activities, and capabilities, enabling us to deliver faster, clearer, simpler services.

## Transformation

Transformation is defined in different ways, for this digital and data transformation strategy we focus on 'service transformation' and define it as 'the comprehensive and deliberate process of re-imagining and redesigning Defra group's (public-facing and internal) services to create a more efficient, user-centric, and outcome-driven experience'.

It involves a fundamental shift in how services are delivered, focusing on innovation, digitalisation, and continuous improvement to meet the evolving needs of users and stakeholders, and to achieve the outcomes Defra group cares about.

Please note Transformation is also likely to result in services being rationalised or retired. Further information, on definitions of transformation and some key features are identified in the 7 Lenses of Transformation.

## User

Refers to external customers (or a third party) and internal staff who interact with or use a service/product.

## User-centric

This means designing services based on what people need to do and how they will use them.

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