



Department  
for International  
Development



# DFID TECHNOLOGY STRATEGY 2017-2020

Technology to support effective development

# CONTENTS

Document Purpose.....	3
Executive Summary .....	4
1. Technology to support DFID's delivery .....	6
DFID's strategic objectives.....	6
The challenging environments we work in .....	6
Working with others .....	7
The role of Business Solutions Department.....	7
2. What we will deliver: technology strategic objectives .....	9
Services: deliver effective and efficient services to users .....	9
Infrastructure: develop and maintain up to date technology platforms .....	11
Data: knowledge and data to drive better delivery .....	13
Tools: Deploying effective tools driven by our users' needs .....	14
Advice: Providing effective advice and support.....	15
3. How: our delivery principles & governance .....	16
Delivery principles.....	16
Seamless and simple .....	16
Continual Improvement .....	16
Build for Security .....	17
collaborating and partnering.....	17
Building Capability for All .....	18
Governance and management.....	19
Governance .....	19
Financial and commercial management.....	20
Resourcing and risk .....	21

## Document Purpose

This Technology Strategy is one of a set of three strategies alongside the Digital Strategy and the Data Roadmap, all linked to the [Government Transformation Strategy](#) for the period 2017-2020. It also contributes to the overall Corporate Performance Group strategy and DFID's [Single Departmental Plan](#).

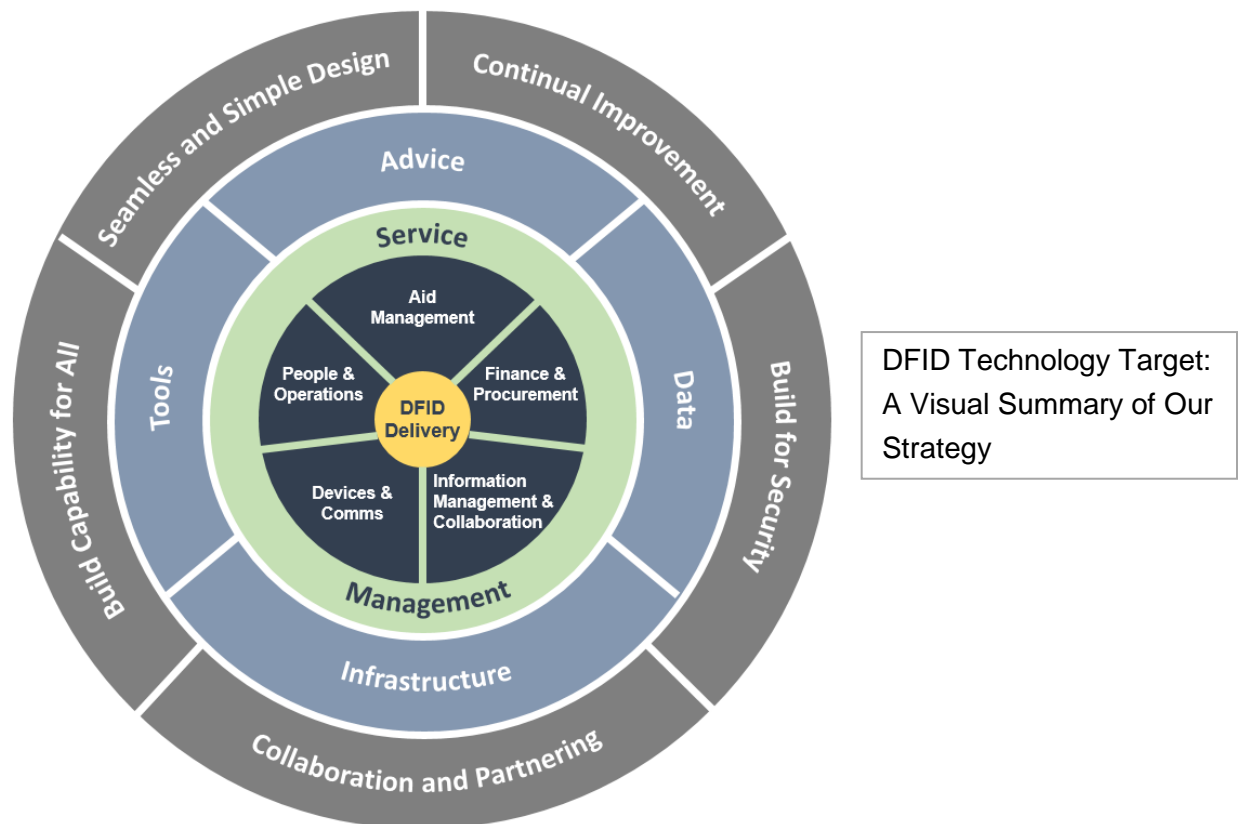
**DFID's Technology Strategy** provides a high level view of our direction, what we expect to deliver and why. Business Solutions Department (BSD) and others across Corporate Performance Group (CPG) are responsible for its delivery, in partnership with colleagues across DFID. This document is made available externally as part of DFID's commitment to Freedom of Information and transparency. As such it allows members of the public, suppliers and other interested parties insight into the Department's approach to using technology. The Strategy will be reviewed annually to ensure its ongoing alignment with the Single Departmental Plan and Government Transformation Strategy.

Our **Digital Strategy** outlines both our work internally and our approach to embedding digital in the delivery of the aid programme.

**DFID's Data Roadmap** describes how we will underpin our delivery and accountability for outcomes with quality, accessible and timely data.

## Executive Summary

DFID's Technology Strategy sets out how we will provide the best information technology (IT) services to staff across the Department to support the delivery of the four objectives in the UK Aid Strategy and to enable effective working and achieve value for money. Supporting DFID to deliver its objectives is therefore at the centre of our Technology Target.



Business Solutions Department (BSD) is responsible for managing these key IT services. The Aid Management Platform (AMP) is the primary system used to manage delivery of our programmes and is available globally to teams in more than forty locations. Staff are also reliant on other corporate systems for email, calendar and virtual meeting management; budgeting and making payments to suppliers; procurement and contract management; people management; document sharing and collaboration; and management information and data visualisation. In addition, staff need devices (laptops and phones) through which these systems will be accessed.

BSD manage each of these systems as a service, which means that the systems will be continually improved to meet changing business needs. Guidance on how to use the systems will be regularly refreshed to ensure staff always have access to the support and advice they need.

The effectiveness of these services is reliant on BSD having robust and secure infrastructure to connect our offices, our people and host our systems.

The data held in each of the systems is a rich resource which BSD manages and helps to analyse and present results. BSD will work with partners across DFID to identify and select appropriate digital applications and tools that meet user needs and maintain information integrity and security.

There are five key principles that inform BSD's approach to its delivery of services. All our systems - and the processes that they are used to manage – should appear seamless and simple to the end user. We will engage with end users and corporate service providers to understand their needs, continually improving our processes and systems to meet those evolving needs. The systems and infrastructure provided by BSD will be designed to be secure and to protect data from misuse.

DFID increasingly works in close partnership with other UK government departments and other delivery partners, so we will use technology to enable DFID staff to collaborate effectively across organisational boundaries, and we will also utilise cross-government services such as GOV.UK, Registers and Notify.

In addition, we will ensure that we build capability across the Department so that people have the appropriate skills and knowledge to use the tools and systems provided to them to work as efficiently, effectively and flexibly as possible.

# 1. Technology to support DFID's delivery

## ***DFID's strategic objectives***

The Department for International Development (DFID) leads the UK's work to end extreme poverty. We are tackling the global challenges of our time including poverty and disease, mass migration, insecurity and conflict. Our work is building a safer, healthier, more prosperous world for people in developing countries and in the UK too.

The UK Government has committed to spending 0.7% of Gross National Income (GNI) on international development.

The [UK Aid Strategy](#) sets out four strategic objectives in order to eliminate poverty, advance the UK's national interest, and support the UN Global Goals:

- strengthening global peace, security and governance
- strengthening resilience and response to crises
- promoting global prosperity
- tackling extreme poverty and helping the world's most vulnerable

DFID's Single Department Plan has two further objectives:

- delivering value for money
- delivering efficiency in DFID

## ***The challenging environments we work in***

We have headquarters in the UK and we work in, or manage remotely, programmes in countries across Africa, Asia and the Middle East, many of which are fragile or at risk from fragile neighbours; and we also have development relationships with aid-dependent Overseas Territories. In addition to working directly in countries, DFID also provides UK Aid through multi-country global programmes and core contributions to multilateral organisations.

It can be highly challenging to provide IT services in some of these locations, for example where there is a lack of good quality local IT infrastructure or significant security concerns. All our design and delivery decisions take these factors into

account as we aim to enable the staff working in these challenging and hostile environments to operate safely and effectively.

## ***Working with others***

Whilst DFID is UK's primary channel for aid spending, an increasing amount of the Official Development Assistance (ODA) budget will be administered by other UK government departments. We are therefore seeking to implement technology solutions that will support closer collaboration between departments, including the management of cross-government funds.

DFID also uses a wide range of delivery channels for its own aid programmes. We work in partnership with governments, civil society, private sector and multilateral organisations. The circumstances in which DFID and its partners operate can change quickly, for example because of extreme weather events, political unrest or outbreaks of disease. It is therefore our key goal to enable our staff to share information and to collaborate across organisational boundaries to help them adapt to changing priorities and achieve shared objectives.

## ***The role of Business Solutions Department***

DFID currently employs over 3,000 staff who work in our offices in London, East Kilbride and over 50 locations globally. Business Solutions Department (BSD)'s role is to provide the technology capability, advice and support to enable staff to deliver the commitments set out in the Single Department Plan.

That is why "DFID Delivery" sits at the centre of our Technology Target.



Using technology, we aim to support the effective administration of the department and improve the flow of knowledge, so that DFID staff can help the world's poorest by being able to:

- effectively deliver the UK's aid programme and continue to improve aid quality through monitoring and evaluation, sharing knowledge and lesson learning
- share data and collaborate across the department, UK government, donors, partner governments, Non-Governmental Organisations (NGOs) and multilateral and private sector partners
- be mobile, having access to information whenever necessary, responding quickly and robustly in a crisis
- apply robust financial controls on all aspects of its operations, and have access to high quality and timely management information on finances, projects, results, people, operations and procurement
- meet government and international commitments on transparency and communicate effectively about DFID's work to UK citizens and others
- ensure information is handled securely and managed in line with the Public Records, Data Protection and Freedom of Information Acts
- continually improve the effectiveness of the organisation's operation, deliver value for money and strengthen supplier management.



## 2. What we will deliver: technology strategic objectives

The previous chapter set out what DFID's delivery objectives are. To deliver those objectives DFID is reliant on a range of services, which, as with any modern organisation, are underpinned by technology. The technological infrastructure, software applications and end user devices we use and the way we support them, will be key to enabling DFID to work as effectively as possible and deliver its objectives.

This chapter sets out the five themes of BSD's approach to technology management for DFID (the middle ring of the Technology Target) and further details how that translates into BSD's operational services (the inner ring of the Technology Target).

The five themes are as follows:

- **Services:** deliver effective and efficient services to users
- **Infrastructure:** develop and maintain up to date technology platforms
- **Data:** knowledge and data to drive better delivery
- **Tools:** deploying effective tools driven by our users' needs
- **Advice:** providing effective advice and support



### ***Services: deliver effective and efficient services to users***

As outlined in our Digital Strategy, we will continue to embed agile ways of working in to our service provision through focussing on user needs, delivering iteratively, continually improving, learning quickly, and continually planning.

In line with the [Digital Service Standard](#), we will place user needs at the core of all our design, delivery and management decisions by:

- ensuring that each corporate system is managed continually as an ongoing service, rather than an unchanging product, supported by sufficient staff in all appropriate roles (for example Service Owner, Product Manager, Configuration Manager), with those staff working across multiple services, where necessary
- working in partnership with other parts of DFID, including Corporate Performance Group, to ensure systems support effective delivery of services to staff through aligning with streamlined administration processes
- adopting a flexible, iterative approach in which our systems can be developed and adapted to exploit opportunities of newer technology and/or to meet changed user needs
- conducting regular service assessments to provide assurance that services remain high quality, easy to access and simple to use

Our core service groupings are shown below.

- **Aid Management:** results and value for money of aid programmes
- **Finance and Procurement**
- **Information Management and Collaboration:** effective use and management of information
- **Devices and Comms:** enabling staff to work wherever they are
- **People and Operations:** workforce planning, recruitment and on-boarding



To be most effective, we recognise that the teams providing each service need to be:

**User-oriented** so that the focus is on meeting user needs, where necessary co-ordinating changes to multiple corporate systems to support changes to service processes

**Empowered** to make decisions on designing, developing and managing the service to meet the needs of users, whilst working within a strategic plan and agreed framework of priorities, to avoid delays awaiting unnecessary approval steps

**Multi-disciplinary**, so that each service has a team of staff with the full range of skills (including user researchers, developers, product managers, and other roles) to fully support it

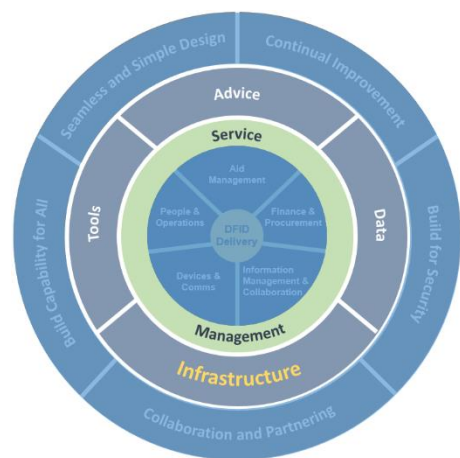
**Agile**, following a methodology that focuses on delivery of new corporate systems (or changes to existing ones) that will benefit users as early as possible, and subsequently making iterative improvements based on user feedback

**Complete**, taking a 'whole service' approach so that our services can be delivered through the appropriate balance of effective and value for money underlying technology (from servers at the backend to laptops or smartphones at the front end), simple to administer processes for service providers, and ease of use by end users through the most appropriate device.

### ***Infrastructure: develop and maintain up to date technology platforms***

A reliable and secure technology infrastructure is the foundation of delivering high quality services to users across the world. Our Infrastructure programme, "INSPIRE", seeks to refresh our core infrastructure elements in the UK and overseas. In addition, the ECHO 2 programme will deliver key usability improvements and reduce the cost of delivering the global communications and data network.

A hybrid infrastructure will help provide high speed, reliable and resilient services, by maximising use of commoditised ('off the shelf') services, using high capacity commercial communications links and adopting other new technology solutions as they mature.



## Our hybrid infrastructure model

DFID will make more use of **Cloud services** procured through the [Digital Marketplace](#), enabling our internal teams to focus on DFID specific needs. Continuing to operate a **hybrid infrastructure model** will ensure we remain flexible and responsive in meeting user need and reduce the risk of being locked-in to continued use of obsolescent products or services. Broadly, this means:

- **Using Infrastructure as a Service (IaaS)** provided by third party suppliers to host DFID's internally developed systems such as the Aid Management Platform.
- **Buying in Platform(s) as a Service (PaaS)** – in which third party suppliers manage a cloud-hosted platform on our behalf – for commoditised software products such as office productivity suites.
- **Buying in Software as a Service (SaaS)** – in which DFID users use cloud-hosted applications that are configured for DFID needs but are managed fully by a third party supplier – for services common to many organisations such as document management, people management, finance and procurement.

Where necessary we will retain on-premises equipment to meet specialist needs, for disaster recovery and to manage transition to cloud models.

DFID will collaborate with Government Digital Service and across government to design platforms, systems and services for flexibility, scalability (the potential to cope with growing demand) and reuse that are cost-effective and meet user need. We will also contribute to the development of common platforms, for example, to enable government departments to work together effectively overseas as One HMG or within government property hubs. A high performance, secure network infrastructure will underpin all the service platforms for DFID, FCO and other partners across government, and will be delivered under ECHO 2.

We will enable interoperability of our systems (so that they will be able to exchange and make use of information from each other) through use of open Application Programme Interfaces (APIs). We will make use of existing government platform services such as GOV.UK, Notify and Registers to help meet our user needs.

## ***Data: knowledge and data to drive better delivery***

High quality knowledge and data are critical to the effective operation of DFID, its decision making and its accountability to taxpayers. We also recognise the value of data for the collective delivery of the Global Goals.

Data forms a key element of how DFID learns:

Data interpreted is Information

Information in context is Knowledge

Knowledge applied is Learning



Our Digital Strategy and Data Roadmap outline how our focus on improving data availability, quality and use in these areas continues through:

- Enabling data to be captured and recorded in a clear and user-friendly way using well-designed tools such as our Aid Management Platform (AMP), Vault (our Electronic Document and Records Management System), ARIES (our finance system) and Passport (our people management system). We will use open data standards to support information sharing with our delivery partners.
- Expanding interactive reporting capabilities and flexibility of systems to make data easy to obtain and understand so that users can focus on analysis and insight, leading to better decision making.
- Developing a wider range of tools to support effective knowledge sharing, and to meet varying user needs for reliable management information on finance, projects, procurement, people and operations.
- Improving awareness of information legislation such as the Public Records Act, Freedom of Information Act and Data Protection Act so that users know how to meet the requirements for managing their data safely.

- Investing in our data architecture, infrastructure and governance. We will maintain one version of each key piece of information, for example having a primary record for people, programmes, or suppliers, with the same unique identifiers re-used across all our systems. We will use shared government Registers for lists of common information, for example countries, territories and suppliers, to ensure consistency.
- Providing support and leadership in transparency, we make our data open and transparent by default and seek to make effective use of information from external sources. We will continue our work with implementing partners to adopt the International Aid Transparency Initiative (IATI) standard, promoting accountability and traceability in aid across our delivery network. More focus will be given to producing evidence of results of development intervention, engaging with a wider audience and seeking beneficiary feedback.

### ***Tools: Deploying effective tools driven by our users' needs***

BSD will provide all staff, both UK Home Civil Service (HCS) and Staff Appointed in Country (SAIC), with appropriate access to systems and information that enable them to do their work, depending on their role and security clearance level. We will do this by:

- Providing a manageable range of devices to suit different user needs that enables flexible working with modern office productivity tools - making more use of mobile technology to support staff working on the move, including in difficult locations.
- Working to enable our staff to communicate and collaborate as seamlessly as possible with colleagues across government and other partners globally, whilst maintaining the integrity and security of our systems and information.
- Embedding contextual user research in design and delivery of our services to observe behaviour, building our understanding of how environment, policy, process and technology can combine to enable our users in their daily work.



## ***Advice: Providing effective advice and support***

Ongoing engagement across the organisation will ensure our strategy and delivery remain aligned to corporate objectives and user needs.

We will do more to help staff get the most out of our technology, considering adoption and behavioural change at the outset of new initiatives, and supporting staff to gain personal productivity improvements from smarter working with existing tools.



DFID's HR, Finance, IT and Facilities support systems are being brought together into a single knowledge service, joining up what staff need to know about our systems and processes. Funnelling all our corporate service queries into to a single system helps develop our understanding of the user needs we need to support in end-to-end services.

Our engagement and support model will ensure there are a range of opportunities for users to access our expertise and inform our decision making, through

- dialogue and feedback mechanisms to ensure continual improvement of resources, products and services
- experts in project management, user research, business analysis and process design working with users to deliver new or improved services
- clear, comprehensible and easily accessible online guidance to share what works through different channels
- providing expert advice to programme delivery teams in using digital to achieve programme outcomes, along with digital specialists in teams across DFID
- a responsive support model, built around an excellent central service desk, which ensures that users get the support they need to resolve issues, within agreed service levels, and fully benefit from the range of technology available to them.

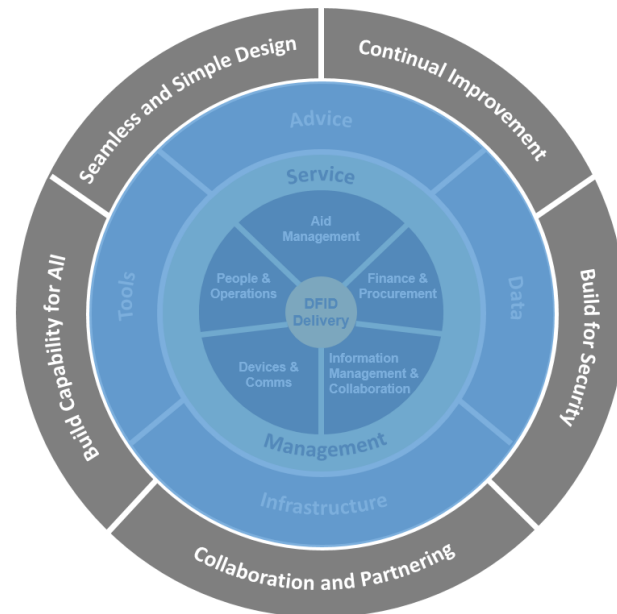


### 3. How: our delivery principles & governance

#### *Delivery principles*

Delivery of our technology services is in accordance with the [Technology Code of Practice](#) and the [Service Manual](#). Our delivery is **user-centred** and **value-driven**, underpinned by the following core principles:

- Seamless and simple
- Continual improvement
- Build for security
- Collaborating and partnering
- Building capability for all



#### **Seamless and simple**

Accessing and using our services, processes and tools should be seamless and simple. We will work across functional and department boundaries, between systems and information silos, designing for **integration and interoperability** between applications, data and infrastructure. We will work to create user interfaces, processes and information that are **easy to understand and quick to use**.

#### **Continual Improvement**

We will be flexible and deliver through partnership with users. We will not take a 'big bang' approach, but roll out services in small **increments**, minimising disruption and learning from feedback along the way. We will prioritise our work according to the value it offers our users, measuring success by **outcomes** through a range of quantitative and qualitative data from system usage, performance statistics and user feedback.



A continually changing context necessitates **agility** in responding to shifting priorities, whilst making the most of emerging opportunities such as increased internet and mobile coverage. We will use mapping techniques so that we understand the context of our decisions and build flexibility into our service design and delivery to enable continual improvement.

## **Build for Security**

As the [National Cyber Security Strategy](#) notes, cyber attacks are growing more frequent, sophisticated and damaging when they succeed. As we use more Cloud services we will need to continue to evolve our cyber security practices, including setting up a Security Operations Centre and continuing to develop a cadre of in-house cyber security specialists.

We will continue developing our capability to build the appropriate cyber and information safeguards into design, delivery and monitoring of our infrastructure, platforms, applications and processes. We will continue to provide cyber security support and advice to technology projects.

## **Collaborating and partnering**

This means working together with our partners on all aspects of our operating model: with our users, with our business stakeholders, across technology and corporate services, with suppliers, across government and other partners globally to deliver shared objectives. In particular we aim to:

- meet users' needs across all channels of corporate service delivery, by working in collaboration with colleagues across Corporate Performance Group
- support control, compliance and efficiency through service design
- measure the value of our services in terms of business outcomes – what services enable our end users to achieve
- work in partnership with GDS and colleagues across government to share and reuse wherever possible
- work alongside our digital teams to maximise use of digital technologies in our global development programmes

## Building Capability for All

We will work on two key areas for skills development:

Firstly, we will work in partnership with our **end users** to help them get the most out of our technology. We will support smarter working through new tools and practices, thus improving efficiency for users. Our new Digital Curriculum for staff will help with:

- improving efficiency and effectiveness of daily work enabled by technology through raising awareness of the potential benefits of tools available and how to use them
- encouraging and role modelling desired behaviours
- raising awareness of information handling and cyber security
- supporting knowledge sharing and learning

Building skills in effective use of data and analysis tools will continue to be a priority, with the support of statisticians and data scientists.

Secondly, we will work to make sure **BSD staff** continue to be skilled in product and service design, development and delivery, commercial and contract management, cyber security and operations. We will continue to operate an in-house delivery model, and will invest in the development of BSD staff. We aim to grow talent within the internal team drawn from existing staff in BSD and new staff recruited from the local market.

Key areas of focus for building capability within BSD include:

- commercial, contract and risk management to drive value, performance and quality from cloud hosted and other third party products and services
- technical expertise in development and data architecture to improve our ability to build effective services using modern toolsets and internet services
- cyber security and information handling

We will review roles to align with Digital, Data and Technology (DDaT) profession across government, and continue to link across DDaT, Knowledge and Information Management, Project and Programme Management, Statistics and Operational Delivery professions.

## ***Governance and management***

### **Governance**

In line with the agile governance principles set out in the Service Manual, and central government spending controls processes, our governance goals are to:

- align technology delivery to DFID's strategic objectives
- get the best out of our resources to deliver maximum value to end users
- effectively manage, measure and report on risk and performance
- manage information
- ensure efficiency and appropriate controls
- help manage and communicate changes to systems and processes.

The delivery of new infrastructure, devices, systems and applications outlined in this Strategy will be managed as a portfolio of programmes and projects led by Business Solutions Department but involving key delivery partners across and beyond DFID to prioritise and shape our work. This will bring clarity of purpose, co-ordination of delivery and effective business change management.

This Strategy has been approved by Ministers and DFID's most senior board the **Executive Management Committee (EMC)**. The portfolio management approach and the overall funding for programmes will be agreed by the **Strategic Corporate Investment Board (SCIB)** chaired by the Director of People, Operations and Systems and the **Business Solutions Board (BSB)**, chaired by DFID's Chief Information Officer. The BSB maintains oversight of individual programmes and projects, referring major decisions on funding or strategic direction to the SCIB, EMC and/or Ministers as appropriate. Projects and programmes are empowered to use agile methods to prioritise activity and deliver early and often. The BSB reviews the status and progress against plans and budgets of each component on a six-weekly basis.

Some workstreams that will deliver elements of the Technology Strategy form part of other DFID programmes and therefore report through other DFID governance arrangements (for example the procurement system replacement project and our Management Information Strategy) but are also monitored by the BSD Board. Other workstreams (for example the ECHO2 global communications infrastructure refresh) are

part of cross-government initiatives and are therefore subject to cross-government programme boards as well as departmental monitoring and management.

DFID will work with cross-government Digital, Data and Technology Leaders, brought together by GDS, to contribute to a system of governance for services that include more than one department, and actively contribute to exploring and sharing common approaches to problems.

BSD also ensures that it can be held to account for its performance in managing services to DFID users by representatives from across the business. This ranges from monthly publication of performance against operational **service level agreements** on DFID's intranet; more formal scrutiny of service delivery and value for money through GPG Leaders reviews; and, internal audits of BSD functions and services.

## **Financial and commercial management**

BSD holds DFID's operating budget, as delegated by the Executive Management Committee, for all aspects of Information Technology within the UK, and for limited IT spend overseas.

BSD also manages the capital budget for infrastructure and application development, and for the licensing and maintenance of a range of systems managed by business divisions. Overseas offices have an IT budget for some consumables and local services. The overall capital budget for this purpose is initially held by Finance and Corporate Performance Division then 'drawn down' in incremental allocations approved by the Strategic Corporate Investment Board.

BSD contains a specialist procurement team who ensure that all DFID procurement of IT equipment, services, licences, etc. conforms to HMG rules and achieves value for money. The procurement team work closely with technical specialists to ensure that all equipment and services are fit for purpose and are consistent with current/planned architecture.

An active transition of our services to Cloud is in line with the HMG 'Cloud First' Policy, although this will lead to a significant shift from capital to admin expenditure.

We will seek to work with partners over time-limited periods where we do not have the necessary skills or capacity in-house. We will use the Digital Marketplace to source these partners.

## **Resourcing and risk**

The resourcing requirement for delivery of the Strategy will vary during phases of preparation, delivery and user support, followed by transition to business as usual. BSD will adapt to the changing demands by flexible deployment of its in-house staff, temporary use of contractors and appointment of implementation partners, where appropriate.

BSD maintains an in-house IT model, which means we recruit, maintain and grow our own staff to deliver core tasks, supplemented with specialist advice and skills when required. We will continue to invest in our staff, developing our skills and capability as required to deliver DFID needs. In line with our commitment to continuous improvement of systems and services, we will ensure that sufficient people are available to ensure BSD can deliver the advice and support required to exploit technology to create better ways of working in DFID.

BSD has undertaken a formal succession planning review to identify where it has capability gaps or a lack of strength in depth. This is being used to inform our recruitment and development strategies so that we achieve an appropriate balance of recruitment to meet immediate needs and longer-term internal development to address emerging challenges.

As an example of changing business delivery, we are moving to a 'Cloud First' delivery model and we will therefore build on our expertise in this area, including efficient resource management and procurement of services. We will maximise opportunities to share expertise and people across government to do this effectively.

The management of risk associated with both project delivery and ongoing service provision aspects of the Technology Strategy conforms to DFID's established Risk Policy and Risk Management Framework. The Framework sets out clearly that risk will be considered at frequent (daily/weekly) project and team meetings and identified at the earliest opportunity, then formally assessed and categorised on project risk registers, and, where necessary escalated to higher level Strategic Risk Registers.

Project and programme risks will be monitored by the BSD Senior Management Team, the BSB and the EMC. In addition, security risks (including information security and cyber security) will be further monitored through the **Information Security Management Group** (ISMG) and the **Security Committee**.

The key high level risks relating to this Strategy, at the time of publication, are:

- **Resourcing and capability:** We continue to face challenges in recruiting and retaining the right skills needed within DFID in a highly demanding market. We will continue to explore ways to attract talent into DFID and provide career development opportunities for our staff.
- **Cyber security:** We will continue to protect and keep our information safe in a hostile environment, building secure systems to protect against the increasing levels of cyber threats while ensuring our staff are trained and aware of good cyber security measures and practice.
- **Cross-government cohesion:** We will balance responsive delivery for DFID alongside sharing services with partners, avoiding divergence from the cross-government strategy or direction.
- **Evolving cost model:** We will be moving towards greater use of Cloud services, rather than purchasing and managing our own on-site servers. This entails a shift towards meeting running costs for those services and away from capital investment. We will work with finance colleagues to ensure best use of government financial resources to deliver effective services.