



Collaborating with HMRC to build digital delivery capability

The situation

HM Revenue & Customs (HMRC), the UK tax authority, has a vision to deliver a modern, transparent tax system enabled by digital self-service, which is safe and easy for its customers to use and inexpensive for HMRC to run. HMRC is on a journey to become "Digital by Default" by delivering customer-focused digital services that are accessible and inclusive. Its ambition is to increase the number of users who choose to use HMRC's digital services and to provide assisted digital support to those who need it.

Capgemini partnered with HMRC to collaboratively grow its sustainable digital delivery capabilities by helping to design, establish, manage, and run Digital Delivery Centres (DDCs) in Telford and Worthing. The DDCs actively enable HMRC to develop and operate digital, user-centric solutions on a multi-channel digital tax platform, HMRC's underlying digital infrastructure.

Organisational design and governance

The DDCs are governed and directed by HMRC and are run by local management teams. Experienced Capgemini leaders are embedded into HMRC's management structure to help run day-to-day operations. By providing vibrant, shared environments, the DDCs enable HMRC, Capgemini, and third-party suppliers to work together alongside business and technical subject matter experts to deliver modern, user-centred services. To ensure consistently high-quality delivery, they operate to a common set of standards and processes to deliver products and services according to Government Digital Services (GDS) standards. Services are quickly evolved through a dynamic DevOps approach, meaning HMRC can deliver new, digital, public-facing services within just a few weeks of the government announcing a change in policy.



Digital principles supporting the DDCs

A core set of principles underpin the way the DDCs operate:

- Being “Digital by Default” by offering high-quality, responsive, convenient, and up-to-date services
- Improving the customer experience in every aspect of their contact journey with HMRC
- Making all services fully inclusive to become “Accessible by Default”
- Having potent user research and user design capabilities in order to put the customer at the heart of every service
- Ensuring all services meet or exceed UK GDS standards
- Using agile teams to use accelerators and templates that are continuously improved and updated to quickly deliver digital services
- Building upon common technology platforms for the re-use of digital assets
- Giving confidence to users with a secure design and implementation
- Using an Open Data Strategy to deliver APIs for greater flexibility.

This successful model is also being used to support other public sector organisations.

Establishing and growing capability in a sustainable way

Capgemini worked with HMRC to assemble a team of experts, which in turn cross-skilled new members to help meet HMRC’s demand. Within 24 months of establishing the DDC in Telford, the number of Capgemini digital team members totalled 450 people, sourced from Capgemini and working with HMRC and a number of other partner organisations.

Capgemini has continued to work closely with HMRC to create a digital capacity that can evolve with the organisation as it develops new services. Capgemini provides highly skilled and talented people to work within the DDCs by leveraging its global digital practice. This approach has allowed the DDCs to grow rapidly, and is supported by a rigorous operating model that ensures the continuous delivery of sustainable business value for HMRC.

The DDC model allows HMRC to flex its resourcing requirements, thereby enabling specific skills to be added or adjusted when required. Staffing is tailored to local market conditions and balances hiring experienced employees and contractors, re-skilling existing IT resources, and supporting HMRC in promoting and nurturing junior talent.

Capgemini’s successful development and management of people within the Telford and Worthing DDCs has allowed HMRC to deliver value quickly. Tailored training academies, developed in conjunction with selected partners, deliver

skilled technicians in user research, user design, testing, development, product management, and business analysis. This is supplemented by on-the-job training and a formal buddying system to build confidence and experience. External training and certification programmes keep the team up to date with the latest skills and technologies required to deliver digital services, guaranteeing the DDCs remain relevant for the future.

Cultivating a digital core

Multiple technologies have helped HMRC take incremental steps towards transitioning to full digital services. For example, using Adobe and Scala to convert hundreds of paper-based forms to an online, adaptive format. This enabled customers to contact HMRC online instead of sending in documents, reducing the need for staff to retype information into digital systems. Robotic process automation software picks up the output from the online forms and then automatically updates back-end systems. This solution has provided quicker customer service and enables employees to focus on higher value tasks, saving HMRC 80% on processing costs and 40% on call times.

Culture and working practices

The DDC culture empowers staff to deliver user-centred, innovative solutions in an agile way. They are structured into communities of practice for each role type, which are responsible for growing their own capabilities through training, attending conferences, and networking across locations to share best practices. Various disruptive techniques ensure that continuous improvement is embedded into the DDC ethos; for example, regular Hack Days challenge cross-community teams of developers, designers, and business experts to collaboratively build innovative and creative solutions to real-world problems.

Agile methods ensure the development of consistently high-quality, user-focused services. Resources are organised into multi-functional, multi-supplier scrum teams that use collaborative, open-sourced tools to forge a “one-team” spirit. Working environments are carefully designed to encourage active collaboration, a central element within the agile and DevOps ways of working that includes incorporating breakout spaces and areas for showcases, retrospectives, and workshops.

For the DDCs, agility is about a continuous improvement mindset that drives the repeated inspection and adaptation of a product, a team, and its delivery process. This is supported by cutting-edge development tools and techniques, which include XP, test-driven development, behaviour-driven development, and establishing good patterns to drive acceleration.



User-centric design is fundamental to the DDC using research and analytics to continually improve and iterate services, thereby enhancing the ease of first-time use. Continuous delivery allows new feature functionality to be shipped into the production environment for users multiple times a day. Underpinned by rigorous automated testing techniques, this approach delivers immediate and consistent quality improvement. Best-of-breed operational monitoring ensures the teams proactively understand the health of the services and are able to react quickly in the event of issues.

Technologies and tooling

The DDC model allows capabilities to be built using any technologies or approaches. HMRC's DDC development using SCALA and tooling includes Confluence, Slack, Cucumber, Gherkin, Selenium, Gatling, Play Framework, MongoDB, Json, and Puppet. The source code is open, reusable, and published on GitHub under the Apache 2 License. Artefacts produced by the DDCs are openly published on Bintray.

The benefits

The digital delivery capabilities that Capgemini has worked with HMRC to create have enabled HMRC to rapidly advance its digital journey and to provide end-to-end, public-facing services that are:

- Customer centric: a User Research & Design Centre of Excellence puts HMRC's customers at the heart of all of its digital services. The team is highly experienced at discovering user needs and designing services that work well for them
- Safe and secure to use: HMRC's digital services support the increasing demand for strong authentication and conform to OAUTH2 and OpenID Connect standards
- Highly usable: Mobile apps have helped to drive channel shift by providing a convenient way for customers to engage with HMRC. HMRC's mobile app was shortlisted for a UK IT Industry Award

As a result, the number of taxpayers using HMRC's services online is increasing year on year. There are currently over 19 million personal account users and 3 million business account users. The number of people accessing HMRC's mobile app is also increasing and has been used 24 million times in a year.

About Capgemini

A global leader in consulting, technology services and digital transformation, Capgemini is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. It is a multicultural company of over 200,000 team members in more than 40 countries. The Group reported 2018 global revenues of EUR 13.2 billion.

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About HMRC

As the UK's tax, payments and customs authority, HMRC collects the money that pays for the UK's public services and helps families and individuals with targeted financial support. Its 63,000 employees oversee the collection of more than £600 billion in taxes and duties from 50 million customers.

For more information, please visit:
www.hmrc.gov.uk