Digital Delivery Unpackaged

Summary Overview

A practical guide to establishing a digital delivery capability
February 2016

The Background to Digital Delivery

The United Kingdom Government is committed to becoming "digital by default". This is explained as delivering "digital services that are so straightforward and convenient that all those who can use them will choose to do so whilst those who can't are not excluded"[1]. The government digital agenda is driven by the desire to create digital services that are cheaper, quicker, more convenient, secure and accessible than the more manual services they replace.

Public sector organisations are transforming themselves to enable digital delivery, often through large scale Digital Delivery Centres (DDCs). Digital delivery radically changes the way that public-facing services are delivered. The primary focus is now on meeting the needs of the end user, rather than the department. Every aspect of a DDC needs to support that aim: the people, culture, processes, governance, ways of working, physical location and technology. Building a high-performing internal capability is more complex than staffing a new IT Delivery Team and involves enterprise-level change.

As other public and private sector organisations undertake digital transformations and face common challenges, HM Revenue and Customs (HMRC) is keen to share its experiences of large-scale digital delivery. HMRC and Accenture have co-authored Digital Delivery Unpackaged, an in-depth, practical guide on building an effective digital delivery capability. Digital Delivery Unpackaged provides guidance on the principles and enablers for successful digital delivery, as well as pragmatic, step-by-step advice on the activities necessary to set-up, operate, continuously improve, and scale a digital delivery capability.

The Digital Delivery Centre Newcastle

The benefits of digital are particularly important to HMRC. The Department handles 1.15 billion transactions a year[2] - 70% of all government transactions. HMRC is embedding digital delivery at the heart of its business in order to improve its customer experience, reduce cost and maximise yield. HMRC is developing personalised digital tax accounts for each of its customers, to make it simpler, quicker and easier to pay the right tax at the right time. Since 2013, HMRC has established 5 DDCs to build these new digital services.

From November 2013 Accenture has supported HMRC to establish and operate the agile Digital Delivery Centre in Newcastle (DDCN), a 250 person delivery team responsible for delivering HMRC's new digital services. The DDCN is one of HMRC's five DDCs. It is HMRC's largest DDC, and the second to mobilise following the London DDC. The DDCN has been used as a template for the development of HMRC's other DDCs in Telford, Yorkshire and Worthing.

Over a seven month period, Accenture worked with HMRC to mobilise the DDCN, conducting the key activities necessary to begin delivery of digital services from Newcastle. This included the design and implementation of the operating model, organisation structures, delivery processes, governance and roles for the delivery of digital services. The integrated HMRC-Accenture team developed and rolled-out a capability development framework to support the on-boarding, monitoring and longer-term upskilling of HMRC staff. The team also supported HMRC to design a customised office environment for large-scale agile delivery, and select and implement the development tools and equipment needed to deliver.

Accenture staff work alongside HMRC staff in 20 scrum teams, with a variety of specialisms, including developers, automation testers, scrum masters, product owners, user researchers, designers and more. The DDCN teams take an agile approach to service delivery, utilising leading edge open source tools and technologies including Scala, Play, Cucumber, Jenkins, Gatling and more.

The DDCN has delivered over 15 new public facing services in its first two years of operation. These include an online tax credits service which led to 400,000 less inbound phone calls in 2014, a digital service to administer tax-free childcare for 12 million working UK parents, and the personal tax account that holds all tax information for an individual in one place for the first time.

Principles for Successful Digital Delivery

There are 10 principles that organisations should follow in order to successfully mobilise, operate and continuously improve a large scale digital delivery capability.

Start small, learn from doing

Mobilise the minimum DDC components needed to start small-scale service delivery. Learn by doing, feeding in lessons learned.

A culture of continuous improvement

Continually iterate digital services and the processes and ways of working of the DDC itself.

Every DDC is different

DDCs look and feel different to traditional delivery environments. The relative priority of set-up activities varies widely between DDCs.

Share ownership, trust the teams

Focus on collective responsibility, developing a DDC that best fits its team members.

Autonomous teams, common standards

Give teams flexibility in how they operate, whilst ensuring conformity to consistent standards.

An unremitting focus on value

Use operating processes, technology and metrics to deliver value.

Automate and streamline as much as possible

Invest in a strong DevOps platform to support rapid development and frequent releases.

User-centric services

Always put the end user, the public, at the heart of the service.

The most important part of a DDC is its people

Recruit the right mix of people and on-board, upskill and monitor them effectively.

Enterprise digital, aligning change

Foster change throughout your organisation to become a truly digital enterprise.

Principles for Digital Delivery Success

Start small, learn from doing

Agile encourages teams to focus on delivering the minimum functionality required for a product to start delivering value as early as possible. This is known as delivering the Minimum Viable Product (MVP). The product can then be iterated further to add more features as needed. You should use the same approach when setting up the DDC. Start with a focused period of mobilisation that aims to deliver the DDC MVP i.e. the minimum DDC building blocks you need in order to start small-scale service delivery. Then establish one or two experienced 'scrum teams' (the term used for an agile service delivery team) and learn from doing. As you learn new lessons, continually improve the DDC.

A culture of continuous improvement

Successful DDCs instil a culture of continuous improvement. Teams should strive to release an MVP for their digital service that will form the basis for all subsequent releases. Each further release should add significant value rather than incremental detail. An agile project is more than just an incremental delivery: it is the continuous improvement mind-set behind repeated inspection and adaptation of a product and its delivery process. It is equally important to iterate the DDC itself. Seek to continually improve the delivery processes and ways of working by establishing a central continuous improvement team. They will be responsible for identifying issues that are impacting team effectiveness and for implementing continuous improvement solutions to mitigate these issues.

Share ownership, trust the teams

All team members in the DDC should take responsibility for continuously improving the centre, so it takes a shape that best fits its team members. Fostering a start-up mentality, with team members assuming a sense of responsibility and accountability for the progress of the DDC, will help to embed this commitment to continuous improvement. You should include individual teams and cross-DDC communities (e.g. developers, designers) in the design and implementation of mobilisation and continuous improvement activities. Working cultures grow organically: the working practices and collaborative behaviours that best fit your DDC will gradually evolve if the wide range of skills and perspectives of the DDC team members are included in its development.

An unremitting focus on value

Everything within the DDC should be planned to deliver value. You should design your operating processes, governance, metrics and technology to support the rapid and ongoing delivery of value. However, these are only important if they are supported by an outcome-focused mind-set. The question for teams should not be "What can we deliver by point X, many months in the future?", but rather "How long will it take us to release an MVP that delivers some value?" Releasing the service is not an outcome in itself. The product owner needs to consider the operability of the service and must strive to deliver a sustainable and continually improving service that provides value on an ongoing basis.

User-centric services

Digital delivery practices put the end user at the heart of the service being developed. IT services used to be developed based solely on requirements defined by the business, but digital services are developed based on requirements defined by end users (i.e. the public). Digital delivery involves user research and user-centred design throughout delivery, incorporating user feedback and ensuring their requirements are given extensive attention across the delivery lifecycle. Establishing such a fluid feedback loop helps to deliver better-quality, user-focused services. However, it does raise certain challenges with the need to balance and align the needs of the users and business.

Becoming a digital enterprise and aligning change

Mobilising a DDC in isolation will limit the benefits of digital delivery. Consider what other changes are needed throughout the rest of your organisation to embed digital operations, support the new digital services and become a truly "digital enterprise". Digital customers expect a consistent and joined-up experience, and your organisation should be structured to meet this expectation. Invest time in developing an effective approach to managing the organisation's product backlog of potential projects. This should include the process for managing the digital pipeline, and the appointment of empowered product owners to lead service delivery. You should consider appointing a lead product owner for each area of the business. The lead product owner should have overall ownership for the digital product vision, and the ability to prioritise different digital delivery services and functionality within their business area.

The most important part of a DDC is its people

If you want your DDC to be a successful, exciting place to work, you need to staff it with passionate, digital specialists who possess a continuous improvement philosophy and development approach. But selecting and training your team members is one of the greatest challenges for a new DDC. Digital delivery teams may require skills that don't currently exist in your organisation. Consider your skill requirements and the optimum mix between internal, external and supplier resources. Your recruitment approach should be tailored to effectively compete with digital private sector organisations for the best talent. Developing an approach to recruit, upskill and monitor the development of your staff is key to success. You will need a structured approach to capability development in order to create high-performing teams in a short space of time, build the skills you'll need to deliver high-quality digital services and deliver on the commitments made during the recruitment process.

Automate and streamline as much as possible

Digital delivery is at its most effective when software development and deployment is highly automated. Continuous integration, automated testing and automated deployment tools and infrastructure will enable agile teams to rapidly develop and release incremental functionality. DevOps should be a top priority activity for any new DDC. A strong DevOps platform can help you to reduce the number of interactions and the number of dependencies between operations, development, security and testing. DevOps functions provide the technical building blocks to allow agile scrum teams to create and scale environments, develop and maintain automated testing and deploy to development and production environments. This will help you to streamline the deployment pipeline and increase the number of releases to end users, delivering value earlier.

Autonomous teams, common standards

Digital delivery teams work effectively when they have high levels of autonomy. Form teams with limited external dependencies so they are self-sufficient and can define their most effective working practices. You should consider the degree of standardisation and reuse that you will need in order to develop your applications. If there is a strong desire for a common look and feel, along with architectural compliance, then you should establish cross-DDC functional leads and authorities in design, user research, development and architecture. While teams have autonomy and flexibility on how services are developed, the functional leads can ensure that individual services conform to certain organisational, or platform-level, design and development standards.
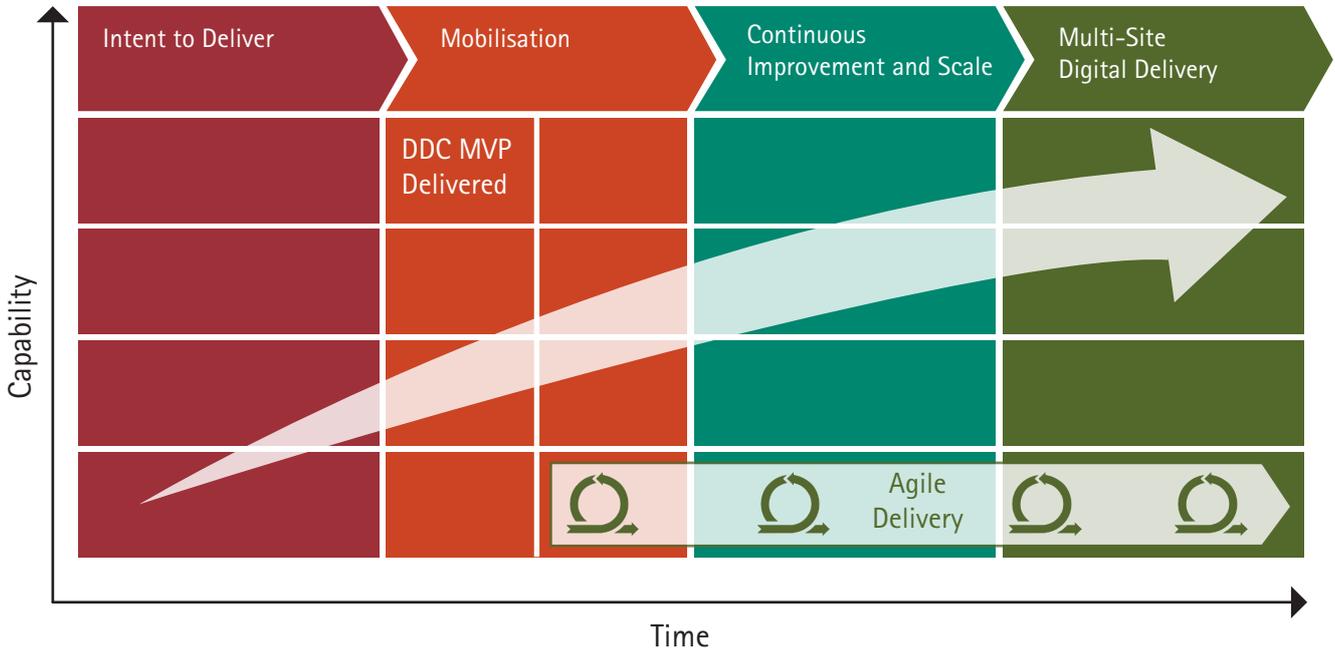
Every DDC is different

Every organisation is different, so we do not advocate a single, prescriptive process to deliver a DDC. Rather, Digital Delivery Unpackaged provides a proven framework based on HMRC and Accenture's experience, which your organisation can adapt and develop to meet your own vision, objectives and user requirements. We recommend carrying out some priority mobilisation and continuous improvement activities, but recognise that how you prioritise these activities, and their underlying detail, will vary widely between DDCs.

The Evolution of Digital Delivery

We believe the development of a digital delivery capability involves the following stages:

Capability (y-axis) — **Time** (x-axis)

Stages shown in chart: Intent to Deliver | Mobilisation | Continuous Improvement and Scale | Multi-Site Digital Delivery

DDC MVP Delivered — Agile Delivery

Intent to Deliver

> Digital delivery vision defined and communicated by leadership

> Digital delivery budget secured

> Mobilisation plan developed

Mobilisation

> Deliver the DDC MVP - the minimum components needed to start delivery

> Start small scale delivery - learn from doing

> Continue to ramp up and mobilise activities needed for scaled delivery

Continuous Improvement and Scale

> Ramp up delivery and prove ability to operate at scale

> Develop a culture of continuous improvement to enhance ways of working

> Focus on embedding activities for long-term operation e.g. live service

Multi-Site Digital Delivery

> Open additional DDCs if necessary

> Form teams and structures needed for cross-site delivery e.g. cross-DDC continuous improvement, DevOps, work prioritisation

> Ongoing continuous improvement

1–Intent to Deliver

The initial vision and plans for the DDC are formulated and communicated. Developing a new DDC requires sponsorship and buy-in from senior leaders within your organisation from the outset. They must secure the necessary funding and visibly champion a clear vision for the DDC, externally and internally. Achieving real and demonstrable progress will underline your commitment and build momentum. We recommend iteratively rolling-out components of the DDC - starting with an initial dedicated DDC mobilisation team responsible for leading the set-up of the DDC.

Digital delivery is as much about cultural change as it is about changing technology or delivery methodology. At this stage, you should focus on building familiarity with the agile way of working for anyone who will be involved in digital delivery. Strong leadership and cultural change are required during Intent to Deliver, and on an ongoing basis thereafter – they will take time to fully implement.

2–Mobilisation

Your dedicated mobilisation team should first focus on delivering the DDC MVP i.e. the minimum DDC components necessary to start small scale delivery. Once this is in place, you should set up one or two experienced exemplar scrum teams and start delivery, iterating the DDC as new lessons are learned. In parallel, continue to conduct the mobilisation activities you will need to effectively operate large-scale digital delivery, continuously improving the ways of working to increase delivery effectiveness. While mobilisation activities may vary between DDCs, we recommend you consider operating model design (including delivery processes, team structures and governance model), recruitment, learning and capability development, infrastructure and tooling (including DevOps), physical location, communications and work prioritisation.

3–Continuous Improvement and Scale

Continuous improvement involves both the ongoing development of the areas covered during mobilisation, while also expanding your focus to new areas which you need in order to effectively operate the DDC. All team members should be responsible for the continuous improvement of the DDC to ensure that it evolves to best fit its team members. Additionally, we recommend deploying a dedicated continuous improvement team to identify delivery issues and risks, and design and implement mitigating solutions. This is particularly important as the DDC ramps up. The continuous improvement team can also provide overarching design and development authority, setting standards and ensuring consistency and quality across teams.

4–Multi-Site Digital Delivery

Where greater digital delivery capacity is required, it may make sense to set up new DDCs in different geographic locations. You could re-use structures, materials, processes, technology, guidance and learnings from any existing DDCs to increase pace and maintain quality across the distributed network. You should also consider moving people from the new DDC into teams in more experienced DDCs to support the development of your team's skills and capabilities. Where managing multiple DDCs, we recommend considering the roll-out of certain cross-DDC functions including communications, continuous improvement, DevOps, work prioritisation and governance.

Conclusion

Building and operating DDCs is not easy. It requires change throughout the organisation and takes time to achieve. However, the benefits are clear. Specific activities may vary between organisations, but structuring activities based on the principles and framework highlighted in this paper will help you to quickly mobilise and scale your digital delivery capability.

HMRC and Accenture have used this framework to effectively operate the 250 person digital delivery centre in Newcastle. At the time of writing, the DDCN has delivered over 15 new public facing digital services and has been used as a blueprint for HMRC's subsequent centres.

Use this content to plan your DDC, then learn by doing.

Click here for the full Digital Delivery Unpackaged paper or go to hmrcdigital.blog.gov.uk and search for 'Digital Delivery Unpackaged'.