



Australian Government  
Digital Transformation Agency

**dta**

# Little book of digital





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# Foreword



Our careers are unfolding in incredible times and, unsurprisingly, this brings with it a range of challenges and opportunities.

The Australian Government, like others around the world, must continue to accelerate its digital transformation. People expect access to services on any device, at any time, anywhere. At the same time, governments are being asked to do more with less, prioritise investments and continually measure the benefits of what they do.

Digital transformation challenges not only how we lead our teams, but how we think about our work and our own leadership. This change isn't easy. We are being told to lead teams to 'work agile', be 'user-centred' and to 'deliver iteratively'. But what does this actually mean?

Digital transformation is as much about mindset as it is about tools, techniques and technology. Our research shows that without a common language and shared understanding of digital transformation, transition into this new way of working will be even harder.

This Little Book of Digital has been created to help align our language, our thinking and our ways of working. It covers a few foundational concepts and ideas on how to get started in your organisation.

It's a small start but, I hope, a helpful one.

I encourage you to share this book widely and keep talking about your transformation challenges and your successes.

We are in this together.

A handwritten signature in black ink, appearing to read 'Randall Brugeaud', with a long horizontal flourish extending to the right.

**Randall Brugeaud**

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# Digital transformation

**Digital transformation is about delivering improvements to policy, process and technology to better meet user needs.**

It uses evidence-based decision-making and technology to improve the experiences of people using both front- and back-end systems. It's a new way of working that encourages organisations to constantly improve and adapt to people's expectations in a fast-changing world.

Through digital transformation, organisations reform how they operate and how they deliver value to their users. It creates efficiencies and can lead to cost savings, as focus is placed on designing and building the right solution.

Nothing is as expensive  
as building the wrong thing.



## What it is

- user-centred
- innovation
- willingness to change
- developing new skills and capabilities across entire organisations
- evidence-based
- data-driven
- enabled by technology



## What it's not

- only digitising paper transactions or processes
- restricted to technology teams
- siloed skills and single-function teams
- focused on outputs
- driven by technology

## Beginning transformation

Transformation begins with building awareness of, and then building capability in, digital tools, practices and mindsets.

There is no one-size-fits-all to digital transformation and different organisations will be at different stages of their journey.

It requires changes in approach to many parts of government, including:

- funding models
- policy, processes and legislation
- organisational structures
- how work is managed and planned
- the required skills and capabilities within teams and across organisations.

Rather than trying to build all capabilities, start by understanding how digital supports better business outcomes for your organisation.

Some of the digital capabilities relevant to the public service include:

- **Technology** – APIs, machine learning, artificial intelligence, cyber security, blockchain, cloud, robotics, platforms and shared services
- **Data and analytics** – advanced analytics, process digitisation, strategy and governance
- **Users** – personalisation, privacy, user research, user journeys and life events
- **Design** – interaction, content, service, visual
- **Ways of working** – agile at scale, skill building, leadership, partnerships, exemplar projects, incubators/ innovation labs

# Getting started

## Get engaged

Join digital transformation communities at the Digital Transformation Agency (DTA) and in other agencies. Explore collaborative opportunities with others, including third parties, to drive change across government.

## Think long-term

Digital transformation will deliver benefits, but recognise that change will take time.

## Establish a digital transformation unit

Nominate digital champions across the organisation to support change. Oversee transformation efforts and digital practices through a central team also responsible for implementing the digital strategy.

## Undertake a digital maturity assessment

Explore how your organisation buys, builds and uses technology, along with how it delivers services to users. Understand and prioritise capability gaps.

## Set a digital strategy

Specify the vision for the organisation and the pace at which change will occur. Develop a roadmap for improving digital capabilities and practices that align to business outcomes.

# Products and services

**Digital transformation involves changing the way we deliver our work. It's a shift in focus from 'projects and programs' to 'products and services'.**

This way of working, called 'product management', is all about delivering better outcomes. The key difference is that projects have a clear beginning and end, but products are continuously improved as user needs evolve or until the offering is no longer needed.

A **service** is a series of interactions that help someone do something like getting a passport, applying for a rebate, or finding out the weather. In this case, 'service' does not mean customer service, but rather the people, business processes and technologies involved to achieve an outcome.

A **product** is a tool created to deliver the service. It could be a web application, a policy, a set of procedures, or a combination of these. Products are created, maintained and then retired when no longer useful. Services are typically made up of multiple products.

A **channel** is a way users engage with a service. Channels can be online (for example, web pages, chatbots, email or social media) or offline (for example, mail, telephone or face-to-face shopfronts).

A simple way to work out if something is a product or service is to describe it.

The service is a verb,  
the product is a noun.

For example, the service may be 'helping young Australian artists' and the product may be a 'grant'. Or the service is 'lodging a claim' and the products are both the policy and the tool that helps people lodge their claims.



or



## Projects versus products and services

A project is a way of achieving an outcome by setting a predefined scope, timeframe and budget. Examples of projects include website redevelopments or the purchase and deployment of a new piece of software.

While projects are common, they have limitations. When a project is complete, it typically moves to a business as usual (BAU) state where it then receives less funding and attention. This way of working is linked closely to traditional agency funding models. Projects often focus on outputs (completing work on time, within budget or scope) as the method to measure success.

A strong component of product management is ongoing measuring, testing and learning.

This helps demonstrate what outcomes and benefits have been gained and what needs to be improved. It makes it easier for teams to release new features, engage with users and remain current with technology.

## Projects:

- have a beginning and an end date
- focus on deliverables (the thing being built) and outputs (time, budget, scope)
- require extensive forward planning
- are commonly transferred to a BAU team upon completion
- are rarely funded or prioritised for further improvement (once in BAU).

## Products and services:

- have no strict end date
- focus on outcomes (benefits realised and lessons learned)
- are maintained until no longer needed or viable
- are continuously improved based on user feedback
- are ideally managed by the same team who designed and built them
- are funded long-term as required.



## Product management provides:

- greater visibility of what is being developed, including opportunities for re-use or simplification
- improved insights into why the product is being developed
- greater opportunity to learn and adapt
- greater return on investment because the product is designed to meet user needs
- more effective long-term management
- greater opportunities to collaborate and leverage existing channels because there is greater visibility over how products and services connect.

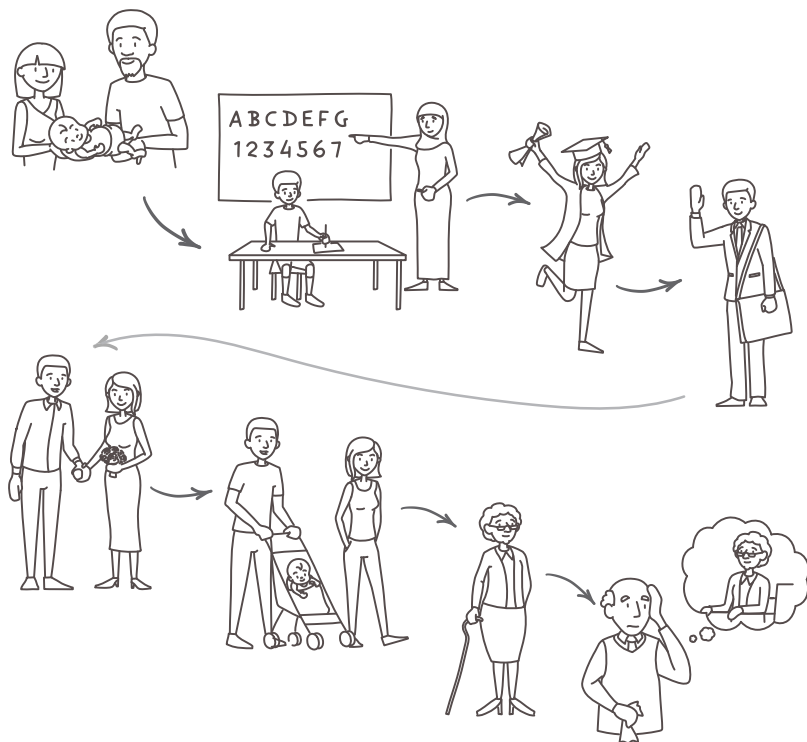
The Digital Service Standard applies to products and services rather than channels or projects.

At a high level, meeting the Standard involves ensuring products and services:

- meet user needs
- are iteratively improved upon
- are resourced appropriately
- use fit-for-purpose technologies
- meet legislative and policy requirements.

## Services and life events

Digitally mature organisations view their services from their users perspective as ‘life events’. For example, a person having a baby will need to interact with numerous organisations (government and the private sector) to access healthcare, employment-related support, childcare and financial rebates. Viewing the services as an end-to-end life event helps organisations find innovative solutions, collaborate across sectors, simplify processes and make improvements.



# Getting started

## Examine the user journey

Explore which services and products your agency is responsible for and check they are being managed and delivered based on user needs.

## Empower teams

Document a clear owner for each service and product your agency is responsible for. Set a high-level, outcomes-based vision for the service, but don't be prescriptive about how your teams achieve it.

## Identify interactions

Know how your service interacts with other services, products and channels, especially across agencies and third-party providers. Begin to view services as part of life events.

## Focus on outcomes

Commit to ways of working that deliver value early and often.

## Measure benefits

Consider how you will measure the success of your service early. Collect data and report publicly.

# Multidisciplinary teams

**Multidisciplinary teams (MDTs) have all of the skills required to deliver and improve products and services.**

Traditionally, organisations have divided capabilities across functional areas. In contrast, MDTs draw members from a range of disciplines. MDTs can fluctuate in size, but consist of a core group who work together to research, build and improve the product or service. They have:

- a broad mix of technical and expert roles and digital skills
- the right amount of people and resources to deliver the product or service
- the ability to understand the problem through objective research and data analysis
- the ability to change and adapt as knowledge of the products and services evolve
- the confidence to make quick decisions based on evidence
- a focus on outcomes over outputs.

MDTs work in ways that are agile and they follow user-centred design practices.

Senior executives set the vision for the overall service and are crucial to its success.

Leaders:

- are responsible for the experience of their service, ensuring user needs are met
- empower their teams to continuously deliver evidence-based improvements
- understand the basic principles of agile delivery and user-centred design
- explore opportunities to reuse, simplify and increase efficiencies across products and services
- help to remove barriers and resolve issues
- protect and champion the work of their teams
- may oversee several MDTs who form part of the service.





## **Common challenges**

### **There is limited understanding of the roles and responsibilities of MDTs**

Learn the basic make-up of a MDT by reading the role descriptions below or visit [www.dta.gov.au](http://www.dta.gov.au)

### **There is limited understanding of the value of MDTs.**

Establish a small MDT to work on a manageable and meaningful problem to demonstrate its value internally. Support the team and share learnings and successes. As confidence and capability improves, create more MDTs to replace traditional ways of working. Learn from colleagues within and across agencies.

### **It is hard to attract, retain and build digital talent.**

Build organisational capability by hiring suitable digital talent, by transferring knowledge from contractors, and by promoting training and on-the-job learning. Explore your recruitment strategies and advertise widely. Build a culture and workplace that supports digital talent.

**High-performing staff are spread across multiple products and projects.**

Consider how continual context-switching reduces performance and productivity and leads to burnout. Prioritise work to ensure staff have a clear, singular focus. Limit people being spread across multiple products or projects at once. Develop digital talent retention strategies which support work-life balance.

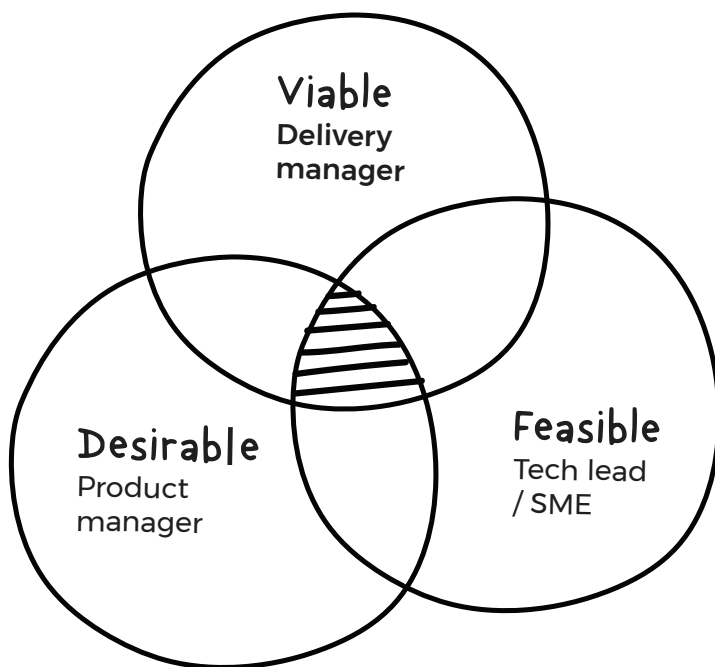
**Managers neglect cross-skilling and collaboration.**

Promote collaboration to achieve diverse thinking and find solutions quickly.

Encourage cross-skilling to ensure staff build understanding and empathy and can bring their expertise to the problem.

## Roles

The **product manager** sets the vision and priorities and ensures the product meets user needs. A **delivery manager** supports the team to deliver results quickly, learn from efforts and make improvements. The **technical lead** or **subject matter expert**, or often both, ensures the product is created and managed in line with technical and policy requirements.<sup>1</sup> A successful team seeks to balance a solution which is desirable, feasible and viable.



<sup>1</sup> Concept adapted from Henrik Kniberg 2012, Agile Product Ownership in a Nutshell.  
<https://www.youtube.com/watch?v=502ILHjX9EE>



### Service manager

Experienced senior leader responsible for the overall delivery and operation of the service. Is responsible for the user experience and ensuring the quality of the service.

**Involvement:** across all stages, as needed.



### Product manager

Has overall responsibility for the product and team. Works with the team to create the vision for the product, and sets the day-to-day priorities to fulfil that vision and ensure the team delivers. Manages expectations and has input into service-level prioritisation.

**Involvement:** across all stages.



### Delivery manager

Supports the team, removes blockers to progress, and coaches the team on agile tools and processes.

**Involvement:** across all stages.



### Tech lead

The most senior technical person in the team. Helps to prioritise technical work and requirements, coaches technical staff, identifies technical options and informs architectural approaches.

**Involvement:** across all stages, as needed.



### **Subject matter expert**

Provides in-depth expertise and high-level knowledge (as an authority) in a particular subject area, including policy, legal, regulatory, financial and other disciplines.

**Involvement:** across all stages, as needed.



### **User researcher**

Helps the team develop a deep understanding of users, their needs and helps test the service.

**Involvement:** across all stages.



### **Service designer**

Works from the user research to identify how a service could be delivered so that it better meets user needs.

**Involvement:** across all stages, particular focus in Discovery.



### **Content designer**

Makes sure written, visual and interactive content is clear and meets user needs.

**Involvement:** across all stages, particular focus in Alpha and Beta.



## Interaction designer

Responsible for designing accessible and user-focused digital interfaces, and making use of established design patterns.

**Involvement:** across all stages, particular focus in Alpha and Beta.



## Developer

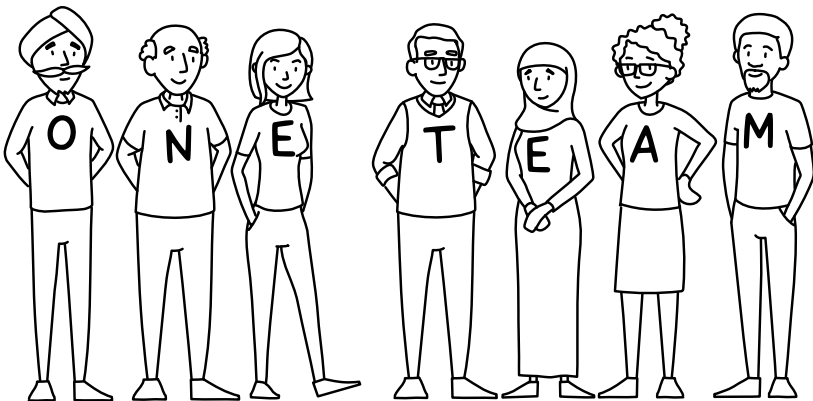
Builds quality, well-tested software, sites and architecture according to standards and best practice. May take the role of tech lead if no other senior technical person is needed.

**Involvement:** across all stages, particular focus in Alpha and Beta.

When something is worked on,  
something else is not worked on.  
Set priorities so teams are focused on  
delivering the right thing.

Teams may also need other roles at different stages of the service design and delivery process, such as:

- information architect
- content strategist
- business analyst
- web operations engineer
- support operations staff
- ethical hacker
- performance analyst
- IT security specialists
- procurement and contract managers.



# Getting started

## Establish multidisciplinary teams

Pull together the right people at the right time from different functional areas.

## Start small

Prove the value of MDTs through pilot initiatives. Learn through experience before attempting larger pieces of work.

## Limit distraction

Ensure teams are focused on a single priority. Limit context switching.

## Commit to priorities

Place resources in the highest value products and services and retire services no longer delivering value.

## Empower people

Encourage new ways of working. Help your team understand the problem and encourage solutions based on evidence not preference.

## Get involved

Be part of the team by being available, responsive and collaborative. Ask to see the work. Remove barriers — don't be a barrier.

# Agile

**Agile is a set of principles, behaviours and approaches for delivering work. Many organisations and governments now successfully operate in agile.**

Agile is about:

- delivering products and services by focusing on outcomes
- breaking large bodies of work into smaller chunks
- testing, learning and iterating
- delivering value early and often
- making evidence-based decisions using research and data.

Agile teams are able to create, adapt and improve products and services over time. Agile embraces change and learning ‘as you go’, which can make it look unpredictable at first. In fact, agile is focused on sustainability and predictability, and requires as much discipline as other project management methods.

Adopting agile won’t produce instant improvements in quality and efficiency. New agile teams will probably experience some discomfort and disruption. It takes practice, discipline and persistence to see results.



## What it is

- an umbrella term for a range of ways of working, including frameworks such as Scrum, SAFe (Scaled Agile Framework) and Kanban
- a fit-for-purpose approach to delivering usable increments
- transparent and accountable



## What it's not

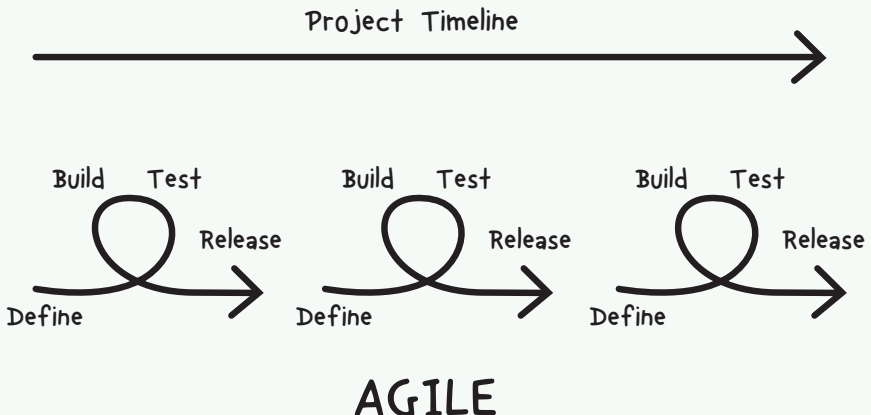
- just a buzzword
- undocumented or unstructured
- unpredictable
- difficult to fund

## Agile versus waterfall

**There are key differences between agile and waterfall (traditional project management).**

### Agile:

- uses shorter plans with multiple iterative cycles
- is flexible and responsive to changes and new information
- relies on data and insights from ongoing research to inform the right solution
- delivers benefits continually through smaller releases.
- aims for predictability through sustainable work patterns

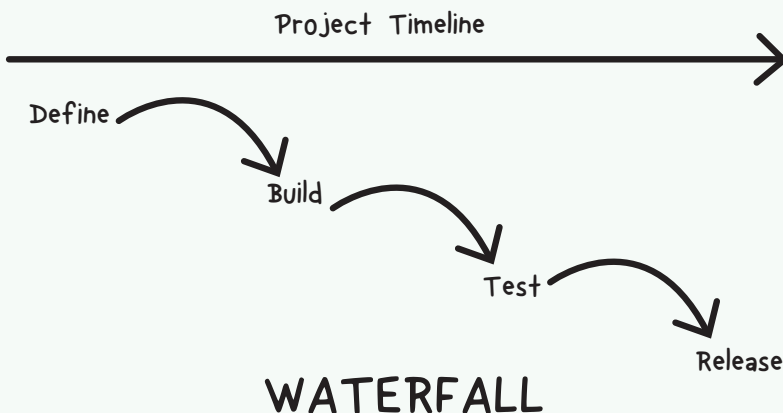


There are benefits to both. But these can be diluted if the methodologies are mixed.

Choose the right methodology for the work you are doing. For digital products and services, agile is usually best.

### Waterfall:

- involves extensive upfront planning
- solutions are identified before the start of the project
- tries to predict how and when projects will be completed
- relies on sequential activities happening on a strict timeline
- benefits are realised at the end of the project.



## Common terms

### **Backlog**

A list of tasks to be completed to meet a specified goal.

### **Blocker**

Anything that slows or stops the progress of work.

### **Iteration**

A new increment, version or update to a product or service.

### **Showcase**

An informal demonstration and discussion of completed work, usually across teams or a whole organisation.

### **Sprint**

A defined time period (usually two weeks) in which to complete work.

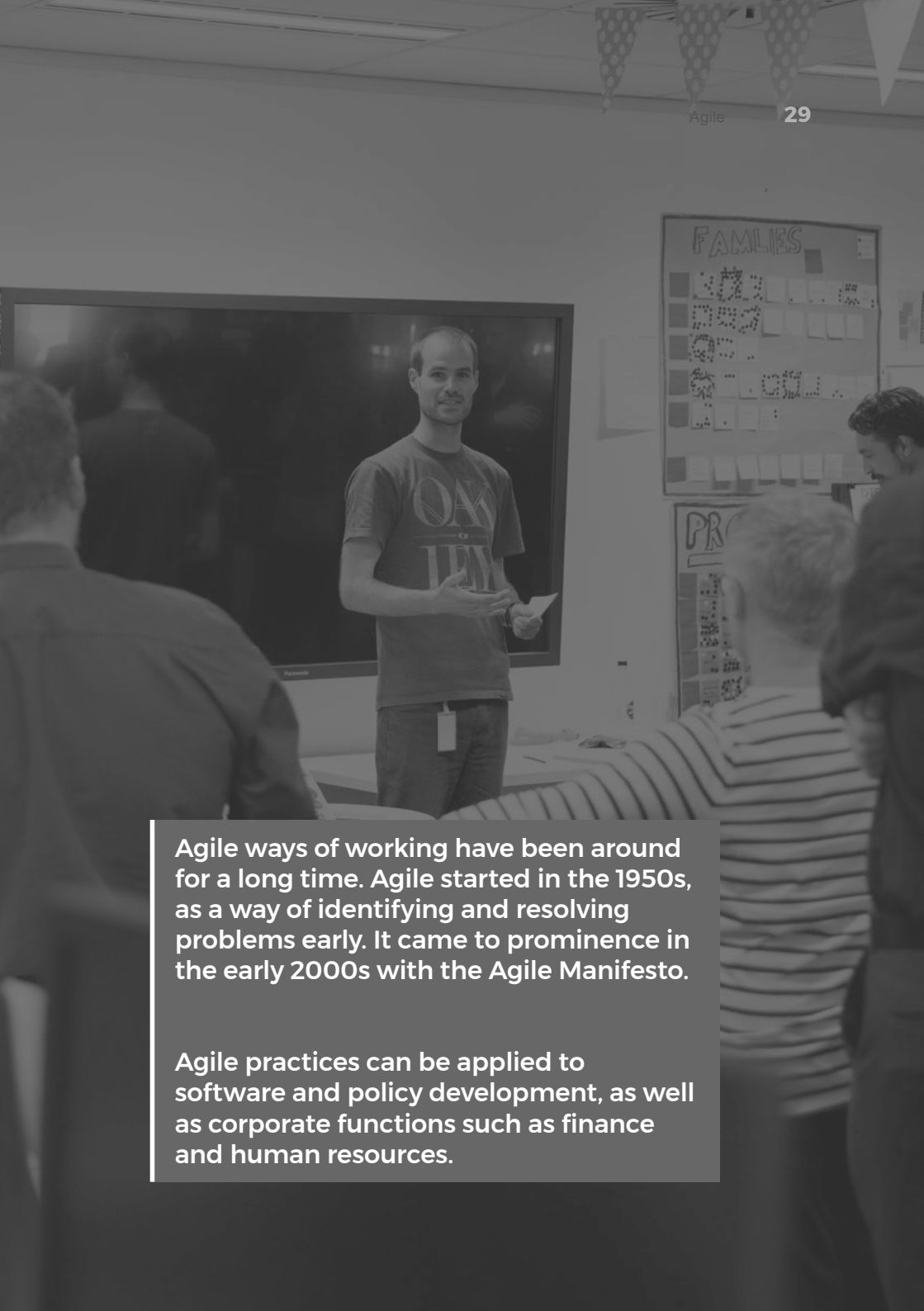
### **Stand-up**

A daily meeting where the team discusses progress and identifies blockers.

### **Retrospective**

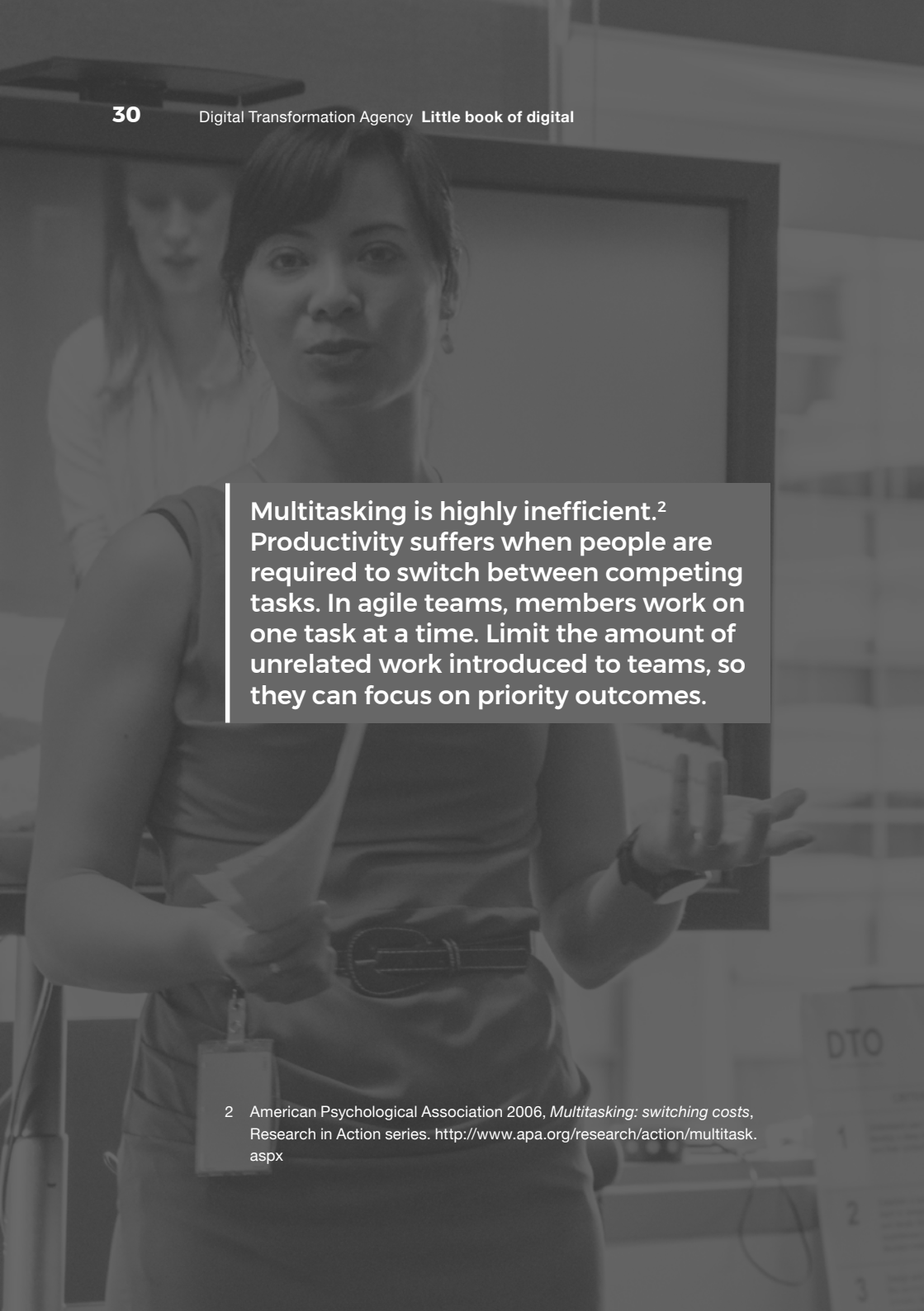
A reflective meeting following a sprint or release, where the team reviews how they worked together. The goal of a retrospective is to improve team communication and processes.

Executives don't have to be experts in agile to lead agile teams. But understanding the basic principles and benefits helps support rapid delivery and improvements.



Agile ways of working have been around for a long time. Agile started in the 1950s, as a way of identifying and resolving problems early. It came to prominence in the early 2000s with the Agile Manifesto.

Agile practices can be applied to software and policy development, as well as corporate functions such as finance and human resources.



**Multitasking is highly inefficient.<sup>2</sup> Productivity suffers when people are required to switch between competing tasks. In agile teams, members work on one task at a time. Limit the amount of unrelated work introduced to teams, so they can focus on priority outcomes.**

2 American Psychological Association 2006, *Multitasking: switching costs*, Research in Action series. <http://www.apa.org/research/action/multitask.aspx>

# Getting started

## Set a vision

Set up multidisciplinary teams who share one goal: creating great services for users.

## Keep things simple

Limit work in progress, re-use work across teams and reduce waste.

## Develop the mindset

Support agile ways of working, champion them and protect your teams from distractions.

## Expect change

Support teams to use research to iterate designs and fix problems.

## Encourage continuous improvement

Establish short feedback loops so teams can learn fast, apply new thinking and work better.

## Ask good questions

At sprint reviews or showcases ask your teams:

- What problem is this solving?
- What is the value to our user(s)?
- How have our assumptions changed?
- What have we learned?

# User-centred design

**User-centred design (UCD) is an approach to solving problems that revolves around people and their needs.**

Not meeting user needs in government forces people to more expensive channels such as phone and service centres, and can damage public trust.

Agencies may have their own preferences for referring to their users, so it's important to ensure there is a shared understanding. Some consider 'users' to only mean end users, that is, the public. However, under the Digital Service Standard, user means everyone that uses or is impacted by the service (including people who build, maintain or rely on it).

User-centred design is also known as user experience design (UX), customer experience design (CX) or human-centred design (HCD).



## What it is

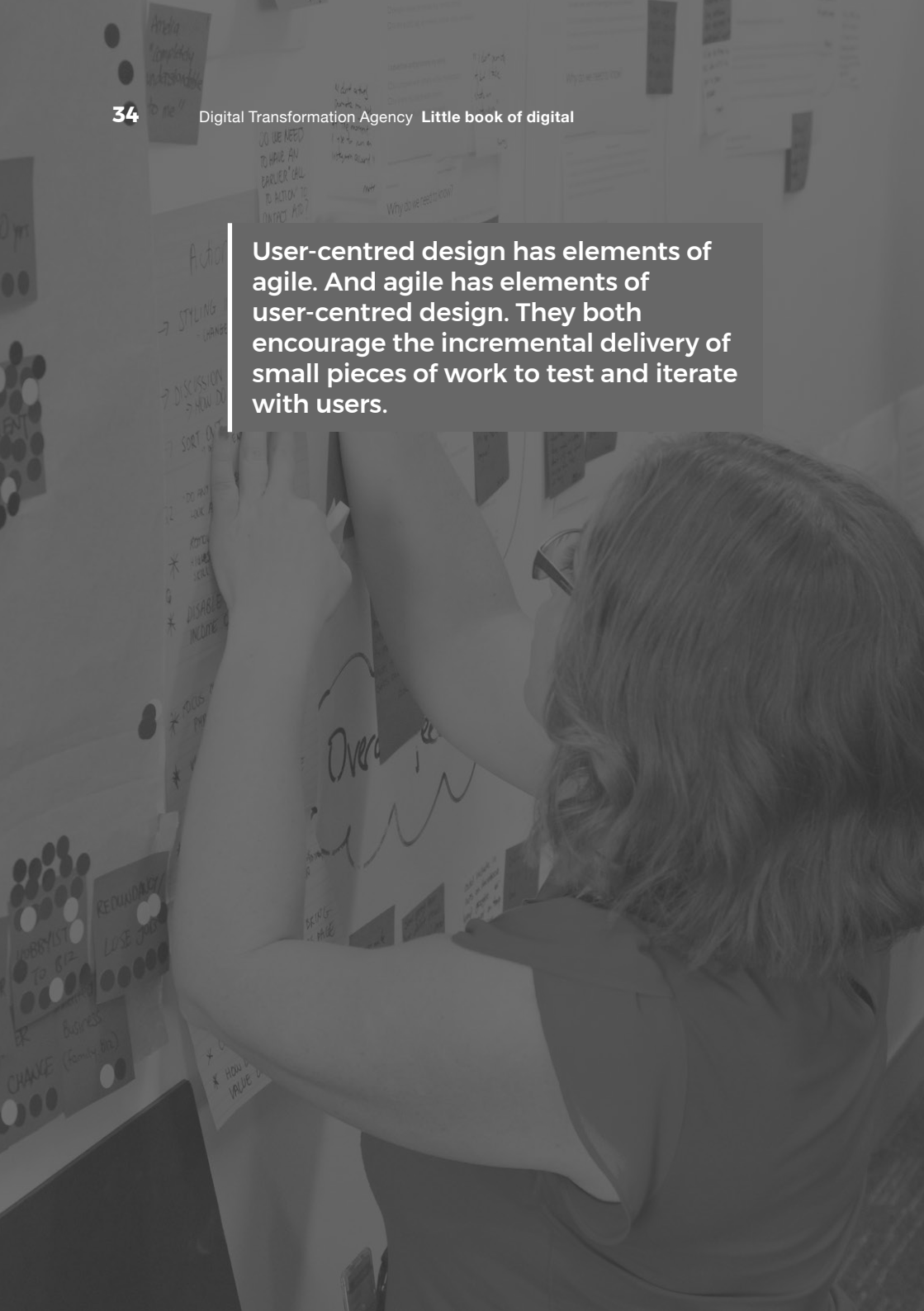
- understanding people and how they interact with government by using specialist tools and research techniques
- learning about users, forming hypotheses and testing ideas
- making it easier for people to achieve an outcome
- using empathy to understand the context (and possible obstacles) of interactions
- testing to ensure products work for people



## What it's not

- making assumptions about people and what they need
- giving users anything they want
- only about end users
- feeling sorry for users
- stopping compliance activities
- assuming issues with products are due to human error

**User-centred design has elements of agile. And agile has elements of user-centred design. They both encourage the incremental delivery of small pieces of work to test and iterate with users.**

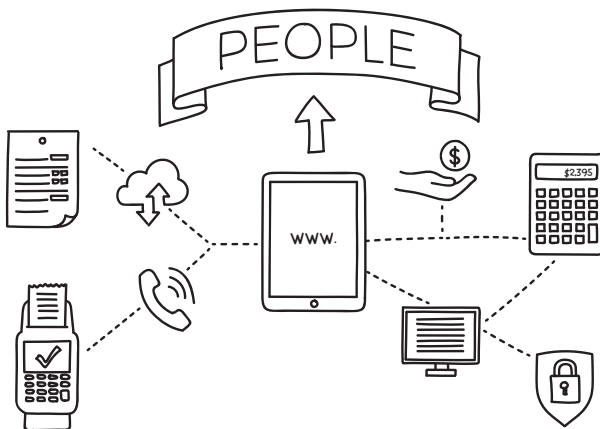


It's not just end users. It's everyone:

- clients
- customers
- ministers
- internal staff
- recipients
- industry groups
- peak bodies
- stakeholders
- interest groups

### User needs not user wants

User-centred design is not about giving users everything they want. People have a range of interactions with government which they may not otherwise choose to participate in (such as paying fines or meeting compliance obligations). The aim is to make government interactions as simple, easy and fast as possible.



## Common terms

### Contextual inquiry

Interviewing and observing users to learn how they interact with the service, and why they do what they do.

### Co-design

Involving users in the design process to ensure their needs are met.

### Journey maps

A visual representation of a user's interaction with a service, typically described in a series of activities or stages.

### Pain points

Problems users experience when trying to interact with a service.

### Persona

A representation of users, created from research with real people, that reflects their needs, goals and behaviours.

### Service design

Planning and organising internal processes, policy and organisational structures to deliver more effective services.

### Usability test

Evaluating a product or service by testing it with real users and seeing how it performs to determine the ease of use and user satisfaction.

### User interface (UI)

The visual part of a system or application which the user interacts with.

# Getting started

## Understand your users

Learn who they are and why they interact with your service.

## Encourage objectivity

Make decisions based on data and evidence rather than opinions.

## Build empathy

Involve the whole team in user research, encourage participation.

## Share research

Showcase findings and insights, be willing to share with others.

## Invest early

Fund work to understand user needs before you start deciding on or building solutions.

# The Digital Service Standard

**The Digital Service Standard (the Standard) is a mandated set of best practice principles to help teams build government products and services that are simple, clear and fast.**

The Standard is not a checklist or a tool for compliance, but rather a guide for how teams should work. Many agencies already meet some of the criteria, including legislated requirements such as security and accessibility.

The Standard emphasises:

- agile ways of working
- user-centred design
- appropriate use of technology
- evidence-based decision making
- digital take-up
- progress over perfection.

# The service design and delivery process helps teams to:

## **Deliver the right thing**

Focus on building end-to-end services that meet users needs.

## **Increase adaptability**

Work incrementally and test often, learning and adapting as needed.

## **Deliver quickly**

Frequent incremental releases increase value for users and allow actionable feedback.

## **Manage risk**

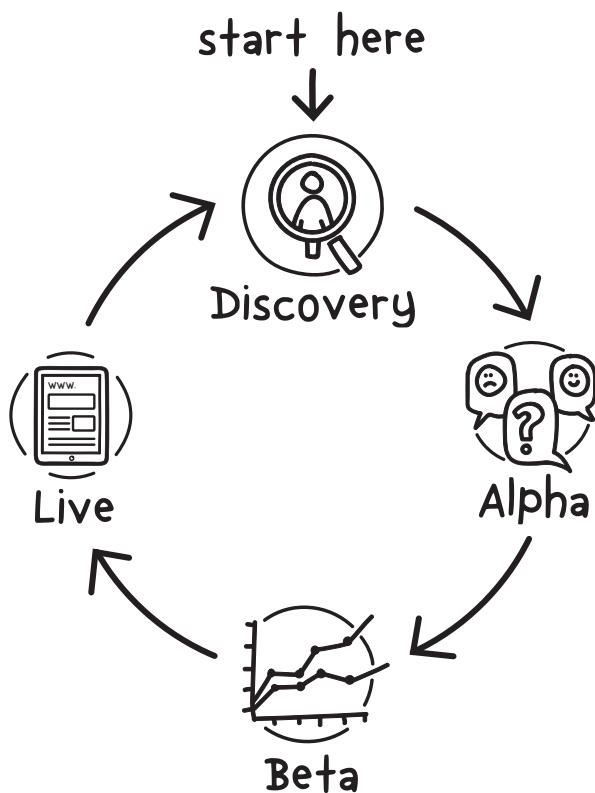
Allow teams to break work into smaller tasks to quickly validate hypotheses.

## **Increase visibility**

Demonstrate work openly to show progress and reveal potential issues.

## Discovery, Alpha, Beta, Live

The Standard promotes a user-centred approach to delivering government services. It uses a four-stage approach called the service design and delivery process, also known as Discovery, Alpha, Beta, Live.







## Discovery

Discovery is about spending time to sufficiently understand the problem. This helps make sure the developed solution, rather than deciding upfront what the solution should be.

In this stage, the team:

- examines how the service is currently delivered
- explores tools and systems used to provide the service
- researches user needs and barriers
- scans the policy and political environment
- forms hypotheses to test in Alpha.

Discovery generally takes a few weeks.



## Alpha

Alpha is about prototyping ideas and developing the minimum viable product. This is the best solution that meets some user needs and can be developed quickly.

In this stage, the team:

- tests hypotheses
- prototypes several ideas
- plans how the solution will be developed (for example technology, security, content and accessibility requirements).

Sometimes teams run multiple Alphas concurrently when releasing larger or more complex pieces of work (for example, planning a new online payment system and updating policy at the same time).

Alpha generally takes a few weeks to a few months.



## Beta

Beta is about developing the solution which will be tested by real users and improved upon before being released. Development may include a technical build or purchase of new or improved sites, software or architecture; changes in policy or process; or often a combination of these.

In this stage, the team:

- develops the solution
- meets legal and policy requirements
- tests with a small cohort of selected users (Private Beta) before a wider audience (Public Beta)
- iterates and measures the solution.

Existing services are usually run in parallel to a Beta service. The new solution is typically badged as 'Beta' to help users understand it is new and undergoing testing.

Beta generally takes a few months.



## Live

Live is about releasing and maintaining the new solution, and retiring the prior service or product, if one exists. Live is not an end point.

In this stage, the team:

- continues to understand and meet user needs
- adds new features to improve the service
- measures the the success of the service (e.g. user satisfaction and digital take-up)
- maintains the service as long as it is useful
- retires the service when it no longer meets user needs.

This stage is similar to a ‘business as usual’ function of projects; however, the work is resourced appropriately, prioritised and supported. Ideally, the team that developed the solution continues to maintain it, rather than it being handed over to another team.

Live lasts as long as the service is viable. New features or releases progress through Discovery, Alpha and Beta stages as necessary.

## Common terms

### **Feature**

A small improvement to the product which can be developed and released as a standalone component.

### **Hypothesis**

A starting point where assumptions are further investigated in order to build evidence about a potential solution.

### **Minimum viable product (MVP)**

The minimum solution the team can build that meets user needs but delivers value quickly and can be iterated and tested for improvements.

### **Prototype**

A visual or interactive tool to test ideas and share concepts.

Most OECD governments have a digital service standard. Ours is tailored for Australia, but shares many principles with these other standards.

# Service design and delivery process

Focussing on users' experience to design and deliver better solutions.

Discovering what users need to understand and deliver high quality services that create value for users and deliver better solutions.

## DISCOVERY

### ALPHA

### BETA

### LIVE



## Getting started

### **Support your team in new ways of working**

Ensure they understand and apply the Digital Service Standard.

### **Build capability**

Hire digital talent, encourage on-the-job learning and find experts to coach and mentor staff in new ways of working.

### **Track progress**

Engage with your teams to understand how they are progressing and sharing lessons learned. Ask your teams to show you (not tell you) what they've been working on at regular intervals.

### **Experiment early and safely**

Prototypes are made to be tested; only keep them if they show promise. Increase the fidelity of prototypes as the team becomes confident the concept is right.



# Further reading

The Digital Transformation Agency provides a range of resources to help agencies improve their digital maturity.

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