



Australian Government  
Digital Transformation Agency

# NO NO NO

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**Digital  
Review**

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## Digital Review 2021 | F01 | 08.12.21

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### User guidance

This report explores the Australian Government's digital capability. It is based on information collected through the Digital Review 2021 data collection from the 20 agencies comprising the Digital Leadership Committee and Secretaries Digital Committee.

Enquiries regarding this document are welcome at: [digitalreview@dta.gov.au](mailto:digitalreview@dta.gov.au)

**The Digital Review delivers a baseline measurement of digital capability across the APS. The data collected will help decide which strategic interventions are best placed to drive government's digital transformation.**

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# Key figures

**20**

Agencies

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**80%**

Government Expenditure

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**74,120**

Data Points

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**350**

Critical Systems

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**190**

Maturity Statements

# CEO's foreword

The Australian Government has a bold vision – to be a world-leading digital government. This aspiration will see agencies apply technology to its full potential as they work to realise more responsive policy, less red-tape and better services.

This Digital Review forms a baseline of the Australian Government's digital capability, assessing 20 functional areas of digital capability across agencies, many for the first time. This baseline will underpin measurement of progress associated with the government's digital transformation agenda.

Measuring Australian Public Service (APS) digital maturity is not a simple task. Partnering with both APS and external experts, a bespoke model has been prepared, and underpinned by more than a dozen proven frameworks for digital maturity measurement. The model comprises 5 pillars that together measure an agency's ability to:

1. Collaborate with industry and other government agencies.
2. Attract, recruit, engage, and support staff with digital and ICT capabilities, and provide training and development opportunities.
3. Navigate and inform the development of policies and regulations that enable digital and ICT capability.
4. Deliver core functions, services, and projects in an efficient, effective, and stakeholder-centric way.
5. Build, sustain, and manage flexible and cost-effective technology and data platforms that drive high-quality outcomes.

Based on this model, the findings and recommendations set out in this Digital Review highlight the strengths of the APS, including our confidence in building productive alliances across all sectors. It also identifies areas for improvement. These areas include overcoming barriers that are impeding our progress to successfully implement Whole-of-Government frameworks and architecture. These findings and recommendations will allow us to move forward, unified as one APS, to enhance and drive the government's digital transformation and deliver high-quality digital services that benefit all Australians.

I would like to acknowledge the Digital Leadership Committee and Secretaries Digital Committee agencies for all of their contributions and for providing the resources to participate in this review.

More than 80 staff across the 20 participating agencies engaged with the DTA to develop the survey instruments. Many more have been engaged in securing the Digital Review's 74,120 data points. It has been encouraging to see the shared commitment across agencies to ensuring the Digital Review is delivered successfully.

In the future, we will harness this shared commitment as we leverage the Digital Reviews' insights, and continue driving and coordinating the digital transformation of the Australian Government.



**Chris Fechner**  
Chief Executive Officer

Digital  
Transformation  
Agency

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# Introduction and overview

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01

# Executive summary

The Australian Government is committed to becoming a global digital leader by 2025. In support of this ambition, and in response to a recommendation from the *Our Public Service, Our Future, Independent Review of the Australian Public Service* led by David Thodey AO (the Thodey Review), the Digital Review was commissioned to catalogue, audit and assess agency digital and ICT maturity and capability.<sup>1</sup>

The Digital Review surveyed 20 agencies, accounting for over 80% of government expenditure and collected upwards of 74,000 data points. It documented more than 350 critical systems, 75 critical data sets, 70 internal digital and ICT policies and strategies, 125 contracted vendors and alliances, and 65 shared platforms and services.

In providing a baseline of digital capability, the Digital Review has identified areas where the Australian Government is ahead of other organisations. This includes some, but not all, aspects of the 5 pillars of digital capability investigated by the Digital Review, such as:

- developing strategic alliances and partnerships to build capability
- change, supplier, and project management capabilities
- policy, particularly in developing technology strategies
- implementing effective processes and controls supporting the sustainment of digital and ICT capabilities
- acknowledging the value of data and service integration to the development of a single view of a stakeholder, although achieving this single view is a work in progress for many agencies.

The Digital Review has also identified areas of relative weakness, including areas which would benefit from greater focus to help achieve the 2025 goal such as:

- legacy technologies and technical debt-constraining transformation
- inconsistency of agency practices for collecting, managing, and reporting information about their digital and ICT estates
- inconsistency in tracking benefits realisation for investments
- insufficient resourcing and investment to ensure effective delivery and sustainment of capability, and limited Whole-of-Government coordination to enable focused intervention to fill gaps
- lack of a consistent and interoperable approach across government to manage the delivery and sustainment of digital and ICT capabilities
- gaps in SES leadership knowledge and experience on how to cultivate and embed transformation change
- inadequate platforms to support cross-agency collaboration, data and information sharing, and digital and ICT capability delivery.

<sup>1</sup> Department of Prime Minister and Cabinet (PM&C). (2019). *Our Public Service, Our Future: Independent Review of the Australian Public Service*. Canberra: Australian Government, pp157. (Henceforth PM&C. *The Thodey Review*)

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**Only 1 of 20 agencies participating in the Digital Review agreed that funding was sufficient to implement major change programs, decommission or transform legacy systems.**

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**Only 35% of agencies reported having a benefits monitoring process throughout the lifecycle of their digital and ICT projects.**

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# Key insights

Key insights emerging across the 5 pillars of digital capability are summarised here, with more detail included in the pillar by pillar analysis later in the report.



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Most agencies reported having the capability to support a wide range of alliances.

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Over 170 unique digital alliances were identified. These were mostly with private ICT providers and other Commonwealth agencies. Only a small proportion of alliances were with other jurisdictions, non-commercial organisations and academies.



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Only half of agencies map digital and ICT capabilities to roles. There is also significant reliance on external talent for digital and ICT capability, with nearly half the digital and ICT workforce consisting of contractors and other service providers.

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Only a quarter of agencies support their staff with learning and development programs to innovate and lead transformational change.



policy

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Agencies broadly endorse policies which deliver and enable Whole-of-Government marketplaces, platforms, and shared services, but reported often lacking funding, capacity, and capability to develop, sustain, or utilise them.

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The lack of a common framework for data collection, management, and sharing, and the lack of technology to support shared approaches to these activities is a substantial barrier to cooperation and sharing between agencies.



process

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Smaller and medium sized agencies dedicate a larger portion of their ICT funding to BAU spend, indicating those cohorts require further support to fund priority transformational digital and ICT projects.

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Agencies do not consistently track benefits and measure stakeholder satisfaction, both of which inhibit benefit realisation across the project lifecycle.



tech  
and  
data

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Agencies believe their core systems provide a sufficient platform for building digital front-office capabilities, but few can access a single view of their stakeholder.

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Agencies believe they have effective systems and controls for data sharing. However, they generally lack strong data governance, common data vocabularies, and data catalogues and registers. This makes retrieval of information difficult and inhibits the discovery and usability of data across agencies.

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Agencies lack a common definition and understanding of shared services and reuse. Agencies interpreted the scope and meaning of reuse in very different ways when responding to survey questions.

# Key recommendations

Eight key recommendations are highlighted in this section as benefiting from additional focus. These recommendations are directly linked to review findings that identify issues and risks that are hampering governments ability to achieve the 2025 vision for digital transformation.

Other recommendations in this report are not included in this section as they are significantly addressed through a range of existing measures underway, including:

- work already underway within the Digital Transformation Agency (DTA) including the emerging investment oversight and assurance responsibilities
- in-flight work across the APS to modernise and transform agency operations and services, with uplifting digital maturity in key areas at the centre of these efforts
- consultation with key external agencies and initiatives such as APS Reform, Australian Public Service Commission (APSC) and Australian Cyber Security Centre (ACSC).



## R5

Ensure SES leaders are able to lead and embed transformational change in support of the government's digital aspirations for 2025 and beyond.



policy

**R8**

Investigate Whole-of-Government approaches to developing and effectively maintaining a comprehensive model digital policy suite and associated digital policy lifecycle management approach for agencies.

**R9**

Identify and address structural barriers to collaboration across agency digital functions and digital and ICT projects and programs.

**R11**

Seek to address ongoing funding challenges associated with digital and ICT across Whole-of-Government, initially by developing an alternative sustainable funding framework spanning the full lifecycle of digital development and delivery which ensures digital products are continuously improved, meet increasing expectations and do not create technical debt.



process

**R13**

Strengthen guidance for agencies on agile financial management to increase uptake of agile approaches to project, product, and sustainment.

**R14**

Develop and mandate a Whole-of-Government digital and ICT initiative benefits realisation, outcome tracking, and implementation oversight framework to ensure initiatives deliver expected results.

**R17**

Develop guidance to support agencies in aligning to common reporting standards for covering key dimensions including risks and benefits.



tech  
and  
data

**R18**

Undertake analysis of effective benchmarking approaches in government service quality, performance, and stakeholder satisfaction to inform future implementation and enable continuous improvement.

# In-flight work

Work is already underway across the APS to modernise and transform agency operations and services, with uplifting digital maturity in key areas at the centre of these efforts.

This page summarises some of this in-flight work as it relates to findings emerging from the Digital Review.

Later in the report we explore in more detail the ongoing in-flight work and how that work addresses the Digital Reviews' remaining 16 recommendations. alliances.



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The Digital Review found a need to test the value and efficacy of existing Whole-of-Government marketplace and procurement arrangements.

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The DTA is conducting a Digital Sourcing Review that will report on the current ICT and digital sourcing state across government and possible options to optimise the processes in the future. This analysis could be used to identify any gaps or limitations, and to strengthen guidance for agencies on achieving quality alliances.

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Other identified inflight work also includes the APS reform agenda, DTA's Whole-of-Government Architecture, DTA's Whole-of-Government Reuse Catalogue and shared corporate services such as the Services Australia's Service Delivery Office.



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The Digital Review highlighted a clear need to uplift the digital and ICT skills and capabilities of the APS workforce. It is vital to first map any gaps that exist so that initiatives can target these areas in their resourcing and development.

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The APSC is addressing this through the in-flight work of the Digital Profession, the APS Workforce Strategy 2020-2025 along with APS access to resources such as the 'Skills Framework for the Information Age'. This work intends to set a standard of excellence for digital professionals in government, and enable the APS to deliver world-leading services for Australia.

policy

Collaboration and data-sharing across Whole-of-Government programs was an area the Digital Review found had existing challenges.

The Office of the National Data Commissioner (ONDC) has developed guidance for agencies on how to manage their data more effectively, supporting the alignment of responsibility, objectives, governance and data asset management. This work, called the Foundational Four, continues to be operationalised and adopted throughout the APS.

Other identified inflight work also includes the Department of Finance’s Transparency Portal, Australian Bureau of Statistics Data.gov.au, DTA’s Digital Contestability Standard, DTA’s Investment Oversight Framework and Digital Service Standard.

process

The Digital Review identified opportunities to promote use of agile funding methods and improve approaches to reporting of investment benefits.

The DTA is seeking to address these challenges, by supporting teams to develop their skills in agile approaches and ensuring reporting mechanisms and standards are aligned.

The APSC is contributing through the Digital Profession, the APS Workforce Strategy 2020-2025 along with providing the APS access to resources such as the ‘Skills Framework for the Information Age’. Other initiatives include the APS reform agenda and the Service Delivery Office.

Other identified inflight work also includes the DTA’s whole of government Reuse Catalogue, DTA’s Hosting Certifications Framework, DTA’s Digital Contestability Standard, DTA’s Investment Oversight Framework and DTA’s Digital Service Standard.

tech and data

The Digital Review found that agencies could further develop their maturity with user-centred design, data management and cloud strategies.

The DTA has ongoing initiatives such as Whole-of-Government Reuse Catalogue, Digital Identity, myGov, Digital Service Standard, and the Hosting Certifications Framework.

Other identified inflight work also includes Department of Finance’s Transparency Portal, the Department of the Prime Minister and Cabinet’s (PM&C) Citizen Experience Survey , Office of the National Data Commissioner ‘Dataplace’ platform, the APS reform and other data and cyber security initiatives being jointly led such as National Security Framework and associated Action Plan and Hardening Government IT.

**The Digital Review has shown that the Australian Government is operating at an advanced level of digital and ICT maturity. The recommendations presented in this report are designed to ensure we are on track to become a global digital leader by 2025.**

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# Overview and background

The Secretaries Board commissioned the Digital Transformation Agency (DTA) to conduct a Digital Review, auditing Whole-of-Government digital and ICT maturity, capability, needs and risks. The outcomes of this would support the development of a range of Whole-of-Government outcomes, including:

- a digital and ICT blueprint
- a digital workforce strategy and centres of excellence model
- transformation and integration of digitally enabled public services and government products
- adoption of common tools and coordination of digital and ICT delivery
- changes to ways of working in digital and ICT delivery
- improved sharing of data and making data open by default
- streamlining and simplifying the funding, structure, and management of digital and ICT functions.

An initial scoping study was conducted in the second half of 2020, which defined the core data to be collected and the 5 pillars of digital capability to be surveyed (alliances, people, policy, process, and technology and data).<sup>1</sup>

In early 2021, a series of 5 survey instruments were developed to support collection of data across each of these pillars. These were integrated with existing DTA instruments from the ongoing Approved Programs Collection to reduce agency burden and duplication.<sup>2</sup> The 5 data survey instruments were:

1. The **Maturity Statements Survey** which sets out a range of qualitative statements to elicit the agency's perspectives on its own digital and ICT capability and performance.
2. The **Audit Data Capture Survey** which captures primarily quantitative and factual data about the agency's digital capability.
3. The **Technology Audit Collection Survey** which requests detailed information about the top 20 systems held by an agency by whole-of-life cost, examining capability, function, value, cost, delivery model, data holdings, opportunities, reusability, issues, risks, and security concerns.
4. The **Business-as-Usual Form** which is an existing instrument and has been expanded to capture information on ongoing business-as-usual ICT capability, sustainment, and service delivery.
5. The **Project Collection Delivery Form** which is also an existing instrument and has been expanded to collect information on ongoing digital transformation projects, including capabilities to be delivered, key dates, risks, issues, benefits, current status and delivery status trend, and other critical information.

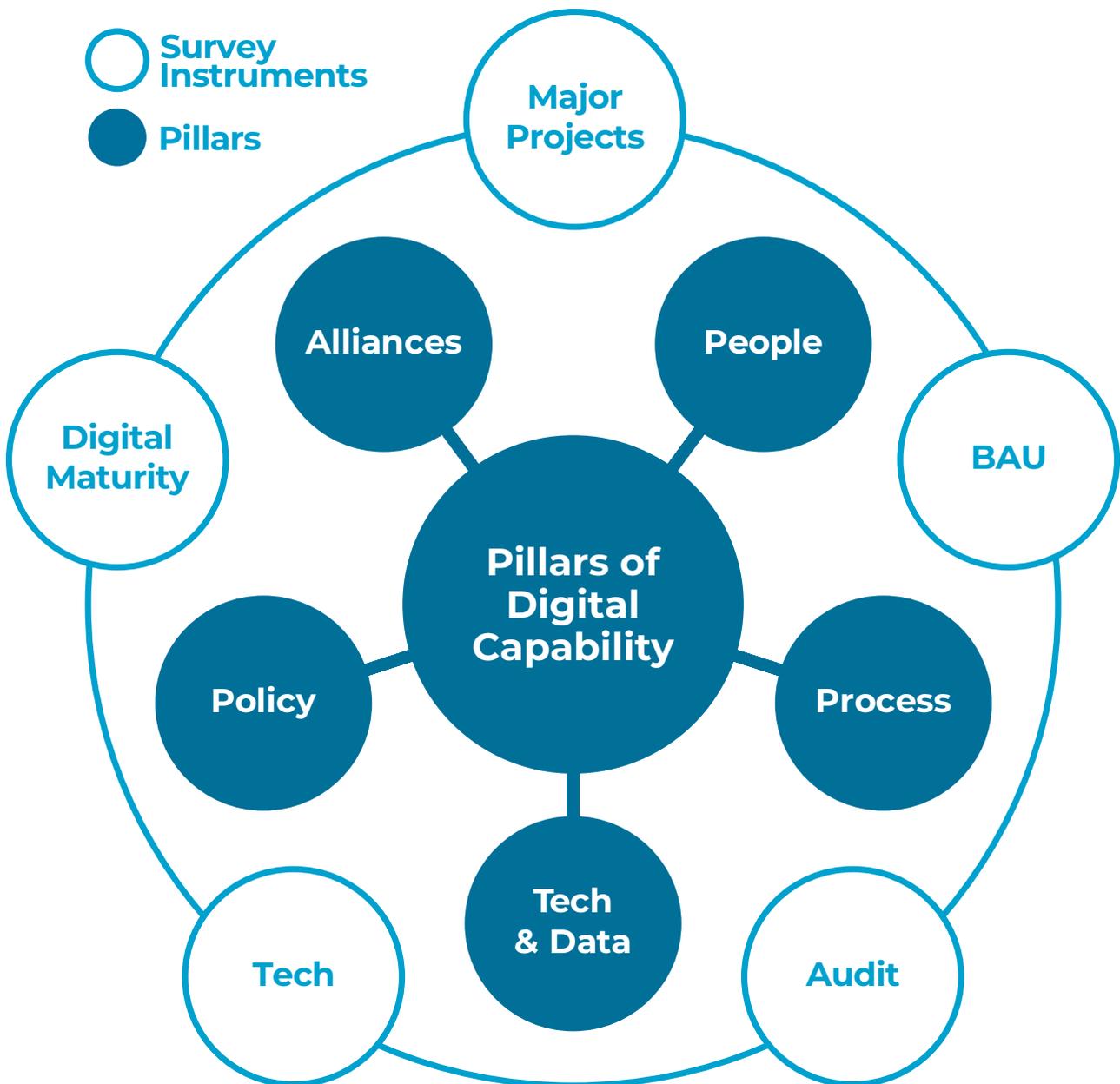
The 20 member agencies of the Secretaries Digital Committee and Digital Leadership Committee were selected for the initial round of data collection.

1 PwC on behalf of the DTA. (2020). *Establishing the Digital Review*. Canberra: Digital Transformation Agency. (Henceforth DTA. *Scoping Study*)

2 The Approved Programs Collection is a survey run quarterly by the DTA to collect information on the progress of agencies' major digital programs and business as usual sustainment activities.

# Program structure

The Digital Review collects information on the 5 pillars through 5 survey instruments.



## Pillars of digital capability

The Digital Review considered government digital maturity and capability in 5 pillars.

**Alliances:** How agencies develop, manage, and realise value from their digital and ICT-related relationships with other organisations.

**People:** How agencies plan for, acquire, develop, and sustain their digital and ICT workforce and develop effective leadership and culture.

**Policy:** How agencies are impacted by legislative, regulatory and investment controls, and define and realise value from their policies and strategies.

**Process:** How agencies create and manage their digital and ICT processes and how effective these processes are in delivering value.

**Tech and data:** How technologies and data processing capabilities enable or constrain agencies' digital transformation and how effective they are in technology, data, and analytics delivery.

## Survey instruments

The Digital Review data collection consisted of 5 survey instruments that use a mixture of quantitative and qualitative questions to gather information and build a holistic picture of the digital maturity of each agency.

**Major projects:** The Project Collection Delivery Form is an existing instrument from the DTA's regular data collections which has been expanded to collect information on ongoing digital transformation projects, including capabilities to be delivered, key dates, risks, issues, benefits, current status and delivery status trend, and other critical information.

**BAU:** The Business-as-Usual Form is also an existing DTA survey instrument which has been expanded to capture information on ongoing business-as-usual ICT capability, sustainment, and service delivery.

**Audit:** The Audit Data Capture Survey captures primarily quantitative and factual data about the agency's digital capability.

**Tech:** The Technology Audit Collection Survey requests detailed information about the top 20 systems held by an agency by whole-of-life cost, examining capability, function, value, cost, delivery model, data holdings, opportunities, reusability, issues, risks, and security concerns.

**Digital maturity:** The Maturity Statements Survey sets out a range of qualitative statements that elicit the agency's perspectives on its own digital and ICT capability and performance.

# 30%

**Agreed their approach to talent management was effective at addressing digital and ICT capability gaps**

# Navigating this report

This report provides a summary of findings and insights of the Digital Review:

- **The introduction and overview** provides a summary of the key insights, in-flight work and the recommendations that target opportunities for change. It also includes a look into the background and structure of how the Digital Review was conducted.
- **A Whole-of-Government snapshot** outlines the current state of government digital and ICT maturity, capability, needs and risks as observed by the Digital Review.
- **The key findings** are 15 specific findings emerging from the Digital Review and provide insights relating to the highest priority issues, gaps, and risks in the current landscape.
- **The pillars** of Alliances, People, Policy, Process, and Technology and Data outline the significant role each pillar plays in progressing digital capability, set out the current state of agencies in each pillar and how that compares with industry benchmarks, and provide detailed recommendations to uplift Whole-of-Government capability.



# Whole-of-Government snapshot

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02

# Whole-of-Government snapshot

The Digital Review has developed a detailed view of digital and ICT capability across the 20 agencies surveyed. This view includes an understanding of agency digital maturity across the 5 pillars, on a 4-point scale of capability from Basic to Leading. It also delivers insight into their collective strengths, issues, gaps, risks, and opportunities for transformation. These views are underpinned by catalogues of their systems, practices, processes, legislative and regulatory foundations, and strategies.

The DTA-calibrated agency maturity scores saw the Australian Government placed in the Advanced category. While this is a strong result, agencies also identified risks, issues and challenges which are not characteristic of leading digital organisations and governments and will need to be addressed for Australia to ascend to its target world-leading digital government status. These include:

- inflexibility of technologies and processes
- lack of consistent and mature approaches to delivery
- insufficient investment in talent management and development
- limited workforce planning
- unproven cyber assurance
- limited availability of reusable and shared platforms supporting collaboration, data sharing, and rapid development.

Agencies also reported there were challenges presented by Whole-of-Government concerns, including:

- funding arrangements
- limited allocation of funding to adoption of Whole-of-Government services, business-as-usual sustainment, continuous improvement, and learning and development
- Whole-of-Government staffing arrangements and constraints on workforce mix
- inconsistent and uncoordinated frameworks for strategic workforce planning.

For government to become a global digital leader by 2025, these challenges will need to be addressed. Interventions will need to be made to transform current capabilities, fill gaps, and improve coordination and consistency.

Where agencies did demonstrate substantial strength was in developing strategic partnerships, efficiently managing the sustainment of core functions, defining technology strategies, and conducting core ICT assurance activities. These strengths can be shared across government and developed to ensure all agencies can benefit from effective, efficient, and consistent approaches.

An overview of these findings, including a Whole-of-Government capability maturity profile, is presented below. More detailed data on current capability across agencies is available on request to authorised parties.

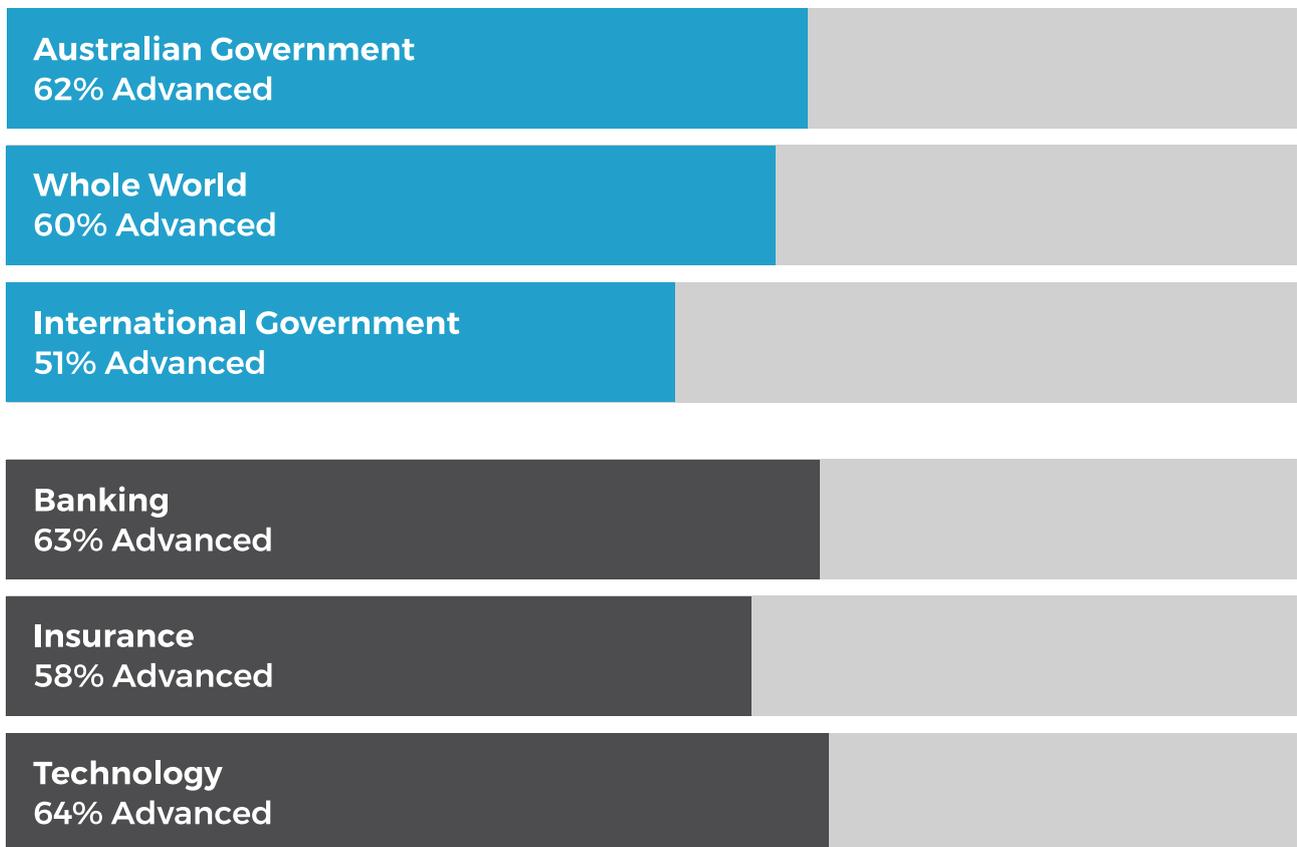
# Whole-of-Government capability maturity profile

The Digital Review has assessed the Australian Government as well ahead of the international government benchmark (51%), and just ahead of the whole world benchmark (60%). While this level of performance is encouraging, the Australian Government remains well short of current digital leaders including Singapore (79%) and South Korea (87%).

Becoming a world-leading digital government will require concerted effort by agencies coordinated across Whole-of-Government with a focus on harnessing digital technology and new ways of working to improve the lives of Australians.

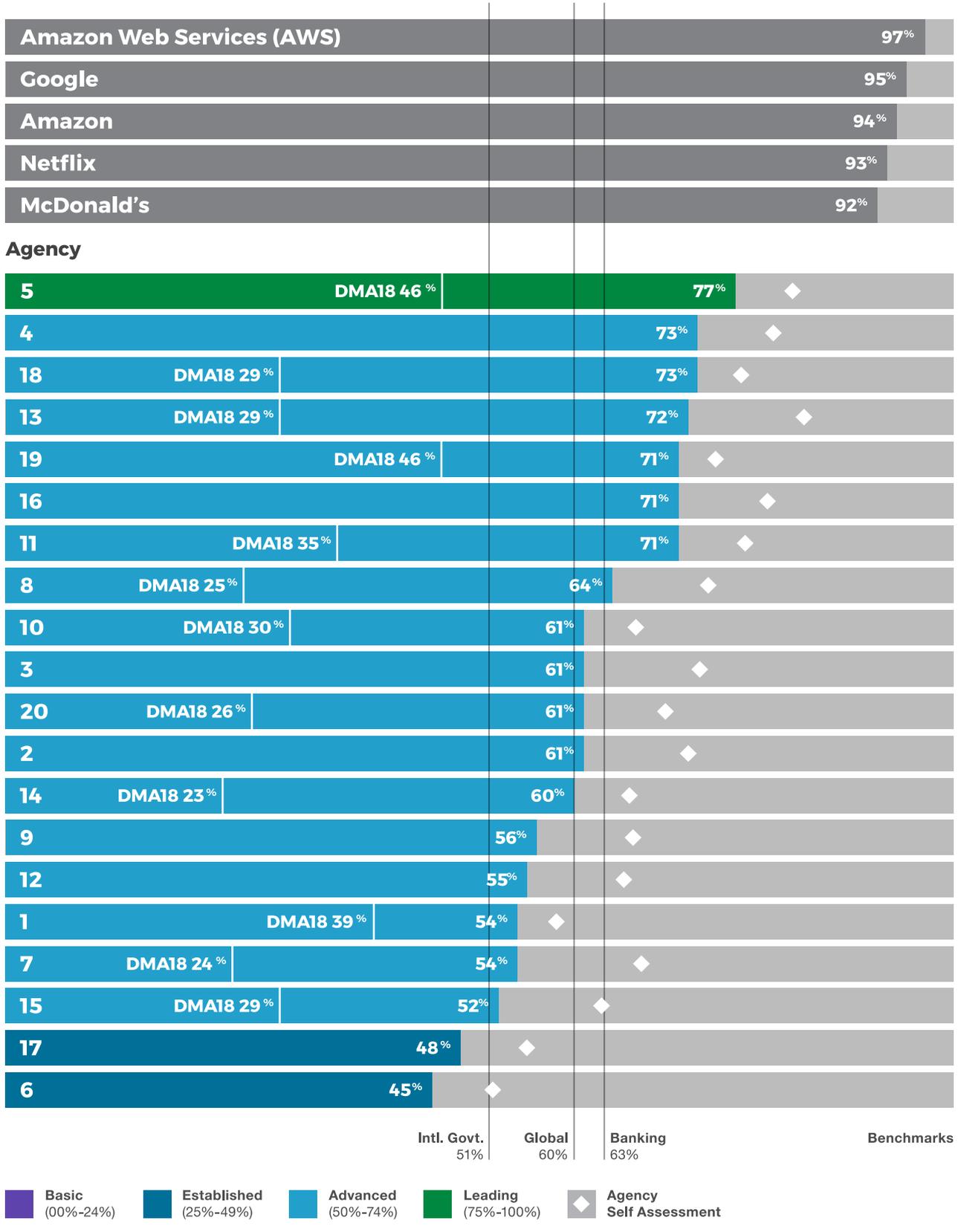
There is much to be learned from leading digital governments. Case studies of globally leading organisations are presented in the analysis of each digital and ICT capability pillar later in the report.

## International average



Ratings by Agency

# Agency maturity against benchmarks



DMA18 refers to a Digital Maturity Assessment that was conducted in May 2018, and worked with 28 agencies to assess their digital maturity across 36 dimensions. \*Agencies may request their agency number from the DTA.

*Self-assessments from agencies were carefully calibrated drawing on the evidence base formed through the Digital Review, providing a reliable picture on current digital maturity.*

## DTA maturity calibration process

The Digital Review has assessed the Australian Government as well ahead of the international government benchmark (51%), and just ahead of the whole world benchmark (62%). While this level of performance is encouraging, the Australian Government's ambition is to be a world-leading digital government by 2025.

Becoming a world-leading digital government will require concerted focus and attention on addressing cultural, procedural, technological and investment barriers identified through the Digital Review.

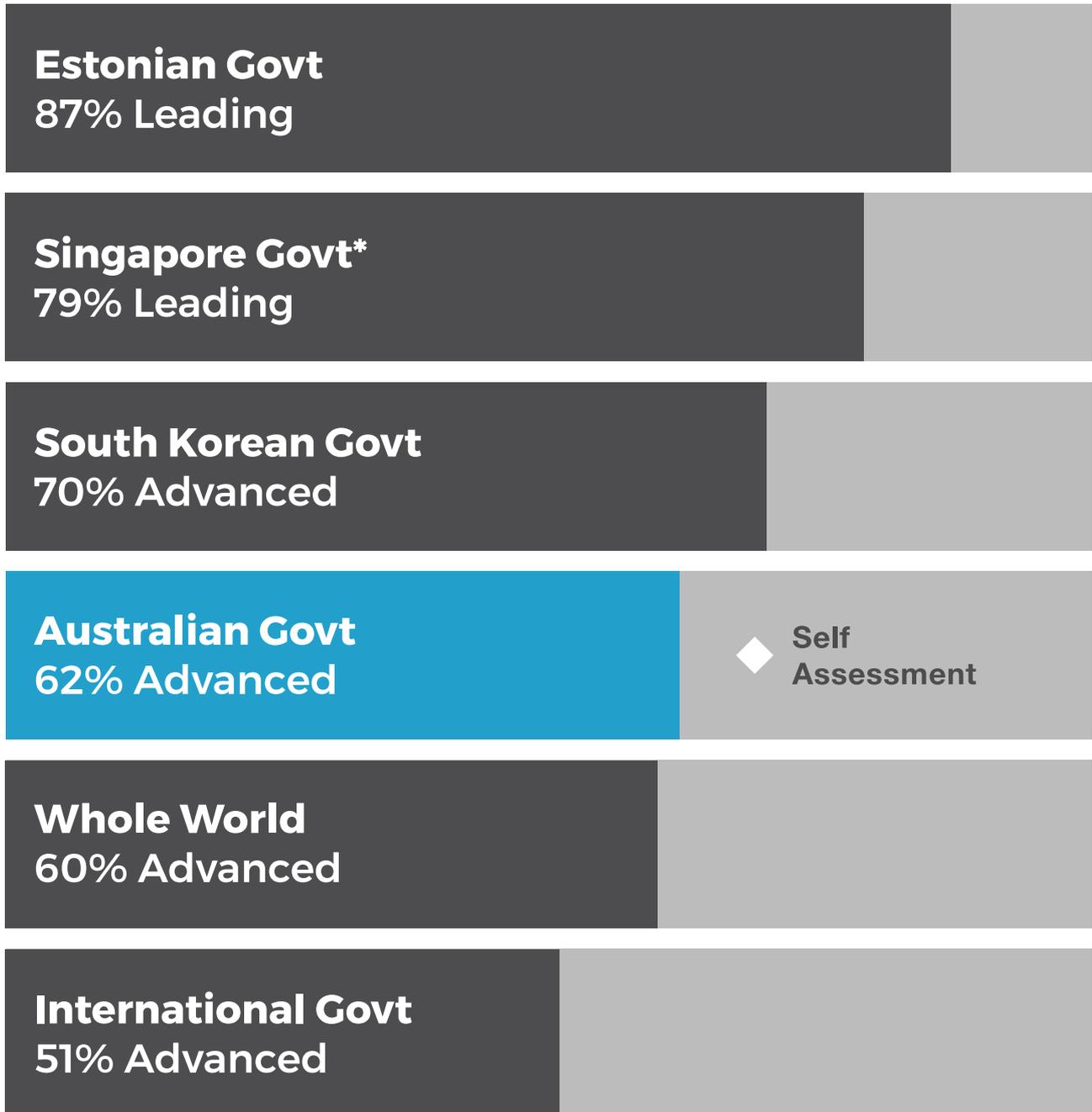
It will also require continued focus on communicating and affirming the level of performance the Australian Government needs to achieve and display across the key pillars of digital capability to truly be recognised as world-leading.

Agency self-assessments saw many agencies identified as global digital leaders under the maturity model. The DTA's calibration process assisted in aligning these self-assessments with evidence around the actual levels of performance. As a result, only 1 agency maintained their status as a global digital leader.

While the Australian Government works to uplift its performance, current global digital leaders won't be standing still, and expectations of individuals and businesses consuming agency services will only continue to grow.

Rating by government

# Benchmarking Australian government digital capability



\*Note: This score has been derived based on previous submissions to the benchmark database made by the Singaporean government prior to their sizeable investments in digital transformation brought on by COVID-19. The scores have been manually updated to reflect this improvement and will be rebaselined after the next Singaporean government submission.

**“ I have a vision of a world-leading digital government that delivers services that are simple, personalised and available wherever you need them – where Australians choose the data they want to share and we deliver results that meet their needs.”**

**Ministerial Foreword,  
Digital Transformation Strategy**

# Google

Google is regularly cited as one of the world's leading companies. Founded in 1998, it is primarily known for Google Search, but has now expanded into a vast array of enterprise and consumer products and services. Consistently rated as providing best practice across a wide range of operational and capability areas, Google provides a good benchmark of leading digital and ICT capability.

## Alliances

- Leveraging open source platforms, Google operates an innovation ecosystem that allows all users (customers, content providers, advertisers and innovators) to collaboratively share, develop and expand services via the Google network.
- Google currently operates the Google Partner Program. Launched in 2013, the program includes advertisers and content producers and is active in 60 countries.
- In December 2020, Google announced its membership in the Modern Computing Alliance with the goal of pooling knowledge and resources toward solving shared problems around how companies perform work in the cloud.

## People

- Google employs over 100,000 employees worldwide. It is regularly ranked as one of the best companies to work for, having been ranked first in Fortune magazine's employer list in 2007, 2008 and 2012.
- Google has a workplace culture that is open and allows a free exchange of information, full transparency, and a work environment that fosters flexibility, creativity, and innovation. At the Google X lab, employees are encouraged to 'shoot for the moon' and are rewarded for their failures.

## Policy

- Google's 'policies' are a reflection of its '10 Things' philosophy.
- Reflecting the open-source model adopted by Google, it has developed and enforces strict policies about how third parties engage with the various platforms it offers.

## Process

- Google uses agile approaches for their software development
- Often initiated by customer stories and journeys, their releases are executed by cross-functional teams of developers working in a single project management tool.
- While a strong adopter of agile, Google is also known for not announcing specific release time frames. This gives them more flexibility to move features into the next release cycle if they are not ready.

## Technology and data

- Google manages an extensive infrastructure network including data centres and submarine communication cabling networks which can be accessed from 67 public exchange points and 69 locations worldwide. The network is designed to reduce latency as well as to be fault tolerant, whereby data is still available on other servers when a system fails.
- Google is the commercial sponsor of the Android operating system consortium. As open source software, Android is the most widely used mobile operating system in the world, with over 2 billion monthly active users.

## Outcomes and implications for the Australian Government

Google is a world leading technology company largely responsible for shaping the modern internet. Similar to Google, the Australian Government aspires to be a global digital leader by harnessing the power of technology to realise better services for its users. The Digital Review identifies enhancements to address the challenges and issues reported by agencies and the recommendations identify how we can move to deliver better services with greater flexibility, more responsive policy and less red tape, all enhanced by digital technology.

The Australian Government’s calibrated overall maturity score of 62% is made up of agency self-assessments conducted across the 5 pillars of digital capability examined through the Digital Review.

The Australian Government performed strongly in the alliances and process pillars. The comparative weakness of the technology and data pillar may be explained by the significant legacy of technical debt that constrains digital transformation, and which agencies identified as a substantial barrier requiring attention.

The similarly reduced rating in the people pillar may be explained, in part, by the lack of control agencies have over staffing arrangements, due to both current Whole-of-Government staffing level rules, and their relative inability to individually influence the market for talent.

Later in this report, the Australian Government’s performance in each pillar is examined in detail, with more information on areas of relative strength and weakness within each pillar.

Pillar level results are presented below.

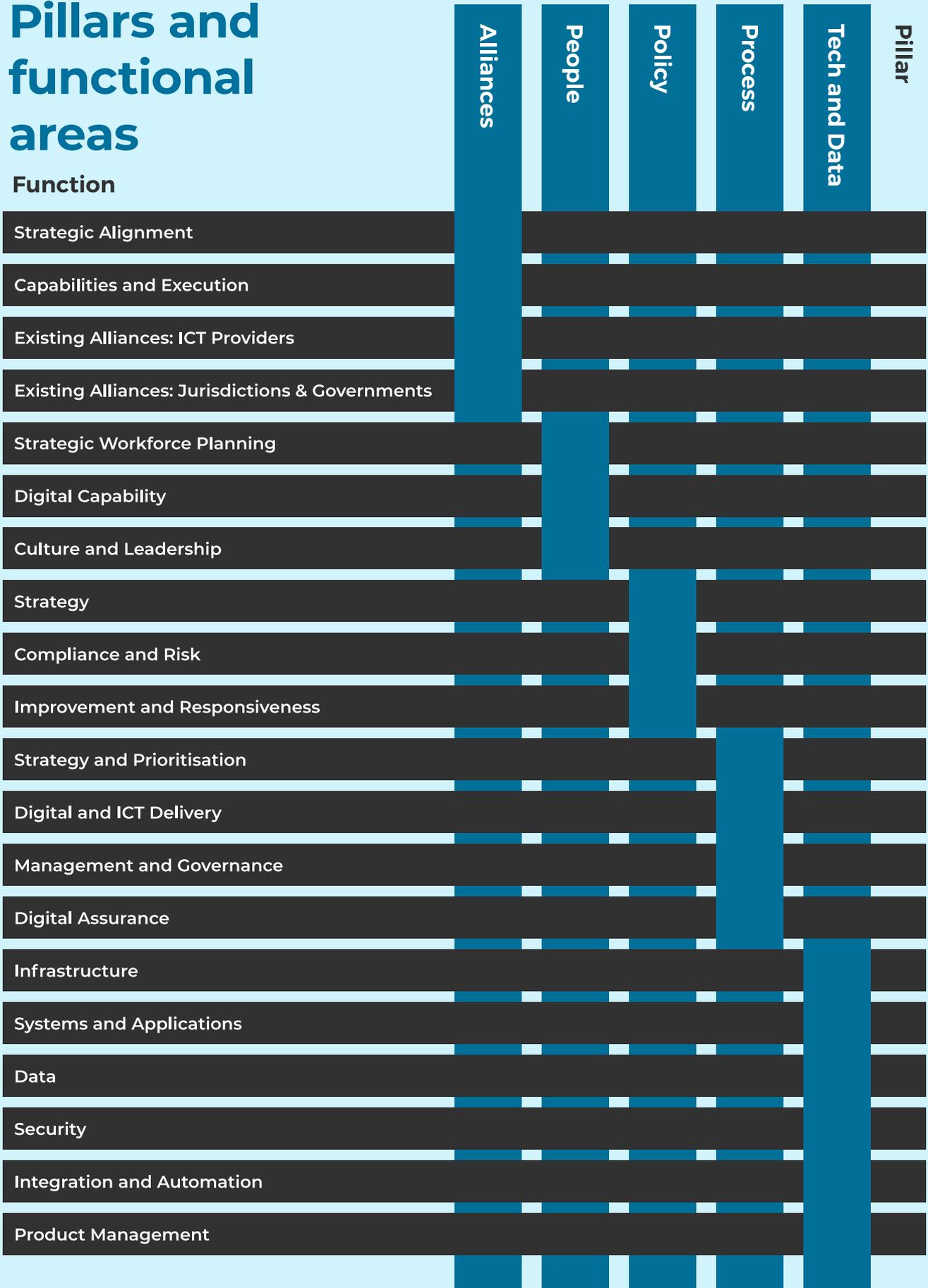
Sector and benchmarks

# Whole-of-Government pillar scores



# Pillars and functional areas

## Function



# Functional profile

Each of the pillars of digital and ICT capability was broken down into a range of functional areas, reflecting the complexity and multidimensionality of delivery within each pillar:

## Alliances

Agency capability in digital and ICT alliances was analysed across functional areas through 2 lenses, focused on the alliances' strategic alignment and delivery of value.

## People

Agencies' people capabilities were considered in 3 functional areas, covering the end-to-end talent lifecycle, culture, leadership, and development.

## Policy

Agencies' policy capability across 3 functional areas was considered through the constraints and enablers imposed on them by Whole-of-Government compliance requirements and guidance, and on the ability of the agency to rapidly adapt the policies they deliver to meet changes in their context and the digital and ICT landscape. The Digital Review also considered the ability of stakeholders to digitally consume agency policies.

## Process

The processes of each agency related to digital and ICT were assessed for their ability to efficiently, flexibly, and consistently support best-practice ways of working, responsiveness, and high-quality stakeholder experience, across 6 functional areas.

## Tech and data

Agencies' operational and data platforms, platform management approaches, information and knowledge management capabilities, sustainment and estate management practices, cyber security, and integration and automation capabilities were assessed across 6 functional areas.

A breakdown of capability by functional area across all agencies is presented on the following page.

## Functional capabilities

Pillar	Functional area	Australian Government rating
<b>Alliances</b>	Strategic alignment	74%
	Alliance capabilities and execution	72%
<b>People</b>	Strategic workforce planning	64%
	Culture and leadership	67%
	Digital capability	63%
<b>Policy</b>	Strategy	65%
	Compliance and risk	66%
	Improvement and responsiveness	66%
<b>Process</b>	Prioritisation and funding	71%
	ICT strategy	72%
	ICT service delivery	76%
	ICT management, organisation and governance	70%
	ICT sourcing and procurement	69%
	Digital and ICT assurance	71%
	<b>Tech and data</b>	Data
	Infrastructure	52%
	Integration and automation	59%
	ICT estate management	60%
	Security	66%
	Systems and applications	57%

# Key strengths

## **Secure alliances and partnerships that best align with their strategic needs.**

Agencies expressed moderate to high degrees of satisfaction with vendors, service providers and other partners. This was helped through effective Whole-of-Government approaches to the sourcing and procurement of digital and ICT capability. Agencies also had a good internal understanding of when to engage external digital and ICT alliances, as opposed to building capability internally.

## **Conduct regular digital and ICT governance and assurance activities.**

Agencies reported consistently applying assurance and governance activities. Agencies also identified strong governance and controls over the acquisition of external talent, safeguarding investments where possible through knowledge transfer and capability uplift.

## **Define technology strategies and ICT plans.**

Agencies exhibited strength in strategy development and in the engagement of senior leadership. Agency senior leadership largely recognises the value of digital transformation and incorporates this into a comprehensive, system-wide approach to digital capability uplift.

## **Efficiently manage the ongoing delivery and sustainment of core functions.**

Agencies reported having strong and proven processes in place to manage the technology and digital and ICT services necessary to deliver and sustain their core functions. This can include service desk management, technology provisioning, platform management, and continuous availability planning. The proposed investigation into this strength will help reveal reusable processes, governance models, and sustainment techniques that can be developed into Whole-of-Government patterns for reuse.

## **Cultivate a culture of transparency and communication.**

Agencies displayed some strengths in culture and people management, including an openness to transparent communication and collaboration. This can be leveraged to support an effective Whole-of-Government digital transformation agenda.

# Key issues and risks

Agencies also raised several issues and risks that are hampering their ability to digitally transform and adopt a Whole-of-Government approach.

## Lack of agility

Agencies reported an inability to respond swiftly and effectively to changing environments. This is due to immature processes that lengthen project execution cycles and prevent them from releasing digital and ICT funding in an agile manner. This is leading to a misallocation of resources that favour servicing today's needs, instead of tomorrow's requirements.

## Insufficient talent

Agencies lack the highly skilled digital and ICT talent they need to digitally transform. This is due to insufficient investment into deepening digital and ICT skills and capabilities, as well as structural staffing constraints and a lack of workforce understanding. This translates to a heavy reliance on contractors, increasing costs.

## Poor outcome management

Several digital and ICT initiatives are failing to meet expected outcomes and timeframes due to poor benefits and project management, impacting support for further digital investment. Agencies also lack a comprehensive process for measuring and reporting on user experience.

## Exposure to security threats

Agencies assessed their current cyber security measures and protocols as not fully effective in addressing cyber security risks. This is despite high levels of policy implementation and agency-wide education. With an ever-expanding number of cybersecurity and data privacy threats, the importance of these measures and protocols will only increase.

## Prevalence of legacy platforms and technical debt

Legacy platforms represent a substantial burden on agencies. Combined with technical debt, they slow delivery and reduce the ability of agencies to adopt innovative technology, integrate with external capabilities, adapt their practices and ways of working, and ensure positive stakeholder experiences. If legacy technologies are maintained, there is significant risk that digital leadership will be unachievable.

# Key investment opportunities

Agencies were asked to identify their investment priorities and areas of highest risk requiring additional resources to mitigate and rectify. This information was aggregated, prioritised based on the number of agencies expressing the requirement and, where provided, the financial value of investment required. The information was then used to generate the 2 investment demand profiles below.

These set out agency priorities for:

- general investments in digital and ICT capability, excluding technology
- investments in technology and related capability.

The priorities identified mirror the issues and risks reported by agencies. The first demand profile reflects the general agency need to develop and retain their digital and ICT talent bases, acquire the skills and tools necessary to successfully deliver and sustain digital capabilities, and be able to transparently reflect the status and outcomes of investment.

The second indicates agencies' lack of confidence in their cyber-worthiness and assurance practices, the impediments arising from legacy platforms, and the impact of inconsistent collaboration and digital transformation delivery solutions.

These key investment opportunities, coupled with the recommendations of the Digital Review, will help focus efforts to transform government and achieve the 2025 vision of a world-leading digital government.

## Potential areas for general investment:

Based on agency reported investment priorities and findings emerging from the Digital Review, the following general investment priorities have been identified for further investigation. Many of the identified investment opportunities have been incorporated into the recommendations from the Digital Review.

- culture – reward and recognition
- learning and development
- strategic workforce planning
- benefits measurement
- delivery consistency.

## Potential areas for technology investment:

Agencies also identified a range of technology-oriented investment priorities. Based on analysis of this information, the Digital Review has identified the following investment priorities for further investigation.

- cyber security
- legacy infrastructure
- unified communications
- productivity and end user computer
- platform development services.

## Challenges requiring action

Drawing on the data supplied by agencies, the Digital Review has identified several challenges requiring action:

- Government's digital and ICT landscape is characterised by legacy platforms, technical debt, bespoke single-purpose applications, tools approaching end-of-life (and in some cases beyond end-of-life)
- there is significant duplication of digital and ICT capability across agencies, resulting in inefficiencies. Duplication is widespread across technology capabilities, including delivery platforms, relationship management tools, productivity solutions, and identity and security capabilities
- there are insufficient Whole-of-Government processes supporting investment, prioritisation and digital portfolio management. Agencies identified a lack of visibility of ongoing digital and ICT activities across government and limited Whole-of-Government coordination as core challenges. The DTA's new mandate that commenced from 1 July 2021 will see greater emphasis on integrated Whole-of-Government planning for digital investments.
- there are substantial barriers to sharing, collaboration, and data exchange between agencies, many of them cultural. The Office of the National Data Commissioner's Data Availability and Transparency Bill seeks to address these issues.<sup>1</sup> Agency-level policy and process issues will need to be the focus of sustained attention to ensure data is being used effectively across agency boundaries where this is appropriate
- there is a lack of data and service integration across agencies, impacting the quality of service delivery and the ability to provide seamless, joined-up experiences to stakeholders. This is reflected both in public satisfaction with the consistency of government services, as well as in agency data that identifies risks and challenges emerging from a lack of sufficient data sharing. For example, all agencies identified that they could not develop integrated views of their stakeholders using data from across government.

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<sup>1</sup> Office of the National Data Commissioner. (2020) Data Availability and Transparency Bill. [online] Available at: <https://www.datacommissioner.gov.au/data-legislation/data-availability-and-transparency-bill>. [Accessed May 2021]. (Henceforth ONDC. *Data Availability Bill*)

Overcoming these challenges requires investment, practical commitment, and a systematic approach to delivering transformation. There is already work underway to address many of these challenges under the stewardship of the Secretaries Digital Committee and the Digital Leaders Committee. Additional intervention may be required to:

- address lingering technology legacy and technical debt, which the majority of agencies have identified as a significant impact on their ability to digitally transform
- increase central governance and coordination of Whole-of-Government and shared digital and ICT capability. This includes driving a focus on reuse to avoid duplicative investments, in line with the emerging Reuse Policy and supporting frameworks
- implement and continuously improve the Whole-of-Government Architecture currently in development
- ensure agencies are equipped with the digital skills and literacy needed to meet the requirements of a digitally-enabled government. This needs to be supported by implementing Whole-of-Government continuous learning and development programs and tools, and more strategic workforce planning
- adjust legislative, regulatory, policy and technology barriers to government functioning as “One APS” and implement Whole-of-Government solutions to support collaboration, data integration and sharing

- ensure the buying power of government is mobilised effectively to achieve value-for-money across alliances with key vendors, by reviewing and aligning the digital and ICT vendor and services base
- reset the baseline understanding of digital maturity across agencies and develop a consistent framework for benchmarking performance and identifying areas of strength and weakness.

**A single intervention to deliver change in these areas will be insufficient to bring the Australian Government to global digital leadership. Digital transformation is a continuous process and new funding models are likely to be required to support this—providing secure, ongoing funding to support Whole-of-Government digital and ICT delivery, sustainment, continuous improvement and the adoption of Whole-of-Government capabilities by agencies.**

As stakeholder expectations continuously evolve at the pace of technology advancements, so too must digital government.

## Pillar insights

In addition to the core strengths and challenges that span all pillars identified previously, the Digital Review developed a range of key findings and detailed insights related to each pillar individually.

**Please note:** Percentages referring to agency responses are based on the total number of agencies that provided a response to the underlying survey question, noting that in some instances, not all agencies were able to respond.

## Alliances

The Digital Review surveyed both the maturity of agencies' practices in establishing and managing digital and ICT alliances, as well as a quantitative summary of their most valuable alliances spanning ICT vendors, Commonwealth agencies and other organisations such as academic institutions.

The Digital Review found agencies to be effective in setting up alliances, enabled by clear strategy and collaborative culture. In contrast, further improvement opportunities were identified in managing these alliances, with a lack of KPIs being a notable gap.

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**Over 170 unique digital alliances were identified:**

- private ICT providers are the largest group, comprising 47% of reported alliances
- other Commonwealth agencies accounted for 43% of all reported alliances
- other jurisdictions, non-commercial organisations and academia accounted for 10%.

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**Generally, agencies are satisfied with their ICT vendor alliances (68%). However, larger agencies are less satisfied with the performance of their larger ICT contracts (i.e. greater than A\$50m in annual contract spend).**

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**75% of agencies reported having the capability to support a wide range of alliances. Larger agencies were more confident in their capabilities than smaller agencies.**

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**Agencies exhibited strengths in establishing digital and ICT alliances, including:**

- a collaborative culture, especially working with other agencies
- good alignment of alliances to strategic objectives
- clear internal guidance on deciding when, and who, to partner with.

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**Agencies could further improve the execution and ongoing management of digital and ICT alliances through:**

- documenting and using Key Performance Indicators (KPIs) in managing alliance performance
- periodically reviewing the portfolio of alliances
- using digital solutions, such as secure online workspaces, to collaborate and share information with alliances.

## People

The Digital Review analysed the maturity of agencies' people management practices through an assessment of their strategic workforce planning and digital and ICT workforce capability, as well as agency culture and leadership. It considered qualitative commentary provided by agencies in the Digital Review, including reported barriers to attracting, developing and retaining the best digital and ICT talent in the market.

The Digital Review found agencies have strong governance controls to ensure they derive the best value-for-money when they externally source talent through alliances with service providers and consultants.

The Digital Review found a significant reliance on contractors and consultants for digital and ICT skills and capabilities. Gaps in workforce data need to be addressed to improve the Australian Government's ability to better understand and more strategically manage its use of contractors and consultants.

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**Most agencies invest in learning and development programs to build the digital and ICT capability of the APS workforce. Fewer agencies invest in high potential staff to grow the breadth and depth of their digital and ICT expertise. There are also inconsistent views on which capabilities are key to successfully delivering digital transformation.**

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**Agencies have unreliable current-state workforce data and are unable to forecast and plan for the emerging skills and capabilities required for the future.**

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**Agencies lack a consistent approach to strategic workforce planning, and report competing against one another for digital talent.**

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Agencies embed a culture of information-sharing and can articulate their digital and ICT vision and agenda. Where limited internal sharing and collaboration occurs, it is identified as a key inhibitor toward adopting the Digital Service Standard.

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Despite having access to digital skills and capabilities within the APS and through its alliances, the inflexibility of agencies' digital and ICT strategies and lack of resources hinders the ability of the APS to effectively respond to change.

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Agencies prioritise filling known capability gaps rather than recruiting for emerging skill requirements. This leads to lag in the recruitment and capability development cycle, with agencies lacking access to experts in emerging skills when they make the decision to adopt technologies and approaches which require them.

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Learning and development programs do not sufficiently equip APS staff to lead and embrace change. Resistance to change is identified as a key barrier to digital transformation.

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When the APS sources talent externally, it appears to do so strategically and with a view to maximising opportunity to uplift the capability of APS staff as appropriate.

## Policy

The policy pillar of the Digital Review surveyed agencies on how relevant laws, regulations and government policies enable or constrain effective digital transformation. The Digital Review assessed the degree to which agencies were able to maintain compliance and had effective frameworks and procedures for understanding and navigating risk.

The Digital Review found agencies reported strong alignment and confidence in their level of maturity for risk management, including in relation to cyber security and data management. Agencies also reported relevant policies and procedures are transparent, compliant, and accessible. Despite this, policy constraints in relation to data, privacy and the handling of data records and information assets more generally remain significant barriers to enabling digital transformation.

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**Agencies broadly endorse policies which deliver and enable Whole-of-Government marketplaces, platforms, and shared services, yet they lack funding, capacity, and capability to develop, sustain, or utilise them.**

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**Digital is valued at an executive level within agencies, and is embedded into strategic planning, but this does not always translate into implementation.**

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**Lack of common purpose and alignment to shared strategies and delivery frameworks present as substantial barriers to joint delivery, data sharing, and collaboration, with larger agencies finding these barriers particularly significant.**

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**Despite legislation, regulation, and policy designed to enable simplified data sharing, agencies indicated difficulties with data sharing in practice, including legislative barriers.**

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Agencies agree that cloud adoption enables increased agility and responsiveness, but cloud adoption remains inconsistent and influenced by the risk tolerance of individual agencies. Some agencies find the lack of central or trusted sources of security certification for cloud platforms a significant barrier to adoption.

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Agencies have uniformly aligned their cyber security policy frameworks to a common standard, but are uncertain if compliance effectively mitigates cyber risk.

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The lack of a common framework for data collection, management, and sharing, and the technology to support shared approaches to these activities, is a substantial barrier to cooperation and sharing between agencies.

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Many agencies, under their establishing legislation and internal policies, believe they are prevented from sharing information or collaborating with other organisations with which they do not explicitly share common objectives, strategic priorities, or focuses. The lack of explicit alignment between agencies' purposes means they may consider themselves limited in sharing data and capability, even where this may not be the case.

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The development and maintenance of policy, legislation, and regulatory frameworks is not agile or coordinated, hindering the ability of agencies to respond to emerging needs and rapidly deliver new capability.

## Process

The Process pillar of the Digital Review surveyed agencies' practices in planning for and realising digital transformation against a backdrop of finite resources. Agencies demonstrated strength in considering a system-wide view and incorporating digital transformation into their strategy and processes. Significant gaps in benefits tracking and allocation of cost were observed. The Digital Review recommends addressing these weaknesses, which would bring government in line with leading digital organisations.

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**Agencies do not consistently track benefits and measure stakeholder satisfaction, both of which inhibit benefit realisation across the project lifecycle.**

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**Some agencies indicated their internal budget processes are incompatible with modern funding approaches for digital investments, including releasing funding in faster, more frequent cycles. Agencies indicated additional complexity in determining an appropriate split of capital and operating funding, particularly given the introduction of cloud and as-a-service infrastructure solutions with operating cost bases.**

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**Cybersecurity and data analysis capabilities have been identified across the Whole-of-Government as investment priorities.**

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**Baseline agency funding is inadequate to support development, adoption and deployment of new digital and ICT products and services.**

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**Smaller and medium sized agencies dedicate a larger percentage of their digital and ICT funding to BAU spend, indicating they have less flexibility in pursuing priority transformational digital and ICT projects.**

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**While senior leaders have oversight of digital and ICT portfolios, this does not translate fully into effective decision-making and investment performance. 25% of agencies report that their governance frameworks do not enable timely investment decision-making, while 35% did not believe that their investment process leads to good digital and ICT outcomes.**

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**Project underperformance against budget and schedule is a key issue for some agencies. Strategies such as professionalising the project management workforce and driving adoption of better practice project management approaches were identified as possible solutions.**

## Tech and data

The Digital Review analysed the maturity of agencies' technology and data practices through a review of their core systems, platforms, services, data sets and capabilities, and the extent to which each of these are shared and reused. It considered qualitative commentary from agencies on the enablers as well as the barriers to adopting new technology, working collaboratively with other agencies, and adopting Whole-of-Government solutions.

The Digital Review found that agencies had effective toolsets for communication and collaboration as well as a strong focus on data and analytics as a strategic priority. Agencies have not been effective in sharing data both internally and publicly, and reuse of technology and capabilities is limited. There are gaps in reporting processes which inflate agencies' perception of the quality of the services they provide.

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**Agencies have an optimistic self-perception of the service quality they deliver. When compared against industry peers, citizen perception of service quality is considerably lower.**

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**Agencies consider their core systems provide a sufficient platform for building digital front-office capabilities, but few can access a single view of their stakeholder.**

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**The absence of a consistent and robust approach to measuring and reporting on stakeholder satisfaction inhibits the experience of individuals and businesses interacting with government. Agencies had difficulty reporting on the performance and benefits of services. Appropriate frameworks should be implemented to better measure service quality and efficacy.**

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**Agencies lack a common definition of shared services and capabilities but are optimistic in their ability to deliver shared services and capabilities collaboratively.**

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Agencies believe they have effective systems and controls for data sharing. A lack of data governance and common data vocabulary makes retrieval of information difficult. As indicated in the policy pillar, perceived restrictions around data sharing policies and the absence of data dictionaries hinder Whole-of-Government data sharing.

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Responsibility for delivering key digital Whole-of-Government capabilities is dispersed across agencies, including major service delivery and operational agencies. This necessitates strong policies and frameworks to drive a Whole-of-Government outlook for these capabilities, which are still emerging.

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Variations in security and legislative requirements between agencies are a significant barrier to adopting a Whole-of-Government approach to capability sharing. These inconsistencies often lead agencies to default to conservative decisions, slowing the uptake of shared services.

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Agencies reported strategic alignment of their priorities through formal agreement of roles and responsibilities as the top enabler to adopting a Whole-of-Government approach to technology and data use.

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Agencies value the strategic role of data and analytics, but this has not translated into the creation of timely self-service insights for decision-making and sharing.

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Less than 10% of agencies' most significant datasets are made publicly available.



# Key findings

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# 03

# Fifteen Key findings

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The Digital Review has provided a rich understanding of the Australian Government's delivery of digital and ICT capabilities, functions, products and services. This rich understanding allows us to surface insights relating to the highest priority issues, gaps, and risks in the current landscape and identify opportunities for genuinely transformative change. The vision articulated represents a summary of agency feedback and provides a guidepost for transformation in the medium to long term.

The following pages summarise 15 key findings emerging from the Digital Review and provide a view on the related maturity pillars, the horizon to realise meaningful change, and the expected effort required.

## Key finding

# Insufficient sustainment and business-as-usual (BAU) funding and ineffective planning and forecasting in project delivery.

### Challenge: Where we are now

Agencies lack sufficient sustainment and BAU funding to support continuous improvement and the delivery of quality services. BAU and sustainment funding are inconsistent, and agencies do not have the certainty to plan for the future of platforms and systems. The funding is regularly reduced, and often deprioritised in planning new capability. Funding is often delivered ad hoc and is not routinely costed into capital funding requests at an appropriate level.

### Vision: Where we want to be

- digital and ICT solutions are seen as enablers for government business products, which have an enduring lifespan beyond the technology solution, and are funded as such.
- Whole-of-Government platforms are overseen centrally and are supported with ongoing, guaranteed funding for sustainment and continuous improvement to ensure their continued value and relevance.
- budgetary measures are in place to ensure certainty in this space and to enable effective forward planning over medium- and long-term horizons.
- all agency-delivered digital and ICT solutions are funded initially with a comprehensive sustainment and continuous improvement budget for a reasonable forward period. This includes funding for cyber security, assurance, and rectification activity on an ongoing basis.

### Value: What we get out of it

- cost efficiencies
- delivery efficiencies
- increased reuse
- Data integration and enhanced single views of citizen, organisation, and service
- reduced agency burden
- rationalised and aligned technology and vendor profile
- standardised and enhanced security posture
- improved BAU and sustainment funding model.

### Maturity pillars impacted



Alliances

People

Policy

Process

Tech and Data

### Horizon Project duration



### Effort Project cost



## Key finding

# Limited visibility of investment implementation, quality, and outcomes.

### Challenge: Where we are now

Many agencies are not confident that their investments are leading to high quality outcomes, with 80% reporting difficulty achieving a balanced portfolio of sustainment and transformation-oriented investments.

Current reporting approaches also do not provide desired levels of visibility of the quality and efficacy of the implementation of approved investments. Neither delivery nor benefits are routinely or consistently tracked and reported. Agencies are generally not required to report outcomes, return on investment, and implementation performance after the initial allocation of funding. This means there is limited data available to inform future investment and process improvement decisions.

### Vision: Where we want to be

- a comprehensive set of criteria are consistently used for assessing and ranking proposed projects for the Whole-of-Government digital portfolio, through evidence-based decision-making
- projects are regularly reviewed for alignment, with the portfolio optimised on a regular basis, balancing sustaining and transforming digital and ICT products and services to ensure all agencies are able to deliver on their strategic objectives
- investment decisions take into account a broad range of factors that encompass the full management lifecycle.

### Value: What we get out of it

- improved financial allocation
- improved prioritisation of investment
- simplified investment and budgeting process
- effective tracking of outcomes and increased transparency.

### Maturity pillars impacted



### Horizon Project duration



### Effort Project cost



## Key finding

### Realising increased levels of Whole-of-Government reuse for digital and ICT capabilities will depend on agreeing common frameworks and approaches, as well as increasing understanding and buy-in on the key enablers and benefits of reuse.

#### Challenge: Where we are now

Current approaches to funding, designing and delivering digital and ICT capabilities do not sufficiently support and incentivise agencies to prioritise meeting Whole-of-Government needs. There is also insufficient strategic focus and attention on identifying key capability needs across agencies both now and into the future and developing strategic plans as 'One APS' to fulfil these in the most efficient and effective manner.

#### Vision: Where we want to be

- current and future capability needs across agencies inform an integrated Whole-of-Government strategic plan with a focus on driving efficiency and effectiveness by maximising reuse wherever appropriate
- approaches to funding the design, delivery and sustainment of re-usable capability help to incentivise and prioritise ensuring Whole-of-Government needs are met both now and into the future. This includes ensuring agencies are positioned to actively shape the design and evolution of Whole-of-Government platforms, systems, services and other capabilities
- agencies can baseline the costs of managing and delivering their services and functions and can easily calculate the cost savings of technology transformation, decommissioning, capability consolidation, and reuse.

#### Value: What we get out of it

- cost efficiencies
- delivery efficiencies
- increased reuse
- Data integration and enhanced single views of citizen, organisation, and service
- rationalised and aligned technology and vendor profile
- standardised and enhanced security posture.

#### Maturity pillars impacted



#### Horizon Project duration



#### Effort Project cost



## Key finding

# Existing policy settings are frustrating agency efforts to achieve the flexibility and agility they require to deploy their workforces most efficiently and effectively in pursuit of digital transformation.

### Challenge: Where we are now

Agencies are limited in their ability to shape their workforces in the most efficient and effective manner in pursuit of digital transformation.

### Vision: Where we want to be

- agencies can access an appropriate mix of staff, contractors, and consultants to meet their needs within available resources
- Whole-of-Government capability development programs are available to all agencies across all streams of the digital profession and are delivered through Whole-of-Government platforms
- all agencies have appropriate internal digital and ICT capability development funds and appropriate programs to upskill staff and attract new staff to fill capability gaps. As such, capabilities of staff are continuously improving through targeted learning and development programs
- there are specialised programs to increase the depth and breadth of high potential talent
- there is a strong emphasis on digital and ICT capabilities in performance agreements or expectations for digital and ICT staff.

### Value: What we get out of it

- improved internal capability
- cost efficiencies
- improved flexibility in staffing mix
- improved adoption of emerging technology.

### Maturity pillars impacted



### Horizon Project duration



### Effort Project cost



## Key finding

### Agencies do not consistently measure and benchmark the quality of their services and functions, and currently overestimate the quality of services they are providing.

#### Challenge: Where we are now

Agencies have limited reporting on service quality and user satisfaction, inhibiting their ability to achieve insights-driven decision-making. Their responses to survey questions indicated many agencies consider they offer high-quality services, without the metrics to support this, and despite external evidence to the contrary.

#### Vision: Where we want to be

- robust metrics are used to validate the effective delivery and implementation of digital and ICT services
- regular user research and formal metrics measure stakeholders' digital experience
- senior leaders have KPIs related to the agency's digital and ICT capability.

#### Value: What we get out of it

- consistent measurement of public and stakeholder perception
- continuous service improvement based on meaningful information
- standardised information sharing and benchmarking framework
- standardised reporting framework
- standardised performance assessment model
- reduced waste and inefficiency
- improved stakeholder perception.

#### Maturity pillars impacted

Alliances

People

Policy

Process

Tech and Data

#### Horizon Project duration



#### Effort Project cost



## Key finding

# No Whole-of-Government digital and ICT investment plan or framework.

### Challenge: Where we are now

In the absence of a cohesive plan for participating in joined-up services and cross-agency integration, agencies are unable to coordinate and align their activities accordingly.

### Vision: Where we want to be

- there is a Whole-of-Government integrated digital investment plan that identifies the strategic capability needs of the APS and calibrates planned investment to ensure greatest impact
- agencies share assets and insights freely so that opportunities for reuse are fully exploited before investing in new capability.

### Value: What we get out of it

- improved prioritisation of investment
- improved medium- and long-term planning for digital and ICT capability across the APS
- improved information sharing and reporting
- improved benefits and outcomes tracking and transparency
- reduced duplication and wastage
- alignment with Whole-of-Government Architecture and reduced cyber risk.

### Maturity pillars impacted



### Horizon Project duration



### Effort Project cost



## Key finding

# Ineffective data management and sharing.

### Challenge: Where we are now

Agencies do not feel they have the tools or processes to support easy discovery, record keeping, management, use and secure sharing of data across government.

### Vision: Where we want to be

- data is a core part of agencies achieving successful business outcomes and is valued
- data is managed in a secure, central location with scalability and integration capability built-in, eliminating ambiguity of data analysis and processing, and where standardisation is applied
- data is collated into single source of truth systems, which can be securely shared externally.

### Value: What we get out of it

- data shared between agencies supports Whole-of-Government service delivery and capability.

### Maturity pillars impacted



### Horizon Project duration



### Effort Project cost



## Key finding

# Cloud adoption is complex and often considered risky.

### Challenge: Where we are now

While agencies find value in the cloud-first policy, cloud adoption remains disparate and influenced by individual agency risk tolerance. The existing government frameworks and industry models supporting cloud adoption make it difficult for agencies to accept cloud-based risks.

### Vision: Where we want to be

- agencies have an optimal mix of on-premise vs cloud
- all agencies are leveraging cloud software to access, manage, store, analyse and importantly, share data
- agencies are seeing benefits of cloud software including productivity gains, greater scalability and flexibility and reduced maintenance efforts.

### Value: What we get out of it

- cost savings due to consistent technology across agencies, reduced maintenance costs and the ability to scale up and down depending on demand
- productivity gains, driven by improved speed to insights, greater processing power and capitalising on turn-key solutions that exist in the cloud
- cost savings in uptake of cloud technologies
- improved service interoperability
- improved skills consistency.

### Maturity pillars impacted



### Horizon Project duration



### Effort Project cost



## Key finding

### Cyber security compliance considered ineffective.

#### Challenge: Where we are now

Agencies are not confident that compliance with cyber security policy frameworks effectively mitigates cyber risk.

#### Vision: Where we want to be

- stakeholders are proactively informed about relevant cyber security risks and related mitigation strategies
- regular reviews are undertaken to review cyber security risks, with input and participation from a broad range of agencies
- risk mitigation is implemented into all facets of system development
- centralised security with enforced classifications is maintained
- logging and alerting capabilities are in place and operating effectively.

#### Value: What we get out of it

- improved cyber security and reduced risk
- improved crisis response coordination
- increased agency and stakeholder confidence
- increased transparency
- early risk identification and mitigation.

#### Maturity pillars impacted



#### Horizon Project duration



#### Effort Project cost



## Key finding

# Digital Service Standard adoption needs to be strengthened to ensure new ways of working are consistently deployed to create world-class services.

### Challenge: Where we are now

The Digital Service Standard is a valuable and proven framework for designing and implementing new and transformed digital services. However, agencies reported struggling with adoption.

### Vision: Where we want to be

- the Digital Service Standard delivers on its intent to help digital teams build services that are simple, clear and fast
- senior leadership see its value and work to implement it across all their digital activity
- stakeholders and the public can access high-quality government services designed and delivered in a compliant manner.

### Value: What we get out of it

- improved quality of service
- improved stakeholder confidence and perception
- improved cross-agency information sharing
- standardisation of government service delivery.

### Maturity pillars impacted



### Horizon Project duration



### Effort Project cost



## Key finding

### Lack of Whole-of-Government coordination of essential policies and standards for digital and ICT capability, including in relation to cyber security.

#### Challenge: Where we are now

There is no mandated Whole-of-Government coordinator for essential policies and standards required to support the efficient and effective development of digital and ICT capability.

#### Vision: Where we want to be

- essential policies and standards are managed and curated centrally with education and promotion activities undertaken at an appropriate level to ensure agencies are supported in meeting them
- agencies comply with a mandated digital capability framework and Whole-of-Government Architecture, and with relevant policies and standards when developing, continuously improving, and sustaining Whole-of-Government services and capabilities
- this framework and architecture encompasses cyber security practice and technology sufficiently to assure consistency, consolidation, reuse and cyber worthiness across all agencies.

#### Value: What we get out of it

- cost and delivery efficiencies
- increased reuse
- Whole-of-Government architectural alignment
- Whole-of-Government planning and prioritisation
- data integration and enhanced single views of citizen, organisation, and service
- reduced agency burden
- rationalised and aligned technology and vendor profile
- standardised and enhanced security posture.

#### Maturity pillars impacted



Alliances

People

Policy

Process

Tech and Data

#### Horizon Project duration



#### Effort Project cost



## Key finding

# Barriers to agility in delivery and budgeting.

### Challenge: Where we are now

Current budgetary processes are not supportive of ‘fail fast’ implementation and delivery approaches. This reduces agencies’ ability to engage in experimentation, agile delivery, and continuous, iterative improvement.

### Vision: Where we want to be

- agencies are able to release smaller allocations of funding more quickly, encouraging faster and more iterative development of digital solutions and services. This would also help address the gap in operational, non-project-based funding that is essential for maintaining BAU ICT capability.

*Note: Agile finance improves BAU sustainability by increasing speed to decision and reducing complexity. Financial teams, decision makers, and product financial administrators can apply agile techniques – meeting regularly and frequently to discuss requirements and share information, delegating financial authority to functional decision makers, and acting quickly to change plans and budgets to meet emerging challenges. Adopting agile ways of working and financial models reduces the time to decision, focuses efforts on highest priority objectives, and supports the development of minimum viable control and governance processes.*

### Value: What we get out of it

- faster development cycles and better BAU sustainability
- reduced waste through rework
- increased experimentation and improved adoption of new and emerging technologies
- improved support for research and development.

### Maturity pillars impacted



### Horizon Project duration



### Effort Project cost



## Key finding

### APS workforce digital and ICT capability not prioritised.

#### Challenge: Where we are now

Reliance is placed on existing agency-delivered learning and development programs, which are not consistently targeting the skills and capabilities required to digitally transform, or providing effective skills to APS staff to support digital transformation.

#### Vision: Where we want to be

- the Whole-of-Government digital and ICT strategy and workforce strategy anticipate, accommodate, and derive benefit from change
- the APS supports centrally-provided learning and development programs accessible to all staff which enable them to develop the digital and ICT skills necessary for their role in digital transformation. These programs are considered globally leading and are regularly referenced as exemplars of their type
- reward and recognition is comparable across government agencies to support APS staff having equal and equitable opportunity to develop their digital and ICT careers
- there is an ongoing and sustainable level of investment to ensure agencies achieve and sustain the full suite of digital capabilities they require to successfully deliver digital transformation activities.

#### Value: What we get out of it

- increased capability in APS workforce
- improved digital literacy across the APS workforce leads to better use of technology
- improved alignment of skills and capabilities with emerging digital and ICT trends
- improved learning and development program quality
- cost efficiency through consolidation and capability sharing
- reduced agency burden.

#### Maturity pillars impacted



Alliances

People

Policy

Process

Tech and Data

#### Horizon Project duration



#### Effort Project cost



## Key finding

# Limited understanding of workforce.

### Challenge: Where we are now

The APS lacks a clear understanding of the size of and spend on its current workforce, and in particular its contingent workforce. This presents barriers to transparency, reporting, planning, budgeting, benefits tracking, and return on investment assessment.

### Vision: Where we want to be

- the APS will have a detailed understanding of its entire workforce and labour base, including the roles and responsibilities of each worker
- all agencies will capture information about their workforce consistently, using standardised information models. This information will be available at agency, cohort, and Whole-of-Government levels and will be used to drive planning, investment, skills gap identification, labour force management, and capability development activity

### Value: What we get out of it

- improved planning
- fewer skills gaps
- targeted investment in capability development
- improved investment targeting and demand forecasting
- improved understanding of the contractor, contingent worker, and consultant base
- improved understanding of the costs of outsourcing.

### Maturity pillars impacted

Alliances

People

Policy

Process

Tech and Data

### Horizon Project duration



### Effort Project cost



## Key finding

# Disjointed workforce planning is hampering efforts to achieve and sustain a workforce ready to harness digital technology and new ways of working for the betterment of digital services.

### Challenge: Where we are now

Agencies lack a consistent approach to strategic workforce planning, stemming from limited understanding of their future digital and ICT skills and capability needs, as well as how to address them.

### Vision: Where we want to be

- forecasting future needs, identifying gaps and then proactively using this knowledge to future-proof their workforce through people capability planning which clearly links to a digital and ICT strategy.

### Value: What we get out of it

- the right people with the right capabilities in the right roles (e.g. clear priorities when recruiting staff with digital and ICT capabilities), to provide the best outcomes.

### Maturity pillars impacted

Alliances

People

Policy

Process

Tech and Data

### Horizon Project duration



### Effort Project cost



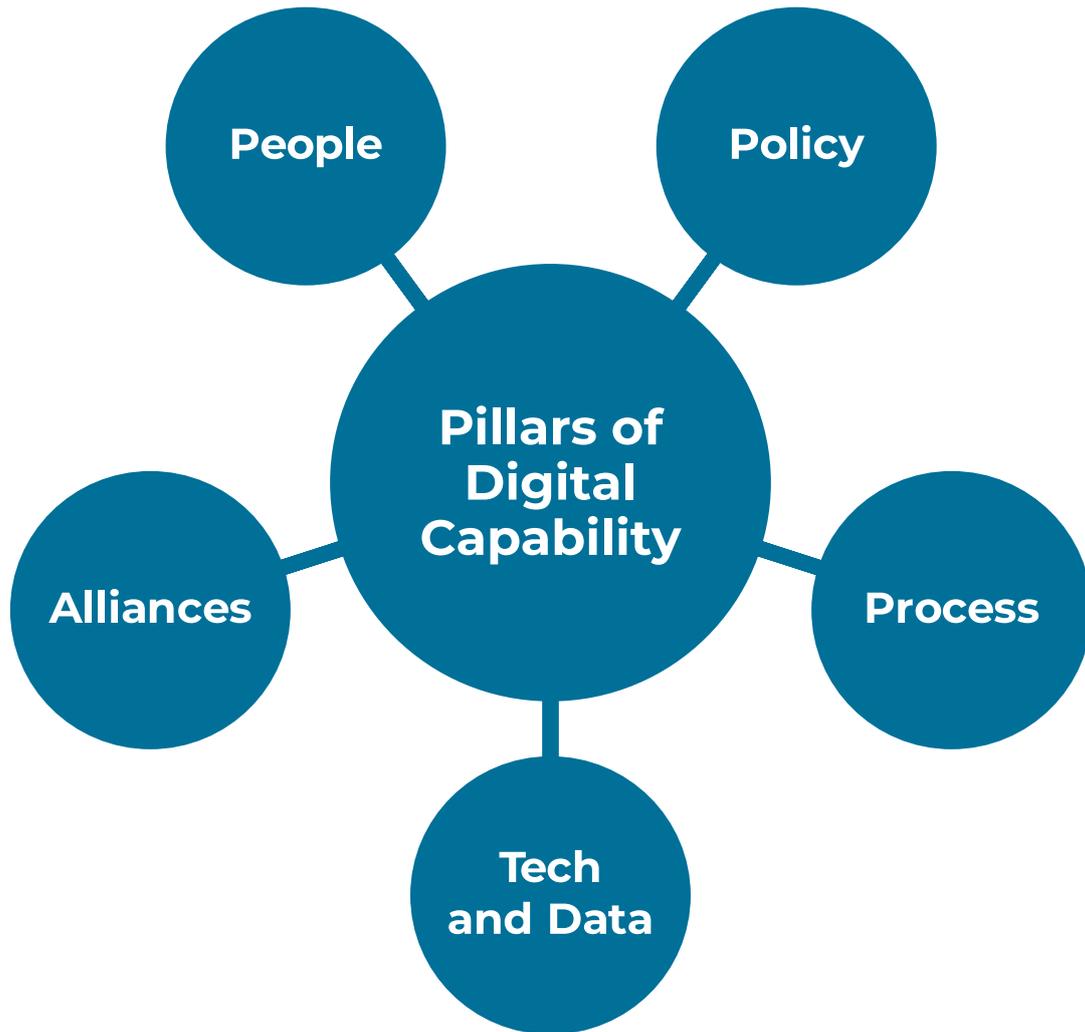


# Pillars

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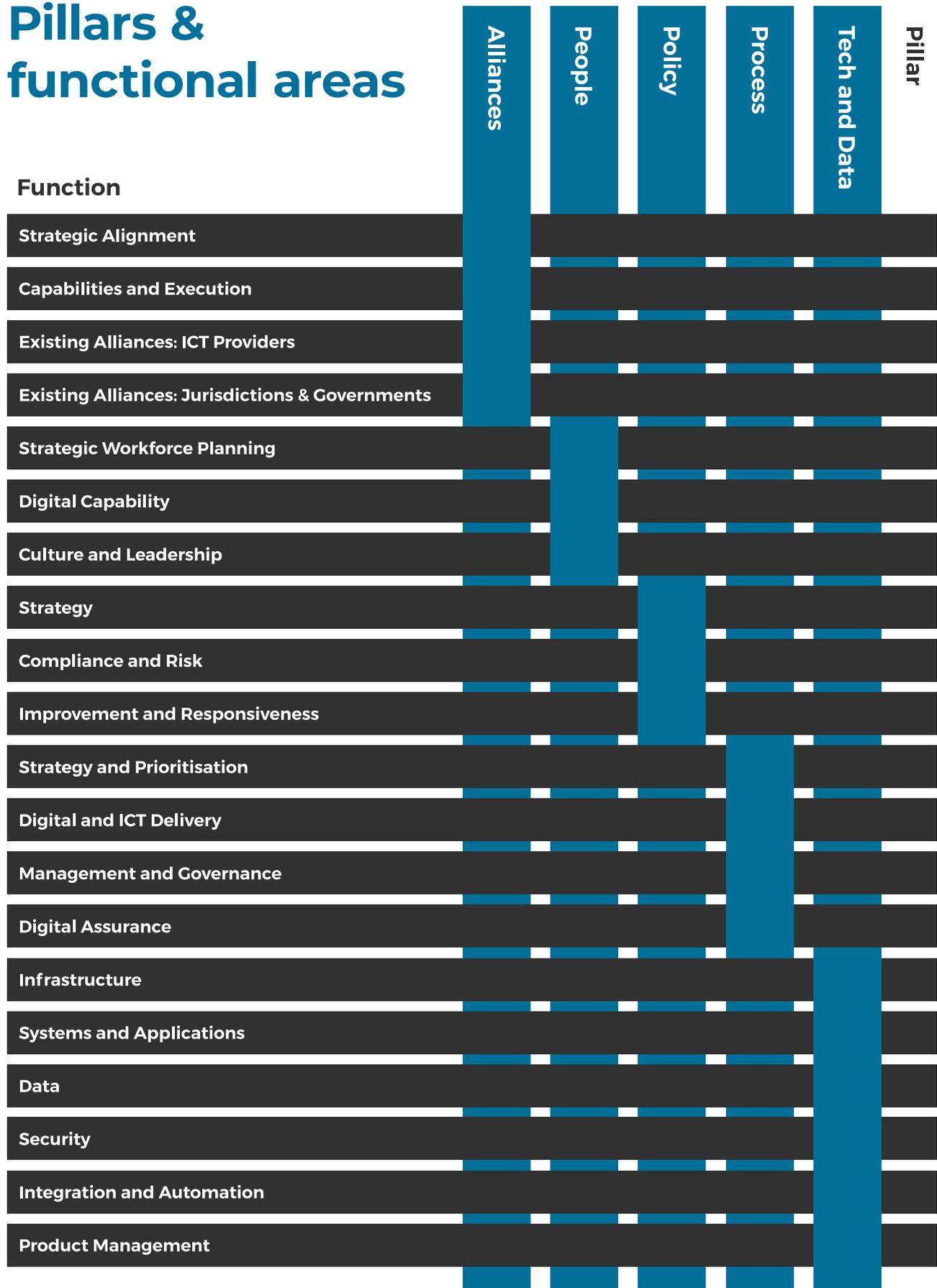
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## Pillars of digital capability



**The Digital Review collects information on the 5 pillars through 5 survey instruments**

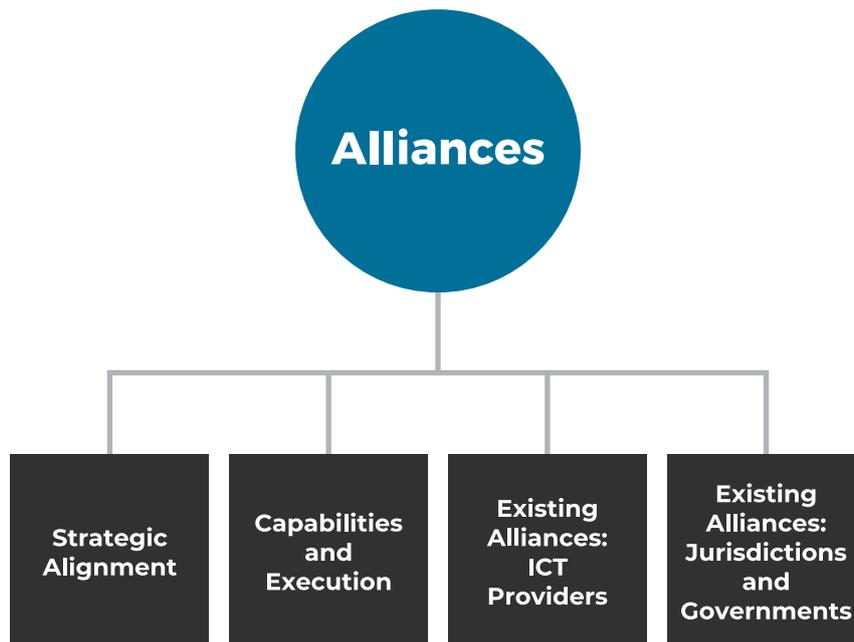
# Pillars & functional areas



# Alliances

How agencies develop, manage, and realise value from their digital and ICT-related relationships with other organisations.

## Functional areas



## Alliances – functional areas

The Australian Government is committed to delivering world-leading digital services. To achieve this, it is critical that government can harness the right digital and ICT capabilities across technology and skilled delivery personnel. Given the rapid pace of technological change and stakeholder needs, it is not always economical or timely for government to build technology and develop digitally-skilled personnel through its own efforts. This is especially true where the required capabilities are scarce, or where the market has greater levels of maturity or innovation.

Collaboration with alliances is a key enabler of digital capability. Working with organisations at the forefront of digital expertise enables sourcing of innovation, essential capabilities, delivery support and technology solutions that would otherwise be burdensome or uneconomical for government to build or deliver itself.

The purpose of this pillar is to identify the alliances that drive digital capability, determine how those relationships are leveraged across government, and measure agencies' capability to develop these relationships. It also analyses the processes by which alliances are acquired and managed, and the risks and opportunities with which they are associated. With these alliances identified, government can improve the way it manages and builds future relationships that have the largest impact on digital transformation.

This pillar measures the degree to which an agency can effectively collaborate with partner agencies, industry, academia, not-for-profits, and other jurisdictions. The Alliance pillar was organised into 4 key functional areas:

## Strategic alignment

Captures the ability of the agency's digital and ICT alliances to support strategic objectives with clearly defined roles and responsibilities. Strategic alignment determines the impact of related processes on efficiency and effectiveness of alliances, and assesses collaboration with other government agencies in sharing leading practice and co-developing digital solutions.

## Capabilities and execution

Features the agency's capability to build and support a variety of alliance types to deliver a broad range of digital and ICT solutions. New alliances should be built with future digital and ICT capabilities front of mind and considered alongside clearly defined Key Performance Indicators (KPIs). This approach ensures the Australian Government has access to the capabilities it needs to effectively deliver public services to the Australian community, businesses, not-for-profits and to other jurisdictions.

## Existing alliances with ICT providers

Reviews the structure of existing alliance agreements and the flexibility they offer in delivering new digital and ICT products and solutions to maximise value provided to the agency. The existing agreements are assessed in alignment with the Commonwealth Procurement Rules and other relevant policies.

## Existing alliances with other jurisdictions and government agencies

Captures the extent to which the agency collaborates with other jurisdictions and other government agencies to encourage sharing and learning of best practices within the digital and ICT landscape.

## Alliances maturity score

**73%**

**Advanced level of maturity**

**Agency self-assessed score: 79%**

## Alliances – ratings by agency

Agencies expressed a high degree of confidence in their digital and ICT alliance and relationship management capabilities.

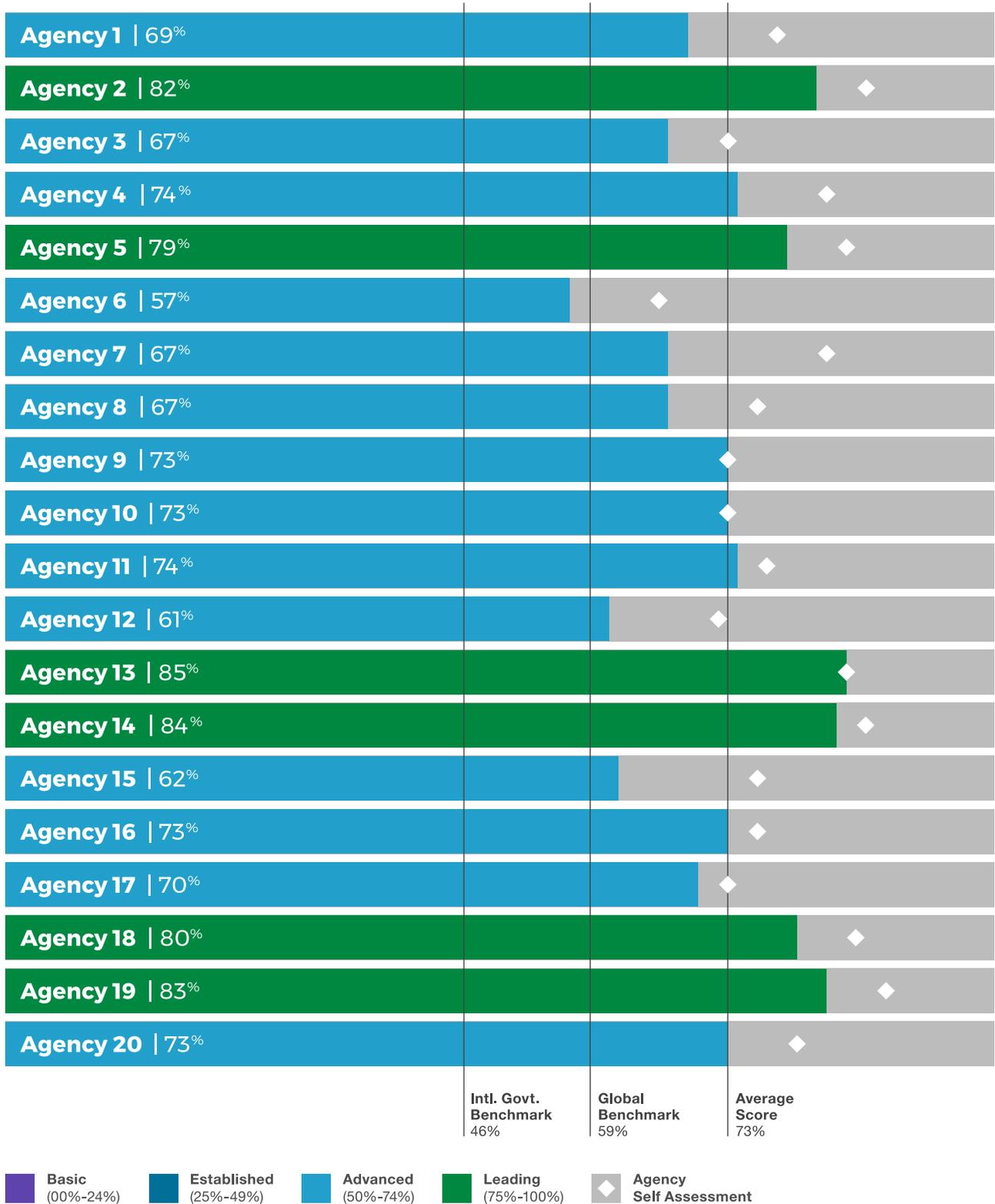
DTA-calibrated maturity ratings saw 6 agencies identified as having leading digital maturity in the alliances pillar. Overall, the alliances pillar was the strongest pillar with a Whole-of-Government average of 73% and no agency scoring below the advanced capability maturity level.

Data provided by agencies suggests the Australian Government has comparative strength in alliance acquisition, management, and value realisation. The Whole-of-Government frameworks for procurement and contracting, procurement guidance provided by the Department of Finance and the DTA, and the common digital marketplaces and shared purchasing vehicles provide a strong foundation to government alliance creation.

Areas requiring further intervention and investment include the development of relationships focused on delivering innovation, empowering existing partners to take a role in strategic leadership, and ensuring long-running contracts are structured to enable flexibility as technology evolves. There is also a role for agencies to develop in building effective relationships with industry, which should be conducted in a pragmatic manner to facilitate the adoption of new technologies as they emerge in the marketplace.

Ratings by agency

# Alliances



## Case Study

# Amazon

## Background

Amazon was founded as an online marketplace for books in 1994. Now, it's not only become the largest e-commerce retailer in the world, but has expanded its business to include: consumer electronics, digital media, cloud computing, logistics and even grocery retail. It is a leading example of how building the right alliances can drive digital transformation.

## Processes

Amazon's marketplace has grown to host over 3 million third-party sellers. This business continues to grow, enabled by strong merchant partnerships with leading brands such as Apple which serve to attract customers to Amazon and increase overall sales. Additionally, Amazon's efficient and affordable delivery service is based on well-established fulfillment partnerships. These partnerships continue to multiply through Amazon Delivery Service Partners, which has enabled thousands of small business owners to start their own package delivery service using Amazon's logistics knowledge and technology capabilities.

Partnerships have also been critical to Amazon's expansion beyond online marketplace sales, such as with major content providers that have driven the rise of Amazon Prime Video. Amazon now has the largest TV show and movie catalogue in many markets around the world.

## Outcomes and implications for the Australian Government

Amazon is now regarded by many experts as the world's leading internet company. Enabled by its alliances and significant investment into technology, it continues to develop new products and services for its customers while continually optimising its operations.

As a commercial entity, Amazon clearly has different imperatives to the Australian Government. Like many internet and new economy companies, its approach to managing relationships with suppliers has also not escaped criticism.

If Australia is to achieve world-leading digital government status, it is important for agencies to consider leaders in the space, whether they be commercial or public entities. The level of coordination and strategic engagement Amazon maintains with its suppliers to defend its competitive advantage, and the way it connects these suppliers with its rich and in-depth understanding of its customers, could be instructive. For example, could agencies enhance their engagement and education of suppliers to maintain the right incentives to provide world-leading services on behalf of the Australian Government.

The Digital Review revealed that the Australian Government needs specialist skills and solutions to develop digital and ICT capability at the speed and scale required to meet the vision of digital transformation by 2025. Digital and ICT service providers are important partners and enablers to the government, and they account for a significant portion of ICT spending.

The success of the Amazon model demonstrates that there is an opportunity to increase collaboration between government and industry across the delivery lifecycle of digital and ICT capability, including undertaking joint ventures. Successful models used by Amazon and exemplar countries such as Estonia, South Korea, and Sweden lead the way in uncovering innovative ways to build and nurture alliances.

## Alliances findings

The experience of leading organisations shows that bringing seamless digital services to the public at massive scale can be achieved through effective development and management of alliances. Even a global enterprise such as Amazon relies on partners to extend its reach of service and improve its offerings where it would otherwise be financially prohibitive, or uncompetitive, to do so by itself. The Digital Review found that agencies were effective in making similar decisions for themselves, following clear internal guidance on whether to partner for capability. Agencies demonstrated maturity in applying standard frameworks to assess the appropriateness of potential partners.

Over 170 unique digital alliance relationships were identified in the Digital Review, with private ICT comprising 47% of reported alliances. Other government agencies accounted for 43% of all reported alliances. Other jurisdictions, non-commercial organisations and academia only accounted for 10%.

It is worth exploring whether greater industry engagement is valuable in the future. The degree to which agencies are customer-facing and the degree of innovation required are both critical to assessing whether an “ecosystem” approach (employed by leading digital organisations such as Amazon) is appropriate.

### ICT providers

Developing government’s digital and ICT capability at the speed and scale needed to deliver digital transformation requires specialist skills and solutions. Digital and ICT service providers are important partners to the government, and they account for a significant portion of ICT spending. It is critical that agencies optimise spending, maintain effective relationships with providers, and ensure that the performance of providers continues to meet agency needs.

The Digital Review identified the following key statistics on ICT providers, which also includes other government agencies providing paid digital services:

- \$2.15 billion – or 33% of total ICT spending in 2019–20 – was directed towards the combined agencies’ top 52 ICT suppliers
- the 10 largest ICT suppliers by annual contract value in 2019-20 accounted for \$1.74 billion (27% of total ICT spending in 2019–20). This underscores the importance of major ICT providers and the role that they play in matching digital demand with supply of skilled resources. Small and medium enterprise (SME) ICT providers accounted for 27% of suppliers identified in the Digital Review, but only accounted for 5% of the reported spending
- agencies are largely aligned with the Whole-of-Government approach to sourcing and procuring digital and ICT capability, with 95% applying Digital Sourcing Framework principles and policies, utilising Whole-of-Government marketplaces and shared procurement arrangements.

Aside from overall spending, there are important distinctions between larger versus smaller agencies in their respective alliance relationships relating to internal capability, degree of reliance on ICT vendors, and satisfaction.

- larger agencies have more complex needs and maintain their own large contracts, and in exceptional cases can receive more favourable terms due to their size
- smaller agencies report less mature capability to manage a broad range of alliances. This is not to be interpreted as a weakness, considering that budgets and resource allocations are smaller than bigger agencies. Increasing adoption of Whole-of-Government arrangements by key providers (e.g. Services Australia and the DTA), has been driven by smaller agencies in particular. Agencies noted Whole-of-Government purchasing arrangements such as the Microsoft Volume Services Arrangement are of particular value
- \$2.12 billion (98.6%) of the ICT spending on alliances in the Digital Review was attributable to spending reported by extra-large and large agencies. Key services provided include: large-scale managed services and professional services contracts, ICT services and support, telecommunications, infrastructure and software
- a little over \$25 million (1.4%) was attributable to spending by small and medium agencies on their top 5 ICT suppliers. This was mostly towards software licences, specialist ICT resources and support, and telecommunications
- agencies were satisfied with 68% of the individual alliances reported. However, when this is measured by total contract value, that satisfaction rating drops to 46%. This is because higher levels of dissatisfaction are associated with larger ICT contracts (i.e. in excess of \$50 million) held by larger agencies.

The final point on dissatisfaction needs to be explored further. Given that 80% of agencies in the Digital Review believe they are maximising the value they receive from digital and ICT alliances, it is likely there are issues not strictly relating to finances or performance to be addressed. A likely candidate is a lack of flexibility. 30% of agencies did not believe their contracts allowed them to be flexible in delivering new digital and ICT capabilities.

In the process of assessing levels of vendor satisfaction, the Digital Review identified significant gaps in vendor performance management:

- 50% of agencies reported not having clearly defined KPIs in their contracts and agreements
- this gap is also evident in the Digital Review response quality – with \$1.39 billion of the \$2.15 billion (65%) being categorised with a performance satisfaction rating, while the rest had no response. This is a substantial gap in reporting.

32% of agencies do not have a central asset register for ICT software, hardware, and infrastructure assets, which also makes it difficult to ascertain whether agencies are efficiently using the capability they have procured.

# Alliances recommendations and in-flight work

In addition to the 8 key recommendations outlined in the introduction and overview sections of this report, the below recommendations have also been identified through findings. However, this recommendation will be largely addressed by relevant in-flight work.

## RI

Test the value and efficacy of existing Whole-of-Government marketplace and procurement arrangements. Use this analysis to identify any gaps or limitations, and to strengthen guidance for agencies on achieving quality alliances.

## Alliances in-flight work

**These in-flight initiatives present an opportunity to focus agencies' efforts, resources and development. The below in-flight work is already making strides to address the above recommendation from the Digital Review, this progress will not deliver the intended outcomes without direct support from government and individual agencies.**

## DTA – RI

The Digital Sourcing function within DTA provides strategic sourcing advice and delivers value for money marketplaces, panels and Whole-of-Government single vendor agreements to simplify the procurement of digital goods and services across government.

Whole-of-Government Reuse Catalogue is a practical implementation of the Reuse and Sourcing Policy function in the DTA, which ensures the reuse of government capabilities, and improves sourcing experience and compliance.

The Whole-of-Government Architecture function aims to develop a unified connected digital landscape, and to understand its capability gaps in digital and ICT. This function will maintain architectural standards to support strategic investment advice and prioritisation, and leverage architecture to identify reuse opportunities, and critically evaluate and derive insights that identify and inform capability gaps.

## PM&C – RI

The APS Reform agenda supports a single enterprise approach to effective investment, development and use of digital and ICT capabilities to meet the needs of the Australian public.

## Alliances

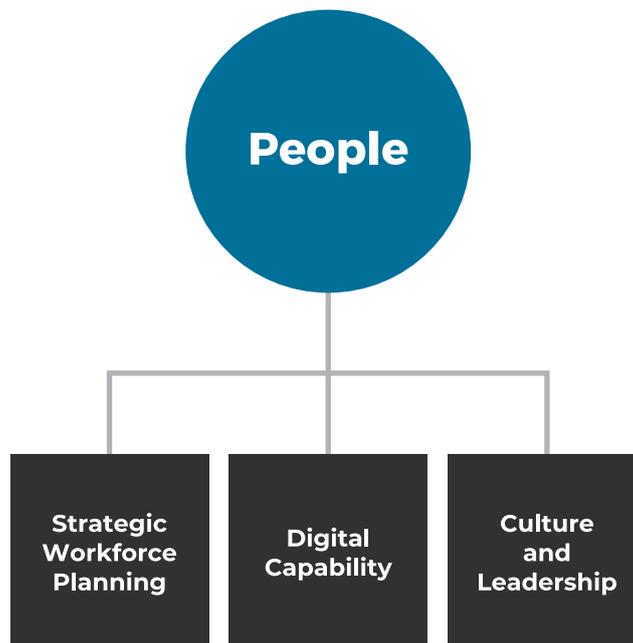
# 50%

**of agencies reported not having clearly defined key performance indicators (KPIs) in their contracts and agreements.**

## People

How agencies plan for, acquire, develop, and sustain their digital and ICT workforce and develop effective leadership and culture.

### Functional areas



## People – functional areas

*“Strengthening APS capability to address the needs of today and prepare for the future will require a coordinated service-level workforce strategy.”<sup>1</sup>*

The ongoing disruption caused by new and emerging technologies has significant workforce implications, both within and outside government. The COVID-19 pandemic has further accelerated these impacts, as entire workforces became digital, and the vast majority of Australian and global citizens engaged with government services using almost entirely digital means. It has never been more crucial for the public sector workforce to have leading digital capability, supported by a culture that encourages its people to embrace and leverage digital and ICT opportunities.

Governments, along with all other organisations, are facing significant skills shortages for digital and ICT talent. The APS must strive for an effective balance between efforts to attract, develop and retain the most talented people, whilst strategically sourcing for niche capabilities and additional resources to deliver projects and programs quickly.

This pillar was organised into 3 functional areas:

## Strategic digital and ICT workforce planning

The activities designed to ensure that the right people with the right capabilities are in the right roles at the right time. This involves having a clear understanding of the current skills, capabilities and structure of the existing workforce, and clearly and accurately identifying the skills and capabilities required in the future. It also involves ensuring the organisation’s approach to talent management attracts, develops and retains people with these required skills and capabilities.

## Digital capability

The identification, targeting and sourcing of the critical skills, capabilities and experiences that digital and ICT roles and digital transformation projects within the organisation require. Digital skills and capabilities have been organised into the areas of design and architecture, development and implementation, delivery and operation, and change and transformation.

## Culture and leadership

The combination of organisational and individual factors that form an organisation’s culture. Organisational factors include how transparently and accurately information flows through the organisation and the alignment of recognition and performance expectations to clearly stated values and behaviours that drive digital capability and transformation. Individual factors include the degree to which required skills are matched to roles and the degree to which the workforce is committed to the organisation’s clearly articulated purpose. Critical to this is the role of leaders in understanding and engaging with emerging digital and technology solutions and driving a transformational change agenda to support the government’s digital ambitions.

1 PM&C. The Thodey Review, pp. 298.

## People maturity score

**65%**

**Advanced level of maturity**

**Agency self-assessed score: 77%**

## People – ratings by agency

Following calibration of self-assessments, the Whole-of-Government score for People is 65%, down from 77%. This drop reflects that:

- only 50% of agencies agreed to linking a digital and ICT strategy to their people and talent capability plans
- 45% were unable to supply workforce data in relation to their utilisation and spending on contractors and consultants
- only 30% agreed their approach to talent management was effective at addressing digital and ICT capability gaps
- only 25% agreed learning and development programs equip staff and leaders to lead through transformational change
- only 10% identified improving digital and ICT workforce capability as a top 10 investment priority over the next 4 years.

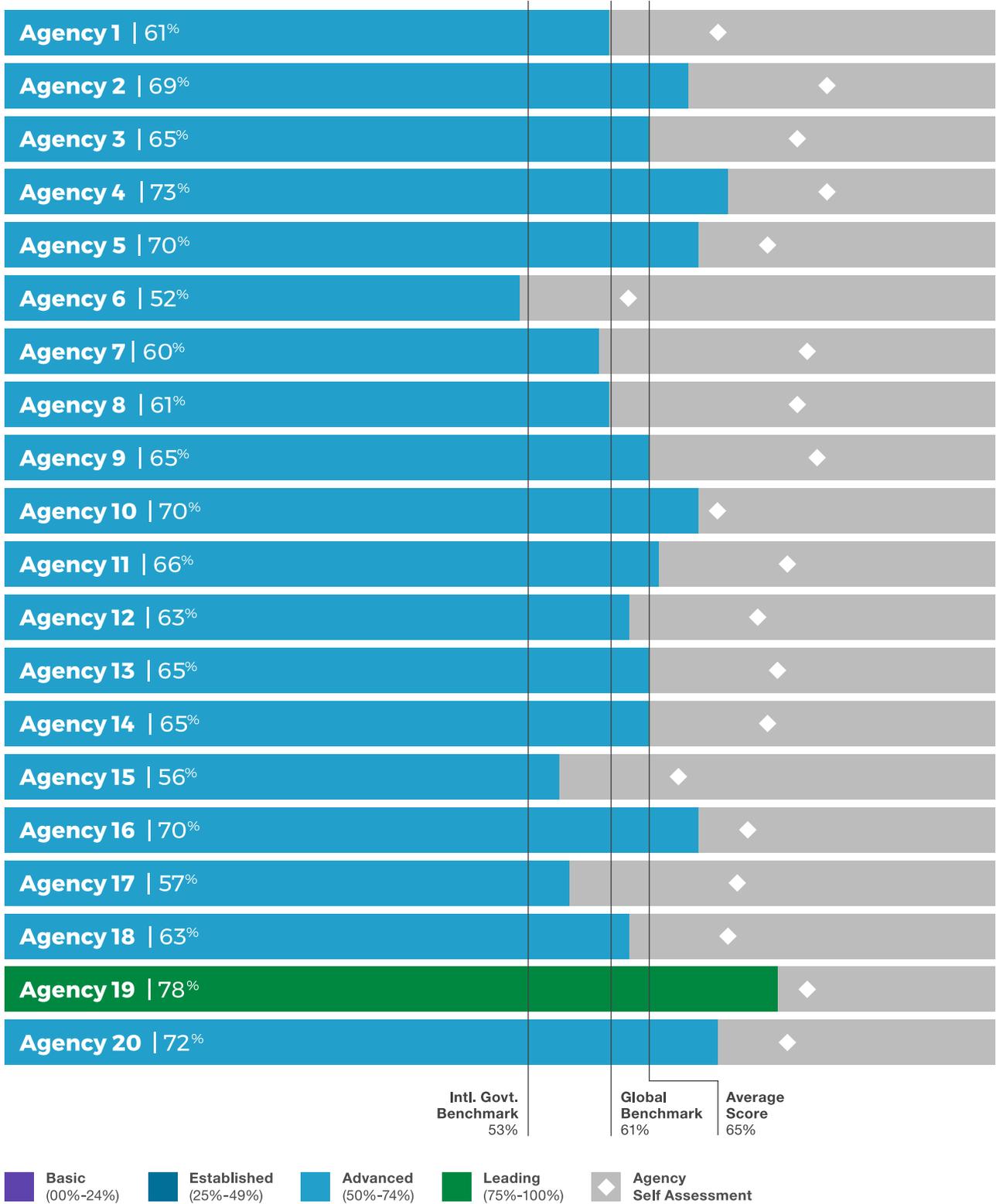
The 65% calibrated score still places the Australian Government in the advanced category, with 1 agency rated as leading and no agency falling into levels below advanced. Compared to benchmarks, this places agencies at a higher level of maturity than Global organisations, Global governments and Australian governments (including some states and territories) who have average maturity scores 60%, 52% and 59% respectively. This also places them at a higher level of maturity than the Banking (65%), Insurance (60%) and Technology (64%) sector benchmarks.

Agencies demonstrated substantial strengths in maximising the value of digital and ICT alliances, as well as the governance and controls surrounding the borrowing of talent. Strong governance surrounding the utilisation of digital and ICT alliances helps ensure value-for-money is achieved. It also helps guarantee capability uplift is provided to the APS in the form of knowledge and skills transfer and securing innovative approaches and varied perspectives.

The APS should continue to assess service provider capacity, capability, and commercial suitability to accelerate the delivery of services. Agencies also reported strong change and project management. The APS can continue to capitalise on these strengths by ensuring that reliable data is collected on the use of external talent, allowing for effective and strategic workforce planning. The goal is to have leading digital and ICT talent to be less reliant and more strategic when sourcing contractors and consultants.

Ratings by agency

# People



## Case Study

# Netflix

## Background

**Netflix is the world's leading streaming entertainment service, with over 200 million paid memberships. Beyond its success in expanding the reach of its services across the globe, Netflix has also been recognised as one of the best organisations to work.**

**Netflix's approach to managing its staff is founded on a Culture Manifesto, which details the core philosophy of people over process, priding itself on its ability to recruit extraordinary people that can work collaboratively as a 'dream team'. Sheryl Sandberg, COO of Facebook commented that the Manifesto "may well be the most important document ever to come out of the Valley".**

## Processes

Netflix excels through its expert recruitment, and through the culture it cultivates; encouraging mistakes so long as they lead to improvement, prioritising honesty and respect, fostering collaboration, embracing diversity, supporting information sharing, and discouraging politics. Their overarching principles are based on 5 tenets created by Patty McCord, Chief Talent Officer at Netflix from 1998-2012: hire, reward and tolerate only fully formed adults; tell the truth about performance through a simple 360-degree review process; creating great teams and company culture; and focus on what is good for the company by thinking like businesspeople and innovators first, and like HR people last.

Netflix believes an organisation's values are easy to write, but are much harder to live by, and hence real value lies in those shown through action (e.g., who gets rewarded and who gets let go). These values are aligned with the skills and behaviours which they seek in all their employees: judgement, communication, curiosity, courage, passion, selflessness, innovation, inclusion, integrity, and impact.

As companies grow, they often become highly centralised and inflexible – Netflix avoids this by spending lots of time debating strategy together, and then trusting each other to execute on tactics without prior approvals.

## Outcomes and implications for the Australian Government

Netflix has been extremely successful in attracting and retaining talent by creating a special work dynamic where employees are encouraged to make independent decisions, share information openly, broadly, and deliberately, be extraordinarily candid, and be highly effective in their daily workings, maintaining a voluntary attrition rate of 3-4% per year – and for those that leave, over 70% report that they would recommend working at Netflix.

Of course, Netflix doesn't operate within the same policy constraints as the Australian Government. For example, salaries for employees are calibrated every year against their 'personal market' with Netflix aiming to pay the maximum of what each employee could achieve at peer firms.

Performance management approaches also more closely resemble a sports team, indeed, this is how Netflix itself describes their approach to hiring and firing: 'Those who do not pass the keeper test ... are promptly and respectfully given a generous severance package so we can find someone for that position that makes us an even better dream team.'

Netflix's experience in building high performing teams to deliver ever better services and outcomes to their customers and shareholders is, however, worth reflecting on. Their experience speaks to the vital importance of people to realising digital transformation goals and objectives.

## People findings

### Digital and ICT workforce capability

*“The foundation of good workforce management is knowledge – knowing your business requirements, the capabilities of your staff, and the ways in which your business and workforce are likely to change in the years ahead.”<sup>1</sup>*

The Thodey Review noted the APS has “startlingly little knowledge of its workforce”.<sup>2</sup> Since the Thodey Review, the Australian Public Service Commission has developed the APS Workforce Strategy 2025 and, together with the National Skills Commission, will be forecasting the future skills that will be required in the APS in the years ahead.<sup>3</sup>

There is still work required to future-proof the skills of the APS workforce, and to align the workforce to the right tasks and priorities. This is an ongoing challenge for the APS that has been identified in multiple reviews.<sup>4</sup> Addressing this challenge requires accountability, data, investment, service-wide leadership, and strategic HR ability.<sup>5</sup>

The Digital Review baselined the strategic workforce capability of the APS. Strategic workforce capability encompasses all the efforts to ensure the right people are in the right place, doing the right thing, at the right price. Agencies were asked to assess the understanding of their current workforce and future workforce needs, and the effectiveness of their strategic workforce plans in addressing workforce capability gaps.<sup>6</sup>

### Understanding the current APS workforce

Robust workforce data is required to plan for change, avoid the under or over utilisation of the existing workforce, and to align workers to the right tasks and priorities. As noted in the Thodey Review, the APS is not consistently collecting or analysing workforce data, particularly in relation to headcount of the total workforce (including contractors) and spend on external talent.<sup>7</sup>

Agencies were asked to provide the headcount of their total and digital and ICT workforce, and their total workforce spend. The reported results are shown on the following page.

1 PM&C. *The Thodey Review*, pp. 188.

2 PM&C. *The Thodey Review* pp. 188.

3 Australian Public Service Commission. (2021). APS Workforce Strategy 2025. [online] *APSC Website*. Available at: <https://www.apsc.gov.au/initiatives-and-programs/aps-workforce-strategy-2025> [Accessed May 2021]. (Henceforth APSC. *APS Workforce Strategy*)

4 PM&C. *The Thodey Review*, pp. 59.

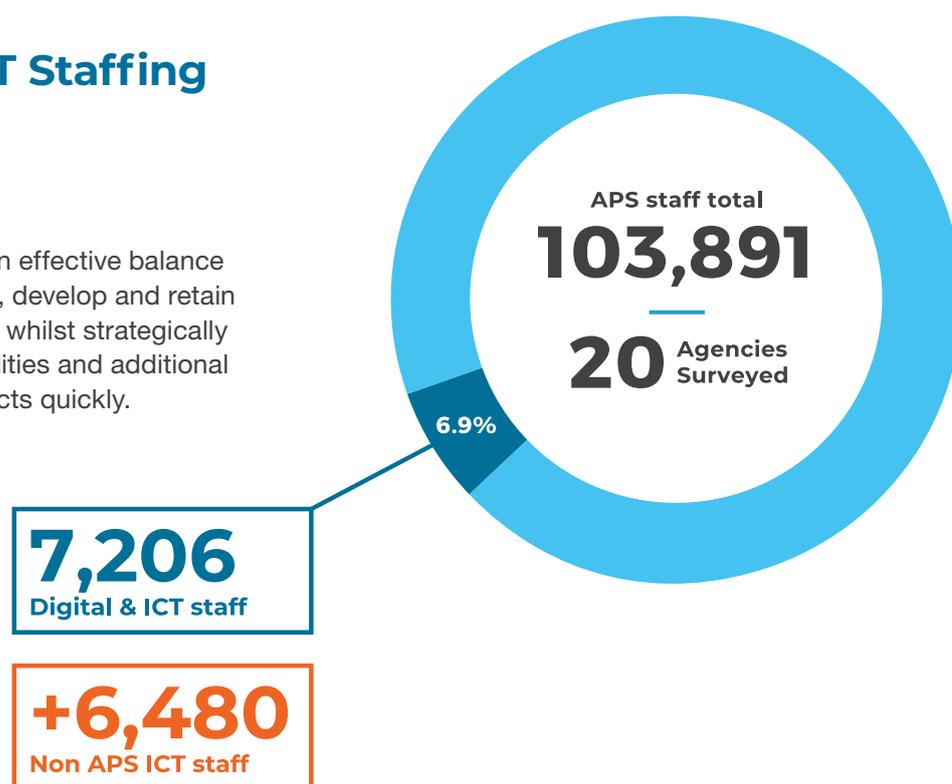
5 PM&C. *The Thodey Review*, pp. 188.

6 PM&C. *The Thodey Review*, pp. 25.

7 PM&C. *The Thodey Review*, pp. 185.

## Digital and ICT Staffing

The APS must strive for an effective balance between efforts to attract, develop and retain the most talented people, whilst strategically sourcing for niche capabilities and additional resources to deliver projects quickly.



### Total workforce

	Total workforce*	Digital and ICT workforce	Total workforce spend
<b>Workforce</b>	<b>140,157</b>	<b>13,686</b>	<b>\$16bn</b>
APS	103,891	7,206	\$12.6bn
	74.1%	52.7%	78.8%
Service providers	25,710	2,750	\$1.1bn
	18.3%	20.1%	6.9%
Contractors	10,226	3,709	\$2.1bn
	7.3%	27.1%	13.1%
Consultants	330	21	\$200m
	0.2%	0.2%	1.3%

\*Departmental staff numbers are included to show the breakdown of these numbers across the permanent APS and contingent workforce, including personnel in digital and ICT roles. One agency provided estimates that were not included to preserve data integrity.

Percentages may not add up to 100% due to rounding.

Two of the twenty agencies who participated in the Digital Review did not supply any quantitative workforce data. 22% of the agencies who supplied quantitative workforce data did not supply this data in relation to contractors or consultants, explaining that the relevant information was not available, there was no confidence in the accuracy of the data or the data was inconsistently captured within the agency. Indeed, 35% of agencies reported having no contractors or consultants in their total workforce numbers, but then reported a proportion of contractors or consultants in their digital and ICT workforce.

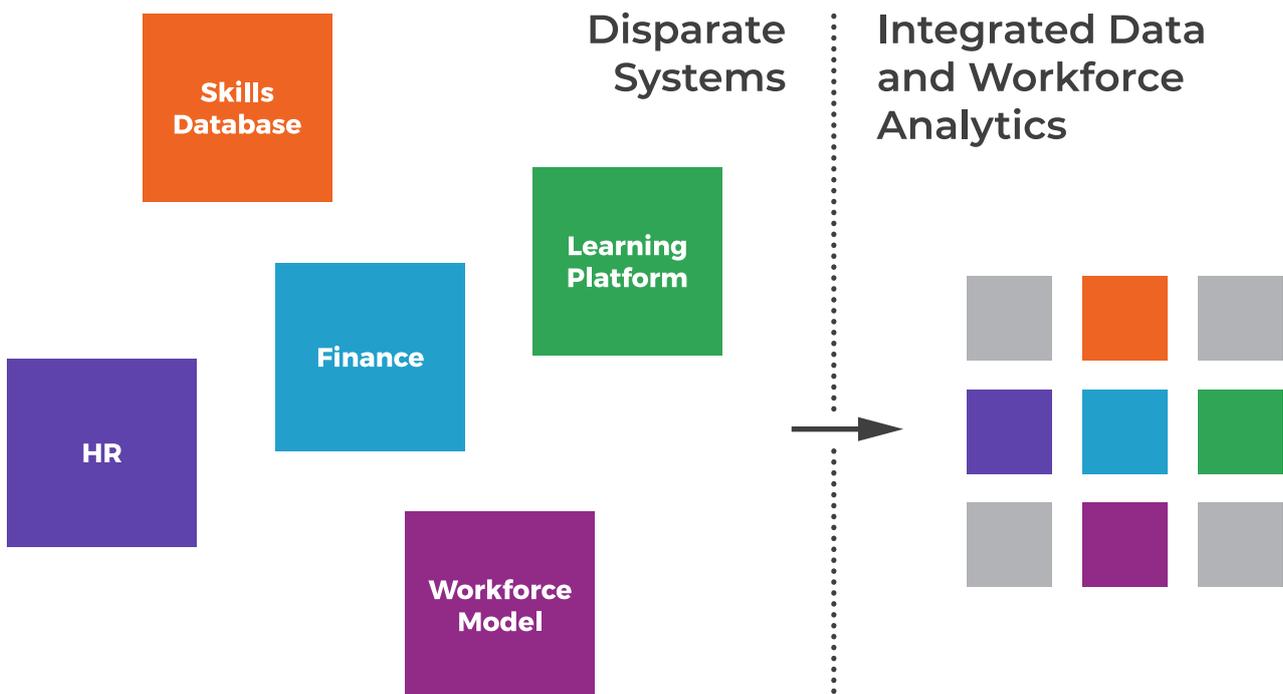
Despite these limitations, the following observations can be made:

- 48% of the digital and ICT workforce of participating agencies is comprised of external talent, which is more than double the global industry average (23%) and 1.5 times higher than the global government average (32%)
- the proportion of contractors in digital and ICT roles (27.1%) is almost 4 times the proportion of the contractors in the APS workforce overall (7.3%).

Poor quality data is a significant barrier to effective workforce planning, but not an uncommon one. HR data is often stored across multiple and separate databases, making it difficult to reconcile and form a single view of an agency’s workforce as illustrated below.

For contractors and consultants, this is further complicated because their engagement is often managed as part of a process in the agency’s finance area, rather than through HR.

In addition to the lack of data on the size and spend on contractors and consultants, agencies also reported information gaps in relation to skills, capabilities and roles. Only 50% of agencies agreed they map digital and ICT capabilities to roles.



Agencies were also asked about the capabilities they most relied on contractors for. The results were:

Capabilities	Percent
ICT architecture – encompassing enterprise, information, security, and solution architecture	60%
Development – infrastructure, program, application, and cloud development	55%
Business related support	55%
ICT/ IT/technology capability	55%
Analysis – business, security, data, process, design, test, service, and systems analysis	50%

Agencies reported lower reliance on contractors for change management, project management and supplier management. 70% of agencies agreed they had the required capabilities in these areas to successfully deliver digital projects. Change management, project management and particularly supplier management are generalist capabilities to manage the delivery of projects. These findings suggest the APS has sufficient capability to manage the delivery of projects, but rely on contractors and consultants for the digital and ICT capabilities the projects require.

The findings indicate some agencies have a mindset of utilising internal talent to manage the delivery of projects, and that additional focus may be required on acquiring leading digital and ICT talent that can stay ahead of the curve. Significant research into the United States Government suggests such reliance on contractors and consultants can easily lead to vendors effectively

shaping digital transformation in government, rather than the government truly leading its own digital transformation agenda.<sup>1</sup>

There is a view that existing levels of reliance on contractors and consultants have eroded skills and expertise within government departments and agencies. A recent \$1.2 billion federal bill from 8 consulting firms in 12 months is cited as proof.<sup>2</sup> This can also dilute the Employee Value Proposition (EVP) of the APS and encourage talented workers in the market to seek consulting roles rather than working for government directly.<sup>3</sup>

The internal workforce of the APS is critical to its future success. Building and maintaining a significant in-house digital and ICT workforce has been described as a silver bullet for the many technology challenges governments face.<sup>4</sup>

1 Harvard Belfer Center. (2021). Closing the Government Tech Talent Gap. [online video] *Harvard Belfer Center Website*. Available at: <https://www.belfercenter.org/event/closing-government-tech-talent-gap#!watch-here> [Accessed May 2021].

2 Coade, M. (2021). APS suffers from 'command and control' dynamic and outsourcing. [online] *The Mandarin*. Available at: <https://www.themandarin.com.au/156151-aps-suffers-from-command-and-control-dynamic-and-outsourcing-expert-says> [Accessed May 2021].

3 Coade, M. *APS Suffers*.

4 Harvard Belfer Center. *Closing the Government Tech Talent Gap*.

## Understanding the future APS workforce

Demand for digital and ICT skills and capabilities will continue to rise – despite change in what the future workforce will look like.<sup>1</sup> It is therefore important to proactively identify current and emerging capability gaps in the APS workforce and the investments required to close them.

To establish a baseline of the future digital skills the APS requires, agencies were asked to assess their identification of future skills and the effectiveness of their approach to address projected future capability gaps in their workforce.

The findings revealed some agencies lack a long-term focus in workforce planning. 65% of agencies have defined the future skills they require and 55% have defined an approach for developing the digital capabilities they will need.

A stronger majority reported understanding their capability gaps (70%) and prioritising filling known capability gaps when recruiting staff for digital and ICT roles (85%). Only 30% agreed their approach to talent management was effective at addressing digital and ICT capability gaps. Agencies also reported a lack of uniformity in their approach to identifying future skills, with only 50% agreeing they use the Skills Framework for the Information Age (SFIA) as recommended by the APSC.<sup>2</sup>

These findings are not surprising, but the consequences are serious. A recent survey of 323 corporate executives found 73% had experienced talent shortfalls due to inadequate workforce planning, leading to missed business objectives. In the same survey, the majority of executives (57%) identified the need for more data to support more effective workforce planning decisions, and improvements in talent management to attract, develop and retain the best and most suitable available talent.<sup>3</sup>

- 1 Australian Public Service Commission. (2021). Delivering for Tomorrow: A Workforce Strategy for the APS. [PDF] *APSC Website*. Available at: [https://www.apsc.gov.au/sites/default/files/2021-03/APS\\_Workforce\\_strategy\\_2025.pdf](https://www.apsc.gov.au/sites/default/files/2021-03/APS_Workforce_strategy_2025.pdf). [Accessed May 2021], pp. 11.
- 2 Australian Public Service Commission. (2021). Skills Framework for the Information Age. [online] *Australian Public Service Commission Website*. Available at: <https://www.apsc.gov.au/initiatives-and-programs/aps-workforce-strategy-2025/workforce-planning-resources/skills-framework-information-age> [Accessed May 2021].
- 3 Visier. (2015). Nearly Three-Quarters of Businesses Have Missed Objectives Due to Inadequate Workforce Planning, Harvard Business Review Analytic Services Report Reveals. [online] *Visier Website*. Available at: <https://www.visier.com/press-release/nearly-three-quarters-of-businesses-have-missed-objectives-due-to-inadequate-workforce-planning-harvard-business-review-analytic-services-report-reveals/> [Accessed May 2021].

## Approach to talent management

The goal of talent management is to achieve and sustain a workforce with the skills and capabilities required to deliver objectives, including augmenting the workforce with contractors and consultants where appropriate. The Thodey Review acknowledged the benefits of the APS accessing and leveraging the best external talent, provided that such decisions are strategic and well-informed.<sup>1</sup> Creating a workforce which is fit for the future is about balancing the development of strong internal capability with the strategic sourcing of external talent.

To establish a baseline for talent management practices across the APS, agencies were asked to assess the effectiveness of their efforts at striking this balance.

The findings indicate agencies have a strategic and purposeful approach toward borrowing external talent through alliances. However, they lack a similar future-focussed approach to developing the internal digital and ICT capability of their workforce.

One of the most significant workforce findings of the Digital Review is that only 50% of agencies agreed they link a digital and ICT strategy to their people and talent capability plans. Without a clear link between digital and ICT strategy and workforce capability development, it will remain difficult for the APS to secure the digital and ICT talent it needs in the future.

80% of agencies agreed they apply clear internal guidance in deciding between building the digital and ICT capability of their internal workforce, or engaging an external digital and ICT alliance. The main reasons reported for engaging externally included accessing specialist capability in relation to cyber, infrastructure, data, and development.

75% of agencies also agreed they target improvements in the digital and ICT capability of their workforce in 2 important ways. The first is by requiring new alliance partners to build internal capability through skills and knowledge transfer. The second is by ensuring investments in digital transformation also improve workforce capability.

Less than half of agencies (45%) agreed learning and development programs led to continuous improvement in the capability of their digital and ICT workforces. 75% of agencies also reported having programs for high potential talent, but they varied considerably. Most agencies relied on internal and external learning and development programs (which, as identified above, were not linked to continuous improvements in digital and ICT capability) or to existing Whole-of-Government programs such as the DTA Graduate Program or APSC Leadership Programs. Fewer agencies reported mentoring programs, secondment opportunities and access to specialist courses such as those run by the National Security College and Next Generation CIO Academies.<sup>2</sup>

Growing and investing in talent and capability is a challenge for many organisations. Research suggests 73% of high potential talent programs fail to deliver any return on investment.<sup>3</sup> This may be due to not having the right talent in these programs, with a survey reporting despite many organisations (55%) having a formal process to identify high potential talent, few professionals are confident that they have the future leaders they need (29%), or are selecting the right people for their high potential programs (14%).

1 PM&C. *The Thodey Review*, pp. 187.

2 For example: Cyber at the National Security College, <https://nsc.crawford.anu.edu.au/executive-education/course/professional-course/12307/cyber>.

3 Hogan. (2016) *The Politics of Potential: How organisational politics are poking holes in your high-potential program. Hogan Assessments*. Available at: [https://www.hoganassessments.com/wp-content/uploads/2017/02/PoliticsHiPo\\_eBook.pdf](https://www.hoganassessments.com/wp-content/uploads/2017/02/PoliticsHiPo_eBook.pdf) [Accessed May 2021].

Investing in high potential talent is also the benchmark of success for some organisations. Companies such as Genentech (an American biotechnology corporation) equip their talent with hands-on education to expand their knowledge through a blend of initiatives such as graduate rotation programs, formal training, informal learning seminars, networking opportunities, mentoring and exposure to both the strategic and operational arms of Genentech.<sup>1</sup> The company also forms strategic partnerships with venture funds to engage staff with the digital health community and provide exposure to start-up environments, to grow their capabilities.<sup>2</sup>

Boeing has a 2-year career foundation program which allows participants to gain broad exposure to various IT functions while working in areas like cyber security, data analytics, cloud computing, application development, network designing, information security and global digital and IT projects. Employees also have mentors, develop technology and leadership skills, access digital learning and skill-building courses, attend networking events and tour various Boeing locations. Other initiatives include their industry-leading tuition assistance program, offering generous funding to enhance employees' skills at hundreds of accredited colleges and universities, online and across the globe. Boeing also offers a range of programs in areas such as leadership development, project management and business planning.<sup>3</sup>

IBM has implemented engaging initiatives to increase the learning consumption of its employees through open digital credentials (badges), embedding a strong learning culture, and uplifting employee experience through unique learning opportunities such as YourLearning. YourLearning is a personalised learning platform to enable agile and successful reskilling to engage, retain and grow talent.<sup>4</sup>

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1 Genentech. (2021). Join a Team That Lives to Improve Lives. [online] *Genentech Website*. Available at: <https://www.gene.com/careers>. [Accessed May 2021].

2 Chase, D. (2015). How Rock Health went from Accelerator to Venture Fund in 5 Years. [online] *Forbes*. Available at: <https://www.forbes.com/sites/davechase/2015/09/08/rock-health-marks-its-5-year-anniversary/> [Accessed May 2021].

3 Boeing. (2021). A Career with Benefits. [online] *Boeing Website*. Available at: <https://jobs.boeing.com/benefits> [Accessed May 2021].

4 IBM. (2019). How IBM Creates a Culture of Learning. [online] *IBM Website*. Available at: <https://www.ibm.com/blogs/jobs/2019/04/17/how-ibm-creates-a-culture-of-learning/>. [Accessed May 2021].

## Culture and leadership

*“Culture is critical to sustained performance, but often overlooked.”*

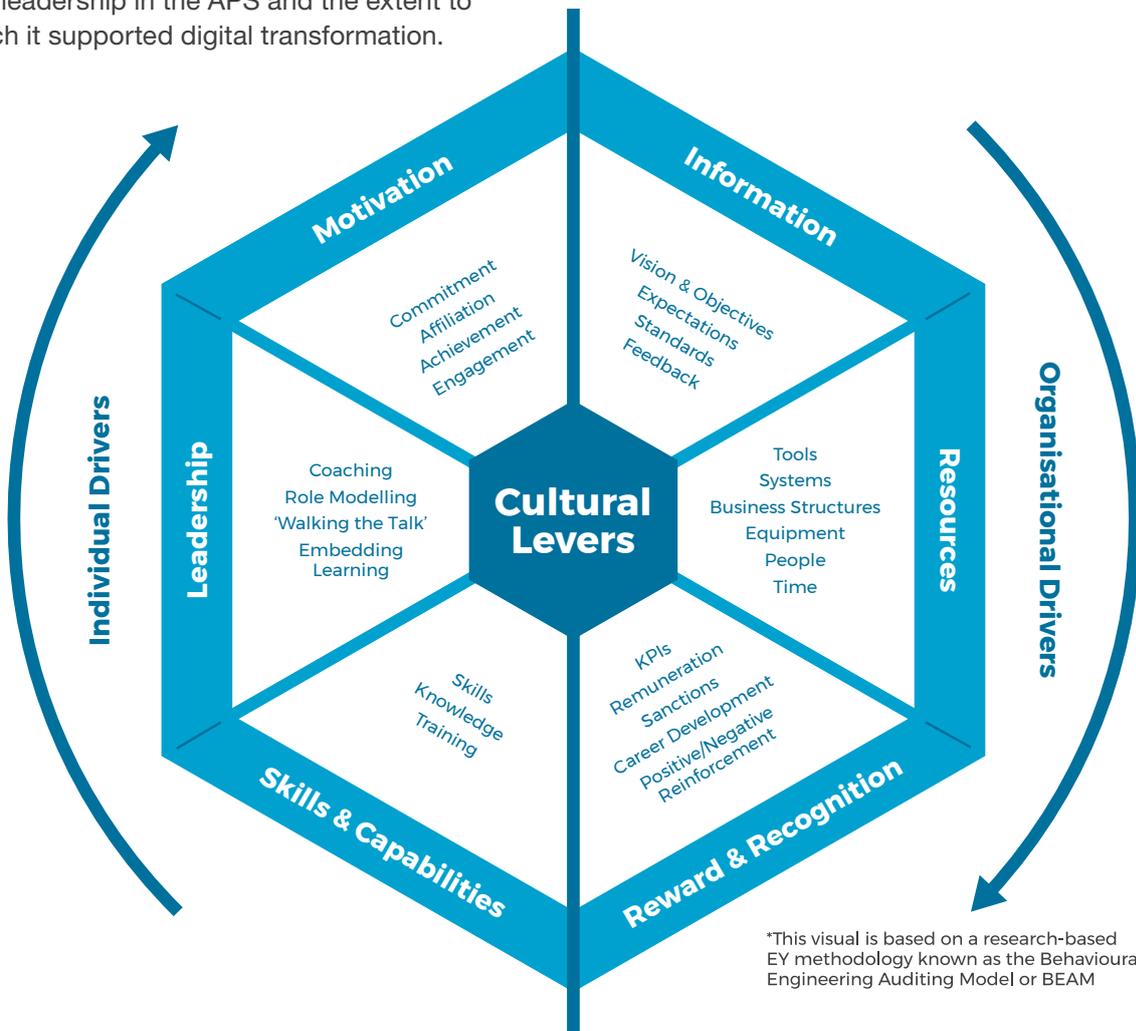
*“Leadership is the most important element in successful and sustained government transformation.”<sup>1</sup>*

The Thodey Review, APS Workforce Strategy 2025, the Digital Transformation Strategy, and the Digital Professional Stream Strategy all acknowledge the importance of the APS having a culture that supports digital dexterity to fulfil the government’s digital aspirations by 2025.<sup>2</sup>

This Digital Review sought to baseline culture and leadership in the APS and the extent to which it supported digital transformation.

The Thodey Review cited a 4-factor model for assessing culture, comprised of communication, leadership, capabilities and incentives.<sup>3</sup> This Digital Review extended these factors to include resources and motivation.

The Digital Review found evidence of a strong APS culture that values transparency, communication and collaboration, alongside programs to develop the APS’ digital and ICT workforce capability. The Digital Review also found uplifting the skills and capabilities of the workforce to support digital transformation specifically is not highly prioritised within agencies and further significant investment is required.



\*This visual is based on a research-based EY methodology known as the Behavioural Engineering Auditing Model or BEAM

1 PM&C. *The Thodey Review*, pp. 61-62.  
 2 PM&C. *The Thodey Review*, pp. 85.  
 3 PM&C. *The Thodey Review*, pp. 29.

## Information

The effective flow of relevant information through an organisation is an important way for the workforce to gain clarity and understanding regarding expected values and behaviours. Without this, it is difficult for a large workforce such as the APS to align to a unified vision as well as objectives and behavioural expectations. The Thodey Review cited a study in which 90% of people indicated more communication, especially with front line staff, would have made public sector transformation more successful.

APS agencies were asked to assess how effectively the vision, objectives and expectations of the government's digital transformation agenda are filtered to reach all levels of the workforce.

The Digital Review found unanimous agreement among agencies for having a culture which embeds transparency, communication, and collaboration. 85% also agreed senior leadership has articulated the vision for digital and ICT system's potential impact on their agency's mission, goals, and strategies, and 80% agreed all agency staff can easily access the agency's digital and ICT policies and procedures.

This is consistent with the European 2020 eGovernment Benchmark, which reported 98% of government websites were transparent about organisational structure, mission and responsibilities, access to information, the possibility to request additional information and where to find corresponding legislation.<sup>1</sup>

Whilst agencies reported strong agreement with the free flow and accessibility of information, some agencies reported limited internal sharing and collaboration among the top 3 inhibitors toward adopting the Digital Service Standard. This behavioural data conflicts with agency responses to maturity statements in the Digital Review, indicating an overestimation of maturity by agencies in relation to information sharing.

Nonetheless, these findings indicate a strong foundation of information sharing and transparency that can be leveraged to support the government's digital transformation.

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<sup>1</sup> European Commission. (2021). *Shaping Europe's digital future: eGovernment Benchmark 2020*. Brussels: European Commission.

## Resources

Over 80% of public sector transformation leaders globally indicated that, in hindsight, more resourcing upfront would have significantly improved overall success.<sup>1</sup>

Resources refer to the tools, systems, technology, and other resources available to an organisation and its workforce to support meeting the organisation's objectives. Resources may not seem like an intuitive factor that informs an assessment of culture. A lack of resources creates time pressure and stress, both of which are drivers of behaviours, and can lead to shortcuts and other deviations from desired and expected values.

In the Digital Review, agencies were asked to evaluate the availability of resources and its organisational impact. The Digital Review found agencies reported having the right structures and governance in place to support timely decision-making. Agencies reported lower levels of confidence and maturity in the flexibility of resources and identified relevant constraints.

95% of agencies agreed they assembled multidisciplinary teams to deliver digital transformation projects. 85% agreed they have a culture of building alliances with other agencies to deliver digital and ICT capabilities.

Organisations can be prone to overestimating their level of resourcing. In a survey of nearly 3,500 people from global companies, approximately 80% of executive managers agreed to having the right resources to do great work, including time, staff, funds, and support. Only half of frontline employees agreed with this same statement.<sup>2</sup>

Overestimation helps to explain another finding in the Digital Review. Close to half (45%) of participating agencies identified a lack of time, resources, and budget among the top 5 barriers to adopting new digital and ICT capability. Two-thirds (65%) agreed the agency's digital and ICT strategy can effectively respond to changes, including through flexibility in its resources, people, and digital and ICT capabilities.

The limited availability and flexibility of resources is a common organisational and cultural challenge, particularly in relation to skill shortages. In a global workforce survey, executives reported the perceived skills gap for digital and ICT capabilities in areas such as artificial intelligence and data science to be higher than 20% in 2020, which they projected to increase to a gap of more than 50% in the next 3 years.<sup>3</sup>

Whilst the culture of building alliances to deliver digital and ICT capabilities supports resource availability, it can lead to over-reliance on external providers for essential skills. Evidence suggests that this in turn creates challenges maintaining a strong shared culture with externally sourced talent.<sup>4</sup>

The relevance of skills and capabilities as factors influencing organisational culture is explored further in the skills and capabilities section on the following pages.

1 PM&C. *The Thodey Review*, pp. 61.

2 Sturt, David & Rogers, Jordan. (2016). Why Your Employees Don't Innovate. [online] *Harvard Business Review*. Available at: <https://hbr.org/2016/02/why-your-employees-dont-innovate> [Accessed May 2021].

3 Haskell, Timothy. (2020). How do you reshape when today's future may not be tomorrow's reality?. [online] *EY Website*. Available at: [https://www.ey.com/en\\_au/oil-gas-digital-skills-survey/how-do-you-reshape-when-todays-future-may-not-be-tomorrows-reality](https://www.ey.com/en_au/oil-gas-digital-skills-survey/how-do-you-reshape-when-todays-future-may-not-be-tomorrows-reality) [Accessed May 2021]. (Henceforth EY. Tomorrow's Reality)

4 Michael Page. (2016). How to maintain company culture when bringing on contract workers. [online] *Michael Page Website*. Available at: <https://www.michaelpage.com.au/advice/management-advice/engagement-and-retention/how-maintain-company-culture-when-bringing> [Accessed May 2021].

## Reward and recognition

*“Research and innovation require failure, which must be taught [and] nurtured...”<sup>1</sup>*

An important factor that contributes to organisational culture is the extent to which reward and recognition align with desired workforce values and behaviours. This is emphasised in the Thodey Review. The Thodey Review concludes that reward and recognition should reflect the imperatives of digital transformation and help to build long-term APS capability.<sup>2</sup>

This is particularly important for innovation and the creation of the safety and active encouragement to learn iteratively and fail fast.<sup>3</sup>

Agencies were asked whether staff involved in research and development activities are rewarded by senior leadership for iterating and learning from failures. Only 50% agreed they were. This contrasts with the global benchmark established by the Digital Readiness Assessment (DRA), in which 64% of organisations agreed senior leaders accept failures, and 68% agreed teams are encouraged to build, collaborate, measure, iterate and learn from failures (for leading organisations, 89% and 93%, respectively). These attributes also define the culture and successes of leading technology companies such as Amazon and Netflix.<sup>4</sup>

Staff are naturally reluctant to ‘fail’, let alone to highlight and share their failures. This can be driven by the pressure to perfect solutions. The complexity of digital transformation makes mastering the prediction, control, and elimination of variance an impossible feat. The search for perfection can be a costly and inefficient use of resources, and prevents valuable insight and knowledge generated through ‘failures’ being shared within agencies and across government.

## Skills and capabilities

The Digital Review included a significant assessment of the APS’ digital and ICT workforce capability.

In addition to the importance of digital and ICT capabilities to ensure the APS workforce is equipped to deal with the government’s future challenges, skills and capabilities also impact the APS’ culture.

The impacts of skill and capability shortages on organisations are extensive and well documented. They create inefficiencies which lead to greater operating and recruitment costs, reduced productivity, and negative impacts on staff morale and wellbeing. All these factors combine to create stress and pressure, which often lead members of the workforce to deviate from expected values and behaviours.<sup>5</sup> This is most damaging when skill and capability shortages impact critical roles.<sup>6</sup>

Agencies were asked about the extent to which they invest in and prioritise the skills and capabilities they need to digitally transform. The Digital Review found that uplifting the skills and capabilities of the workforce to support digital transformation is not highly prioritised within agencies and further significant investment is required.

Whilst 75% of agencies agreed that investments in digital transformation include improving the digital and ICT capabilities of its workforce, only 10% identified improving the skills and capabilities of the workforce among their top 10 digital and ICT investment priorities over the coming 4 years.

1 Giles, Sunnie. (2018). How to Fail Faster – And Why You Should. [online] Forbes. Available at: <https://www.forbes.com/sites/sunniegiles/2018/04/30/how-to-fail-faster-and-why-you-should/?sh=544ec5d9c177> [Accessed May 2021].

2 PM&C. *The Thodey Review*, pp. 28.

3 PM&C. *The Thodey Review*.

4 Taylor, Bill. (2017). How Coca-Cola, Netflix, and Amazon Learn from Failure. [online] *Harvard Business Review*. Available at: <https://hbr.org/2017/11/how-coca-cola-netflix-and-amazon-learn-from-failure> [Accessed May 2021].

5 Zak, Paul. (2017). The Neuroscience of Trust. [online] *Harvard Business Review*. Available at: <https://hbr.org/2017/01/the-neuroscience-of-trust> [Accessed May 2021].

6 Parliament of Australia. (2003). Chapter 2 – Skills shortfalls and future skills need. In: Parliament of Australia, ed., *Bridging the Skills Divide*. Canberra: Commonwealth of Australia.

This lack of prioritisation is reflected in the findings of the Thodey Review, which reported only 45% of APS staff believe their SES manager invests time in developing talent.<sup>1</sup> By contrast, in a global digital transformation and workforce survey conducted in 2020, skills shortages affecting the current workforce were identified as a challenge by 94% of participating organisations, with 43% identifying it as a major challenge.<sup>2</sup>

Only 25% of agencies agreed their learning and development programs equip staff with the right digital and ICT capabilities to lead transformational change.

The impacts of this lack of prioritisation are already being felt. 75% of agencies in the Digital Review reported a lack of staff skills and agencies' inability to develop their staff among the key barriers to adopting new digital and ICT capability or ways of working.

## Leadership

Effective leadership is more than just qualitative attributes and behaviours. It is premised on objective clarity, transparency, accountability, and measurement.<sup>3</sup>

The Thodey Review observed the APS has no way to measure the capability of its talent, nor the amount invested in leadership and skills development.<sup>4</sup> It further identified change leadership as a critical success factor in the government's digital transformation agenda and essential to SES development.<sup>5</sup>

In the Digital Review, agencies were asked to assess the extent to which their senior leaders were equipped and able to drive a digital transformation agenda. The Digital Review found agencies are likely to be overestimating the knowledge of senior leaders in relation to digital and ICT trends, and that they are not being equipped with the capability to drive and embed sustained and transformational change in support of digital transformation.

100% of agencies agreed that senior leadership have a good understanding of digital and ICT trends impacting the government ecosystem. This is surprising, given 84% of executives in a recent global digital and workforce transformation survey identified a lack of understanding regarding the opportunities presented by digital and ICT as a challenge (with 39% identifying this as a major challenge).<sup>6</sup>

1 PM&C. *The Thodey Review*, pp. 28.

2 EY. *Tomorrow's Reality*.

3 PM&C. *The Thodey Review*, pp. 276.

4 PM&C. *The Thodey Review*, pp. 25.

5 PM&C. *The Thodey Review*, pp. 65.

6 EY. *Tomorrow's Reality*.

100% of agencies also agreed that digital transformation is an essential part of the senior leadership's agenda. This is a further surprise, given 70% of organisations in the previously mentioned survey recently identified a lack of active leadership and commitment toward digital transformation as a challenge.

Almost all agencies (95%) reported they had 1 or more senior leaders specifically focussed on either digital and ICT and/or data and information. Only 25% of agencies support their leaders with learning and development programs to lead transformative change. The APSC has developed a 'Leading in the Digital Age' program. At the time this report was finalised, only 10% of SES leaders had completed the program.<sup>1</sup>

Fostering transformational leadership throughout the Whole-of-Government, especially through learning and development, is critical to successfully delivering digital vision and transformation. Canada recognises this and has implemented a number of initiatives to support their leadership in becoming strategic business partners, enablers, and innovators. One method is promoting the digital leadership mindset through professional development programs such as the Digital Academy for agile leaders. Other key initiatives include setting out clear expectations, strengthening change and talent management, succession planning, as well as running Whole-of-Government external competitions to identify diverse leadership candidates in the private sector to work within government. Canada has appointed senior government leaders with the technical skills to adopt an "open first" approach toward content creation, knowledge-sharing and embracing collaborative digital spaces.<sup>2</sup>

The APS Digital Professional Stream Strategy has recognised the need to make sure the APS recruits digital professionals with relevant credentials, skills, and qualities to lead digital and cultural transformation and to professionalise and uplift the digital dexterity and capability of the APS workforce. Various initiatives are currently being pursued under this strategy. Such initiatives include introducing a 'digital delegate' to selection processes for all Senior Executive Service (SES) digital roles. These digital delegates focus on ensuring individuals are recruited with the right behaviours, digital capabilities, credentials, and expertise needed to guide and drive public sector digital transformation.<sup>3</sup>

Overall, findings from the Digital Review suggest a gap between the reality of senior leadership behaviour and the level of agencies' confidence in the knowledge, ownership and accountability of leaders for driving and embedding necessary changes to drive the government's digital transformation agenda.

1 Digital Transformation Agency. (2020). Leading in a digital age. [online] *Digital Transformation Agency Website*. Available at: <https://www.dta.gov.au/help-and-advice/communities-practice/leading-digital-age> [Accessed May 2021].

2 Government of Canada. (2018). Digital Operations Strategic Plan: 2018-2022. [online] *Government of Canada Website*. Available at: <https://www.canada.ca/en/government/system/digital-government/government-canada-digital-operations-strategic-plans/digital-operations-strategic-plan-2018-2022.html> [Accessed May 2021].

3 Australian Public Service Commission. (2021). APS Digital Professional Stream Strategy. [PDF] *APSC Website*. Available at: [https://www.apsc.gov.au/sites/default/files/2021-03/digital\\_professional\\_stream\\_strategy\\_final\\_accessible.pdf](https://www.apsc.gov.au/sites/default/files/2021-03/digital_professional_stream_strategy_final_accessible.pdf) [Accessed May 2021].

## Motivation

The tangible benefits of creating a shared purpose and vision to unite large, complex organisations have been demonstrated many times over. Done carefully, they deliver better outcomes, improve motivation, and increase collaboration.

The final individual factor used to assess people capability in the Digital Review was motivation. Motivation is the extent to which the workforce shares an affiliation and commitment to an organisation's purpose. Motivation compels adherence to desired values and behaviours. The absence of motivation can result in individuals falling back on their own personal values and drivers, which may or may not align with organisational needs and priorities.

Agencies were asked to supply information to gauge the relevant motivation of the APS workforce. The Digital Review identified several cultural barriers that limit motivation.

Over 70% of agencies identified resistance to change as a top 3 inhibitor to adopting new digital technology, Whole-of-Government solutions, new ways of working, and the Digital Service Standard. Such resistance to change is not unique to the APS – resistance to change among frontline employees is a key challenge to technology adoption. This was reported by 86% of respondents in a recent 2020 global digital transformation and workforce survey of executives.<sup>1</sup> In an assessment of 2,163 professionals, managers and executives, frontline employees reported they believed 45% of the workforce would like to remain in the status quo. By contrast, executive leaders believed only 37% of the workforce would like to remain in the status quo.<sup>2</sup>

This indicates executive leaders are generally more optimistic about whether employees want to leave the status quo than employees are themselves. This optimism gap has been shown to exist in both the public and private sector, and is likely to exist in the APS.

Agencies also reported their innovation index scores from the 2020 APS Census. Innovation index scores assess both the extent to which employees are personally motivated to be innovative, and whether their agency has a culture which enables them to be innovative.<sup>3</sup> Agencies reported scores ranging from 59 to 75, indicating that while staff feel some ability to innovate, there are a range of cultural and practical barriers preventing them from realising innovation as regular practice in their daily duties.

1 EY. *Tomorrow's Reality*.

2 Murphy, Mark. (2016). New Data Shows That Leaders Overestimate How Much Their Employees Want to Change. [online] *Forbes*. Available at: <https://www.forbes.com/sites/markmurphy/2016/02/19/new-data-shows-that-leaders-overestimate-how-much-their-employees-want-to-change/> [Accessed May 2021].

3 Australian Public Service Commission. (2019). *Australian Public Service Employee Census Explanatory Guide 2019*. Canberra: Australian Public Service Commission.

# People recommendations and in-flight work

In addition to the 8 key recommendations outlined in introduction and overview section of this report, the below recommendations have also been identified through findings. However, these recommendations will be largely addressed by relevant in-flight work.

## R2

Update requirements for mandatory reporting of workforce data as part of the Approved Programs Collection to improve APS digital and ICT workforce analytics.

## R3

Identify the specialist and generalist capabilities APS staff will need in order to thrive in the digital age and ensure agencies can target these capabilities in their resourcing and development, and monitor progress in uplifting capability in these areas through the Secretaries Digital Committee.

## R4

Leverage APS-wide programs to increase the breadth and depth of high potential digital and ICT talent.

## R6

Conduct a thorough APS workforce assessment for digital dexterity, readiness and transformation.

## R7

Embed the Digital Profession as a core part of the Employee Value Proposition (EVP) of the APS.

## People in-flight work

**These in-flight initiatives present an opportunity to focus agencies efforts, resources and development. The below in-flight work is already making strides to address the above recommendations from the Digital Review, this progress will not deliver the intended outcomes without direct support for government and individual agencies.**

## APSC – R2, R3, R4, R6 and R7

Whole-of-Government efforts to secure and sustain key digital workforce capabilities including through the Digital Profession and in accordance with the APS Workforce Strategy 2020-2025. Initiatives currently being delivered include digital emerging talent programs, learning and career development opportunities, the Digital Career Pathfinder tool and activities to promote foundational digital skills development across all APS (digital dexterity). These Digital Profession initiatives align with the broader APS Professionalising Capabilities Model, which includes the APS Academy, Professional Streams and Centres of Excellence.

The Digital Profession is delivering a range of guidance and learning and development opportunities to uplift agile capabilities and culture. This includes written guidance, specialist advice, training offerings and supporting the agile champions community. These initiatives are designed to support agencies, noting that a commitment from agency leadership and a supported program of change within agencies is also required.

The Digital Profession has purchased a whole-of-Australia subscription to the Skills Framework for the Information Age (SFIA) and support agencies and industry to map career and learning pathways to SFIA. This helps the APS understand and plan for its digital workforce, and encourages consistency and interoperability across sectors.

Agencies must continue to engage with and embed the Workforce Strategy and the Digital Profession for these activities to have the intended impact.

## People

**Only 45% of agencies agreed learning and development programs led to continuous improvement in the capability of their digital and ICT workforces.**

# Policy

**How agencies are impacted by legislative, regulatory and investment controls, and define and realise value from their policies and strategies.**

## Functional areas



## Policy – functional areas

*“Policy capability is not just about the skills of individual advisers, it also reflects the effectiveness of organisations and systems of government to commission, generate, integrate and deliver advice over time.”<sup>1</sup>*

The policy pillar has been designed to measure the impacts of government policy on digital transformation at Whole-of-Government and agency levels. Policy can act as both an enabler of, and a constraint to, the delivery of digital capability. The processes for managing policy and aligning organisations to policy represent foundational elements of digital maturity. Digital policy in government has historically focused on compliance, risk control, and supporting pure technology strategy. Over recent years, policy has moved toward establishing Whole-of-Government frameworks, processes, and methods, enabling agencies to collaborate, and establishing an integrated approach to delivering stakeholder services. Government is now grappling with reducing barriers to collaboration that have accrued in legislation, regulation and policy over the Commonwealth’s 120-year history.

Accounting for this, the policy pillar has assessed compliance and risk, service delivery, collaboration, data sharing, and investment impacts of the current digital and ICT policy framework. In combination, effective policy in each of these areas will support the delivery of world-class services which meet the needs of Australians. This encompasses the impact of relevant laws, regulations and government policies on the digital and ICT capability and transformation agenda of the Australian Government.

For the purposes of data collection and analysis, the policy pillar was organised into the following 3 functional areas:

## Strategy

The effectiveness of organisational digital and ICT strategies that drive prioritisation and investment decisions, and are aligned to how the government operates to deliver services to the Australian community.

## Compliance and risk

The policies, procedures and governance controls which help to serve and protect the interests of the Australian public by maintaining compliance with applicable laws and regulations. This includes the extent to which these are embedded and have common application across government agencies, as well as their overall effectiveness in managing digital and ICT risks, including cyber security.

## Improvement and responsiveness

How the agency is leveraging contemporary user research and engagement methods to promote user-centred services and target improvement efforts based on sophisticated service performance measurement and reporting capabilities.

Understanding these impacts helps to guide the government toward understanding how current policy and legislative settings are enabling, and in some cases hindering, digital transformation. Having a transparent inventory of agency level digital and ICT policies gives government the opportunity to shape the development of its services and platforms.

1 PM&C. *The Thodey Review*, 18.

## Policy maturity score

66%

**Advanced level of maturity**

Agency self-assessed score: 75%

## Policy – ratings by agency

On average, agencies self-assessed as having near leading maturity in policy. Calibration led to ratings falling by 9% on average. Even with this fall, 2 leaders remained with all other agencies assessed as advanced.

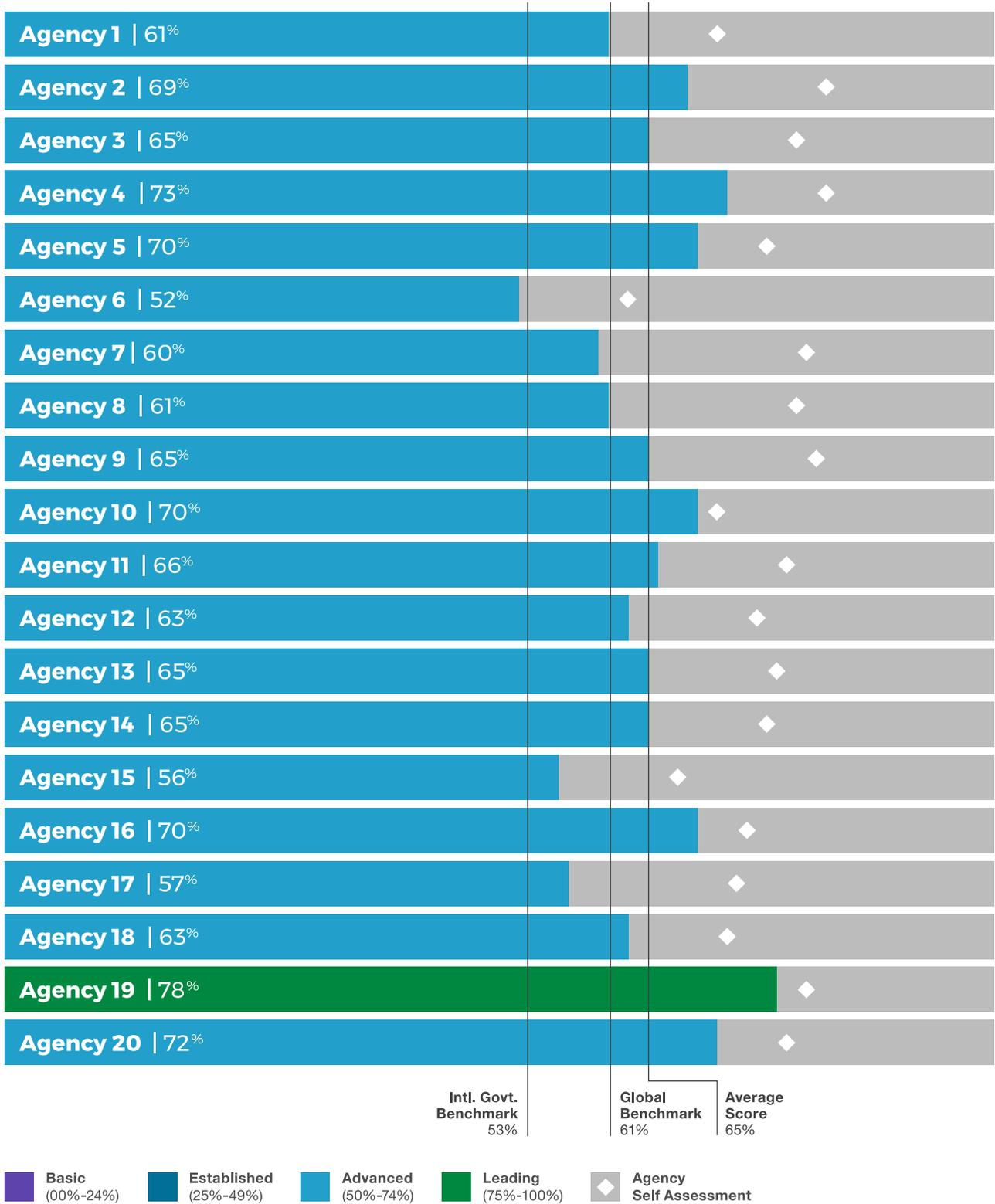
Compared to benchmarks, this places agencies at a higher level of maturity than global organisations, global governments and Australian governments who have average maturity scores of 61%, 59% and 60% respectively.

On average, this also places agencies at a higher level of maturity than the Banking, Insurance and Technology sector benchmarks which sit at 64%, 63% and 68% respectively.

Agency ratings suggested strengths in developing internal technology strategies and managing compliance with Whole-of-Government policy, legislation and regulation. They reported relative weaknesses in risk assurance and cyber policy implementation, and in continuous improvement and responding to policy change.

Ratings by agency

# Policy



What good looks like

Case Study

# Estonian Government

## Background

The Estonian Government has successfully developed one of the world's most advanced digital societies. As part of its ongoing commitment to digital governance, the Estonian Government has made 99% of state services available online, and has developed several leading digital initiatives such as e-identity, e-governance, a Estonian Education Information System (EHIS) and digital healthcare. Its efforts have been welcomed by citizens, with 99% joining the e-identity scheme (70% use the scheme regularly) and close to half (46.7%) of Estonians leveraging internet voting.

## Policy

Estonia's government mandate for Whole-of-Government sharing, legislation to support data consolidation, and the implementation of a cloud solution that is accessible by all of government provides an excellent foundation for public e-services. Together, they have integrated their previously siloed government, bringing together policy functions, IT infrastructure, data centres, datasets, and information systems of the public sector into a shared pool of resources for more efficient decision-making, as well as secure and agile service provision. This integrated policy and technology landscape makes the following initiatives possible:

- **E-identity:** every Estonian has a state issued digital identity that allows them to provide digital signatures, access secure e-services, and authenticate themselves without physical contact. These ID-cards are also utilised as a legal travel document within the EU, iVoting, proof of ID for health insurance, e-prescriptions, and banking and tax-claims
- **EHIS:** integrates the design of policy with real-time data and a variety of digital online tools to support the delivery of education services across Estonia. Tools such as eKool, Stuudium and e-schoolbag produce a wide range of data that helps government officials identify and determine key needs across the educational system, and then address those needs with policy and legislation

- **X-Road@:** software-based solution X-tee is the backbone of e-Estonia, allowing the nation's various public and private sector e-service information systems to link up. By pairing this with a geographical information system (GIS), the e-Land Register delivers real-time geographical data through the X-Road and supports many of the location-based services in Estonia. X-Road also connects the Population Registry which is the state's database of every Estonian's basic information.

## Outcomes and implications for the Australian Government

The adoption of digital government services and service interoperability has moved the country towards more efficient policymaking, optimised processes and greater sustainability, benefitting the people and planet.<sup>1</sup> EHIS, as an example of an Estonian Government-led tool, has been highly effective in digitising the country's education system, and has made it possible for the government to ingest accurate data and create policy solutions that target specific areas of need within education.

The Digital Review revealed that agencies would find value from Whole-of-Government policy frameworks and enhancements to digital policy. Structural barriers (includes barriers across the legislative, regulatory, policy, strategy, alignment, cultural, technological, and data domains) need to be closely examined and require a coordinated approach across government to resolve. The Australian Government is already moving to strengthen approaches to designing and delivering joined up services and maximising reuse of existing capabilities and the Estonian Government is an exemplar case study to help identify a way through the underlying issues.

1 e-Estonia Briefing Centre. (2021). We have built a digital society and we can show you how. [online] *e-estonia.com*. Available at: <https://e-estonia.com/> [Accessed May 2021].

## Policy findings

### Policy, compliance and risk

*“To be truly innovative in our harnessing the benefits of transformation, government should have the ability to consider a portfolio-wide, strategic approach to advancing technologies and driving the direction of our investment, rather than simply monitoring the implementation and progress of initiatives.”<sup>1</sup>*

Compliance with legislation, regulation and Whole-of-Government policy can be both an enabler and a constraint for agencies to deliver digital transformation. It also affects risk management frameworks and risk appetites, which can substantially alter the speed of delivery.

In the Digital Review, agencies considered they effectively understood the potential impact of policy mechanisms on their digital transformation. For example, 70% identified policy mechanisms supporting the sharing of information as vital to the success of Whole-of-Government initiatives.

Agencies were also optimistic about the impact of their compliance and risk management regimes on digital transformation. 70% of agencies agreed that compliance with applicable laws and regulations enabled their effective and efficient delivery of digital and ICT products and/or services. 85% of agencies considered they had strong strategic and operational governance in place for digital transformation, ensuring they complied with laws, regulations, policies and procedures. This same group considered they maintained a comprehensive understanding of digital and ICT risk to inform decision-making.

Agencies also understood the value of Whole-of-Government policy in the cyber security context, noting that it enabled relatively standardised implementation of security capability, alignment of protective techniques, and discussion of security controls and frameworks in a common language. They also noted this had not necessarily

been reflected in practice, as security levels and risk appetites across agencies were not uniform.

All agencies reported a suite of internal security policies aligned to Whole-of-Government frameworks, and 85% agreed that the policies and procedures effectively address cyber security risks. While the remaining 15% is cause for some concern, work is already underway including through the Hardening Government IT program to improve cyber security arrangements across agencies.

90% of agencies also consider they effectively educate all of their stakeholders about cyber risks and related mitigations, including the policies and strategies related to these risks, and that stakeholders understand them well.

### Continuous improvement

There is less optimism when considering agency approaches to maintaining and continuously improving their policy suite. Policy frameworks and individual policy documents are not generally treated as ‘living’. This means they are not always treated as needing to be continuously improved. At least 57% of agencies took a periodic and procedural approach to policy review, and at least 16% of core digital transformation-related policies had not been reviewed in more than 2 years.

When agencies did conduct reviews of their policy suite, only 38% made explicit reference to reviewing impact and effectiveness. Most reviews focused on compliance and legislative alignment, rather than tangible business value and fitness for purpose.

There are also concerns around policy record-keeping practice. For 35% of policies identified as key to digital transformation, agencies could not identify the date the policy was last updated or amended.

<sup>1</sup> Digital Transformation Agency. (2021). Digital Transformation Strategy refresh. [online] *Digital Transformation Agency Website*. Available at: <https://www.dta.gov.au/digital-transformation-strategy/digital-transformation-strategy-refresh> [Accessed May 2021].

## Policy, collaboration, and delivery

Collaboration and consistency in delivery practice are critical to the delivery of high-quality, joined-up services and to enable agencies to make data-driven decisions. As the APSC has noted:

*“Collaboration offers the APS ways to design better solutions, provide stronger policy advice, and deliver better services. Working across portfolio boundaries brings diverse perspectives, multi-disciplinary approaches and system-wide solutions to complex challenges. Further, partnering with other jurisdictions, business leaders and the community has the potential to leverage unique strengths and deliver high quality results for Australians.”<sup>1</sup>*

The imperative to collaborate and deliver consistently has been acknowledged by the Secretaries Board through the ‘One APS’ initiative.

Agencies have acknowledged the value of collaboration and have a strong appetite for policy and legislative frameworks, which enable and enforce collaboration and cooperation across the service to support digital transformation. 80% of agencies agreed that compliance with Whole-of-Government digital and ICT policies and procedures helps drive the execution of digital transformation projects.

Specific examples of agencies finding value through Whole-of-Government policy frameworks and digital policy agencies include:

- **cloud adoption**, with 50% of agencies actively reporting finding value in the Whole-of-Government approach to cloud adoption, Whole-of-Government cloud platforms, and the cloud-first policy
- **DTA-led coordination**, where, while no specific question was asked, 29.4% of agencies identified that the DTA had provided additional insight, access to capabilities, or valuable coordination support. Several agencies noted the recent positive impact of the DTA’s Protected Utility Blueprint, the Digital Marketplace and Strategic Sourcing work and Whole-of-Government procurement arrangements
- **ACSC support**, which several agencies considered a “great enabler.” These include the:
  - Sprint programs that assessed and baselined agency maturity against the Australian Cyber Security Centre’s *Strategies to Mitigate Cyber Security Incidents: Essential Eight*.<sup>2</sup> The Essential Eight is a prioritised list of mitigation strategies to assist organisations in protecting their systems against a range of adversaries.
  - Cyber Hygiene Improvement Program (CHIPs) which assists agencies in guiding their cyber security efforts and uplifting their security postures.<sup>3</sup>
  - Host Based Sensor Program, providing ACSC with a monitoring window into agencies’ IT network to monitor systems for malicious or unwanted behaviour.

1 Australian Public Service Commission. (2020). Chapter 1: Commitment to Our Service, One APS. In: Australian Public Service Commission, ed., *State of the Service Report 2019-20*. [online] Available at: <https://www.apsc.gov.au/state-service/state-service-report-2019-20/chapter-1-commitment-service/one-aps> [Accessed May 2021].

2 ACSC. *Mitigation Strategies*.

3 For more information see: The Commonwealth Cyber Security Posture in 2019 | Cyber.gov.au, <https://www.cyber.gov.au/acsc/view-all-content/reports-and-statistics/commonwealth-cyber-security-posture-2019>.

Agencies still found challenges in engaging in collaborative delivery aligned to Whole-of-Government policy and guidance. This largely resulted from a lack of information sharing and collaborative engagement, with some structural barriers also emerging. For instance, 40% of agencies identified differing priorities, a lack of strategic alignment, or a lack of coordination in policy goals as a significant barrier. 47% of agencies noted they lacked Whole-of-Government digital, data, and ICT capabilities.

Agencies identified a range of complex challenges in this area, including:

- **security and risk appetite:** Agencies identified differing risk appetites as a substantial barrier, particularly where agencies have a lower risk tolerance than their partners. Some agencies suggested a common baseline risk level across government may help reduce this barrier. 45% of agencies also identified differences in security requirements as a key barrier to sharing and collaborating, and suggested a more prescriptive framework establishing common security levels across government would reduce barriers to sharing
- **lack of collaborative design frameworks:** Agencies noted “governance of Whole-of-Government initiatives and platforms can be challenging, as agencies bring competing ideas, control models, and priorities”
- **legislative barriers to information sharing:** Several agencies identified legislative barriers to information sharing and collaboration. They noted the existence of “complex legal frameworks prohibiting agencies from requesting information... or sharing information [which the] Data Availability and Transparency Bill, if enacted, does not overcome”

- **lack of a common view of and access to data:** Agencies noted structural barriers to information due to the siloing of functions and information. They also noted that “a transparent, clear governance model for the management of data across the data lifecycle is critical for the use of data within and across agencies. In Whole-of-Government data sharing arrangements data collected for 1 purpose may be used for another. Without a clear understanding of the data throughout the lifecycle unintended consequences can arise and delay or prevent an initiative”.

These structural barriers require a coordinated approach across government to resolve. Agencies have expressed a willingness to engage in the development of these approaches and to support change to their internal models to facilitate greater collaboration in the pursuit of digital transformation. However, they also noted the need for specific funding to support effective engagement with Whole-of-Government capabilities. 42% of agencies who responded indicated that constraints around funding approaches for shared capabilities remain a significant constraint on cooperation.

## Policy and data sharing

Data sharing across agencies and with the public is vital to the continuous digital transformation of the Australian Government. Data plays a pivotal role in enabling service improvement, transformation of stakeholder experiences, and decision-making which is efficient, effective, and informed.

As noted by the Office of the National Data Commissioner (ONDC):

*“Over the past 100 years more than 500 different provisions limiting the use of information held by government agencies have entered into federal law. Unfortunately, many of them are out of date thanks to advances in information technology that were not envisaged when they were first written. This prevents agencies from sharing information and coordinating efficiently to deliver better health, education and other important community and social services.”<sup>1</sup>*

Government has committed to modernisation – bringing government information sharing into the 21st century. An example of the importance attached by the government to inter-agency and public data sharing is the recently tabled Data Availability and Transparency Bill. This Bill offers a new legislative framework to help overcome barriers which prevent efficient use of public sector data, while maintaining strong security and privacy protections.<sup>2</sup> This Bill has not entered into law, and agencies face barriers beyond its scope which continue to inhibit digital transformation.

Agencies have demonstrated an understanding of the need to share data. 70.6% considered that policy mechanisms to enable and enforce information sharing were vital to the success of Whole-of-Government initiatives. 80% of agencies actively support sharing non-sensitive data to the public, and 75% support adopting an open access policy for non-sensitive data internally.

Agencies also understood the challenge. 71% identified the lack of a uniform implementation of policy caused differing security postures and risk appetites across agencies and Whole-of-Government services. These different risk tolerances posed a substantial barrier to the sharing of data, information, and capability. Several agencies noted the lack of policy at a Whole-of-Government level to align data management standards increased complexity when sharing data. 55% of agencies embed a standard data management approach into all relevant digital and ICT policies and procedures.

30% of agencies reported that they did not have appropriate systems to support data sharing. Less than 23% of the core systems reported by agencies are practically used by other agencies, and only 10% of these were considered shared capabilities. Despite the ONDC’s work to date, and the 2015 Australian Government’s Public Data Policy Statement, which provides a clear mandate for Commonwealth agencies to release non-sensitive data by default, 41% of agencies identified legislative restraints as a barrier to sharing information and participating in Whole-of-Government arrangements.<sup>3</sup>

These issues suggest to a need to better support agencies in developing and operationalising policies which support and internally mandate inter-agency data sharing and cooperation.

1 Office of the National Data Commissioner. (2021). Modernising government data sharing. [online] ONDC Website. Available at: <https://www.datacommissioner.gov.au/media-hub/modernising-government-data-sharing> [Accessed May 2021].

2 ONDC. *Data Availability Bill*.

3 Department of Prime Minister and Cabinet. (2015). Public Data Policy. [online] *Department of Prime Minister and Cabinet Website*. Available at: <https://pmc.gov.au/public-data/public-data-policy> [Accessed May 2021]. (Henceforth PM&C. *Public Data Policy*)

## Policy impacts on investment

95% of agencies identified barriers to improving their existing services and technologies, and to creating, sustaining, and adopting Whole-of-Government platforms and shared services. Barriers cited include:

- lack of dedicated funding
- lack of capacity within already over-stretched BAU sustainment teams
- lack of the resources required to develop specialised capabilities to deliver and support such technologies.

There is evidence that under-investment in ageing digital and ICT infrastructure across APS agencies has occurred over time due to:

- savings collected from agencies through the efficiency dividend
- removing depreciation funding from agencies
- agencies' own internal budget priorities redirecting BAU funds to other digital and ICT priorities, which can be at the expense of supporting legacy systems.

Agencies have identified a range of consequences from the above in their responses to the Digital Review, including:

- unsustainable maintenance costs
- lost vendor support
- difficulty in retaining specialist ICT skills
- increased transactional costs within government
- the inability to undertake fundamental reform in a timely and efficient manner
- increased risk of vulnerabilities across digital and ICT systems.

The Digital Review obtained information on critical ICT systems from agencies through the Technology Audit Survey. Some of the key systems identified provide illustrative examples of the impact of the lack of consistent and comprehensive sustainment funding on mission critical services.

## Policy

**Agencies responding  
identified \$3.27 billion  
in critical investments.**

# Examples

To illustrate some of the funding and investment challenges reported by agencies for their current systems, the Digital Review has included the following anonymised examples.

## Example 1

### ICT landscape

- one agency reported having a suite of high-profile, mission critical systems which underpin a government function vital to the Australian Government and the broader economy
- the systems are curated and managed by the agency in a highly effective manner, and are generally perceived across the APS as setting the benchmark for digital and ICT management maturity
- the agency notes in its response to the Digital Review that their key risk is dealing with their complex and ageing legacy technology portfolio. They note the failure of services which may result from weaknesses in this technology environment may impact on the organisation's ability to provide contemporary digital services in line with staff and client expectations
- **remediation of the agency's legacy technology portfolio is expected to be the focus of its ICT portfolio management strategy in the short and medium-term. However, funding to support essential transformation has not been allocated and the agency notes sustainment funding is not sufficient to support the necessary level of continuous improvement that avoids solutions and platforms becoming legacy.**

## Example 2

### A reporting indicator system

- a bespoke system developed in-house by an agency and used to produce critical reporting indicators. This system is relatively small in terms of capital expenditure (\$3.4 million to date) and has annualised operating expenditure costs of only \$0.5 million per annum. This system was commissioned more than 5 years ago having been developed in the early 2000s and has an expected remaining life of 3 to 5 years
- a failure in this system would have significant effects on the Australian economy and government finances
- **despite the agency being provided with approved funding for a transformation program, this application is still a critical legacy system with only 3 to 5 years of remaining functionality. This will put pressure on the successful, timely delivery of the transformation project.**

## Example 3

### Information discovery and records management system

- this application is a critical database within the agency, containing significant advice provided to more than 350 critical stakeholders
- compromise of this system would lead to a breach of substantial private and confidential information and cause the Australian Government to incur significant financial and legal liability as well as reputational damage
- the agency reported operating costs of \$22.7 million per annum
- the agency has not explicitly identified the replacement, transformation, or continuous enhancement of this system as a key investment priority
- this database was developed more than 5 years ago and now has an expected end-of-life of 2 to 3 years. The most important elements of the database are ensuring its ongoing cyber security and the protection of the confidential information that resides in this system
- **the agency has not explicitly identified the replacement, transformation, or continuous enhancement of this system as a key investment priority.**

## Example 4

### Automated profiling engine

- this system provides sophisticated profiling across a number of sectors. It supports the operation of a key function of the Australian economy and one of the Australian Government's core constitutional responsibilities. It is considered mission-critical for the agency and broader government
- while this system's life is expected to extend beyond the next 5 years, the agency was unable to indicate its capital or operational expenditure to date or the expected redevelopment or continuous improvement costs
- **the absence of expenditure information suggests there may be some risks in understanding whether current and future levels of BAU funding are adequate.**

## The Digital Service Standard

The Digital Service Standard is a core policy and procedural framework intended to align delivery practice across government around better practice principles. The Standard currently has a mixed perception amongst agencies.<sup>1</sup>

The majority of agencies acknowledged that the Digital Service Standard represents a set of modern standards and ways of working, with only 1 agency questioning the value of the Digital Service Standard in their response. Only 13% of agencies perceive the Digital Service Standard to be overly complex or challenging to implement.

60% of agencies reported that their senior leadership had limited understanding of the Digital Service Standard, and failed to see it as a priority. Just over a third (37%) noted that some staff and executives understood the value of the Digital Service Standard.

There are a number of possible causes for these issues, including:

- **lack of Whole-of-Government investment in upskilling.** 73% of agencies noted adoption of the Digital Service Standard requires substantial investment in upskilling, procedural change, new technology and other capabilities. Without an ongoing Whole-of-Government approach, agencies reported they would need to source funding for this from their BAU budgets or capital funding, which they had previously suggested was already stretched
- **lack of available resources in market.** 73% of agencies noted they had difficulty sourcing or developing resources with skills in the Digital Service Standard's implementation.

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<sup>1</sup> Digital Transformation Agency. (2020). About the Digital Service Standard. [online] *Digital Transformation Agency Website*. Available at: <https://www.dta.gov.au/help-and-advice/about-digital-service-standard> [Accessed May 2021].

# Policy recommendations and in-flight work

In addition to the 8 key recommendations outlined in introduction and overview section of this report, the below recommendations have also been identified through findings. However, these recommendations will be largely addressed by relevant in-flight work.

## R10

Promote sharing of data collected through Whole-of-Government programs to support alignment of practice, unified reporting, single-views of stakeholders, data publication, and evidence-based decision-making.

## R12

Better support agencies in applying the Digital Service Standard as part of improving approaches to the design and delivery of government digital service transformation.

## Policy in-flight work

**These in-flight initiatives present an opportunity to focus agencies efforts, resources and development. The below in-flight work is already making strides to address the above recommendations from the Digital Review, this progress will not deliver the intended outcomes without direct support for government and individual agencies.**

## ONDC – R10

The ONDC has introduced the Data Availability and Transparency Bill (DAT Bill), which will help maximise the value of our public sector data, supporting a modern data-based society, driving innovation, and stimulating economic growth. The proposed user accreditation process for the DAT Bill will provide the ONDC with the ability to capture data management, data analysis and security capability of participating entities. The ONDC has also begun a pilot program to develop data inventories for 20 percent of government agencies. These data inventories will provide the foundation for a public, searchable catalogue of government-held data assets.

The ONDC has funding to implement the DAT Bill's data sharing scheme and more generally provide a coordinated capability to request government data through digital services, generally referred to as the Dataplace platform. Dataplace will connect organisations seeking government data with Commonwealth agencies. Users of the platform will be able to submit an application to become accredited under the DAT scheme, submit data requests, assess requests, and develop and manage data sharing agreements with Commonwealth agencies.

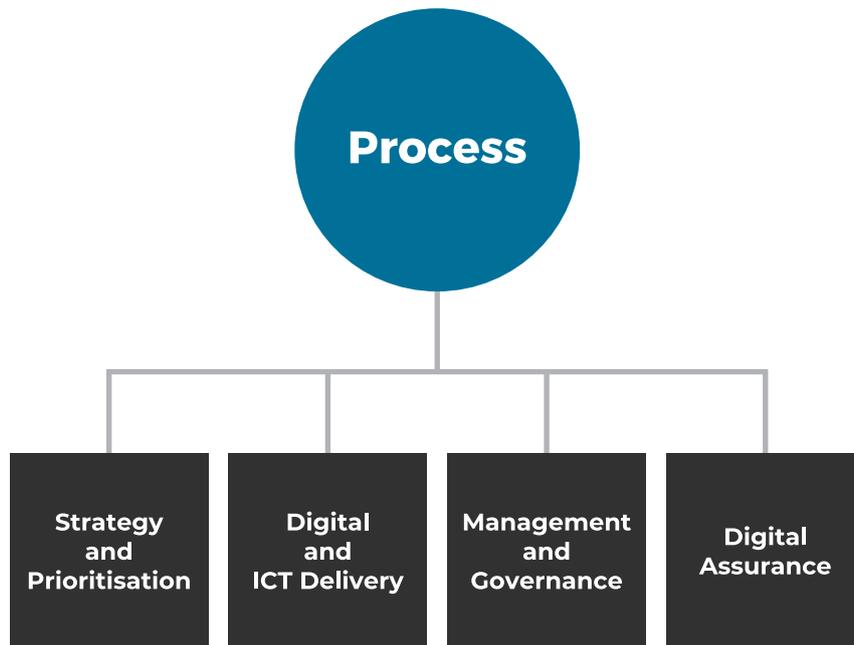
## DTA – R10 and R12

The Digital Service Standards function ensures user needs are at the forefront of consideration throughout the investment life cycle, and will continue refreshing the way it supports agencies in measuring their progress against the standard.

## Process

How agencies create and manage their digital and ICT processes and how effective those processes are in delivering value.

### Functional areas



## Process – functional areas

*“A robust process will set clear expectations for delivery, provide support and guidance to improve performance.”<sup>1</sup>*

This pillar measured the degree to which an agency delivers core functions, services, and projects in an efficient, effective, and stakeholder-centric way.

The purpose of this pillar is to understand the kind of processes that are necessary within an organisation to enable the effective operation of ICT capabilities and delivery of digital services. This pillar provides insights into the current level of process maturity and the breadth of their coverage.

In order for agencies to help stakeholders achieve their outcomes, it is vital that the processes they put in place to deliver their digital capabilities are efficient and sustainable by design. These can be achieved through:

- the use of contemporary, collaborative and iterative techniques that accelerate delivery
- the effective oversight of digital and ICT projects against scope, timeframes and benefits
- the adoption of methods and standards which ensure delivery processes are repeatable, consistent across government and sustainable within available resourcing.

*“Governments must now lead, not follow — in digital service delivery for citizens, and the use of data and digital technologies to solve complex policy problems and enable the APS and the Government to work together seamlessly.”<sup>2</sup>*

As identified in the Thodey review, legacy digital infrastructure and ICT systems, inconsistent processes and methodologies, and lack of integration across agencies are limiting government’s ability to deliver effective capability simply and swiftly.<sup>3</sup>

High-quality, digitally-enabled service delivery requires agencies to adopt defined delivery methodologies and common architecture frameworks. This will ensure consistency, interoperability, and continuous improvement across Whole-of-Government, helping to realise the vision of joined-up services organised around stakeholder needs rather than the machinery of government.

The Digital Review examined current practices in the provision of digital and ICT functions and capabilities. It assessed the delivery approaches, architectural frameworks, delivery and sustainment maturity, and other methodological techniques used across government. It also explored the structural impediments, critical risks, issues, and challenges to the delivery of both existing and new digital and ICT-enabled services and functions.

1 PM&C. *The Thodey Review*, pp. 290.

2 PM&C. *The Thodey Review*, pp. 144.

3 PM&C. *The Thodey Review*, pp. 152.

Processes spanning the digital lifecycle from strategy and design, delivery, management and governance must support contemporary and agile ways of working in line with government strategy. The process pillar was organised into the following 4 key functional areas:

## Strategy and prioritisation

The set of processes that comprise digital and ICT strategy development, effective funding allocation, project prioritisation and alignment to budget/resource and capacity forecasts. This also incorporates processes involved with applying comprehensive criteria across the digital and ICT portfolio to strike the optimal balance between sustaining and transforming digital and ICT products and services. These processes collectively enable agencies to make decisions in a timely and evidence-based manner which is attentive to funding allocations, capacity constraints, budget optimisation and opportunities for continuous improvement.

## Management and governance

This functional area incorporates the organisation's processes which instil commitment to a common purpose and direction for digital and ICT. This includes the formation of governance bodies comprising senior stakeholders who coordinate and manage digital ICT products and services. This area assesses ICT management processes which enable digital and ICT functions to integrate with the rest of the agency to deliver quality services.

## Digital and ICT delivery

The set of processes which ensure digital and ICT services are delivered effectively, enabling stakeholders to meet their needs easily and efficiently. Stakeholder experience is a key focus area and relies on engagement and consultation to ensure stakeholder needs are captured early to shape digital and ICT products and services. Application of Whole-of-Government ICT procurement frameworks is also assessed as an enabler of digital and ICT maturity.

## Digital assurance

The set of processes which ensure that digital and ICT projects deliver expected results. This includes processes which review initiatives, address underperformance and deprioritise misaligned projects to ensure delivery on budget, schedule and to agreed benefits. This functional area also includes processes for capturing lessons learned alongside other assurance findings to inform the design of future investments. It also assesses processes related to project management, oversight and assurance of digital projects.

## Process

**Only 19% of systems captured their average number of monthly transactions.**

## Process maturity score

**71%**

**Advanced level of maturity**

**Agency self-assessed score: 79%**

## Process – ratings by agency

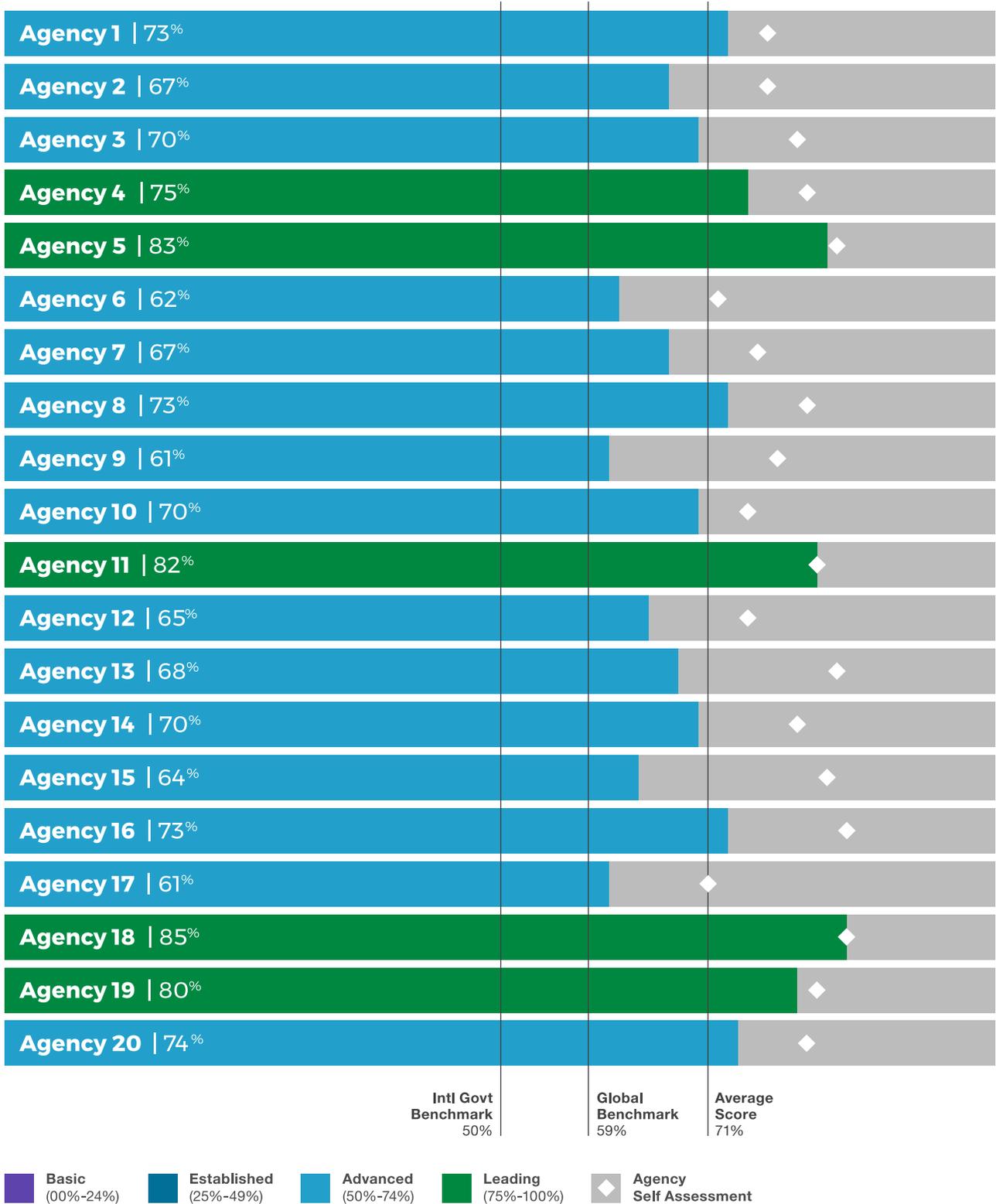
Prior to calibration, the process pillar was the highest rated pillar by agencies at 79%, comfortably in the leading maturity category. The calibration process saw the average for Whole-of-Government fall by 8% to 71% with 4 of 16 agencies retaining their leading status. The minimum rating in the pillar was still the highest of any of the pillars at 60%, putting the Australian Government comfortably in the advanced category.

Overall, agencies were assessed as having deep capability in ICT service delivery management and sustainment processes, and in developing technology strategies. They had less confidence in sourcing and procurement practices, assurance and funding, and prioritisation process management.

With an average calibrated score of 71%, compared to benchmarks agencies place at a higher level of maturity than global organisations, global governments and Australian governments which have average maturity scores of 60%, 55% and 57% respectively. This also places the Australian Government at a higher level of maturity than the Banking, Insurance and Technology sector benchmarks which sit at 63%, 55% and 63%.

Ratings by agency

# Process



# McDonalds

## Background

**McDonalds Corporation is the largest quick service restaurant chain in the world. With over 38,000 restaurants serving over 60 million customers a day, McDonalds maintains quality of service through process discipline and growth investment.<sup>1</sup>**

## Processes

McDonalds' business model is founded in customer centricity and a focus on continuous improvement and innovation. Using company-owned stores (around 7% of all stores<sup>2</sup>), McDonalds constantly develops and tests innovations, trials new operating models and trains staff to adapt to digitised processes.

As part of its commitment to innovation, McDonalds has more recently worked to acquire and integrate highly innovative companies. This includes an artificial intelligence focussed company (Dynamic Yield) which was acquired for US\$300m as well as a voice-recognition firm (Apprento). Other pivots McDonalds has made to embrace digitisation include:

- establishing a digital customer engagement team, which now sits above all marketing technology and global delivery teams.<sup>3</sup>
- delivering worldwide store upgrades to include self-order menu kiosks as part of its "Experience of the Future" program.
- transforming McDelivery from a US\$1bn business to a US\$4bn business globally over 3 years, by deploying a mix of store-operated, third-party (e.g. online delivery platforms like Uber Eats and DoorDash) and hybrid models.

Going into the pandemic, McDonald's was well positioned to build on its prior digital innovations to create a user experience well-suited for the constraints

posed by the pandemic. As indoor dining declined during the pandemic, McDonald's made significant drive-thru technology investments (such as dynamic menu boards) and operational improvements to ultimately deliver the value their customers cared most about: speed. These innovations enabled McDonald's to cut 30 seconds from its drive-thru times on average and move "300 million additional cars" through McDonald's drive-thrus during the pandemic.

## Outcomes and implications for the Australian Government

McDonald's resilience in the face of crisis can be attributed to its investments in digital technology and massive culture transformation over the past 7 years. . McDonalds has significantly transformed its operations and adapted to the loss of restaurant dining traffic since the onset of COVID-19.

Its Q1 2021 revenues are back to 2019 levels, having doubled down on their digital, delivery and drive-thru strategy and process improvements. By focusing on seamless and convenient customer experiences, growth of sales on digital-enabled platforms have allowed McDonalds to keep up with ongoing government restrictions on store hours and dine-in capacity worldwide.

Identifying and actively managing processes to optimise value for customers and users is a hallmark of McDonald's strategy, and a key contributor to its success. The Australian Government likewise relies on processes to deliver value to individuals and businesses. The Digital Review's recommendations under the process pillar acknowledge the importance of the Australian Government taking a more strategic approach to managing and actively improving the performance of processes both at an agency and a Whole-of-Government level.

1 Gregory, Lawrence. (2017). McDonald's Operations Management , 10 Decisions, Productivity. [online] *Panmore Institute Website*. Available at: <http://panmore.com/mcdonalds-operations-management-10-decisions-areas-productivity> [Accessed May 2021].

2 McDonald's Corporation. (2019). McDonald's Franchising Overview. [online] *McDonald's Corporate Website*. Available at: <https://corporate.mcdonalds.com/corpmcd/franchising-overview.html> [Accessed May 2021].

3 Lauchlan, Stuart. (2020). McDonald's new CEO – digital transformation not only continues but will be super-sized. [online] *Diginomica Website*. Available at: <https://diginomica.com/mcdonalds-new-ceo-digital-transformation-not-only-continues-will-be-super-sized> [Accessed May 2021].

## Process findings

*“Transforming the APS to deliver both high-quality advice to the Government and outstanding services to the people of Australia, now and into the future, will require sustained investment in the service”<sup>1</sup>*

Leading digital organisations have mastered the art of delivering great outcomes for stakeholders at speed and scale. This is due to excellence in execution throughout the lifecycle of their digital and ICT investments, from strategy through to delivery.

Fully appreciating the implications of digital disruption to their operations is a key success factor that agencies in the Digital Review share with leading organisations. Agencies reported both incorporating digital transformation and a comprehensive view when developing their strategy. They also reported that senior leadership is actively engaged and has oversight of the overall portfolio of digital and ICT initiatives.

The Digital Review has identified that agency investment priorities are aligned with leading practices, with a particular focus on cybersecurity and data analytics capabilities which are both vital in realising trusted digital services. The Digital Review has also identified gaps including in the commitment of funding for transformation, customer focus, measurement rigour and speed to deliver. These gaps are explored throughout this section.

## Strategy, funding and prioritisation

The top investment priorities of agencies include modernising platforms and solutions to meet stakeholder expectations. The priorities also reflect a focus on realising stakeholder-centric services, seamless engagement across multiple agencies, and uplifting data analytics capabilities.

While these investment priorities mirror those of other leading organisations, agencies also reported that they face challenges securing adequate funding for digital and ICT investment. A lack of tracking and reporting benefits, which many agencies recorded in their returns to the Digital Review, may be reducing the evidence base available to make a compelling case for investment.

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1 PM&C. *The Thodey Review*, pp. 30.

## Inadequacy and inefficiency of funding

The Thodey Review recognised that investment in capability and talent development is required, and if not addressed will “*risk leaving the APS with expensive legacy systems that do not support exceptional services or enable data-led policy making*”.<sup>1</sup>

The investment required to make up for this legacy of systemic underinvestment in ICT assets and capabilities will be considerable.<sup>2,3</sup> Accenture found that government has 5 times as much technical debt per application than 11 other industries, and estimated as an example that the cost to address end-of-life systems in the US government would be US\$7.5 billion.<sup>4</sup>

Although departmental appropriations increased 8.6% between FY19–20 and FY20–21, ICT spend versus total appropriation declined slightly from 10.9% to 10.3% in the same period. This remains consistent with benchmarks across other national governments of around 10% of operating expenditure, but remains exactly the same as the last reported figure of 10.3% from 5 years ago.

The Digital Review found that agencies are allocating their ICT budgets between business-as-usual and project spending in line with benchmarks (38% of ICT budget in FY20–21 is dedicated to project spending, versus a cross-industry benchmark of 34%). Despite this, 35% of agencies did not believe they had the right balance between sustainment and transformation initiatives. These agencies varied in size, had different departmental appropriation levels and had various allocations of operational and transformational ICT spending meaning no clear trend could be deduced.

The foregoing points, while in line with benchmarks, need to be contextualised with the trend towards as-a-service and cloud-based models that shift the spending on digital capability towards ongoing operational spending. Agencies need to have internal funding allocation processes that can keep up with the speed of digital and ICT delivery. The Digital Review found areas for improvement with only 47% of agencies agreeing that their internal budgeting systems and processes can support modern funding approaches, such as seed funding, tranche funding and agile funding.

The majority of agencies further clarified that the nature of a fixed annual budget cycle is rigid and exacerbates the challenges of inadequate funding. This means there is no capacity to address needs that arise outside of the budget cycle, or plan for sustainment that spans multiple financial years.

80% of agencies identified a lack of sufficient ongoing funding as a barrier to implementing mandates and strategic priorities. 100% of agencies identified project-based implementation and delivery approaches as a primary delivery model across their organisations. Projects take a finite view of capability, rather than considering the ongoing sustainment and enhancement of outcomes.

The resulting inability to fund business-as-usual operations has tangible effects on the experience of agency staff, with agencies reporting less than 50% satisfaction in their current systems and infrastructure. This was echoed in workshop sessions, where senior executives from multiple agencies identified declining sustainment budgets as a major constraint on their ability to deliver digital and ICT outcomes.

1 PM&C. *The Thodey Review*, pp. 14.

2 PM&C. *The Thodey Review*, pp. 152.

3 Department of Home Affairs. (2018). Submission to the Independent Review of the APS. [online] *APS Review Website*. Available at: <https://www.apsreview.gov.au/file/288/download?token=dMxRBtME> [Accessed May 2021].

4 McClure, David. (2016). *Decouple to Innovate: How federal agencies can unlock IT value & agility by remediating technical debt*. Washington D.C.:Accenture.

## Lack of benefits discipline

In reporting their ongoing digital and ICT project and program delivery activity, agencies provided highly varied descriptions of benefits and impacts. This has also been reflected in past Approved Programs Collection returns, where agencies have been asked to describe the value, benefits, and outcomes of their delivery activities. Inconsistency and limited precision in the initial description and subsequent measurement of the realisation of benefits was apparent across returns.

Through this Digital Review, agency responses indicated a lack of consistent benefit tracking across digital and ICT projects making evident the ongoing legacy issue:

- 55% of agencies agreed they have established processes to track and realise benefits during ideation, funding and initiation of a digital or ICT project
- only 35% of agencies agreed they have established processes to track and realise benefits throughout the lifecycle of all digital and ICT projects.

In a workshop with the Digital Leadership Committee, it was also recognised that agencies do not consistently track benefits and improvements in a way that enables continuous improvement and informs future funding.

There are few measures post-financial allocation against which agencies must report outcomes and Return on Investment (ROI). This informs future budgeting and investments. For example, government has mandated that approaches to measuring and reporting on benefits of major digital investments be reviewed, in the first instance, by examining the benefits realisation of major digital projects over the past 5 years. It would be beneficial for agencies to establish internal processes for continuous benefits measurement and tracking instead of relying solely on the external review process.

## Management and governance

Once priorities have been set and funding allocated, most digital and ICT activity within agencies will consist of day-to-day execution of projects and delivery of services. The smooth running of these operations is enabled by practices and governance that guides how digital projects and services are delivered, and which digital capabilities agencies need to develop.

The Digital Review found that agencies' governance mechanisms and leadership oversight are present across their respective digital and ICT portfolios, and that the sharing of information and resources within each agency is well-established.

The Digital Review also identified that agencies require additional guidance and support on development of digital and ICT capabilities:

- in workshops, agencies expressed a need for unified programs, supporting technology, and consistent frameworks for the development of digital and ICT capabilities and skills across the APS workforce. They specifically identified the need for these frameworks to be focussed at a more practical and operational level
- the Digital Service Standard identifies key principles for service teams designing and delivering user-focused services. The Digital Service Standard can be a useful tool to guide agencies in defining the capabilities they need to enable service transformation. The Digital Service Standard, although a readily available framework, has not been fully adopted by agencies and could be relied upon more heavily going forward to improve understanding of key capabilities required for effective service transformation.

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**Over 70% of participating agencies identified resistance to change as a top inhibitor to adopting new digital technologies, Whole-of-Government solutions, new ways of working, and the Digital Service Standard.**

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## Digital and ICT delivery

When working to deliver digital services, agencies need to consider how their services fit with stakeholder needs, the prevailing technology landscape, relevant policy, and the operating environment. This is especially challenging in an environment of limited funding and competing priorities.

Having structured processes and the requisite people capabilities to understand and balance the full range of delivery requirements is a key enabler of digital transformation. This ensures that the government’s digital and ICT initiatives are designed and executed in a way that delivers value to the public and builds upon an integrated, Whole-of-Government technology landscape.

In leading practice, this is depicted in the intersection of desirability, feasibility and viability:

Lens	Objective	Enabling practices / methods
Desirability	Design services that deliver positive outcomes to the Australian public.	Stakeholder-centric design and engagement.
Feasibility	Build within the confines of known technical capability.	Alignment to enterprise architecture and ICT landscape.
Viability	Deliver agency objectives in a cost-efficient way.	Alignment to strategy and priorities. Adherence to agile delivery models.

The Digital Review found that agencies were inconsistent in applying leading practice in their delivery of ICT services. Where leading digital organisations are collaborative, iterative, and informed deeply by their technology when delivering digital and ICT services, not every agency evidenced a similar level of performance.

Some agencies reported not fully engaging stakeholders in the design and delivery of digital and ICT services. Over 20% of agencies also reported not having a stakeholder engagement strategy to drive how they deliver digital and ICT products and/or services, nor did they report conducting delivery in an iterative fashion. This runs counter to the principle of designing services with user needs at the forefront and risks poor service uptake and reduced user satisfaction.

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Based on analysis of Digital Review data, many agencies can better align delivery of services to their enterprise architectures. 55% of agencies reported not identifying, planning and managing digital and ICT investments and projects according to an endorsed enterprise architecture blueprint. This is a gap that, if not addressed, increases the risk of ICT projects encountering delays or poor performance.

There are some agencies that demonstrated that they make digital and ICT investment decisions informed by enterprise architecture. In doing so, they put in place practices that:

- align initiatives to broader ICT strategy and relevant standards
- assess and ensure fit-of-initiatives with existing ICT architecture
- define principles to act as guardrails for digital initiatives
- document and track technical debt across the ICT landscape
- support the rest of the agency's functions with development of forward capability roadmaps
- identify dependencies and adapt the enterprise architecture as initiatives are delivered.

## Digital quality, assurance and continuous improvement

Digital quality and assurance are central to developing and maintaining ICT systems, meeting regulatory ICT standards and ensuring projects deliver expected results. These reviews can also improve alignment between agency initiatives to Whole-of-Government strategic objectives, making them a critical element of all digital and ICT activity.

The Digital Review found that most agencies reported a strong focus on senior oversight and visibility of their digital and ICT activities.

For up to 35% of agencies, this has not translated into putting in place processes required to inform effective investment decision-making. These agencies do not conduct systematic reviews of their digital and ICT portfolio of initiatives, nor do they deprioritise projects that are no longer aligned to their agency's strategy.

The Digital Review also identified that not every agency has put in place an effective project monitoring interface for senior leadership. This interface often takes the form of a portfolio management office or a similar body, playing a vital role in supporting effective oversight of an agency's project portfolio, including by ensuring adherence to common project governance and reporting standards. Nearly a third of agencies reported not currently utilising portfolio and/or PMO resources to oversee their digital and ICT portfolios. Nearly a third of agencies also did not agree that they are resourced appropriately to meet independent assurance and compliance requirements.

With a third of agencies unable to meet key project requirements, including budget and timing, additional focus on ensuring effective internal oversight of projects is consistently achieved across Whole-of-Government is critical. This level of project performance also compares poorly with leading practice, which indicates that cross industry peers on average deliver 80% of projects on time and 78% of projects on budget.

A fundamental part of enabling digital transformation is instilling continuous improvement into processes. The Digital Review also found:

- 25% of agencies do not apply a formal lessons-learnt process to closed digital and ICT projects and programs to inform future investments and implementations
- close to a third of agencies reported not having a structured approach for collating, reviewing, and prioritising ideas for continuous improvement and digital transformation
- many projects are just funded to the point of delivery but have nothing allocated for ongoing maintenance, support, reporting, and most importantly reviews.

## Case Study

## ING

## Background

ING is a global bank headquartered in the Netherlands, with over 30 million customers globally. With 40% of their retail transactions conducted online, they found that their retail operations and customer service functions needed to adapt to the expectations of speed and seamlessness that their customers had come to expect. In 2015, ING embarked on a transformative journey, shifting its traditional organisation to an agile model. The new approach at ING improved its time to market, boosted employee engagement, and increased productivity. Having already adopted agile methodologies in its Dutch IT unit, ING decided to pilot an organisation-wide agile transformation, starting in its headquarters.

Processes<sup>1</sup>

ING Senior leaders and the board were strongly engaged in driving the process of agile transformation. They:

- articulated a vision for a new agile, team-based approach to deploying, developing, and assessing capability
- sponsored and engaged with continuous showcases, demonstrating how ING was succeeding in using agile
- engaged with technology companies and other market leaders to understand what good looked like and what practices and processes were driving success, learning how their talent systems enabled better customer service.

Across its 3,500 staff in its headquarters, ING replaced most of its traditional structure with a fluid, agile organisation composed of:

- **squads** – cross-functional teams of no more than 9 people, focused on solving a particular customer problem

- **tribes** – a collection of squads focused on the same domain such as private banking, mortgage lending, and business banking
- **chapters** – same skillset, such as User Experience, Data and Analytics, who develop capability in their area across squads.

Agile coaches were put in place to help squads and individuals collaborate effectively in an environment where employees are encouraged to solve problems on the ground rather than pass them on to someone else.

## Outcomes and implications for the Australian Government

ING was an established and traditional organisation that reinvented itself completely in its structures and processes using agile principles. The company reported that the organisational silos that existed were broken down and it also saw a greater increase in employee engagement. The transformation was such a huge success that there were numerous requests by external entities and individuals to visit their organisation and to study or understand the changes that were implemented.

In Australia, ING leads in speed-to-market, having rolled out its “no transaction fees for global purchases” feature in just 6 weeks.<sup>2</sup> It also leads in customer satisfaction, with a Net Promoter Score (NPS) of 42.9 versus the Big Four average of 7.1.<sup>3</sup>

The Digital Review revealed that agencies are constrained by their inability to respond swiftly and effectively to changing environments. Government agencies can leverage the experience from ING by actively promoting agile methodologies and ensuring that our senior executives continue to cultivate the right mindset. Proposed recommendations include providing guidance for agencies on agile financial management and supporting the digital leadership mindset by promoting professional development programs such as the Digital Academy for agile leaders.

1 Harvard Business Review, *One Bank's AgileTeam Experiment* (2018).

2 Epic Agile: “How ING is taking on the big four” <https://epicagile.com.au/ing-using-agile-to-take-on-big-four/>

3 Roy Morgan Single Source (Australia). April 2021. “Big Four” refers to CBA, ANZ, Westpac and NAB.

## Agility and speed-to-deliver

To keep up with the rapid pace at which technology develops, government agencies need to build agility and resilience into their operating model. This will enable them to invest and deploy suitable ICT and digital innovations swiftly, driving quicker returns.

Despite the belief of many agencies that they are quick to deploy and integrate new ICT products and/or services, 35% of agencies indicated that a lack of a consistent project management methodology could be inhibiting further improvements in dexterity, informed decision-making and delivery success.

80% of agencies agreed that their digital and ICT systems give them speed, flexibility, agility, and confidence to deliver their core business functions and services, while describing their operations as slow and inflexible in other questions. This suggests that the problem lies in the application of people and processes to digital delivery, or other external factors disrupting the efficiency and effectiveness of agency operations. Agency responses indicated low adoption (60%) and low maturity of frameworks that define ongoing digital and ICT operations such as ITILv3 and/or ITILv4, supporting the above hypothesis.

Leading organisations in the process pillar are able to respond to major business shifts in 5-6 months on average.<sup>1</sup> Data supplied as part of the Digital Review suggests this benchmark level of performance is not being consistently met by agencies in the delivery of major digital projects.

## Adoption of delivery methods

The Digital Review assessed whether agencies have adopted standard methods and frameworks that enable consistency of project delivery. The responses from agencies indicated 2 main issues: a lack of wider adoption of agile methodologies, and the low level of maturity demonstrated in any of the key methodologies adopted.

The Digital Review found that agency delivery methods focus mainly on traditional project delivery, rather than adoption of agile methodologies. Although all agencies reported that they have adopted a standard project management methodology within their agency (PRINCE2), agencies only reported 54% across all agile methods surveyed.

Within agile methods, there was also a disparity in levels of adoption and maturity between frameworks designed for smaller teams and managing work, versus that of frameworks designed to scale the agile approach across multiple teams in an organisation. Specifically, 95% adopted Kanban as an agile framework, while only a combined 40% reported adoption of scaled agile frameworks such as SAFe, Scrum of Scrums and Nexus. In addition, less than 20% of agencies indicated a mature level of adoption across all agile methods surveyed. These responses indicate that increased support for agencies to adopt agile methods is needed.

<sup>1</sup> APQC. (2013). Key IT Benchmarks at a glance. [online] *APQC Website*. Available at: <https://www.apqc.org/> [Accessed May 2021].

# Process recommendations and in-flight work

In addition to the 8 key recommendations outlined in introduction and overview section of this report, the below recommendations have also been identified through findings. However, these recommendations will be largely addressed by relevant in-flight work.

## R15

Strengthen support and governance of the Digital Service Standard and update the incorporated process guidance, to improve quality and consistency of digital and ICT service delivery.

## R16

Improve support for agencies to adopt and apply agile methodologies, to improve focus on meeting stakeholder outcomes.

## Process in-flight work

**These in-flight initiatives present an opportunity to focus agencies efforts, resources and development. The below in-flight work is already making strides to address the above recommendations from the Digital Review, this progress will not deliver the intended outcomes without direct support for government and individual agencies.**

### APSC – R16

The Digital Profession is delivering a range of guidance and learning and development opportunities to uplift agile capabilities and culture. This includes written guidance, specialist advice, training offerings and supporting the agile champions community. These initiatives are designed to support agencies, noting that a commitment from agency leadership and a supported program of change within agencies is also required.

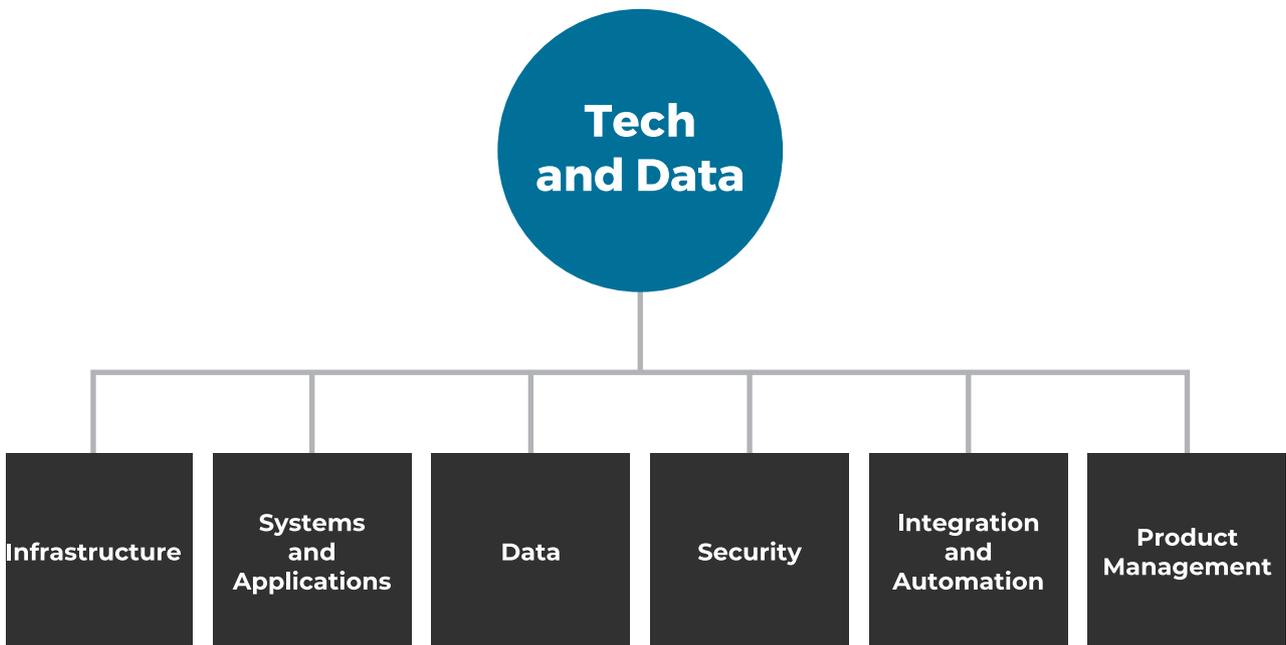
### DTA – R15

The Digital Service Standards function ensures user needs are at the forefront of consideration throughout the investment life cycle, and will continue refreshing the way it supports agencies in measuring their progress against the standard.

## Tech and data

How technologies and data processing capabilities enable or constrain agencies' digital transformation and how effective they are in technology, data, and analytics delivery.

### Functional areas



## Tech and data – functional areas

Technology is a key enabler of digital service delivery, remote ways of working, and inter-agency collaboration.

Data plays an equally significant role in realising the potential of traditional and emerging technologies and enabling evidence-based reporting and decision-making. As a result of the interdependent nature of technology and data, particularly in the efficiency and productivity domains, they have been combined to form 1 pillar.

The purpose of this pillar is to reflect how technology and data supports digital and ICT capability in government. This includes measuring the extent to which government uses and manages shared datasets, and the extent to which government has incorporated and aligned to modern industry standards for data-centric models and ways of working. This pillar also identified opportunities to improve, de-risk and share technology across Whole-of-Government.<sup>1</sup>

The digital aspirations of any government rely on: robust technology and data capabilities; the extent to which common practices and approaches exist across agencies; and the potential for reuse of technology and data across the Whole-of-Government. The technology and data pillar was organised into the following 6 key functional areas:

### Infrastructure

The combination of hardware, software, facilities, and service components that support the delivery of business systems, services, functions and ICT-enabled processes. Infrastructure should support business outcomes, adapt to changes in business need and technology and scale with demand. It should be modern, robust, and flexible enough to implement and integrate new solutions and services into the existing environment, whilst supporting business continuity.

### Systems and applications

The technology and data solutions which directly enable and/or deliver business outcomes, such as the provision of public services, support in policy-making and investment decisions, and management of core business functions. Systems and applications that are flexible, scalable, intuitive, and extensible improve the productivity of public services. They reduce the effort required to achieve outcomes, improve stakeholder satisfaction, enhance trust through in-built governance and enable cross-cutting services through the integration of agencies' systems and datasets.

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<sup>1</sup> DTA. *Scoping Study*.

## Data

The knowledge, information and data assets held by agencies, and the systems used to access, manage, share, govern, and secure them. As government moves towards becoming more analytics and insights driven, the importance of data as a function continues to grow. It underpins decision-making, automation, service integration, stakeholder experience, and performance improvement. Additionally, it encompasses the ability of the government to turn the insights into action through the assessment, interpretation and analysis of data.

The role of data in achieving the Government's digital ambitions is acknowledged in the Digital Transformation Strategy and reflections on its importance featured heavily in agency responses to the Digital Review. While observations and recommendations to maximise the value of data have been developed drawing on the evidence base formed through the Digital Review, it is acknowledged that recommendations relating to public sector data management must be tested and progressed through Whole-of-Government data governance fora.

## Security

The physical and digital safeguards and protocols that mitigate risk. To be effective, security should be embedded into systems, processes and culture, and be regularly reviewed. This is particularly critical when considering the sensitivity of information held by government agencies. Security measures can include cyber security practices such as routine vulnerability and threat testing, active and automated management of identity, and advanced and responsive centralised monitoring capabilities. Mature organisations adopt diverse, integrated, and automated security measures which proactively and predictively identify threats, breaches and losses and act to stop them. They embed security-aware cultures, and adopt a security-forward posture through policies such as the Protective Security Policy Framework.<sup>1</sup>

## Integration and automation

The ease at which infrastructure, systems, processes, applications, data sets, products and services can talk to one another, within and across agencies. This is enhanced and simplified through the automation of processes, decision support, and other historically manual activities. Integration and automation helps reduce time spent on manually-intensive tasks, freeing up humans to focus on complex and creative problems. This improves productivity, while also enabling more effective knowledge sharing within and between agencies.

## Product management

The set of tools, services, processes, models, and approaches for ensuring the capabilities provided by other functional areas are effective. It measures ongoing sustainability, fitness for purpose, deployability, and availability of business and public services, functions, outcomes, and applications. All agency products should be managed holistically through their lifecycle to ensure continuing value.

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<sup>1</sup> AGD. *Protective Security Policy Framework*.

## Tech and data

# 35%

**of agencies recorded  
none of their top 20  
systems as being  
designed for reuse.**

## Tech and data maturity score

# 59%

## Advanced level of maturity

Agency self-assessed score: 69%

## Tech and data – ratings by agency

Agencies self assessed their technology and data maturity as the weakest of any of the pillars, with only 5 agencies rating themselves as leading compared to 6 for alliances, 14 for people, 13 for policy and 16 for process.

Following calibration, agency scores dropped by an average of 10% meaning technology and data remained the weakest pillar. Only 1 agency retained its leading maturity status following calibration with this pillar also seeing the lowest minimum rating at 47% (in the established maturity category).

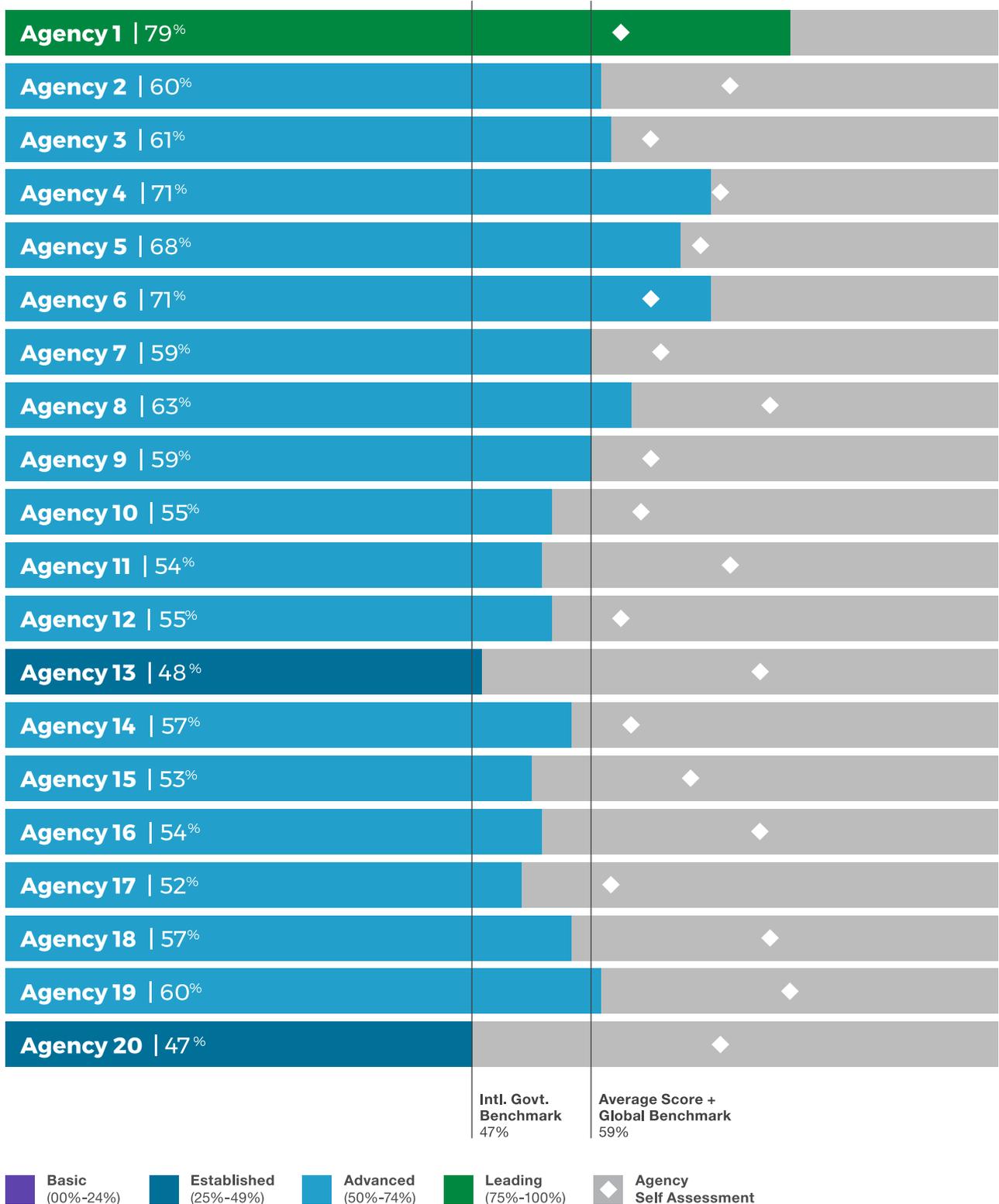
There were still strengths identified, including in the security functional area with the weaker functional areas being infrastructure and systems and applications.

Calibrated agency scores saw an average for Whole-of-Government of 59% which corresponds to an advanced level of maturity. Compared to benchmarks, this places agencies at a higher level of maturity than Global organisations, Global governments and Australian governments who have average maturity scores 57%, 44% and 52%, respectively.

This also places them in close proximity to the Banking (61%), Insurance (56%) and Technology (62%) sector benchmarks.

Ratings by agency

# Tech and data



## Case Study

# Amazon Web Services (AWS)

## Background

**Amazon Web Services (AWS) was the first organization to bring cloud hosting and cloud infrastructure-as-a-service (IaaS) to a commercial market in 2008 and the first to forecast the scale of the commercial cloud opportunity. Whilst other big players such as Google and Microsoft have since introduced their own solutions, Amazon has maintained a market share of over 50%, recording record profits of USD13.5 billion in Q4 of 2020.**

## Processes

The AWS product suite consists of a range of cloud products, including a range of low-cost and larger-scale storage services and its main cloud computing offering, Amazon Elastic Compute Cloud (E2C).<sup>1</sup> E2C is marketed to organisations as a way to cheaply access large-scale computing capacity, without building an actual physical server farm.<sup>2</sup>

The AWS offering is modelled on a pay-as-you-go subscription service, which has introduced a new level of scalability and flexibility into the market. Under this model, the amount of storage capacity and compute can be adjusted depending on user need. AWS used their scale and global reach to present an alternative to on-premise, where businesses have to invest in enough physical infrastructure to support peak processing periods to a model where they only pay for what they use.

Security and risk is still a large concern for many non-adopters of cloud.<sup>3</sup> AWS has responded by diversifying the location of data among data centres across the globe, which are continuously monitored and maintained. AWS also provides a suite of security and access controls which can embed into their platform. In addition to security, AWS offers 'off the shelf' products ranging from artificial intelligence and machine learning services, to data migration solutions. Given their market share size, AWS can afford to offer these products at a competitive rate, with 24-7 support.

## Outcomes and implications for the Australian Government

AWS servers span 245 countries and territories, where customers—including governments, educational institutions, NGOs and private organisations—rely on its hosting and data management solutions.<sup>4</sup> AWS systems provide businesses with the infrastructure to manage consumer centric market offerings in a cost-efficient manner. Trust and appetite for cloud products is only growing, driving new growth opportunities for AWS.<sup>5</sup>

To improve the quality of public services and progress towards a 'one government' operating model, agencies must be able to effectively collaborate on service delivery. The AWS case study demonstrates the potential value of cloud technologies to support agencies collaborating. Agencies reported on the value of cloud adoption for increased agility and responsiveness, and the Digital Review recommends work to increase cloud adoption across government by driving cultural change, and providing additional technology support to reduce cost of delivery and improve interoperability.

1 Amazon AWS. (2021). What is cloud computing?. [online] *AWS Website*. Available at: <https://aws.amazon.com/what-is-cloud-computing/> [Accessed May 2021].

2 Page, Vanessa. (2020). What is Amazon Web Services and Why Is It So Successful?. [online] *Investopedia Website*. Available at: <https://www.investopedia.com/articles/investing/011316/what-amazon-web-services-and-why-it-so-successful.asp> [Accessed May 2021].

3 Magoulas, Roger & Swoyer, Steve. (2020). Cloud Adoption in 2020. [online] *O'Reilly Radar*. Available at: <https://www.oreilly.com/radar/cloud-adoption-in-2020/> [Accessed May 2021].

4 Amazon AWS. (2021). Why Cloud Infrastructure Matters. [online] *AWS Website*. Available at: <https://aws.amazon.com/about-aws/global-infrastructure/> [Accessed May 2021].

5 Newcombe, C, et al. (2015). How Amazon Web Services Uses Formal Methods. *Communications of the ACM*, 58(4), pp. 66-73.

## Tech and data findings

Leading digital organisations have mastered the art of delivering seamless customer experiences at scale. Their ability to do this rests for the main part on excellent foundations in managing data and digital investments from strategy through to delivery.

The Digital Review highlighted that agencies consider they offer high-quality services. It also identified opportunities for development in how agencies meet stakeholder expectations to manage data and design for reuse.

### Meeting stakeholder needs and expectations

*“One major trend before the APS is the rising expectations of citizens for more transparency and accountability and for better services and solutions, increasingly tailored to the needs of people and places.”<sup>1</sup>*

The Thodey Review recognised that despite several large domain-specific investments in service-delivery transformation, agencies are struggling to keep pace with user expectations.<sup>2</sup> Australians are finding government services inconvenient and difficult to navigate, with fragmentation of services across agencies a major pain point.<sup>3</sup>

To establish a clear baseline of service performance across government, agencies were asked to assess the quality of their services and provide details on how they measure stakeholder satisfaction. To ensure that the findings present a comprehensive and accurate image of service quality, the Digital Review assessed service efficacy against 3 core dimensions—user perception, cost per transaction and continuous service improvement—and asked agencies to provide tangible metrics associated with each of these.

In the Digital Review, agencies routinely rated themselves at the top of the maturity scale for their service delivery quality. The top of the maturity scale represents leading industry organisations who have achieved a level 5 maturity rating in any given capability pillar. Most agencies (75%) believe their core systems deliver positive experiences consistent with high performing government agencies. Almost half (40%) also reported that this experience is consistent with highly reputable and successful leading global organisations, such as Amazon.

1 PM&C. *The Thodey Review*, pp. 23.

2 PM&C. *The Thodey Review*, pp. 21.

3 PM&C. *The Thodey Review*, pp. 162.

When comparing these results against other independent studies and surveys, it is clear that public perception of the quality of government service delivered does not match that provided by the most mature organisations in industry. According to the PM&C Citizen Experience Survey from June 2020, approximately 1 in 4 Australians (22%) are not satisfied with Australian public services and almost 4 in 10 Australians (35%) do not trust services.<sup>1</sup>

In contrast, according to a recent survey by seoClarity, more than 60% of users trust major, mature companies such as Google, Amazon, Microsoft, Apple, and Samsung.<sup>2</sup> These organisations had distrust ratings below 25% in all cases. According to the American Consumer Satisfaction Index, consumer satisfaction with Google has not dropped below 75% since 2002.<sup>3</sup> Each of the industry participants listed here has achieved a level 5 maturity rating on at least one of the capability pillars underpinning the maturity model of the Digital Review.

A substantial factor contributing to this optimism regarding the quality of services agencies provide is likely to be the lack of clear and consistent metrics and insufficient access to benchmarks. Across agencies, there is no consistent model or data collection for measuring stakeholder experience and satisfaction with government services. Agencies indicated they had established a diversity of models to measure stakeholder satisfaction and experience. These models varied significantly in their comprehensiveness and were at different levels and frequencies of measurement. The models also did not apply uniformly to all services and public facing systems offered.

As an example, while 95% of agencies were able to provide some evidence of using metrics to measure service quality, the quantity and quality of these metrics and associated measurement approaches provided varied greatly. Just over half (60%) of agencies self-reported they have appropriate measures of stakeholder satisfaction for their digital and ICT support services in line with relevant ICT service management standards. The most common service quality/customer service metric reported was user satisfaction, measured primarily through irregular and inconsistently applied survey instruments. The regularity in which these surveys are performed varies greatly, ranging from quarterly to annually.

By comparison, leading companies use a clear set of metrics and KPIs which support decision-making and are able to quickly, accurately and consistently measure and report on service quality and customer experience. Leading global companies use a range of customer experience KPIs and consider these as core to their competitive advantage.<sup>4</sup> The top KPIs used or in the process of being adopted include: customer satisfaction (49%), customer retention (47%), digital volume (39%), performance during digital customer journey (35%) and digital investments to customer behaviour (32%). While not all of these specific metrics will be appropriate to the government context, they represent the value attached to consistent and high-quality stakeholder metrics by digitally mature organisations.

1 Department of Prime Minister and Cabinet. (2021). Citizen Experience Survey. [online] *PM&C Website*. Available at: <https://pmc.gov.au/public-data/citizen-experience-survey> [Accessed May 2021]. (Henceforth PM&C. *Citizen Experience Survey*)

2 Gandhi, Mitul. (2021). Do Americans Trust Tech Giants?. [online] *seoClarity Website*. Available at: <https://www.seoClarity.net/blog/americans-and-trusting-tech> [Accessed May 2021].

3 American Consumer Satisfaction Index. (2021). Benchmarks by Company. [online] *American Consumer Satisfaction Index Website*. Available at: [https://www.theacsi.org/index.php?option=com\\_content&view=article&id=149&catid=&Itemid=214&c=Google&i=Internet+Search+Engines+and+Information](https://www.theacsi.org/index.php?option=com_content&view=article&id=149&catid=&Itemid=214&c=Google&i=Internet+Search+Engines+and+Information) [Accessed May 2021]. (Henceforth ACSI. *Benchmarks*)

4 Ernst & Young. (2021). *Global Technology Sector Trends – February 2021*. New York: Ernst & Young.

## Joined up services

The rise of companies differentiating their products in the market by delivering exceptional stakeholder experiences has taught end users to expect a seamless experience from industries such as banking. Those expectations have extended to the APS, and this pressure has driven the adoption of capabilities such as ‘tell us once’ which allows stakeholders to access and consume multiple services across channels and agencies without repeating information. 79% of consumers want their information shared across all points of contact, whilst 46% of consumers support data sharing between agencies so that they do not have to provide the same information multiple times.<sup>1</sup>

Work has already begun on developing and enhancing Whole-of-Government platforms that make this level of integration and data sharing possible. To understand where further work is needed, the Digital Review examined the current extent of government agencies’ ability to understand end users at all touch points of their respective user journey. Central to this capability is the effectiveness of agencies’ systems of record and processes and the extent to which services have been digitised. These were compared with agencies’ perception of their ability to provide and access a single source of truth for each of their end users.

The Digital Review found that not all public facing services have been digitised, meaning that some of the services agencies provide are not fully available and/or able to be completed online. This lack of digitisation is both a significant impediment to the development of a ‘tell us once’ capability and is inconsistent with stakeholders’ expectation that services should be available online. Only 47% of agencies surveyed reported that they have digitised all their public facing services. Of the remaining agencies, only 40% provided target dates for digitisation.

As a comparison, EU benchmarks show that more than 3 out of 4 public services can be fully completed online (78%). Users can find the services they are looking for via portal websites 95% of the time, and information about these services nearly 98% of the time.<sup>2</sup>

As a leader in the digitisation space, Estonia has achieved complete digitisation of 99% of its services. Ranking highest on the 2020 e-participation index and ranking 3rd in e-governance, Estonia is considered one of the fastest rising countries for digital transformation and sets a benchmark for what can be achieved by a world class digital government.<sup>3</sup> Estonia’s journey to become a leading digital nation saw it apply many leading practices. This includes their early investment in agile developed frameworks, as well as their cutting-edge policy settings which, for example, require that no system, regardless of how well it is functioning, should be older than 13 years. These approaches have helped strengthen Estonia’s IT ecosystem as it worked to achieve a high rate of digitisation and provide transparency to citizens, including by giving them greater freedom and knowledge on the use of their data.<sup>4</sup>

<sup>1</sup> Ernst & Young. (2017). *Digital Australia: State of the Nation*. Melbourne: Ernst & Young. (Henceforth EY Digital Australia)

<sup>2</sup> European Commission. (2021). *Shaping Europe’s digital future*. Brussels: European Commission.

<sup>3</sup> United Nations Department For Economic And Social Affairs. (2020). *UNITED NATIONS E-GOVERNMENT SURVEY 2020: Digital Government in the Decade of Action For Sustainable Development*. New York: United Nations.

<sup>4</sup> Estonian Investment Agency. (2019). Former Government CIO: ‘Estonia Used “Agile” before “Agile” Was Even Invented. [online] *Invest in Estonia Website*. Available at: <https://investinestonia.com/former-government-cio-estonia-used-agile-before-agile-was-even-invented/> [Accessed May 2021].

Estonia has a highly integrated approach to stakeholder relationship management (xRM). They, and other leaders, are able to access single views of their stakeholders across government. Although most Australian agencies (81%) reported that their CRM systems provide a sufficient platform for building digital front office capabilities, only half of agencies reported they could access a single view of their stakeholders. No agencies are able to access stakeholder profiles across their partner agencies or jurisdictions. A review of agencies' reported core systems, platforms, and data sets revealed a pattern of ad hoc connectivity and a lack of integrated views of stakeholders, with the majority of agency platforms making no or limited use of data sources from other agencies or partners.

Agencies recognised that fully integrated platforms are a critical building block to the provision of the customer management capability required to form a single view of stakeholders. Many agencies also noted the complexity of their legacy systems impedes their ability to efficiently share data with agencies and form complete views of stakeholders. Agencies also identified that key enablers of the Whole-of-Government approach required to effectively deliver a tell us once experience is for agencies to be aligned to the same guiding strategies, and the implementation of formal agreements and governance structures.

Stakeholders now expect their digital experience to be personalised. 51% of consumers want content that is modified to reflect their needs and the interest they show.<sup>1</sup> Globally, leading organisations are making a deliberate effort to enhance stakeholder engagement by providing personalised experiences that are contextually relevant to stakeholders. This is being achieved using approaches such as emotion detection (60%), smart personalisation (45%) and artificial intelligence and human translation platforms (25%).

Very few agencies are sufficiently informed to deliver these sorts of tailored services, with only 15% of agencies strongly agreeing that they routinely conduct user research with stakeholders to inform the design of digital and ICT products and/or services. This indicates that agencies have some way to go before they will be able to meet stakeholder expectations in this area and compete with the world's leading organisations.

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<sup>1</sup> EY. *Digital Australia*.

# Breaking down silos and taking a Whole-of-Government approach

## Background

**The 2019/20 bushfires and extreme weather conditions highlighted the need for an end-to-end integrated response to natural disasters across all levels of government. It was recognised that there is a significant amount of work happening within government, not-for-profit and third-party organisations to support people who have been impacted by natural disasters in Australia. However, these efforts can often be siloed and uncoordinated, particularly for national-scale disasters, and create an extra burden for people who need support. In May 2020, the Data and Digital Minister's Meeting (Previously the Australian Data and Digital Council) endorsed experiencing a natural disaster as a priority life event, with the Commonwealth (Digital Transformation Agency) being responsible for mapping the end to end journey of a person's experience before, during and after a natural disasters.**

## Processes

In July 2020, using the life events approach, the first phase ('Discovery') kicked off in partnership with Queensland, Victoria and South Australia governments. The aim of Discovery was to better understand the needs and pain points of people impacted by a natural disaster and to coordinate efforts across jurisdictions in establishing a shared pipeline of initiatives and service improvement opportunities. This was to be achieved by:

- Creating a holistic view and a shared understanding of people's experience before, during and after a disaster.
- Identifying pain points and exploring opportunities for Whole-of-Government service improvements and making recommendations on these opportunities to the Data and Digital Ministers' Meeting.
- Identifying the ecosystem of services and existing initiatives to encourage joined-up services as well as better outcomes and experience for people across Whole-of-Government.

The team engaged with over 50 organisations from across federal, state/territory governments, academia, independent bodies, not-for-profit and private sectors and reviewed 587 papers including reports, media and submissions to the royal commission, where we focused on human stories. Out of this analysis, 93 opportunities for service improvements were identified and shared with relevant government, non-government and not-for-profits organisations.

## Outcomes

The team developed an end-to-end journey map that shows the experience of people impacted by natural disasters and the ecosystem of services available for them, as well as the pain points and opportunities to improve the service. The journey map has proven to be a useful tool for government to have a consolidated understanding of the current state and of the problem areas in this space.

The DTA has partnered with the National Recovery and Resilience Agency to undertake a Recovery and Resilience Futures Mapping 2025 project. The Recovery and Resilience Futures Project 2025 project will take a human centred design approach to provide government with a whole-of-system future vision of improved recovery and resilience pathways for communities experiencing a natural hazard in the year 2025. This will provide decision makers with awareness of how current and planned future reforms may work together to change the recovery and resilience ecosystem, and support identification of new initiatives that drive potential future systemic reform.

## Sharing of data

The Digital Review found that, in principle, agencies support the provision of open access to non-sensitive information and data. This includes sharing data internally, with other agencies, and publicly. 80% of agencies reported that they actively support public access to non-sensitive data as outlined by the Australian Government Public Data Policy Statement.<sup>1</sup> This includes proactively releasing high-value data sets using open standards. 75% of agencies reported that they adopt an open access policy internally to information that is not security sensitive. 95% of agencies reported that they seek appropriate opportunities for data sharing with other government agencies.

Despite this reported willingness to share data, the Digital Review revealed that in practice, agencies are not sharing their most significant data sets. Less than 10% of agencies' most significant data sets are publicly available despite some appearing to be good candidates for public release. Security and privacy constraints were cited for more than 60% of data sets that are not currently published. However, the remainder fall within the kind contemplated in the Productivity Commission's Inquiry into Data Availability and Use as examples of datasets with high-value to the public sector, research sector, academics and the community.<sup>2</sup>

Most agencies also believe that there are effective controls, agreements, and mechanisms in place to govern data sharing and external storage. 95% of agencies reported having agreements in place for timely and safe data sharing with other agencies, in accordance with Australian Government Data Sharing Principles. 80% of agencies reported that their core data is easily used by stakeholders, with appropriate controls in place to ensure security and usability. Over two-thirds (68%) of agencies reported that they have effective mechanisms in place to control and manage data when stored outside the agency.

However, a 2017 report by the Productivity Commission highlighted that the frameworks and security controls in place did not facilitate necessary and valuable sharing. It noted:

*“Lack of trust by both data custodians and users in existing data access processes and protections and numerous hurdles to sharing and releasing data are choking the use and value of Australia’s data. In fact, improving trust community-wide is a key objective. Marginal changes to existing structures and legislation will not suffice. Recommended reforms are aimed at moving from a system based on risk aversion and avoidance, to one based on transparency and confidence in data processes, treating data as an asset and not a threat. Significant change is needed for Australia’s open government agenda and the rights of consumers to data to catch up with achievements in competing economies.”<sup>3</sup>*

This perception is further supported by a study which found that only 33% of consumers are confident that the Australian Government has adequate security systems and processes to ensure that privacy is protected when personal information is shared across agencies.<sup>4</sup>

While the National Data Commissioner is in the process of addressing these issues, the legislative framework they have put forward has not yet passed and these issues remain substantial.<sup>5</sup>

Agencies reported several key barriers which they view as limiting their ability to effectively share data both internally and externally. For example, comprehensive and standardised documentation of data is generally lacking across government. Only 21% of agencies reported having agency-wide controlled vocabularies such as data taxonomies and data dictionaries.

1 PM&C. *Public Data Policy*.

2 Productivity Commission. (2017). *Data Availability and Use. Productivity Commission Inquiry Report*. 82. Canberra: Commonwealth of Australia.

3 Productivity Commission. *Data Availability and Use*. pp. 2.

4 EY. *Digital Australia*.

5 Productivity Commission. *Data Availability and Use*.

Only 37% reported having a comprehensive and up-to-date data catalogue. Just over half of agencies reported having identified and recorded their data assets in an inventory, register, or catalogue. 24% of agency responses mentioned the lack of centralised data as a key barrier.

The absence of a central data repository inhibits the discovery and usability of data across agencies. This issue is further compounded by inconsistent data classification and rules that cause data misuse and misinterpretation. This lack of clear, consistent, and accurate documentation significantly inhibits the ability of agencies to effectively retrieve and share their own data as well as locate and use shared data from other agencies. This has highlighted the important role that data stewardship plays in enabling improvements to Whole-of-Government data sharing.

A further key barrier relates to security concerns including legislative restrictions (perceived or real), restrictive and complex data sharing controls and differences in security requirements between agencies. 35% of agencies identified these barriers as an obstacle to sharing data.

Agencies also reported that there is significant effort involved in preparing data for sharing, and not all agencies consider that their data systems allowed them to share data easily. 70% of agencies reported that they have effective systems in place to support agency-to-agency data sharing, exchange or integration. Only 58% of agencies reported that their data systems made it easy to properly anonymise data, whilst even fewer (47%) reported that their data systems made it easy to share this anonymised data with authorised external parties.

Multiple agencies highlighted the need for central mandates and strong incentives to share data. Agencies further reported that without these clear top-down mandates it is difficult to get buy-in.

## Treating data as an asset

For the Australian Government to achieve its digital ambitions, it must treat data as an asset. This means managing data across its full lifecycle, including governing the processes that produce data, measuring data against specifications and addressing data quality challenges.

Agencies self-reported that they share data and resources both internally and across government, with 40% highlighting the strategic importance of analytics and efficient data utilisation. Despite this, most agencies take a dataset specific approach to managing data, rather than managing a consolidated set based on subject areas across Whole-of-Government. While most agencies perceive their systems and digital systems as capable of managing their data assets, audit responses indicate agencies are not taking a consistent lifecycle approach to managing data. Many data sets are also reported as high risk and lack a business owner. There is an absence of an architectural mindset when it comes to how agencies manage their data. This translates into lack of effective data governance and controls for enhancing data quality.

Agencies understand the importance of utilising data and analytics to improve services. Success is highly dependent on having a clear strategy, data-driven culture, and strong data capability. Agencies consider their most business-critical datasets are well managed. While this may be true, many agencies need to improve their overall approach to data governance. This includes assigning business level owners and implementing effective controls to accurately address the value of data as it changes over time.

Based on maturity scores, leading agencies have invested heavily in data and analytics capabilities. However, even leading agencies are reporting challenges in achieving a data-driven culture. A major barrier across all agencies is a lack of reporting and insufficient data in areas including user satisfaction and service quality to inform good decisions as well as weaknesses in the overall approach to data governance.

## Effective cross agency collaboration and delivery

To improve the quality of public services and make progress towards a 'one government' operating model, agencies must be able to effectively collaborate on service delivery. Common data and technology platforms, standardised skillsets, common patterns and processes as well as shared implementation practices are key to enabling both small and large agencies access to Whole-of-Government digital and ICT capability.

Agencies considered themselves well placed to effectively collaborate with other agencies to deliver shared capabilities/services. Almost all agencies self-reported to have formed effective alliances with other agencies and have systems in place to share best practices and data. There is also evidence of sharing capabilities and services across parts of government. Despite this, agencies tend not to share their digital services catalogues internally and do not have a consistent understanding of shared services and capabilities.

Agencies recognise the importance of effective collaboration in sharing capabilities and services. To effectively collaborate, agencies identified several key enablers.

For example, agencies require the alignment of their respective objectives to create a single mindset for adopting Whole-of-Government approaches to technology and information sharing. Agencies also cite the need for common approaches to licensing for software and hardware as it supports collaboration during platform development and allows them to take advantage of technology stacks being used across other agencies.

While the barriers that hinder the delivery of cross agency digital and ICT products vary in nature, the most common barriers relate to visibility, clarity, and capability gaps.

35% of agencies listed poor visibility, poor communication, and a lack of open relationships as a key factor preventing them from adopting Whole-of-Government approaches. Cultural aspects, such as the tendency to focus on sustaining business-as-usual at the expense of evolving capabilities to ensure they remain fit for purpose, are also cited as hindering transparency and reducing buy-in on Whole-of-Government initiatives. Agencies believe they are missing a central mandate and set of incentives to using shared capabilities. This stems from agency sentiment that Whole-of-Government approaches require additional upfront effort to collaborate across agencies and drive successful adoption. Some agencies noted the tendency for such approaches to divert resources away from core operational responsibilities. Even when incentives for sharing and collaboration are in place, some agencies noted a lack of clarity around processes and limited ability to collaborate due to knowledge and capability gaps inhibited efforts to share capabilities across Whole-of-Government.

Cloud technologies can support agencies collaborating. They support developing interoperable and shareable solutions, as capability becomes more standardised and data inherently shareable. More than 50% of agencies reported finding value in the Whole-of-Government approach to cloud adoption, Whole-of-Government cloud platforms, and the cloud-first policy. Agencies reported that cloud adoption had enabled increased agility and responsiveness. They noted newly adopted cloud solutions have opened broader avenues for information sharing (inter department, partners and cross-government/industry), remote access (flexible working) and adaptive case management. Some agencies reported that the cloud-first policy advances cloud adoption within their organisation and reduced risk-adversity. Others confirmed they had realigned their Digital Strategies and Secure Cloud Strategies to the cloud-first policy and have consequently been investing in cloud as their primary operating environment.

Some agencies experienced challenges in adopting cloud solutions and ensuring their interoperability once developed. They suggested collaboration on the development of cloud services was complex and noted “Many agencies... are at different stages of cloud adoption and have a differing risk tolerance to cloud-based tools. This can cause barriers [to] effectively connect[ing] and collaborat[ing] across the whole of APS.”

This points to a need for increased support for agencies to align their capabilities and develop consistent cloud accelerators and technologies.

## Building for reuse

The Australian Government must embed a culture of reuse across its agencies, backed by the necessary capabilities, frameworks, and governance systems.

Reuse includes reuse of technology through platforms and services, as well as reuse of skills, architecture (e.g. standards, frameworks, and patterns), information (e.g. shared cross agency information), skills (e.g. expertise and knowledge), and procurement (e.g. licences and agreements) – whether shared across Whole-of-Government or only between a few agencies.

Reuse delivers cost savings, promotes cross agency collaboration and streamlines processes. It also helps agencies avoid the burden of developing isolated legacy systems and technical debt in favour of consolidated cross-agency platforms, which are easier to update and tailor for specific needs. Government is actively supporting the reuse agenda through initiatives such as the Digital Service Standard, Whole-of-Government Architecture and the emerging Reuse Policy.

From the qualitative responses to the Audit Survey, it is clear agencies are aware of the enablers required to successfully embrace a culture of reuse. From a technology perspective, this includes the need to have a dedicated senior leader in charge of enabling architecturally informed investments to realise higher rates of reuse. Agencies have also displayed an appreciation of how integrated platforms are a building block to the customer management capabilities required to form a single view of stakeholders. They know the use of modular architecture produces easily consumable services and enables ease of sharing between agencies. They also appreciate that the use of common APIs enable digital and ICT platforms to interact with each other and enables developers across government agencies to move past common decision points quickly by referencing pre-agreed, best practice design patterns.

Data supplied through the Digital Review shows that agencies are for the most part still not designing services for reuse with the technology survey reporting 84% of systems are not designed for reuse. While almost all (85%) agencies self-reported that they consider “ICT platform integration and collaboration with other government agencies” when developing new digital platforms, very few systems were reported to be designed for reuse. This includes recently commissioned systems and planned new systems. Of the systems designed for reuse, most agencies were not clear on the extent to which their systems were reused.

From the data collected across the Digital Review’s survey instruments, several key observations can be made about agencies and the current state of reuse. Most (55%) agencies do not

follow a common architectural blueprint. When adopting a response to digital trends, almost half (45%) of agencies are not consulting or aligning decisions to an enterprise architecture. Qualitative responses indicate a common understanding of reuse is missing. Agencies interpreted the scope and meaning of reuse in very different ways. This suggests there is an inconsistent conceptual understanding of what reuse means across agencies.

The government’s Reuse Policy currently progressing through the Digital Leadership Committee and the Secretaries Digital Committee aims to address this issue including by shifting the conversation to acknowledge and value the full range of possible reuse opportunities including:

Platforms and services	Procurement	Information	Architecture	Skills
Platforms encompass the business and ICT capabilities required to deliver a clear set of services.	The procurement processes, licenses and agreements that govern access to capabilities from the market.	Information that is common across multiple agencies and government services.	Architecture frameworks, standards and patterns used to facilitate design, inform investment, and govern.	Sharing of valuable skills between agencies.
e.g.: MyGov, GovERP, Payments Utility	e.g.: WofG Agreements, Clause bank, Digital sourcing consider first policy	e.g.: Moving towards a single view of citizen, Single view of government	e.g.: WofG integration blueprint, Agency defined patterns, APIs	e.g.: Digital Profession, Data/AI expertise, Platform development skills

# Tech and data recommendations and in-flight work

In addition to the 8 key recommendations outlined in introduction and overview section of this report, the below recommendations have also been identified through findings. However, these recommendations will be largely addressed by relevant in-flight work.

## R19

Prioritise human-driven design and leverage user input throughout the design and delivery of digital and ICT services.

## R20

Improve understanding of data sharing value and constraints through training and cultural change.

## R21

In consultation with agencies, develop Whole-of-Government guidance to standardise data lifecycle management practices and data standards to facilitate sharing, transparency, and joined-up service delivery.

## R22

Promote better citizen experience through the interoperability of systems, and better data management to support 'tell us once' capability, joined-up service delivery, data-driven decision-making, and the delivery of single views of stakeholders.

## R23

Work to increase cloud adoption across government including by driving cultural change, and providing additional technology support to reduce cost of delivery and improve interoperability.

## R24

Support agencies to align with the Whole-of-Government Architecture and reuse existing digital and ICT capabilities where possible to improve consistency, and interoperability, and to reduce cost.

## Tech and data in-flight work

**These in-flight initiatives present an opportunity to focus agencies efforts, resources and development. The below in-flight work is already making strides to address the above recommendations from the Digital Review, this progress will not deliver the intended outcomes without direct support for government and individual agencies.**

### PM&C – R19 and R22

The APS Reform agenda supports a single enterprise approach to effective investment, development and use of digital and ICT capabilities to meets the needs of the Australian public.

The Citizen Experience Survey is a regular, national survey measuring public satisfaction, trust and experiences with Australian public services. The Survey offers a whole-of-APS and cross-sectional view of service experience, complementing existing work undertaken by APS agencies. Survey results support the APS to continually improve Australian public services.

### ACSC – R20, R22 and R23

The ACSC is responsible for maintaining the Information Security Manual (ISM) and Essential 8 Cyber Security threat mitigations which are both subject to change in light of the evolving technology environment. These policies contain detailed technology and cyber security recommendations to uplift agency cyber security. This helps agencies make their own ICT decisions to adopt cloud services in a way which is secure and reliable. The PSPF provides the guidance to entities on how to determine the business impact level of their data which is subsequently mapped to a security classification.

## Tech and data in-flight work

### DTA – R19, R22, R23 and R24

Whole-of-Government Reuse Catalogue is a practical implementation of the Reuse and Sourcing Policy function in the DTA, which ensures the reuse of government capabilities, and improves sourcing experience and compliance.

The Whole-of-Government Architecture function aims to develop a unified connected digital landscape, and to understand its capability gaps in digital and ICT. This function will maintain architectural standards to support strategic investment advice and prioritisation, and leverage architecture to identify reuse opportunities, and critically evaluate and derive insights that identify and inform capability gaps.

The Digital Service Standards function ensures user needs are at the forefront of consideration throughout the investment life cycle, and will continue refreshing the way it supports agencies in measuring their progress against the standard.

The DTA is supporting the Department of Home Affairs to create a comprehensive approach to data security through the development of a National Data Security Action Plan. The Action Plan will set out a comprehensive roadmap of measures to uplift the security of data. The first priority of the Action Plan will be to ensure Australia's control of sensitive data holdings by ensuring robust security settings for Australian Government data, building on the Hosting Strategy, and the Protecting Critical Infrastructure and Systems of National Significance reforms (Home Affairs).

Digital Identity makes it quicker and easier for Australians to access government services by giving them the choice to create a single Digital Identity to verify their identity across government services.

The Policies and Standards function develops fit for purpose, digital policies and standards based on the latest evidence and insights. The function provides 2 common digital frameworks, the M365-based Protected Utility blueprint and the Secure Cloud Strategy for adopting cloud based capabilities. This advice is made available to agencies to make their own ICT adoption decisions in alignment with their risk profile and culture.

### ONDC – R20, R21 and R22

The ONDC has introduced the Data Availability and Transparency Bill (DAT Bill), which will help maximise the value of our public sector data, supporting a modern data-based society, driving innovation, and stimulating economic growth. The proposed user accreditation process for the DAT Bill will provide the ONDC with the ability to capture data management, data analysis and security capability of participating entities. The ONDC has also begun a pilot program to develop data inventories for 20 percent of government agencies. These data inventories will provide the foundation for a public, searchable catalogue of government-held data assets.



Digital Review

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