

ACT AUDITOR–GENERAL’S REPORT

ICT STRATEGIC PLANNING

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The Speaker
ACT Legislative Assembly
Civic Square, London Circuit
CANBERRA ACT 2601

Dear Madam Speaker

I am pleased to forward to you a Performance Audit Report titled 'ICT Strategic Planning' for tabling in the Legislative Assembly pursuant to Subsection 17(5) of the *Auditor-General Act 1996*.

Yours sincerely



Mr Michael Harris
Auditor-General
21 June 2019

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SUMMARY

Conclusions

ICT STRATEGIC PLANNING IN THE DIRECTORATES

There is considerable variability and inconsistency in ACT Government directorates' ICT strategic planning processes. While some ACT Government directorates demonstrate a level of maturity in their approach to ICT strategic planning, and there are examples of better practice in some of the directorates, the variability in the quality and consistency of ICT strategic planning outputs impairs the ability of ICT to effectively support directorate strategic goals and objectives and whole-of-government goals and objectives.

The absence of a consistent, identifiable ICT strategic planning framework, with clear roles and responsibilities, timeframes and deliverables, makes it difficult for ACT Government directorates to consistently and effectively plan for ICT. This increases the risk of inconsistent and inappropriate ICT planning decisions across directorates and impairs the opportunity for collaboration across directorates and the achievement of whole-of-government efficiencies and cost-savings through consistent planning and procurement decisions.

WHOLE-OF-GOVERNMENT ICT STRATEGIC PLANNING

ACT Government initiatives to improve whole-of-government ICT strategic planning have not been effective.

A key whole-of-government ICT strategic planning document is the *ACT Government Digital Strategy 2016-2019* (the Digital Strategy). It provides a high-level vision statement for ICT for the ACT Government and seeks to bring cohesion to ACT Government directorates' ICT strategic planning 'through a common purpose, language and perspective'. However, there is little further information on the practical implications of the ACT Government's vision for ICT, as identified in the Digital Strategy, and how this should be used to inform, or be translated into, directorate-specific ICT strategic planning processes and documents. A series of initiatives flagged in the Digital Strategy to promote whole-of-government ICT strategic planning, and which may have provided further information on the practical implications of the ACT Government's vision for ICT, have not been effective, including cross-directorate Digital Strategy Workshops and the completion of self-assessment scorecards by directorates against the strategic principles identified in the Digital Strategy. An Application Portfolio Management tool, an initiative that sought to comprehensively identify and document the 'current state' of ICT across directorates and inform future whole-of-government planning and procurement decisions was poorly implemented.

The establishment of a Digital Service Governance Committee in April 2016 sought to improve whole-of-government ICT strategic planning communication and coordination; it meets regularly

and provides an effective forum for discussing key ICT strategic planning issues across the directorates. It is also effectively supported by an ICT Briefs and Business Cases Sub-Committee, which reviews directorates’ ICT concept and budget bids, and provides advice which informs the budget deliberation process. However, other sub-committees that were envisaged to support the Digital Service Governance Committee, and which could have better and more proactively informed whole-of-government ICT strategic planning have not been established, including a Strategy and Roadmap Advisory sub-committee and Common Capability and Standards sub-committee.

Key findings

ICT STRATEGIC PLANNING IN THE DIRECTORATES

Paragraph

An effective ICT strategic plan, aligned to the organisation’s strategic objectives and priorities provides assurance to senior management and other stakeholders that ICT investment and activities are being directed to support the organisation in achieving its strategic goals. ICT strategic plans should explicitly link the ICT business unit’s activities to organisational goals. A review of directorates’ ICT strategic planning documentation shows that this was not done effectively. While most (but not all) ICT strategic planning documents identified directorate objectives and priorities there was little further information or elaboration as to how ICT strategic objectives contributed to them. By not doing so, directorates increase the risk of misalignment between ICT strategic planning and directorate organisational planning.

2.34

An effective ICT strategic plan should identify the ICT capabilities required to meet the organisation’s foreseeable business needs over the life of the plan. This demonstrates that the plan is relevant to the organisation’s requirements and facilitates prioritisation of spending and effort, including re-prioritisation when business needs change. A review of directorates’ ICT strategic planning documentation shows that this was not done effectively. While future ICT capabilities could be interpreted from various aspects of directorates’ ICT strategic planning documents, this was usually done in a generic way. There was little further information on what this practically meant for the directorate’s future ICT requirements, including the technology or software that might be needed.

2.52

A comprehensive analysis of the current state of an organisation's ICT capabilities is an important element in the ICT strategic planning process. A summary of the results should be included in ICT strategic planning documents as evidence that the analysis has been done, as justification for the proposed change program, and for the information of internal and external stakeholders. A review of directorates’ ICT strategic planning documentation shows that this was not done effectively. While some directorates’ ICT strategic planning documents acknowledge shortcomings in the current state of ICT in the directorate, particularly with reference to ageing or legacy systems, this is primarily in a high-level conceptual way. Most directorates’ ICT strategic planning documents are focused on identifying and asserting strategies and actions to be implemented (in a high-level conceptual way), with little recognition of the current state of ICT in the directorate and how the current state

2.66

will affect the delivery of ICT strategies, priorities and objectives identified in the document.

An effective ICT strategic plan should include details of the projects and other initiatives that will be used to implement the desired changes that the plan describes. An ICT roadmap setting out the change initiatives required to move from the current state to the desired future state is an important element of any ICT strategic plan. An ICT roadmap in a strategic plan should identify, at a minimum, the work to be done and when it is expected to be completed. A review of directorates' ICT strategic planning documentation shows that the documents inconsistently identified actions to be undertaken to address current and expected future gaps in ICT capabilities. While the directorates' ICT strategic planning documents generally identified actions to be undertaken, many of these were described generically, with no further information on how they contributed to closing the gaps in capabilities. Some ICT strategic planning documents identified projects currently underway in the directorate in relation to specific ICT systems or activities, but there was little further information on timeframes and deliverables. Both the Transport Canberra and City Services Directorate and Justice and Community Safety Directorate developed ICT roadmaps, which are effective in identifying and reporting on planned activities for the directorates' current ICT systems, but there is no clear link or articulation of how these activities and projects are expected to address identified gaps between the current and future states of ICT in the directorate.

2.86

An effective ICT strategic plan should outline the governance arrangements in place to oversee its implementation, including roles and responsibilities for implementation. This provides important information for internal and external stakeholders, and mitigates the risks of duplication or gaps in delivery. Most directorates' ICT strategic planning documents effectively documented governance arrangements for the delivery of ICT, although there was little information in the documents with respect to Shared Services ICT and its role in the implementation of directorates' ICT strategic plans.

2.102

An effective ICT strategic plan should identify metrics, key performance indicators and baseline data, so that progress on the implementation of ICT strategies can be measured and reported. ICT roadmaps were prepared by the Transport Canberra and City Services Directorate and Justice and Community Safety Directorate, which provide a basis on which progress on the implementation of ICT strategies can be measured and reported. There was no further information in the ICT strategic planning documents of the other directorates, including details of an implementation plan or road map which sets out detailed actions to be taken, due dates or responsibilities. The ICT strategic planning documents of the directorates did not include information on metrics, key performance indicators and baseline data, by which to measure progress on the ICT strategy.

2.114

WHOLE-OF-GOVERNMENT ICT STRATEGIC PLANNING

Paragraph

The *ACT Government Digital Strategy 2016-2019* (the Digital Strategy) was released in 2016, with the purpose of 'clearly [expressing] the ACT Government's intentions and [creating] the impetus and architecture for fully digitised services and technology platform renovation'. The Digital Strategy provides a high-level vision for

3.20

ICT for the ACT Government. The Digital Strategy acknowledges that ‘it is not a detailed action plan—although many actions will be informed and guided by it. The scope is deliberately at a whole of government level to lay foundations and set direction rather than endeavouring to be a digital master plan’. The Digital Strategy also acknowledges that ‘it cannot answer all the questions – and in fact will add questions. But it will bring cohesion – through a common purpose, language and perspective’. The Digital Strategy, while useful in providing a vision statement for ICT for the ACT Government, does not serve the purpose of an ICT strategic plan. It does not include further or more detailed information on inter alia:

- how it links with, or supports, the ACT Government’s strategic priorities;
- the ICT capabilities required to meet the ACT Government’s business needs;
- the ‘current state’ of the ACT Government’s ICT capabilities; and
- how, and by when, gaps between current and required ICT capabilities are to be closed.

The establishment of Shared Services ICT in 2007 was an attempt to achieve a more effective whole-of-government approach to the management and administration of ICT services across ACT Government agencies, particularly with respect to common or shared platforms and applications. An undated *ICT Roles and Responsibilities* document seeks to assign roles and responsibilities for the management and administration of ICT services between Shared Services ICT and the directorates. With respect to strategic planning activities for ICT, the *ICT Roles and Responsibilities* document clearly identifies a responsibility for directorates to ‘Develop an ICT strategic plan for the Directorate in line with any government-wide ICT strategies’, ‘Communicate (through various agreed mechanisms) about Directorate business needs and challenges, including future state needs’ and ‘Provide clear direction and priority setting around ICT work required’. The *ICT Roles and Responsibilities* document identifies that there is a shared role for Shared Services ICT and the directorates as follows: ‘In collaboration with SSICT, set priorities for functional requirements, system or infrastructure features and use cases’ and ‘In consultation with SSC, jointly identify, evaluate and procure new ICT equipment and infrastructure to support business operations’.

3.26

Shared Services ICT has developed a series of documents that demonstrate elements of an ICT strategic planning approach, specifically the *ICT Business Strategy 2017-19* (February 2017) and *Exemplary Services for Digital Citizens - Common ICT Capability Vision 2020+* (February 2018). These are high-level documents, which are general in nature and vague in their description of activities to be undertaken, including timeframes and deliverables. The documents do not describe the ‘current state’ of ICT capability within Shared Services ICT (or across ACT Government agencies where appropriate) or how, and by when, the gaps between the current and required ICT capabilities are to be closed, with any specificity. A Technology Roadmap, which was identified as a key foundational project to be undertaken, is still under development by Shared Services ICT approximately twelve months after it was flagged.

3.42

In June 2016, the ICT Collaboration Forum endorsed the use of an Application Portfolio Management (APM) tool developed by Shared Services ICT. The Application Portfolio Management (APM) tool sought to capture an overview of existing ICT systems across government, including systems owned and operated by Shared Services ICT and by directorates, and provide a roadmap for future investment. The concept of application portfolio management, and the use of a tool to assist, is appropriate. However, the Application Portfolio Management (APM) tool developed by Shared Services ICT lacked functionality. The tool has not been widely and consistently used or populated by the directorates and its information is incomplete and out-of-date. It has not been an effective mechanism to inform whole-of-government ICT strategic planning by providing a comprehensive overview of the current state of ICT across ACT Government directorates.

3.53

In April 2016 the Strategic Board agreed to, and endorsed, the *ACT Government – ICT Governance Framework*. An outcome expected from the establishment of the *ACT Government – ICT Governance Framework* was ‘an opportunity to maximise the benefit realisation and return-on-investment for the Territory’s annual ICT spend by implementing a more encompassing approach to the ICT portfolio governance’. The *ACT Government – ICT Governance Framework* notes and acknowledges the roles of different ACT Government entities associated with ICT strategic planning, including the Strategic Board, Office of the Chief Digital Officer, directorates and agencies and Shared Services ICT. The *ACT Government – ICT Governance Framework* seeks to identify and document a more collaborative and communicative approach to strategically manage ICT across ACT Government agencies.

3.57

The Digital Service Governance Committee was established by the Head of Service on 7 April 2016, in accordance with the *ACT Government – ICT Governance Framework*. The Committee ‘seeks to strengthen the benefit realisation of WhoG ICT portfolio investment management across-government by taking a service-wide, citizen-centric approach and looking for ways to share information and resources’ and ‘aims to maximise the value-for-money and benefits realisation derived from the ACT Government ICT investment’ by taking a strategic approach to seeking opportunities for whole-of-government initiatives and prioritising service integration, economies-of-scale and/or other improvements to effectiveness and efficiency. The Digital Service Governance Committee meets regularly and considers a wide variety of ICT-related issues relevant to whole-of-government strategic ICT planning. The committee represents an effective attempt at improving whole-of-government communication and coordination of strategic ICT planning, although it is noted that the attendance of alternative senior executives, in place of the intended Deputy Directors-General, may impede the authority and decision-making capability of the committee.

3.67

An ICT Briefs and Business Cases Sub-Committee has been established to support the activities of the Digital Service Governance Committee. The sub-committee’s role is to review and provide advice to the Digital Service Governance Committee on budget bids from across ACT Government which have a significant digital component. The sub-committee has been an active committee; meeting regularly, and as often as weekly, during critical budget review periods. The sub-committee assesses concept and budget bids using an assessment tool with comprehensive evaluation criteria,

3.80

resulting in an assessment of a project as Category A (strongly supported), Category B (supported) or Category C (conditionally supported but not considered urgent). The establishment of the sub-committee is an effective attempt at improving whole-of-government communication and coordination of strategic ICT planning, by facilitating cross-agency consideration of new systems.

A number of other sub-committees were also envisaged by the Digital Service Governance Committee, including a Strategy and Roadmap Advisory sub-committee and Common Capability and Standards sub-committee. These sub-committees were not established as expected. This is a missed opportunity to establish specific sub-committees that could have had a clear and explicit role in whole-of-government ICT strategic planning by understanding and promoting common capabilities across ACT Government directorates and developing strategies for enhanced ICT collaboration. 3.81

A series of Digital Strategy Workshops were held with most ACT Government directorates (all but the Health Directorate) in late 2016 and early 2017, the purpose of which was to 'assist [the directorates] in interpreting the Strategy within their own context and to develop their own road maps for implementation'. As part of the Digital Strategy Workshops directorates completed self-assessment scorecards, which sought to 'track progress against the strategy principles over time'. There was no further information on the application or use of the scorecards, including: how frequently they should be reviewed and updated; or how progress on the scorecard and its use and implementation should be reviewed and monitored. No further Digital Strategy Workshops have been held since then for the purpose of revisiting or reviewing progress against the original self-assessment scorecards. 3.94

The *ACT Government Digital Strategy 2016-2019* envisaged the preparation of a strategy implementation roadmap, which was intended to 'be constructed collegially and managed as a measure of our digital progress and enterprise cohesion'. There is no further guidance in the strategy as to the purpose and application of the strategy implementation roadmap, including who had responsibility and accountability for progressing the roadmap. A strategy implementation roadmap has not yet been produced. A Strategy and Roadmap Advisory sub-committee that was envisaged to be established to support the activities of the Digital Service Governance Committee has not been established. 3.98

The *ACT Government Digital Strategy 2016-2019* envisaged that each directorate was expected to 'present and maintain a roadmap for their portfolio of systems and applications'. The directorates' roadmaps were expected to 'support investment decisions by providing a strategic context and ensuring there is not a build-up of technology debt and risk'. Roadmaps have not been presented to the Digital Service Governance Committee for consideration and review on an ongoing basis by ACT Government directorates. 3.101

The *ACT Government Digital Strategy 2016-2019* identified an intention to establish a set of Common Capabilities for ICT across ACT Government directorates, which have since been defined as "any technology that has use across directorates or whole of government' where there are potential advantages in collaborating to enable the sharing of ICT investment and pooled resources, the reduction of 3.113

duplicated investments and rationalisation of procurement effort'. A Common Capabilities sub-committee that was envisaged to be established to support the activities of the Digital Service Governance Committee in implementing the principles of Common Capabilities was not established. Nevertheless, in June 2018 a Common Capabilities framework was endorsed by the Digital Service Governance Committee. Strategic Platforms, which are technologies already provided by Shared Services ICT to directorates as part of its core service delivery, would be recognised as the 'first, core set of technologies governed under the proposed Common Capabilities framework'.

The Common Capabilities framework represents a concerted effort by multiple stakeholders to rationalise the whole-of-government ICT infrastructure. However, because neither the current ICT environment nor agencies' business needs have been formally and consistently documented, the framework's benefits will not be optimised unless it is situated within a comprehensive strategic planning process. The Digital Service Governance Committee also acknowledged, in June 2018, the work that needed to be done to populate the agreed Common Capabilities framework and 'understand the resources required to implement the framework, and how those resources would be supported and allocated'.

3.114

In December 2018, the Strategic Board requested that Shared Services and the Office of the Chief Digital Officer gain an understanding of the ACT Government's critical ICT systems. A risk-based assessment was conducted in January across ACT Government directorates, which focused on ICT systems that have been classified as 'government critical' (i.e. systems that have been assessed as 'Requir[ing] continuous availability. Interruptions to the system or service are intolerable, immediately and significantly damaging'). Fifty government critical systems were identified; 17 for the Health Directorate and 33 for the other directorates. Twenty percent of systems were identified as not fit for purpose, with immediate investment required, while a further twenty percent were identified as fitting business needs, but with near term investment required.

3.124

The December 2018 request by the Strategic Board was the catalyst for intensive and focused action by ACT Government directorates in identifying and documenting the 'current state' of ACT Government ICT systems, albeit through a limited but risk-based focus on 'government critical' systems. The exercise was acknowledged as 'the first step in a much larger body of work that will need to extend to Business Critical systems and beyond'. This demonstrates that existing ICT strategic planning processes, including whole-of-government ICT strategic planning initiatives, have not been effective to date.

3.125

Recommendations

RECOMMENDATION 1 ICT STRATEGIC PLANNING FRAMEWORK

The Chief Minister, Treasury and Economic Development Directorate should develop and implement an ICT strategic planning framework for ACT Government, its directorates and agencies. The ICT strategic planning framework should promote consistency and coordination of ICT strategic planning activities by identifying:

- a) roles, responsibilities and timeframes for ICT strategic planning; and
- b) minimum requirements for ICT strategic planning outputs and deliverables, including:
 - i) the strategic priorities and objectives of the directorate (including any whole-of-government priorities and objectives) and how the strategies in the ICT strategic plan contribute to these;
 - ii) the 'current state' of ICT in the directorate;
 - iii) future capabilities and requirements for ICT in the directorate; and
 - iv) a detailed program of work, or technology roadmap, to 'close the gap' between the 'current state' and future capabilities and requirements.

RECOMMENDATION 2 WHOLE OF GOVERNMENT ICT STRATEGIC PLAN

The Chief Minister, Treasury and Economic Development Directorate should develop a whole-of-government ICT strategic plan that supports the ACT Government Digital Strategy. The whole-of-government ICT strategic plan should identify at a minimum:

- a) the ICT capabilities required to meet the ACT Government's business needs;
- b) the 'current state' of the ACT Government's ICT capabilities; and
- c) how, and by when, gaps between current and required ICT capabilities are to be closed.

RECOMMENDATION 3 APPLICATION PORTFOLIO MANAGEMENT TOOL

In order to support the development of a whole-of-government ICT strategic plan the Chief Minister, Treasury and Economic Development Directorate should develop and implement a whole-of-government application portfolio management approach, including:

- a) identification and implementation of a software tools that assists directorates to identify:
 - i) existing ICT systems, hardware and capabilities;
 - ii) future ICT systems, hardware and capabilities and associated investment needs; and
- b) development and formalisation of governance arrangements, including roles, responsibilities and processes for the implementation and maintenance of the software tools and its data.

Agencies responses

In accordance with subsection 18(2) of the *Auditor-General Act 1996*, the Justice and Community Safety Directorate, Transport Canberra and City Services Directorate and Chief Minister, Treasury and Economic Development Directorate were provided with:

- a draft proposed report for comment. All comments are considered and required changes reflected in the final proposed report; and
- a final proposed report for further comment.

In accordance with subsection 18(3) of the *Auditor-General Act 1996* the Community Services Directorate, Education Directorate, Environment Planning and Sustainable Development Directorate and Health Directorate were also provided with a draft proposed report for comment and a final proposed report for further comment.

No comments were provided for inclusion in this Summary Chapter.

1 INTRODUCTION

ICT strategic planning

- 1.1 Effective public administration relies heavily on information and communications technology (ICT); ICT drives all facets of public administration, including policy development, service delivery, regulation and administration. In order to achieve public administration outcomes and objectives, ICT needs to be effectively planned and coordinated.
- 1.2 For the purpose of this audit, ICT strategic planning refers to the activities of directorates and other entities with a role in whole of government planning to identify, understand and plan for the delivery of ICT to meet the needs and objectives of the directorates and the ACT Government.

Importance of ICT strategic planning

- 1.3 Issues arising from the ageing of key systems and other challenges such as a lack of interoperability can significantly degrade the capacity of ICT to deliver the required capability over time. Further, as the cost of ICT services in the broader economy declines – as a result of more efficient manufacturing, procurement and support techniques and the use of server virtualisation technology and cloud computing – opportunities to achieve efficiencies in ICT operations will be constrained unless organisations undertake effective ICT strategic planning.
- 1.4 Good strategic planning also has the potential to help bridge the gap between users and providers of ICT. By participating in ICT strategic planning activities, users can ensure that ICT providers are aware of their business requirements and priorities. By involving user agencies in the planning process ICT providers can also ensure that users are aware of potential technical solutions to their business problems, and the constraints and limitations under which the solutions can be provided.
- 1.5 Without effective strategic planning, organisations may adopt a reactive approach to risk management; they focus on addressing risks that have materialised rather than on treating risks proactively. The lack of effective strategic planning can also result in organisational fragmentation, leading to duplication, gaps and uncertainty as to who is responsible for what activities.
- 1.6 The overarching theme in good ICT strategic planning is alignment: business as usual activities, projects and organisational structures should all be directed towards achieving the organisation's goals. Without the discipline of an adequate ICT strategic plan, aligned to the organisation's priorities, an ICT team might be able to assess its operational performance, i.e. is it doing things right?, but has no way of assessing whether it is doing the right things.

New South Wales guidance

- 1.7 The New South Wales Department of Finance, Services & Innovation has developed and disseminated guidance to New South Wales Government agencies on how to develop good ICT strategic plans. In doing so, the *Agency Guidance: Developing ICT Strategic Plans* document provides a succinct overview of the purpose and use of ICT strategic plans:

The purpose of an ICT strategic plan is to ensure that ICT activities and investments are aligned with strategic and corporate objectives, and to define the ICT standards and policies that agencies have put in place. It defines the way an agency proposes to manage and enhance its information assets to support its current and future business needs. It is also a useful tool to communicate an ICT strategy both internally and externally.

ICT strategic plans also guide decision-making about technologies and solutions. New proposals to change or enhance business processes should be tested to ensure that they align with the current ICT strategic plan.

An ICT strategic plan facilitates the consistent management and future direction for ICT investment and assets so that they support an agency's service priorities.

- 1.8 The New South Wales Department of Finance, Services & Innovation's *Agency Guidance: Developing ICT Strategic Plans* guidance further notes:

ICT strategic plans are the 'master plan' documents that set out an agency's:

- Current ICT operating environment
- Business drivers for change
- Policy and strategic context, including relationship to NSW Government and agency/cluster strategic objectives and priorities
- Goals and objectives
- Roadmap for achieving the goals and objectives.

ICT strategic plans should provide a consolidated and prioritised view of the agency's planned ICT investments to enable it to meet its business and service delivery objectives.

Roles and responsibilities for ICT strategic planning

- 1.9 A number of ACT Government agencies and entities have a role in ICT strategic planning, including:
- directorates and agencies;
 - Shared Services ICT (a business unit of the Chief Minister, Treasury and Economic Development Directorate); and
 - the Office of the Chief Digital Officer (a business unit of the Chief Minister, Treasury and Economic Development Directorate).

ACT Government directorates and agencies

1.10 ACT Government directorates and agencies have primary responsibility for ICT strategic planning in accordance with the principles of public sector accountability provided for by the *Public Sector Management Act 1994* and *Financial Management Act 1996*.

1.11 Directors-general and other agency chief executives are primarily responsible, in accordance with subsection 19(1) of the *Public Sector Management Act 1994*, which states:

A director-general is—

- (a) responsible for leadership of an administrative unit and leadership in the service; and
- (b) answerable to the Minister responsible for the administrative unit and to the head of service.

1.12 With respect to the use of Territory resources (including ICT resources), subsection 31(1) of the *Financial Management Act 1996* states:

The responsible director-general of a directorate is accountable to the responsible Minister of the directorate for the efficient and effective financial management of the directorate.

1.13 Subsection 31(2) of the *Financial Management Act 1996* provides further guidance on the efficient and effective use of Territory resources, noting:

The responsible director-general of a directorate must manage the directorate in a way that—

- (a) promotes the achievement of the purpose of the directorate; and
- (b) promotes the financial sustainability of the directorate; and
- (c) is not inconsistent with the policies of the government.

Collaboration and a whole-of-government approach

1.14 While the *Financial Management Act 1996* provides for directorate-specific responsibility for the efficient and effective management of Territory resources, the *Public Sector Management Act 1994* promotes collaboration and cooperation across directorates and agencies. Subsection 19(2) of the *Public Sector Management Act 1994* requires a Director-General to manage directorate activities ‘taking into account the responsibilities of the government as a whole, including by collaborating with other directors-general’. Subsection 19(2) of the *Public Sector Management Act 1994* also states:

A director-general has the following leadership functions:

...

- (d) to work efficiently, effectively and constructively with other directors-general to ensure a whole-of-government focus and promote cooperation and collegiality within and between administrative units; ...

Shared Services ICT

1.15 Shared Services is a business unit within the Chief Minister, Treasury and Economic Development Directorate. According to the 2018-19 Budget Statements for the Chief Minister, Treasury and Economic Development Directorate:

Shared Services provides a range of ICT and corporate services, including infrastructure, applications support and development, ICT project services and tactical and transactional human resource and finance services to directorates and agencies.

The key outputs to be delivered include:

- providing services to government agencies as outlined in Shared Services ICT catalogue of services and affirmed through various service level and support agreements;
- managing the whole of government data and communications network;
- providing general service and help desk functions;
- providing payroll and personnel services; ...

1.16 In practice Shared Services ICT (part of Shared Services within the Chief Minister, Treasury and Economic Development Directorate) provides core ICT services across the ACT Government, including: desktops, laptops and mobile devices as appropriate; networks and storage; core financial and human resource applications; and connectivity to the internet. There are currently no service level and support agreements between Shared Services ICT and ACT Government agencies, although there have been in the past. There is a project underway to develop these.

Office of the Chief Digital Officer

1.17 The Chief Digital Officer was appointed, and the Office of the Chief Digital Officer established, in August 2015. The Office of the Chief Digital Officer is a business unit within the Chief Minister, Treasury and Economic Development Directorate, with the Chief Digital Officer reporting directly to the Director-General and Head of Service.

1.18 The Office of the Chief Digital Officer is responsible for 'driv[ing] the ACT's digital agenda and leading the whole of government strategic direction for ICT', specifically:

- Maintaining a future digital vision and strategy for the ACT Government;
- Participating in Economic Development activities to support the growth and diversification of the ACT economy;
- Setting relevant policy and standards for whole of government ICT;
- Creating the frameworks for whole of government ICT investment and governance;
- Undertaking research and analysis to support strategic policy advice on current and emerging ICT and digital policy issues and initiatives; and
- Shaping and sponsoring the development of whole of government ICT capability.

- 1.19 The activities of the Office of the Chief Digital Officer are directly covered by Strategic Objective 6 for the Chief Minister, Treasury and Economic Development Directorate.

To establish Canberra as a fearlessly digital city/state that has embraced revolutionary and innovative technology to grow and diversify our economy, connect our people, accelerate our learning, and nurture our culture and community.

- 1.20 With respect to Strategic Objective 6 and the activities of the Office of the Chief Digital Officer, the 2018-19 Budget Statements for the Chief Minister, Treasury and Economic Development Directorate state:

The Office of the Chief Digital Officer (OCDO) will provide the leadership across the ACT Government to drive the three key elements of a digital city; an expanding digital economy, a full range of ACT Government digital services, and a government with a broad foundation of digital computing capability and practice.

The OCDO is directly responsible for the establishment of a Centre of Data Excellence to coordinate a whole of government approach to improving data management and analytics capabilities. It includes both the ICT infrastructure elements required by a modern, data rich organisation as well as policy and capability development to fully realise the benefits of the platform, such as automation and data analytics.

In 2017 the OCDO established the capability for a citizen to have a single validated digital identity. In 2018-19 the OCDO is focussing its efforts on working with directorates to on-board transactions and services that drive citizen uptake of digital services.

ICT expenditure

Capital Expenditure

- 1.21 The purchase of new (or significant upgrades) of ICT is typically funded by directorates and agencies by capital injections through appropriation. Directorates and agencies do not separately report on ICT-related capital expenditure in their annual financial statements. The annual ACT Budget does, however, identify ICT-related budgeted capital expenditure. Table 1-1 shows the budgeted capital expenditure for ICT projects for financial years 2015-16 to 2021-22.

Table 1-1 Budgeted capital expenditure for ICT Projects (\$'000)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Budgeted Capital Expenditure	102 497	95 350	104 415	65 011	57 063	13 083	8 215

Source: ACT Audit Office, based on ACT Government Budget Statements

Recurrent expenditure

- 1.22 The provision of ICT services is supported by recurrent appropriation provided to directorates and agencies. This is difficult to identify with any certainty based on readily available information. Table 1-2 shows amounts reported in directorates' financial statements for items such as 'Information Technology Costs and Office Equipment'; 'IT Services'; 'Information Technology and Office Equipment'; 'Computer Expenses' and 'Information Technology and Telecommunications'. The amounts shown in Table 1-2 may also include amounts paid to Shared Services ICT for the provision of ICT services.

Table 1-2 Recurrent expenditure by directorates on ICT services for financial years 2014-15 to 2017-18 (\$'000)

	2014-15	2015-16	2016-17	2017-18
Recurrent expenditure	134 320	134 478	135 098	142 610

Source: ACT Audit Office, based on directorate annual reports

Shared Services ICT

1.23 Shared Services ICT provides the majority of ICT services to directorates and agencies. Shared Services recovers from directorates and agencies the costs of providing ICT services. Table 1-3 shows Shared Services ICT's expenditure for the financial years 2013-14 to 2017-18.

Table 1-3 Shared Services ICT expenditure for financial years 2013-14 to 2017-18 (\$'000)

	2013-14	2014-15	2015-16	2016-17	2017-18
Total Expenses	154 324	154 718	164 384	165 177	164 149

Source: ACT Audit Office, based on data provided by Shared Services

Audit objective and scope

Audit objective

1.24 The objective of the proposed audit is to provide an independent opinion to the Legislative Assembly on the effectiveness of ACT Government agencies' strategic planning for information and communications technology (ICT).

Audit scope

1.25 The scope of the audit includes consideration of:

- the effectiveness of any whole-of-government arrangements or initiatives for ICT strategic planning; and
- a selection of ACT Government agencies' ICT strategic planning processes for compliance with any whole-of-government or other better practice processes and requirements.

1.26 With respect to the effectiveness of any whole-of-government arrangements or initiatives for ICT strategic planning, the audit includes consideration of ICT strategic planning at the whole-of-government level, including the activities of:

- Shared Services ICT;
- the Office of the Chief Digital Officer; and

- cross-agency committees and working groups, including the Digital Service Governance Committee (and relevant sub-committees) and the Shared Services ICT Collaboration Forum.
- 1.27 With respect to the selection of ACT Government agencies' ICT strategic planning processes the audit specifically focusses on the:
- Transport Canberra and City Services Directorate; and
 - Justice and Community Safety Directorate.
- 1.28 In doing so, however, the audit also considers other directorates' ICT strategic planning, and presents information on directorates' planning practices gathered by means of a survey.

Out of Scope

- 1.29 An assessment of the efficiency, effectiveness or economy of the ACT Government's ICT operations was beyond the scope of this audit. Consideration of agencies' implementation of their ICT strategic plans – including the effectiveness of ICT initiatives, activities or deliverables – was also out-of-scope.

Audit criteria, approach and method

Audit criteria

- 1.30 To form a conclusion against the objective, the following criteria were used:
- Are the whole-of-government governance arrangements in place suitable to ensure that ICT strategic planning is being conducted effectively?
 - Is appropriate and effective ICT strategic planning being conducted at a whole of government level?
 - Is appropriate and effective ICT strategic planning being conducted at an agency level?
- 1.31 The audit was performed in accordance with *ASAE 3500 – Performance Engagements*. The audit adopted the policy and practice statements outlined in the Audit Office's *Performance Audit Methods and Practices (PAMPr)* which is designed to comply with the requirements of the *Auditor-General Act 1996* and *ASAE 3500 – Performance Engagements*.
- 1.32 In the conduct of this performance audit the ACT Audit Office complied with the independence and other relevant ethical requirements related to assurance engagements.

Audit approach and method

1.33 The audit approach and method consisted of:

- interviews and discussions with staff in:
 - the Chief Minister, Treasury and Economic Development Directorate, including the Office of the Chief Digital Officer and Shared Services ICT;
 - the Transport Canberra and City Services Directorate; and
 - the Justice and Community Safety Directorate;
- review of relevant whole-of-government ICT policy documents, including the *ACT Government Digital Strategy 2016-19*;
- review of the activities of the Digital Service Governance Committee (DSGC), and relevant sub-committees;
- review of documentation used in Shared Services ICT's and agencies' ICT strategic planning, including corporate plans, ICT strategic plans and ICT roadmaps; and
- the engagement of a subject matter expert through Cordelta Pty Ltd to provide advice and guidance on the conduct of the audit and review the audit method and findings.

Better practice models and guidance

1.34 In developing the test program for this audit, the Audit Office consulted a wide range of better practice guidance relating to ICT strategic planning. In this respect, the Cordelta Pty Ltd subject matter expert noted:

ACT Government does not have a guiding framework for developing ICT Strategic Plans. There are numerous methodologies available however there is no single industry recognized standard in the digital government context.

1.35 The Cordelta Pty Ltd subject matter expert further noted:

A combination of research material, standards and methodologies has been used in this review. In reviewing the Whole of Government ICT Strategic Planning arrangements and the Directorate ICT Strategies I elected to use the following industry guidance and tools:

- Gartner’s Building a Successful Strategic Plan for Information and Technology.¹
- COBIT 5 Governance Enabling Processes for Strategic Planning (EDM01, APO01, APO2).²
- Enterprise Architecture as a strategy in creating an ICT business model.³
- United Nationals e-Government 2012 Survey.⁴

The combination of these tools provides a holistic approach to developing the strategic plans, governing the plans and continual review against strategic business priorities in a digital government context.

1.36 The Audit Office notes the most relevant of these is COBIT. Published by ISACA,⁵ COBIT aims to provide ‘a business framework for the governance and management of enterprise IT’. It is well regarded, and widely used in information systems audit. COBIT’s strategic planning guidance is congruent with, and encapsulates, good practice guidance from other sources such as academia and technical publications.

¹ <https://www.gartner.com/en/publications/ebook-strategic-planning-for-technology>

² https://www.isaca.org/Knowledge-Center/cobit/Documents/CF-Vol-2-2014-Strategic-Planning-Using-COBIT-5_nlt_Eng_0414.pdf

³ J Ross, P Well, DC Robertson, *Enterprise Architecture as Strategy: Creating a Foundation for Business Excellence*, Harvard Business School Press.

⁴ <https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2012-Survey/Chapter-3-Taking-a-whole-of-government-approach.pdf>, p55

⁵ ISACA is an independent, nonprofit, global association that engages in the development, adoption and use of globally accepted information system knowledge and practices. Previously known as the Information Systems Audit and Control Association, ISACA now goes by its acronym only. - <http://searchcompliance.techtarget.com/definition/ISACA>

2 ICT STRATEGIC PLANNING IN THE DIRECTORATES

- 2.1 This chapter discusses ICT strategic planning activities in ACT Government directorates, with a focus on the Transport Canberra and City Services Directorate and Justice and Community Safety Directorate. Directorates' ICT strategic planning activities are considered with reference to key elements of better practice ICT strategic planning, as demonstrated by COBIT guidance and Gartner guidance.

Summary

Conclusion

There is considerable variability and inconsistency in ACT Government directorates' ICT strategic planning processes. While some ACT Government directorates demonstrate a level of maturity in their approach to ICT strategic planning, and there are examples of better practice in some of the directorates, the variability in the quality and consistency of ICT strategic planning outputs impairs the ability of ICT to effectively support directorate strategic goals and objectives and whole-of-government goals and objectives.

The absence of a consistent, identifiable ICT strategic planning framework, with clear roles and responsibilities, timeframes and deliverables, makes it difficult for ACT Government directorates to consistently and effectively plan for ICT. This increases the risk of inconsistent and inappropriate ICT planning decisions across directorates and impairs the opportunity for collaboration across directorates and the achievement of whole-of-government efficiencies and cost-savings through consistent planning and procurement decisions.

Key findings

	Paragraph
An effective ICT strategic plan, aligned to the organisation's strategic objectives and priorities provides assurance to senior management and other stakeholders that ICT investment and activities are being directed to support the organisation in achieving its strategic goals. ICT strategic plans should explicitly link the ICT business unit's activities to organisational goals. A review of directorates' ICT strategic planning documentation shows that this was not done effectively. While most (but not all) ICT strategic planning documents identified directorate objectives and priorities there was little further information or elaboration as to how ICT strategic objectives contributed to them. By not doing so, directorates increase the risk of misalignment between ICT strategic planning and directorate organisational planning.	2.34
An effective ICT strategic plan should identify the ICT capabilities required to meet the organisation's foreseeable business needs over the life of the plan. This demonstrates that the plan is relevant to the organisation's requirements and facilitates prioritisation of spending and effort, including re-prioritisation when	2.52

business needs change. A review of directorates' ICT strategic planning documentation shows that this was not done effectively. While future ICT capabilities could be interpreted from various aspects of directorates' ICT strategic planning documents, this was usually done in a generic way. There was little further information on what this practically meant for the directorate's future ICT requirements, including the technology or software that might be needed.

A comprehensive analysis of the current state of an organisation's ICT capabilities is an important element in the ICT strategic planning process. A summary of the results should be included in ICT strategic planning documents as evidence that the analysis has been done, as justification for the proposed change program, and for the information of internal and external stakeholders. A review of directorates' ICT strategic planning documentation shows that this was not done effectively. While some directorates' ICT strategic planning documents acknowledge shortcomings in the current state of ICT in the directorate, particularly with reference to ageing or legacy systems, this is primarily in a high-level conceptual way. Most directorates' ICT strategic planning documents are focused on identifying and asserting strategies and actions to be implemented (in a high-level conceptual way), with little recognition of the current state of ICT in the directorate and how the current state will affect the delivery of ICT strategies, priorities and objectives identified in the document. 2.66

An effective ICT strategic plan should include details of the projects and other initiatives that will be used to implement the desired changes that the plan describes. An ICT roadmap setting out the change initiatives required to move from the current state to the desired future state is an important element of any ICT strategic plan. An ICT roadmap in a strategic plan should identify, at a minimum, the work to be done and when it is expected to be completed. A review of directorates' ICT strategic planning documentation shows that the documents inconsistently identified actions to be undertaken to address current and expected future gaps in ICT capabilities. While the directorates' ICT strategic planning documents generally identified actions to be undertaken, many of these were described generically, with no further information on how they contributed to closing the gaps in capabilities. Some ICT strategic planning documents identified projects currently underway in the directorate in relation to specific ICT systems or activities, but there was little further information on timeframes and deliverables. Both the Transport Canberra and City Services Directorate and Justice and Community Safety Directorate developed ICT roadmaps, which are effective in identifying and reporting on planned activities for the directorates' current ICT systems, but there is no clear link or articulation of how these activities and projects are expected to address identified gaps between the current and future states of ICT in the directorate. 2.86

An effective ICT strategic plan should outline the governance arrangements in place to oversee its implementation, including roles and responsibilities for implementation. This provides important information for internal and external stakeholders, and mitigates the risks of duplication or gaps in delivery. Most directorates' ICT strategic planning documents effectively documented governance arrangements for the delivery of ICT, although there was little information in the documents with respect to Shared Services ICT and its role in the implementation of directorates' ICT strategic plans. 2.102

An effective ICT strategic plan should identify metrics, key performance indicators and baseline data, so that progress on the implementation of ICT strategies can be measured and reported. ICT roadmaps were prepared by the Transport Canberra and City Services Directorate and Justice and Community Safety Directorate, which provide a basis on which progress on the implementation of ICT strategies can be measured and reported. There was no further information in the ICT strategic planning documents of the other directorates, including details of an implementation plan or road map which sets out detailed actions to be taken, due dates or responsibilities. The ICT strategic planning documents of the directorates did not include information on metrics, key performance indicators and baseline data, by which to measure progress on the ICT strategy. 2.114

ICT strategic planning

2.2 The audit sought to examine ACT Government directorates' ICT strategic planning processes primarily through consideration of directorates' ICT strategic plans and other strategic planning-related supporting documents.

2.3 In conducting the audit, the Audit Office sought the advice of a subject matter expert. With respect to ICT strategic planning generally, the Cordelta subject matter expert noted:

Strategic Planning is the process for defining your organisation's business strategy, priorities, goals, future directions and decisions on resource distribution at a strategic level.⁶

Governments are complex organisations with limited resources and are required to ensure all activities performed across directorates are efficient to ensure value is delivered to all citizens. Information Communication and Technology (ICT) is one function that is viewed as a strategic resource that is pivotal in ACT Government's future direction as outlined in the Digital Strategy 2016-2019.

As the business goals are different to the ICT goals a formal strategic planning process is required to identify the ICT strategic directions required to deliver value to ACT Government and the Directorates. COBIT 5 and Gartner both describe a cascading model of plans where there is a comprehensive map of ICT actions linked to business strategic priorities.

2.4 With respect to a model for ICT strategic planning and industry better practice, the Cordelta subject matter expert advised 'a framework for assessing [ICT strategic planning] was required ... as the ACT Government does not have a whole-of-government strategic planning framework for ICT Strategic Planning'. In this respect the Cordelta subject matter expert noted:

There is no single industry standard that covers ICT strategic planning, IT Governance and whole-of-government delivery in the context of implementing government digital strategies. In assessing an appropriate framework, I considered a number of options. This included:

- adopting a published strategic planning approach relevant to ICT from a leading ICT research organisation such as Gartner;
- using an Enterprise wide IT Governance model such as COBIT 5;

⁶ https://www.isaca.org/Knowledge-Center/cobit/Documents/CF-Vol-2-2014-Strategic-Planning-Using-COBIT-5_nlt_Eng_0414.pdf

- using Enterprise Architecture to drive strategy;
- reviewing other government ICT Strategic Planning Frameworks;
- reviewing other government digital strategies and their corresponding ICT strategic plans; and
- latest research from Harvard Business Review and Gartner on ICT strategic planning to advance digital priorities.

All models share comparable steps when developing an ICT Strategic Plan. Strategic planning includes a model of engagement, gaining a clear understanding of the business directions, an assessment of your capabilities, defining your objectives, establishing a set of actions for IT with measurement and metrics, communicate the strategy and continually review.

Control Objectives for Information and Related Technologies (COBIT)

2.5 The *COBIT 5 Process Reference Guide* was used as a key input into the assessment of ACT Government directorates' ICT strategic plans and other strategic planning-related supporting documents. The *COBIT 5 Process Reference Guide* outlines the following management practices as key elements of an ICT strategic planning approach:

Understand enterprise direction. Consider the current enterprise environment and business processes, as well as the enterprise strategy and future objectives. Consider also the external environment of the enterprise (industry drivers, relevant regulations, basis for competition).

Assess the current environment, capabilities and performance. Assess the performance of current internal business and IT capabilities and external IT services, and develop an understanding of the enterprise architecture in relation to IT. Identify issues currently being experienced and develop recommendations in areas that could benefit from improvement. Consider service provider differentiators and options and the financial impact and potential costs and benefits of using external services.

Define the target IT capabilities. Define the target business and IT capabilities and required IT services. This should be based on the understanding of the enterprise environment and requirements; the assessment of the current business process and IT environment and issues; and consideration of reference standards, good practices and validated emerging technologies or innovation proposals.

Conduct a gap analysis. Identify the gaps between the current and target environments and consider the alignment of assets (the capabilities that support services) with business outcomes to optimise investment in and utilisation of the internal and external asset base. Consider the critical success factors to support strategy execution.

Define the strategic plan and road map. Create a strategic plan that defines, in co-operation with relevant stakeholders, how IT-related goals will contribute to the enterprise's strategic goals. Include how IT will support IT-enabled investment programs, business processes, IT services and IT assets. Direct IT to define the initiatives that will be required to close the gaps, the sourcing strategy and the measurements to be used to monitor achievement of goals, then prioritise the initiatives and combine them in a high-level roadmap.

Communicate the IT strategy and direction. Create awareness and understanding of the business and IT objectives and direction, as captured in the IT strategy, through communication to appropriate stakeholders and users throughout the enterprise.

Gartner guidance

- 2.6 The Gartner guide *Building a Successful Strategic Plan for Information and Technology*⁷ was also used as a key input into the assessment of ACT Government directorates' ICT strategic plans and other strategic planning-related supporting documents.
- 2.7 The Gartner guide *Building a Successful Strategic Plan for Information and Technology*⁸ identifies a series of steps associated with ICT strategic planning, as follows:
- Set ground rules
 - 'From the outset, it's helpful to clearly define the enterprise and business context for all stakeholders to prevent managers and executives from misunderstanding each other in the planning process. Start by outlining the responsibilities, process timelines and expected outcomes for each participant';
 - Verify the business imperative
 - During this process planners are encouraged to seek feedback from organisational leaders in order to: 'describe the current and desired future state of the business'; 'lay out the goals and capabilities required to support and enable those business aspirations'; and 'specify suitable metrics to gauge progress against those goals';
 - Assess your functional capabilities
 - 'Based on the collective understanding (among business and functional leaders) of the function's strengths and weaknesses, identify critical outcomes the function needs to achieve to deliver on its value proposition';
 - Define your objectives
 - 'To support strategic goals, functional leaders will need to develop a prioritized list of objectives with discrete and measurable steps that describe how a specific goal will be accomplished';
 - Establish an action plan with measures and metrics
 - The action plan is described as 'a formal document that outlines the sequence of action steps or initiatives required to attain an objective. It is the primary source of information for how the function's objectives will be executed, monitored, controlled and closed';
 - The action plan is also expected to: 'details interdependencies between different initiatives'; 'estimates the types, quantities and costs of resources required to perform an initiative'; 'sets roles, responsibilities and accountabilities of employees'; 'specifies risks and associated mitigation plans'; and 'establishes quality standards for different initiatives, metrics to measure progress and course-correction mechanisms to account for deviations';

⁷ <https://www.gartner.com/en/publications/ebook-strategic-planning-for-technology>

⁸ <https://www.gartner.com/en/publications/ebook-strategic-planning-for-technology>

- Put your strategy on a page
 - This process seeks to ‘clarify where functional organization is, where it is going and how it will get there’ and ‘communicates how you are adding value today, demonstrates how you plan to impact future business across the coming year – in line with corporate objectives – and provides a tool to cascade the strategic plan further across and down the organisation’;
- Effectively communicate your strategy
 - This process seeks to ‘communicate the functional objectives and strategy across the function and the [organisation]’.
- Keep the strategic plan alive
 - ‘Once the strategic plan is complete and communicated, it’s critical to measure progress against the objectives, revisit and monitor the plan to ensure it remains valid and adapt the strategy as business conditions change’.

Key elements for strategic planning

2.8 Through synthesising guidance from a range of sources, including the Gartner guide *Building a Successful Strategic Plan for Information and Technology*⁹ and *COBIT 5 Process Reference Guide* the Audit Office considered how ACT Government directorates demonstrated the following key requirements of an effective ICT strategic planning approach:

- a reflection of, and linkages to, the directorate’s strategic priorities;
- a description of the ICT capabilities required to meet the directorate’s strategic priorities and business needs;
- a description of the ‘current state’ of the directorate’s ICT capabilities;
- a description of how, and by when, gaps between the ‘current state’ of the directorate’s ICT capabilities and its required ICT capabilities is expected to be closed;
- a description of governance arrangements for ICT strategic planning, including how ICT-related planning decisions are expected to be made; and
- a description of how progress in implementing the directorate’s ICT strategic plans is expected to be measured and monitored.

2.9 The audit considered ACT Government directorates’ ICT strategic planning processes by examining directorates’ ICT strategic plans and other strategic planning-related supporting documents against these key requirements.

⁹ <https://www.gartner.com/en/publications/ebook-strategic-planning-for-technology>

Assessment of directorates' ICT strategic planning

Links to directorate's strategic priorities

- 2.10 The overarching theme of good ICT strategic planning is alignment. An ICT strategic plan, which is aligned to the organisation's strategic priorities and objectives, provides assurance to senior management and other stakeholders that ICT investment and activities are being directed to support the organisation in achieving its strategic goals. ICT strategic plans should explicitly link the ICT business unit's activities to organisational goals.
- 2.11 In reviewing the directorates' ICT strategic plans and other strategic planning-related supporting documents, the Audit Office sought to understand whether the directorate's:
- strategic priorities and objectives have been identified or otherwise referenced in the ICT strategic planning documents;
 - ICT strategic objectives have been clearly linked to the directorate's strategic priorities and objectives; and
 - ICT strategic objectives have been clearly linked to the *ACT Government Digital Strategy 2016-19*.

Transport Canberra and City Services Directorate

- 2.12 The *Information and Technology Strategy 2017-20* is the Transport Canberra and City Services Directorate's key ICT strategic planning document. The document states:

The IT Strategy is a core enabler of the TCCS strategic direction and will see the organisation take a fresh approach to the way technology services are sourced and delivered, which will allow the replacement of ageing and costly systems with modern cloud-based solutions that provide dynamic scaling, automation, software as a service, and continuous improvement through agile processes.

- 2.13 The *Information and Technology Strategy 2017-20* explicitly acknowledges that it:
- ... provides guidance on how IT will be used to achieve organisation goals set out in the [directorate's] Strategic Plan 2017-20 by focusing on delivery of smart, simple and seamless solutions.
- 2.14 Notwithstanding the *Information and Technology Strategy 2017-20* acknowledgement of the Transport Canberra and City Services Directorate's *Strategic Plan 2017-20*, there is no further information on the directorate's strategic priorities and objectives in the document and how they are acknowledged or addressed.
- 2.15 The *Information and Technology Strategy 2017-20* outlines four key ICT objectives:
- customer experience improved;
 - operations supported and effective;
 - risks reduced in security and technical areas; and

- engagement with business areas and development of digital business solutions.
- 2.16 The *Information and Technology Strategy 2017-20* states ‘these objectives will govern where TCCS will focus on planning, investment and service delivery’. However, without further information and acknowledgement of the Directorate’s strategic priorities and objectives, it is not clear how these four key ICT objectives contribute to, or align with, the strategic direction of the Directorate.
- 2.17 An *Information and Technology Operational Plan 2017-20* has also been developed, which ‘represents the short term (3-12 months) plan to achieve strategic priorities identified in the [*Information and Technology Strategy 2017-20*]’. The *Information and Technology Operational Plan 2017-20* identifies six key focus areas, as follows:
- KFA 1 – Improve administrative and operational support systems
 - KFA 2 – Improve data, security and privacy assessments processes
 - KFA 3 – Project delivery – IT/Digital projects
 - KFA 4 – Mobility improvement
 - KFA 5 – Support digital and enable innovation
 - KFA 6 – Technology refresh and replacement
- 2.18 The *Information and Technology Operational Plan 2017-20* identifies how these key focus areas align with, and support, the four key ICT objectives, but there is no further information on how they contribute to, or align with, the strategic goals of the Directorate.
- 2.19 The *Information and Technology Strategy 2017-20* includes a reference (and link) to the *ACT Government Digital Strategy 2016-19* in a table along with other reference documents. There is no further information on the implications of the *ACT Government Digital Strategy 2016-19*, what it means for the directorate’s ICT strategy or implications for the directorate’s ICT strategic objectives. The *Information and Technology Strategy 2017-20* does not document any clear links between the four ICT objectives outlined and the principles of the *ACT Government Digital Strategy 2016-19*.

Justice and Community Safety Directorate

- 2.20 The *ICT Strategy 2017-19* is the Justice and Community Safety Directorate’s key ICT strategic planning document. The document states that it provides:
- ... high level direction to move the Justice and Community Safety Directorate (JACS) towards systems that:
- support better service delivery to ACT community, government and our clients; and
 - assist to inform policy and program development, including evaluation, and increase our analytical capability.

2.21 The *ICT Strategy 2017-19* acknowledges the Justice and Community Safety Directorate *Strategic Plan 2017-19*, including its four strategic priorities:

- Emergency services - increase community safety through strategic reform and planning, and building resilient communities
- Corrective services - provide effective and integrated Corrective Services through a safer community, offender management and strategic reform and planning
- An accessible justice system - increase justice access and support through courts and tribunal, access to advice and support, and victim support
- A safe community - increase community safety through crime prevention, safer roads and regulatory reform.

2.22 The *ICT Strategy 2017-19* also acknowledges the Directorate's strategic indicators, as articulated in the Justice and Community Safety portfolio budget (albeit the *2016-17 ACT Budget*).

2.23 Although the *ICT Strategy 2017-19* acknowledges the Justice and Community Safety Directorate's *Strategic Plan 2017-19* and the directorate's strategic indicators, there is no further information on the Directorate's strategic priorities or objectives in the document and how they are acknowledged or addressed.

2.24 With respect to key Justice and Community Safety Directorate ICT strategies, the *ICT Strategy 2017-19* states:

The current delivery of ICT services to JACS would benefit from greater discipline in the following key areas:

1. overall management of ICT needs to be more strategically driven and this *ICT Strategy 2017-2019* provides the foundation for this;
2. better planning and business case development;
3. better procurement through Shared Services around clarity of service categories, standards and pricing; and
4. better procurement through outsourcing to deliver approved contractual arrangements and certainty of services.

JACS ICT services will focus on continuous improvement across the Directorate. ICT will be managed holistically, ensuring a clear link to business needs, while taking account of procurements, benefits realisation, and monitoring performance and costs of services. We will better use data to identify our needs, benchmark and improve performance, practices and ensure value for money.

2.25 However, without further information and acknowledgement of the Directorate's priorities or objectives, it is not clear how these four key ICT objectives contribute to, or align with, the strategic priorities and objectives of the Directorate. The *ICT Strategy 2017-19* does not describe or make clear links between the four strategic priorities of the Justice and Community Safety Directorate and the ICT strategies that have been identified.

2.26 The *ACT Government Digital Strategy 2016-19* and its three principles are acknowledged in the Justice and Community Safety Directorate's *ICT Strategy 2017-19*. Under the heading 'ICT Contribution of [Justice and Community Safety Directorate's] success' the three principles of the *ACT Government Digital Strategy 2016-19* are quoted. While the *ACT Government Digital Strategy 2016-19* has been acknowledged, there is no further information on the link between the principles and the four key ICT objectives, with the *ICT Strategy 2017-19* simply stating:

Along with our service strategies ... JACS will use the Digital Strategy to guide our decision making and approach.

Other directorates

2.27 There was variability in the ICT strategic planning documents of the other directorates and the extent to which they aligned with, and referenced, the directorate's strategic priorities and objectives.

2.28 At the time of audit fieldwork the Health Directorate had prepared a draft *Digital Health Strategy 2018-2028*. The draft *Digital Health Strategy 2018-2028* referenced the 'strategic priorities' of the directorate, as demonstrated in the *ACT Health Corporate Plan 2018-2023*. This included three strategic goals:

- 'putting patients at the centre of everything we do';
- 'building a sustainable health system driven by innovation'; and
- 'developing the workforce of the future, starting now'.

2.29 The Health Directorate's draft *Digital Health Strategy 2018-2028* also identified a Digital Health Vision for the directorate, as well as Digital Health Strategic Themes (single trusted record for every person, seamless experience and effective access, research discovery and collaboration and continuity of care across various clinical settings) and a series of Digital Future-Ready Technology domains and capabilities in support. The Health Directorate's draft *Digital Health Strategy 2018-2028* also referenced the *ACT Health Quality Strategy 2018-2028* and the three strategic priorities of the directorate in relation to quality:

- Strategy Priority 1 – Person-centred – Improve the experience of care;
- Strategic Priority 2 – Patient Safety – Proactively seek a reduction in patient harm;
- Strategic Priority 3 – Effective Care – Best evidence for every person, every time.

2.30 There was no further information on the implications of the strategic goals or strategic priorities of the directorate in relation to quality, for the directorate's ICT strategic objectives.

2.31 The Environment, Planning and Sustainable Development Directorate's *ICT Strategic Plan 2018-2021* quoted a summary of the Directorate's responsibilities, but did not clearly and explicitly reference the strategic priorities or objectives of the organisation and how the ICT plan and its strategies contributed to those objectives. The Community Services

Directorate's *ICT & Digital Strategy 17-18* referred to a series of 'policies, government directions and other important documents' but did not clearly and explicitly reference how the ICT plan and its strategies aligned with these documents. The Community Services Directorate also advised that a 'Digital and Data Plan' was in the process of being developed for the directorate, which is intended to replace the *ICT & Digital Strategy 17-18*.

- 2.32 Links between the directorates' ICT strategic objectives or priorities and the *ACT Government Digital Strategy 2016-19* were not explicitly documented in the relevant ICT strategic plans. Most of the ICT strategic plans of the directorates included statements and references that the *ACT Government Digital Strategy 2016-19* was a key document, that it had been considered or that its principles would be used to guide decision making, but there was little further elaboration of these statements. However, the ICT strategic plans of the Health Directorate and the Environment, Planning and Sustainable Development Directorate directly quoted the three principles from the *ACT Government Digital Strategy 2016-19*.
- 2.33 At the time of audit fieldwork the Education Directorate did not have an up-to-date ICT strategic plan. The Education Directorate advised that it developed and executed a *Digital Strategy 2012-2017* as well as an *ICT Strategic Plan 2014-2017* and that work is being undertaken to develop a plan to support the Education Directorate's *Strategic Plan 2018-21*.
- 2.34 An effective ICT strategic plan, aligned to the organisation's strategic objectives and priorities provides assurance to senior management and other stakeholders that ICT investment and activities are being directed to support the organisation in achieving its strategic goals. ICT strategic plans should explicitly link the ICT business unit's activities to organisational goals. A review of directorates' ICT strategic planning documentation shows that this was not done effectively. While most (but not all) ICT strategic planning documents identified directorate objectives and priorities there was little further information or elaboration as to how ICT strategic objectives contributed to them. By not doing so, directorates increase the risk of misalignment between ICT strategic planning and directorate organisational planning.

Identification of required ICT capabilities

- 2.35 Providing the ICT capabilities that are needed by an organisation to carry out its planned actions and activities can be considered to be core business of the ICT business unit; ICT business units must possess the expertise to translate business needs into specific ICT capabilities. As part of an effective strategic planning process, the ICT business unit should identify the ICT capabilities required to meet the organisation's foreseeable business needs.
- 2.36 In reviewing the directorates' ICT strategic plans or other strategic planning-related supporting documents, the Audit Office sought to understand whether:
- the ICT capabilities needed by the directorate to give effect to the directorate's business strategies and associated business needs had been identified; and

- the ICT capabilities needed by the directorate to give effect to the directorate's business strategies and associated business needs aligned with the *ACT Government Digital Strategy 2016-2019*.

Transport Canberra and City Services Directorate

2.37 The Transport Canberra and City Services Directorate's *Information and Technology Strategy 2017-2020* does not explicitly document or acknowledge the ICT capabilities needed by the Directorate to give effect to its business strategies and associated business needs.

2.38 As discussed in paragraph 2.15, the *Information and Technology Strategy 2017-2020* documents four key ICT objectives. The *Information and Technology Strategy 2017-2020* implicitly identifies how these objectives are expected to be achieved and includes, in part, some details of required future capabilities. For example, for the key ICT objective 'Operations supported and effective', the *Information and Technology Strategy 2017-2020* states:

Operations supported and effective - the focus is on continually improving the systems, devices and platforms that enable the optimisation of our operations across the organisation by:

- Providing the mobility that is needed to meet the business requirements both in the office and outdoor environments;
- Ensuring solid, reliable infrastructure that will hold us in good stead for the future;
- Providing easy to use technology and software that adds value to the processes;
- Monitoring system performance and invest in systems that provide agility, collaboration, transparency and customer empathy; and
- Establishing a plan to upgrade, replace or decommission systems that no longer perform and provide the value for money and required service outcomes.

2.39 While this provides some insight into the directorate's future ICT capabilities, this is only in a generic way. For example 'Providing easy to use technology and software that adds value to the processes' does not provide information on the nature of the technology or software that might be needed.

Justice and Community Safety Directorate

2.40 Under the heading of 'JACS ICT capability needs' the Justice and Community Safety Directorate *ICT Strategy 2017–2019* acknowledges that 'to support JACS' role and functions, strategic priorities, and measure our success, we will need to ensure JACS business capabilities are strong, relevant and agile'. It notes that 'service delivery expectations have evolved rapidly' and that 'the ACT Government is committed to delivering innovative services and community access to data'. The document then briefly describes, in a high-level, conceptual way, what this means for the directorate's people, processes, information and technology.

2.41 Under the heading of 'JACS ICT capability' the Justice and Community Safety Directorate *ICT Strategy 2017 – 2019* acknowledges that the future delivery of ICT to the directorate will be through:

- JACS ICT programs and project delivery;
- Shared Services ICT; and
- 'Outsourcing arrangements for supply and support of our business specific solutions'.

2.42 The *ICT Strategy 2017 – 2019* also states that:

There is still a need to grow our organisation's strategic ICT capability to deliver on key priorities through greater innovation and digital service improvements. Without growing these capabilities our ability to meet commitments and deliver improved business outcomes will be limited, opportunities will be lost and costs and risks will increase. The following capabilities are imperative to JACS success:

- planning, business case development, benefits realisation and change management;
- service design, business architecture and data analysis;
- portfolio, program and project management; and
- procurement based on contemporary services and technology solutions.

2.43 There is no further detail on what this practically means for the directorate's future ICT needs, including the nature of the technology or software that might be needed.

Other directorates

2.44 The ICT strategic planning documents of the other directorates included varying levels of detail when describing the ICT capabilities required for the future. Implicit within the Chief Minister, Treasury and Economic Development Directorate's *Digital Strategy 2015 – 2020* is a number of required capabilities such as digital workflow and work management; digital infrastructure; modernised information systems; integrated data stores and business systems; and desk-based teleconferencing. However, these are identified only with a high-level description, with little further information on the technology or software to support these capabilities. The Chief Minister, Treasury and Economic Development Directorate has also, since the development of the initial *Digital Strategy 2015 – 2020*, sought to better understand what 'digital and ICT capabilities are required, with extensive consultation across the Directorate'. As a result of that project the directorate has identified four capabilities: Digital Workplace, Business Systems, Data Ops, Science & Analytics and Innovation & Change. Six service lines have been proposed for each of these capabilities.

2.45 The Health Directorate's draft *Digital Health Strategy 2018-2028* identifies 18 different categories of ICT capability needed in the future. These are mapped to a series of Digital Future-Ready Technology domains, which are linked to the Digital Health Vision for the directorate, as well as Digital Health Strategic Themes (single trusted record for every person, seamless experience and effective access, research discovery and collaboration and continuity of care across various clinical settings). This is a reasonably comprehensive

approach to identifying future business capability needs and identifying how they support higher-level ICT strategic objectives and priorities.

- 2.46 The Community Services Directorate's *ICT & Digital Strategy 17-18* does not explicitly document the required capabilities, but it does document 'Objectives/shifts' and 'measures of success', some of which describe generic capabilities. For example, the following is documented as a 'measure of success', but may also be interpreted as describing a future capability:

Customer-centric services that are well supported by mobile, digitally skilled staff.

- 2.47 However, the majority of the 'Objectives/shifts' and 'measures of success' do not describe a capability, including for example:

Professional Development of directorate staff to utilise new technologies occurs earlier in projects.

Staff satisfaction surveys reflect increasing appreciation for ICT allocated and capabilities attained.

- 2.48 In response to the draft proposed report, the Community Services Directorate advised that the *ICT & Digital Strategy 17-18* 'was developed as short term, identifying gaps and pathways, and to inform future integrated strategic planning'. The Community Services Directorate also advised that 'integrated strategic planning has now been developed, ensuring that the [*ICT & Digital Strategy 17-18*] (now known as the Digital & Data Plan) are inherently linked with capability requirements (Workforce Plan), financial appropriation (Finance Plan) and within a risk profile recognizing the pace of change required (Risk Plan)'.

- 2.49 The Environment, Planning and Sustainable Development Directorate's *ICT Strategic Plan 2018-2021* implicitly identifies various capabilities that will be required in the future, identifying these as 'areas of focus'. While these may be interpreted as providing some detail on required future capabilities, for the most part they are not specific ICT capabilities. For example, to improve the customer services experience, the strategy states that, for example, it will:

- move away from paper records by digitalising information and creating knowledge centric work practices

- introduce workflows, end to end processes and digital signatures

...

- 2.50 Statements like this may be interpreted as providing some information on required future capabilities, but they are not specific ICT capabilities and nor is there further information on the nature of the technology or software that might be needed.

- 2.51 Notwithstanding the lack of a current ICT strategic plan, the Education Directorate advised that 'future state capabilities are documented as part of the project proposal and discovery process' and that the directorate 'has established service design principles of "simple, fast, reliable, intuitive, elegant, safe and secure" which all future state capabilities must align to'.

- 2.52 An effective ICT strategic plan should identify the ICT capabilities required to meet the organisation's foreseeable business needs over the life of the plan. This demonstrates that the plan is relevant to the organisation's requirements and facilitates prioritisation of spending and effort, including re-prioritisation when business needs change. A review of directorates' ICT strategic planning documentation shows that this was not done effectively. While future ICT capabilities could be interpreted from various aspects of directorates' ICT strategic planning documents, this was usually done in a generic way. There was little further information on what this practically meant for the directorate's future ICT requirements, including the technology or software that might be needed.

Description of the current ICT capabilities

- 2.53 It is not possible to optimise investment and effort unless planning proceeds from a thorough understanding, and documentation, of the organisation's current ICT environment. The results of the current state analysis should feed in to a gap analysis, identify 'pain points' and establish a baseline against which progress can be measured and reported.
- 2.54 In reviewing the directorates' ICT strategic plans or other strategic planning-related supporting documents, the Audit Office sought to understand whether:
- the directorate's current ICT capabilities had been adequately described; and
 - the description of the directorate's current ICT capabilities identifies key areas of risk and exposure.

Transport Canberra and City Services Directorate

- 2.55 The Transport Canberra and City Services Directorate's *Information and Technology Strategy 2017-20* does not fulsomely describe the Directorate's current ICT capabilities or its current state. A brief acknowledgement of 'current state' is found under the heading 'Transition from legacy systems' which notes that:

The IT environment in TCCS is a mix of old and new technologies, fragmented and inconsistent systems. The directorate recognises the need to transition away from legacy systems to next generation IT and to collaborate on investment decisions which consider the directorate's needs and advance the whole of government approach to IT. The management of legacy issues relating to service continuity and security is a significant ongoing challenge which impacts on an agency's ability to transition to working digitally.

- 2.56 Under the heading of 'where are we today?' the *Information and Technology Strategy 2017-20* states:

Our IT infrastructure is ageing and parts of the system require updating or replacement over the next two years. This includes products that are provided to us by other areas such as Access Canberra and SS ICT, which will need to be considered as part of the overall support plan for TCCS. The IT Operational Plan will provide more details on how this will be achieved, however, the principle of annual reviews, looking at two years ahead, is part of this higher-level strategy.

2.57 The *Information and Technology Strategy 2017-20* also notes the role of the whole-of-government Application Portfolio Management tool in identifying the 'current state' of the directorate's ICT capabilities, noting that it 'allows the capture of information and classification of all TCCS applications, software and systems (not just those managed by [Shared Services] ICT, but self-managed and vendor managed)'. The Application Portfolio Management tool is discussed in further detail in paragraphs 3.44 to 3.53.

Justice and Community Safety Directorate

2.58 The Justice and Community Safety Directorate's *ICT Strategy 2017 – 2019* does not describe the Directorate's current ICT capabilities or the current state other than stating that the Directorate has:

... undertaken several large ICT modernisation programs which have increased the maturity and capability of our ICT.

2.59 In March 2019 a *Business System Mud Map* was developed and presented to the Justice and Community Safety Directorate's Audit and Performance Improvement Committee. As part of the exercise each of the directorate's business systems was assessed and rated with reference to the following elements:

- Legacy / Strategic technology, including considerations of whether the business system is fit for purpose and what plans are in place for upgrades; and
- System risk, including the nature of the business system (i.e. bespoke or off-the-shelf) and the critical rating of the business system in terms of failure.

2.60 The relative risks of the directorate's business systems, and exposure to the directorate, was also presented, along with commentary on the actions to be undertaken with respect to systems that were identified as Legacy in nature and High risk in terms of failure. The paper noted other work that was underway to understand the directorate's specific risk exposure with respect to some of the systems.

Other directorates

2.61 The Chief Minister, Treasury and Economic Development Directorate's *Digital Strategy 2015-2020* describes the current state of the directorate's ICT operations for each of the nine 'Digital Focus Areas for 2015 to 2020', under a heading of 'Where We Are Now' for each of the focus areas. For example, under the focus area 'modernise information systems to improve supportability' the current state is described as follows:

- In some cases there has been little investment in business systems for 10 or 15 years, resulting in the need for a costly and disruptive project when the system is replaced.
- Costly systems replacement projects are required to bring systems into line with vendor support arrangements.
- The risks associated with aging systems are not always clearly visible or fully understood by system owners.
- Ageing systems often result in productivity of directorate staff not being optimised.

- 2.62 The Community Services Directorate's *ICT & Digital Strategy 17-18* takes a similar approach, describing the current state of the directorate's ICT operations for each of the six categories of business processes, under the heading of 'Current State'. For example, under the 'Mobility, Anywhere Anytime Services' business process, the Current State is identified as:
- Like much of the ACTGov Workforce, work environments tend to be static and steeped in historical profiles.
- There exists a vast spectrum of manual and automated processes within CSD.
- Excluding Case Workers and Housing Managers, most of CSD works in a geographically static way.
- 2.63 The Community Services Directorate also advised that it was intended that the Application Portfolio Management tool was to assist in this process 'but there hasn't been time allocated to complete this'. The Application Portfolio Management tool is discussed in further detail in paragraphs 3.44 to 3.53.
- 2.64 The Environment, Planning and Sustainable Development Directorate's *ICT Strategic Plan 2018-2021* does not explicitly document the current ICT capabilities of the directorate, except in a general way:
- Our ICT infrastructure is ageing, with numerous elements of the software and hardware ecosystem, requiring updating or replacement over the next two to three years.
- ...
- The EPSDD ICT environment is a mix of old and new technologies, resulting in a fragmented and inconsistent operating environment. The directorate recognises the need to transition away from legacy systems to next generation ICT and to collaborate on investment decisions which consider the directorate's needs and advance the whole of government approach. The management of legacy issues relating to service continuity and security is a significant ongoing challenge which impacts on an agency's ability to transition working digitally.
- 2.65 The Health Directorate's draft *Digital Health Strategy 2018-2028* does not include a description of the current state.
- 2.66 A comprehensive analysis of the current state of an organisation's ICT capabilities is an important element in the ICT strategic planning process. A summary of the results should be included in ICT strategic planning documents as evidence that the analysis has been done, as justification for the proposed change program, and for the information of internal and external stakeholders. A review of directorates' ICT strategic planning documentation shows that this was not done effectively. While some directorates' ICT strategic planning documents acknowledge shortcomings in the current state of ICT in the directorate, particularly with reference to ageing or legacy systems, this is primarily in a high-level conceptual way. Most directorates' ICT strategic planning documents are focused on identifying and asserting strategies and actions to be implemented (in a high-level conceptual way), with little recognition of the current state of ICT in the directorate and how the current state will affect the delivery of ICT strategies, priorities and objectives identified in the document.

Description of ICT strategies to be implemented

- 2.67 A roadmap setting out the change initiatives required to move from the current state to the desired future state is an important element of any ICT strategic plan. An adequate roadmap in a strategic plan will identify, at a minimum, the work to be done and when it is expected to be completed.
- 2.68 In reviewing the directorates' ICT strategic plans or other strategic planning-related supporting documents, the Audit Office sought to understand whether:
- strategies for closing the gaps between the 'current state' and the required 'future state' had been identified;
 - any gaps between the 'current state' and 'future state' have been prioritised; and
 - a implementation plan or road map had been identified.

Transport Canberra and City Services Directorate

- 2.69 The Transport Canberra and City Services Directorate's *Information and Technology Strategy 2017-2020* identifies seven 'next steps' for 2017-18:
- Review and development of systems to support the activity based working environment, ensuring readiness for moving to the new Dickson building in 2019;
 - Better management of IT procurement across the directorate;
 - Delivery of the IT projects linked in section 10;
 - Delivery of mobility solutions for City Services;
 - Definition of requirements for City Services technology solution that will enable automated work order assignment and tracking;
 - Identification and implementation plans for the transfer of systems from Data Centre to Cloud; and
 - Build an IT roadmap, utilising the data from APM, that will map out the directorate's needs (new/improved IT), priorities (city/business critical, unsupported, consolidation, requiring replacement/upgrade, superfluous) and anticipated expense necessary (possible budget bids) for TCCS to be a technologically advanced, mobile agency that can deliver excellent customer services.
- 2.70 There is no further information or detail on these 'next steps' in the document. It is noted, however, that the document includes a link to another document on the directorate's intranet that provides 'a list of the projects that are already being delivered against this strategy'. It is also noted that the last 'next step' identified envisages the development of what appears to be a comprehensive ICT roadmap, including identified priorities, which is informed by an analysis of the 'current state' through the Application Portfolio Management tool.

- 2.71 A comprehensive ICT roadmap has been prepared by the Transport Canberra and City Services Directorate, in the form of an Excel spreadsheet. It identifies:
- the ICT systems currently in use across the directorate;
 - how the system is hosted (i.e. either in-house or through a vendor);
 - a description of the action planned for the system (i.e. whether it is to be reviewed);
 - a technical risk rating of the system;
 - an assessment of whether to 'invest, migrate, tolerate or eliminate' the system; and
 - dates for the review points or actions over a three-year period (2018-19 to 2020-21).
- 2.72 The ICT roadmap is useful in identifying planned activities for the directorate's current ICT systems. However, there is no clear link or articulation of how these activities are expected to address identified gaps between the current and future states of ICT in the directorate.
- 2.73 An *Information and Technology Operational Plan 2017-20* has also been developed, which 'represents the short term (3-12 months) plan to achieve strategic priorities identified in the [*Information and Technology Strategy 2017-20*]''. The *Information and Technology Operational Plan 2017-20* identifies six key focus areas, as follows:
- KFA 1 – Improve administrative and operational support systems
 - KFA 2 – Improve data, security and privacy assessments processes
 - KFA 3 – Project delivery – IT/Digital projects
 - KFA 4 – Mobility improvement
 - KFA 5 – Support digital and enable innovation
 - KFA 6 – Technology refresh and replacement
- 2.74 For each key focus area there is:
- a brief description;
 - a series of goals associated with the key focus area;
 - a series of activities to be undertaken in 2017-18, as well as a series of actions to be undertaken in 2018 and beyond.
- 2.75 The *Information Technology Operational Plan 2017-2020* key focus areas, goals and activities are useful in identifying where and how the ICT activities of the directorate are going to be focused in the short term. However, they represent actions to be undertaken to implement the *Information and Technology Strategy 2017-2020* rather than identified gaps between the current and future states.

2.76 In its response to the draft proposed report the Transport Canberra and City Services Directorate advised:

[The Transport Canberra and City Services Directorate] has identified drivers that relate to actions in the [*Information and Technology Strategy 2017-2020*]. The actions when addressed will reduce the gap between what we have now and where we want to be in the future, which is also detailed in the Strategy. [The Transport Canberra and City Services Directorate] has a clear connection between our strategy and investment path with identification of how systems will be maintained, retired and replaced. This has been evident in our bid for a platform-based system that will see the reduction in standalone systems and provide a more capable system and development program for the future requirements.

Justice and Community Safety Directorate

2.77 The *ICT Strategy 2017 – 2019* included information on its ‘program and projects 2017-2019’, noting that ‘all JACS ICT related programs and projects planned for FY 2017-19 are identified in the attached schedule’. The schedule identified 28 ICT-related projects that were planned for the directorate, with a brief description of the project objectives, project budget and timeframes (start and end dates). The schedule also includes:

- a description of the project stage (i.e. whether it is at Feasibility, Planning, Design, Procurement, Delivery or Implementation); and
- a ranking of the project ‘based on the size, resources, experience and budget’, ranging from Tier 1 (large, complex or high risk initiatives) to Tier 3 (small engagements).

2.78 The schedule formed the basis of the subsequent *JACS ICT Portfolio Dashboard*, which is regularly reported to the JACS Information Management and Information Communication and Technology Committee (IMICT). The *JACS ICT Portfolio Dashboard* includes additional information on the projects, including an assessment of the project’s status.

2.79 The Justice and Community Safety Directorate also developed an *ICT Strategy – Implementation Roadmap* in order to support its *ICT Strategy 2017 – 2019*. The *ICT Strategy – Implementation Roadmap* describes activities to be undertaken on a quarterly basis (over the life of the plan) against four categories:

- ICT Strategy and Planning;
- Programs and Projects;
- Application Portfolio Management; and
- ICT Operational Assurance.

2.80 Progress on the activities is reported to the JACS Information Management and Information Communication and Technology Committee (IMICT) according to whether the activity is commenced, completed or overdue.

2.81 The *JACS ICT Portfolio Dashboard* and *ICT Strategy – Implementation Roadmap* are useful in identifying planned activities for the directorate’s current ICT systems. However, there is no clear link or articulation of how these activities and projects are expected to address identified gaps between the current and future states of ICT in the directorate.

Other directorates

- 2.82 The Environment, Planning and Sustainable Development Directorate's *ICT Strategic Plan 2018–2021* includes a *2018-2021 Action Plan* as an appendix. It lists 62 projects, including a very brief description of the project, the responsible manager and the 'current status' of the project. No timeframes are provided for these projects, nor is there any further information on how they support the *ICT Strategic Plan 2018–2021* and its strategies and objectives. It is not an adequate description of how, and by when, gaps between current and required ICT capabilities will be closed.
- 2.83 The Education Directorate advised that 'future state capabilities are documented as part of the project proposal and discovery process' and that the directorate 'has established service design principles of "simple, fast, reliable, intuitive, elegant, safe and secure" which all future state capabilities must align to'. The Education Directorate advised that the previous *ICT Strategic Plan 2014-2017* included a gap analysis of current to future state capability and that work is being undertaken to develop a plan to support the Education Directorate's *Strategic Plan 2018-21*.
- 2.84 The Chief Minister, Treasury and Economic Development Directorate's *Digital Strategy 2015-2020* includes a series of ICT strategies, with information on 'Where We Are Now', 'How We Will Achieve Our Vision?' and 'Our Vision for 2020'. At a very high level the 'How We Will Achieve Our Vision?' component identifies the strategies to be implemented, and the 'Our Vision for 2020' describes the desired future capabilities. For example, under the first community-focused strategy of 'move from paper to digital', the *Digital Strategy 2015-2020* describes the 'How We Will Achieve Our Vision?' as:
- We will create a catalogue of our paper-based services.
 - We will establish targets for converting paper-based services to digital.
 - We will invest in digitisation of services that currently require clients to use paper.
 - The iConnect Program will deliver cost-effective platforms to build and integrate digital services so that new services are "digital by default".
- 2.85 For the first community-focused strategy of 'move from paper to digital', the *Digital Strategy 2015 – 2020* describes 'Our Vision for 2020' as:
- Digital services will be "delivered to citizens as they live, work, learn and play" (Digital Canberra Action Plan).
 - Digital services for business will be "simpler, cheaper and faster" (iConnect vision statement).
 - Clients will be able to interact with the directorate through their preferred channel, including digital channels.
- 2.86 An effective ICT strategic plan should include details of the projects and other initiatives that will be used to implement the desired changes that the plan describes. An ICT roadmap setting out the change initiatives required to move from the current state to the desired future state is an important element of any ICT strategic plan. An ICT roadmap in a strategic plan should identify, at a minimum, the work to be done and when it is expected to be

completed. A review of directorates' ICT strategic planning documentation shows that the documents inconsistently identified actions to be undertaken to address current and expected future gaps in ICT capabilities. While the directorates' ICT strategic planning documents generally identified actions to be undertaken, many of these were described generically, with no further information on how they contributed to closing the gaps in capabilities. Some ICT strategic planning documents identified projects currently underway in the directorate in relation to specific ICT systems or activities, but there was little further information on timeframes and deliverables. Both the Transport Canberra and City Services Directorate and Justice and Community Safety Directorate developed ICT roadmaps, which are effective in identifying and reporting on planned activities for the directorates' current ICT systems, but there is no clear link or articulation of how these activities and projects are expected to address identified gaps between the current and future states of ICT in the directorate.

Description of governance arrangements

- 2.87 A good ICT strategic plan should outline the governance arrangements in place to oversee its implementation. This provides essential information for internal and external stakeholders, and mitigates the risks of duplication or gaps in delivery.
- 2.88 In reviewing the directorates' ICT strategic plans or other strategic planning-related supporting documents, the Audit Office sought to understand whether the governance arrangements for the delivery of ICT had been adequately described, including:
- roles and responsibilities for ICT service delivery; and
 - decision-making responsibilities and accountabilities.
- 2.89 A key consideration was the extent to which the role, responsibilities and accountabilities of the directorate and Shared Services ICT had been acknowledged and documented in the ICT strategic plans or other strategic planning-related supporting documents.

Transport Canberra and City Services Directorate

- 2.90 The Transport Canberra and City Service Directorate's *Information and Technology Strategy 2017-2020* notes the establishment of:
- ... the TCCS IT and Information Leadership Group (ITILG) which will oversee the Directorate's information technology and information management practices to ensure the strategic direction and operational priorities are achieved and investment planning is undertaken at a strategic level.

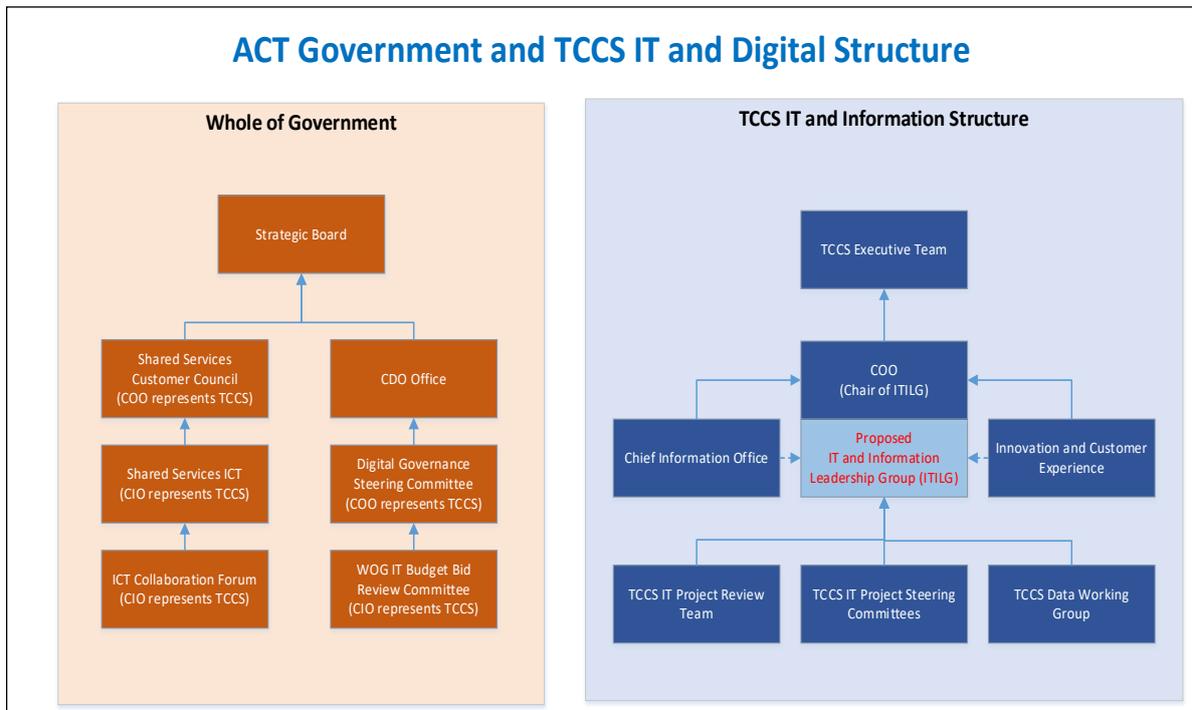
2.91 The Transport Canberra and City Service Directorate’s *Information and Technology Strategy 2017-2020* discusses the role of the TCCS IT and Information Leadership Group (ITILG) as follows:

The ITILG is responsible for driving the development and implementation of the IT Strategy, Digital Strategy and Data Strategy on behalf of the TCCS Executive Team. It is comprised of members from Chief Information Office, Customer Experience, Innovation and Technology, Finance, Transport Canberra and City Services and will be chaired by the Chief Operating Officer. The roles and responsibilities of this group are detailed in the TCCS ITILG Charter and approved by the Executive Team.

2.92 It is noted that, while the TCCS IT and Information Leadership Group (ITILG) is expected to have a role with respect to a Digital Strategy and Data Strategy for the directorate, neither of these documents have been produced. The Transport Canberra and City Services Directorate advised that a decision was made not to produce these documents as the *Information and Technology Strategy 2017-2020* satisfied the Directorate’s needs.

2.93 The Transport Canberra and City Service Directorate’s *Information and Technology Strategy 2017-2020* provides a brief overview of the governance arrangements for the delivery of ICT, including a figure which shows both the Directorate’s arrangements and the whole of government arrangements (refer to Figure 2-1)

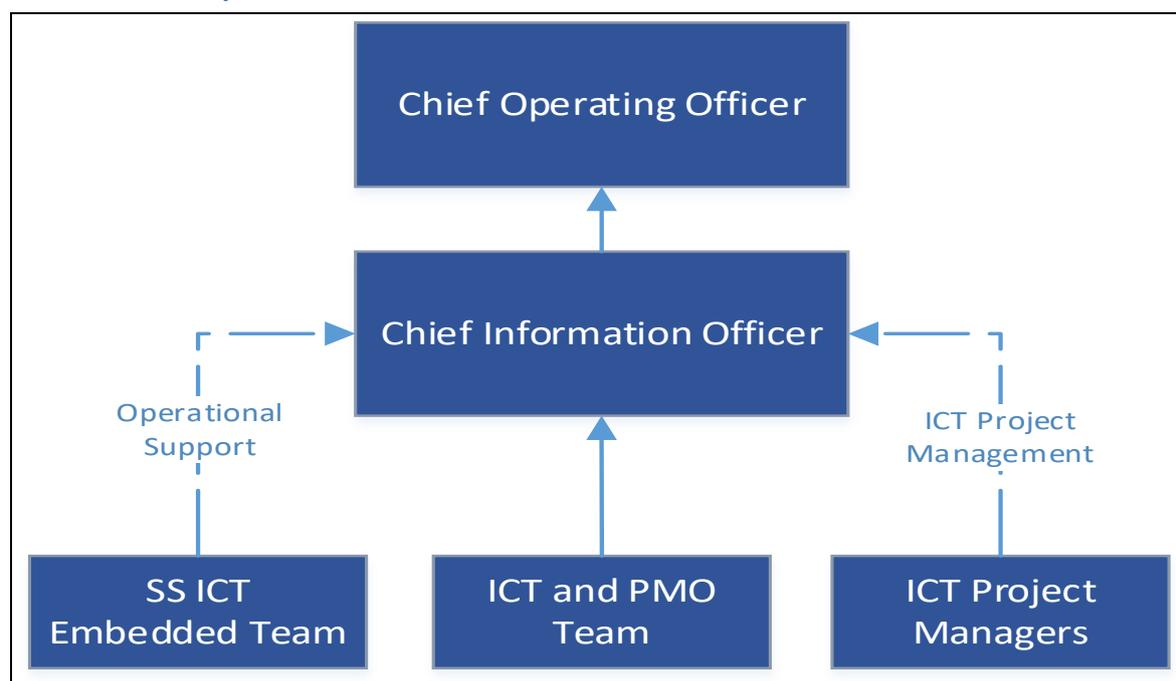
Figure 2-1 Transport Canberra and City Services Directorate ICT governance arrangements



Source: *Information and Technology Strategy 2017-2020*, Transport Canberra and City Services

2.94 The Transport Canberra and City Service Directorate’s *Information and Technology Strategy 2017-2020* also describes the role and responsibilities of the Chief Information Officer and includes a diagram showing the reporting lines and roles of the various managers and teams reporting to the Chief Information Officer (refer to Figure 2-2).

Figure 2-2 Transport Canberra and City Services Directorate ICT reporting responsibilities



Source: *Information and Technology Strategy 2017-2020*, Transport Canberra and City Services Directorate

2.95 The Shared Services ICT Embedded Team is noted as providing ‘Operational Support’ to the Chief Information Officer, with the intention for it to work with the Chief Information Officer’s team as one team delivering the *Information and Technology Strategy 2017-2020*. There is no further detail provided in the *Information and Technology Strategy 2017-2020* as to the broader roles and responsibilities of Shared Services ICT and how it contributes to the directorate’s ICT strategic priorities and objectives.

Justice and Community Safety Directorate

2.96 The Justice and Community Safety Directorate’s *ICT Strategy 2017 – 2019* describes both the:

- whole-of-government ICT governance arrangements; and
- directorate-specific ICT governance arrangements.

2.97 With respect to the whole-of-government ICT governance arrangements, the *ICT Strategy 2017 – 2019* notes the roles of:

- the Strategic Board;
- the Digital Service Governance Committee; and
- the Shared Services Customer Council, including the relevant ICT Collaboration Forum.

2.98 The Directorate's ICT governance arrangements are also briefly described, including an acknowledgement of the JACS Information Management and Information Communication and Technology Committee (IMICT), including that it 'operates within the Whole of Government and JACS Governance Frameworks' and that it 'reports to the JACS Strategic Management Committee'. The Justice and Community Safety Directorate's *ICT Strategy 2017 – 2019* notes:

The [Justice and Community Safety Directorate] Strategic Management Committee is the executive decision making body and sets the strategic direction of JACS, including addressing our strategic risks. The JACS IMICT Governance Committee supports SMC to ensure JACS ICT priorities and strategies are being implemented.

2.99 The Justice and Community Safety Directorate's *ICT Strategy 2017 – 2019* does not provide any further information on the Directorate's ICT decision-making responsibilities and accountabilities, nor is there any information with respect to the role and responsibilities of Shared Services ICT and how it contributes to the directorate's ICT strategic priorities and objectives.

Other directorates

2.100 The Environment, Planning and Sustainable Development Directorate's *ICT Strategic Plan 2018–2021* and the Health Directorate's draft *Digital Health Strategy 2018-2028* describes the governance arrangements overseeing implementation of the plans and associated projects.

2.101 The Chief Minister, Treasury and Economic Development Directorate's *Digital Strategy 2015- 2020* states that it will 'apply appropriate governance, reporting and assurance to digital transformation initiatives' and that 'investment in business systems will be supported by governance structures at the directorate level', but provides no further detail. The Community Services Directorate's *ICT and Digital Strategy 17-18* includes a column headed 'People/Responsibility' which assigns several responsibilities, but does not do so consistently. It does not describe the governance arrangements that will apply to the plan and its implementation.

2.102 An effective ICT strategic plan should outline the governance arrangements in place to oversee its implementation, including roles and responsibilities for implementation. This provides important information for internal and external stakeholders, and mitigates the risks of duplication or gaps in delivery. Most directorates' ICT strategic planning documents effectively documented governance arrangements for the delivery of ICT, although there was little information in the documents with respect to Shared Services ICT and its role in the implementation of directorates' ICT strategic plans.

Description of how progress will be measured

2.103 ICT strategic plans should identify metrics, key performance indicators and baseline data, so that progress on the implementation of ICT strategies can be measured and reported. Robust metrics can be used to justify business cases for individual projects that contribute

to realising the strategy, assist in managing a portfolio of projects directed toward the same outcome, and facilitate project prioritisation and re-prioritisation. They are an essential input to the process of identifying, managing and realising the benefits of the change process.

2.104 In reviewing the directorates' ICT strategic plans or other strategic planning-related supporting documents, the Audit Office sought to understand whether:

- an implementation plan or roadmap had been developed, with information on the delivery of actions identified and documented and capable of being reported against; and
- key performance measures had been identified and documented to facilitate the assessment of whether ICT strategic objectives or priorities had been met.

Transport Canberra and City Services Directorate

2.105 As discussed in paragraph 2.71, an ICT roadmap has been prepared by the Transport Canberra and City Services Directorate. It includes *inter alia* dates for the review points or actions over a three-year period (2018-19 to 2020-21). This provides a basis on which progress in undertaking aspects of the review of ICT systems in use across the directorate can be ascertained. As noted, however, it does not provide a basis on which the directorate's efforts in closing the gap between the 'current state' of its ICT and the required future state can be reviewed and ascertained.

2.106 The Transport Canberra and City Services Directorate's *Information and Technology Strategy 2017-2020* does not include any further information, including performance measures, to facilitate an assessment of progress in implementing the ICT strategy. Similarly, while the Directorate's *Information Technology Operational Plan 2017-2020* includes specific, outcome-related goals, there are no target dates for implementation, metrics or key performance measures by which to measure progress on its implementation. However, the Transport Canberra and City Services Directorate advised that actions attributable to the Chief Information Officer are given visibility by reporting through the directorate's Governance area as part of broader directorate reporting.

Justice and Community Safety Directorate

2.107 As noted in paragraph 2.77, the Justice and Community Safety Directorate has developed a *JACS ICT Portfolio Dashboard* and *ICT Strategy – Implementation Roadmap*. These provide information on activities and associated projects to be undertaken in support of the *ICT Strategy 2017 – 2019* and provide a basis on which progress on the implementation of ICT strategies can be measured and reported. As noted, however, they do not provide a basis on which the directorate's efforts in closing the gap between the 'current state' of its ICT and the required future state can be reviewed and ascertained.

- 2.108 The Justice and Community Safety Directorate's *ICT Strategy 2017 – 2019* does not include any further information, including performance measures, to facilitate an assessment of progress in implementing the ICT strategy.

Other directorates

- 2.109 The ICT strategic planning documents of the other directorates do not include details of an implementation plan or road map which sets out detailed actions to be taken, due dates or responsibilities.

- 2.110 While the Environment, Planning and Sustainable Development Directorate's *ICT Strategic Plan 2018–2021* includes a *2018-2021 Action Plan* as an appendix, which lists 62 projects, no timeframes or milestones are provided for these projects. This does not serve as a useful mechanism by which to measure progress in implementing the ICT strategic objectives and priorities.

- 2.111 The ICT strategic planning documents of the other directorates do not include details of key performance measures that could be used to assess if ICT strategic objectives/priorities have been met.

- 2.112 The Community Services Directorate's *ICT and Digital Strategy 17-18* includes a heading of 'Measure of Success' for each of the six categories of business processes identified in the document. However, this is presented as narrative statements, with no metrics, key performance indicators or baseline data. For example, the 'Measure of Success' for the 'Mobility, Anywhere Anytime Services' business process, is described as:

That mobility will be an available way of working well in advance of 2019.

Staff satisfaction and other indicators improve.

Only staff who are unable to do, do not participate.

Staff are able to BYOD as a choice.

Virtual working gains prevalence.

Staff are able to maintain confidentiality levels to those of the current state.

Attraction of quality staff to vacant positions.

Greater variance in employment models.

Reduced Cost.

- 2.113 The Chief Minister, Treasury and Economic Development Directorate advised that key performance indicators have not been developed or tied to the *Digital Strategy 2015-2020*, but the Directorate has since developed 'six themes for assessing portfolio value'. These themes outline values articulated by directorate executives and are proposed as the basis for future service level agreements for the delivery of ICT:

- Financial – 'help me save or make money';
- Better Services – 'help me make the lives of our customers better';
- Engaged Staff – 'Our staff are passionate and want to come to work';

- Flexibility – ‘Help me meet my customer’s needs quicker and more effectively’;
- Governance & Risk Management – ‘helping me comply with regulations, follow best practice and balancing cost and benefit’; and
- Customer Satisfaction – ‘products and services delivered to our customers are meeting or surpassing their expectations’.

2.114 An effective ICT strategic plan should identify metrics, key performance indicators and baseline data, so that progress on the implementation of ICT strategies can be measured and reported. ICT roadmaps were prepared by the Transport Canberra and City Services Directorate and Justice and Community Safety Directorate, which provide a basis on which progress on the implementation of ICT strategies can be measured and reported. There was no further information in the ICT strategic planning documents of the other directorates, including details of an implementation plan or road map which sets out detailed actions to be taken, due dates or responsibilities. The ICT strategic planning documents of the directorates did not include information on metrics, key performance indicators and baseline data, by which to measure progress on the ICT strategy.

RECOMMENDATION 1 ICT STRATEGIC PLANNING FRAMEWORK

The Chief Minister, Treasury and Economic Development Directorate should develop and implement an ICT strategic planning framework for ACT Government, its directorates and agencies. The ICT strategic planning framework should promote consistency and coordination of ICT strategic planning activities by identifying:

- a) roles, responsibilities and timeframes for ICT strategic planning; and
- b) minimum requirements for ICT strategic planning outputs and deliverables, including:
 - i) the strategic priorities and objectives of the directorate (including any whole-of-government priorities and objectives) and how the strategies in the ICT strategic plan contribute to these;
 - ii) the ‘current state’ of ICT in the directorate;
 - iii) future capabilities and requirements for ICT in the directorate; and
 - iv) a detailed program of work, or technology roadmap, to ‘close the gap’ between the ‘current state’ and future capabilities and requirements.

3 WHOLE-OF-GOVERNMENT ICT STRATEGIC PLANNING

- 3.1 This chapter discusses initiatives to establish a whole-of-government strategic direction for ICT, as well as activities to promote cross-agency communication and coordination. This includes consideration of the *ACT Government Digital Strategy 2016-19* and the Digital Service Governance Committee. The chapter also discusses the role of Shared Services in whole-of-government ICT strategic planning.

Summary

Conclusions

ACT Government initiatives to improve whole-of-government ICT strategic planning have not been effective.

A key whole-of-government ICT strategic planning document is the *ACT Government Digital Strategy 2016-2019* (the Digital Strategy). It provides a high-level vision statement for ICT for the ACT Government and seeks to bring cohesion to ACT Government directorates' ICT strategic planning 'through a common purpose, language and perspective'. However, there is little further information on the practical implications of the ACT Government's vision for ICT, as identified in the Digital Strategy, and how this should be used to inform, or be translated into, directorate-specific ICT strategic planning processes and documents. A series of initiatives flagged in the Digital Strategy to promote whole-of-government ICT strategic planning, and which may have provided further information on the practical implications of the ACT Government's vision for ICT, have not been effective, including cross-directorate Digital Strategy Workshops and the completion of self-assessment scorecards by directorates against the strategic principles identified in the Digital Strategy. An Application Portfolio Management tool, an initiative that sought to comprehensively identify and document the 'current state' of ICT across directorates and inform future whole-of-government planning and procurement decisions was poorly implemented.

The establishment of a Digital Service Governance Committee in April 2016 sought to improve whole-of-government ICT strategic planning communication and coordination; it meets regularly and provides an effective forum for discussing key ICT strategic planning issues across the directorates. It is also effectively supported by an ICT Briefs and Business Cases Sub-Committee, which reviews directorates' ICT concept and budget bids, and provides advice which informs the budget deliberation process. However, other sub-committees that were envisaged to support the Digital Service Governance Committee, and which could have better and more proactively informed whole-of-government ICT strategic planning have not been established, including a

Strategy and Roadmap Advisory sub-committee and Common Capability and Standards sub-committee.

Key findings

	Paragraph
<p>The <i>ACT Government Digital Strategy 2016-2019</i> (the Digital Strategy) was released in 2016, with the purpose of ‘clearly [expressing] the ACT Government’s intentions and [creating] the impetus and architecture for fully digitised services and technology platform renovation’. The Digital Strategy provides a high-level vision for ICT for the ACT Government. The Digital Strategy acknowledges that ‘it is not a detailed action plan—although many actions will be informed and guided by it. The scope is deliberately at a whole of government level to lay foundations and set direction rather than endeavouring to be a digital master plan’. The Digital Strategy also acknowledges that ‘it cannot answer all the questions – and in fact will add questions. But it will bring cohesion – through a common purpose, language and perspective’. The Digital Strategy, while useful in providing a vision statement for ICT for the ACT Government, does not serve the purpose of an ICT strategic plan. It does not include further or more detailed information on inter alia:</p> <ul style="list-style-type: none"> • how it links with, or supports, the ACT Government’s strategic priorities; • the ICT capabilities required to meet the ACT Government’s business needs; • the ‘current state’ of the ACT Government’s ICT capabilities; and • how, and by when, gaps between current and required ICT capabilities are to be closed. 	3.20
<p>The establishment of Shared Services ICT in 2007 was an attempt to achieve a more effective whole-of-government approach to the management and administration of ICT services across ACT Government agencies, particularly with respect to common or shared platforms and applications. An undated <i>ICT Roles and Responsibilities</i> document seeks to assign roles and responsibilities for the management and administration of ICT services between Shared Services ICT and the directorates. With respect to strategic planning activities for ICT, the <i>ICT Roles and Responsibilities</i> document clearly identifies a responsibility for directorates to ‘Develop an ICT strategic plan for the Directorate in line with any government-wide ICT strategies’, ‘Communicate (through various agreed mechanisms) about Directorate business needs and challenges, including future state needs’ and ‘Provide clear direction and priority setting around ICT work required’. The <i>ICT Roles and Responsibilities</i> document identifies that there is a shared role for Shared Services ICT and the directorates as follows: ‘In collaboration with SSICT, set priorities for functional requirements, system or infrastructure features and use cases’ and ‘In consultation with SSC, jointly identify, evaluate and procure new ICT equipment and infrastructure to support business operations’.</p>	3.26
<p>Shared Services ICT has developed a series of documents that demonstrate elements of an ICT strategic planning approach, specifically the <i>ICT Business Strategy 2017-19</i> (February 2017) and <i>Exemplary Services for Digital Citizens - Common ICT Capability</i></p>	3.42

Vision 2020+ (February 2018). These are high-level documents, which are general in nature and vague in their description of activities to be undertaken, including timeframes and deliverables. The documents do not describe the 'current state' of ICT capability within Shared Services ICT (or across ACT Government agencies where appropriate) or how, and by when, the gaps between the current and required ICT capabilities are to be closed, with any specificity. A Technology Roadmap, which was identified as a key foundational project to be undertaken, is still under development by Shared Services ICT approximately twelve months after it was flagged.

In June 2016, the ICT Collaboration Forum endorsed the use of an Application Portfolio Management (APM) tool developed by Shared Services ICT. The Application Portfolio Management (APM) tool sought to capture an overview of existing ICT systems across government, including systems owned and operated by Shared Services ICT and by directorates, and provide a roadmap for future investment. The concept of application portfolio management, and the use of a tool to assist, is appropriate. However, the Application Portfolio Management (APM) tool developed by Shared Services ICT lacked functionality. The tool has not been widely and consistently used or populated by the directorates and its information is incomplete and out-of-date. It has not been an effective mechanism to inform whole-of-government ICT strategic planning by providing a comprehensive overview of the current state of ICT across ACT Government directorates. 3.53

In April 2016 the Strategic Board agreed to, and endorsed, the *ACT Government – ICT Governance Framework*. An outcome expected from the establishment of the *ACT Government – ICT Governance Framework* was 'an opportunity to maximise the benefit realisation and return-on-investment for the Territory's annual ICT spend by implementing a more encompassing approach to the ICT portfolio governance'. The *ACT Government – ICT Governance Framework* notes and acknowledges the roles of different ACT Government entities associated with ICT strategic planning, including the Strategic Board, Office of the Chief Digital Officer, directorates and agencies and Shared Services ICT. The *ACT Government – ICT Governance Framework* seeks to identify and document a more collaborative and communicative approach to strategically manage ICT across ACT Government agencies. 3.57

The Digital Service Governance Committee was established by the Head of Service on 7 April 2016, in accordance with the *ACT Government – ICT Governance Framework*. The Committee 'seeks to strengthen the benefit realisation of WhoG ICT portfolio investment management across-government by taking a service-wide, citizen-centric approach and looking for ways to share information and resources' and 'aims to maximise the value-for-money and benefits realisation derived from the ACT Government ICT investment' by taking a strategic approach to seeking opportunities for whole-of-government initiatives and prioritising service integration, economies-of-scale and/or other improvements to effectiveness and efficiency. The Digital Service Governance Committee meets regularly and considers a wide variety of ICT-related issues relevant to whole-of-government strategic ICT planning. The committee represents an effective attempt at improving whole-of-government communication and coordination of strategic ICT planning, although it is noted that the attendance of alternative senior executives, in place of the intended Deputy Directors-General, may impede the authority and decision-making capability of the committee. 3.67

- An ICT Briefs and Business Cases Sub-Committee has been established to support the activities of the Digital Service Governance Committee. The sub-committee's role is to review and provide advice to the Digital Service Governance Committee on budget bids from across ACT Government which have a significant digital component. The sub-committee has been an active committee; meeting regularly, and as often as weekly, during critical budget review periods. The sub-committee assesses concept and budget bids using an assessment tool with comprehensive evaluation criteria, resulting in an assessment of a project as Category A (strongly supported), Category B (supported) or Category C (conditionally supported but not considered urgent). The establishment of the sub-committee is an effective attempt at improving whole-of-government communication and coordination of strategic ICT planning, by facilitating cross-agency consideration of new systems. 3.80
- A number of other sub-committees were also envisaged by the Digital Service Governance Committee, including a Strategy and Roadmap Advisory sub-committee and Common Capability and Standards sub-committee. These sub-committees were not established as expected. This is a missed opportunity to establish specific sub-committees that could have had a clear and explicit role in whole-of-government ICT strategic planning by understanding and promoting common capabilities across ACT Government directorates and developing strategies for enhanced ICT collaboration. 3.81
- A series of Digital Strategy Workshops were held with most ACT Government directorates (all but the Health Directorate) in late 2016 and early 2017, the purpose of which was to 'assist [the directorates] in interpreting the Strategy within their own context and to develop their own road maps for implementation'. As part of the Digital Strategy Workshops directorates completed self-assessment scorecards, which sought to 'track progress against the strategy principles over time'. There was no further information on the application or use of the scorecards, including: how frequently they should be reviewed and updated; or how progress on the scorecard and its use and implementation should be reviewed and monitored. No further Digital Strategy Workshops have been held since then for the purpose of revisiting or reviewing progress against the original self-assessment scorecards. 3.94
- The *ACT Government Digital Strategy 2016-2019* envisaged the preparation of a strategy implementation roadmap, which was intended to 'be constructed collegially and managed as a measure of our digital progress and enterprise cohesion'. There is no further guidance in the strategy as to the purpose and application of the strategy implementation roadmap, including who had responsibility and accountability for progressing the roadmap. A strategy implementation roadmap has not yet been produced. A Strategy and Roadmap Advisory sub-committee that was envisaged to be established to support the activities of the Digital Service Governance Committee has not been established. 3.98
- The *ACT Government Digital Strategy 2016-2019* envisaged that each directorate was expected to 'present and maintain a roadmap for their portfolio of systems and applications'. The directorates' roadmaps were expected to 'support investment decisions by providing a strategic context and ensuring there is not a build-up of technology debt and risk'. Roadmaps have not been presented to the Digital Service 3.101

Governance Committee for consideration and review on an ongoing basis by ACT Government directorates.

The *ACT Government Digital Strategy 2016-2019* identified an intention to establish a set of Common Capabilities for ICT across ACT Government directorates, which have since been defined as ‘any technology that has use across directorates or whole of government’ where there are potential advantages in collaborating to enable the sharing of ICT investment and pooled resources, the reduction of duplicated investments and rationalisation of procurement effort’. A Common Capabilities sub-committee that was envisaged to be established to support the activities of the Digital Service Governance Committee in implementing the principles of Common Capabilities was not established. Nevertheless, in June 2018 a Common Capabilities framework was endorsed by the Digital Service Governance Committee. Strategic Platforms, which are technologies already provided by Shared Services ICT to directorates as part of its core service delivery, would be recognised as the ‘first, core set of technologies governed under the proposed Common Capabilities framework’.

3.113

The Common Capabilities framework represents a concerted effort by multiple stakeholders to rationalise the whole-of-government ICT infrastructure. However, because neither the current ICT environment nor agencies’ business needs have been formally and consistently documented, the framework’s benefits will not be optimised unless it is situated within a comprehensive strategic planning process. The Digital Service Governance Committee also acknowledged, in June 2018, the work that needed to be done to populate the agreed Common Capabilities framework and ‘understand the resources required to implement the framework, and how those resources would be supported and allocated’.

3.114

In December 2018, the Strategic Board requested that Shared Services and the Office of the Chief Digital Officer gain an understanding of the ACT Government’s critical ICT systems. A risk-based assessment was conducted in January across ACT Government directorates, which focused on ICT systems that have been classified as ‘government critical’ (i.e. systems that have been assessed as ‘Requir[ing] continuous availability. Interruptions to the system or service are intolerable, immediately and significantly damaging’). Fifty government critical systems were identified; 17 for the Health Directorate and 33 for the other directorates. Twenty percent of systems were identified as not fit for purpose, with immediate investment required, while a further twenty percent were identified as fitting business needs, but with near term investment required.

3.124

The December 2018 request by the Strategic Board was the catalyst for intensive and focused action by ACT Government directorates in identifying and documenting the ‘current state’ of ACT Government ICT systems, albeit through a limited but risk-based focus on ‘government critical’ systems. The exercise was acknowledged as ‘the first step in a much larger body of work that will need to extend to Business Critical systems and beyond’. This demonstrates that existing ICT strategic planning processes, including whole-of-government ICT strategic planning initiatives, have not been effective to date.

3.125

Whole-of-government ICT strategic planning

Whole-of-government ICT strategic plans

3.2 Since 2011 the ACT Government has developed two documents that provide a framework for whole-of-government ICT strategic planning:

- *Strategic Plan for ICT 2011-15*; and
- *ACT Government Digital Strategy 2016-2019* (the Digital Strategy).

Strategic Plan for ICT 2011-15

3.3 The *Strategic Plan for ICT 2011-15* is described as a 'high-level strategic plan supported by other planning and policy documents'. The *Strategic Plan for ICT 2011-15* set:

... the ACT Government's direction to focus our ICT investment on five key objectives which aim to make the relationship between the Community and its Government easier and more collaborative, while managing our financial and energy resources even more closely.

3.4 The *Strategic Plan for ICT 2011-15* set five key objectives:

- 'make living in Canberra easier by developing, with the community, an integrated, comprehensive and affordable range of readily accessible services';
- 'improve return on investment on public expenditure on ICT through implementing and sharing higher quality, more resilient systems';
- 'use ICT to promote Open Government and online community engagements';
- 'contribute to the achievement of its environmental targets by improving the energy efficiency of its ICT infrastructure and promoting the use of ICT to assist other sustainability initiatives'; and
- 'develop its workforce and partnerships to provide the future capacity and skills to implement its ICT programs and strategies'.

3.5 The *Strategic Plan for ICT 2011-15* also established a series of governing principles, as follows:

ACT Government ICT:

- investment should support Government policy and service delivery priorities.
- should be of a professional quality, lifecycle managed and supportable.
- investment should create improved performance, greater efficiency and/ or better community services.
- should be shared wherever possible across Government.
- should be acquired on a basis of value for money and total cost of ownership and be accessible to the ACT Government as a whole.
- should be supported by a level of targeted Research and Development investment to help Directorates realise the potential benefits of ICT.

- enabled business projects will be project managed, steered and governed by ICT trained and experienced staff.
- principles should be communicated and followed at all levels in a directorate.
- investment must have measurable outcomes.

3.6 The *Strategic Plan for ICT 2011-15* did not provide any further detail or information on:

- how it linked with, or supported, the ACT Government's strategic priorities;
- the ICT capabilities required to meet the ACT Government's business needs;
- the 'current state' of the ACT Government's ICT capabilities;
- how, and by when, gaps between the current and required ICT capabilities were to be closed;
- how decisions associated with ICT were to be made, except in a very general way through the governing principles for ACT Government ICT outlined in paragraph 3.5; and
- how progress in implementing the strategy was to be measured.

3.7 The *Strategic Plan for ICT 2011-15* stated that 'each directorate is responsible for the creation of a business-focussed plan detailing programs and projects to support its particular business plans'.

ACT Government Digital Strategy 2016-19

ICT and 'digital'

3.8 The term 'digital' has traditionally been applied to computers, which operate using 1s and 0s, as opposed to, for example, slide rules or analogue clocks, which use moving parts to represent numbers. In recent years, however, the word has become widely used as a shorthand for digital transformation - the application of technology to a widening range of business and administrative tasks.

3.9 The *ACT Government Digital Strategy 2016-2019* states that:

'Digital' is a term that has captured people's imagination on a global scale. It simply resonates with an intuitive understanding that something has changed. This popularisation of digital in our language has also created a diversity of meaning ... Digital describes a new way of doing things. Deliberately challenging and disruptive of conventional practice, it is the use of technology to effect radical change. It is about innovation, creating value, 'in real time', removing unnecessary costs and activities. It places high value on the creation and use of data. But more than anything—and more than ever before, it places the customer at the centre of its vision.

Purpose of the ACT Government Digital Strategy

3.10 The purpose of the *ACT Government Digital Strategy 2016-2019* is:

... to clearly express the ACT Government's intentions and create the impetus and architecture for fully digitised services and technology platform renovation.

3.11 With respect to its scope and purpose, the *ACT Government Digital Strategy 2016-2019* further states:

This Strategy sets direction for the Digital agenda. It is not a detailed action plan—although many actions will be informed and guided by it. The scope is deliberately at a whole of government level to lay foundations and set direction rather than endeavouring to be a digital master plan. Those individual plans will be enacted across the individual directorates, to meet the objectives set by their respective Ministers.

3.12 With respect to its scope and purpose, and limitations on its use, the *ACT Government Digital Strategy 2016-2019* further states:

It cannot answer all the questions – and in fact will add questions. But it will bring cohesion – through a common purpose, language and perspective.

Technology is fast-paced and compelling. This strategy provides a perspective at a point in time that will allow the ACT Government to engage with citizens and staff, business and academia, to stand behind a common vision to capitalise on the opportunities of the digital age.

3.13 The *ACT Government Digital Strategy 2016-2019* presents three strategic ‘dimensions’, each of which is supported by a series of principles:

- Growing the Digital Economy
 - Collaboration multiplies Outcomes
 - Supporting our Digital Explorers
 - Source commodities globally – add value locally
 - Digital is for everyone
- Delivering Digital Services
 - Start with the Customer Relationship
 - Design for Digital Business
 - Assemble Cloud services. Build only when unique
 - Growing our Digital Capability
 - Digital Services is built on Data
 - Digital Services – Mobile Devices
- Building Digital Foundations
 - Cloud is our Service Platform
 - Common Capabilities – Common Standards
 - The Dataculturists
 - The Geospatial Dimension
 - Responsive Procurement
 - Security and Assurance
 - Strategic Governance

3.14 *The ACT Government Digital Strategy 2016-2019* discusses each of the principles and provides further information and context. The further information and context varies in its detail and specificity.

3.15 For example, for the purpose of the *Growing our Digital Capability* principle, the *ACT Government Digital Strategy 2016-2019* states:

We will:

- build, and build on, “Common Capabilities” - units of technology that can be used across government;
- adopt Bi-modal delivery - two separate modes of delivery - one traditional for systems of record and the other more agile emphasising speed and agility. This will mature into multi modal delivery - a refined approach where the delivery is tailored to the needs of the individual directorates;
- recognise the “ages and stages” of directorates to ensure our own digital explorers are empowered to build new capability whilst encouraging the more traditional practices to plan their digital future. We will chart a path for convergence;
- become risk intelligent by maturing our approach to risk by balancing consequences and potential gains. We will start small and adapt. We will avoid “big bang” projects and become incrementally agile;
- leverage the power and reach of the Internet of Things (IoT); and
- commit to open standards, extensibility/APIs.

3.16 This is a high level description, which is not supported by further and specific detailed information associated with the technology to be acquired, timeframes or cost estimates. This description is appropriate for a vision statement, but lacks further detail necessary for ICT strategic planning.

3.17 For the purpose of the *Cloud is our Service Platform* principle the *ACT Government Digital Strategy 2016-2019* states ‘as our first preference, we will buy software, services and infrastructure from the cloud. We will migrate our current assets and services into the cloud at the highest practical value point to optimise services and gain financial benefits’. The *ACT Government Digital Strategy 2016-2019* further states:

We will therefore seek to adopt:

- Software as a Service (SaaS) rather than developing bespoke applications;
- Office Productivity as a Service (OPaaS) rather than individual Office packages;
- Platform as a Service (PaaS) rather than creating technology platforms from individual components; and
- Infrastructure as a Service (IaaS) rather than procuring and maintaining our own servers and storage.

3.18 This is a high level description of intended actions, which is not supported by further and specific detailed information associated with the technology to be acquired or timeframes associated with implementation. This description is appropriate for a vision statement, but lacks further detail necessary for ICT strategic planning.

3.19 With the *ACT Government Digital Strategy 2016-2019* approaching the end of its duration the Digital Services Governance Committee has commenced activities for the development of the next iteration of the ACT Government Digital Strategy. As discussed in paragraph 3.87

workshops have been held to determine the direction and contents of the next iteration of an ACT Government Digital Strategy.

3.20 The *ACT Government Digital Strategy 2016-2019* (the Digital Strategy) was released in 2016, with the purpose of ‘clearly [expressing] the ACT Government’s intentions and [creating] the impetus and architecture for fully digitised services and technology platform renovation’. The Digital Strategy provides a high-level vision for ICT for the ACT Government. The Digital Strategy acknowledges that ‘it is not a detailed action plan—although many actions will be informed and guided by it. The scope is deliberately at a whole of government level to lay foundations and set direction rather than endeavouring to be a digital master plan’. The Digital Strategy also acknowledges that ‘it cannot answer all the questions – and in fact will add questions. But it will bring cohesion – through a common purpose, language and perspective’. The Digital Strategy, while useful in providing a vision statement for ICT for the ACT Government, does not serve the purpose of an ICT strategic plan. It does not include further or more detailed information on inter alia:

- how it links with, or supports, the ACT Government’s strategic priorities;
- the ICT capabilities required to meet the ACT Government’s business needs;
- the ‘current state’ of the ACT Government’s ICT capabilities; and
- how, and by when, gaps between current and required ICT capabilities are to be closed.

RECOMMENDATION 2 WHOLE OF GOVERNMENT ICT STRATEGIC PLAN

The Chief Minister, Treasury and Economic Development Directorate should develop a whole-of-government ICT strategic plan that supports the ACT Government Digital Strategy. The whole-of-government ICT strategic plan should identify at a minimum:

- a) the ICT capabilities required to meet the ACT Government’s business needs;
- b) the ‘current state’ of the ACT Government’s ICT capabilities; and
- c) how, and by when, gaps between current and required ICT capabilities are to be closed.

Shared Services

3.21 Shared Services was established in 2007 to centralise the delivery of corporate support services to ACT Government agencies. The establishment of Shared Services represents an attempt to achieve a more effective whole-of-government approach to a range of corporate support services, including ICT, finance, human resources and payroll services.

3.22 Shared Services ICT provides a range of ICT services to ACT Government directorates and agencies including infrastructure, applications support and development, and ICT project services. It manages the whole-of-government data and communications network, including cloud provision, data centres and an extensive optical-fibre voice and data

network. Shared Services ICT also provides business systems support and ICT project management and application development services, including through 'embedded' ICT teams in the various directorates.

3.23 The Cordelta Pty Ltd subject matter expert noted:

This approach shows a commitment to moving away from a siloed ICT delivery model to a [whole-of-government] coordinated approach to ICT delivery for common services. The shared services centre is part of an ICT operating model aimed at driving efficiency and standardisation.

3.24 The roles and responsibilities of Shared Services ICT (and the directorates) with respect to the management and administration of ICT services are outlined in an undated *ICT Roles and Responsibilities* document. Roles and responsibilities are grouped into the following key areas:

- General;
- Productivity and Workplace Services;
- Business Systems Management;
- Communitarian and Collaboration;
- ICT Consulting and Project management; and
- ICT Governance and Assurance.

3.25 The *ICT Roles and Responsibilities* document identifies 173 separate roles and allocates responsibility for these roles to directorates, Shared Services ICT or both. Table 3-1 shows a selection of roles and responsibilities of relevance to the audit.

Table 3-1 Selected roles and responsibilities for ICT services

Roles and responsibilities	Directorate	Shared Services
General		
Develop an ICT strategic plan for the Directorate in line with any government-wide ICT strategies	✓	
Communicate (through various agreed mechanisms) about Directorate business needs and challenges, including future state needs	✓	
Provide clear direction and priority setting around ICT work required	✓	
Timely decisions about requirements and proposals	✓	
In collaboration with SSICT, set priorities for functional requirements, system or infrastructure features and use cases	✓	✓
In consultation with SSC, jointly identify, evaluate and procure new ICT equipment and infrastructure to support business operations	✓	✓
Support ICT asset management and purchasing processes to leverage economies of scale for the Territory	✓	

Roles and responsibilities	Directorate	Shared Services
Provide systems and platforms that meet functional and quality needs of Directorates		✓
ICT governance and assurance		
Clear ICT Strategic plans that are developed in line with any government-wide ICT strategies, plans or principles	✓	
Guidance on business goals, strategies and objectives	✓	
Advice on usage scenarios, business requirements and business capabilities requiring ICT support or enablement	✓	
Access to relevant business experts and stakeholders to discuss and workshop the above	✓	
Timely sharing of information relating to major changes to requirements or other issues of relevance	✓	
Ensure staff are aware of related architectural policies and requirements as appropriate	✓	
Develop and maintain Application Architecture (in conjunction with advice and assistance from SSC/GIO)	✓	
Enterprise Architecture reference models and associated services		✓
Research and advice on emerging ICT capabilities and services		✓
Develop and maintain Technical Architecture		✓
Develop and maintain the ICT infrastructure plan		✓

Source: Shared Services ICT, *ICT Roles and Responsibilities* document

3.26 The establishment of Shared Services ICT in 2007 was an attempt to achieve a more effective whole-of-government approach to the management and administration of ICT services across ACT Government agencies, particularly with respect to common or shared platforms and applications. An undated *ICT Roles and Responsibilities* document seeks to assign roles and responsibilities for the management and administration of ICT services between Shared Services ICT and the directorates. With respect to strategic planning activities for ICT, the *ICT Roles and Responsibilities* document clearly identifies a responsibility for directorates to 'Develop an ICT strategic plan for the Directorate in line with any government-wide ICT strategies', 'Communicate (through various agreed mechanisms) about Directorate business needs and challenges, including future state needs' and 'Provide clear direction and priority setting around ICT work required'. The *ICT Roles and Responsibilities* document identifies that there is a shared role for Shared Services ICT and the directorates as follows: 'In collaboration with SSICT, set priorities for functional requirements, system or infrastructure features and use cases' and 'In consultation with SSC, jointly identify, evaluate and procure new ICT equipment and infrastructure to support business operations'.

Shared Services ICT planning

3.27 Shared Services ICT has produced several strategic planning documents. These include:

- the Shared Services *ICT Business Strategy 2017-19* (February 2017);
- the *Common ICT Capability Vision 2020+* (February 2018);
- *Shared Services Strategic Direction 2018-2020*; and
- *Shared Services ICT Principles* document.

Shared Services - ICT Business Strategy 2017-19

3.28 The Shared Services *ICT Business Strategy 2017-19* (February 2017) outlines a series of improvements that it seeks for ICT services across the ACT Government and strategies it intends to implement to achieve these improvements. With respect to the improvements that it seeks to implement, under the heading ‘what will be better for our clients?’ the Shared Services ICT Business Strategy identifies the following:

- ‘we will dramatically reduce the timeframes and costs of provisioning our services by cutting red tape, providing self service capabilities and automating the fulfilment of standard requests’;
- ‘we will provide absolute clarity on our services by redefining them in a way our clients understand’; and
- ‘we will provide absolute transparency in the pricing of our services and up to the minute tracking of directorates’ consumption of those services’.

3.29 In support of these improvements the Shared Services *ICT Business Strategy 2017-19* (February 2017) identifies ten service-related targets of varying specificity, such as:

- ‘the timeframe to provision standard ICT services will be reduced by 50% over the next 2 years’;
- ‘100% of directorate business applications will be mapped to understand what ICT components they depend on’; and
- ‘we will deliver our major programs; Cloud, Desktop Modernisation and Macarthur House Relocation’; and
- ‘we will deliver several digital pilots from the digital hub’.

3.30 The Shared Services *ICT Business Strategy 2017-19* (February 2017) identifies three strategies it intends to pursue in support of the improvements it seeks:

- Strategy 1 – Strengthen the Foundation;
- Strategy 2 – Modernise our Services; and
- Strategy 3 – Innovate.

3.31 The Shared Services *ICT Business Strategy 2017-19* (February 2017) identifies its approach to implementing 'Strategy 2 – Modernise our Services' as follows:

- 'the Cloud Adoption Program will modernise our application hosting services by taking advantage of public cloud hosting, reducing delivery times and providing self-service functionality to directorates';
- 'the Desktop Modernisation Program will take the initial steps towards modernising our workplace productivity services';
- 'the Macarthur House Relocation Program will decommission the Macarthur House';
- 'the Whole-of-Government Print project will provide easy and secure print services across the ACT Public Service';
- 'we will deliver an Application Portfolio Management capability that will provide directorates with clarity on their application portfolio costs and risks. This will give them the tools to manage their investment in business applications to ensure they get best return for stakeholders';
- 'communication and collaboration tools will support the move away from static desktops to new work models such as activity based working'; and
- 'we will establish roadmaps and investment plans for our major services and technology platforms'.

3.32 Under the heading 'what are we going to do?' the Shared Services *ICT Business Strategy 2017-19* (February 2017) notes 'delivering the outcomes in this strategy is going to require input from all areas within SSICT, but there are some existing major programs that our initiatives will be focussed around'. The *Shared Services ICT Business Strategy* then presents a Gantt chart of 10 projects that were underway. There is no further information on the projects, their objectives or expected outcomes.

3.33 The Shared Services *ICT Business Strategy 2017-19* (February 2017) does not identify a desired 'future state', except in the most general terms, and Shared Services ICT advised it has not documented a desired future state.

Shared Services - Common ICT Capability Vision 2020+

3.34 The Shared Services *Exemplary Services for Digital Citizens - Common ICT Capability Vision 2020+* (February 2018) sets out Shared Services ICT's intentions for its ICT services at a very high level. The document identifies 'the Big Picture in 2020+' noting that 'the pace of change is so fast that traditional relationships between Government, Citizens and Business are becoming blurred'. In doing so it states that Shared Services:

Moves from commoditised utility to service and data broker that:

1. Simplifies common technology to enable focus on core business
2. Increases agility and responsiveness of capability supply to service demand
3. Enables co-creation of new business capability

4. Reduces cross funding
5. Increases visibility of prioritisation

3.35 According to the Shared Services *Exemplary Services for Digital Citizens - Common ICT Capability Vision 2020+* (February 2018), Shared Services ICT seeks to adapt its role from providing commodity IT to becoming a service broker, a value creator and then a 'coalface collaborator'. Under the heading 'what we do then' the document states:

In 2020, Common ICT Capability is organised around the lifecycle of services delivered to directorate business partners. Performance is measured against continuous efficiencies gained in service cost and partner satisfaction. Challenges arise from complexity of orchestration and integration.

3.36 The timeframe for this transformation is vague: '2020+ - Phase 2 – Phase 3'. The actions to be taken to achieve this are also vague. Under the heading 'what are we doing now to achieve this?' the document identifies:

- 'major programs and projects, technology roadmap alignment';
- 'service catalogue, personas, costing, workforce reform'; and
- 'Technology Roadmap and internally funded ongoing business system review'.

3.37 The *Common ICT Capability Vision 2020+* (February 2018) identified that the Shared Services Technology Roadmap is a key project to be undertaken; it is the first in a series of five steps (or strategic documents) to be prepared. The document states 'each of the steps (strategic documents) enables and supports the higher step towards the ultimate strategic vision ambition embodied in the Statement of Ambition'. There is no further information or detail on the purpose or objectives of the Technology Roadmap, or what it seeks to achieve. Shared Services ICT advised that the Technology Roadmap is still under development. In its response to the draft proposed report Shared Services identified that there is mapping work underway between the Office of the Chief Digital Officer and Shared Services ICT, leading to the development of the Technology Roadmap, and that this is currently focused on government/business critical systems.

Shared Services Strategic Direction 2018-2020

3.38 The *Shared Services Strategic Direction 2018-2020* provides information on strategies and initiatives for all of Shared Services' businesses and activities, including Human Resources and Finance. Under 'Technology' the document lists 12 'major activities and projects' for 2018 to 2020, such as 'embed strategic platforms becoming the platform of choice for Common Capabilities' and 'progressively migrate to consumption based delivery models'. No timeframes or key performance indicators are provided for these activities.

Shared Services ICT Technology Principles

3.39 The *Shared Services ICT Technology Principles* document identifies five principles to guide future technology choices. The document states:

All technology investments will be undertaken to support business objectives.

To ensure we support those objective with optimal technology choices we have identified five overarching investment principles.

These will underpin the delivery of flexible, secure, reliable and cost-effective solutions that support the territory's residents, visitors and taxpayers.

3.40 The five principles identified in *Shared Services ICT Technology Principles* are:

- Single, authoritative source of information – ‘structuring information models so that every data element is stored in an authoritative location. Any possible linkages to this data element should be by reference only. If duplication is required for performance purposes the authority of the single source is maintained’.
- Minimise technical debt – ‘implementing solutions that embed a continuous update paradigm. Avoid the need for substantial, intermittent capital injections to maintain currency, functionality and easy integration across the landscape’.
- Consolidate around standardised platforms – ‘utilising the same technology, management, processes and applications to support as many services as possible, to lower operational costs, improve organisational agility and optimise skills and knowledge’.
- Device and location independence – ‘delivering solutions that function on a wide variety of devices regardless of the hardware and location, to increase workplace flexibility and productivity’.
- Consumption based delivery – ‘adopting new service models so that clients pay proportionally for use rather than committing to large fixed payments, and delivered through self-service options wherever possible’.

3.41 The *Shared Services ICT Technology Principles* document also identifies seven ‘core strategic platforms’ to deliver Common Capabilities across the ACT Government:

Our strategic platforms deliver common capabilities to support the Territory's residents, visitors and taxpayers.

Focusing our resources will build best-practice competencies that optimise benefits and efficiencies.

They will become the platforms-of-choice for new common initiatives, while specialised solutions support individual directorate-specific requirements.

3.42 Shared Services ICT has developed a series of documents that demonstrate elements of an ICT strategic planning approach, specifically the *ICT Business Strategy 2017-19* (February 2017) and *Exemplary Services for Digital Citizens - Common ICT Capability Vision 2020+* (February 2018). These are high-level documents, which are general in nature and vague in their description of activities to be undertaken, including timeframes and deliverables. The documents do not describe the ‘current state’ of ICT capability within Shared Services ICT (or across ACT Government agencies where appropriate) or how, and by when, the gaps between the current and required ICT capabilities are to be closed, with any specificity. A Technology Roadmap, which was identified as a key foundational project to be undertaken, is still under development by Shared Services ICT approximately twelve months after it was flagged.

- 3.43 The implementation of Recommendation 1 should address these shortcomings in Shared Services' ICT strategic planning.

Application Portfolio Management tool

- 3.44 As noted at paragraph 2.8, adequate ICT strategic planning involves (among other things) assessing the current environment, capabilities and performance. In June 2016, the ICT Collaboration Forum endorsed the use of an Application Portfolio Management (APM) tool. Gartner guidance notes that application portfolio management is a process to:

... profile the characteristics of an organization's applications and evaluate their value or fit to current and anticipated business needs relative to cost, risk and select spending strategies to maintain, replace, recondition or retire assets. APM practices support application strategy formulation, build business engagement, and contribute to the project and portfolio management and enterprise architecture domains.

- 3.45 The Application Portfolio Management tool was developed by Shared Services ICT in order to facilitate a 'current-state' assessment of ICT across ACT Government. The Application Portfolio Management tool was intended to capture an overview of existing ICT systems across government, including systems owned and operated by Shared Services ICT and systems owned and operated by directorates, and provide a roadmap for future investment. The Application Portfolio Management tool incorporates the components as outlined by Gartner for an effective portfolio management practice.
- 3.46 The Transport Canberra and City Services Directorate's *Information and Technology Strategy 2017-2020* described how the Application Portfolio Management tool was expected to be used in its planning processes:

The WhoG Application Portfolio Management (APM) system allows the capture of information and classification of all TCCS applications, software and systems (not just those managed by SS ICT, but self-managed and vendor managed). The APM enables the lifecycle management of applications; investigates the total cost of ownership; and continues to review and assess the investment in applications to meet business needs. It contains information relating to internal management and ownership as well as criticality of these applications to the business or government. The data is centrally transparent across Directorates, the Office of the Chief Digital Officer, SS ICT and Treasury. The system has many other features which will enable greater management of directorate systems. The APM will provide the necessary whole of directorate level data to enable effective IT procurement, management and rationalisation.

- 3.47 As discussed in paragraph 3.28, the Shared Services *ICT Business Strategy 2017-19* outlines three strategies to address identified areas for improvement. 'Strategy 2 – Modernise our Services' of the *ICT Business Strategy 2017-19* describes seven actions, one being the delivery of the Application Portfolio Management tool. The Strategy states that:

We will deliver an Application Portfolio Management capability that will provide directorates with clarity on their application portfolio costs and risks. This will give them the tools to manage their investment in business applications to ensure they get best return for stakeholders.

- 3.48 The Shared Services *ICT Business Strategy 2017-19* identified that the Application Portfolio Management tool would be implemented between March 2017 and February 2018.

3.49 The Application Portfolio Management tool has not been successful. It has been criticised by directorates and other users as lacking functionality and not being fit for purpose, as it requires manual input and continuous updating. Accordingly, it was not widely and consistently used or populated by the directorates and, as a result, its information is incomplete and out-of-date. For example, to determine the future investment needs of applications or systems the directorates were asked to record details for each system and conduct an assessment. Assessments for a significant number of applications and systems have not been completed. As at October 2018, only 240 of the 1 087 systems recorded in the Application Portfolio Management tool have completed assessments.

3.50 The poor quality and incomplete data in the Application Portfolio Management tool was highlighted during a recent assessment of the ACT Government's ICT systems. Discussed in further detail at paragraphs 3.115 to 3.125, Shared Services and the Office of the Chief Digital Officer attempted to use the data in the Application Portfolio Management tool to determine the current status of systems and applications. The paper prepared presenting the details of this work noted that:

- CMDB and APM systems were interrogated to produce a spreadsheet of Government Critical systems with associated costs, fitness and risk measures and what we know of status and our investment posture.
- The spreadsheet was shared with CIOs or equivalent from across all directorates for input and quality control. This process made it clear that the original data was largely incorrect and/or outdated. More than fifty percent of the original data was modified by CIOs. ...

3.51 In its response to the draft proposed report Shared Services noted:

The existing APM tool was a bespoke development undertaken with minimal resourcing when there were no cost-effective off the shelf solutions available. The lack of investment to update and enhance the solution has led to it increasingly diverge from modern applications standards and directorate expectations. As a consequence, functional limitations have restricted the ability of directorates to keep their system information up to date, significantly undermining the integrity of the dataset.

It should be recognised that an effective APM solution requires improved business processes and a supporting toolset. One without the other will not deliver sustained improvement in data quality required to underpin strategic investment decisions.

With the significant changes in the vendor landscape since the initial development there is a opportunity to leverage standardised, user-friendly solutions without any expensive customisation.

This approach and toolset will assist both whole of government strategic planning, and general operations, capacity planning and systems lifecycle management of directorate business systems portfolios.

The clear governance of roles and responsibilities in the highly complex and interdependent ACT Government ICT environment will be major drives of APM success.

3.52 In its response to the draft proposed report Shared Services noted:

The dynamic nature of the ICT landscape across the ACT Government makes the conduct of a whole of government current-state analysis time consuming, expensive and of limited value to a future state program of work unless it is coupled with associated process and toolset changes that ensure it remains up-to-date. This requires significant investments in resources and associated supporting infrastructure.

- 3.53 In June 2016, the ICT Collaboration Forum endorsed the use of an Application Portfolio Management (APM) tool developed by Shared Services ICT. The Application Portfolio Management (APM) tool sought to capture an overview of existing ICT systems across government, including systems owned and operated by Shared Services ICT and by directorates, and provide a roadmap for future investment. The concept of application portfolio management, and the use of a tool to assist, is appropriate. However, the Application Portfolio Management (APM) tool developed by Shared Services ICT lacked functionality. The tool has not been widely and consistently used or populated by the directorates and its information is incomplete and out-of-date. It has not been an effective mechanism to inform whole-of-government ICT strategic planning by providing a comprehensive overview of the current state of ICT across ACT Government directorates.

RECOMMENDATION 3 APPLICATION PORTFOLIO MANAGEMENT TOOL

In order to support the development of a whole-of-government ICT strategic plan the Chief Minister, Treasury and Economic Development Directorate should develop and implement a whole-of-government application portfolio management approach, including:

- a) identification and implementation of a software tools that assists directorates to identify:
 - i) existing ICT systems, hardware and capabilities;
 - ii) future ICT systems, hardware and capabilities and associated investment needs; and
- b) development and formalisation of governance arrangements, including roles, responsibilities and processes for the implementation and maintenance of the software tools and its data.

ICT portfolio governance framework

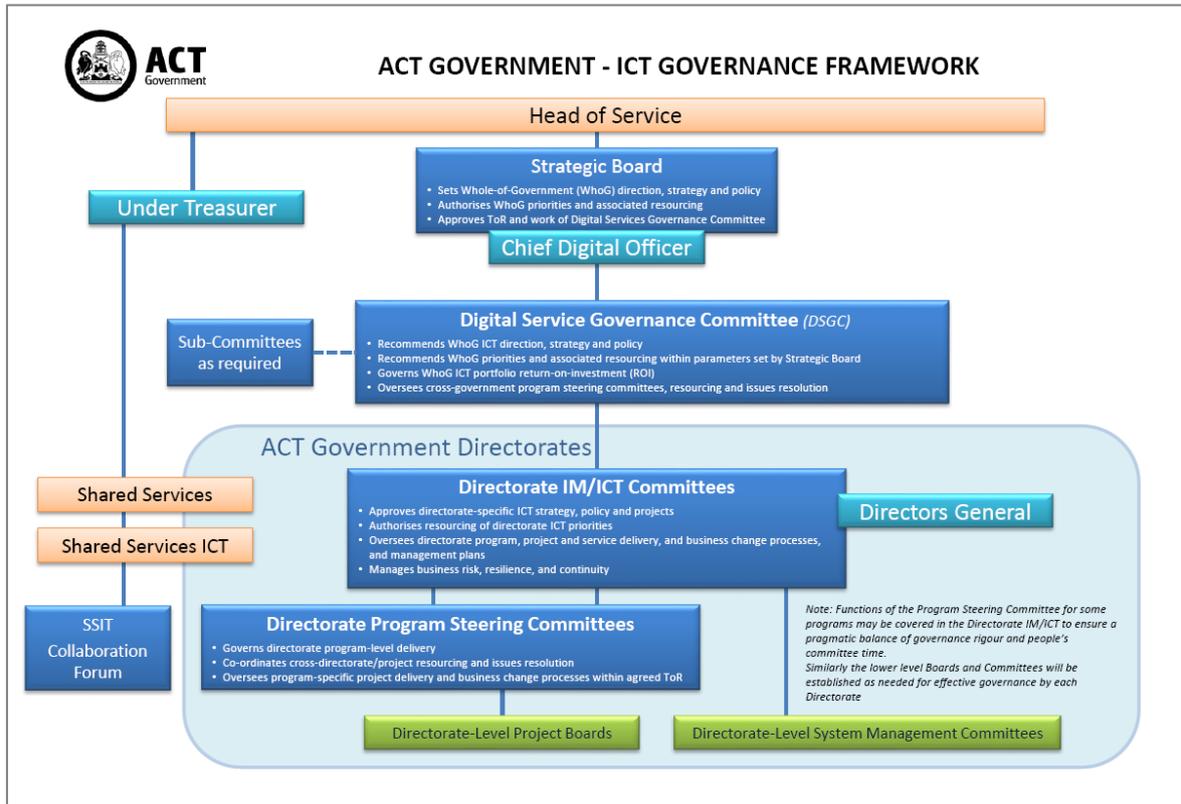
- 3.54 In April 2016, the Office of the Chief Digital Officer, through the Chief Minister, Treasury and Economic Development Directorate's Director-General, proposed to the ACT Government Strategic Board a whole of government ICT portfolio governance framework. According to the Agenda Paper accompanying the proposed whole of government ICT portfolio governance framework:

- There is an opportunity to maximise the benefit realisation and return-on-investment for the Territory's annual ICT spend by implementing a more encompassing approach to the ICT portfolio governance.
- The portfolio governance framework detailed in this paper builds on the work of the previous Chief Digital Officer (CDO) Strategic Board paper (October 2015) regarding capital spend monitoring financial management, by aligning the Whole of Government (WhoG) governance committee structure across government to strengthen decision-making and cohesiveness in achieving our goals.

- The proposed framework lays the foundations for consistent governance structures and cohesive approaches to be used across, and within, various directorates and agencies based on the principle that all projects are business change projects; some being technology-enabled.

3.55 Figure 3-1 shows the *ACT Government – ICT Governance Framework* that was agreed to and endorsed at the April 2016 meeting of the Strategic Board.

Figure 3-1 ACT Government – ICT Governance Framework



Source: Office of the Chief Digital Officer

3.56 The *ACT Government – ICT Governance Framework* notes and acknowledges the roles of different ACT Government entities associated with ICT strategic planning, including the Strategic Board, Office of the Chief Digital Officer, directorates and agencies and Shared Services ICT.

3.57 In April 2016 the Strategic Board agreed to, and endorsed, the *ACT Government – ICT Governance Framework*. An outcome expected from the establishment of the *ACT Government – ICT Governance Framework* was ‘an opportunity to maximise the benefit realisation and return-on-investment for the Territory’s annual ICT spend by implementing a more encompassing approach to the ICT portfolio governance’. The *ACT Government – ICT Governance Framework* notes and acknowledges the roles of different ACT Government entities associated with ICT strategic planning, including the Strategic Board, Office of the Chief Digital Officer, directorates and agencies and Shared Services ICT. The *ACT Government – ICT Governance Framework* seeks to identify and document a more

collaborative and communicative approach to strategically manage ICT across ACT Government agencies.

Digital Service Governance Committee

3.58 The Digital Service Governance Committee was established by the Head of Service on 7 April 2016, in accordance with the *ACT Government – ICT Governance Framework*. The Digital Service Governance Committee subsumed the responsibilities of the former ACT Government ICT and Business Systems Committee. The committee's Terms of Reference state that it was established to:

... drive the ACT Government's ICT reform agenda, including transforming service delivery, building service capacity, and implementing ICT portfolio governance to strengthen the benefit realisation and return-on-investment.

3.59 According to its Terms of Reference, the Digital Service Governance Committee:

... is the most senior ICT committee in the ACT Government, providing strategic direction, leadership and advice on prioritisation on the development and management of the ACT Government's information and technology assets.

3.60 The Digital Service Governance Committee's Terms of Reference further states that the Committee:

... seeks to strengthen the benefit realisation of WhoG ICT portfolio investment management across-government by taking a service-wide, citizen-centric approach and looking for ways to share information and resources.

By taking a strategic approach to seeking opportunities for whole-of-government initiatives and prioritising service integration, economies-of-scale and/or other improvements to effectiveness and efficiency, the DSGC aims to maximise the value-for-money and benefits realisation derived from the ACT Government ICT investment.

In this way, the [Digital Service Governance Committee] completes the existing tactical and operational governance structures currently in place in and across territory entities, which remain responsible for business and technical architectures.

Role of the Digital Service Governance Committee

3.61 The role of the Digital Service Governance Committee, as outlined in its Terms of Reference, is to:

- provide advice to the Strategic Board in respect of the alignment of technology initiatives to the *ACT Government Digital Strategy 2016-2019* – and in particular, supporting Treasury in providing advice to the Strategic Board in respect of budget planning processes;
- provide support, encouragement and identify opportunities for directorates to effect business transformation through the use of technology;
- provide governance and guidance over technology architecture, standards and practices (including recommending whole-of-government ICT policy to Policy Council);
- identify and authorise Common Capabilities as whole of government standards;

- be a forum for resolution of points of difference in the technology directions of directorates;
- provide oversight on behalf of the Strategic Board on technology projects of strategic significance or risk;
- provide advice (and if requested) oversight in regard to technology initiatives under the Small Business Innovation Programme;
- evolve and sanction the *ACT Government Digital Strategy 2016-2019* to ensure it remains current and relevant;
- develop, oversee and monitor the implementation of the ACT whole-of-government ICT portfolio investment framework;
- assess the ICT aspects of all business and technology proposals (irrespective of funding source) with an ICT component with:
 - whole-of-life costs of greater than \$250,000; and/or
 - whole-of-life costs of greater than between \$50,000 and \$250,000 where cloud-based software-as-a-service is proposed and the Executive Director of Shared Services ICT, for any reason, determines the solution warrants assessment by the DSGC; or
 - the unmitigated business risk of any technology initiative is deemed to be ‘High’;
- assess agency requests for opt-outs from agreed Common Capabilities;
- review key trends in the Government’s ICT expenditure; and
- recommend the Government’s position on and response to emerging ICT trends and issues.

3.62 A key responsibility of the Digital Service Governance Committee is to:

... review and consider project funding and resource allocation and, by providing analysis and recommendations as part of the annual WhoG ICT portfolio investment management framework- and at other times as necessary, ensure significant technology projects are in line with the strategic priorities.

Membership of the Digital Service Governance Committee

3.63 The Digital Service Governance Committee is chaired by the Chief Digital Officer. It comprises senior ACT Government executives from key areas of the Chief Minister, Treasury and Economic Development Directorate, including finance, policy and cabinet, as well as representatives from directorates. Standing ex officio members of the Digital Service Governance Committee include:

- Executive Director, Shared Services ICT;
- Senior Manager, Enterprise Architecture and Hybrid Cloud, Shared Services ICT;
- Director, Territory Records Office;
- Deputy Chief Digital Officer;

- DSGC Executive Support Officer, Office of the Chief Digital Officer; and
- Chair - ICT Collaboration Forum.

3.64 The Digital Service Governance Committee's Terms of Reference state that:

In some instances, [Deputy Director-Generals], in consultation with their [Director-General], may delegate their position on the committee to a senior representative – typically at [Chief Information Officer] or equivalent level.

3.65 The minutes of the Digital Service Governance Committee's meetings between February 2018 and March 2019 show that Deputy Directors-General do not have a high rate of attendance, with Chief Information Officers and other senior representatives attending in their place. While the Terms of Reference allows for 'some instances' of delegation, under representation at the Deputy Director-General level can impede the committee's ability to make decisions and take action in line with the Directorate's strategic positions.

Activities of the Digital Service Governance Committee

3.66 The Digital Service Governance Committee is an active committee. Since June 2016 the Committee has met 28 times – it meets on a monthly basis (except January). A review of agenda papers and minutes shows that they are of a high standard. A review of the minutes of the Committee show that it considers a wide variety of ICT-related issues. Recent topics for consideration by the committee included:

- reporting to the Strategic Board;
- development of a new Digital Strategy;
- Common Capabilities, including designating 'default', whole-of-government platforms;
- the cost of 'technology debt' (i.e. legacy systems);
- emerging technology (e.g. robotics, and the 'Internet of Things'); and
- governance and operations of the Budget Assessment Sub-Committee.

3.67 The Digital Service Governance Committee was established by the Head of Service on 7 April 2016, in accordance with the *ACT Government – ICT Governance Framework*. The Committee 'seeks to strengthen the benefit realisation of WhoG ICT portfolio investment management across-government by taking a service-wide, citizen-centric approach and looking for ways to share information and resources' and 'aims to maximise the value-for-money and benefits realisation derived from the ACT Government ICT investment' by taking a strategic approach to seeking opportunities for whole-of-government initiatives and prioritising service integration, economies-of-scale and/or other improvements to effectiveness and efficiency. The Digital Service Governance Committee meets regularly and considers a wide variety of ICT-related issues relevant to whole-of-government strategic ICT planning. The committee represents an effective attempt at improving whole-of-government communication and coordination of strategic ICT planning, although it is noted that the attendance of alternative senior executives, in place of the intended Deputy

Directors-General, may impede the authority and decision-making capability of the committee.

ICT Briefs and Business Cases Sub-Committee

3.68 The Terms of Reference for the Digital Service Governance Committee allows for sub-committees to be created to undertake discrete items of work. The Terms of Reference state:

... sub-committees will be created to undertake specific items of work. These will change over time but are expected to include (but not limited to):

- Strategy and Roadmap Advisory sub-committee
- ICT Briefs and Business Cases sub-committee
- Common Capability and Standards sub-committee
- Data Governance sub-committee
- DSGC annual review sub-committee

3.69 Three subcommittees have been created: the Data Governance; Geospatial Advisory; and the ICT Briefs and Business Cases. However, the Strategy and Roadmap Advisory sub-committee and Common Capability and Standards sub-committee, both of which could have had a clear and explicit role in whole-of-government ICT strategic planning by understanding and promoting common capabilities across ACT Government directorates and developing strategies for enhanced ICT collaboration, were not established.

3.70 The Digital Service Governance Committee has an important whole-of-government strategic role through its ICT Briefs and Business Cases Sub-Committee. According to draft Terms of Reference for the ICT Briefs and Business Cases Sub-Committee prepared in October 2017:

The Committee's key role is to review and provide advice to the DSGC on budget bids from across ACT Government which have a significant digital component. The Committee reviews and provides advice at both Concept Brief and Budget Bid stages. It also provides an opportunity to discover cross-directorates synergies.

This advice, after endorsement by the DSGC, is forwarded through Treasury to be included on individual bids as information to assist Budget Committee of Cabinet (BCC) in their deliberations. The advice includes summary information, including prioritization, on the relative technical merit, needs, benefits, constraints, and value of each bid. It is also provided to Strategic Board for information.

3.71 The sub-committee includes representatives from each ACT Government directorate, taken from the Digital Service Governance Committee or their nominees, as well as relevant business areas of the Chief Minister, Treasury and Economic Development Directorate (Shared Services, Access Canberra, Office of the Chief Digital Officer, Procurement). Two representatives from Treasury are permanent observers. Other officials may also be invited to attend meetings to provide specific advice.

3.72 According to draft Terms of Reference prepared in October 2017 the ICT Briefs and Business Cases Sub-Committee seeks to provide:

- a) A report to the DSGC at each stage of budget review describing the relative merit of each bid, as well as a brief summary for inclusion with each bid in the budget process.
- b) Feedback to directorates to enable changes or review based on the Committee's recommendations. Ideally the timeframe of review and feedback will provide an opportunity for directorates to resubmit within the same budget process.

3.73 The ICT Briefs and Business Cases Sub-Committee is an advisory committee only (to the Digital Service Governance Committee) and is intended to meet:

... monthly from July through to October each year to facilitate the discovery of cross-directorate synergies and the coordination of aligned bids.

During critical budget review periods meetings will be scheduled weekly. For the Concept Brief stage this is during October and November, and for Budget Bids this is during January and February.

3.74 The ICT Briefs and Business Cases Sub-Committee is an active committee, with weekly meetings scheduled during critical budget review periods. However, minutes of these meetings were not maintained until June 2018. Minutes that have been maintained since June 2018 show that the sub-committee discusses and assesses concept and budget bids put to it for assessment. The sub-committee also discusses its operations and identifies areas for improvement, including how directorates can improve the quality of the bids.

ICT Briefs and Business Cases Budget Sub-Committee assessment of budget bids

3.75 Details of the ICT Briefs and Business Cases Sub-Committee's assessment of concept and budget bids is outlined in reports prepared for the consideration of the Digital Service Governance Committee. The sub-committee has prepared eight reports (four for concept bids and four for budget bids) for the financial years 2017-18 and 2018-19.

3.76 The criteria for the assessment of the concept and budget bids has been adopted and evolved from the former Whole-of-Government ICT and Business Systems Committee (a sub-committee of the Strategic Board), which previously provided advice on ICT budget bid matters. The *Sub-Committee review of FY2017/18 ICT Business Cases – Full report* states that:

The Committee used an assessment tool initially developed during the FY2016/17 Budget cycle that was further developed for this Budget process. The framework is based on a set of criteria to provide a subjective assessment of the ICT Business Cases, being overall *benefits* such as alignment to strategy and ability to mitigate significant risks and *constraints* criteria to reflect limitations that may impact the overall success of the initiative such as scope uncertainty and expertise resource constraints.

3.77 For the 2018-19 Budget cycle, the ICT Briefs and Business Cases Budget Sub-Committee assessed concept and budget bids against the criteria used in 2017-18. However, the Sub-Committee also assessed the bids' 'strategic importance, criticality/urgency, and whole of government reach'. Each concept and budget bid were subsequently assessed into one of three categories:

Category A: initiatives in this top tier are strongly supported by the Committee due to their contribution to a critical, core capability for government, or a significant reduction in technical debt and all strongly align with the government's strategic digital direction.

Category B: initiatives in this second tier are supported by the Committee due to their ability to improve capability, enhance citizen engagement with government, provision of productivity gains and are also strategically aligned with the Digital Strategy.

Category C: initiatives in this third tier are conditionally supported by the Committee. All have merit in their own right but in a budget constrained environment are not considered as urgent as those in Category A or B. Initiatives in this category improve existing systems, provide some risk mitigation and are important for an individual business unit but, from a Digital Strategy perspective, are not as strategically important as the initiatives in category A and B.

3.78 Table 3-2 shows the number of concept and budget briefs that were assessed by the ICT Briefs and Business Cases Sub-Committee for the financial years 2017-18 and 2018-19.

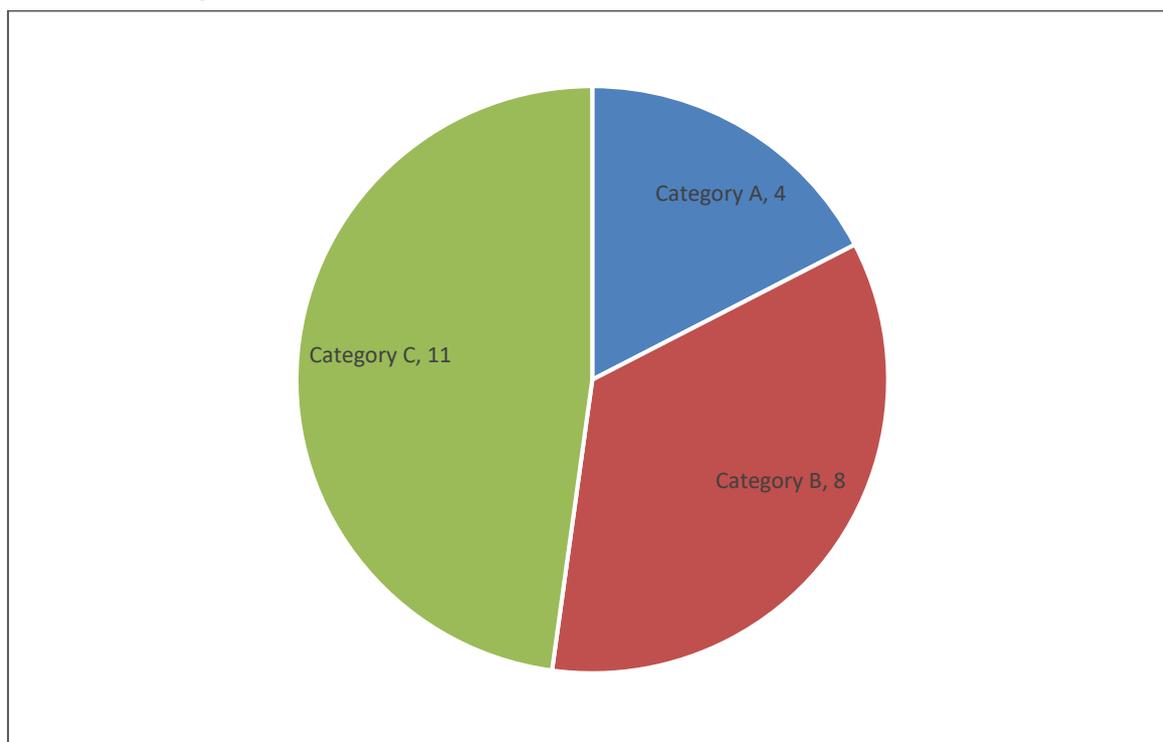
Table 3-2 Number of concept and budget briefs assessed by the ICT Briefs and Business Cases Budget Sub Committee (2017-18 and 2018-19)

	2017-18	2018-19
ACT Electoral Commission	0	1
Chief Minister, Treasury and Economic Development Directorate		
Access Canberra	1	3
Treasury	1	2
Office of the Chief Digital Officer	1	4
Community Services Directorate	2	3
Environment, Planning and Sustainable Development Directorate	3	2
Health Directorate	2	2
Justice and Community Safety Directorate	3	5
Transport Canberra and City Services Directorate	3	4
Education Directorate	1	0
Total	16	26

Source: Digital Service Governance Committee

3.79 Figure 3-2 shows the number of concept and budget briefs assessed as part of the 2018-19 Budget cycle as either Category A, B or C.

Figure 3-2 Number of concept and budget briefs assessed as either Category A, B or C by the ICT Briefs and Business Cases Sub-Committee



Source: ICT Briefs and Business Cases Sub Committee

- 3.80 An ICT Briefs and Business Cases Sub-Committee has been established to support the activities of the Digital Service Governance Committee. The sub-committee's role is to review and provide advice to the Digital Service Governance Committee on budget bids from across ACT Government which have a significant digital component. The sub-committee has been an active committee; meeting regularly, and as often as weekly, during critical budget review periods. The sub-committee assesses concept and budget bids using an assessment tool with comprehensive evaluation criteria, resulting in an assessment of a project as Category A (strongly supported), Category B (supported) or Category C (conditionally supported but not considered urgent). The establishment of the sub-committee is an effective attempt at improving whole-of-government communication and coordination of strategic ICT planning, by facilitating cross-agency consideration of new systems.
- 3.81 A number of other sub-committees were also envisaged by the Digital Service Governance Committee, including a Strategy and Roadmap Advisory sub-committee and Common Capability and Standards sub-committee. These sub-committees were not established as expected. This is a missed opportunity to establish specific sub-committees that could have had a clear and explicit role in whole-of-government ICT strategic planning by understanding and promoting common capabilities across ACT Government directorates and developing strategies for enhanced ICT collaboration.

Implementation of the *ACT Government Digital Strategy*

3.82 The *ACT Government Digital Strategy 2016-2019* states:

In an overarching sense, the implementation of all ICT activity in line with the Strategy will be the responsibility of the Digital Service Governance Committee (DSGC). Further to this, Economic Development already have accountability for economic growth and this Strategy simply supports their work and provides a broader technology context. All aspects of the strategy implementation are subject to the availability and approval of funding. This has the potential to constrain the scope and/or extend the timeframe of the strategy implementation.

3.83 The *ACT Government Digital Strategy 2016-2019* further states:

Ultimately, success is generated by the day to day activities of all individuals using the Strategy as a guide to decision making. The sum total of these decisions and actions generates the momentum that creates successful and cohesive Digital outcomes across the whole of government.

3.84 The *ACT Government Digital Strategy 2016-2019* identified a number of activities and initiatives that were envisaged to progress the strategy and its role in whole-of-government ICT strategic planning, including:

- Digital Strategy workshops;
- a self-assessment scorecard;
- a Strategy implementation roadmap;
- directorate roadmaps for portfolio systems and applications; and
- establishment of Common Capabilities.

Digital Strategy Workshops

3.85 The *ACT Government Digital Strategy 2016-2019* identified that a series of Digital Strategy workshops were to be held to assist directorates. The Digital Strategy states:

To align our work plans to this Strategy, the Chief Digital Officer will facilitate a series of Digital Strategy Workshops with each directorate to review their respective technology and business plans through the lens of this Strategy. Included in this exercise will be the determination of “what success looks like”—from an individual directorate and whole of government perspective.

...

Directorates have adopted a range of strategy and planning tools and are at various stages of maturity in their use. Some have gained great value from business capability modelling which maps the services to be delivered against the requisite organisational capabilities. Others have adopted an approach aligned to an enterprise architecture view—others simply plan through a comprehensive program of work.

All of these approaches are appropriate noting the ‘ages and stages’ of the directorates. The purpose of the Digital Strategy Workshops is to align these plans to the overall whole of government direction.

3.86 The *ACT Government Digital Strategy 2016-2019* states:

The result of these workshops will be to provide a view of the Digital Strategy implementation plan through the initiatives of directorates—that is the business initiatives, together with some focussed foundational initiatives will be the vehicle for implementation.

3.87 A series of workshops were held with directorates in late 2016 and early 2017. The purpose of these workshops was to ‘assist [the directorates] in interpreting the Strategy within their own context and to develop their own road maps for implementation’. The Chief Minister, Treasury and Economic Development Directorate, Community Services Directorate, Education Directorate, Environment, Planning and Sustainable Development Directorate, Justice and Community Safety Directorate, Transport Canberra and City Services and Access Canberra attended these workshops. The Health Directorate did not attend these workshops.

3.88 As part of these workshops the directorates conducted self-assessments which sought to document how each directorate’s current state aligned with the principles of the *ACT Government Digital Strategy 2016-2019* and the target state envisaged to be achieved over the life of the Strategy.

Self-assessment scorecard

3.89 The *ACT Government Digital Strategy 2016-2019* states:

In addition, a self-assessment scorecard will be produced to track progress against the strategy principles over time.

3.90 Appendix A of the *ACT Government Digital Strategy 2016-2019* includes a scorecard which provides guidance on how assessments can be conducted against each of the principles in the Strategy. For each principle the scorecard provides three scores (5, 3, 1, with 5 being the highest). Guidance is provided to describe what the relative scores mean and how they may be achieved.

3.91 The *ACT Government Digital Strategy 2016-2019* does not provide any further guidance or instruction on the application or use of the scorecards, including:

- how frequently they should be reviewed and updated; or
- how progress on the scorecard and its use and implementation should be reviewed and monitored, including whether there is a role for external scrutiny and accountability outside the directorate, e.g. through the Digital Service Governance Committee.

3.92 Table 3-3 shows the results of ACT Government directorates’ use of the self-assessment scorecard, as part of a series of workshops in late 2016 and early 2017.

Table 3-3 ACT Government directorates' ACT Government Digital Strategy 2016-2019 self-assessment scorecard results

		CMTEDD	TCCS	EPSDD	CSD	JACS	EDU	ACCESS CBR
Vision for the Digital Economy								
Collaboration	Current	2	2	3	2	3	2	2
	Target	5	5	5	5	5	5	5
Digital Explorers	Current	2	1	2	1	1	1	3
	Target	4	5	4	4	3	3	5
Source globally/value locally	Current	2	1	2	3	3	3	1
	Target	5	4	4	5	5	5	5
Digital for everyone	Current	1	1	4	1	1	3	2
	Target	5	5	5	4	3	5	5
Vision for Delivering Digital Services								
Customer Relationship	Current	2	1	3	3	1	2	3
	Target	5	5	5	5	4	5	5
Design for Digital Businesses	Current	1	1	3	1	1	1	3
	Target	4	5	5	5	4	5	5
Assemble Cloud/build only	Current	2	2	1	2	3	3	1
	Target	5	5	4	5	5	5	4
Growing Digital Capacity	Current	2	2	2	1	1	3	1
	Target	5	4	5	5	3	4	5
Digital Services Built on Data	Current	1	3	2	1	1	2	2
	Target	4	5	5	5	3	5	5
Digital Services - Mobile Devices	Current	3	1	2	1	1	3	3
	Target	5	4	5	5	3	5	5
Visions for Building Digital Foundations								
Cloud is Services Platform	Current	1	2	1	2	1	3	2
	Target	5	4	5	5	4	5	4
Common Capabilities	Current	2	1	2	2	2	3	2
	Target	5	4	5	5	3	5	4
Dataculturists	Current	1	1	3	1	1	2	2
	Target	4	5	5	5	3	5	5
Geospatial Dimension	Current	2	3	3	1	2	2	3
	Target	4	5	5	5	5	4	4
Responsive Procurement	Current	2	1	1	1	1	2	1

		CMTEDD	TCCS	EPSDD	CSD	JACS	EDU	ACCESS CBR
	Target	5	4	5	5	5	4	5
Security and Assurance	Current	3	1	4	3	1	2	3
	Target	5	4	5	5	4	4	5
Strategic Governance	Current	2	1	2	3	3	3	3
	Target	5	5	5	5	5	5	4

Source: Digital Service Governance Committee

3.93 As at November 2018, an additional three cross-directorate workshops had been conducted for the purpose of gathering feedback to inform the development and direction of a new Digital Strategy. A further workshop was also planned for February 2019, to begin developing the new strategy's framework. These workshops sought to inform the development of a new Digital Strategy but did not review or revisit the information or material that was generated from the first series of workshops in late 2016 and early 2017, or otherwise review progress against the self-assessment scorecards that were prepared at the time.

3.94 A series of Digital Strategy Workshops were held with most ACT Government directorates (all but the Health Directorate) in late 2016 and early 2017, the purpose of which was to 'assist [the directorates] in interpreting the Strategy within their own context and to develop their own road maps for implementation'. As part of the Digital Strategy Workshops directorates completed self-assessment scorecards, which sought to 'track progress against the strategy principles over time'. There was no further information on the application or use of the scorecards, including: how frequently they should be reviewed and updated; or how progress on the scorecard and its use and implementation should be reviewed and monitored. No further Digital Strategy Workshops have been held since then for the purpose of revisiting or reviewing progress against the original self-assessment scorecards.

Strategy implementation roadmap

3.95 The *ACT Government Digital Strategy 2016-2019* states:

This strategy document will be followed by a strategy implementation roadmap which will be constructed collegially and managed as a measure of our digital progress and enterprise cohesion.

3.96 There is no further guidance in the *ACT Government Digital Strategy 2016-2019* as to the strategy implementation roadmap, its purpose and application. There is also no further guidance as to who had responsibility and accountability for progressing the strategy implementation roadmap.

3.97 A strategy implementation road map was not prepared as envisaged by the *ACT Government Digital Strategy 2016-2019*. As noted in paragraph 3.68, a Strategy and Roadmap Advisory sub-committee that was envisaged to be established to support the activities of the Digital Service Governance Committee has not been established.

3.98 The *ACT Government Digital Strategy 2016-2019* envisaged the preparation of a strategy implementation roadmap, which was intended to ‘be constructed collegially and managed as a measure of our digital progress and enterprise cohesion’. There is no further guidance in the strategy as to the purpose and application of the strategy implementation roadmap, including who had responsibility and accountability for progressing the roadmap. A strategy implementation roadmap has not yet been produced. A Strategy and Roadmap Advisory sub-committee that was envisaged to be established to support the activities of the Digital Service Governance Committee has not been established.

Directorate roadmaps for portfolio systems and applications

3.99 The *ACT Government Digital Strategy 2016-2019* states:

Under the governance principle, the DSGC will oversee the implementation of this Strategy and provide whole of government oversight to all technology initiatives. In addition to the current governance arrangements, which focus largely on the annual planning/business case cycle, the DSGC will provide month by month oversight and direction to the individual business group strategies, plans, investments, implementation and lifecycle management.

An important aspect of the DSCG agenda will be for each directorate to present and maintain a roadmap for their portfolio of systems and applications. This will support investment decisions by providing a strategic context and ensuring there is not a build-up of technology debt and risk.

3.100 Roadmaps have not been presented by ACT Government directorates to the Digital Service Governance Committee for its review and consideration. ACT Government directorates’ activities with respect to ICT strategic planning were discussed in Chapter 2. A key finding and conclusion arising from the analysis of ACT Government directorates’ ICT strategic planning was that planning documents inconsistently identified actions to be undertaken to address gaps between the current and future state, including the development of roadmaps.

3.101 The *ACT Government Digital Strategy 2016-2019* envisaged that each directorate was expected to ‘present and maintain a roadmap for their portfolio of systems and applications’. The directorates’ roadmaps were expected to ‘support investment decisions by providing a strategic context and ensuring there is not a build-up of technology debt and risk’. Roadmaps have not been presented to the Digital Service Governance Committee for consideration and review on an ongoing basis by ACT Government directorates.

3.102 The implementation of Recommendation 1 should address these shortcomings in ICT strategic planning.

Common Capabilities

3.103 The *ACT Government Digital Strategy 2016-2019* states:

We will create a set of “Common Capabilities” — technology and service capabilities that reflect the aggregated needs of directorates. We will support these capabilities with a commitment to common and recognised standards.

3.104 The *ACT Government Digital Strategy 2016-2019* states:

The economics and benefits of scale and standardisation are simple. By adopting a common technology platform across government we procure it just once, we use more of it and improve unit pricing, we become expert with it and we can create value on it— value that is accessible to all.

We will therefore create a set of “Common Capabilities” which we will leverage across all directorates. We will undertake all practicable steps to align new business initiatives to build on the Common Capabilities and diverge only when convergence and compromise cannot be achieved.

The Common Capabilities will include products, services and solutions provided internally or by the business community.

3.105 The *ACT Government Digital Strategy 2016-2019* states:

New Common Capabilities will be introduced through a lead directorate. Rather than adopting an insular approach to business initiatives, we will develop a whole of government capability which will be a foundation for use in other directorates. Whilst this places a burden on the original directorate it also enables them to tap into all directorates and bring a broader experience and skill set—reducing risk and setting the scene for a successful capability build.

All directorates will consider Common Capabilities as their first option—focussing on what makes us the same—rather than what makes us different.

Similarly, existing solutions will migrate to the Common Capabilities at the first appropriate lifecycle point. The best economic outcome is not obtained by forcing artificial transitions to Common Capabilities—but by using lifecycle events where investment is required to maintain the integrity of our services.

Common Capabilities also refers to skill sets and standards. The library of Common Capabilities will include technology standards around which we will reinforce capability. A simple example might be the acquisition and use of HTML5 web coding skills.

As our library of Common Capabilities expands, we will be able to focus more energy on building and innovating new strengths that lift our Digital service capability.

3.106 The Common Capabilities concept is intended to improve the coordination of technology use across government by committing to a core set of platforms to reduce fragmentation, enable capability building, and reduce unnecessary overheads associated with multiple contracts and vendors. As noted in paragraph 3.81, a Common Capabilities sub-committee was envisaged to be established to support the activities of the Digital Service Governance Committee, but this was not established.

3.107 In June 2018 a Common Capabilities framework was endorsed by the Digital Service Governance Committee (DSGC). It was developed by Shared Services ICT and the Office of the Chief Digital Officer. The accompanying agenda paper noted ‘Common Capabilities is about leveraging economies of scale from technologies that we all use in common’, which was defined as:

... any technology that has use across directorates or whole of government’ where there are potential advantages in collaborating to enable the sharing of ICT investment and pooled resources, the reduction of duplicated investments and rationalisation of procurement effort.

3.108 In considering the proposed Common Capabilities framework, the Digital Service Governance Committee acknowledged the work undertaken to date by Shared Services ICT in relation to Strategic Platforms. It was noted that the Strategic Platforms, which are technologies already provided by Shared Services ICT to directorates as part of its core service delivery, would be recognised as the ‘first, core set of technologies governed under the proposed Common Capabilities framework’.

3.109 A model for Common Capabilities was presented to, and supported by, the Digital Service Governance Committee. The Common Capabilities framework that was agreed to at the meeting is shown in Figure 3-3.

Figure 3-3 Common Capabilities Model



Source: Digital Service Governance Committee

3.110 Under the governance model for the Common Capabilities framework endorsed by the Digital Service Governance Committee at its meeting in June 2018, the Chief Minister, Treasury and Economic Development Directorate has responsibility for the implementation and communication of the framework itself, to be accomplished collaboratively between Shared Services ICT and the Office of the Chief Digital Officer. When a new function is designated under the framework, the Collaboration Forum will decide on a lead directorate to take responsibility for both procurement and contract management on behalf of all directorates. Any new arrangements will be ‘opt in’ for Directorates, even for capabilities in the Default category. The principle is that the arrangement will be attractive for Directorates to join, but not enforced if there is a good case to do otherwise.

3.111 With respect to the implementation of the Common Capabilities framework, the agenda paper to the Digital Service Governance Committee noted:

An incremental implementation model has been proposed. This means that transition to the framework would occur at opportune stages of existing technology lifecycle (i.e. when an existing contract expires the Common Capabilities framework would be applied).

3.112 With respect to the ‘next steps’ associated with the Common Capabilities framework, the agenda paper to the Digital Service Governance Committee noted:

Pending the above decisions and approval from the DSGC, the next step would be to understand the resources required to implement the framework, and how those resources would be supported and allocated.

- 3.113 The *ACT Government Digital Strategy 2016-2019* identified an intention to establish a set of Common Capabilities for ICT across ACT Government directorates, which have since been defined as “any technology that has use across directorates or whole of government’ where there are potential advantages in collaborating to enable the sharing of ICT investment and pooled resources, the reduction of duplicated investments and rationalisation of procurement effort’. A Common Capabilities sub-committee that was envisaged to be established to support the activities of the Digital Service Governance Committee in implementing the principles of Common Capabilities was not established. Nevertheless, in June 2018 a Common Capabilities framework was endorsed by the Digital Service Governance Committee. Strategic Platforms, which are technologies already provided by Shared Services ICT to directorates as part of its core service delivery, would be recognised as the ‘first, core set of technologies governed under the proposed Common Capabilities framework’.
- 3.114 The Common Capabilities framework represents a concerted effort by multiple stakeholders to rationalise the whole-of-government ICT infrastructure. However, because neither the current ICT environment nor agencies’ business needs have been formally and consistently documented, the framework’s benefits will not be optimised unless it is situated within a comprehensive strategic planning process. The Digital Service Governance Committee also acknowledged, in June 2018, the work that needed to be done to populate the agreed Common Capabilities framework and ‘understand the resources required to implement the framework, and how those resources would be supported and allocated’.

Identification of critical systems

- 3.115 In December 2018, the Strategic Board requested that Shared Services and the Office of the Chief Digital Officer gain an understanding of the ACT Government’s critical ICT systems. The February 2019 Digital Service Governance Committee agenda paper that reported the outcome of this exercise noted:

In December 2018 The Under Treasurer informed Strategic Board that significant additional funds would be required to implement the government’s new HRIMS system.

Strategic Board requested that SSICT work with the OCDO to provide an understanding of the government’s ICT systems, their status and a roadmap for future investment.

- 3.116 This assessment was conducted in January 2019. It was not a comprehensive assessment, but it was a risk-based assessment, as it focused on ICT systems that have been classified as ‘government critical’.¹⁰

¹⁰ Government critical systems are systems that have been assessed as ‘Requir[ing] continuous availability. Interruptions to the system or service are intolerable, immediately and significantly damaging’.

3.117 The February 2019 Digital Service Governance Committee agenda paper provided a summary of the assessment of the government critical systems that had been conducted to date. The summary was presented in the form of draft diagrams which provided details including:

- system name;
- system owner;
- costs (Shared Services ICT and directorate);
- technology platform; and
- future investment details.

3.118 The agenda paper also provided details of the core infrastructure required to support systems, with the agenda paper stating that:

Core infrastructure for connectivity, authentication and authorisation of essential [whole of government] infrastructure; effectively the "Plumbing".

[Shared Services ICT] indicate that the total cost for them to provide this core infrastructure to government is [approximately] \$74 M per annum. This is the cost to 'keep the lights on'. The costs to host and maintain the government critical systems above are in addition to these costs.

3.119 Two maps were prepared, one outlining the systems for all ACT Government directorates, excluding the Health Directorate and another outlining only the systems for the Health Directorate. The maps identified 50 government critical systems, 17 for the Health Directorate and 33 for the other directorates.

3.120 The diagrams provide detail on the future investment requirements for each system. The four investment requirements described are:

- immediate investment required, not fit for purpose;
- near term investment required, fits business needs;
- long term investment required, fits business need, replacement underway; and
- no investment profile.

3.121 Table 3-4 shows the investment profile of the government critical systems that have been identified.

Table 3-4 December 2018 assessment of 50 government critical systems

Investment Profile	Directorates (excluding Health Directorate)		Health Directorate		Total	
	Number of Systems	Percentage	Number of Systems	Percentage	Number of Systems	Percentage
Immediate investment required, not fit for purpose	8	24%	2	12%	10	20%
Near term investment required, fits business needs	5	15%	5	29%	10	20%
Long term investment required, fits business need, replacement underway	16	48%	7	41%	23	46%
No investment profile	4	12%	3	18%	7	14%
Total	33	100%	17	100%	50	100%

Source: Digital Service Governance Committee

3.122 The February 2019 Digital Service Governance Committee agenda paper that reported the outcome of this exercise noted ‘this is the first step in a much larger body of work that will need to extend to Business Critical systems and beyond’. The February 2019 agenda paper also noted:

The process so far has raised further questions, such as:

- Why hasn’t this work been done before now?
- Who is responsible for understanding and maintaining this data?
- If this is useful now, how will we maintain our understanding into the future?

3.123 In its response to the draft proposed report the Transport Canberra and City Services Directorate noted that a challenge in understanding system criticality has been changes in definitions of system criticality:

The classification of system criticality that is held in the [Application Portfolio Management] and the Configuration Management Database (CMDB) is out of date and not correct for [Transport Canberra and City Services Directorate]. In addition, some of the older system data that resides in the CMDB is not correct and predates the definitions for system criticality applied. [There are] inconsistencies between how systems were categorised and how they are now categorised, as there is a significant difference. The process of categorisation by CIOs has only been in the past 3-4 years and prior to that there were no or very little control processes in place for the system criticality assessments.

- 3.124 In December 2018, the Strategic Board requested that Shared Services and the Office of the Chief Digital Officer gain an understanding of the ACT Government's critical ICT systems. A risk-based assessment was conducted in January across ACT Government directorates, which focused on ICT systems that have been classified as 'government critical' (i.e. systems that have been assessed as 'Requir[ing] continuous availability. Interruptions to the system or service are intolerable, immediately and significantly damaging'). Fifty government critical systems were identified; 17 for the Health Directorate and 33 for the other directorates. Twenty percent of systems were identified as not fit for purpose, with immediate investment required, while a further twenty percent were identified as fitting business needs, but with near term investment required.
- 3.125 The December 2018 request by the Strategic Board was the catalyst for intensive and focused action by ACT Government directorates in identifying and documenting the 'current state' of ACT Government ICT systems, albeit through a limited but risk-based focus on 'government critical' systems. The exercise was acknowledged as 'the first step in a much larger body of work that will need to extend to Business Critical systems and beyond'. This demonstrates that existing ICT strategic planning processes, including whole-of-government ICT strategic planning initiatives, have not been effective to date.

Audit reports

Reports Published in 2018-19	
Report No. 05 – 2019	Management of the System-Wide Data Review implementation program
Report No. 04 – 2019	2017-18 Financial Audits Computer Information Systems
Report No. 03 – 2019	Access Canberra Business Planning and Monitoring
Report No. 02 – 2019	Recognition and implementation of obligations under the <i>Human Rights Act 2004</i>
Report No. 01 – 2019	Total Facilities Management Procurement
Report No. 11 – 2018	2017-18 Financial Audits - Overview
Report No. 10 – 2018	Annual Report 2017-18
Report No. 09 – 2018	ACT Health’s management of allegations of misconduct and complaints about inappropriate workplace behaviour
Reports Published in 2017-18	
Report No. 08 – 2018	Assembly of rural land west of Canberra
Report No. 07 – 2018	Five ACT public schools’ engagement with Aboriginal and Torres Strait Islander students, families and community
Report No. 06 – 2018	Physical Security
Report No. 05 – 2018	ACT clubs’ community contributions
Report No. 04 – 2018	2016-17 Financial Audits – Computer Information Systems
Report No. 03 – 2018	Tender for the sale of Block 30 (formerly Block 20) Section 34 Dickson
Report No. 02 – 2018	ACT Government strategic and accountability indicators
Report No. 01 – 2018	Acceptance of Stormwater Assets
Report No. 11 – 2017	2016-17 Financial Audits – Financial Results and Audit Findings
Report No. 10 – 2017	2016-17 Financial Audits – Overview
Report No. 09 – 2017	Annual Report 2016-17
Report No. 08 – 2017	Selected ACT Government agencies’ management of Public Art

These and earlier reports can be obtained from the ACT Audit Office’s website at <http://www.audit.act.gov.au>.