![ACT Government logo]

DRAFT ACT GOVERNMENT DIGITAL STRATEGY

Draft for Feedback

Chief Minister, Treasury and
Economic Development
Directorate

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INTRODUCTION

This Strategy supports the Chief Minister's vision to make Canberra one of the world's most liveable cities; Inclusive, Progressive and Connected; open to all.

This Strategy builds on the ACT Government Digital Strategy 2016-19, and describes firstly the outcomes that that the ACT Government wants to achieve for the Canberra community, and then focuses on how we will use digital technologies and data to achieve these outcomes.

We know that people and businesses in the Canberra region expect more from government.   This is an outcomes-based strategy, organised around four key themes:

- **Community centred**. This brings the perspective of the community into the centre of our thinking. A community centred focus will also help us continue to move towards one government approaches and more seamless transition between services, value add, and with permission.
- **Data**. The data we collect has real value and our legacy systems do not allow for easy integration and data analysis. Great benefit comes when governments and organisations are data savvy and leverage information to identify problems, opportunities and create solutions with better design. This is also about providing transparency about how we safeguard the privacy and security of your personal information and provide more ways in which you can give or remove permission for new uses.
- **Co-designed**. Building community centred design and co-design approaches to the way we plan for changes in urban and regional developments, and in-service delivery will be how we ensure that the benefits can be achieved.
- **Strategic relationships**. Our vision is of a connected, vibrant and active community, supported by relationships between government and industry, sharing information and being open to new ideas and trialling new technology. We are prepared to take managed risks and be at the heart of solutions-based innovation that brings benefit. We recognise that government is not alone in providing services to the community, and boosting engagement is a method of broadening our own perspective, learning different approaches, enabling our community to add value and optimising outcomes from joined up approaches across industry.

We have listed a number of current initiatives that work towards our strategic goals and the timeframes they are planned for delivery. We have also provided a glimpse into possible future initiatives that will further enhance liveability and wellbeing in our community. These will be sequenced where it makes sense in any given budget cycle.

Whilst our current initiatives have delivery timeframes associated with them, the ACT Government Digital Strategy does not set a time window. We believe the community

outcomes described here will stand the test of time, even though the technology, methods and approaches to achieve them will change rapidly.

Our responses and approaches to fulfilling community needs and expectations will be greatly influenced by new ways in which we as a community experience and leverage technology advancements in our private lives, and disruptive technologies. Our job as a government is to bring ourselves and our staff into this frame, and develop the skills and capabilities to continually advance on the value of our services, and continue to bring technology and public policy closer together.

We consider this a living document, which will be refreshed on an 18 month to 2-year cycle. This first publishing is as a draft for feedback. Our efforts to open up conversations about what a future Canberra could be has been rewarded by community participation and contribution of a vision for how people expect to live in the ACT.

The feedback we receive from this round will shape the next version we publish in early 2020.

COMMUNITY-CENTRED SERVICES

The ACT Government is ambitious in what it wants to achieve for you and the ACT community, particularly by optimising digital and smart technologies. Our vision is that people can easily and seamlessly interact with our services, at the time you need or want to. We will provide digital services that are centred on your needs and that are truly digital in that they deliver real value beyond forms online.

We will secure the data government collects and adhere to privacy protection laws.

We will deliver services that save people, and businesses time.

We will co-design and test the services we create and change, with you as our community.

We will continue to reduce regulatory red tape while improving the integrity of our regulatory functions. We want to make it easy for you while at the same time increasing your confidence that we have the appropriate checks and balances in place.

We will continue authentic engagement with the ACT community and expand this to co-design and test our services and policy.

We understand that not all government services can or should be provided in a digital way. However, government services can be enhanced using digital technologies. We will continue to ensure that the most vulnerable members of the community, particularly those with protected attributes under human rights and discrimination laws or acts are provided every opportunity to access digital services and information.

We will continue to provide customer service at our Canberra locations and phone services from our call centre to meet the ways people want, and choose, to contact us.

I want to:

- *Only have to prove who I am to government once and be able to access all services applicable to me based on my needs and the services I have used before.*
- *Be able to update any details about me on my mobile device and expect that government will update their records (if I request or consent for government to share this information). For example:*
  - *I sold the car*
  - *I registered a dog*
  - *I enrolled my child at school*
  - *I moved house.*
- *Choose to be digitally notified and reminded of my bills, renewals and authorisations and be able to pay, set for payment or make a payment arrangement anytime from the convenience of my mobile device.*
- *Provide information in an easier way – no forms to fill in or obligations to notify.*
- *Choose the details of my concessions cards to be shared so I don't have to prove my entitlements over and over again. This saves me from burdensome red tape.*
- *Have an easy sign up because this is good service.*

We want to see the community readily adopt our digital channel because it's easy to find and get what they need.

We will examine the ways government can adopt smarter ways of doing things to improve our services and our responses.

What you told us

In 2019 we asked you to describe an ideal digital government service. We wanted to know what you considered 'digital service' to be, what it might do and how it might improve your interactions with government. This is what you told us:

➢ *One where you know the service I need, when I need it. Not one where I have to hunt through my Hotmail email looking for that pesky registration renewal email from a month back that I've since forgotten about.*

➢ *It would give access to all government services in one place. It would be simple to search and easy to use by everyone, in particular people with disabilities or older people. It would provide options for human interaction and it would provide information about services not offered. For example, directing people to the correct federal agency.*

➢ *It should be simple to use, easy to navigate and read as well as clear about what is required. A great example is scheduling a payment plan for infringements. It was online, easy to find and use, quick and done in minutes.*

➢ *Digital government to me is about public services being provided in a simple and efficient way - the systems talk to each other, so that we don't have to keep telling our stories.*

➢ *It shouldn't get in my way. I don't care or want to know who provides it. It will remind me as it nears (if it has a deadline) and I will get immediate (automated) responses to simple questions. It should maintain equal access to paper-based and face-to-face services for those who need it, for example, people with low language, literacy, numeracy and digital skills.*

➢ *As a user, I want to engage electronically. So that I am not bound on when I interact, on having to chase bits of paper, of having multiple-step processes that require both digital and paper steps. I want a highly intuitive system designed for (and preferably by) users, so that users aren't required to seek help to understand just what service they need. The key thing is to remember those who aren't addicted or enamoured to digital technology. Make online information available in print-friendly formats. Post important information such as changes to laws (include with rates notices or car registration renewals).*

➢ *It should help make things easier, but also not just remove front line staff. I don't like having to ring or email instead of just walking into an information point.*

➢ *It should be useful, intuitive, reduce the need to present to an Access Canberra shop front, which has opening hours that are not useful for most full-time workers.*

What our staff have told us

People who work in the ACT Government have a significant role in delivering services that meet the needs of the community. They educate our children, provide healthcare, maintain the streets and transport systems, operate the call centres and research and create policies

suited to our city and community. They are part of the community and also work for the community. Their opinions are relevant because they represent service providers as well as service users. Their feedback gives insight to how government can operate to be efficient and responsive. This is what we have heard:

> *One of the problems we have now is that we focus internally on fixing our workflows, not externally on fixing the workflow for our citizens.*
> *You wouldn't believe what we make people do.*
> *Cultural change is required, staff don't feel empowerment or have the tools to undertake co-design and re-design.*
> *Digital needs to be used to close the gap rather than widen it and we need to ensure that we keep this in mind.*
> *Collaboration/co-ordination across directorates could be improved in service design and delivery.*

Current initiatives

These are some initiatives that we are working on right now that illustrate our commitment to providing community-centred services.

ACT Digital

The iConnect project commenced in 2015 and is a significant investment in new online government services. The program aimed to make it easier for people and businesses to connect, transact and do business with government. iConnect has delivered the ACT Digital Account where people and businesses can set up an online profile specific to their ACT Government interactions. You can use the ACT Digital Account as a channel for individualised communication and the intent is to continue to grow the number of services that can be accessed this way, providing access to most government services in one place.

The ACT Digital Program, funded in the 2019/20 Budget, will change the way people apply for Working With Vulnerable People registrations (WWVP), and services, and comply with the changing screening requirements of the National Disability Insurance Scheme.

In 2020, you will be able to register for a Working With Vulnerable People card through your ACT Digital Account and provide consent for the criminal history check, through the convenience of your mobile device. Face to face and phone services will still be available and should also provide faster results.

In future years the ACT Digital program could deliver improvements such as the ability to:

- Prove eligibility for concessions once - such as pensioner, veterans, seniors' card, student - and have concessions applied automatically for all connected services.
- Advise of changes to circumstances once - such as change of address, sale of a car, registration of a dog – and have this update all systems that rely on currency of information.
- Purchase and use the new integrated light rail and bus tickets from your ACT Digital Account, receiving automatic concession pricing, SMS style messages or notifications if the rail or bus is running late, or if you need to top up payments.
- Receive your rates and land tax notifications, with concessions automatically applied, and choose to pay, set for payment or make payment arrangements through your ACT Digital Account. This would deliver fully digital interactions and reduce the need to send out paper notifications and reminders through the post.
- Have a digital Working With Vulnerable People registration, available to present to any employer or official via your mobile device. WWVP/NDIS would be the first of many registrations, licences and permits that will move to digital formats, as we co-design with community and industry groups on how we transition to digital drivers' licences.
- Have a single place to manage vehicle registrations, with automatic notifications, concessions automatically applied, and choose to pay, set for payment or make

payment arrangements through your ACT Digital Account. This would deliver fully digital interactions and reduce the need to send out paper notifications and reminders. This would be easier as payments would be a one touch experience.

These services will be designed end-to-end. This requires us to consider legislative, policy, process and people considerations in addition to technical ones. The ACT Digital Account demonstrates the inclusive, progressive and connected path we are providing for Canberra.

Managing requests from the community

Improving our response to requests from the community involves delivering seamless connections. We are doing this using cloud-based, digital platforms to provide a 'no wrong door' experience. A request, complaint or action will be assigned to the most suitable staff member or ranger based on factors including location, skills and equipment needs. Communication will be automated where appropriate. Streamlining these interactions is expected to deliver better outcomes for a growing community using the same workforce.

In 2020, these improvements will be delivered for Domestic Animal Service requests, with others to follow. We are on target to significantly improve the digital interface by streamlining the customer journey. For example, people will be able to register their dogs through the ACT Digital Account with digital reminders when registration is due to expire. This will mean more time in the field and less time in the office for rangers and improve response times for reports about dangerous dogs and other complaints.

In future, improvements in the management of other services are planned, including:

- household bins, rubbish, recycling and green waste collection
- community path networks including cycle paths and shopping centre pavements
- road maintenance, street lighting, street sweeping, stormwater, road and pavement resurfacing
- trees in Canberra's residential streets, as well as significant trees under the *Tree Protection Act 2005*
- graffiti reporting and removal
- playground maintenance and safety
- community bus services
- Transport Canberra bus incident management
- reporting abandoned vehicles
- reporting sharps in public places
- requests and complaints regarding use of public land
- sportsgrounds and facilities bookings.

A Digital Health Record for the ACT

Currently, the ACT Health Information and Communication Technology environment is complex with different systems used in the delivery and management of healthcare services. Work has commenced to implement a Digital Health Record that will be a single point of reference for a patient's clinical record and replaces disparate electronic and paper-based systems.

The Digital Health Record will transform the way that care will be delivered, improving clinical practice, patient outcomes and the patient experience as well as supporting wellness and care in the community. The Digital Health Record gives members of healthcare treating teams ready access to the information they need about the person in their care. It will integrate health information from across the ACT public health system so healthcare professionals can access richer information about the patient and improve patient care. It will assist high-quality clinical decisions and motivate patients to participate in their healthcare.

The Digital Health Record will enable real-time capture of information and access to historical information. Data analytics will also assist future planning of public health services.

More information is available at www.health.act.gov.au/digital/dhr.

What is the difference between the Digital Health Record and the Commonwealth's My Health Record?

The Digital Health Record has a different scope and purpose to the Australian Government My Health Record, but the two systems are complementary.

The Digital Health Record is a record of all interactions between a person and the public health system in the ACT. As such, it is much more detailed. It will contain records of observations, medications, data fed from devices such as infusion pumps and patient monitors, information on who is in which care facility bed, or which operating theatre and much more. It is a complete view of health care activities in the ACT public health system.

The Australian Government My Health Record is a summary of information about a person's health. This can be used by people and members of their healthcare team across public and private health systems and across all of Australia in a privacy centred way. It contains information such as medications, diagnoses, discharge summaries, diagnostic imaging and pathology results. This subset of data is essential for accurate and appropriate healthcare across the sector but is not sufficiently detailed to provide care to individuals on a day-to-day basis in a hospital or community health setting.

The law requires that health services providers collect and store information about patient treatments and conditions. This information is already collected via paper-based and other systems. The same information may be collected by other members of healthcare teams

such as general practitioners. The Digital Health Record consolidates that data in one place so that it is easily accessible by healthcare teams when they need it to provide patient care.

The plan:

This is an eight-year initiative funded from the 2019–20 Budget. The work has commenced and the first phase of the system is expected to be operational in 2022–23. Following the initial implementation phase, the program will continue for a further four years, to achieve the vision outlined in the ACT Digital Health Strategy 2019–29 (www.health.act.gov.au/digital/strategy). This may involve consumer and provider portals to improve access to the information held in the Digital Health Record.

In the shorter-term, the Digital Health Strategy outlines priority areas for investment. The Pathology Laboratory Information System will be replaced to provide reliable and accurate provision of pathology results with reduced turnaround times. In Canberra Health Services pagers have been replaced with clinical-grade smartphones and switchboards have been upgraded so that communications systems are reliable and easy. This reduces training times and makes faster and successful connections.

Choice-based Letting for Public Housing

Choice-based letting in social housing provides options for people to select properties more suitable for their accommodation needs as circumstances change. Similar to services available in the private rental market, people can browse properties and find available housing.

The ACT will be the first jurisdiction in Australia to implement a choice-based letting model in social housing and we expect to start the service in June 2020.

Schools administration system

A new, single school administration system is being implemented across all ACT Government's 88 schools. The ACT will be the first jurisdiction to do this as a system. The new capability has delivered wellbeing modules, academic reporting and electronic roll marking. Future capability will enable a direct digital connection between parents and schools. The schools administration system will enable improved data governance and record keeping.

Digital Education

The ACT Government recognises the importance of equipping ACT public school students with access to digital tools to support diverse learning needs, provide digital equity and to empower them to be confident leaders of the future.

ACT public schools emphasise the use of ICT and the development of ICT skills to ensure that their students can develop their capacity to analyse information, solve problems and communicate in a digital society. In the 17/18 budget the Government committed to invest $17.2million to deliver technology-enabled learning (TEL) to provide devices to all students in public high schools and colleges. This investment was in direct response to the needs of our students, who set out their clear expectations for fast, anywhere, anytime access to modern digital tools and services to meet their learning needs in a globally connected world. Chromebooks have now been offered to Year 7 to 11 students in ACT Public Schools as an opt-in in 2018 with 18,373 devices distributed to students under the program (at July 2019). In January 2020 there will be an additional round of approximately 3500 devices to go out to new students in the ACT. The supply of Chromebooks builds on an extensive program to ensure schools have appropriate technology for teaching for the future which includes high speed wi-fi for all our schools and the integration of Google Suite for Education which expands the tools available to ACT public school students, providing access to industry standard applications and collaborative tools. In addition to the supports for students to date, over 1000 public education staff have attended Google for Education professional learning events, including a range of short courses and three two-day annual Google Summits. Through 2020 the Education Directorate will continue to support teachers in schools utilise technology in their teaching to enhance the learning experience for our students.

Jury Management System

The apex of the justice system is the operation of the Supreme Court where members of the community can be required to make a direct contribution to the administration of justice in our Territory by serving as a juror. This initiative will deliver a new electronic solution to streamline juror selection and processes so interaction with the courts is simplified.

Integrated Courts Management System

The ACT Courts and Tribunal will utilise a new solution known as the Integrated Courts Management System (ICMS) to provide online services. An electronic lodgement facility for civil matters in the courts will enable members of the legal profession to lodge documents and pay related court fees online and to access information about their cases through the e-lodgement portal. There are a number of benefits for registered users including the ability to file documents with the court via the ACT Courts and Tribunal website, instead of having to attend the Court Registry. In addition, users will not be restricted to the operating hours of the courts as electronic lodgement will generally be available 24 hours a day seven days a week. The ICMS will also support interfaces with key justice agencies including ACT Policing and ACT Corrective Services to facilitate the quick and accurate exchange of information

relevant to law enforcement, community safety and the administration of custodial and non-custodial sentences.

Looking ahead – possible future initiatives

Birth of a Child

The ACT Government and the Department of Human Services are collaborating to design and test the feasibility of a seamless, digital end-to-end pathway for parents to register a newborn child.

The birth of a child requires new parents to register the birth with Births, Deaths and Marriages and obtain a birth certificate, enrol in Medicare and other relevant social services. This can require parents to provide the same information to multiple agencies at both state and federal government levels.

We know this is a stressful time and we don't want to add to the anxiety.

This initiative aims to collect information from parents once and automate the registration and enrolment processes as much as possible, creating simplified processes and better experience for people at a big moment in their lives.

The outcomes sought are to:

- remove the burden of form-filling for parents by re-using information that governments already hold
- establish an 'identity of integrity' that can be relied on
- ensure any solution for ACT can be extended to all jurisdictions.

Birth of a Child is now an initiative of the Australian Data and Digital Council.

VALUE AND PROTECT THE DATA WE COLLECT AND USE ON BEHALF OF OUR COMMUNITY

Globally, 'the amount of data we produce every day is truly mind-boggling. There are 2.5 quintillion bytes of data created each day[1] at our current pace, but that pace is only accelerating with the growth of the Internet of Things. Over the last two years alone 90 per cent of the data in the world was generated.'

We live in an increasingly digital world and that means data is everywhere. We create data touch points every day. We search the internet, catch up with friends on social media, shop online, catch public transport and, increasingly, undertake more complex and personal interactions with the health sector and social services.

Data is the lifeblood of the digital economy. 'Corporations have been the greatest beneficiaries from this data revolution. In 2006, oil and energy companies dominated the list of top six most valuable firms in the world, but in 2016, the list is dominated by data firms like Alphabet, Apple, Facebook, Amazon and Microsoft. Platform companies and data-aggregators capitalise on individual data by selling to advertisement networks and marketers looking to target specific segments, influence buyer behaviour and make dynamic pricing decisions.'[2]

Governments are increasingly becoming data savvy and leveraging open data for improving quality of life of its citizens by better design and targeting of welfare schemes, data-driven policies and improving participative governance.'

While there is value to be derived from data, personal data in the wrong hands can invade privacy and cause harm. The ACT Government safeguards data and uses it only for the purposes for which it was collected.   As we move forward discovering new uses for our data, we need to decide how to strike the best balance between the opportunities that present themselves, and the risks.

Personal information

Personal data is information that identifies us as individuals. It includes our names, addresses, dates of birth and other sensitive information that may be considered personal and private. This would include racial and ethnic origins, religious or political beliefs, income and financial status or health information.

Governments, as well as public and private organisations, collect personal information to provide services and perform regulatory functions. Australian laws prescribe how your

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[1] www.forbes.com/sites/bernardmarr/2018/05/21/how-much-data-do-we-create-every-day-the-mind-blowing-stats-everyone-should-read/#29dba36460ba
[2] www.weforum.org/agenda/2017/09/the-value-of-data/

personal information should be treated when being collected, stored and used. There are also laws and policies within sectors including education, health, transport and justice that cover personal information obligations.

De-identified data

De-identified or anonymised data is sensitive information that has had identifying information such as names, addresses and dates of birth, removed. Sensitive information is information that we may consider personal and private, such as our racial or ethnic origins, religious or political beliefs, sexual orientation, income and financial status, criminal history or the health conditions we have and medications we take.

De-identified data is used for a range of statistics, research and analysis purposes and can produce valuable insights. Simple, well-known examples include the correlation between smoking and Type 2 Diabetes to the percentage of road deaths that can be attributed to alcohol consumption. Insights like these often monitor trends over time, help to raise awareness of emerging issues in our community and focus attention on ways to address them.

Sometimes de-identification is difficult to achieve with certainty and there have been cases worldwide where data has been released publicly that has enabled the re-identification of individuals. Research has shown that most of us would consider that our sensitive information, if unable to be traced back to us as individuals, is ok to be used for these purposes.

This is a complex area which can be difficult to navigate for government staff who, want to serve our community well, and lawfully. In the 30-plus years Australia has had privacy laws, governments and, other public and private organisations have implemented, honed and continue to improve processes and systems to safeguard ensure the security and privacy of our personal information. ACT Government takes the privacy of personal information very seriously and has controls in place to test that data is appropriately de-identified before being used for these important purposes.

Non-personal data

Non-personal data is information that doesn't contain any personal data. The ACT Government collects non-personal data as a by-product of its daily operations. This includes data about the natural and built environment, traffic information, water levels and quality, soil quality, weather, bushfires and floods.

Such data is a key building block for city planning and for future economic growth and is considered the most important factor for the digital and data economy to unleash its full

potential. To fully reap the benefits, government and industry make this data open and available to others, for example, to academics to study or for businesses to leverage. This is good for society and our economy.

The benefits of sharing data

The ability to share personal data can allow us to identify potential issues and facilitate preventive actions before they impact on the community. The more information we can use to inform our actions, the more effective and timely the results can be. We know that there are some circumstances where, if data is not shared there can be tragic outcomes. Recent reports from royal commissions and enquiries have identified the need to share data in relation to protecting children and families. These include:

- the "*Review into the system level responses to family violence in the ACT*"[3] (2016) recommended:
  - creation of a collaborative and information sharing culture within the family violence sector that is focused on whole of family safety and early intervention.
- the Victorian Government Royal Commission into Family Violence [4](2016) identified that:
  - sharing information about risk within and between organisations, is crucial to keeping victims safe. It is necessary for assessing risks to a victim's safety, preventing or reducing the risk of further harm, and keeping perpetrators 'in view' and accountable.
  - despite the importance of information sharing, agencies in the family violence system do not share information routinely or systematically. A number of barriers impede organisations from sharing information, among them the complex legislation that governs privacy and information sharing, current information-sharing practices, and outdated information technology systems.
- the Royal Commission into Institutional Responses to Child Sexual Abuse[5] included 23 recommendations related to records and particularly related to data sharing is:
  - Recommendation 8.6 - The Australian Government and state and territory governments should make nationally consistent legislative and administrative arrangements, in each jurisdiction, for a specified range of bodies (prescribed bodies) to share information related to the safety and wellbeing of children, including information relevant to child sexual abuse in institutional contexts (relevant information). These arrangements should be made to establish an

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[3] https://www.cmtedd.act.gov.au/__data/assets/pdf_file/0010/864712/Glanfield-Inquiry-report.pdf
[4] http://www.rcfv.com.au/
[5] https://www.childabuseroyalcommission.gov.au/

information exchange scheme to operate in and across Australian jurisdictions.

The capacity to share personal data can streamline the services we provide. Your personal information is stored in many ACT Government systems, depending on the types of interactions you've had with us. This information is not shared between systems unless it is a permitted use of information by law. Information in some systems might be out of date or incomplete because it has been years since you've needed to, for example, register a dog. If you move to a new house or change your name, you currently need to notify government many times and on multiple forms, such as for car registration and for rates payments. If your circumstances change, for example you qualify for a concession card, you should be able to notify us once and ask us to apply those changes to all the related services we provide.

Data privacy and security – the risks

Personal data in the wrong hands can risk privacy, cause harm and may breach human rights. As our data continues to move from analogue to digital formats, we are putting greater security protections in place to control and monitor who can access and use the data.

But that doesn't mean that incidents cannot occur. The threats of cyber attack are increasing and systems and methods to mitigate these risks are constantly evolving. Protections include increasingly sophisticated data encryption, intrusion detection and monitoring methods.

The government adopts consistent, proactive and open communication in the event of a data breach, consistent with obligations under the Notifiable Data Breach scheme administered by the Office of the Australian Information Commissioner. We require industry bodies that gather data on our behalf to adopt the same care and consideration for protecting data.

New technology, faster networked computer power combined with artificial intelligence makes the searching of recorded closed circuit television (CCTV) footage for people or objects of a specific appearance faster and more accurate with less resources. This will enhance the ability of ACT Policing to investigate crime and bring those responsible to justice. However, the same technology could be used to identify a person with overdue parking fines. As citizens, we may accept one use of this technology as lawful and reasonable to keep people in the community safe, but we may not accept the same technology used for other purposes. We recognise the need to balance the use of the data we have access to against the need to protect people's privacy, security and wellbeing.

How to strike a better balance

Our vision is that people in the community trust ACT Government to safeguard personal information and make decisions to reuse your information to deliver better services to you.

We can achieve this by:

- making it clear how the information we collect is protected and used, particularly for all new services and every service we make changes to
- providing easier ways to manage your information and give or remove permissions. We will do this using the ACT Digital Account. As services become connected to your Digital Account, you can make choices
- asking your permission to reuse or share your information to deliver better services to you, for example, if you move residence, you can tell us your new address once and ask that we update this in all places we store that information. We will do this in a way that's easy to understand and helps you make an informed choice
- providing alternative options for people who choose not to have their personal information reused
- being open and transparent about data we use for research, policy and analytics purposes and how that data is protected and secured, particularly for new data analytics projects
- embedding a consistent 'privacy and security by design' approach to the development of new and changing services and ensure ongoing monitoring and detection is built into ongoing operations of these services
- collaborating with the community to help make the best-balanced choices around the ethical uses of data.

Open Data

Non-personal and de-identified data is not just a resource that helps us provide better services. It can also provide benefits to the community, academia and industry when it is published and open to access. This is called open data.

Open data, in its simplest term, is data that can be freely used, modified and shared by anyone. A common definition is data that is 'legally open', available under an open (data) licence that permits anyone to access, reuse and distribute; and 'technically open', data is available free or for no more than the cost of reproduction and in machine-readable and bulk from.

The data that governments hold is a strategic national resource. Where possible, safely releasing this data to the public as open data greatly increases the provision of new insights and better services. Some of the benefits associated with open data include:

- economic benefits from innovations, new business activities and reduced overheads

- community connections, communication and knowledge sharing in areas of public interest such as spotting endangered animal habitats in our parklands or creating community action groups around new areas of social concern
- developing better government services and more relevant experiences for the community, including:
    - improved customer experience of our service delivery by making it easier to find government services and assets
    - easier access to government services by incorporating feedback following service delivery
    - improved public safety by publishing data that allows people to choose how to make their lives safer or avoiding risky areas and activities.
- Better understanding of the built and natural environment in which we live, through location-based information and imagery

The ACT Government has had an Open Data Program since 2012. The program has resulted in new and innovative uses of data. We are long-standing supporters of community hackathons, such as the annual GovHack, where innovative ways have been identified of using open government data. These include alerting people when environmental conditions indicate possible high asthma attack risks, planning personal transport based on different transport preferences, deciding on best places to start a business and how to support community gardens based on socio-economic conditions and public transport routes. Over time we aim to publish more data of higher quality and in formats that can be read by machines. We will provide the community with easier ways to access and interpret the data.

What you told us

In 2019 we asked you 'if sharing data between different parts of the government resulted in better services for you, would you consent to your data being shared in this way?' This is what you told us:

> *Yes, but I need to have full intentional awareness of who has access to my data. It is not transparent at all.*

> *Yes! As long as I can track where my information is going, then yes of course!*

> *I would have no problem with my data being shared between different government departments as long as the necessary security infrastructure is in place.*

> *It depends on the data but on the whole, yes. I thought you already did this?*

> *Depends on what data would be shared? I don't see a huge issue.*

> *Yes I think that data used wisely could solve a lot of problems and make life easier.*

> *Yes - provided my consent is sought every time. For example, registering new pets, if I was asked 'do you want to use address data the ACT Government holds to help complete this application', I would say yes.*

> *Yes. The default should be open exchange between departments as long as it is being used for their legislative work pursuits.*

> *Yes. Many people assume that this already happens, and it can be frustrating when you need to provide or update your details to a number of different agencies. I think the exceptions would be health services and justice (for example, privacy for victims of crime). There needs to be different layers of privacy so that you can provide your details once, and the correct people are given access. If there was a way to share between territory and federal jurisdictions, this would also improve service.*

> *Data should be shared by default as long as appropriate controls are in place and data breaches are reported and transparent.*

> *Yes to sharing subject to legal and technical safeguards to protect privacy. Noting the size of the ACT Government workforce, consider that serious sanctions should be applied for breaches by ACT public servants and possibly compensation available to those that have their rights impinged. Provide or remove consent at any time would be important, as well as the opportunity to limit sharing to select or specified services rather than the provision of an all-encompassing consent.*

> *Yes. However, each instance of data sharing should be opt-in. This would enable people who are interested in receiving completely integrated services can receive them, and those who are not as interested in sharing their data can abstain.*

> *Depends on the nature of the information, the parts of government and the promised service improvement. Privacy safeguards would be extremely important. It would also be important what third parties had access to the information and what the controls are (e.g. the Medicare app shares location info with US companies and allows them to store and use it).*

- Qualified yes. I would need to know what is being collected and kept, how it is being used, shared and managed, ability to provide and remove consent, including to different types of data. Contingent on not being sold to third parties. Roles-based security and access to reduce human-related problems with breaches, especially in health. Interfaces need to be a lot less clunky and more usable across all services like library, Access Canberra, My Way. They're digital but hard to use and fragmented. Single sign on?

- Yes. But there is a lot of needless sharing of information. Identity is important to share, but I don't agree with data matching to better target rates and penalties.

- Yes, I will. However, I want my government to respect and protect my privacy. I also want to have the ability to opt-in or opt-out of services. I believe data sharing between agencies is needed to provide ideal digital services.

- Depends highly on the data being shared of course. But if the appropriate measures have been but in place to protect the end user's privacy, I would be happy to consent on some data being shared but, again, depends on the circumstances. I feel this question needs examples to provide a yes or no answer.

- I would consent to all my data being shared except private hospital and health data as that is very private, so password protected by consumer or two-factor authentication. I definitely think data matching in the ACT and data sharing will help the ACT Government catch out scammers and those not paying their fair share of tax. As well as help the CALD community understand the policies and rules easier and make it more accessible to overseas Australian citizens. :)

- Only if I was asked for permission on each and every occasion that the data was to be shared. There are obvious exceptions to this where emergency services have access to certain databases to obtain information as part of their daily duties, but outside that, no data should be shared without the express consent of the subject.

- Only with my explicit approval and knowledge on each occasion. I would be happier with a professional public servant operating under legislation approved in an open session of an elected body rather than outsourced to a for-profit multinational. (Dollar cost should not be the only consideration.)

- Maybe, as there is no reason why if both forced dual authentication security and highest SSL browser security is in place. Current state - a simple audit on well-respected SSL labs does show several state and national government agencies do not rate A+ on their SSL security and the most important element in a browser at the client level is not all citizens use the latest browser. Therefore, TLS versions need to be considered at the lowest common OS, such as Android. That has the largest issue.

- Yes. We can share anonymised data to support people better by learning about what is going on. Keep ethics in mind. Facebook already does this. Why doesn't government use our data for good.

- Yes of course, if it means I get continuity of care and great services - but as soon as I can be confident that public servants know what to do, they have the skills and

capabilities to work with my data and have access to digital tools that are secure and safe. But, given the high-profile data breaches around, how can you provide us with the assurance?

➢ *There's a difference between bringing in new technology and platforms, to, people willing to make the oversight, management and policy decisions to consult properly, honestly and transparently. From my experience, the ACT Government and ACT directorates can be closed and tight-knit in how they decide and respond. For example, a couple of years ago, one directorate rep told me an issue needed multi-agency discussion, but management intentionally wanted to shut that down; he was overruled.*

➢ *Absolutely. When I was young and had to use several government services, having to fill in the same information like tax details over and over again for government services was frustrating. It would make me feel more like a person than a number of some of my known details were there no matter what agency I was using. Treated like a person, not a number. (Even if I had a number).*

➢ *Yes. Very much so. It should be a choice. Those who want to participate, can. Those who don't want to, have to deal with longer processing delays. Give people the incentive of 'now' and the number of those who have privacy or technical concerns, will dissolve quickly. Everyone is time poor. Also look at technology advancement. If Apple think Face ID is safe, so can a state government.*

➢ *1. Yes I would consent. 2. Of course there have to be privacy safeguards. 3. Legally, you cannot deny me the right to remove my consent so of course you have to provide a mechanism for doing this.*

➢ *Yes 100000000% break down legislation and policy barriers and help save time and money.*

➢ *Yes. Always.*

➢ *No. I do not agree with this. There are many hackers out there and you cannot guarantee the safety of the data.*

➢ *No.*

➢ *Only if I explicitly agreed to each connection and sharing.*

➢ *No. I've already had my data stolen from two government agencies. I won't consent to my data being shared for any service again. The risks are too great for very little reward.*

➢ *No and any such move must include a long period to enable the withdrawal of consent prior to launch.*

➢ *Not until the individual services are massively improved, for example, secure local health system network, then build out from there.*

Current initiatives

These are some initiatives that we are working on right now that illustrate our commitment to valuing and protecting the data we collect.

Wellbeing indicators

The ACT Government is developing a Framework of Wellbeing Indicators to monitor progress across a broad range of areas that reflect the values of Canberrans and influence our quality of life. These indicators will need to be broad enough to encompass the various facets of wellbeing for the community, but specific enough that we can track progress and make policy or investment decisions using the insights gained. To do this, the Framework aims to draw on data and other information sources available from national data sets through to administrative data held by ACT directorates relating to programs they administer. Work will be undertaken to develop the data and other information sets to underpin our reporting. Data integrity, including robustness and privacy, will be important – particularly for reporting at geographic and population levels lower than the Territory as a whole.

Integrated Journey Planner

In 2018 we launched an integrated journey planner that provides an intuitive interface to help you plan your journey using multiple transport options (bus, walk, ride, drive). We also included dedicated school services. By July 2019 Canberrans had used this to plan 1 million complete journeys, indicating that the journey planner is useful and user-friendly.

What we plan to do:
In Phase 2 we will improve the commuter travel experience by providing real-time information, service disruption, service alerts, road and footpath closures, safe cycling routes and travel fares; all within a single platform.

Family Safety

Our family safety initiatives aim to improve how families with lived experiences of domestic and family violence are supported using better data collection and automation of reporting. By automating currently manual reporting processes, there is opportunity to free up staff to focus on supporting victims of family violence. Richer data on domestic violence can be used to provide insights into the characteristics and trends of domestic violence in the ACT; supporting improvements in the policy and service responses.

Proactive waterways management

This initiative seeks to improve the health of ACT waterways by integrating data from multiple sources and sensors including rainfall, stream flow and water quality. It enables analysis and reporting on the state of ACT waterways in near real time and development of

dynamic models of the ACT waterways. This can support a wide range of strategic and operational needs including land development, climate change, water-sensitive urban design and statutory reporting obligations. Future benefits include predictive modelling of outbreaks of viral gastroenteritis and algae blooms and enable early treatment to prevent public health risks.

Triple Zero to emergency

This initiative improves patient care and resource management by combining Ambulance and hospital Emergency Department data to give a complete picture of patient journeys from the initial Triple Zero call to arrival in the Emergency Department. By integrating data, the ACT Ambulance Service and ACT Health identify ways to reduce response times and improve quality and targeted patient-centred care.

Looking ahead – possible future initiatives

Understanding what has happened in the past can help prepare us for the future. To enable this we capture, manage and use data. Data that is captured and interrogated in real time allows us to model scenarios and implement actions or remedies before they become issues. This is related to how we provide services, how we manage the transportation system and how we manage our environment. We recognise and leverage the value of data, both internally and externally, including the by using open data and access to real-time data feeds.

The city infrastructure we develop will incorporate digital capabilities and be capable of providing information about how it is performing (for example, are street lights working) or what is happening around it (the temperature, wind speed, noise levels). This data will feed into other whole-of-city models that allow us to operate and plan for changes. It can also be used in times of emergency such as monitoring wind direction on the street lights, traffic flow from CCTV cameras and pedestrian traffic from Bluetooth detection to determine how best to respond; all in real time.

Our future will have different demands. Examples include the use of electric vehicles, the increase of suburban power generation, drone delivery and driverless cars. We will model what the effects of increasing numbers of electric vehicles requiring charging from workplaces and the flow-on impact on the electricity grid. Related to that will be the local generation of power in suburbs creating a virtual power plant that can be managed to provide power distribution where need, based on real-time data from multiple data sources.

CITY PLANNING - BY DESIGN – AND FOR WELLBEING

Canberra consistently has among the lowest unemployment rates in Australia. Our economy has grown faster than many other jurisdictions for several years. Since 2016, there has been combined economic growth of 12 per cent, creation of over 3200 new businesses and more than 16,000 jobs.[6] Our population is growing by around 8000[7] a year as more people are attracted to the unique mix of big city amenities, great local services and liveability. These indicators matter because a strong economy is fundamental to delivering a decent quality of life for Canberrans. Having a good, secure job, the ability to meet your family's needs and being able to plan for the future with confidence are the basics for a good life.[8]

The 2018 ACT Planning Strategy sets a vision 'to be a sustainable, competitive and equitable city that respects Canberra as a city in the landscape and the National Capital, while being responsive to the future and resilient to change'.[9]

Smart cities use data and technology to achieve sustainability, efficiencies, economic growth and enhance wellbeing factors for the people who live and work there.[10] Smart cities are easy to get around in and are places where it's easy to access work, education, services and leisure. A smart city uses seamless digital technology to enable connection and innovation.

Our desire for Canberra is for it to be liveable, sustainable, resilient and open to all. This means that it is easy to get around and easy to access work, education, services, leisure and activities. Canberra is a knowledge city that can attract and retain talent and investment, can develop the education and training jobs of the future, allows business to diversify, grow and partner. Most importantly, it means Canberra supports diversity, equality and accessibility. To be a smart city, is to put the wellbeing of the community as the top priority, it's digitally connected and inclusive.[11]

Planning of our city needs to consider how we plan to grow within our existing urban footprint. For each urban renewal, or new suburb development we need to ensure we:

- facilitate the creation of connected communities that are socially and culturally inclusive
- provide for a range of activities and amenity, including for older people, children and those with disability

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[6] https://apps.treasury.act.gov.au/budget/budget-2019-20/budget-news/the-2019-20-act-budget-shows-our-economy-is-strong,-growing-and-increasingly-diverse
[7] https://apps.treasury.act.gov.au/budget/budget-2019-20/budget-news/the-2019-20-act-budget-is-building-for-canberras-future
[8] www.andrewbarr.com.au/news/latest-news/measuring-a-healthy-canberra/
[9] www.planning.act.gov.au/act-planning-strategy
[10] https://en.wikipedia.org/wiki/Smart_city
[11] https://publications.csiro.au/rpr/download?pid=csiro:EP184039&dsid=DS1

- create balance between public and private spaces, urban and natural landscapes, parks and outdoor amenities
- enable business investment and economic growth opportunities
- plan for a range of active and accessible transport options
- support greater diversity and choice in housing
- consider aspects of privacy and safety
- adapt to a changing climate and establish resilience in our built forms
- look after our natural resources and become environmentally sustainable
- use existing infrastructure (for example, electricity, water, sewerage, communications networks) efficiently and make smart choices about when to invest in new infrastructure.

Striking the right balance for developments to achieve these outcomes is complex. It's harder to retrofit than to design-in from the beginning.

The Canberra of the future will be co-designed. With the community, and teams within and beyond government with expertise across the range of amenity, from lived experience, engineering, parks and wildlife, utilities, traffic, water, community services and technology. This is needed to ensure we plan and design to achieve all the things we want from a new or renewed development.

Data is core infrastructure that enables everything else. It helps us understand how the city is working today, predict changes that need to be made to address hotspots or cater for emerging needs, provide better services and understand if changes have been effective.

What you told us

In 2019 we asked you 'if you could build your ideal city, taking maximum advantage of digital technology, what would it look like?' This is what you told us:

➢ *A city enabled by technology. Driverless cars would reduce the need for car parks in city centres.*

➢ *My ideal city will offer: safety, connectivity, trust, jobs, education, and a lot of things to do for all age and construction in general - energy efficient - well connected with rest of the world.*

➢ *It's hard to see how citizens really influence what seems like an 'already decided' government. Reports should include dissenting or different views too.*

➢ *If one is unable to access technology, how can one benefit from it?*

➢ *Information boards for public advice (transport, news, events, alerts). Interactive data online (city statistics). Ability to build on collected data to create better concrete services (health, transport, etc.).*

➢ *The ideal city would support work from home and work hubs that people can use.'*

➢ *Technology should be about making life easier, not harder.*

➢ *Use of AI on routine issues to enable more personalised services at complex levels. continue to provide analogue options, publicly accessible tech hubs, for example, libraries, Access Canberra sites.*

➢ *Technology and people focused. Helpful, friendly and caring.*

➢ *For me digital is about enabling and enhancing human connectivity and relationships and helping us to feel a sense of belonging here in the ACT.*

➢ *Increased library opening hours for access to internet for those unable to do so otherwise. Perhaps computer stations in health centres or hospitals.*

➢ *Technology for vulnerable [people] that is readily available and easy to access.*

➢ *I think an interactive map of the ACT that you could choose what services you wanted. Like playgrounds, BBQ areas, picnic areas, off-lead dog areas, etc.*

What our staff have told us

Our staff are involved in all aspects of city planning, from creating maps of our city, managing municipal services, to approving development applications and planning our open spaces. We've spent time talking with our staff to gather their feedback on what great city planning means to them. This is what they told us:

➢ *People want to be able to see what developments have happened in the past as well as the current are being developed.*

➢ *Engage with architects, certifiers, engineers to challenge us all to develop data-driven approaches.*

➢ *Our paper-based systems are very basic. Our challenge is how to digitise what we are currently doing.*

> *Our current capabilities don't match our ambitions for the city.*
> *High-value data is not always collected in ways that can be reused.*

Current initiatives

These are some initiatives that we are working on right now that illustrate our commitment to co-design and planning for and with the community.

Place Intelligence Dashboard – City Renewal Authority

The Place Intelligence Dashboard is a real-time place analytics and automated reporting platform aligned with 17 place-performance indicators within the City Renewal Precinct, of Dickson, Northbourne Avenue, Haig Park, Civic and West Basin. The platform will display and aggregate big data to inform city planning, design, place-making, place management and capital projects. It is a digital reporting tool to track change over time and ensure our work is informed by, and measured, using place-based information and insights.

The Place Intelligence Dashboard will provide benefits such as:

- data-based insights to drive urban renewal
- real-time analytics using the place-performance indicators
- automated performance reporting
- tracking changes over time to measure effectiveness
- precinct-wide and sub-precinct reporting.

Unified geospatial ecosystem

The ACT Government's location information is housed and maintained on hard drives and servers spread across directorates. For example, the road centrelines are maintained by one directorate where another has information about the road surface, heavy vehicle routes and speed. This makes it difficult to understand the breath of information ACT Government holds and supply comprehensive open dataset. The migration (or linking) of location information into one searchable location will ensure better analytics and insight as well as streamline decision making based on authoritative data.

To solve this, ACT Government are building an Enterprise GIS System called the "Geospatial Ecosystem". This Ecosystem will support a single interface and storage of all authoritative ACT location Information, such as foundation data (address, admin boundaries, transport, etc), asset, environment and infrastructure. This will enable a clear picture of the data available for analysis and provide a platform for open data and applications (such as ACTmapi). The system and content will form the foundation for a future Digital Twin.

3D Canberra Planning Tool

The Environment, Planning and Sustainable Development Directorate (EPSDD) has created a 3D planning tool with help from Australian company, Urban Circus Pty Ltd. Using this tool, planners and designers can experiment and explore the impacts and opportunities of planning decisions including building heights, setbacks and plot ratios, and to gain a first-person perspective of how proposed developments will transform the streetscape and the city. Known as 3D Canberra, the digital model allows for 'on-the-fly' 3D testing and visualisation of different planning and development scenarios; for example, how buildings fit into the streetscape, how the shadows change throughout the day, and how transport integrates into the wider environment.

The 3D Canberra planning tool is based on 3D laser scanning technology (LiDAR) that measures distance by illuminating a target with a laser light. The 3D Canberra planning tool is regularly used by government for the assessment of large-scale developments, in discussions for the National Capital Design Review Panel, stakeholder meetings, community engagement activities, master planning projects and planning studies.

Community hubs

Canberra's public libraries are not just a place to borrow books, they provide you with access to the internet, WiFi and devices to connect with others and the rest of the world. There are computer and technology sessions to teach you how to use the technology of today. Our libraries also provide access to electronic resources such as ebooks, digital magazines and newspapers.

YourSay Community Panel

The YourSay Community Panel has made it easy for you to have your say and help shape Canberra's future. Joining this online panel gives you another way to share your views on a wide range of topics and informs our decision-making. Input received through the YourSay Community Panel helps shape the policies, programs and services that make Canberra a great place to live. It will also allow us to test new ideas with a statistically representative sample of the Canberra community.

This initiative helps determine current priorities and emerging issues. It offers a way forward for enhanced citizen participation in decision-making and policy development. The YourSay Community Panel complements the YourSay Community Conversations website, which will continue to be our primary place online for community conversations about particular issues. In contrast, members of the YourSay Community Panel will regularly be asked for views and opinions on a whole range of topics.

Looking ahead – possible future initiatives

A digital model of Canberra

In the future, we will know how our city works, be able to forecast the impact of future developments on aspects of our built and natural environments and address undesirable ones before development begins.

We will bring together the information we have on our city – like land, building plans and materials, environmental flows and traffic to create a model of Canberra; a 'digital twin' that reflects how our city works

As the world becomes increasingly digital, so does infrastructure design, construction and asset management processes. Digital Engineering and Building Information Modelling is transforming the infrastructure sector with innovation and increased efficiency in delivery. The model of Canberra includes key design and condition information for physical assets above and below ground as well as legal boundaries to better manage current and future developments.

A digital model of Canberra could be a strategic public asset. We could use it to forecast the impact of a development on the existing built and natural environment. Building developers could use it to help design and refine their building development applications, armed with greater knowledge about the existing infrastructure. Local communities could see the development virtually in 3D before it is built, enabling real-time feedback to designers who can incorporate enhancements. A digital model of Canberra supports city planning by design.

Our future city:

- is designed with community and industry
- is designed to be inclusive and accessible to all, including those without digital technology
- uses connected technology that can monitor and report on what is occurring within the city
- can use data to make services more efficient, and make best use of the resources we have
- enables developers and community to see the impact of proposed changes
- can use technology to model changes in the city to enable Canberra to be more liveable, sustainable, resilient and safe
- tests, and trials new and emerging technologies
- is seen as being a city of choice to support a diversity of new and growing industries

As a citizen –
- I am brought into the planning process at a stage that enables me to co-design the solution. I can make an impact on what Canberra of the future can be
- I am able to see what changes are being proposed in a format that makes sense to me, such as a 3D computer model. I can use this to see what the impact of planned changes are to me and my community

As a developer –
- I can provide plans to the government in a digital format that is based on an industry standard. This will save me time as well as making it easier for government to assess my plans
- I can use a digital model of Canberra to plan my project and consult with the community. This makes my plans easier to test and better align with the expectations of the community.

Community and digital hubs

Public libraries are a great resource for connecting people in communities and providing access to digital technology. However, their locations may not be convenient for people who live in some parts of Canberra. Looking ahead we're working with community services organisations at options to expand community hubs to other locations, to improve access to digital technology and create a sense of connectedness and belonging.

Finding and booking the use of public places

We manage the city's public places and facilities and provide easier ways to book and hire a range of public amenities for your community or other functions. These include parks and barbeque spots, sportsgrounds, community and school halls, campgrounds and cottages.

We are exploring ways to make it easier to find these facilities and to book them for your functions. Ideally, we'd integrate access to these services in the places you would naturally search. For example, ACT Parks and Conservation has listed both the Nil Desperandum homestead in Tidbinbilla and the Ready Cut Cottage in Namadgi on AirBNB, which is where many people search for accommodation. Alternately, or perhaps in addition, we may enable the booking of any public amenity from one place.

STRATEGIC RELATIONSHIPS WITH INDUSTRY GROUPS

We live a time of rapidly changing technology. This creates new opportunities for businesses, particularly in the knowledge economy. It also creates challenges and opportunities for governments and society.

The ACT Chief Minister's Statement of Ambition[12] states:

- 'This government understands the unique potential of Canberra's governance and scale, and how it can improve outcomes for the community and business. Everything we do is about integrating and breaking down government silos and opening up to partners in business and the community'; and
- 'the global economy is re-focusing on knowledge, innovation and talent - and Canberra has a head start. Knowledge businesses everywhere are locating close to where the talent wants to live, work and cluster.' 'Jobs follow smart people and talent to the places they want to be: liveability is now core to Canberra's economic offer.'

'A knowledge economy is an economy in which the production of goods and services is based primarily upon knowledge-intensive activities. In the knowledge economy, a large portion of economic growth and employment is a result of knowledge-intensive activities. A knowledge-intensive activity involves the collection, analysis and synthesis of information. Success in a knowledge economy requires a commitment of both workers and firms to continually learn and to increase their skills and expertise, which will foster innovation.'[13]

'A knowledge society generates, shares and makes available to all members of the society knowledge that may be used to improve the human condition. A knowledge society promotes human rights and offers equal, inclusive and universal access to all knowledge creation.'[14]

Our vision is of a connected, vibrant and active community, supported through strategic relationships between government and industry groups, sharing information and keeping our fingers 'on the pulse' of our society.

We will continue to be open to new ideas and to trial new technology.

We will continue to grow our relationships with education providers, our understandings of how knowledge and skills are translated into the workforce and work together with employers to evolve the learning mix to keep pace with future needs.

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[12] http://www.cmd.act.gov.au/__data/assets/pdf_file/0006/865482/Canberra-A-Statement-of-Ambition.pdf
[13] https://study.com/academy/lesson/knowledge-economy-definition-lesson-quiz.html
[14] https://en.wikipedia.org/wiki/Knowledge_society

We will continue to support the Canberra Innovation Network to empower entrepreneurs and provide connections, networks and knowledge to help them get a start in a thriving competitive industry.

We will reach out to established digital businesses to learn about services and the challenges faced. We will share government priorities, strategic directions and other knowledge and intelligence for mutual strategic benefit.

We will co-design future government services with business and industry groups to ensure we reduce regulatory red tape. At the same time, we will improve the integrity of our compliance regimes.

We will partner with community services organisations to optimise services provided to the people in our community who need them the most. Joined-up community services optimise our resource investments and ensure people don't fall through gaps in service delivery, and we can improve wellbeing, inclusion, connection and amenity.

Canberra - a hub for trialling new ideas

Canberra is building a reputation as a place with highly educated and technology savvy citizens with a progressive government and is a good place to trial new technologies. In the future, we will continue working with business, citizens and academics to understand the potential of emerging technologies and provide the conditions to safely trial and learn.

The **CANdrive project** was co-designed with the Australian National University and the University of Canberra to test new technology and enable one of Canberra's growing knowledge companies, Seeing Machines, to develop its value proposition in a real-world scenario. This enabled Seeing Machines to strengthen its leadership while helping us understand the emerging technology and how and why regulation may need to change.

The **drone delivery trial by Wing** has been testing drone delivery in Australia since 2014 and has conducted three trials around Canberra. Factors for Canberra's selection included the international reputation of the Canberra-based Civil Aviation Safety Authority as one of the most safety-conscious, innovative aviation regulators in the world. Other considerations included Canberra's per-capita income, its scattered suburbs, digital savviness and talented and experienced unmanned aviation workforce.

We understand there are different opinions about the benefits of drone delivery. People welcome the speed and ease of drone delivery for small items that reduces car costs and lowers greenhouse emissions. Others have concerns about noise, invasion of privacy and adverse impacts on wildlife. In response, Wing has developed a quieter engine and altered flight paths. The Department of Infrastructure, Transport, Cities and Regional Development

has revised its determination that drones were not captured within the Air Navigation (Aircraft Noise) Regulations 2018.

Trials enable a better understanding of the effects of new technology in a controlled way. They enable better decisions about future use and regulations needed for those technologies, and capture the community's views and values so that adjustments can be made.

The success of CANdrive and Wing builds Canberra's reputation as a great location for trials that may involve complex interactions between companies, regulators and the community. They put Canberra on the map as an advanced forward-thinking city with a commitment to finding positive opportunities and positive outcomes for new technologies.

These trials help to attract talented people to Canberra. Cities that are open to and embrace 'disruptive' technologies and new business models generate economic development opportunities. This approach can create competitive advantage and new business opportunities, attract investment and build knowledge economy businesses of the future.

Building the workforce of the future

We work with industry and education providers to understand the skills required in the future and establish courses and initiatives that provide industry-ready graduates in Canberra. We know Canberra has enviable liveability and that those who are educated here are likely to stay if the right employment opportunities are here too.

In the past, we worked with representatives from industry and education to prioritise entry-level cyber security courses at the Canberra Institute of Technology (CIT). Skills Canberra contributed funding and CIT worked with vocational education providers in Victoria to establish Certificate IV and Graduate Certificate courses. We prioritise cooperation in these areas and invite employers of graduates to provide feedback on the value provided through the courses as well as their suggestions for strengthening the course for improved outcomes.

In addition, we will continue to support Canberra businesses to upskill their staff through programs like the Future Skills for Future Jobs Program. This program identifies the skills of the future, such as digital and cyber skills, and seeks innovative proposals from Canberra businesses to prepare their staff for advanced training.

What you told us

In 2019 we asked you what you thought were the digital skills and digital businesses of a future Canberra. This is what you told us:

- *Enable closer work between industry and education sectors, more on-the-job funded training. Yes, CIT and uni's have a good starting point, but more can be done.*
- *Digital literacy, digital transformation, start-ups, venture capital and government grants. The best way to develop these skills is from our universities and schools.*
- *Microsoft and the tech-likes have internship programs to help train young people in STEM.*
- *In a digital world it doesn't matter where I live or work. So we need to not lose sight of the non-digital aspects of an attractive place to live and work.*
- *Create digital hubs for non-government industries and offer them tax incentives. Make fast internet a right (and pay for it via local taxes). Working from home should be encouraged. I'd like to see augmented reality being applied more often to all sorts of activities (including transportation and shopping).*
- *Encouraging the growth of software development industries, including corporate software, video games and consumer apps, where there is a growth in remote workers and in leveraging our knowledge workers through our local university campuses. We need to particularly focus on developing skills for these industries in women, Aboriginal and Torres Strait Islander people and people from migrant backgrounds, to ensure a well-rounded and inclusive industry.*
- *Skills: UI/UX. Cybersecurity. Data analytics. Effective communication (sciences > policy > public). Businesses: Internet providers (and associated infrastructure). Data collection. Data storage. The government should be looking forward to identify these skills and identifying appropriate ways to skill citizens up. Provide incentives. Invest in the people who will carry the future.*
- *Hold sessions for members of the public to upskill in digital skills through libraries and community centres. Ensure IT equipment available to the general public in such locations is maintained and of an acceptable quality rather than dated.*
- *We need to invest in technology at CIT and the universities. There is a lot of uncapped potential. We need to encourage and support new ideas. Many of the new businesses that we will have in a decade haven't even been thought of yet.*
- *There will be a substantial reduction in traditional shopfronts, very few surviving in a virtual world. For those that do, transactions will be virtual rather than bricks-and-mortar. Middle parties will pervade (Uber Eats, online retail), requiring businesses to not have digital strategies, but just strategies incorporating this. The government needs to be able to allow the establishment and dis-establishment of businesses quickly, as many will now be transitory and only virtual.*
- *High-tech business hubs, incubators (partner with CIT and unis?). Education and assistance for individuals to develop second income streams/jobs/microbusinesses,*

for example, ebook publishing, app development, monetising blogs/Instagram/Youtube, online sales of services and physical goods. Focus on making Canberra and the region an EXCELLENT location to live so that 'digital nomads'/high income, location-non-dependent workers chose to live and raise their families here. Encourage remote worker hubs.

➢ *That is something for the private sector to work out as demand and opportunities present themselves. Governments should not be trying to influence that.*

What our staff have told us

We asked our staff what we have been doing to foster Canberra's digital economy and ensure that we understand and provide skills of the future. This is what they told us:

➢ *Our job is to help new businesses take advantage of the opportunities posed by advancing technology. Better digital connectivity is making new kinds of businesses possible.*

➢ *The government should focus on providing the backbone – the services and infrastructure to enable the digital economy. It should also remove unnecessary regulation and make the remaining regulation streamlined, designed for business and easy to use.*

➢ *We are working with CIT and the universities to ensure that skills development opportunities match the knowledge economy.*

➢ *We have had success when we work with industry to provide targeted support to explore emerging opportunities. The CANdrive automated vehicle trial is one example, the Virtual Power Station is another.*

Looking ahead – possible future initiatives

City Lab, Digital Hub, Community Hub

We will actively engage with industry, academia and the community to develop better services and outcomes for you. Key to this is working collectively on a shared problem or opportunity. We will use this environment to test the ideas and innovations we co-create and design.

We will provide equal opportunity for people who do not have access to technology to access digital channels. Our libraries offer access to technology and digital resources, as well as non-digital information formats. They play a role supporting those who need assistance using technology.

Thriving networks with industry and academia

Government helps to foster networks between businesses, government and education institutions that are fundamental to achieving outcomes.

In the future, we will continue support for the Canberra Innovation Network, which is an important genesis point for these collaborations. In a similar way, the Canberra Business Chamber will provide the links between mature businesses and across government, industries and academia.

We will look for opportunities to connect directly with industry and academia. This could include an industry forum where technology and digital companies can come together, learn about ACT Government priorities and provide feedback to improve the way we work together. For example, an area could be the extent to which the digital skills taught in schools and universities are transferrable to industry placements. Or reviewing ways to trial and implement new digital technologies or new ways of working between government and industry. Or how we can develop standard ways of working together to digitise work done by industry for government that allows best reuse for future city planning, social inclusion, increased liveability and ongoing investment. Working together to develop strategic partnerships can help identify new opportunities that can bring benefits.

Our engagement with and support of industry needs to be at all stages of the development of a business; from ideas to start-up to growth and maturity. We will engage with and grow Canberra's industries. We will also work with our innovation sector, such as the Canberra Innovation Network, to foster and grow digital industry capabilities.

We will also bring our focus on co-design, citizen-centred and socially-inclusive approaches to all our work with industry and academia.

Digital Submissions

We will be actively engaging with industry and academia to understand specifications of submitting 3D digital data for infrastructure, buildings and property envelopes. This data will assist in building a comprehensive accurate Digital Twin.

Additionally, understanding how a mix-use multistorey complex is structured in 3D will ensure clear relationship between commercial, residential and common areas. As a resident you can also identify where your car park/garage/storage is within the building.

RESHAPING THE GOVERNMENT OF TODAY – BUILDING THE GOVERNMENT OF THE FUTURE

We remain ambitious in the desire to create an inclusive, progressive and connected Canberra, taking advantage of technology and data to achieve measures of wellbeing for the people and measures of prosperity for businesses. Success depends on continuing to evolve the knowledge and skills of government, the methods and processes used to deliver needed change and making clever and sustainable choices about technology investments.

Our focus areas

Invest in our people

For government to be citizen-centred, transparent, data-driven, trusted and innovative, we need to create the conditions for staff to be constantly learning future-ready skills on-the-job. The biggest challenge is finding ways to create the space for our staff to learn new skills and build on these through practice.

The skills are a combination of knowledge-based and other skills and include:

- leadership
- adaptability and openness to learning
- community-centred and customer service orientation
- design-thinking and approaches to managing change
- active listening, communication and story-telling
- understanding the value of data and the ability to analyse and use it
- collaboration and teamwork, within, across and outside of government
- program and project management
- critical thinking and analysis
- procurement and contract management
- curiosity and creativity
- privacy and security
- change management.

We will invest in our staff to build these capabilities, at all levels. We will do this through a combination of formal training, on-the-job learning, guidance materials and story-telling. For example, the ACT Digital Program is using contemporary design and program management methods using a multi-disciplinary team across government to deliver Working with Vulnerable People reforms. We are working to progressively build a Data Governance and Management Framework to build awareness of the value of data and guide people as they evolve their data-management practices. We are working across jurisdictions to share intelligence and resources on leading digital transformation and building the future workforce.

Design and co-design are the way we manage change

Community-centred design approaches help us deliver change that meets community needs, because you've been involved in helping to shape and design the change. Other key features include:

- clarity of outcome - everyone working on change understands the outcome to be achieved and who the beneficiaries are; as each project evolves, we test against the outcome to ensure we're on target
- holistic design - this considers people, process, place, technology, communications, user experience, data, policy and legislation that contribute to success to build coordinated and integrated policy and service delivery
- multi-disciplinary teams - offer greater perspectives and expertise so creating a change meets the outcome, reduces burden in the community, is sustainable for government to administer and doesn't create unintended consequences
- design governance - supports informed decision-making and provides opportunities for government and senior leaders to understand how a change is planned to be implemented, identity positive and negative effects and allows for adjustment before more expensive build and implementation phases.

Full-Service ICT

The ACT Government has achieved significant efficiencies in the delivery of Human Resource, Finance and ICT functions through a Shared Services model. Under this model the government has delivered a common desktop environment, adopted a 'cloud first' strategy, moved a number of business systems into the cloud, and strengthened the maturity of our technology lifecycle management processes.

Our approach has delivered the technology foundations that support a philosophy of 'one ACT Government'. However, the business of government continues to evolve, along with the services we provide to the community, requiring ongoing investment in new technologies.

Like many other governments and large organisations, we are challenged with the pace of technological change and the investment required to maintain, decommission or renew the vast array of applications required to support our front line services.

The next phase of our technology strategy needs to focus, where it makes sense, on:

- continuing to evolve strategic approaches to ICT investment
- consolidating common functions onto core platforms and building new solutions from standardised, reusable components
- where appropriate, centralising the management and support of core applications.

Applications and software services are the technology interface to our community, and our staff. Their databases house the data that's so important to the future of our community, and their business rules and workflows either work together to achieve a good result, or work against useability and productivity. To optimise the use of our resources we will progressively utilise more commodity ICT services to enable our people to focus on:

- building deeper knowledge of ACT Government business streams
- participating in multi-disciplinary co-design teams
- configuring standardised Software-as-a-Service (SaaS) solutions to support common government processes
- evolving our software solutions to address changing community expectations.

Strategic approach to ICT investment

The ACT Government supports the community and everything we do in government is supported by technology. Many of the services we deliver require collaboration between and across ACT Government agencies. Historically systems have been designed along organisational boundaries.

Our future ICT investment decisions are being informed by government priorities and understanding our existing technology estate, including the challenges of adequately resourcing maintenance and upgrades. Cross-government integration is a key objective and we are creating a whole of government business, information and technology architecture and roadmap to guide our decisions.

Identification of system capabilities and understanding how these support the community and functions of government, will enable us to identify systems that perform similar functions for consolidation over time, and the ones that perform niche functions that need to be preserved or enhanced.

Responsive procurement

The fundamental principles of government procurement are to be transparent, fair and ethical, while delivering value for money to the Territory in the goods and services we purchase. We must ensure that we create and maintain competition for our business.

Our procurement processes in the ACT need to continue to evolve to keep pace with the changing way that goods and services are sourced and provided in an ever-changing digital marketplace. A traditional Request for Tender process is time-consuming and costly for government to prepare and for industry to respond to, and is not always the best way of delivering the desired outcome for the government. There are other ways that government

can ensure probity of process, and structure broad participation in a competitive test of the market without presenting disproportionate hurdles for businesses.

In technology procurements, smaller companies don't always have the resource base to compete with larger companies on tender responses, even though their products or service offerings may be competitive. At the other end of the procurement scale, larger companies may choose not to respond to an RFT if the value of any arrangement is not enough to warrant the investment of time and resources in developing that response. The challenge in employing the appropriate procurement method, therefore, is one of better matching the outcome being procured to the capacity of a respondent to put forward their offering. Better managing respondent information that has already been provided will result in reducing respondent costs and allowing RFT documentation to focus on meaningful evaluation criteria.

The traditional Statement of Requirements, in which we are encouraged to conceive and list everything that we might want in detail, gives way to less prescriptive outcomes-based procurement practices, where we define clearly the outcomes we're seeking to achieve, and any broad parameters within which this must be done such as time, cost or in consultation with various parties. This approach encourages innovation and places a stronger emphasis on evaluation of responses against the strategic need of the Territory, and provides a level playing field for businesses of any size to compete.

In technology procurements, the traditional engagement with a software company to design and build a product to a set of specifications, has given way to software as a service. These are either purchased as complete subscription services, or as platforms that can be configured to meet virtually any need.

The role of our procurement experts continues to evolve to facilitate compliance with our procurement framework as a by-product of helping to achieve good procurement outcomes. Specifically, the unique value add would be:

- better understanding of the business needs. Engage beyond the annual procurement plan, develop relationships in directorates to better understand needs and what approaches to market are being planned to procure goods and services
- build on a contemporary knowledge of the market. Understand the industry that is out there. Keep tabs on comings and goings – who has been bought and sold, who is financially sound and who has delivered well. Who are the indigenous businesses and what goods and services do they provide? Who has secure work certifications? This knowledge and intel should be researched, cultivated, documented and built upon. To do this well also requires strong relationships with the vendors
- ensure there is a range of established mechanisms to allow appropriate testing of the market for all goods and service types

- ensure there is a skilled capability to contribute to tender evaluations and complement technical and operational expertise in the business area, such as in assessment of financial viability and taxation and other regulatory compliance
- encourage the move to a stronger principles-based procurement framework including legislation, policy, practice and protocols
- enhanced understanding of, and provision of advice to directorates on form of contract and best practice in contract management.

Privacy and cyber security

The threat of cyber attack is increasing and our systems and processes to mitigate this risk is constantly evolving. Our work plans fall under four priorities:

- Educate and advise on cyber risks across ACT Government.
- Continuous improvement of the technical security posture of the environment.
- Ensure we protect critical assets and data.
- Ensure we respond to incidents as effectively as possible.

Our cyber strategy includes committing to a proactive stance by looking ahead to understand new threats and putting measures in place to make our systems resistant to attack.

We will outline how we will use data to build a safer Canberra, while maintaining and enhancing the privacy principles we are committed to. We will develop a whole-of-government CCTV strategy that will outline how we will consolidate and manage CCTV data and use it to safeguard you. We will consult with you when we do this so that we know your expectations and get the balance right by protecting privacy while making best use of the data collected.

We commit to being transparent about security breaches if and when they occur. We understand that your trust in government is fundamental and necessary for digital transformation and that being open builds that trust.

Governance

Strategic Board

The Head of the ACT Public Service is the chair of the Strategic Board. The Strategic Board is the peak ACT Public Service forum that leads the delivery of cross-directorate and strategic issues. The Strategic Board provides whole-of-government leadership and strategic direction to the ACT Public Service, including leading the digital transition.

This Board comprises all Directors-General and other whole-of-government roles, including the Deputy Director-General, Workforce Capability and Governance; the Deputy Director-General, Policy and Cabinet and the Chief Digital Officer.

Strategic Board meetings are held on a fortnightly basis.

Digital Services Governance Committee

The Chief Digital Officer is the chair of the Digital Services Governance Committee, which is a sub-committee of the Strategic Board. The Committee provides strategic direction, leadership and advice the development and management of our information and technology assets. The Digital Services Governance Committee strengthens the whole-of-government ICT portfolio investment management by taking a service-wide, citizen-centric approach and looking for ways to share information and resources.

The Committee comprises representatives from all directorates and meets monthly.

Data Steering Committee

Currently, the Director-General of the ACT Health Directorate is the chair of the Data Steering Committee, which is a sub-committee of the Strategic Board. It provides strategic direction, leadership and advice on the development and management of our data assets. The Data Steering Committee drives our data-management reform agenda, including building data analytics capabilities and implementing whole-of-government data-management practices to leverage the value of its data holdings.

The Committee comprises representatives from all directorates and meets every six weeks.

Current initiatives

Here is one of the initiatives that we are working on right now that illustrates our commitment to reshaping the government of today.

Human Resource Information Management Solution

We will deliver an ICT solution that optimises payroll service integration with effective people management. This will increase efficiency, improve service delivery and allow us to take a strategic approach to managing our people. The solution will change how we understand our workforce needs, from recruitment to separation. The comprehensive solution integrates payroll and human-capital management, streamlined and harmonised business processes including staff skills and talent planning, recruitment, learning and development, performance management, career planning, compensation and human resources analytics and reporting.

WHAT WILL THE FUTURE LOOK LIKE?

Canberra of the future

In 2017 the University of Canberra's neXus Research Centre published the Knowledge City Index Report[15]. The report examined 25 cities across Australia and analysed each of them according to its knowledge capital (the underlying knowledge infrastructure of a city) and knowledge economy (the knowledge activation within a city). Canberra was rated third on this list, with the report highlighting:

- *Canberra stands out as one of Australia's leading knowledge cities, despite its comparatively small population and employment bases. It has higher proportions of its population with both knowledge capacity and who are actually working in the knowledge economy than any other city.*

This 'comparatively small' population is one that is growing. The ACT Population Projections 2018 to 2058[16] point us to some challenges and opportunities heading into the future.

- by the year 2022 the ACT population is projected to reach over 452,000 people from the current (2019) 420,000.
- we are projected to reach 500,000 by 2029 and 703,000 by 2058.

As the Knowledge City Index Report showed, Canberra is well placed for digital/technological revolution and knowledge transition but how can we harness the benefits of this population growth, while at the same time maintaining our reputation as an Inclusive, Progressive and Connected city? A **great** city is more than just an economy – it is one where all citizens, from Nobel laureates to the most disadvantaged, feel valued and included and have access to opportunities to grow and prosper.

A growing population is more than just the numbers. The shape of our community, and our city, will also change. We will age, we will look for different places, and ways, to live. We will seek out new employment opportunities and new ways to travel between our homes, schools, places of work and places of recreation.

By following the principles outlined in this Strategy, we will ensure that everyone has a say in what that future looks like. A commitment to ***community-centred services*** means that we always consider how digital will impact on the most vulnerable in our communities to ensure Canberra remains an inclusive and welcoming city – and design services in a way that augments but does not replace face to face interactions for those that need them. By ***valuing the data we collect and use on behalf of our community*** you can be confident that

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[15] http://www.canberra.edu.au/research/faculty-research-centres/nexus-centre-for-research/research-progeammes/research-programs/research-areas/the-knowledge-city-index-a-tale-of-25-cities-in-australia/kci-files/A-Tale-of-25-Cities-in-Australia-PDF.pdf
[16] https://apps.treasury.act.gov.au/__data/assets/pdf_file/0005/1305581/ACT-Population-Projections-Paper-FINAL.pdf

the decisions we make are evidence-based and transparent. *City planning – by design and for wellbeing* facilitates the creation of connected communities that are socially and culturally inclusive, building a future Canberra that is more liveable, sustainable, resilient and safe. Continuing to *build strategic relationships with industry groups* will grow and diversify our economy, ensuring not only that future Canberrans have the skills and education they need, but also that Canberra becomes a city of choice for new and evolving business to start up, experiment, grow and prosper.

FUTURE CANBERRA – the view from here

This Strategy sets the direction for our digital transformation. In a few short years, by 2022 for instance, we know our population may have increased to over 450,000. We know that new technologies will be impacting on our way of life, how we travel, communicate and interact.

Here is what a day could look like in the future in Canberra.

A Day in the Life of Canberrans

Jodi wakes up to a sunny Canberra day. Like most people, the first thing she checks is her mobile phone. It holds all her important information. She sees that her rates are due this week as well as house insurance later this month. She wants to make sure she has enough money in her account to cover the costs as well as take a weekend away. She logs into her ACT Digital Account and authorises a payment plan that spreads out payments across the month.

Her family is very environmentally conscious and owns an electric vehicle. They also have solar cells on the roof connected to a local power grid. Jodi quickly checks their schedule for the day and decides they need an extra charge on the car before heading off. As they draw on the power, the data is sent to power distribution companies as well as government to model impacts on other parts of the city.

Al operates a small business in Canberra and has been thinking about a new product that might be a success but isn't sure how to progress. He notices a post from the ACT Government that has information on what the government provides. It also has information on how to test ideas with the public. Al logs into his ACT Digital Account and registers interest in getting some assistance.

As Peggy is looking at her phone, she notices an alert on work that is planned to occur in her local park. Peggy has expressed interest in what happens in her suburb and has been invited to participate in a co-design session between the government and her community. Peggy is interested and uses her phone to check her calendar with available times being offered via the ACT Government engagement app.

A couple next door are looking to add an extension to their house. Their neighbours have been automatically alerted through their government account. They click through and see the plans in 3D. They also take their mobile phone outside and are able to see what the extension will look like and see what the effect of the shadows will be on their property at different times of the year.

They are also alerted about a new apartment complex close to their parents. Their parents have retired and are concerned about what the impact on them might be. They call up the Canberra Digital Twin and inspect the planned development. They are easily able to see what the effects are from shadows being cast, the traffic flow, public transport, noise and water usage.

As Remy was driving home, she got an update from her mother's smart device indicating she might have forgotten to take some medicine. Remy makes a quick call to her mother to check if everything is ok.

Jane lives in Gungahlin and has just passed her driving test and received her new licence digitally to her smart-phone. She is keen to visit her friends in Woden and checks the integrated travel planner which says with current traffic it will take her 25 minutes. She decides to travel into Civic and jumps on light rail. She simply walks on as her smart phone is connected to her digital account and with beacons on the light rail vehicles they know when she enters and exits and automatically charges her for the transport.

Jane has now finished college and is considering CIT to look at courses relating to the designing of web-sites. She logs on to act.gov.au and in the search bar 'what courses are available to build web-sites' the web-site interprets the question and know she lives in Gungahlin and has a car registered to her shows courses that are available at Bruce and what the best kind of transport is available to her that is both time efficient but also the best outcomes for the community and environment.

Jane decides to move out on her own and logs into act.gov.au and clicking the link that says 'I'm about to move' and puts in her new address. The system automatically changes the address for a number of services including her drivers licence, car registration, her dog registration and updating CIT for her contact details.

Frankie and Riley have registered with their school to receive updates on their children's progress. They receive updates on their phone about grades and announcements about excursions. They also see there is an assignment to better understand Canberra and propose a new idea to improve the city. The parents know the ACT Government has published many open datasets as well as a digital model of Canberra, so they suggest using that as part of the assignment.

As Arnay is driving home from work, he notices there is a lot of building and road works happening in Civic. When he gets home, he checks into the ACT Government dashboard

where he can see all works planned, under way or completed. He notices planned road closures for the next month and spends some time on the transport journey planner choosing alternative routes to work.

DRAFT

Report Card

The following projects were identified in the 2016-2019 Digital Strategy:

Initiative	Description
Data Lake and Analytics	What we said: The establishment of a whole of government Data Lake and an associated analytical capability. It is based on an incremental approach starting with the social sector and broadening its capture to provide appropriate and effective information sharing to support operational reporting, frontline staff support and business intelligence. It will also be the platform for Open and Community Data. Status update: The Office of the Chief Digital Officer established the ACT Data Analytics Centre. The Centre consists of a team of data experts, a scalable data analytics platform and associated governance arrangements. The purpose of the Centre is to enable better services and policies by using data more effectively. The platform is being used for a range of projects from enhancing operations and practice to discovering new insights from integrated data. The Data Lake has robust security and privacy controls to ensure that access is restricted to specific datasets for specific users. Data is partitioned in the lake and access-based permissions are in place. Currently this is only used for government data. In the future this will become the platform for publishing open and community data as well.
Cloud Infrastructure Migration	What we said: The transition from on premise servers and storage to public cloud-based servers, storage and platforms. Status update:

	This project has achieved its target of establishing two Cloud options (Azure and Amazon Web Services) and migrating the majority of our systems onto them. Automating deployments of infrastructure has also led to increases in efficiency. This work is ongoing as we continue to transition the remaining servers and storage to the Cloud as appropriate.
iConnect Program – (now ACT Digital)	What we said: iConnect is the platform on which all online and digital services will be orchestrated and delivered. This includes offering personalised anytime, anywhere engagement with government via any device with an Internet connection. Service capabilities include digital mailboxes, end-to-end transactions and bill payments, service reminders and automatic payments. Status update: ACT Digital (formerly known as iConnect) is a capability that allows people to prove who they are to government once and be able to access a range of services applicable to them. We are following the principle of 'tell government once' and co-designing services on ACT Digital to make life easier for Canberrans. Four services were delivered on the platform in the first year (listed below) and more than 8000 Canberrans had signed up for their ACT Digital Account. *Rental Bond Help* Housing ACT's Rental Bond Help offers eligible people interest-free financial assistance to enter the private rental market. *Infringement transfer* This Access Canberra service is for people to declare and re-assign their infringement notice to another person if they were not in possession or in control of the vehicle at the time of the offence.

	My Family The Community Services Directorate's My Family Service, a central place for people to tell their story once, update it and share it with services they access. *Diversity Register* The Office for Women ACT Diversity Register supports diverse representation on government boards and committees by promoting membership, training and networking opportunities.
One Service One Experience Initiative	What we said: The One Service One Experience initiative supports the provision of joined up customer experience and digital solutions for our community now and into the future. The initiative will enhance service delivery by establishing a common customer service platform within Access Canberra and deliver more online services. Status update: This initiative is now complete. As at 1 July 2019 there are 385 online transactional services which allow 1252 service options at Access Canberra. 203 of these transactional services are enabled for businesses. This brings a total of 284 new online transactional services added since the commencement of this initiative in 2015. On average, a new online transaction was made available every five days for the past 4four years. The percentage of transactions completed online (excl web sessions) was 66% in June 2019, at commencement of the initiative it was 47%. A total of 7.3 million online transactions were completed over the four-year period (excl web sessions). The percentage of transactions completed online (incl web sessions) was 85% in June 2019. A total of 20 million online transactions were completed over the four years (incl web sessions). Overall customer satisfaction with Access Canberra online services was 88% in 2019.

Access Canberra Intelligent Regulator	**What we said:** This is a project to make it easier for citizens and business when they may need a number of regulatory approvals. It will firstly redesign and consolidate approvals needed in the liquor and motor vehicle sector. Building on this capability, Access Canberra will use this platform to apply the same model to other industry sectors. **Status update:** Liquor Licensing approvals will be delivered in the first quarter of 2020. This will make it easier for businesses to obtain liquor licences by: • reducing travel and waiting time in Access Canberra service centres by providing automated self-service options online • reducing the time and effort required to apply by providing a simplified application process • enabling the government to provide quicker response times and a faster overall approval process • giving businesses visibility of where an application is up to in the process online, at any time.
Smart Modern Strategic Procurement Reform Program	**What we said:** Procurement reform is key to the Digital Strategy and this program will re-engineer our processes to modernise all aspects of procurement. **Status update:**

The primary goal of the SMS Program was to achieve Whole of Government Savings, with additional operational benefits obtained specifically in relation to the initiatives implemented. The program closed on 30 June 2019. Key initiatives and their benefits described below:

Contractor Central

This initiative involved automating contingent labour hire and further controlled costs associated with agency fees. Besides savings, the scheme allows single system access by all hiring managers across the Territory, giving an efficient mechanism to hire contingent workers and provide greater transparency of hiring practices and spend.

- Multi-Function Devices – The Territory contracted Ricoh for the Whole of Government supply of multi-function printing devices, which also included 'follow-me-print' capability where printing only occurred when the staff member swiped their access card at the printer. Research indicated that the follow-me-print function significantly reduces printing activity per person.

- Digimail – This contract has been largely utilised by Access Canberra to digitise their bulk mail notices. The program has saved manual processing of many notices to date and the agency has generated savings from this investment.

- OSQAR – The Territory has developed a new simple procurement tool that will navigate and manage procurements under $200,000. The tool is now in implementation stage and provides a 'wizard' like approach to developing and executing simple procurements. The tool will be more user friendly than its predecessor and promote better procurement practice, particularly in those with less procurement experience.

WhoG Electronic Document and Records Management System (EDRMS)	**What we said:** This project will result in a cohesive whole of government digital recordkeeping platform, increased recordkeeping efficiency and compliance, and support greater value creation from government information. **Status update:** The whole of government recordkeeping platform is in place, and additional deployments are continuing across the ACTPS, with the aim of having up to 8,500 users of the system by July 2022.
eDevelopment	**What we said:** This project is to replace and enhance the current development application (DA) and building approval (BA) system. It will provide an easy and convenient way to lodge applications anytime and anywhere via any device with internet connection. **Status update:** The project is continuing following a gateway review process in late 2018. The current phase will overcome technical constraints with underpinning legacy systems and data migration. It will also include a replacement for the Construction Licence database and other features to assist the regulation of building quality. It will also include an upgrade of the planning website that publishes development applications.

Engagement HQ (now the YourSay Community Panel)	**What we said:** Community engagement exercises are resource-intensive and typically only manage to engage time-rich segments of the community. Engagement programs are delivered more efficiently utilising interactive online engagement software that offers diverse outreach mechanisms, 24/7 feedback opportunities and time-saving analysis and reporting tools. **Status update:** The YourSay Community Panel was launched in July 2019, and has made it even easier for Canberrans to have their say and help shape the ACT's future. Input we receive through the YourSay Community Panel helps shape the policies, programs and services that make Canberra a great place to live. It also allows us to test new ideas with a statistically representative sample of the Canberra community. The YourSay Community Panel complements the YourSay Community Conversations website, which will continue to be our primary place online for community conversations about particular issues. By contrast, members of the YourSay Community Panel will regularly be asked for views and opinions on a whole range of topics.
ACTMapi System	**What we said:** ACTmapi system is ACT Government's public facing web mapping and services portal, the system is designed to make it easier to access and utilise ACT government location information by the ACT government and community. **Status update:** ACTmapi continues to be the ACT Government's popular public facing web mapping and service portal. Over the last year alone, 1.1 million views of ACTmapi have been recorded (1 July 2018-30 June 2019), with an average of over 20,000 views by industry and the community per week. On a single day in December there were 42,519 views following the launch of the flood prone area on ACTmapi.

The content of ACTmapi has significantly increased in the last three years, additional applications include:

- searching Education's priority enrolment areas

- providing interactive Flood prone areas

- providing a simpler Land Custodianship map

- enabling Place names search by location and name/key words

- providing a centralized location for historical Imagery

- searching Sport and Recreation by location or sport.

ArcGIS Online	What we said:

What we said:

This initiative is a core component of the ACT Government's spatial environment. ArcGIS Online allows all facets of ACT Government to collect, administer and publish maps and data online either through ACTmapi (ACT Government's Web mapping tool) or through ArcGIS Online shared services internally. There are currently 90 accounts within ArcGIS Online that service 150+ users. A key function of ArcGIS Online is to ensure ACT Government spatial data is accessible and harvestable, via metadata from other systems and through other channels.

Status update:

ArcGIS Online now has 758 users ranging from rangers to building inspectors to emergency services. This system enables our field workers to do a site inspection and record their work on a mobile device on site and have that record geotagged and uploaded to ACT's Geospatial Data Catalogue. This is efficient and easy to use, saves worker time and improves the quality of records. The system holds over a thousand applications ranging from

	playground inspections apps to temporary road closures form. ArcGIS Online is also used as the platform for the ACT's Geospatial Data Catalogue which holds close to 200 datasets which are updated on a regular basis.
Digital Plan Lodgement	What we said: Historically both subdivision plans (Deposited Plans—DPs) and Unit Plans (UPs) have been drafted on plastic film and lodged manually for registration at the Land Titles Office (LTO). Other than the final lodgement all processing of Subdivision and Unit plans is carried out digitally and the final plan is scanned and distributed digitally both within government and to the public. Storing and archiving these film plans is becoming a problem and it is proposed to implement digital lodgement of the final plans which will enable complete digital processing and tracking of the plan from lodgement to registration. Status update: Deposited Plans are currently lodged in PDF format for examination. Once the examination is complete the PDF is digitally signed, using secure signature, by the surveyor and then by the Surveyor-General as part of their certification of the plan. The plan is then stored and subsequently lodged digitally for registration with Land Titles. Units Plans are currently held on film. By 1 October 2019 all Unit Plans will need to be on paper and PDF. Currently there is still some requirements for paper plans. Once registered, the scanned PDF of the paper Unit Plans will be the point of truth. It is intended to migrate to PDF only as soon as possible.
Imagery Program	What we said: Updated aerial imagery is essential for addressing issues relating to the impacts of climate change, disaster management, water security, environmental management, urban planning and infrastructure design. The geospatial ACT government community will coordinate the capture of regular (more than 3 times a year) imagery

	for ACT, this will increase efficiencies by reducing field work and streamline government process. This program is still in its scoping phase, but there are clear benefits to coordinating a whole of government imagery capture.

Status update:

ACT Government signed a three-year contract with Spookfish in 2019 to capture four images per year (seasonal) over the urban area and in late spring over the entire ACT. The imagery will be available publicly through ACTmapi web services under a creative common by attribution license "ACT Government and Spookfish". The first imagery was flown in February 2019.

This information is valuable not only for government but for the community too. Having access to quarterly imagery will allow business to target certain areas that require their business such as landscapers, roof repairs or solar panel installation. Having regular imagery will ensure a clear sequence of change across ACT and help with monitoring environmental and infrastructure changes.

One key benefit for government is providing high resolution recent imagery into the Emergency Triple Zero call centre at ESA. This will greatly enhance the ability for 000 call takers to locate the exact position of an emergency as well as assess best access for responding emergency crews. |
| Geocoding | What we said:

ACT Government makes critical business decisions based on location information. Before you can analyse, extrapolate or profit from location information, the data needs to be geo-located. Geocoding is complex, and mistakes in geocode assignment can lead to poor business decisions. The ACT Government needs to ensure all addressing databases is geocoded for better geospatial statistical analysis. The geocoding system would also assist in the validation of addresses.

Status update: |

	The Territory has successfully negotiated an annual contract with PSMA for Geocoding services. This will ensure Access Canberra smart forms will have predictive authoritative addressing. The Geocoding contract is managed through Customer Experience and Design, Access Canberra. More work is needed to clean up existing databases that contain address or block identification. This will mean that citizens will have their addresses predicted while typing them into AC online forms, as well as being automatically verified to a central source of truth. It ensures that addresses are correct and known.
Revenue Collection and Concession Payment Transformation	What we said: The Revenue Office is replacing its revenue collection and concession payments systems with a single platform as part of a three year transformation program. This will deliver better, faster and smarter digital services to make transactions easier and more efficient for customers and staff. Improved services will include online access to billing information, electronic rather than paper bills and self-assessments. The new platform will also integrate with systems being used by partner agencies. Status update: Under the ACT Revenue Office (ACTRO) Transformation Program, duties and payroll tax were moved to a new IT platform and three new digital services introduced: • self Service Portal that handles Payroll Tax and a range of other forms-based taxes; • rental Bonds portal for Agents and Lessors to lodge bonds and request refunds; and • betting Operations Tax portal. Business process were transformed to improve efficiency and enhance the customer experience, including the introduction of Barrier Free Conveyancing which has eliminated a number of touch points with government

	when paying duty on a property transfer. The ACTRO will continue to enhance its digital offering to customers through its ongoing IT upgrade program.
University of Canberra Public Hospital (UCH)	What we said:

The University of Canberra Public Hospital Digital Program of Work is currently under development, however the Infrastructure Program provides an opportunity for substantial organisational and service delivery change, in addition to the provision of new infrastructure. One of the four key pillars that underpins this program is the inclusion of innovative digital technologies to enable and support future models of care and service delivery. There are a number of key innovation areas that are under consideration for consumers including:

- moving to electronic medical records to allow for a seamless transition for consumers between services;

- next generation patient entertainment to ensure consumers' requirements are met; and

- mobility enabled future allowing consumers to connect.

Status update:

The program has delivered a number of digital capabilities to the University of Canberra Hospital, with some work ongoing.

Digital Patient Room Boards were implemented providing information about the person in the bed, their care team and alerts specific that that person.

Wayfinding kiosks have been installed, making it easier for consumers and visitors to find their way around the hospital. These kiosks will deliver electronic check in for outpatient appointments to complement the staff performing this function. |

	Computers on Wheels were implemented to enable access to clinical systems at the patient bedside.

Patient Journey Boards and a Bed Management tool have been developed that will assist with patient flow from acute to the sub-acute hospital of UCH. These will be implemented in 2019/20 along with Digital Education Content to assist in patient self-care for specific rehabilitation conditions. |
| Health-e-Futures Program | What we said:

In an environment of increasing demand and complexity, new and innovative ways of delivering health care are required to increase efficiency, quality, safety and productivity. Digital information and communications technologies are key components of responding to these dynamics while continuing to deliver high standards of health outcomes. The Health-e-Futures Program established in 2009-10 was a $90 million investment in e-health capacity and ICT infrastructure. The objective of this program of work is to deliver digital technology innovations that put the customer at the centre of the solution. Patient Centric solutions being delivered as part of the Health-e-Future Program include:

- clinical systems that provide a consolidated, secure, shareable patient-centric health record enabling information to be available to the right person at the right place and time;

- support services that use technology to efficiently manage the resources which support the Health Directorate in the areas of patient administration and service delivery, staff management, food services and bed management; and

- digital health infrastructure to provide the foundation to bring existing infrastructure to the standards and capabilities necessary to support future technologies.

Status Update: |

	This program is in the last year of delivery with the last component being rollout of clinical systems at the Centenary Women's Youth and Children's Hospital, the Adult Mental Health Unit and the Hume Health Centre at the Alexander Maconochie Centre. Multiple clinical systems including Electronic Medication Management, Electronic Ordering for Pathology and Radiology, Alerts Management, the new Clinical Records scanning solution (Clinical Patient Folder) and the nurse led Walk In Centre Application have been delivered. The infrastructure across the Canberra Hospital and Health Centre campuses has been upgraded to Medical Grade Networks with redundant fibre links. Supporting applications have been delivered in the food services, rostering and patient administration areas which have helped to standardise systems across the Territory and improve efficiencies in the administrative space.
Integrated Library Management System	What we said: The objective of the project is to replace Libraries ACT's outdated, inefficient and unstable library management and RFID systems with an integrated and robust solution that will increase staff productivity, improve library user experience and provide a robust platform for future enhanced, digital, user-centred services. Status Update: The system is being delivered, with the first phase being the installation of replacement self-service kiosks and return chutes. In the final phase users will have access to a new and improved library catalogue which will allow them to search resources in one place including e-books and digital material as well as create alerts so they know when material of interest is available. This will make libraries easier to use and enable customers to do more. The system is expected to be delivered during 2019.

Transport Canberra and City Services (TCCS) Asset Management System Replacement	What we said: The objective of the project is to transition from an aging 'locally hosted' to a contemporary 'onshore cloud hosted' Asset Management System (AMS) for TAMS, that currently manages some $10 Billion worth of Infrastructure Assets which could be scalable to meet whole of government asset management requirements. A contemporary asset management system would have the capability of combining 2D/3D intelligent infrastructure models and point clouds with engineering information and asset performance management. This capability would more effectively enable the integration of TAMS Asset Data with other government initiatives like Capital Metro and the 3D modelling of the Northbourne Avenue corridor. Status Update: The system is in full production and progressing well. The system is expected to be in delivered completely by June 2020.
Transport Canberra and City Services (TCCS) Project Wise for ACT Government (Cloud Based)	What we said: The objectives of the project are: - create and manage a common project and data environment across an organisation or whole of government; - maximized value across the organisation - inform project stakeholders and enterprise systems in a more consistent, timely and predictable manner using high-impact deliverables; and - timely and actionable participation - synchronise collaboration and comments to resolve issues quickly and effectively returning feedback in context to all the relevant designers.

	The 'Onshore Cloud Hosted' Project Wise portal will mean an increase in collaboration not only between TAMS business units, but with the consultants and developers submitting works, documents and information to TAMS as well.

Status update:

This is fully functioning. A review is planned to map out the future of this system. |
| Transport Canberra and City Services (TCCS) Automated Summary Works as Executed Portal | What we said:

The objective of the project is to deliver higher quality, more accurate, timely and up-to-date asset information that will significantly enhance the directorate's asset management, planning and decision-making processes. This project supports critical government initiatives such as Open Government and Digital Canberra which will greatly facilitate connectivity between industry and the ACT Government in a way that will streamline current work processes. The outcome of this process will allow for greater efficiencies in data management handling and subsequent information management and dissemination to asset managers and key stakeholders.

Status update:

This has been fully implemented and has been extremely successful and exceeded both Government and Industry expectations. |

The following projects were also completed during the period of the previous Digital Strategy:

Initiative	Description
CBR Free WiFi	Overview Initiated in 2014, CBRfree is now used by around 40,000 Canberrans and visitors per month. CBRfree has grown to cover outdoor areas around all of Canberra's town centres. It is now one of the largest free, public WiFi networks in Australia, second only to Melbourne CBD. Status update This has initiative has been a success but at the same time we recognise that CBRfree is now in its 5th year and over that time the costs of mobile data for consumers has reduced considerably. Corresponding use of CBRfree peaked in 2018 and is now declining. It is timely to undertake a review of the program and plan its future.
Robotic Process Automation	Overview Robotic Process Automation is emergent technology that can be applied to free up staff from repetitive data entry work. We proactively engaged with this new technology and as a test case applied it to one of our heavy repetitive manual processing tasks – the processing of new Working With Vulnerable People (WWVP) applications each month. Status Update The test case worked well and we gained an understanding of how and where to apply this very useful technology. We also learned that this is a stop-gap measure on the way to full end-to-end digital service delivery. The WWVP checks are a good example. We used RPA in this case to save processing time on a manual process. More ideally we would completely re-design the process to be truly digital end-to-end and remove the need to repetitive manual processing altogether. This is the next step for WWVP checks and we will deliver this via the ACT Digital Account by 2022.
Single Public Face 2.0	Overview

	The Single Public Face 2.0 initiative unifies branding and design across all ACT Government websites. These guidelines have been implemented across government and the public will notice a more consistent, one government look and feel.
	Status update Beyond the SPF2.0 initiative there is still significant work required to shift architecture to user-centred design, and to continue to archive old sites and content. The ultimate goal is to apply user-centred design and shift content from 'by directorate' to 'by topic' to make it easier for citizens to find what they want online.
Integrated Journey Planner	**Overview** In 2018 we built and launched an integrated journey planner that provides an intuitive interface to help Canberrans plan their entire journey with multiple travel mode options (bus, walk, ride, drive). We also included dedicated school services **Status update** Phase 1 is complete. Phase 2 will further improve the commuter travel experience by providing information such as real-time information, service disruption, service alerts, road/foot path closures, safe cycling routes, and travel fares, all within one single platform.
Learn Anywhere Program	**Overview** We are committed to providing public school students with Information Communication Technology (ICT) that is fit for the learners of today. Our students expect reliable access to learning from wherever they are and whenever they need it. They expect to: • access real-world learning platforms that are easy to use and familiar to them, so they can learn, create, communicate and collaborate from anywhere • connect to reliable high-speed internet, so they are connected to learning, their teachers and each other as a learning community

	• use their own personal device of choice, so their access to learning is personalised and follows them wherever they go.
School Administration System	**Overview** A new, single school administration system is being implemented across all ACT Government's 88 schools. The ACT will be the first jurisdiction to do this as a system. The new capability has delivered wellbeing modules, academic reporting and electronic roll marking. Future capability will enable a direct digital connection between parents and schools. The schools administration system will enable improved data governance and record keeping.
Sportsground Booking System	**Overview** System to book sportsgrounds. We have made it easier for over 200 organisations and thousands of users to book their playing field for an hour, a day or a season. The new system has been designed with users in mind, automates the workflow and communication back to the citizen and replaces an outdated web form process.
Parks Resource Allocation System	**Overview** The Parks and Conservation Service works with the Emergency Services Agency, with the Rural Fire service and with the SES to manage wildfires as well as a resource intensive Hazard Reduction Burn program either side of the fire season. These programs require sharing of people and resources from many locations and many workgroups. The new online system enables managers of those resources to see them, and to plan and share them across multiple events and respond in real time to rapidly changing priorities.

Current initiatives

Initiative	Description	Digital Direction
ACT Digital	**Overview** The ACT Digital Program, funded in the 2019/20 Budget, will change the way people apply for Working With Vulnerable People registrations (WWVP), and services, and comply with the changing screening requirements of the National Disability Insurance Scheme. **Benefits** In 2020, you will be able to register for a Working With Vulnerable People card through your ACT Digital Account and provide consent for the criminal history check, through the convenience of your mobile device. Face to face and phone services will still be available and should also provide faster results. In future years the ACT Digital program could deliver improvements such as the ability to: • Prove eligibility for concessions once - such as pensioner, veterans, seniors' card, student - and have concessions applied automatically for all connected services. • Advise of changes to circumstances once - such as change of address, sale of a car, registration of a dog -— and have this update all systems that rely on currency of information. • Purchase and use the new integrated light rail and bus tickets from your ACT Digital Account, receiving automatic concession pricing, SMS style messages or notifications if the rail or bus is running late, or if you need to top up payments. • Receive your rates and land tax notifications, with concessions automatically applied, and choose to pay, set for payment or make payment arrangements through your ACT Digital Account. This would deliver fully digital interactions and reduce the need to send out paper notifications and reminders through the post. • Have a digital Working With Vulnerable People registration, available to present to any employer or official via your mobile device. WWVP/NDIS would be the first of many registrations, licences and permits that will move to digital formats, as we co-design with community and industry groups on how we transition to digital drivers' licences.	Community

	Have a single place to manage vehicle registrations, with automatic notifications, concessions automatically applied, and choose to pay, set for payment or make payment arrangements through your ACT Digital Account. This would deliver fully digital interactions and reduce the need to send out paper notifications and reminders. This would be easier as payments would be a one touch experience. These services will be designed end-to-end. This requires us to consider legislative, policy, process and people considerations in addition to technical ones. The ACT Digital Account demonstrates the inclusive, progressive and connected path we are providing for Canberra.	
Managing Requests from the Community	**Overview** Improving our response to requests from the community involves delivering seamless connections. We are doing this using cloud-based, digital platforms to provide a 'no wrong door' experience. **Benefits** A request, complaint or action will be assigned to the most suitable staff member or ranger based on factors including location, skills and equipment needs. Communication will be automated where appropriate. Streamlining these interactions is expected to deliver better outcomes for a growing community using the same workforce. In 2020, these improvements will be delivered for Domestic Animal Service requests, with others to follow. We are on target to significantly improve the digital interface by streamlining the customer journey. For example, people will be able to register their dogs through the ACT Digital Account with digital reminders when registration is due to expire. This will mean more time in the field and less time in the office for rangers and improve response times for reports about dangerous dogs and other complaints. In future, improvements in the management of other services are planned, including: - household bins, rubbish, recycling and green waste collection - community path networks including cycle paths and shopping centre pavements - road maintenance, street lighting, street sweeping, stormwater, road and pavement resurfacing	**Community** **Data** **Foundation**

	- trees in Canberra's residential streets, as well as significant trees under the *Tree Protection Act 2005* - graffiti reporting and removal - playground maintenance and safety - community bus services - Transport Canberra bus incident management - reporting abandoned vehicles - reporting sharps in public places - requests and complaints regarding use of public land - sportsgrounds and facilities bookings.	
A Digital Health Record for the ACT	**Overview** The Digital Health Record will transform the way that care will be delivered, improving clinical practice, patient outcomes and the patient experience as well as supporting wellness and care in the community. **Benefits** The Digital Health Record gives members of healthcare treating teams ready access to the information they need about the person in their care. It will integrate health information from across the ACT public health system so healthcare professionals can access richer information about the patient and improve patient care. It will assist high-quality clinical decisions and motivate patients to participate in their healthcare. **What we plan to do** This is an eight-year initiative funded from the 2019–20 Budget. The work has commenced and the first phase of the system is expected to be operational in 2022–23. Following the initial implementation phase, the program will continue for a further four years, to achieve the vision outlined in the ACT Digital Health Strategy 2019–29 (www.health.act.gov.au/digital/strategy). This may involve consumer and provider portals to improve access to the information held in the Digital Health Record.	Community Data Foundation

Choice-based Letting for Public Housing	**Overview** Choice-based letting in social housing provides options for people to select properties more suitable for their accommodation needs as circumstances change **Benefits** Similar to services available in the private rental market, people can browse properties and find available housing. The ACT will be the first jurisdiction in Australia to implement a choice-based letting model in social housing and we expect to start the service in June 2020.	Community
Digital Education	**Overview** The ACT Government recognises the importance of equipping ACT public school students with access to digital tools to support diverse learning needs, provide digital equity and to empower them to be confident leaders of the future. **Benefits** ACT public schools emphasise the use of ICT and the development of ICT skills to ensure that their students can develop their capacity to analyse information, solve problems and communicate in a digital society.	Community
Jury Management System	**Overview** The apex of the justice system is the operation of the Supreme Court where members of the community can be required to make a direct contribution to the administration of justice in our Territory by serving as a juror. **Benefits** This initiative will deliver a new electronic solution to streamline juror selection and processes so interaction with the courts is simplified.	Community

Integrated Courts Management System	**Overview** The ACT Courts and Tribunal will utilise a new solution known as the Integrated Courts Management System (ICMS) to provide online services. **Benefits** An electronic lodgement facility for civil matters in the courts will enable members of the legal profession to lodge documents and pay related court fees online and to access information about their cases through the e-lodgement portal. There are a number of benefits for registered users including the ability to file documents with the court via the ACT Courts and Tribunal website, instead of having to attend the Court Registry. In addition, users will not be restricted to the operating hours of the courts as electronic lodgement will generally be available 24 hours a day seven days a week. The ICMS will also support interfaces with key justice agencies including ACT Policing and ACT Corrective Services to facilitate the quick and accurate exchange of information relevant to law enforcement, community safety and the administration of custodial and non-custodial sentences.	Community
Child and Youth Record Information System	**Overview** Phase 1 will replace the legacy child protection systems and youth justice systems known as CHYPS and YJIS and will be completed at the end of 2019. Phase 2 will include early intervention areas of Child and family Centres and Child Development Services and will be completed by the end of 2020. **Benefits** The connections established across key parts of government that are now separate to share safety, risk and case management information will improve client management and lead to better outcomes. The new system will also introduce significant improvements for staff, including decreasing administrative burden, providing improved access to client information and streamline record keeping.	Community Data Foundation
Wellbeing Indicators	**Overview** The ACT Government is developing a Framework of Wellbeing Indicators to monitor progress across a broad range of areas that reflect the values of Canberrans and influence our quality of life. **Benefits**	Community Data Foundation

	These indicators will need to be broad enough to encompass the various facets of wellbeing for the community, but specific enough that we can track progress and make policy or investment decisions using the insights gained. To do this, the Framework aims to draw on data and other information sources available from national data sets through to administrative data held by ACT directorates relating to programs they administer. Work will be undertaken to develop the data and other information sets to underpin our reporting. Data integrity, including robustness and privacy, will be important – particularly for reporting at geographic and population levels lower than the Territory as a whole.	
Integrated Journey Planner	**Overview** In 2018 we launched an integrated journey planner that provides an intuitive interface to help you plan your journey using multiple transport options (bus, walk, ride, drive). We also included dedicated school services **Benefits** By July 2019 Canberrans had used this to plan 1 million complete journeys, indicating that the journey planner is useful and user-friendly. **Status update** In Phase 2 we will improve the commuter travel experience by providing real-time information, service disruption, service alerts, road and footpath closures, safe cycling routes and travel fares; all within a single platform.	Data
Family Safety	**Overview** Our family safety initiatives aim to improve how families with lived experiences of domestic and family violence are supported using better data collection and automation of reporting. **Benefits** By automating currently manual reporting processes, there is opportunity to free up staff to focus on supporting victims of family violence. Richer data on domestic violence can be used to provide insights into	Data

	the characteristics and trends of domestic violence in the ACT; supporting improvements in the policy and service responses.	
Proactive Waterways Management	**Overview** This initiative seeks to improve the health of ACT waterways by integrating data from multiple sources and sensors including rainfall, stream flow and water quality. **Benefits** It enables analysis and reporting on the state of ACT waterways in near real time and development of dynamic models of the ACT waterways. This can support a wide range of strategic and operational needs including land development, climate change, water-sensitive urban design and statutory reporting obligations. Future benefits include predictive modelling of outbreaks of viral gastroenteritis and algae blooms and enable early treatment to prevent public health risks.	Data
Triple Zero to Emergency	**Overview** This initiative improves patient care and resource management by combining Ambulance and hospital Emergency Department data to give a complete picture of patient journeys from the initial Triple Zero call to arrival in the Emergency Department. By integrating data, the ACT Ambulance Service and ACT Health identify ways to reduce response times and improve quality and targeted patient-centred care.	Data
Place Intelligence Dashboard	**Overview** The Place Intelligence Dashboard is a real-time place analytics and automated reporting platform aligned with 17 place-performance indicators within the City Renewal Precinct, of Dickson, Northbourne Avenue, Haig Park, Civic and West Basin. The platform will display and aggregate big data to inform city planning, design, place-making, place management and capital projects. It is a digital reporting tool to track change over time and ensure our work is informed by, and measured, using place-based information and insights. **Benefits** The Place Intelligence Dashboard will provide benefits such as: • data-based insights to drive urban renewal	City

	- real-time analytics using the place-performance indicators - automated performance reporting - tracking changes over time to measure effectiveness - precinct-wide and sub-precinct reporting.	
Unified Geospatial Ecosystem	**Overview** The ACT Government's location information is housed and maintained on hard drives and servers spread across directorates. For example, the road centrelines are maintained by one directorate where another has information about the road surface, heavy vehicle routes and speed. This makes it difficult to understand the breath of information ACT Government holds and supply comprehensive open dataset. The migration (or linking) of location information into one searchable location will ensure better analytics and insight as well as streamline decision making based on authoritative data. **Benefits** To solve this, ACT Government are building an Enterprise GIS System called the "Geospatial Ecosystem". This Ecosystem will support a single interface and storage of all authoritative ACT location Information, such as foundation data (address, admin boundaries, transport, etc), asset, environment and infrastructure. This will enable a clear picture of the data available for analysis and provide a platform for open data and applications (such as ACTmapi). The system and content will form the foundation for a future Digital Twin.	City
3D Canberra Planning Tool	**Overview** The Environment, Planning and Sustainable Development Directorate (EPSDD) has created a 3D planning tool with help from Australian company, Urban Circus Pty Ltd. **Benefits** Using this tool, planners and designers can experiment and explore the impacts and opportunities of planning decisions including building heights, setbacks and plot ratios, and to gain a first-person perspective of how proposed developments will transform the streetscape and the city. Known as 3D Canberra, the digital model allows for 'on-the-fly' 3D testing and visualisation of different planning and	City

	development scenarios; for example, how buildings fit into the streetscape, how the shadows change throughout the day, and how transport integrates into the wider environment	
Community Hubs	**Overview** Canberra's public libraries are not just a place to borrow books, they provide you with access to the internet, WiFi and devices to connect with others and the rest of the world. There are computer and technology sessions to teach you how to use the technology of today. Our libraries also provide access to electronic resources such as ebooks, digital magazines and newspapers.	City
YourSay Community Panel	**Overview** The YourSay Community Panel has made it easy for you to have your say and help shape Canberra's future. Joining this online panel gives you another way to share your views on a wide range of topics and informs our decision-making. Input received through the YourSay Community Panel helps shape the policies, programs and services that make Canberra a great place to live. It will also allow us to test new ideas with a statistically representative sample of the Canberra community. **Benefits** This initiative helps determine current priorities and emerging issues. It offers a way forward for enhanced citizen participation in decision-making and policy development. The YourSay Community Panel complements the YourSay Community Conversations website, which will continue to be our primary place online for community conversations about particular issues. In contrast, members of the YourSay Community Panel will regularly be asked for views and opinions on a whole range of topics.	Community City
Human Resource Information Management Solution	**Overview** We will deliver an ICT solution that optimises payroll service integration with effective people management. **Benefits** This will increase efficiency, improve service delivery and allow us to take a strategic approach to managing our people. The solution will change how we understand our workforce needs, from recruitment	Foundation

	to separation. The comprehensive solution integrates payroll and human-capital management, streamlined and harmonised business processes including staff skills and talent planning, recruitment, learning and development, performance management, career planning, compensation and human resources analytics and reporting.	

Glossary

API: An Application Programming Interface (API) allows applications to communicate with one another. It is a set of clearly defined methods of communications among various components.

Building Information Modelling: Building Information Modelling (BIM) is an intelligent 3D model-based process that gives architecture, engineering, and construction professionals the insight and tools to more efficiently plan, design, construct, and manage buildings and infrastructure.

CCTV: Closed-circuit television (CCTV), is the use of video cameras to transmit a signal to a specific place, on a limited set of monitors. It differs from broadcast television in that the signal is not openly transmitted. The term is most often applied to those used for surveillance in areas that may need monitoring such as public spaces, banks, stores, and other areas where security is needed.

Cloud: Cloud computing is a general term for anything that involves delivering hosted services over the Internet. These services are broadly divided into three categories: Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS) and Software-as-a-Service (SaaS).

Digital Twin: Digital Twin describes a computerized (or digital) version of a physical asset, space or process. In the case of a city this will incorporate data that is updated at varying intervals – some that is relatively static (like topography data) and some that is regularly updated (like real time sensor data).

Future City: The cities of tomorrow are smart - technologically-connected, sustainable and reactive. A popular term for a city that takes this approach is "future city".

Geospatial ecosystem: In the ACT Government context this refers to a central place where all the Government's geospatial data is held and can be accessed by users from across government.

GIS: Geographic Information System (GIS) is a computer system build to capture, store, manipulate, analyse, manage and display all kinds of spatial or geographical data.

Internet of Things (IoT): The Internet of Things is a network of Internet connected objects able to collect and exchange data. Simply, these are the "things" that sense and collect data and send it to the internet.

KPI: Key Performance Indicators (KPIs) are measurable values that enable the government to track its progress.

Smart City: Interchangeable with Future City (see Future City above)

Software-as-a-Service (SaaS): A method of software delivery and licensing in which software is accessed online via a subscription, rather than bought and installed on individual computers. Also refer to 'Cloud' above.
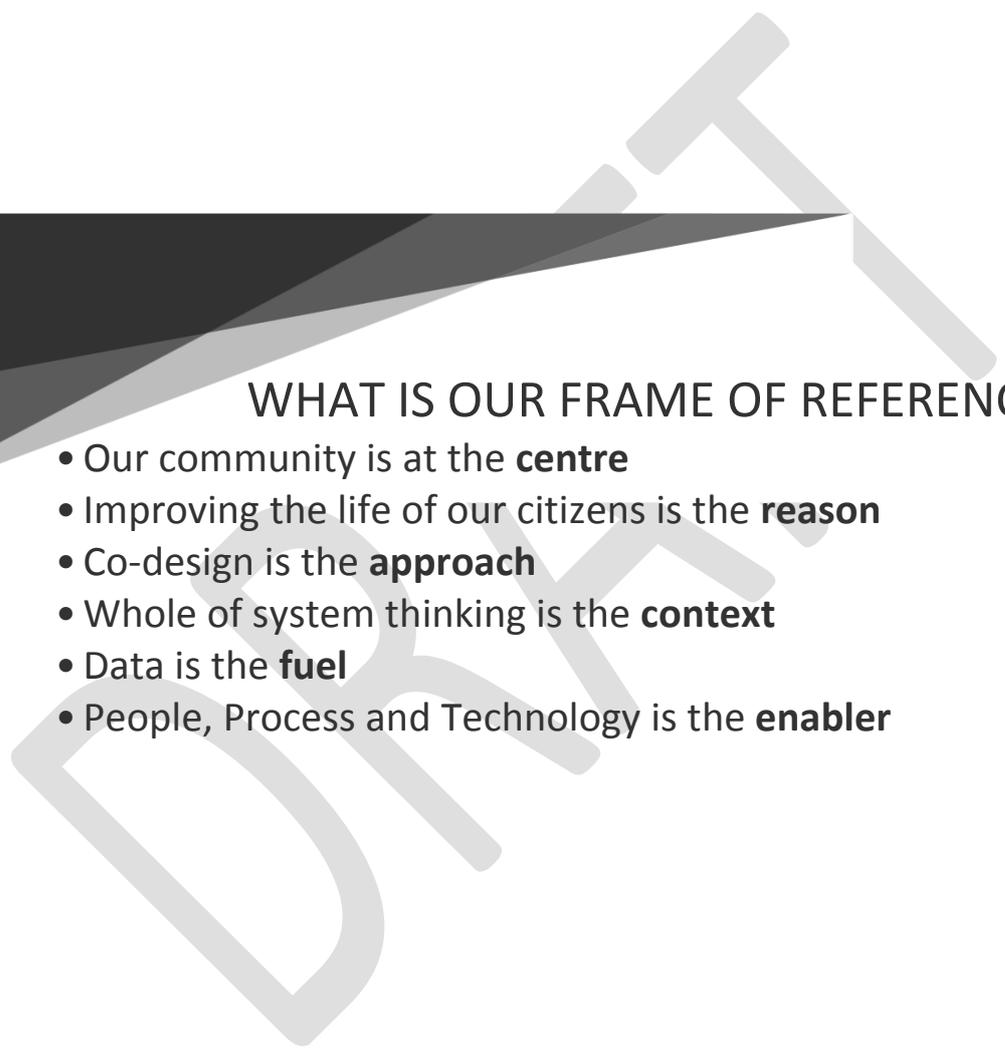
WHAT IS OUR FRAME OF REFERENCE?

- Our community is at the **centre**
- Improving the life of our citizens is the **reason**
- Co-design is the **approach**
- Whole of system thinking is the **context**
- Data is the **fuel**
- People, Process and Technology is the **enabler**

ACT
Government

Chief Minister, Treasury and Economic
Development Directorate

August 2019