Digital Strategy
2019-2023
Digital Cockburn – A Smart City

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Executive Summary

In the City of Cockburn's Strategic Community Plan, *"the pace of innovation and cost of new technology"* has been identified as a key challenge.

While the City has been implementing digital solutions for many years it is recognised that a Digital Strategy is required to provide a more strategic approach. This will help the City manage risks and leverage opportunities being presented by technology disruption and innovation.

The Strategy is supported by a live digital project action plan[1] which details and prioritises specific digital projects that have been signed off in corporate and team based strategies, plans and budgets across the organisation.

The Digital Strategy has the following objectives:

1. **Improve the customer experience**; for internal and external customers

2. **Increase business efficiencies**; doing things better, faster and more effectively

3. **Improve asset and resource management**; using available resources more effectively, securely and sustainably

4. **Improve communication** between people, systems and people and systems

5. **Improve decision making**; providing data to support timely, evidence-based decisions.

Below we outline nine guiding principles that will guide the City in its ongoing digital journey. One key principle must be that digital solutions must be implemented to solve a problem and not for the sake of implementing a digital solution.

We have identified five strategic priorities and allocated actions against each of them.

1. **Smart City** – continue to embrace digital and smart city innovations to improve business efficiencies – relates to objectives 1, 2, 3, 4, 5
2. **Improve customer experience** – to put the customer at the centre, ensuring all innovations enrich the customer experience - relates to objectives 1, 2, 3, 4, 5

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[1] Will be available on the City's website on the Corporate Strategic Planning page (amend this sentence once this strategy has been out to consultation and to Council)

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3. **To increase digital capacity** which includes improving the digital aptitude of employees, residents, contractors, volunteers, businesses and community groups - relates to objectives 2, 4
4. Ensure the City has appropriate **digital infrastructure** - relates to objectives 1, 2, 3, 4, 5
5. **Strengthen Digital Security** – includes risk assessments around privacy and digital security - relates to objectives 1, 2, 3

The concept of a Smart City is not new. The expression Smart City has many definitions but this simple explanation captures the definition that Cockburn wants to embrace.

"A smart city is a municipality that uses information and communication technologies to increase operational efficiency, share information with the public and improve both the quality of government services and citizen welfare." (Rouse)

All of this technology brings risks with it. One of the largest risks in the digital space is ensuring that you have the policies, processes and systems in place to manage privacy and digital security, hence 'Strengthen Digital Security' is one of the five strategic priorities and it must be adequately resourced.

Major projects within the action plan include preparing a business case for providing a single, consolidated, real-time view of the customer. Managing customer data efficiently, provides the opportunity for more accuracy, better customer service, personalised communication and better management around privacy. While this is not yet scoped, it could cost the City approximately $2 million. This will be thoroughly scoped in 2019-20 and a business case will be developed to articulate whether or not the return on investment warrants the level of investment required.

The City currently pays for an ageing streetlight network based on 1970s lighting technology. The City would like to move into the 21st century by upgrading the lights to LED technology. Whilst not smart in itself, this change would lower the City's energy and carbon footprint significantly.

The City is also investigating the option of combining smart light technology within the new LED lights that would create the ability to record data across a range of areas the City manages. These could be traffic measurement and management, environmental monitoring such as noise and particulate measurement and the ability to dim lights as well as measure the actual consumption of power consumed. The overall aim is for this to lead to cost savings for this service and the ability to better understand what is happening in our City with real time data and analytics.

A further significant project is the implementation of 3D GIS planning models to improve planning processes and consultation and to make better use of data. This

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will cost $217k to license, support and implement with an ongoing fee of $107k per annum thereafter (three year license).

The success of this plan will be the progress against the actions in this strategy.

1   Review of Achievements to Date

While this document is a new strategy, created to provide strategic direction for the City in the digital space, the City has been working on digital projects for many years. The City of Cockburn has consistently been investing relatively more in the digital space in the last ten years when benchmarked against other comparable Local Governments.

Below are some examples:

- Created a WCAG 2.0 AA accredited accessible website, community portal, and history website; rolled out the LG Hub intranet for Elected Members
- Launched infocouncil – for agenda and minutes – far greater efficiency and improved governance
- Introduced the Emplive App at Cockburn ARC - paperless management of rostering and timesheets
- Rolled out digital job management - 4,000 jobs are now allocated, managed and reported on digitally across the rangers, CoSafe parks & roads service units
- Finance adopted paperless processes aimed at improving efficiency, being more sustainable, reducing red tape and the cost of business transactions
- Internal automation has been enabled in accounts payable, procurement (evaluation and procure to pay), online credit card management, digital workflows and approval processes, automated job costing
- External automation has been enabled in Finance for Procurement (tendering and sourcing), eProperty self-service portal, paperless rates notices (eRates), efficient payment channel options (BPay, direct debit SmartRates, integrated payment gateway, elimination of AP cheque payments)
- Rates and Revenue - automated zoning statements
- Grant application software
- Planning applications – digital lodgement
- Building applications – digital lodgement, digital recording of past plans; Online animal registration renewals (first time animal registration in development)
- RFID – libraries
- CCTV – ongoing rollout across the City
- SmartRates - paperless, automated payments of rates
- Online forms
- Library – robotic book sorter
- Cyber security plan implementation underway
- Launched on-line community engagement platform – Comment on Cockburn.

2 Strategic Alignment

This strategy aligns with the City's corporate mission to make Cockburn the most attractive place to live, work visit and invest in.

This strategy aligns with the City's values of customer service, safety, sustainability, excellence and accountability.

3 Vision

The long term vision for the Digital Strategy is as follows:

"The City of Cockburn is recognised as a digital transformation leader"

And below is how the City looks to achieve this vision:

Working collaboratively, the City will embrace the possibilities of the new digital world and making a real difference in peoples' lives.

The City has embraced leading edge practices in project and change management to effortlessly adopt new and emerging technologies such as artificial intelligence (AI), virtual reality (VR), augmented reality (AR), the Internet of Things (IoT), LoRaWAN[2] and blockchain.

Thanks to the City's learning programs, digital literacy levels are high across the City, both across the organisation and community, enabling everyone to access and enjoy digital services and to adapt and move forward in a changing world.

Internal and external customers are enjoying improved quality of life with 24/7 access to services, facilities and resources, and information that is authentic, reliable and up-to-date. Employees have the flexibility to work anywhere, anytime, when and if required.

The City of Cockburn as a Smart City will be planned, designed and built to enhance liveability, safety, social inclusion, vibrancy and sustainability. The City will be an example of sustainable progress, applying smart technology and innovation to its community and environment.

Communications can be fully customised and personalised to meet individual preferences. Choose what, when and how you wish to receive or provide information.

Look behind the scenes and you see the City's systems and procedures are futuristic, paperless, agile, streamlined, integrated and responsive. Dashboard reporting helps everyone to stay informed and on track with clear, visual displays of critical information.

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[2] **LoRaWAN is** a media access control (MAC) protocol for wide area networks. It **is** designed to allow low-powered devices to communicate with Internet-connected applications over long range wireless connections. Accessed 5 March 2019
https://www.google.com.au/search?source=hp&ei=hux9XPfVDYGb9QOqkqOoDQ&q=lorawan+austra lia&oq=LoRaWAN&gs_l=psy-ab.1.2.0l10.4570.4570..5829...0.0..0.233.233.2-1......0....2j1..gws-wiz.....0.wRh4J6DLf9Y

With access to live data, customers, employees and systems are empowered to make timely, effective and sustainable choices.

The City regards information as one of its most important assets; meeting all legislative, ethical and moral requirements.

The innovation credentials of the City can be used to promote it as a Smart City – a great place to live and invest.

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4 Links to the Strategic Community Plan 2016–2026

The following table provides practical examples of digital innovations that would support achievement of strategic objectives in the Strategic Community Plan.

	City Growth	Moving Around	Community, Lifestyle & Security	Economic, Social & Environmental Responsibility	Leading & Listening
Strategic Objectives	Planning for the population growth of our City and maintaining our strong financial position	Facilitating safe, efficient, connected and sustainable movement around the City	Providing safe, attractive, healthy programs and infrastructure for a diverse range of activity and people	Enabling a sustainable future economically, socially and environmentally; including business activity, job opportunities and sustainable use of resources	Being accountable to our community and engaging through multiple effective communication channels
Digital Innovations	Robotic Process Automation for rule based, high volume, repetitive tasks to improve efficiencies and reduce costs Paperless office	Share economy (bike, cars, etc.) Self-driven, electric vehicles Google Maps; live traffic data to improve flow	Health and wellbeing apps CCTV for integrated and live reporting of safety issues	Use of virtual and augmented reality to support training, economic development, community engagement, and more Real time monitoring of key environmental factors	Power of One; a single, consolidated, real-time view of a customer Predictive analytics to customise content

5 Guiding Principles

Nine guiding principles will help the City's stakeholders, including Elected Members, employees and contractors work together to achieve the City's Digital Vision.

Guiding Principles	Alignment with City Values
1. **Put internal and external customers at the centre of everything we do.** Co-design, where applicable, to create services with and for our customers. Harness the knowledge and creativity of community members and employees to design customer centric solutions.	Customer Service
2. **Clearly define the problem.** Why do so many attempts at innovative problem-solving fall flat? They target the wrong problem. Invest in understanding the problem and root causes before considering solutions.	Accountability
3. **Think digital first** when searching for ways to meet customers' needs or to solve a problem. Find out how technology is being used by others to meet similar needs or how it could be adapted to meet your needs.	Customer Service Excellence
4. **Seek sustainable solutions.** Consider economic, social and environmental costs, benefits and value, both short and long-term, when evaluating digital options. <u>Don't choose a digital solution just because it is digital</u>. Choose the best solution, whether it is digital or non-digital, to address overall needs.	Sustainability Accountability
5. **Consult the Information Services (IS) Team early**. Don't wait until installation to ask for their help; it may be too late. The IS Team can help with information, support and advice when evaluating, adopting and integrating digital solutions. It's important that the City has the right hardware, systems and underlying infrastructure to support and integrate your solution.	Customer Service
6. **Be open to innovation**. Employees may need to change the way they work, or ask others to change, to support a transformation that will provide overall benefits for the organisation and the community. Be open, flexible and supportive to make the transition smoother and easier.	Customer Service
7. **Collaborate.** The City will bring the best people, technologies and ideas together. Employees will be open to working with colleagues, community, industry, academia, government and innovators locally and globally to create a Smart City.	Excellence
8. **Manage risk** by scanning the market for digital trends and <u>be quick to follow innovators</u> only once new ideas have been tested and proven to work. Be the first-to-market innovator where there is a clear, low risk	Excellence Accountability

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business case.	
9. **Consider legislative, ethical and moral requirements** around data, security and customer privacy. Think about how you're handling metadata, volunteered data and data collected in a public Wi-Fi environment.	Accountability Safety

6 Objectives

The aim of the Digital Strategy is to achieve the following objectives

1. **Improve the customer experience**; for internal and external customers
2. **Increase business efficiencies**; doing things better, faster and more effectively
3. **Improve asset and resource management**; using available resources more sustainably
4. **Improve communication** between people, systems and people and systems
5. **Improve decision making**; providing live data to support timely, evidence-based decisions.

Shared Government Objectives

The City of Cockburn's Digital Strategy aligns with objectives in "Born Digital: Managing Government Information and Data". This is a document that has been produced by the State Records Office of Western Australia to provide direction for all government agencies to work towards establishing fully digital information management environments.

Born Digital can be viewed in full on the State Records Office website:
www.sro.wa.gov.au

Objective 1	Objective 2	Objective 3
Government agencies implement fully digital information management environments	Digital information is well managed, trusted and authentic	Digital information can be used to meet multiple business needs and remains fully accessible for as long as required

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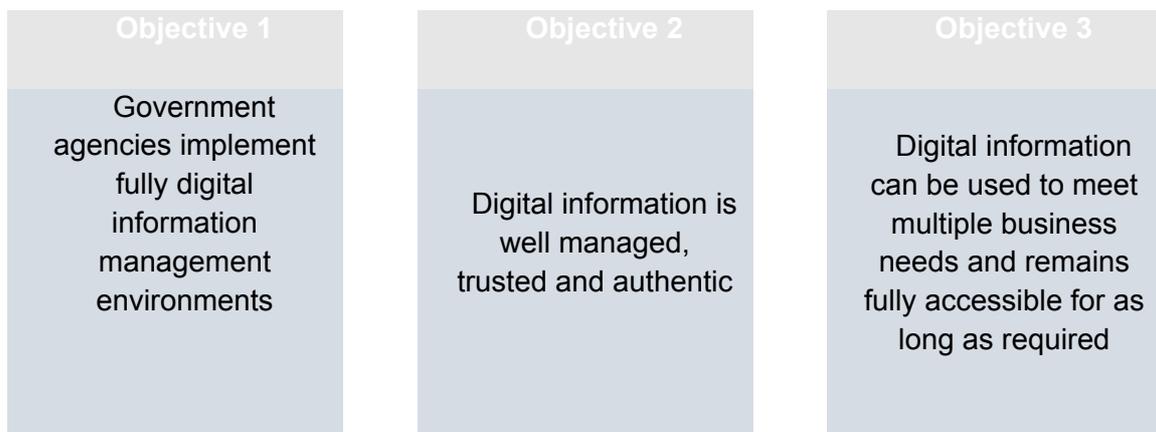
7   Strategic Priorities / Plan

Five strategic priorities have been identified to support achievement of the Digital Vision:
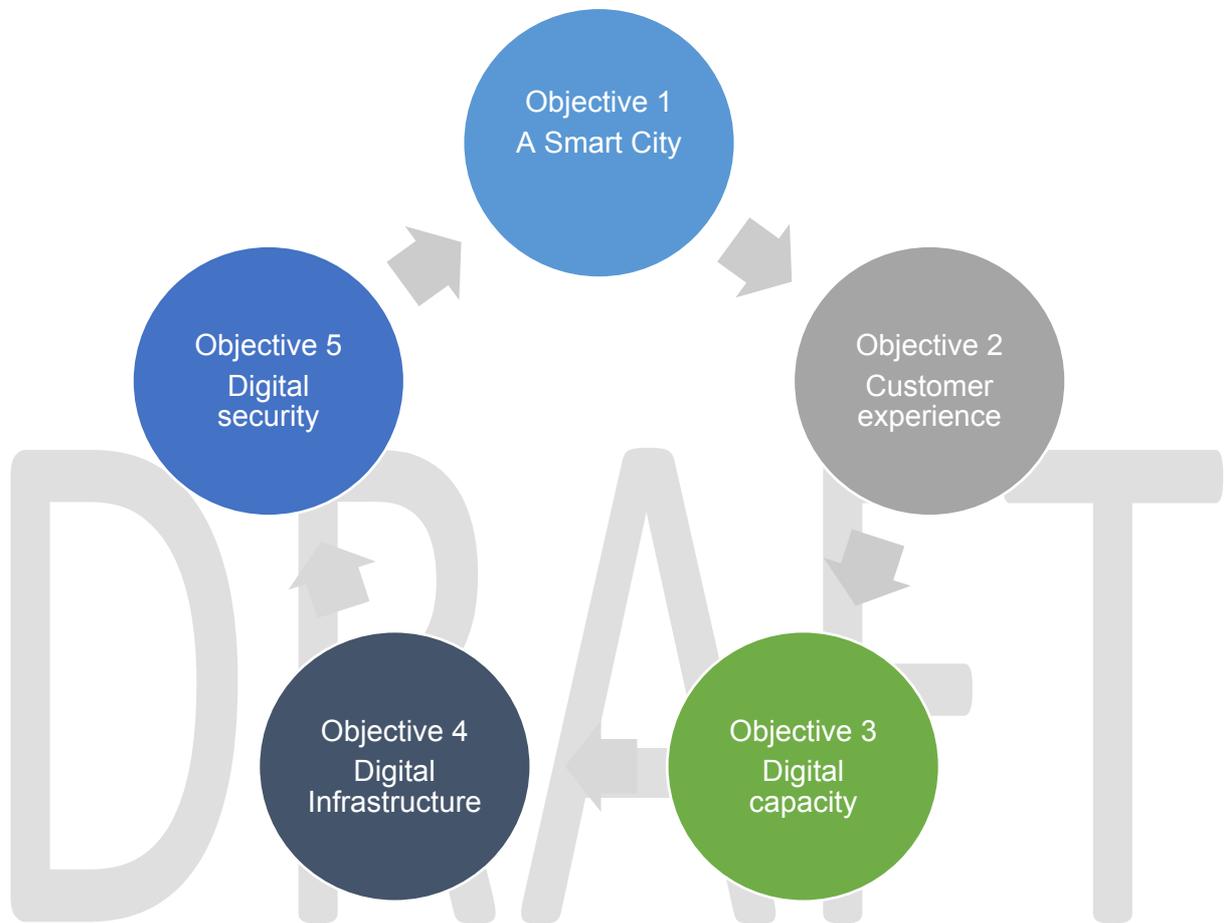
Outlined in the action plan below are the major initiatives that have been identified to achieve this plan. Each has an action, timeframe, cost and performance measure identified. While some of the initiatives use existing resources and budgets, several require additional funding. Two of the initiatives (2.2 and 4.3) will require significant resources to implement and will be the subject of rigorous scoping and business cases to determine if they are to be progressed.

Objective 1 – Embrace digital and Smart City innovations to improve business efficiencies

	Action	Leader/ Main Contributor	Budget ($)	Timeframe	Measure of Success
1.1	Develop an Innovation Framework for both digital and non-digital to enhance innovation, culture, change management and capability. Include rules for prioritising digital projects and agree on an approach for reviewing policies and practices to overcome blocks for embracing digital innovations	CEO and Executive	$30k	2019-2020	Highly valued Innovation Framework
1.2	a) Stay abreast of digital trends and innovations by benchmarking industry leaders, reading, attending conferences, training, talking to colleagues and through personal experiences and observations b) Learn about digital innovations related to cloud computing, Internet of Things (IoT), virtual reality (VR), augmented reality (AR), artificial intelligence (AI), blockchain, open data, big data, LoRaWAN and more	Executive, Manager Information Services and IS Team, Senior Managers	Existing conference training budgets	Ongoing	Growth in digital literacy
1.3	Continuously reflect and evaluate how the City can embrace digital innovations to improve business efficiencies, asset and resource management, communication and decision making	All	Existing	Ongoing	Improve business efficiencies, asset/resource

	Action	Leader/ Main Contributor	Budget ($)	Timeframe	Measure of Success
	Contribute new ideas and suggestions through your manager, at team / tool box meetings and via internal feedback channels (suggestion box initiative)				management and decision making
1.4	Promote increased awareness of the Digital Project Action Plan and understanding about how to submit a new project for consideration as part of business planning process	Internal Communications Officer	Existing	2019-20	Employees are aware of the Digital Project Database
1.5	Showcase digital innovations, successful transformations and lessons learned in the City of Cockburn	Manager Corporate Communications	Existing	Ongoing	Growth in digital literacy
1.6	We will create an open data framework and leverage IoT and Big Data to build a more efficient, innovative and Smart City	Director Finance and Corporate Services	$300k	2020-2021 Framework 2022-2023	Improve business efficiencies, asset/resource management and decision making
1.7	Smart City Resource management - We will work with business and the community to expand the use of smart technology to improve resource efficiency and affordability	Business Engagement Officer	Existing	2020-2023	Improve business efficiencies, asset/resource management

Objective 2 – Embrace digital and Smart City innovations to improve the customer experience

	Action	Leader/ Main Contributor	Budget ($)	Timeframe	Measure of Success
2.1	Continuously reflect and evaluate how the City can embrace digital innovations (such as LoRaWAN, IoT, AR, VR, AI, etc.) to improve the customer experience for internal and external customers. Contribute new ideas and suggestions through your manager, at team / tool box meetings and via internal feedback channels	ICT Manager	Existing $25k	2019-2020 investigation/planning 2020-2021 implementation	Large funnel of new ideas and suggestions
2.2	Prepare a business case/scoping document for embracing the 'power of one'; providing a single, consolidated, real-time view of internal and external customers through shared, integrated databases and systems, enabling customers to customise and manage their preferences, and using analytics to unleash the potential of customer data	Managers Information Services/ Corporate Communications	Existing for business case $2million estimated project cost	Business case 2019-2020	Power of One Business Case reviewed by Executive
2.3	Support Business Units/vendors to expand the range, accessibility (including mobile compatibility) and usability of online services	Manager Information Services	With project budget	Ongoing	Improved customer experience

	Action	Leader/ Main Contributor	Budget ($)	Timeframe	Measure of Success
2.4	Review the City's community engagement platform to look for further digital technology enhancements	Manager Corporate Communications/ Community Engagement Officer	Existing	2019-20	Improved community engagement
2.5	Seek legislative change to allow trial electronic voting at elections	Director Governance and Community Development	Existing	2021-2023	Improved community engagement
2.6	Review and reform regulation and business processes to improve the customer experience	Business Systems	Existing	2018-2021	Improved customer experience
2.7	Leverage digital technology such as 3D planning models (GIS) to improve planning processes, consultation and outcomes	Manager Information Services	$217k + $107k per year 3 year license	2019-2021	Improved customer experience Better business decisions
2.8	Work with industry to produce guidelines for integrating smart technology into new developments and promote the outcomes	Director Planning and Development	Existing	Ongoing	Improved customer experience

Objective 3 – Increase Digital Capacity

	Action	Leader/ Main Contributor	Budget ($)	Timeframe	Measure of Success
3.1	Work with the community, innovators and industry to explore development of a network of innovation and co-working hubs across the City of Cockburn	CEO	$25k	2022 onwards	Network of innovation and co-working hubs across the City of Cockburn
3.2	Promote the IS Team's role, function and personnel to increase awareness, understanding and usage by internal customers	Internal Communications Officer	Existing	2019	Improved business efficiencies
3.3	Increase participation in digital literacy programs among all stakeholders, including a) Elected Members b) Volunteers, community groups and residents to build digital innovation skills and pathways to accelerate innovation activity c) Local businesses	a) CEO b) Manager Libraries with Community Development, Youth Services c) Business Engagement Officer	Existing and external funding	2019-2023	Increasing digital competency leading to increased accessibility of digital services

	Action	Leader/ Main Contributor	Budget ($)	Timeframe	Measure of Success
3.4	Identify and address specific gaps in digital competencies across the workforce. Proactively plan and prepare the workforce for the future. Be open and transparent about possible changes, and assist employees to develop the skills they will need to adapt to future tasks and roles using change management approach	Manager Human Resources	Existing	2019-2023	Increasing digital competency across the City
3.5	a) Promote programs to build innovation skills and pathways to accelerate innovation activity b) Promote grant/sponsorship opportunities relevant to a)	Business Engagement Officer	Existing	Ongoing	Increasing digital competency across the City
3.6	Increase the emphasis on having digital competencies with staff recruitment	Manager Human Resources	Existing	Ongoing	Increasing digital competency across the City
3.7	Continue to evaluate and adopt digital innovations that enable staff to work more efficiently and effectively in the field, in the office or remotely	Manager Human Resources	Existing	Ongoing	Improved business efficiencies
3.8	Recognise and reward digital innovation and excellence through existing employee awards	Manager Human Resources	Existing	Ongoing	Employee recognition

Objective 4 – Ensure the City has appropriate digital infrastructure

	Action	Leader/ Main Contributor	Budget ($)	Timeframe	Measure of Success
4.1	Provide secure, high capacity communications networks for the City by embracing emerging technologies (e.g. 5G, LoRaWAN) that facilitate a foundation for the City to become a connected Smart City	Manager Information Services	Existing $30k	2019-2020 investigation/planning 2020-2021 implementation	Increased connectivity
4.2	Engage a consultant to advise the City on the choice of a future IoT network solution	Manager Information Services	Existing	2019-2020	Increased connectivity
4.3	Work with industry (including Western Power) and innovators, leveraging existing infrastructure, such as streetlights, to create a Smart City connectivity platform	Director Finance and Corporate Services	$1 - $5 million	Ongoing	Increased connectivity Reduced energy consumption Enhanced data collection / more informed decision making
4.4	Expand the free public Wi-Fi network for the City with priority	Manager Information	$30k	Ongoing	Increased

	Action	Leader/ Main Contributor	Budget ($)	Timeframe	Measure of Success
	coverage zones to be discussed with the community	Services			connectivity
4.5	Increase community connectivity by promoting awareness, access and adoption of digital infrastructure initiatives (free public Wi-Fi, NBN, public cloud, mobile 5G networks, LoRaWAN, etc.)	Manager Information Services Manager Corporate Communications	Existing	Ongoing	Increased connectivity
4.6	Ensure the City has appropriate underlying technology, hardware and systems to enable digital, including social media, to work effectively	Manager Information Services	Existing	Ongoing	Improved business efficiencies
4.7	Audit and map existing employee systems, review options to offer one login for multiple systems and create dashboards for staff to monitor activity across multiple systems in one place	Manager Information Services	$30k to scope $100k estimated	2020-2022	Improved business efficiencies
4.8	Work towards providing a seamless experience for both internal and external customers	Manager Information Services Manager Corporate Communications	Existing	Ongoing	Improved customer experience

Objective 5 – Strengthen Digital Security

	Action	Leader/ Main Contributor	Budget ($)	Timeframe	Measure of Success
5.1	Stay up to date with current and proposed legislation related to privacy and digital security (i.e. Notifiable Breaches amendment coming into the Privacy Act in 2019) and conduct risk assessments to identify and mitigate risks to the City	Manager Information Services/ Governance Coordinator/ Manager Corporate Communications	Existing	Ongoing	Strong risk management
5.2	Ensure the City has current and appropriate policies, processes and systems in place to securely store, protect, verify and share data. a) Implement the Cyber Security Plan and regularly review and update verification technologies to improve digital security b) Work towards ISO 27001 certification c) Recruit a Cyber Security Officer	a) Manager Information Services b) Manager Information Services	Three year contract funded $432k	2019-2021	Strong risk management

8 Summary of Consultation

Five workshops were conducted with 40 staff and one workshop was undertaken with Elected Members. The strategy will be placed on Comment on Cockburn and promoted, inviting feedback from the community. This section will be updated following that consultation.

9 Resourcing the Plan

The costs to deliver actions in this strategy that are not resourced from existing budgets are estimated at $1.4 million. An additional $2 million is estimated for item 2.2, the implementation of developing a single, consolidated, one view of the customer, as well as a further $1-$5 million is estimated for item 4.3 'Work with industry (including Western Power) and innovators, leveraging existing infrastructure, such as streetlights, to create a Smart City connectivity platform.' Items 2.2 and 4.3 will be subject to detailed scoping and rigorous business cases. The budgets are broad estimates as until they are fully scoped, the true costs are not known. The budgets for each activity will be subject to the annual budgeting process.

10 Measuring Achievement & Reporting on this plan

The requirement to implement this strategy will be included in the 2021 Corporate Business Plan. Specific actions will be identified and progress will be reported on in each Annual Business Plan. The achievements of the strategy as a whole will be reported on when the strategy is reviewed.

11 Bibliography

Significant desktop research was undertaken to develop this plan. The main documents are listed in Annexe 1.

12 Annexes

12.1 Annex 1 – Bibliography

Western Australian Government ICT Strategy 2016-20

Newcastle City Council Smart City Strategy 2017-21

Sunshine Coast Smart City Implementation Plan 2016-19

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