CARPENTARIA SHIRE
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ICT Strategy

30 June 2021

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Contents

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Carpentaria Shire Council would like to respectfully acknowledge the Gkuthaarn, Kukatj and Kurtijar peoples as the traditional owners of the lands and waters that form the Region. Council pays its respect to elders' past, present and emerging and welcomes the ongoing role that indigenous people play within the Carpentaria community.

Introduction

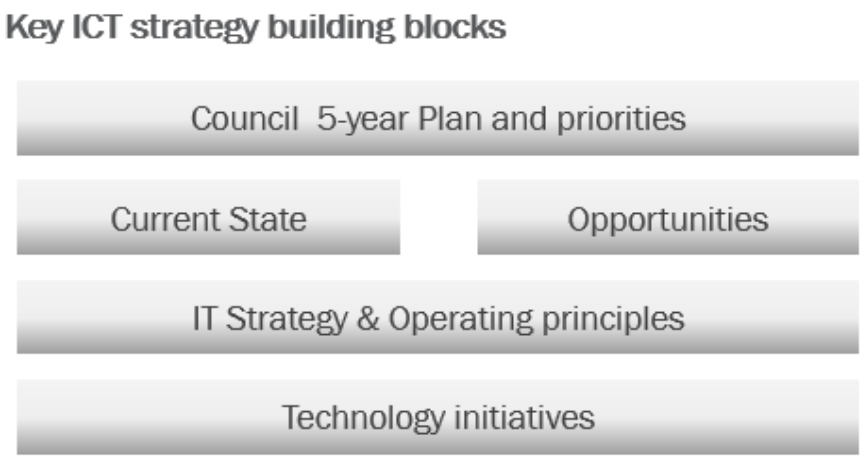
This ICT Strategy sets the direction for ICT at Carpentaria Shire Council (CSC) and underpins the Corporate plan. The *Corporate Plan (2021-2025)* refers to various strategic planning documents (e.g. *Asset Management Plan, Long Term Financial Sustainability Plan, Workforce Strategy, Culture Plan*), and while some of these documents are still to be developed, their effectiveness will be limited without the support of a governed ICT environment with a clear direction.

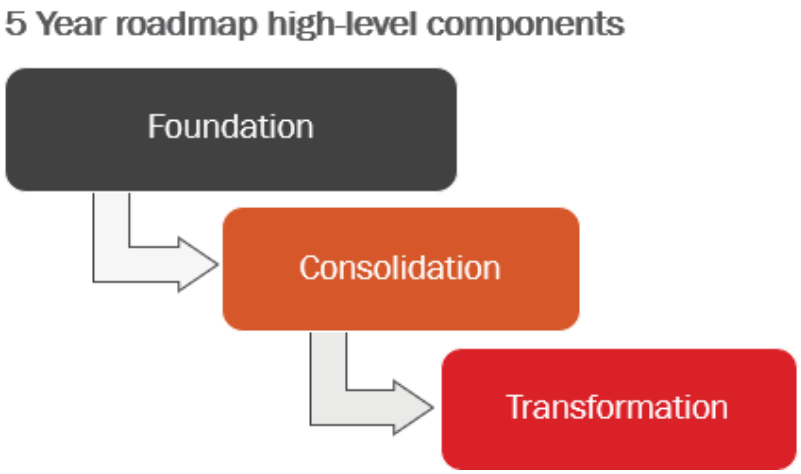
This document defines an ICT strategy by outlining Council's ICT vision, the operating principles that govern ICT planning and implementation, the focus areas for the next 5 years, the objectives to be achieved across each focus area, and the key actions required to meet those objectives. These are further expanded by a set of expected outcomes and success indicators so Council can measure progress against the strategy.

This strategy is accompanied by a high-level 5-year roadmap that outlines the sequence of activities required to meet the objectives across the defined focus areas.

Building blocks

This strategy is part of a broader set of artefacts that guide the direction of ICT at Council as follows.





Approach

GWI engaged with key stakeholders across Council and also conducted a desktop review of strategic and ICT-related documentation representing the current state of ICT. A high-level pain point analysis revealed themes that present a range of opportunities to focus on over the next 5 years. These themes gave rise to the definition of proposed operating principles and a method of prioritising objectives.

The opportunities allowed for several ICT vision statements to be considered, and a combination of two were chosen. All operating principles, focus areas, objectives and actions included in this document are in support of achieving this vision.

In order for Council to ensure accountability in aligning to this strategy, a set of success indicators were developed in conjunction with the high-level objectives.

Assumptions

This ICT Strategy assumes the following:

- Attracting ICT resources to the region will be an ongoing challenge
- Based on the resourcing challenges of the region, a hybrid model of internal and external ICT support is recommended
- Funding to execute the strategy's actions will be secured
- ICT Governance framework will be implemented to provide oversight of ICT support, maintenance and investment.

ICT vision

Council's ICT vision is to provide:

Secure and reliable technology services, empowering our people to connect, engage and serve our community, industry and visitors.

This is aligned to Council's vision in the *Carpentaria Corporate Plan (2021-2025)* and its key values as follows:

Key value	Alignment
Strong leadership	Communications will be supported by modern technology.
Respect and teamwork	Teams will benefit from reliable access to collaboration tools.
Good governance	Operating principles will ensure ICT is governed.
Pride in our work	Modern technology will transform community services.
Positive and professional	Technology will simplify user interfaces for staff and community.
Informed decision making	Business intelligence will drive risk assessments, investment decisions and value propositions.
Realistic goals	Current technology will be leveraged to its fullest extent, and new solutions will be sourced where necessary, feasible and sustainable.

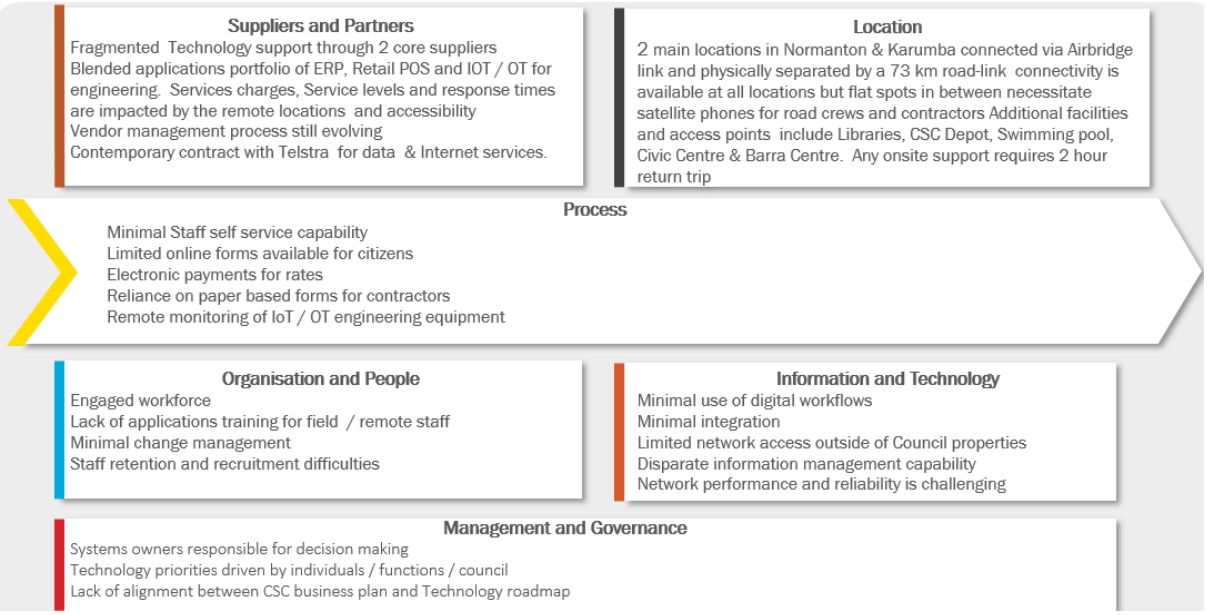
IT operating principles (proposed)

The following principles will govern the management of ICT. They are guardrails for whole of council, and allow for flexible technology choices in support of the organisational needs and goals.

1. **Digital at our core:** Council activities and services will be digitally enabled.
2. **Staff and customer engagement through Digital services and Mobility:** Council will engage staff and citizens via mobile services to streamline engagement channels, provide up-to-date information, and accurately capture requests, applications, payments and feedback.
3. **We are Cloud first:** New solutions will be required to be cloud-based to allow Council to take advantage of the cloud's scalability and cost efficiency.
4. **Reuse, buy, build:** In order of priority, solutions will be based on reusing existing ICT assets, then acquiring by purchasing or licensing a new ICT asset, then building a new ICT asset.
5. **Quality service delivery through partnerships:** Council will seek alliances, partnerships and agreements with industry and government to identify new funding sources, trial cutting-edge technology, and cultivate a mindset of embracing technology-led transformation.
6. **We trust each other and will develop our teams:** Council staff will be provided with regular training to maintain competency, ensure familiarity and maximum usage of new solutions.
7. **Where practical, we reduce duplication and ensure services are easy to use:** Solutions will focus on streamlining processes and standardising the user experience for staff and citizens. Solutions will consolidate functionality into fewer systems where feasible. Commercial arrangements will consider multiple cost and licensing models.
8. **Continuous improvement in service quality and customer outcomes:** Council will embed a process, methodology and culture of embracing system-driven change to ensure the ICT environment is aligned to business priorities.

Current state

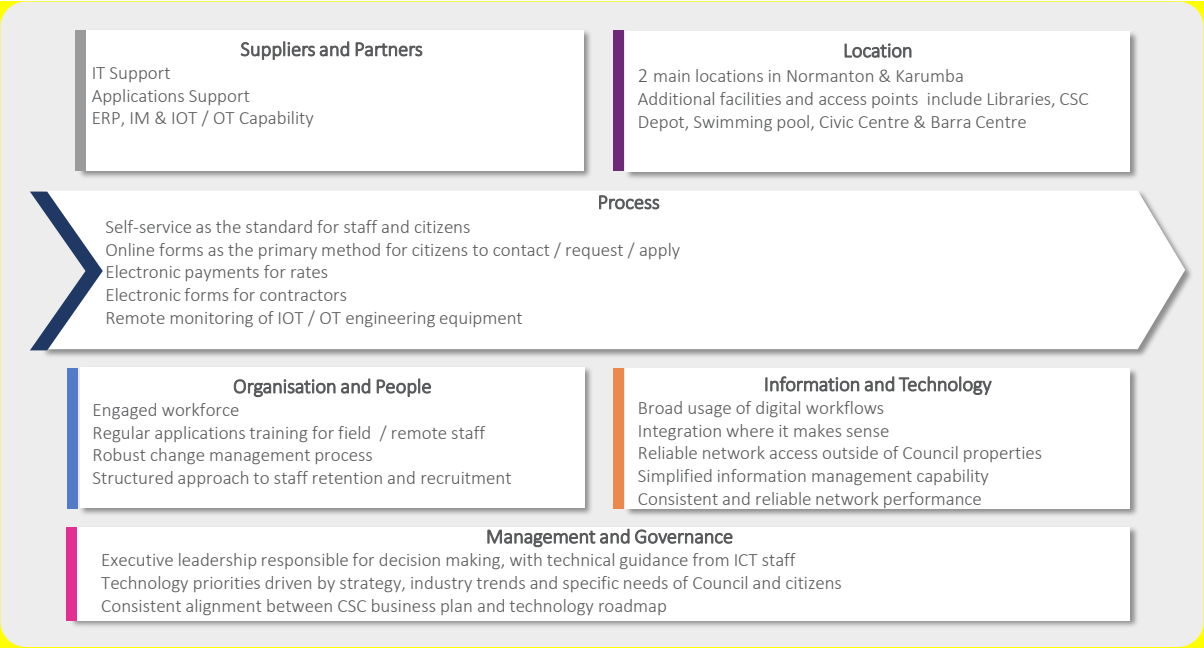
The current state of ICT at Council is summarised below. This diagram is presented as a Target Operating Model (TOM) as it provides a basis for further future state detailed design, scoping and planning.



Challenges exist across all aspects of the above model. These are detailed in the Current State Brief developed by GWI and need to be addressed in a systematic way in order to achieve the future state.

Future state concept

Council envisages the future state of ICT as follows:



To achieve this future state, Council will need to focus on the areas outlined in the next section.

Focus areas

The focus areas are categorised into three phases that represent two concepts: **priority** and **sustainability**. In this context, priority covers the problems that require immediate attention, and sustainability refers to the areas that must be addressed in order for long-term objectives to be achieved.

Foundation	Consolidation	Transformation
This includes high-priority areas due to current challenges, and those that will future-proof Council's ICT for sustainable growth.	*These areas require simplification or rationalisation, and those that are well-established aspects of the ICT environment.*	*These areas are candidates for radical change and present opportunities for innovation. They rely on the foundation areas being addressed.*
• Infrastructure • IT Governance • System configuration • Data quality • Vendor contracts	• Cloud • Information management • Security • End User Computing • ICT support • Sourcing	• System alignment • Customer centricity • Energy efficiency • Government collaboration • Industry partnerships • Business intelligence

Objectives

The strategic objectives for CSC to achieve across the three phases are as follows:

Foundation

- Maximum usage and better control of technology
- Functional alignment of systems to business areas
- Data quality to improve decision making, staff productivity, and reduce compliance risk
- Value for money in vendor contracts.

Consolidation

- Streamlined technology with reliable connectivity
- Reduced duplication of functionality across systems
- Integrated and tightened security and access control
- Standardised interfaces for better user experience.

Transformation

- Self-service for customers
- Efficiency in energy and resource usage
- Innovative infrastructure projects are being established.
- Financial viability is determined for future projects.

Alignment to Key Strategic Themes

This ICT Strategy is aligned to the Key Strategic Themes defined in the Corporate Plan:

1. **Carpentaria Community:** A safe, healthy, and equitable community that celebrates diversity and enjoys a quality lifestyle.
2. **Carpentaria Environment:** The region's environmental assets including natural areas and resources, open space, and agricultural land, are conserved and enhanced for future generations.
3. **Carpentaria Economy:** A dynamic and diverse economy creating industry development and employment opportunities.
4. **Carpentaria Governance:** A well governed, responsive Council, providing effective leadership and management, and respecting community values.

Operating principles	**Theme 1**	**Theme 2**	**Theme 3**	**Theme 4**
Digital at our core	✓	✓	✓	✓
Staff and customer engagement through Digital services and Mobility	✓		✓	✓
We are Cloud first			✓	✓
Reuse, buy, build		✓	✓	✓
Quality service delivery through partnerships	✓		✓	
We trust each other and will develop our teams	✓		✓	✓
Where practical, we reduce duplication and ensure services are easy to use	✓		✓	
Continuous improvement in service quality and customer outcomes	✓		✓	

Key Actions

The high-level actions that will lead to the objectives are outlined below. They are detailed further in the roadmap that accompanies this strategy.

Foundation

- Upgrade network infrastructure as per review recommendations
- Establish IT governance framework
- Reconfigure current systems to align with processes
- Analyse and remediate data across systems
- Review and re-negotiate vendor contracts.

Consolidation

- Adopt single approach to remote access
- Adopt single document management system
- Review and revise security policies, tools and controls
- Refresh deployment approach for end user devices
- Embed robust procurement policy and process.

Transformation

- Adopt system-led change to business processes
- Establish self-service HR functionality for staff
- Establish self-service functionality for citizens, e.g. requests, applications, payments and feedback
- Explore automation for customer services
- Expand data analytics capabilities
- Investigate feasibility of reusing council-owned assets
- Explore new funding sources and industry alliances.

ICT strategy on a page

ICT STRATEGY 2021-2025

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Secure and reliable technology services, empowering our people to connect, engage and serve our community, industry and visitors.

OPERATING PRINCIPLES	Digital engagement through mobile services	Staff development	Continuous improvement
	Cloud first	Simplification	Innovation through partnerships
	1 FOUNDATION	**2 CONSOLIDATION**	**3 TRANSFORMATION**
FOCUS AREAS	Infrastructure · IT Governance System configuration Data quality · Vendor contracts	Cloud · Information management Security · End User Computing Support · Sourcing	System alignment · Customer centricity Energy efficiency · Government collaboration Industry partnerships · Business intelligence
OBJECTIVES	• Maximum usage and better control of technology • Functional alignment of systems to business areas • Data quality to improve decision making, staff productivity, and reduce compliance risk • Value for money in vendor contracts	• Streamlined technology with reliable connectivity • Reduced duplication of functionality across systems • Integrated and tightened security and access control • Standardised interfaces for better user experience	• Self-service for customers • Efficiency in energy and resource usage • Innovative infrastructure projects • Financial viability for future projects
KEY ACTIONS	• Upgrade network as per review recommendations • Establish IT governance framework • Reconfigure current systems to align with processes • Analyse and remediate data across systems • Review and re-negotiate vendor contracts	• Adopt single approach to remote access • Adopt single document management system • Review and revise security policies, tools and controls • Refresh deployment approach for end user devices • Embed robust procurement policy and process	• Adopt system-led change to business processes • Explore automation for customer services • Expand data analytics capabilities • Investigate feasibility of reusing council-owned assets • Explore new funding sources and industry alliances

SUCCESS INDICATORS include

- Reliable network performance
- No functionality overlaps
- Data quality is improved
- Self-service available to staff and residents
- Contracts within budget
- Innovative projects established

Success indicators

Council's ICT performance will be continuously monitored using the below indicators to ensure strategic alignment and to validate outcomes. The roadmap will provide the basis for detailed scheduling and sequencing.

Council should review performance against this strategy on an annual basis.

Foundation

Objective	Success indicator
Maximum usage and better control of technology	Available functions in current ICT are fully utilised, except where configuration is costly or infeasible.
Functional alignment of systems to business areas	Business areas are using available functionality and where functionality is missing, a temporary workaround is established and documented.
Data quality to improve decision making, staff productivity, and reduce compliance risk	Data is more consistent and complete across systems. Data is available as per defined user permissions. Compliance activities are primarily driven by data from systems, not manually entered data without basis.
Value for money in vendor contracts	Contract pricing is within budget tolerances.

Consolidation

Objective	Success indicator
Streamlined technology with reliable connectivity	Improved network reliability and performance for staff and citizens. Staff are upskilled in using new solutions.
Reduced duplication of functionality across systems	Applications do not overlap with functionality.
Integrated and tightened security and access control	Staff have access to systems and data required for their roles, and appropriate restrictions are established and known to staff. Access control is managed via industry-standard software like Microsoft Active Directory.
Standardised interfaces for better user experience	Staff are familiar with what functionality exists and how to access it, across multiple device types. Citizens are familiar with digital services.

Transformation

Objective	Success indicator
Self-service for staff and citizens	More self-service functionality being available and used by staff and citizens.
Efficiency in energy and resource usage	Reuse or repurposing of Council-owned assets. Active exploration or usage of renewal energy.
Innovative infrastructure projects	Infrastructure projects that align to the Corporate Plan are being established.
Financial viability for future projects	Funding sources (existing and new) are known or confirmed for projects that align to the Corporate Plan.

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Repeat annually
Continue

1 FOUNDATION | 2 CONSOLIDATION | 3 TRANSFORMATION

STREAM	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
GOVERNANCE	Establish IT governance framework	Reconfigure current systems to align with processes	Review and revise security policies, tools and controls	Embed robust procurement policy and process	Adopt system-led change to business processes
COMMERCIAL	Review and re-negotiate vendor contracts	Investigate feasibility of reusing council-owned assets		Explore new funding sources and industry alliances	
APPLICATION and TECHNOLOGY	Upgrade network as per review recommendations	Adopt single approach to remote access	Refresh deployment approach for end user devices	Develop and implement a mobility strategy	
			Establish self-service HR functionality for staff		
	Establish self-service functionality for citizens				
	Explore automation for customer services		Adopt single document management system		
INFORMATION and DATA	Analyse and remediate data across systems	Expand data analytics capabilities	Build improved data literacy and drive culture of evidence-based decision making		
			Expand open data and data sharing capabilities		

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1 Foundation activities: Years 1 and 2 Page 1

Stream	Key activities and tasks	Duration (est.)	Supply choice	Cost (est.)
Governance	**Establish IT governance framework.** Key tasks include: • Define IT governance framework based on relevant elements from industry frameworks, e.g. COBIT, ITIL, Val IT • Obtain approval from executive leadership • Socialise across teams to create awareness and encourage adoption.	12 months	Internal: • Business analyst • IT project manager External: • Consultant	Low G
Governance	**Reconfigure current systems to align with processes.** Key tasks include: • Map business processes to current systems to identify gaps and manual workarounds • Determine which gaps can be resolved by reconfiguration / extension of existing systems • Implement and document reconfigurations / extensions.	18 months	Business analyst System administrator Software developer	Moderate G
Commercial	**Review and re-negotiate vendor contracts.** Key tasks include: • Analyse all current vendor and service provider contracts for relevance and value • Approach competing vendors and service providers for alternative proposals • Request re-negotiation with existing providers to implement competitive revisions.	◂◂ 12-18 months	Internal: • Commercial analyst • Procurement advisor	Low G
Commercial	**Investigate feasibility of reusing council-owned assets.** Key tasks include: • Identify assets (including real estate) that can be reused or re-purposed • Identify and select use cases for assets, e.g. IT training for Indigenous community, start-up hub • Develop business case for most preferred / most urgent need, considering ICT requirements.	12-18 months	Internal: • Commercial analyst • Business analyst	Low
Application and Technology	**Upgrade network as per review recommendations.** Key tasks include: • Review and confirm Terracom infrastructure review findings and proposal • Execute contract to upgrade network, ensuring thorough testing is conducted • Develop maintenance plan to ensure longevity of infrastructure.	12-18 months	External: • IT project manager • Network engineer	(Terracom proposal)
Application and Technology	**Establish self-service functionality for citizens.** Key tasks include: • Gather and prioritise citizen requirements for self-service • Extend existing applications support new requirements, or procure and implement new solutions • Promote new self-service functionality to citizens via traditional and digital channels.	◂◂ 9 months	Internal: • Business analyst • System administrator	Low (internal)

$ Low $15k - $40k
$$ Moderate $40k - $75k
$$$ Significant $75k and above

◂◂ Potential to commence earlier
▸▸ Potential to commence later
G GWI can assist

COMMERCIAL-IN-CONFIDENCE

ICT ROADMAP 2021-2025

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1 Foundation activities: Years 1 and 2 Page 2

Stream	Key activities and tasks	Duration (est.)	Supply choice	Cost (est.)
Application and Technology	**Explore automation for customer services.** Key tasks include: • Identify services where automation could improve customer experience, reduce cost and risk • Explore automations that can be configured across existing ICT landscape • Test and deploy automations, prioritising low-cost, high-value items.	Ongoing	External: • IT project manager • Software developer • Business analyst	Low-Moderate G
Information and Data	**Analyse and remediate data across systems.** Key tasks include: • Develop data catalogue, differentiating between master, transactional and analytical data • Define data quality metrics and rules to measure current state of data • Issue data quality reports to Council teams to initiate remediation activities.	12 months	External: • Data architect • Information manager	Significant G
Information and Data	**Expand data analytics capabilities.** Key tasks include: • Leverage data catalogue to identify relevant datasets for reporting and decision-making • Use cloud platform (e.g. Azure) to configure data warehouse and data pipelines for regular ingestion • Connect to BI tools (e.g. Power BI) and configure dashboards relevant to teams.	Ongoing	Internal: • Cloud architect External: • Data architect	Low (if remediation of data is complete) G

$ Low $15k - $40k
$$ Moderate $40k - $75k
$$$ Significant $75k and above

◂◂ Potential to commence earlier
▸▸ Potential to commence later
G GWI can assist

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2 Consolidation activities: Years 2 and 3

Page 1

Stream	Key activities and tasks	Duration (est.)	Supply choice	Cost (est.)
Governance	**Embed robust procurement policy and process.** Key tasks include: • Review the Qld Procurement Policy 2021 to ensure alignment with Qld Govt procurement guidance • Seek ICT procurement and sourcing advice from specialists with public, private and rural experience • Develop and embed policy and accompany procedures to guide future ICT sourcing activities.	◂◂ 12-18 months	External • Procurement specialist	Low G
Governance	**Review and revise security policies, tools and controls.** Key tasks include: • Assess existing security policies and tools for relevance, rigour, weaknesses and inconsistencies • Conduct business impact assessment of weaknesses • Revise policies, obtain new tools and apply stricter controls, and communicate changes across Council.	12-18 months	External: • Information security expert (leverage existing vendor, contractor or as-a-service)	Low (assuming existing security capability) G
Application and Technology	**Adopt single approach to remote access.** Key tasks include: • Engage expert to canvas options (e.g. Citrix, VPN, PAM) supported by network infrastructure • Test options (existing and new) with various users to assess scalability, security and reliability • Adopt most preferred approach, making it accessible to relevant users, and communicate across Council.	▸▸ 12 months	External: • Cyber security specialist • System administrator (leverage existing vendor, contractor or as-a-service)	Moderate
Application and Technology	**Adopt single document management system.** Key tasks include: • Engage staff to identify strengths and weaknesses of each system, noting additional requirements • Define a migration plan to transfer documents to preferred system, noting backups need to be maintained • Adopt system that meets all requirements, and communicate change across Council.	12-18 months	Internal: • System administrator External: • Business analyst	Low
Application and Technology	**Refresh deployment approach for end user devices.** Key tasks include: • Explore current industry standard tools for device deployment and management • Consider and adopt tools that work natively within the Microsoft stack, e.g. InTune, Autopilot, Endpoint • Define and deploy a Standard Operating Environment (SOE), and maintain as per vendor updates.	12-18 months	Internal: • System administrator	Low

$ Low $15k - $40k
$$ Moderate $40k - $75k
$$$ Significant $75k and above

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2 Consolidation activities: Years 2 and 3 Page 2

Stream	Key activities and tasks	Duration (est.)	Supply choice	Cost (est.)
Application and Technology	**Establish self-service HR functionality for staff.** Key tasks include: • Gather and prioritise requirements for Employee Self-Service (ESS) • Define approach to extending intranet to include ESS functionality, noting changes to business process • Implement ESS and communicate ESS to staff	◂◂ 6-12 months	Internal: • Business analyst • System administrator External: • Software developer	Low
Information and Data	**Build improved data literacy and drive culture of evidence-based decision making.** Key tasks include: • Assess current data literacy and tools used to drive decision-making to develop baseline • Define improvements needed to be more data-driven, noting areas requiring significant change • Conduct training with revised material to embed cultural changes toward more a data-driven organisation.	◂◂ 18 months	Internal: • Business analyst External: • Training consultant	Low G

$	Low	$15k - $40k	◂◂	Potential to commence earlier
$$	Moderate	$40k - $75k	▸▸	Potential to commence later
$$$	Significant	$75k and above	G	GWI can assist

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3 Transformation activities: Years 4 and 5

Stream	Key activities and tasks	Duration (est.)	Supply choice	Cost (est.)
Governance	**Adopt system-led change to business processes.** Key tasks include: • Identify systems that require upgrade or functions that will benefit from new systems • Map current and future processes to understand and communicate changes and their benefits • Implement system changes along with business process changes, communicating frequently.	◂◂ 18-24 months	External • IT project manager • Business analyst • Training consultant	Moderate G
Commercial	**Explore new funding sources and industry alliances.** Key tasks include: • Engage other local governments and government associations to create awareness of Council's current services and future plans, identifying relevant federal and state grants • Forge alliances with organisations whose resources and objectives align with Council's plans to attract and retain more talent in the region, encourage tourism, and attract investment. • Host or play a significant role in a local government / infrastructure / tourism conference to generate greater awareness of the shire's opportunities.	◂◂ 18-24 months	Internal: • Commercial analyst (part-time)	Low $20-30K (internal) G
Application and Technology	**Develop and implement a mobility strategy.** Key tasks include: • Review approach to managing mobile devices and providing system access to field staff • Determine which services are best delivered via mobile apps vs mobile websites • Define approach to managing upgrades, security, and department-specific control	18-24 months	Internal • System administrator External: • Business analyst	Moderate $40-50K G
Information and Data	**Expand open data and data sharing capabilities.** Key tasks include: • Develop a data sharing policy to govern Council's data exchange mechanisms and processes • Recruit suitably skilled data analysts to operate analytics tools to enable Council to optimise internal operations, identify and prioritise projects, and support community services with real-time data • Commit to consistently exchanging data with Qld Govt Open Data portal to participate in shared insights gathering with other local governments.	24-36 months	Internal: • System administrator External: • IT project manager • Policy writer • Data analyst	Moderate G

$ Low $15k - $40k
$$ Moderate $40k - $75k
$$$ Significant $75k and above

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Secure and reliable technology services, empowering our people to connect, engage and serve our community, industry and visitors.

OPERATING PRINCIPLES	**Digital engagement through mobile services**	**Staff development**	**Continuous improvement**
	Cloud first	**Simplification**	**Innovation through partnerships**
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SUCCESS INDICATORS include

- Reliable network performance
- Data quality is improved
- Contracts within budget
- No functionality overlaps
- Self-service available to staff and residents
- Innovative projects established