



Whitehorse City Council

INFORMATION TECHNOLOGY STRATEGY

2020 - 2025

STRATEGIC PLAN

July 2020

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EXECUTIVE SUMMARY

Introduction

This document sets out the Information Technology Strategy for Whitehorse City Council (WCC) from 2020 to 2025.

This Strategy has been prepared concurrently with the preparation of an initial Business Case for an Enterprise Resource Planning (ERP) implementation which will explore and recommend options for ERP capability in the areas of finance, HR and payroll applications with scope for exploration of additional modules.

Strategic Drivers

The Strategy is informed and guided by a number of factors.

- The Strategy must build on the current business, IT and digital environment, while making the most of WCC's existing human and technology assets and strengths.
- The Strategy must take account of other relevant plans as these direct or shape how technology should be developed and deployed.
- The Strategy must respond to the needs of users:
 - The community places expectations on Council about how services should be delivered and how technology should be used to support these services.
 - Business areas within WCC need technology to support them in delivering services to the community.
- Technology offers solutions that are not exploited at present, or may only become available in the future, which Council must consider in continuing to provide outstanding service.

Technology Principles

Twelve principles will guide future IT decisions.

Information and data will be easy to find and to use	Technology vendors will be actively managed so that WCC maximises the benefit of what it purchases
Employees can work anywhere, anytime on any device	Accessing systems will be seamless
Technology decisions will be guided by both business and technology expertise	Decision making will be informed by integrated and aligned technology
Services will be responsive to changing community demands	Decision makers will be presented with a unified view of people and assets
Services and systems will be designed for reliability	Decision makers will have straight forward access to real-time reporting
Technologically skilled people will maximise the value of technology	WCC technology will be delivered as efficiently as possible

Enablers

The business objectives will be enabled by business and information technology.

This strategy envisages five groups of enablers, each of which will be achieved through a number of strategic initiatives.

Design enablers ensure that all planning and design for technology solutions at WCC takes account of all aspects of the technology context

Process enablers ensure that WCC business processes are best aligned with user requirements and that appropriate structures exist for sound technology decisions to be made.

Service enablers are management disciplines which support the effective, efficient and sustainable delivery of IT services, improving operations across WCC.

Capacity enablers address the availability of suitable and effective systems and people.

Capability enablers ensure that employees have the skills and knowledge needed to select and use technology to best advantage.

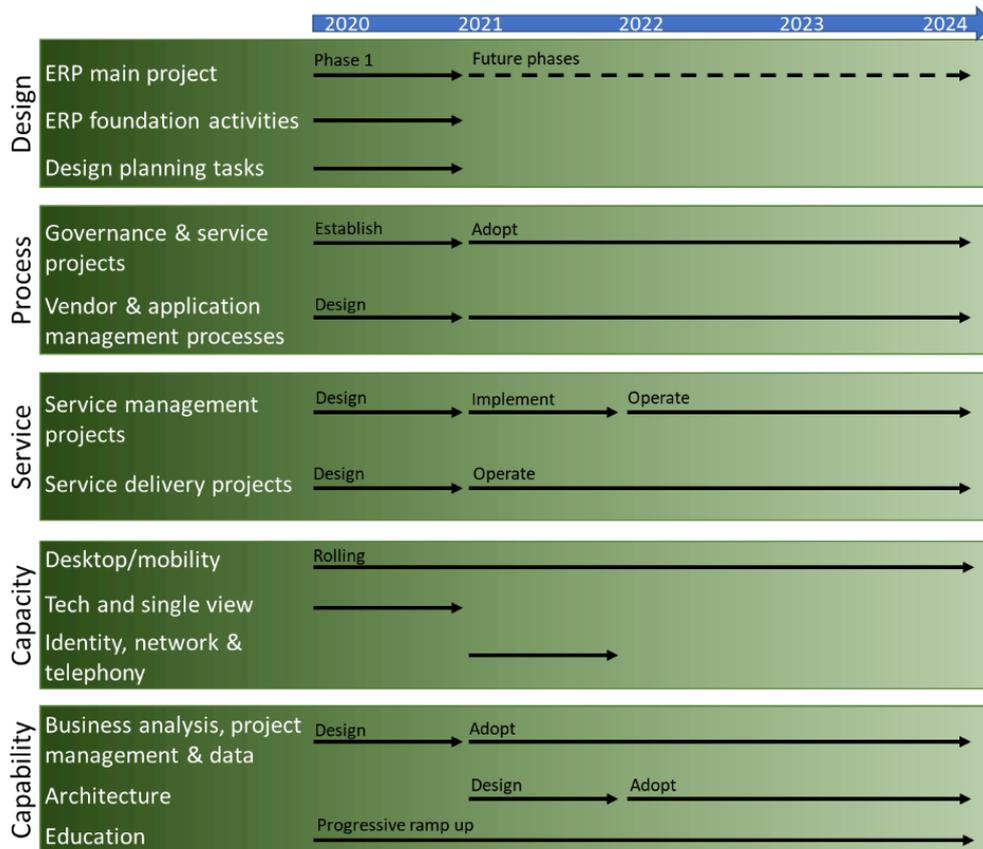
Strategy for the WCC organisation

This is a strategy for information technology within WCC, and therefore implementation is not restricted to the IT function. The elements that impact the whole of the organisation are:

- Uplifting IT capabilities across WCC - improving skills and knowledge so that the potential of existing technology is fully exploited, and general IT awareness and skills are improved.
- Strengthening governance - developing an IT/Business Area partnership for all technology related decisions, developing an enterprise-wide perspective on programmes and projects, and strategic oversight of all endorsed initiatives.

Strategy for IT

The role of the IT function will be enlarged, and capabilities uplifted during the life of the Strategy with a series of strategic initiatives undertaken in each of the enabler groups. IT and business areas will increasingly work together to integrate technologies and support better business processes.



Implementation

There are two stages of activity that are needed to move from the current state to the desired end state for information technology in WCC.

The first step is about reform to ensure that WCC has a stable information technology and business foundation, while the second is about building on this foundation to achieve the strategic goals of the organisation.

Implementation will require additional effort and the Implementation Plan will identify the permanent and project resourcing required. Resources will be optimised to make best use of existing staff expertise, to retain knowledge developed through the work, and balance permanent resourcing to minimise fluctuations.

1. INTRODUCTION

This document sets out the Information Technology Strategy for Whitehorse City Council (WCC) from 2020 to 2025. It replaces a previous IT Strategy adopted in 2014.

The Strategy is intended to provide direction to all decision makers within WCC regarding information technology, enabling business and technology decisions to be aligned. Through this, individual decision makers can be confident that the decisions they make in accordance with this Strategy will also align with decisions made by others within Council. As a result, Council resources will be used most efficiently, and decisions will be made most effectively.

This Strategy has been prepared concurrently with the preparation of an initial Business Case for an Enterprise Resource Planning (ERP) implementation which will explore and recommend options for ERP capability in the areas of finance, HR and payroll applications with scope for exploration of additional modules. Both the IT Strategy and the full proposal for ERP phase 1 are expected to progress to Council approval together, though not solely reliant on the other. The two initiatives potentially deliver significant synergies and alignment and this Strategy has therefore been developed to exploit these synergies. It does not, however, assume that the ERP project will proceed. This Strategy also takes account of the potential for later stages of the ERP project.

While this is a five-year strategy, it also recognises that decisions made during this period will have an impact beyond 2025 and that the life of many systems is significantly more than five years.

The Strategy will be reviewed annually and internally refreshed after 2022-3.

2. STRATEGIC FRAMEWORK

The Strategic Framework is the logic which underpins this Strategy.

The Strategy must use existing and new technologies to deliver positive outcomes for the community and WCC's internal processes. The Strategy describes these outcome imperatives through groups of *Strategic Drivers*.

The response to these Strategic Drivers is a set of *Technology Principles* which describe the required features that technology must deliver.

Converting these Principles into practical actions is effected through a set of *Outcome Enablers*.

Strategic Initiatives then set out the detailed actions that will best deliver the outcomes represented through the Technology Principles and the Outcome Enablers.

This framework is shown in Figure 1.

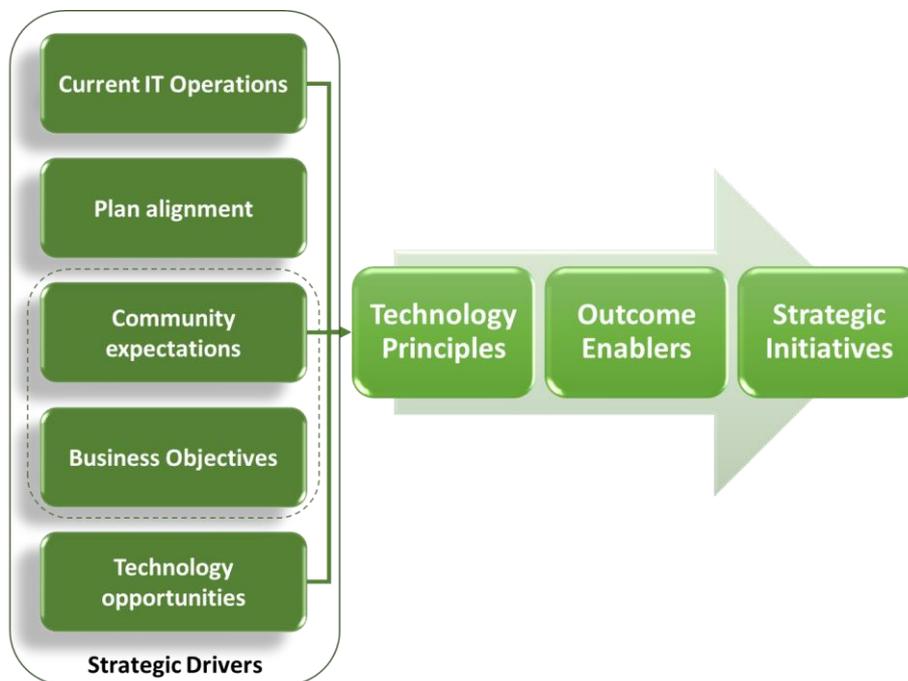


Figure 1: Strategic Framework

The Strategic Framework is made up of four elements:

1. **Strategic drivers.** These include the current IT context for WCC, alignment with internal and external plans and strategies, community expectations, business areas requirements in order to be able to meet these expectations, and how current and future technology opportunities might deliver financially sustainable benefits for WCC.
2. **Technology Principles.** These show the how technology enables the business to achieve its objectives.
3. **Outcome Enablers.** These provide a structure within which technology will deliver the Strategic Principles.
4. **Strategic Initiatives.** These are practical actions that WCC needs to undertake to meet the expectations of the community.

3. CONTEXT

3.1. WHITEHORSE CITY COUNCIL

The technology covered by this Strategy serves a community of 180,000 citizens across a geographical area of approximately 64 km². The residential population has a slight bias towards younger adults and older citizens when compared with Greater Melbourne and a larger number of Chinese born residents than any other non-Australian born national group. Whitehorse also has a lower proportion of indigenous persons than the Victorian average. Whitehorse residents are, generally, educated to a higher level than other Victorians.

The significance of these factors to this Strategy is that community expectations in terms of technological sophistication might be expected to be higher than in other municipalities and that there may be a need to recognise the different technological expectations of people from diverse backgrounds, both in terms of spoken language and the use of devices.

WCC employs over 1,300 employees delivering more than 100 different services. WCC manages assets valued at more than \$2.73 billion¹.

Council operations are both substantial and diverse. While many of the services are unrelated to each other, residents have a multi-service relationship with Council and may deal with Council employees from different business areas for different matters. The scale and complexity of Council operations mean that technology is a vital contributor to the delivery of high quality, efficient and connected services - directly or through Council employees - to residents and the community.

3.2. IT AND BUSINESS TECHNOLOGY

The IT and Digital Business technology environment consists of:

- 1,300 employees accounts, including office, remote and field-based employees
- 2 main on-premise data centres, 5 large sites, 23 small sites
- 200 Virtual Windows servers
- 300TB of storage
- 1,700 network sensors
- 5 core and over 100 supported applications, including cloud applications
- 800 end user devices - split roughly 60/40 laptops to PCs
- 600 mobile phones/tablets

¹ Council Annual Report 2017-18

4. STRATEGIC DRIVERS

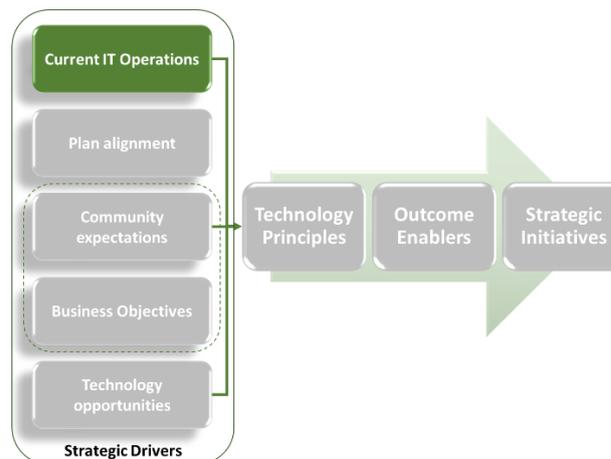
This Strategy is informed and guided by a number of factors.

- The Strategy must build on the current business, IT and digital environment, while making the most of WCC's existing human and technology assets and strengths.
- The Strategy must take account of other relevant plans as these direct or shape how technology should be developed and deployed.
- The Strategy must respond to the needs of users:
 - The community places expectations on Council about how services should be delivered and how technology should be used to support these services.
 - Business areas within WCC need technology to support them in delivering services to the community.
- Technology offers solutions that are not exploited at present, or may only become available in the future, which Council must consider in continuing to provide outstanding service.

This section sets out these drivers.

4.1. CURRENT ENVIRONMENT

This section outlines the existing WCC environment within and outside the Digital & Business Technology functions as well as data, security and governance settings.



4.1.1. Digital & Business Technology

The Digital and Business Technology function is currently structured into three teams under the Head of Digital and Business Technology. These teams are IT Operations, Corporate Information and Digital as shown in Figure 2.

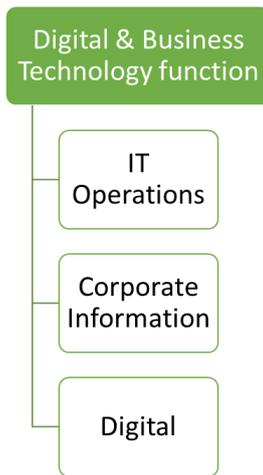


Figure 2: Current Digital & Business Technology function

IT Operations Function

The IT Operations function covers the people, teams, platforms and processes that deliver IT services across WCC. This team has been through significant change since 2017. At that time, a new Digital project team was created that led to flow-on changes of personnel and roles. In addition, the changing nature of technology and the need to respond to recognised gaps in service and technology have led to further organisation, employees and capability changes.

The current state functional structure for the Information Technology team is shown in Figure 3.

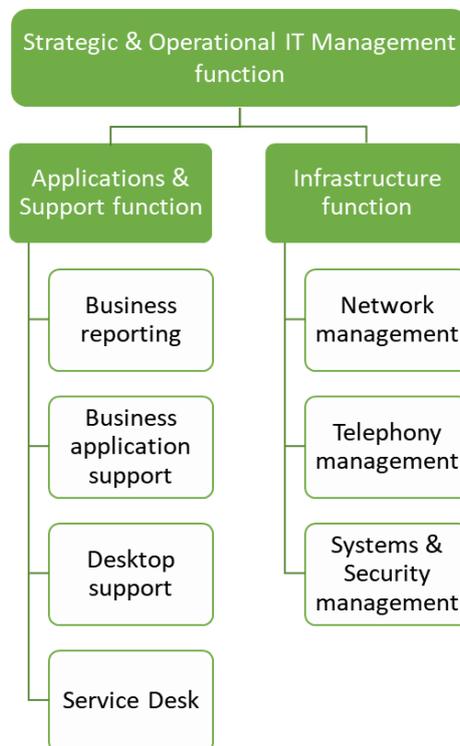


Figure 3: Current State IT Functional Structure

While the current team is effective in delivering the operational services required, the current configuration of the IT Operations team has some functional gaps.

- IT Operations lacks sufficient resources to deliver services that fully meet user expectations for responsiveness and functionality with the current workload.
- Leadership, strategic advisory and business analysis resources are confined to high level advice delivered by the Head of Digital and the Manager, IT Operations.
- Out of hours support is currently restricted to a 'best effort' basis, rather than to meet demand.
- Skill gaps exist, particularly in service delivery, enterprise architecture, business analysis, database integration and project/ programme management.
- Service management and service level gaps
- Business knowledge is insufficient to allow IT to be advisers as well as a delivery team.

As a result, IT team leaders and the Manager of IT Operations are operationally heavily involved, with little spare capacity to play a more strategic role within WCC.

Digital

Digital is a small team with business analysis and project management functions, working with content owners in Strategic Marketing and Communications and other business areas.

Corporate information

Corporate Information is also a small team with a primary focus on information management, privacy and the implementation and operation of the HPCM application (records management system). The role of this team extends beyond management of the system and includes procedural oversight across the organisation and the promotion of compliant records behaviour by employees, for example by appropriate filing of workflow and recording of metadata.

4.1.2. Technology

A programme of hardware refresh has been undertaken which both recognises the need to replace end user devices on a rolling, lifecycle basis and the requirement for greater security with a greater degree of compliance with WCC standards. Server, data centre and network infrastructure has been updated to improve service availability, disaster recovery and cyber threats. The lifecycle management and refresh programme has not yet extended to all assets that Council now relies on for efficiency and automation. In particular, the lifecycle management plan and refresh funding for core applications or tablet devices has yet to be completed.

4.1.3. Cyber security

The management of cyber security has been enhanced by the appointment of a Systems and Security Analyst. While no level of investment in IT security can entirely eliminate risk, the current capability is a significant response. However, it does not yet satisfy all the requirements of a dedicated security function.

4.1.4. Business applications, data and data management

Most applications are owned² by the relevant business areas, though some applications have shared ownership. IT provides expert support to business areas at all stages of the acquisition and sustainment lifecycle.

Application owners across Council manage their own data. Data is not controlled centrally, apart from records (unstructured data), where the management of the data is overseen by the Corporate Information team. The current siloed nature and lack of unified standards of this data inhibits the realisation of Single View of Customer and Business Intelligence & Analytics capabilities.

Business reporting software allows consolidated reporting and analysis of separate data sets. In the context of different ownership, such consolidation is vulnerable to different data definitions and requires a significant level of skill by users. There is no data dictionary that aligns data field names, nor is there a software layer that allows data to be updated across different applications. One significant example of this is that each system needs to be updated separately when a customer changes their address.

As IT Operations lacks any business analysis capability, performing a more strategic or proactive role with business areas would not be possible with current resources. This also means that practical development work on existing systems depends on developers doubling up as business analysts which is an unsound practice.

4.1.5. Governance and processes

Governance is overseen through an IT Steering Committee (ITSC), a Digital Steering Committee (DSC) as well as line management of the Digital and Business Technology department through the General Manager, Corporate Services.

ITSC has industry-standard Terms of Reference and acts as an advisory body to the Executive. The Committee does not have the authority to approve budgets or spending, both of which are vested in business area managers, EMT and, ultimately, the Council. ITSC also does not have responsibility for monitoring or managing the IT team's current or future workload and this is resourced and managed through annual funding and requests for additional resources. Decisions made by ITSC are mostly tactical rather than strategic.

Unlike many other organisations of similar size, there is neither an engagement model, nor a Service Management framework (with accompanying service definitions for users). This means that there are only operational arrangements for managing incidents or requests to the Service Desk.

While some project management skills exist within the IT function, no formal project or programme management methodology is applied or managed within the team or within WCC more broadly outside of the Major Projects function and, as a result, there is no means of coordinating concurrent projects other than through line management. This also means that there is no work-pipeline management.

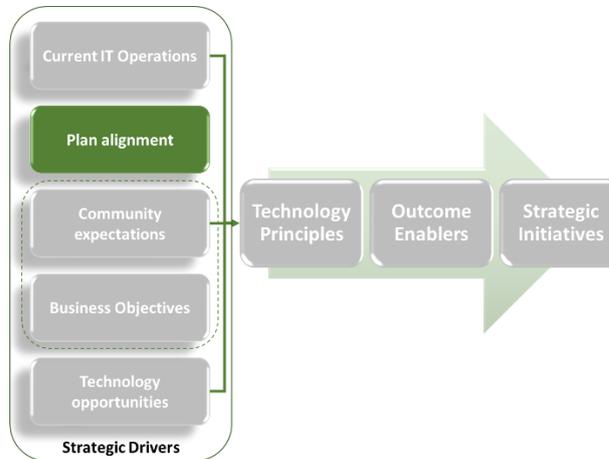
An established suite of policies, processes, procedures and work instructions exists, though coverage is incomplete, and some documents need refreshing. Internal processes are partially

² Application 'ownership' covers responsibility for the strategic and operational management of the application within the business. The role of the IT function is to provide and manage the technology platform and network that the application relies on. Application owners primarily manage the relationship with the vendor, though IT is involved where platform and network matters need to be considered.

documented, partly because the knowledge within the team means that IT is not currently dependent on procedural documentation.

4.2. PLAN ALIGNMENT

This section discusses how this Strategy is aligned with current internal and external strategies, visions and plans.



Information Technology contributes to the operations of WCC, which in turn operates as an entity legislated by the Victorian Government. This Strategy is therefore necessarily shaped by guidance and direction from other strategies and plans.

The Information Technology Strategy is aligned to both external and internal strategies and plans. Figure 4 depicts the relationship between these plans.

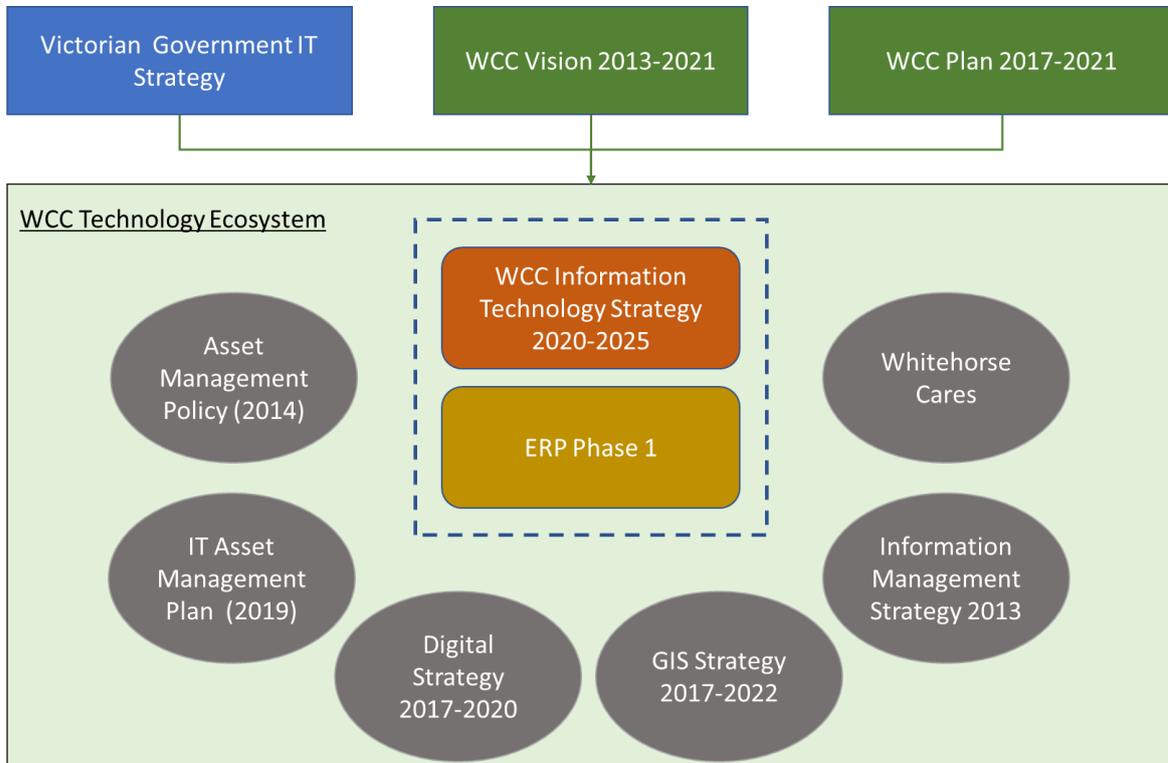


Figure 4: Plan Alignment

The Information Technology Strategy takes account of plans within the WCC Technology Ecosystem and is aligned with the Victorian Government IT Strategy. It also supports the WCC Vision and Plan.

The nature of each of the strategic documents shown in Figure 4 is explained in the section below together with a summary of how the Information Technology Strategy has responded to each.

4.2.1. Victorian Government Information Technology Strategy

The Information Technology Strategy 2016-2020 charts government’s direction across four priorities:

1. Information and data reform -data and information should be available in a way that helps us make good decisions.
2. Digital opportunity -information and services should be easily accessed using any device at any time.
3. Technology reform -the technology systems we use should be contemporary, enable collaboration and share data.
4. Capability uplift -government employees should understand the value of technology and be capable of procuring contemporary systems.

The strategy guides Victorian government bodies to deliver:

- Sound policy
- Contemporary service delivery models
- Value for money for Victorians

Section 5 identifies the ways that the principles for this strategy support the Victorian Government’s priorities. Each of the priorities in the Victorian Government IT Strategy is reflected in this WCC Information Technology strategy.

4.2.2. WCC Vision 2013-2023

The Council Vision 2013-2023 is a high-level strategic document. It articulates the aspirations of the community about the future. The overall vision is summarised in this sentence:

We aspire to be a healthy, vibrant, prosperous and sustainable community supported by strong leadership and community partnerships.

The Vision document sets out five Strategic Directions. These help to identify the purpose and priorities for IT. The Strategic Directions, and their relevance to IT, are shown below.

Strategic Direction		How IT contributes to this objective
1	Support a healthy, vibrant, inclusive and diverse community	IT provides platforms for information and communication and the functionality to manage and support initiatives that facilitate the support of a strong community.

	Strategic Direction	How IT contributes to this objective
2	Maintain and enhance our built environment to ensure a liveable and sustainable city	IT supports Council teams that deliver this objective by providing and supporting technology including infrastructure within and outside Council premises, management software and personal productivity tools.
3	Protect and enhance our open spaces and natural environments	IT provides technology infrastructure and services to support council open space and natural environment management.
4	Strategic leadership and open and accessible government	IT provides infrastructure and functionality to inform decision making within Council and across the community.
5	Support a healthy local economy	IT supports Council officers who promote and support business activity by providing technology infrastructure which enables efficient and effective Council operations for the benefit of ratepayers.

Table 1: IT's contribution to WCC Vision

As the Strategic Directions represent the overall purpose of Council, each element of this Strategy responds to one or more of these Strategic Directions.

4.2.3. WCC Plan 2017-2021

The Council Plan for 2017-2021 details how Council will deliver its goals. The Plan is updated each year. The Year 3 Plan includes a Mission Statement:

Whitehorse City Council, working in partnership with the community to develop and grow our municipality through good governance, proactive strategic planning and advocacy, efficient, responsive services and quality infrastructure. (page 6)

This strategy provides a framework for IT governance, sets out a strategic pathway and aims to support the delivery of Council services in line with the mission.

4.2.4. Asset Management Policy (2014)

The current policy on assets states:

As custodians of community assets, the City of Whitehorse will provide assets that are accessible, safe, sustainable and responsive to the needs of the community and the contemporary environment.

This strategy takes account of this policy in guiding the strategy for asset acquisition, management and disposal.

4.2.5. IT Asset Management Plan (March 2019)

This plan documents an approach to the ongoing management of WCC's Information Technology (IT) infrastructure and related assets. The Plan recognises that this IT Strategy might drive change in several asset areas.

This strategy takes account of the Asset Management Plan and, in particular, the intent to adopt more consistent lifecycle management of equipment to ensure that Council's equipment is fit for purpose. It also recognises that "as a Service" solutions will affect asset requirements in the longer term and that Service Management practices are being adopted more widely in IT.

4.2.6. Digital Strategy 2017-2020

Digital design and delivery are closely interconnected with information technology. The Digital Strategy relies in part on Council's IT resources (hardware, software and data) to deliver the outcomes sought. The Digital Strategy is established and part complete. The Digital Project Vision statement is shown below:

By embracing digital technology, WCC aims to provide the community the best possible service, quick access to relevant information and the ability to connect and engage online.

- Council will achieve this by working collaboratively across all Council departments, developing digital skills and automating and digitising workflows and processes.*
- Council will use data and insight to continually improve our digital presence and our operating processes and respond quickly to technical change.*
- Council will be customer focused and create connected, user friendly, relevant and simple interactions with Council.*

The Strategy initially focuses on enhancing established web interaction with customers and a more systematic and measured involvement in social media. The focus over time will see growth in app delivered access to information and services which will provide connections into back end systems.

The development of this strategy has included deep involvement by the Digital team and the strategy provides a context for the IT delivery aspects of the Digital Strategy.

4.2.7. GIS Strategy 2017 -2022

Council has always relied on an element of spatial data to manage not only the property and rating function but several other assets, service and compliance functions. GIS technologies have come of age in the last decade and the GIS Strategy responds to growing demand and to the potential to improve service quality and efficiency as well as reduce costs. The GIS Vision statement is shown below:

By embracing GIS and Spatial Information, WCC aims to provide its customers and stakeholders the best possible service, quick access to relevant information and the ability to connect and engage online.

Council will achieve this by:

- Ensuring all Council information can be easily mapped in the office, at home or in the field*
- Creating a pervasive GIS mindset throughout Council*
- Providing the necessary IT infrastructure, governance, policies, skills and culture*

One strategic and three supporting outcomes will deliver this vision:

- GIS enabled, integrated, mobile user applications*
- Enabling infrastructure*

- A GIS ‘mindset’ in service planning and delivery
- Effective governance

This strategy recognises the critical nature of GIS data sets and the rapidly increasing functional reliance on GIS services across Council.

4.2.8. Information Management Strategy 2013

Council’s most recent Information Management Strategy (2013-2018) was adopted in 2013. While this Strategy still informs current thinking, it is due for an update, with particular focus needed in the areas of Risk and Compliance, Privacy and Data Protection, Information Asset Management and Information Process Governance to support rapidly increasing customer and organisational demands for data. . Key elements of the 2013 Information Management Strategy were:

- Upskilling employees to work effectively and efficiently with the IM framework and systems
- Improve the management of unstructured data, particularly using HPCM
- The need to better integrate enterprise information management into core systems
- The need to ensure that information management systems are accessible through the IT infrastructure wherever employees are working

This strategy takes account of the central and increasing importance of information management in integrating data and services.

4.2.9. Whitehorse CARES

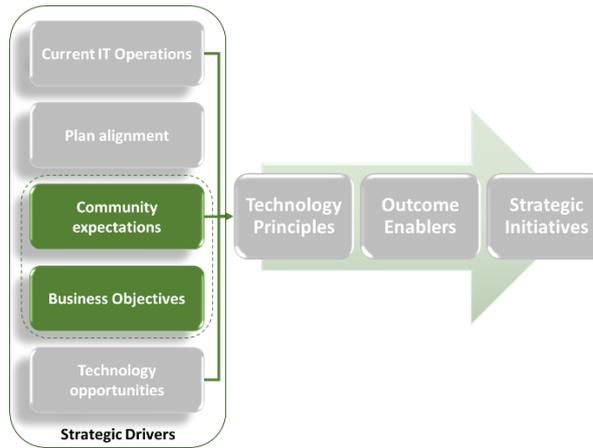
Whitehorse CARES is an internal programme guiding employee’s behaviour with and service to customers. The document identifies five customer service objectives:

- Communication - clearly communicate the process and set expectations
- Accountability - being responsible for the enquiry or request, don’t pass the buck
- Responsiveness -communicating to our customers within the set expectations, keep them informed
- Empathy - take a moment to put yourself in your customer’s shoes, acknowledge their situation
- Solution - work towards a solution that satisfies, and if you can’t meet it, explain/inform your customer

This strategy takes account of these objectives through the importance of supporting employees delivering services to customers.

4.3. COMMUNITY EXPECTATIONS AND BUSINESS OBJECTIVES

This section highlights the expectations and objectives of both external and internal users



While the focus of this Strategy is on technology, the ultimate goal of the strategy is to enable WCC to meet the needs and expectations of its community. Implementing this Strategy will enable WCC to meet these expectations by supporting business areas in meeting their objectives.

As part of the preparation of this Strategy, an extensive consultation was undertaken with managers and subject matter experts from business areas to understand the community needs of each area, and what support each of the business areas needed to be able to respond to, and satisfy, these needs. Each interview established the current state as described by the interviewees, how their operations might be improved, and how information technology could enable such improvement.

The discussions were not limited to technology tools, but also covered structural and behavioural elements.

Figure 5 describes the relationship between the community expectations identified during the consultation, and the business objectives that are required to be able to satisfy these current and future needs.

The Community expects:



To do this WCC business areas need:



Figure 5: Business Objectives

4.3.1. Community Expectations

The community comprises both internal and external customers and within these groups are WCC employees, ratepayers, residents, landlords, business owners and consumers of Council's services. Their expectations are described in more detail in Table 2:

Customer Expectation	Description
Good governance, wise spending	The community will be assured that all decisions are made on a consistent basis, and that when WCC is determining how to use funding it is also based on sound and justifiable reasoning.
Channel options	Community members will be able to access WCC services using their preferred channel, whether that is face-to-face, telephone, e-mail, or online.
Simplicity	Community members will not need to navigate a complex external business process, or multiple system interfaces, to interact with WCC.
Speed and responsiveness	Community members will receive an immediate acknowledgement of enquiries. Community members will have enquiries/transactions resolved as quickly as possible.
Real-time status updates	Community members are able to view the status of an incident, transaction, report they have made or enquiry without needing to contact WCC by phone or e-mail. Community members will receive status updates on a push basis from WCC.
Accessibility	Community members will be able to access WCC services from any device and any location, at any time of the day.
Progress reporting	Community members will be able to access current reporting on the status of projects being delivered by WCC on their behalf.

Table 2: Community Expectations

4.3.2. Business Objectives

WCC aims to be able to provide services to its community that meets its expectations. Increasingly this means providing fast and accurate responses to requests, allowing access to council services via a variety of channels, providing real-time status reports, and improving reporting to the community on projects and initiatives.

To do this the business areas need to have data and information that is well managed, integrated and shared across the organisation and business processes that are formalised and optimised. It also means that the mobility of the workforce needs to be supported with the right tools and applications.

The business also expects to be able to work with IT teams on a partnership basis, with these teams providing strategic advice and education to the business and acting as stakeholders in annual business planning processes. It also expects that there will be an area within the organisation that has oversight of all business improvement initiatives and projects, and that projects will be managed by appropriately skilled employees.

Information technology has a role to play in this by delivering appropriate technology improvements, and by having capable people at the right resourcing level.

Table 3 describes the business objectives in more detail:

Business Objective	Description	Rationale
Integrated, shared information	<p>All data repositories are known, and employees have appropriate access to all the data that they need.</p> <p>Data is integrated and managed on an organisation-wide basis and is easy to access and to use.</p> <p>Information and data will be automatically shared between systems and applications.</p>	<p>The use of information across the business will be optimised saving time for employees when retrieving information to perform their roles and will result in improved consistent performance reporting.</p>
Mobility	<p>Employees will be able to complete business transactions, or access WCC services, from any device, any location, and at any time.</p> <p>Employees will receive appropriate levels of IT support during core business hours and off-site.</p>	<p>Employees will be able to complete transactions with citizens, or transactions related to their roles, without having to return to a WCC site.</p>
Strategic technology support	<p>IT will have the capability and capacity to monitor the external environment for new and emerging technologies and will be able to provide advice about how these can better support WCC.</p>	<p>This will ensure that the selection of new systems and applications is forward-looking, providing WCC with a better use of funds invested in information technology.</p>
Responsiveness to changing customer demands	<p>WCC is able to rapidly adapt when customer expectations about their interactions with WCC change.</p>	<p>WCC will be able to improve customer satisfaction levels.</p>

Business Objective	Description	Rationale
No single points of failure	<p>Knowledge and expertise should not reside with single individuals within the IT team, and there will be capacity to backfill positions when expert resources are not available.</p> <p>There will be adequate redundancy to minimise the risk of failure in any system.</p> <p>The organisation will receive appropriate levels of IT support out of business hours.</p>	<p>This reduces the risk to WCC of not having access to critical IT knowledge, systems and support when it is required.</p> <p>Critical out of hours problems will be resolved quickly.</p>
Skills in managing and using technology	<p>Non-technology employees will have sufficient education and advice to allow them to appropriately use systems and software and to optimise their use of technology tools.</p> <p>The business will have adequately skilled project managers for business-led projects.</p>	<p>This will improve efficiency and effectiveness in business technology and operations.</p> <p>Projects that are managed by skilled project managers will be less costly and have reduced risks.</p>
Vendor management	<p>WCC will have a formal and centrally managed vendor management strategy and procedure.</p>	<p>WCC will be prepared for changes in vendor arrangements that affect its systems and software.</p> <p>No unauthorised approval for changes to existing technology and tools will be made.</p>
Seamless systems	<p>Users will not have to sign into multiple systems and applications to do their job.</p>	<p>This will improve efficiency and effectiveness in business operations.</p> <p>The accuracy of data and information will be improved.</p> <p>The security controls will be enhanced and centrally managed.</p>

Business Objective	Description	Rationale
A partnership with IT	<p>IT and business areas will work together to plan for and deliver initiatives that have a technology element or impact.</p> <p>IT will clearly define and communicated its responsibilities.</p> <p>The business will support IT by providing subject matter expertise.</p>	<p>IT resources will be available to the business when required for projects and changes.</p> <p>Both IT and WCC will have fully funded and fully resourced business plans.</p> <p>IT will have access to expertise that resides in the business that will allow it to provide better advice to the business.</p>
Single view of the customer	<p>Each customer of WCC will have a single profile regardless of which service they have accessed. There will be a 'master' record for each customer.</p>	<p>Customers will not be required to provide their details more than once to WCC.</p> <p>Employees will not need to do multiple searches to find an existing customer.</p>
Easy and real-time reporting	<p>All data is known and available to all employees.</p> <p>The WCC reporting tool is easy to use by non-expert employees.</p>	<p>WCC will be able to readily produce real-time reports that they can be confident are accurate, and that can be readily repeated.</p>
Strategic management of change	<p>There will be an area within WCC that has knowledge and oversight of all business and technology projects and improvements. The impacts of all proposed changes will be identified and assessed on an organisation-wide basis.</p>	<p>Changes within the organisation will be optimised, reducing unforeseen negative outcomes and reducing the risks associated with change.</p>

Table 3: Business Objectives

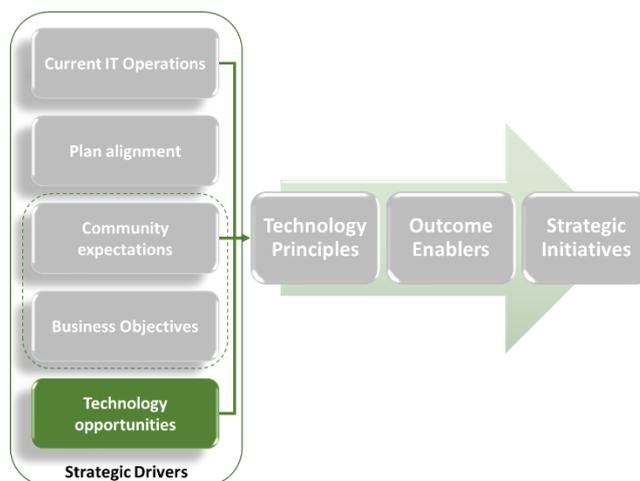
The relationship between the community expectations and business objectives is complex. Many of the business objectives have an apparent internal focus, but without them WCC is unable to fully meet the expectations of the community. The relationship between them is mapped in Figure 6.

		Customer Expectations						
		Good governance, wise spending	Channel options	Simplicity	Speed and responsiveness	Real-time status updates	Accessibility	Progress reporting
Business Objectives	Integrated, shared information			✓		✓		✓
	Mobility		✓	✓				
	Strategic technology support	✓					✓	
	Responsiveness to changing customer demands		✓		✓		✓	
	No single points of failure	✓			✓			
	Skills in managing and using technology	✓			✓			
	Vendor management	✓			✓			
	Seamless systems		✓	✓		✓	✓	✓
	A partnership with IT	✓	✓	✓	✓	✓	✓	✓
	Single view of the customer				✓	✓		
	Easy & real-time reporting					✓		✓
	Strategic management of change	✓						

Figure 6: How the Business Objectives meet Customer Expectations

4.4. TECHNOLOGY OPPORTUNITIES

This section describes the aspects of technology that are likely to drive change within WCC.



There are four aspects of technology opportunities that drive change.

1. **Existing** technology provides functionality far beyond what any organisation can fully use. WCC has an extensive range of hardware and software which offers untapped potential.
2. **Available** and proven technologies used by other organisations could be deployed within WCC.

3. **Emerging** technologies would allow WCC to exploit technologies that are becoming mainstream.
4. In addition, **new** technologies frequently emerge that either create an opportunity for better service or which become mainstream technologies outside WCC and must be adopted by WCC.

4.4.1. Existing technologies

Contemporary software is rich in features and functionality. Organisations typically only exploit part of the potential of their software.

Existing technologies	Opportunity
Office productivity software	The Microsoft Office software suite offers functionality that few users fully exploit. This includes features such as macros (in Word and Excel) and Styles (in Word and PowerPoint). While business areas that use these applications intensively have localised implementations, using these across Council would significantly increase productivity for little additional cost.
Core application functionality	Core applications at WCC include Finance, Property & Rating, Assets, Health and Records management systems. These are typically configured to deliver the original requirements. WCC has the opportunity to take advantage of additional functionality that the software might have but which was not initially enabled, or which has become available as part of the product update lifecycle.

4.4.2. Available technologies

WCC IT assets include networks, computers, data and software, including digital assets. It is generally true that these assets have been acquired to provide specific functionality. The power of these technologies increasingly comes from better integrating them so that:

- The underlying data is visible across applications (eg: Single View of Customer)
- Applications connect workflows and processes
- They in turn connect seamlessly to external systems

Technologies that will create opportunities for WCC during the Strategy period include the following:

Available technologies	Opportunity
Cloud or hosted services	Increasingly, the commoditisation of technology services is making 'as a Service' solutions more attractive. Placing selected applications and services with one or more cloud or hosted providers would reduce risk, cost and support requirements, though at the loss of some control over functionality and (potentially) data.

Available technologies	Opportunity
Network technology	Better, modern networking technology such as wider use of fibre-based technologies would connect sites and devices more effectively than is currently the case and would allow more real time interactions, enhanced service delivery to community expectations, better monitoring of actions or status, and faster response times.
Data integration	Organisation-wide data integration, across the entire Strategy - from Foundational activities through to end solutions like Single View of Customer. Embracing concepts such as Data Warehouses and Data Lakes, would allow for the consolidation of separated, potentially conflicting data sets and simplified interactions with WCC which would also assist reporting. Supporting focus areas include Current State Assessments, Standardisation & Governance, Cleansing, Infrastructure Considerations and Migration.
Data analysis platforms	Enhanced tools for data analysis would permit the extraction of scattered data sets, particularly from machines, to create 'big data' and business insights.
Integration software	Integration platforms connect disparate applications which would allow for partial or full integration of process and data, therefore facilitating joined up services for customers.
Customer Relationship Management (CRM) software	CRM applications typically build core system functionality around a customer centric software model and database. This approach facilitates a single view of the customer and workflow which is designed around customer needs. CRM applications also allow integrated management of potentially complex relationships with individuals.
Collaboration suites	Collaboration tools provide secure, real time connection forums that are easy to use and integrate with work practices and applications. They also offer the potential to collaborate with the community. These would enhance both the efficiency and effectiveness of WCC.
Street and facility-based technology	Closed Circuit TV (CCTV), wayfinding and digital signage are all established technologies and would allow WCC to monitor places and objects as well as provide live, contextual information to customers.
Big data and open data	The consolidation of separate data sets and the provision of public access to data sets that were not previously accessible would create both the potential for significant growth in demand for access through integration functionality that does not yet exist, as well as the potential to improve information and service. WCC may need to build a number of Application Program Interfaces (APIs) to support these.

4.4.3. Emerging technologies

A number of technologies are becoming mainstream in consumer and business markets. WCC has the opportunity to adopt these to support business outcomes.

Emerging technologies	Opportunity
Smart Cities, smart places and the Internet of Things (IoT)	Monitoring, control and communication functionality at low price are increasingly built into devices available to Council. Exploiting this functionality in devices as they are acquired would enable better service delivery, real time monitoring of static and mobile devices, and the creation of new services not currently envisaged.
Drones	While there are regulatory and other issues in the adoption of this technology, it already forms part of a revolution in remote sensing which WCC is highly likely to exploit, affecting applications, bandwidth and system standards.
3D scanning, Augmented Reality (AR) and Virtual Reality (VR)	The capacity to build a 'virtual world' using asset data and machine observation and measurement will create many opportunities for better asset management, service delivery and cost savings. This technology could be used by WCC employees to make decisions about assets guided by AR delivered information, or by customers to read overlaid information about a cultural object.
Process automation	Technology enabled automation of complex business processes would extend the efficiency gains from automation further and allow business areas to deliver better or additional services that are not currently possible.

4.4.4. Future technologies

The development and adoption of future technologies runs on a shorter time cycle than a five-year Strategy. It is therefore difficult to predict which future technologies will be viable by the end of the five years. This is particularly true because, even when a technology is proven, the ability of organisations to adopt it is often dependent on the take up of the technology by the public. In a similar way, the value of a new technology often depends on whether and how it is deployed into other assets.

This section indicates some of the technologies that might be available during the life of the Strategy and how they might be deployed.

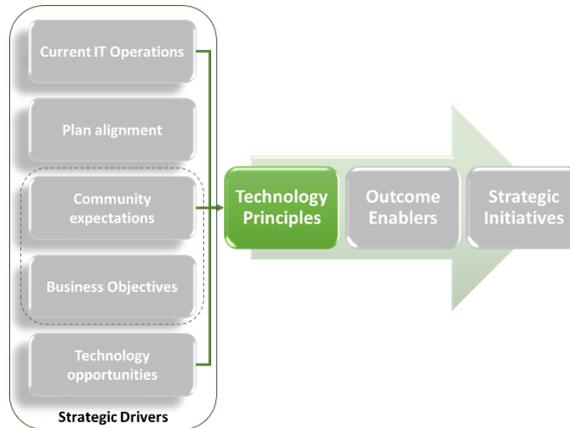
Future technologies	Opportunity
5G (fifth generation mobile technology)	5G technology is being rolled out across Australia, though as yet has limited coverage. It is the fast speed and high bandwidth of 5G that offers great potential. The exploitation of these is only beginning, taking advantage of ultra-low latency and the transmission of previously unthinkable data volumes. Amongst many other implications, IoT devices, video applications and mobile working will become significantly more viable.

Future technologies	Opportunity
Blockchain	<p>This technology has had a slow gestation and its application in a local government context is still uncertain. However, it may be adopted by others as a payment solution that WCC must integrate into Council systems.</p> <p>Blockchain also has the potential to be part of regulatory documentation in areas such as Planning and to support online voting</p>
New, integrated technologies	<p>Technologies are emerging that build on existing, new technologies to create integrated, multi-functional solutions. Technologies such as visualisation, digital twins, robotics and augmented analytics combine existing technologies in new ways. These may be adopted by business areas within the life of the Strategy and will require significant support and incorporation in networks, integration software and service models.</p>

5. TECHNOLOGY PRINCIPLES AND OUTCOME ENABLERS

5.1. TECHNOLOGY PRINCIPLES

The Technology Principles are based on the business objectives



Consultation with business areas identified the business objectives set out in Section 3.1 These have been translated to create Technology Principles which will underpin future IT decisions.

Table 4 describes these Principles.

	Business Objective	Principle	Description
1	Integrated and shared information	Information and data will be easy to find and to use	Actively manage all data, information and systems to maximise integration and efficiency.
2	Mobility	Employees can work anywhere, anytime on any device	Design solutions assuming that users will be mobile, will require access from different devices, and may operate 24 x 7.
3	Strategic technology support	Technology decisions will be guided by both business and technology expertise	Bring together business and IT to best exploit technology options for business and customer benefit.
4	Responsiveness to changing customer demands	Services will be responsive to changing community demands	Applications will be intuitive, and WCC will be innovative and agile, allowing the customer to access information securely and seamlessly via their preferred channel.
5	No single points of failure	Services and systems will be designed for reliability	Technology infrastructure will be designed to ensure that there will be no single points of failure - human, system or process.

	Business Objective	Principle	Description
6	Skills in managing and using technology	<i>Technologically skilled people will maximise the value of technology</i>	Appropriately skill employees to make the best use of the IT tools that are provided.
7	Vendor management	<i>Technology vendors will be actively managed so that WCC maximises the benefit of what it purchases</i>	Technology will be well understood so that externally sourced technology solutions will be managed in an integrated way across WCC to get the best outcomes for the business and customers and to optimise technology support.
8	Seamless systems	<i>Accessing systems will be seamless</i>	Work towards a single and fully integrated user interface.
9	A partnership with IT	<i>Decision making will be informed by integrated and aligned technology</i>	Take into account broad organisation impacts when making decisions. IT and Business Technology will be stakeholders in all business decisions with a technology impact.
10	Single view of the customer	<i>Decision makers will be presented with a unified view of people and assets</i>	Support increasing unification of single views of customers and assets through technology and data decisions. Integrate data across the organisation.
11	Easy and real-time reporting	<i>Decision makers will have straight forward access to real-time reporting</i>	Connect data and make it accessible through integrated or robustly connected software and data sets. New systems and applications will conform to the organisations' data model.
12	Strategic management of change	<i>WCC technology will be delivered as efficiently as possible</i>	Every dollar spent on technology will deliver the greatest value by prioritising spending, eliminating duplication and leveraging technology opportunities.

Table 4: Strategic Principles

The WCC Strategic Principles are also aligned with the strategic IT priorities for the Victorian Government, as shown in Figure 7:

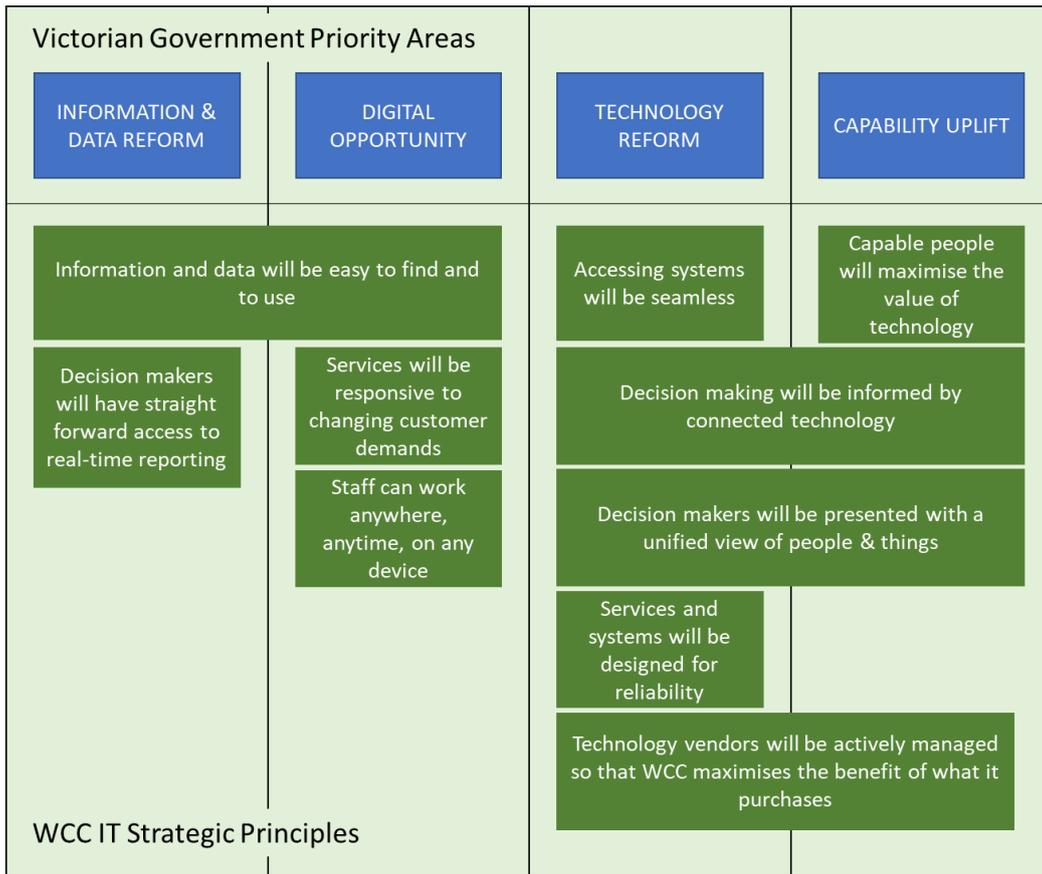
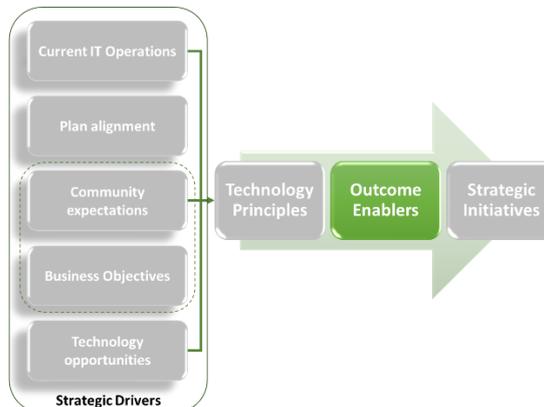


Figure 7: Strategic Alignment

5.2. OUTCOME ENABLERS

The Technology Principles described above will be enabled by business and information technology.



This strategy envisages five groups of enablers, each of which will be achieved through a number of strategic initiatives.

This section describes the enabler groups.

5.2.1. Design enablers

Design enablers ensure that all planning and design for technology solutions at WCC takes account of all aspects of the technology context so that investment decisions are connected

and benefit the whole of the organisation. The central element will ultimately be a complete and detailed plan for all elements of technology design and configuration.

5.2.2. Process enablers

Process enablers ensure that WCC business processes are best aligned with user requirements and that appropriate structures exist for sound technology decisions to be made.

5.2.3. Service enablers

Rigorous service management disciplines supporting the effective, efficient and sustainable delivery of IT services, including support and development work, improving operations across WCC.

5.2.4. Capacity enablers

Delivery of technology services depends on the availability of suitable and effective systems and people. The Strategy plans for the financially sustainable provision and support of all aspects of capacity so that disruptions are minimised.

5.2.5. Capability enablers

Both business and IT depend on the capabilities of individual employees. Capability enablers recognise the importance of ensuring that employees have the skills and knowledge needed to select and use technology to best advantage so that services and productivity are improved.

6. THE TECHNOLOGY STRATEGY FOR THE WCC ORGANISATION

This is a strategy for information technology within Whitehorse City Council. The coverage is therefore not restricted to the IT function but affects and applies to all business areas of WCC.

This section sets out the aspects of the Strategy that will be implemented outside the IT function, or in collaboration between IT and business areas.

6.1. NATURE OF CHANGE REQUIRED

The business objectives highlight that changes outside the responsibilities of IT Operations are needed to deliver the Information Technology Strategy. These include:

- Organisation-wide oversight of all projects through the development of a project and programme management capability, as part of a WCC governance structure
- Recognition of IT as a key stakeholder in the business planning process
- An organisation-wide view of business processes, that is formally documented, managed and improved
- Development of Subject Matter Experts, both within the organisation and in the IT area to improve optimisation of technology and tools, which forms the basis of the planning and advisory partnership between IT and business areas

Figure 8 presents an overview of the resulting responsibilities for each layer of the organisation.

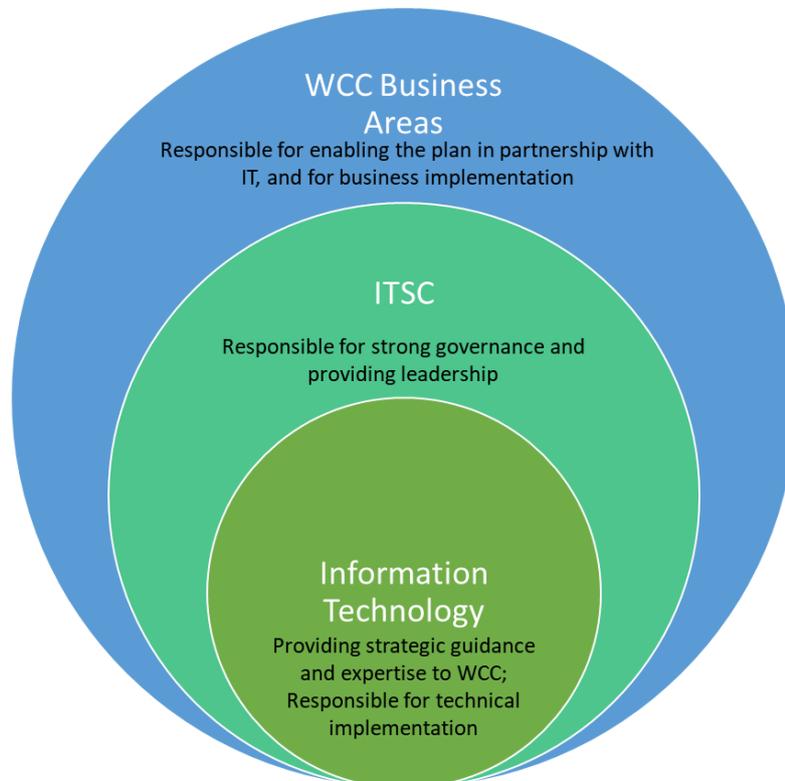


Figure 8: Strategic Responsibilities

6.2. UPLIFTING WCC ORGANISATION IT CAPABILITIES

The implementation of this strategy requires an uplift in IT capabilities across WCC.

Business application users and managers

All employees who use business unit applications, and those responsible for the management and planning of business unit systems, may need to raise their capabilities in respect to:

- Installed system functionality as users, so that they can best exploit the capacity of systems already provided
- Installed and available system functionality so that they can make better system change decisions, exploit business process change opportunities, and contribute to the IT governance framework.
- General high-level IT awareness so that they can contribute effectively to the IT governance model.

IT will develop a capability uplift plan for application users and work with HR to implement and monitor it.

All system users

All employees who use any IT equipment or office productivity tools, including those who do not have access to a device but use online WCC resources, need adequate technology skills to perform their duties. Education initiatives designed and specified by IT and delivered through People and Culture will identify and deliver skills required to best achieve this while skills testing and performance monitoring will ensure that employees achieve the desired level of capability.

In consultation with the business, IT will identify desired and minimum skill levels required for general office productivity tools and will work with People and Culture to identify appropriate training that is linked to the Learning Management System (LMS).

Technologies expected to be covered include:

- Desktop and laptop users - Microsoft Office and Microsoft Windows
- Mobile device users - Android or iOS platforms
- All users - web search functionality

6.3. STRENGTHENING GOVERNANCE

The information technology governance framework for WCC that will deliver changed responsibilities is summarised in Figure 9 and explained in the sections that follow.

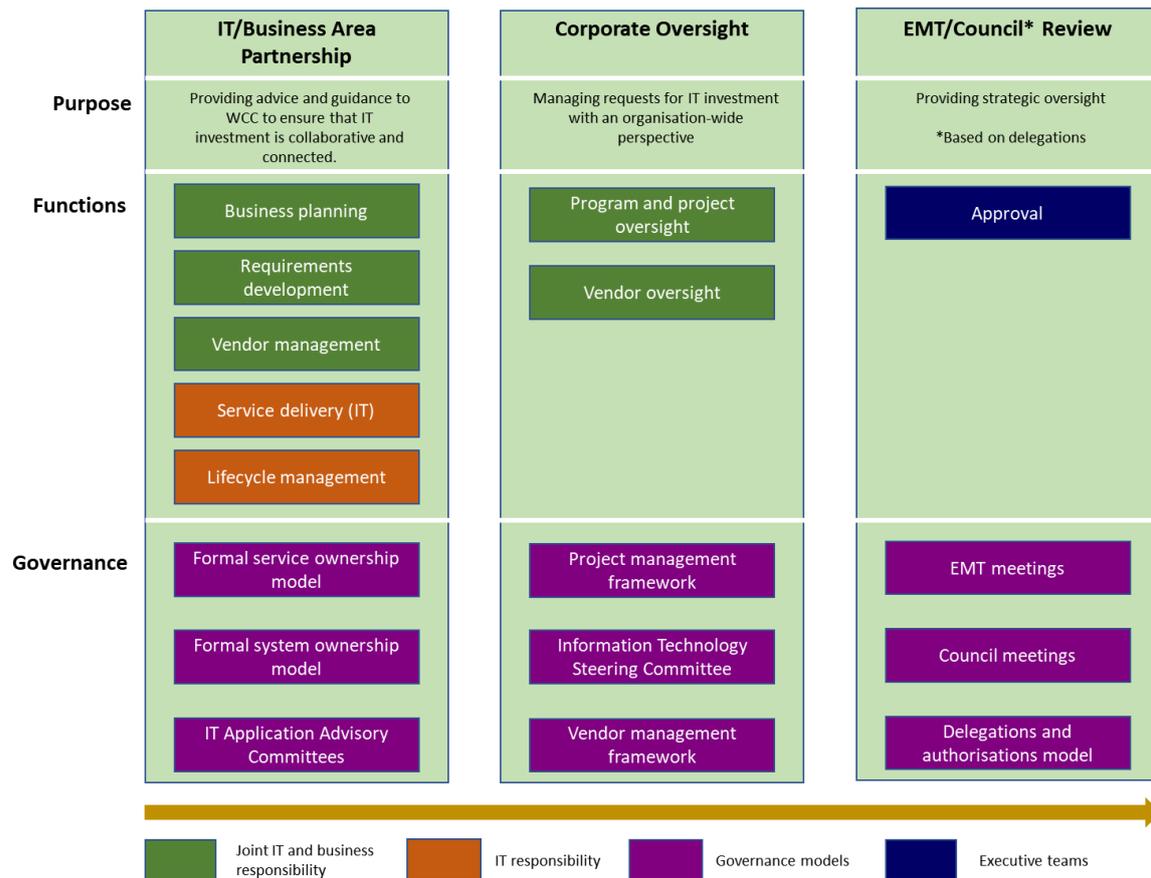


Figure 9: Information Technology Governance Framework

6.3.1. IT/Business Area/Whole of Organisation Partnership

The partnership between the business areas, the organisation and IT is a building block for all decision making related to future investment in technology for WCC, and for ensuring that forward plans are adequately resourced. The attributes of this partnership arrangement are:

- IT will be a stakeholder in all planning for change initiatives
- IT will have a partnership role with the Continuous Improvement team
- Business areas will identify subject matter experts for their applications and systems and these people work in collaboration with designated employee in IT
- Both groups will work together to develop proposals for projects
- Both groups will ensure their project managers are adequately skilled
- A formal IT Service Catalogue for the whole organisation will define the scope of service provided by IT and the responsibilities of business areas

This is supported by the following governance mechanisms:

1. Service ownership model - this model clarifies who owns each service and is therefore responsible for that service. In most instances, services will be the responsibility of IT. These services will be documented in a Service Catalogue. This model is important as it is a guide for all employees, identifying responsibilities and how and in what timeframe services will be delivered.

2. System ownership model - this clarifies who owns each system and is therefore responsible for decisions made about that system. It is important because it is used to inform the Vendor management framework and allows IT to work with system owners to plan for the future.
3. IT Application Advisory Committees - these are an essential part of ensuring that the planning, development and use of core systems is managed collaboratively.

6.3.2. Corporate Oversight

This function will provide WCC with an enterprise-wide perspective on programmes and projects, as well as ensuring that information technology is also managed on an organisation basis. This will ensure that investment in information technology provides positive outcomes for the community and Council while mindful of financial sustainability.

This is supported by the following governance mechanisms:

1. Project management framework - this framework will define how projects are managed and resourced (and the skills required by project managers) and will provide input to business planning and the development of change initiatives. This will ensure that all projects across WCC with an information technology element are appropriately resourced and effectively managed, significantly reducing the risks associated with a less structured approach.
2. Information Technology Steering Committee (ITSC) - this committee will further provide organisation-wide oversight of proposed changes to information technology, ensuring strategic fit across WCC. This will ensure that all proposed changes fit with future plans for WCC.
3. Vendor management framework - this framework provides the 'rules' for vendor management for WCC. Informed by the system ownership model, it will ensure that only appropriately authorised employees will be able to approve modifications or changes to systems, and that IT is involved at the time these decisions are made. It also facilitates better forward planning by IT and business as Vendor roadmaps change.

6.3.3. EMT/Council Review

It is important that all endorsed initiatives are overseen by the Executive of WCC. This provides another layer of strategic oversight, as well as ensuring that proposed changes will support the long-term goals of the organisation.

This is supported by the following existing governance mechanisms:

1. EMT meetings - EMT provides strategic oversight over how money is best invested to achieve the strategic outcomes for WCC. This is important because it ensures that money is invested wisely on behalf of the community.
2. Council meetings - where submissions fall outside EMT delegations, Council must determine whether the submission supports its goals and is appropriate for funding. This matters because Council serves its community and must ensure that WCC is investing in the right initiatives for their future.
3. Delegations and authorisations model - this model will ensure that decisions are made by the right authority. This ensures that governance and decision making is clear and justifiable.