

2018 -
2020

City of Shoreline Strategic Technology Plan



***LEVERAGING TECHNOLOGY FOR OUR
STAFF, OUR CITIZENS, AND OUR FUTURE***

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City of Shoreline

2018 - 2020

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Executive Summary

The City of Shoreline intends to continue the momentum started three years ago with the Strategic Technology Plan 2014 - 2017 (STP). This document outlines new goals and objectives for the use of technology from 2018 to 2020. It is crucial for the City of Shoreline to continue to align technical services and infrastructure to support the operational needs of City government. The City will continue to improve the delivery of stable, reliable and well supported technology. Technology must continue to be leveraged to increase the options and flexibility to deliver services to the City's residents. Residents not only desire that flexibility, but expect it from their City government.

The 2018 – 2020 STP focuses on the theme “**Leveraging Technology for our Staff, our Citizens, and our Future.**” Emphasis will be placed on leveraging the sizable investment made over the past three years to support operational improvements and enhancements to customer service. To this end, the City will focus on exploring opportunities and further implementing core technologies that the City already owns. This will not only enhance the value of investments made, but will also support a culture of continuous process improvement.

Emphasis remains on providing a technical environment that is flexible in supporting changing operational needs. Employees are in the best position to evaluate and improve their work processes. Putting technology into the hands of empowered employees can result in amazing operational improvements. This plan builds on both existing transactional and transformative technologies that can be used by City staff to become more effective and efficient.

Another area of emphasis will be on the use of the City's data to inform operational decisions. The City has implemented an Asset Management system that will provide data to assess the appropriate, effective and efficient support of streets, traffic, parks, and utilities. The new Permit and Customer Service system will provide metrics on the effectiveness of operational processes as well as identify areas of customer concerns. The City is using demographic data, uploading it into the Geospatial Information System (GIS) for analysis to inform recommendations for the sidewalk plan.

The tools that have been implemented over the past three years are also useful in enhancing civic engagement. Greater accessibility to the City through online town hall meetings, virtual public comments, and social media are areas of opportunity.

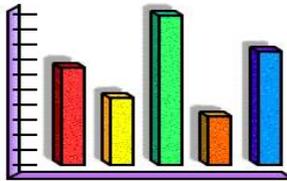
The 2018 – 2020 Strategic Technology Plan is focused on four objectives:



Effective Digital Systems. The City has invested in new enterprise application systems over the past three years. The emphasis will now turn to leveraging those systems to enhance operational efficiencies and customer service, as well as the infrastructure on which they operate.



Workforce Empowerment. There are many City processes that are not driven by enterprise applications. The emphasis in this objective will be to provide tools (using the City’s existing technology) to empower staff to support process changes that will be derived from the City’s continuous improvement efforts. Included in this effort will be to provide more flexibility in accessing the City’s technology.



Data-driven Decision Making. The City Manager has set a direction in which decisions will be based on data, not assumptions. In order to provide ready access to data, as well as tools to analyze it, the City must invest staff time and effort into getting accurate and quality data in, and that data out of ‘data jail’ and into the hands of staff. This objective involves data quality, availability and data analysis tools.



Civic Engagement. Technology is now providing more innovative ways to involve and engage residents. Virtual town hall meetings, remote council comment, and better polling methods are now readily available with little or no additional cost to the City. Technology can support the City Manager’s Office in exposing these technologies and evaluating them for use in Shoreline.

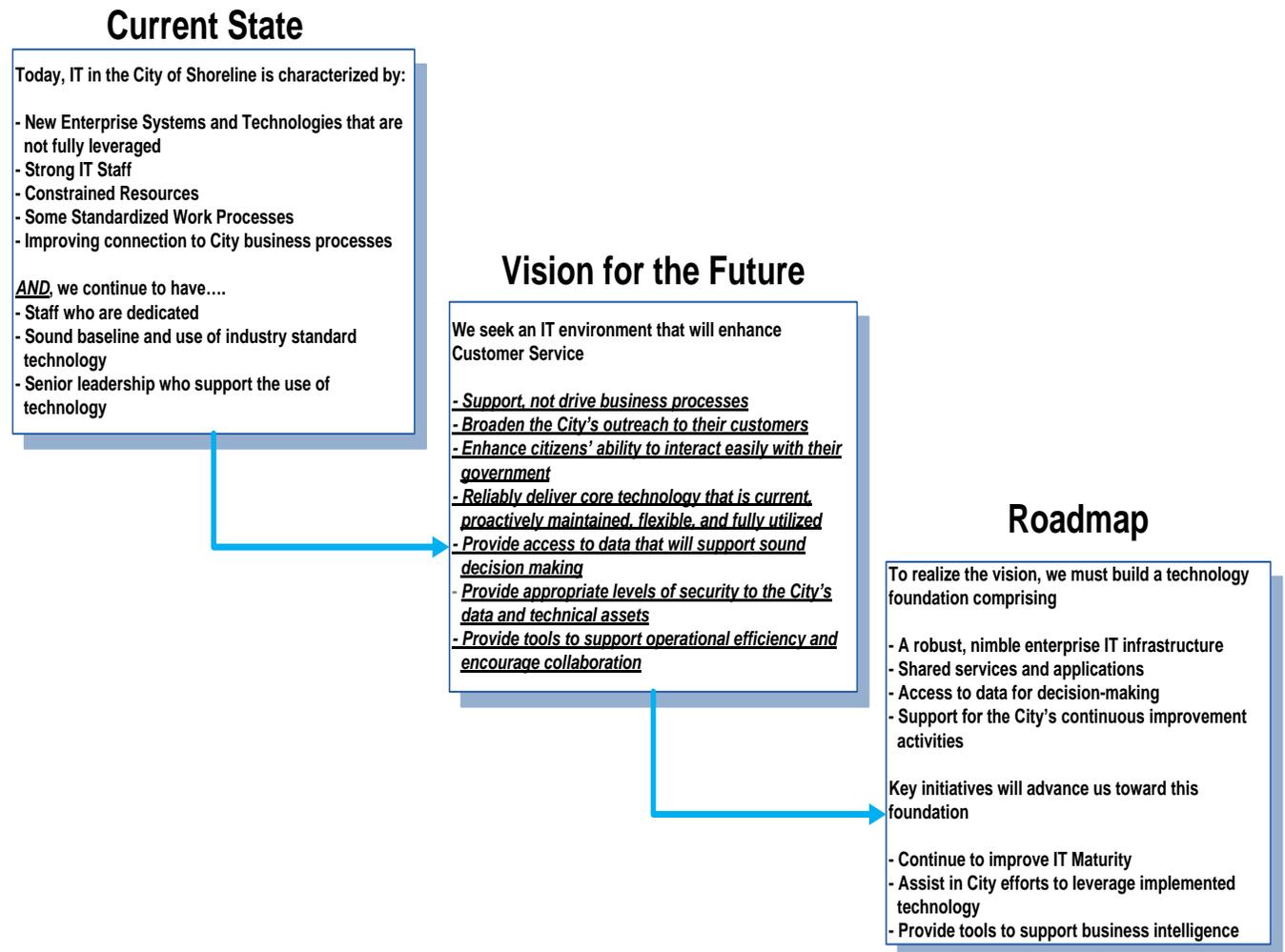
These four objectives are supported by a foundation of the City’s technology and digital security, and they support City Council goals.



Leveraging Technology for our Staff, our Citizens, and our Future

The City has made great progress over the past three years by replacing the majority of aging enterprise systems, as well as making strategic investments in the technical infrastructure. For a list of accomplishments, see **Appendix A**.

While the City’s current state has changed, our vision for the future, and the roadmap to achieve that vision remain constant. Technology will continue to evolve, and the journey towards enhancing IT maturity is a never ending one. The following diagram represents the City’s journey to a more functional and mature technical environment on which to build sound and responsive operational processes.



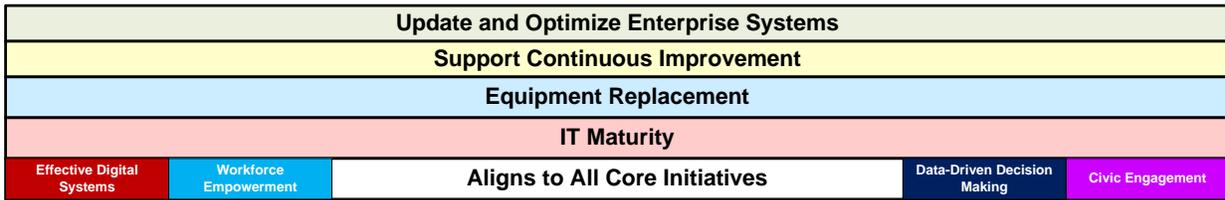
The 2015 – 2017 Strategic Technology Plan included significant monetary investment. The 2018 – 2020 plan is focused on staff time and engagement. The emphasis will be ensuring that the City takes full advantage of the technologies funded, and ensures that new functionality introduced as a part of new releases and capabilities is fully explored and implemented when appropriate.

Between 2018 and 2020, there are 15 discrete and four ongoing IT projects totaling an estimated investment of **\$1.245M** (including the cost of internal IT project management and excluding the new Financial/HR System that is already funded) and an estimated **23,795 labor hours**. The following illustrates the initiatives proposed.

2018

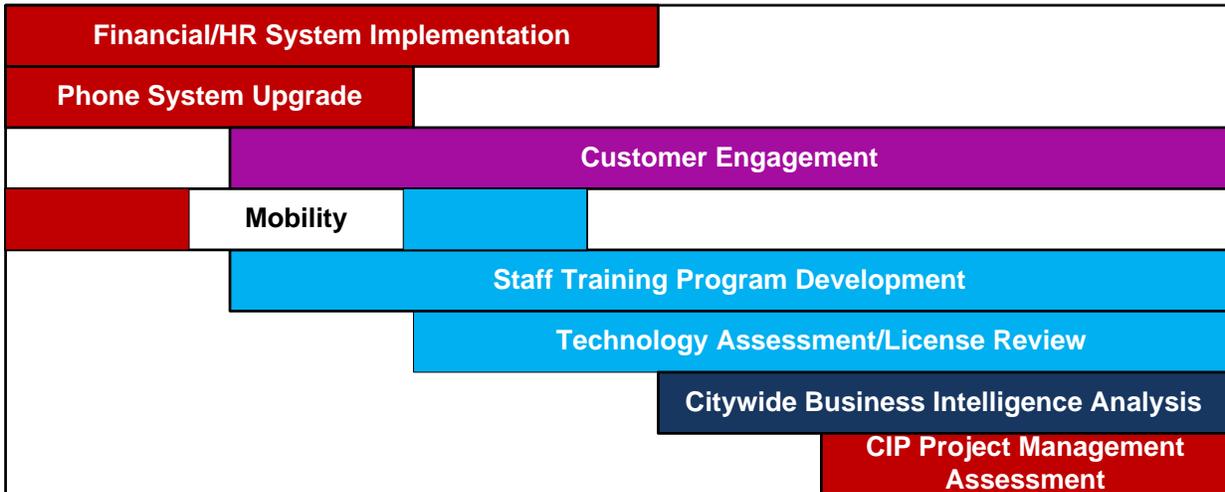
Foundational Projects

2020

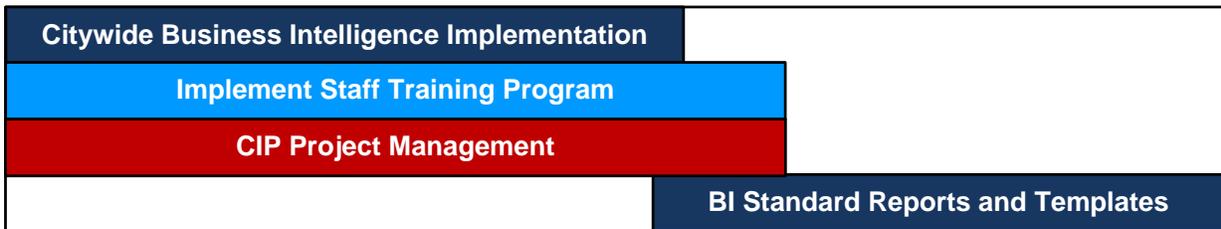


2018 – 2020 Initiatives

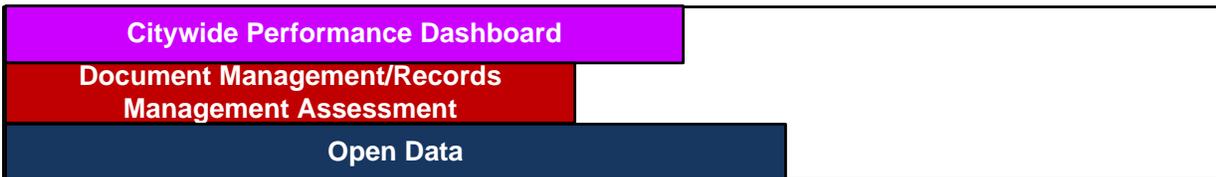
2018 Projects



2019 Projects



2020 Projects



Alignment

- Effective Digital Systems ●
- Workforce Empowerment ●
- Data-Driven Decision Making ●
- Civic Engagement ●

Baseline Recommendations

This plan establishes a roadmap for the City's technology over the next three years. It is also important to establish a robust long-term foundation for the City's technology. The following recommendations should be considered in order to provide that foundation:

- **Operational Staff**
 - Modification of all current job descriptions to include an acceptable level of technical exposure and skills. This should span all job classifications.
 - Encouragement of staff to take advantage of technical training on the tools the City provides, and held accountable to use those tools.
- **IT Staff**
 - Continuation of a dedicated IT Project Manager to manage the annual projects. The costs for this position are included in each project (much like the CIP project managers costs are built into the projects they manage. As long as there is support for a Strategic Technology Plan, there will be projects that will require the leadership for a formal Project Manager.
 - Approval in the 2018 budget for the transition of GIS extra help to a benefitted position, and the transition of a Computer Support extra help to a part time benefitted position.
- **Process**
 - Benefits realization (benefits and means to measure them) will be a component of every technology project.
 - Key manual processes will be assessed with an eye towards adopting the 'no touch' governing principle.
 - Continued adoption by IT of best practices outlined in the Information Technology Infrastructure Library (ITIL). This will build capacity to better assist operational staff in the use of technology to improve operational processes.
- **Technology**
 - Assess lifespan of the City's technology and explore the establishment of an enterprise fund similar to the vehicle replacement fund.

Introduction

The Shoreline City Council approved the adoption of a Strategic Technology Plan 2014 – 2017 in 2015. The main emphasis of this plan was the replacement of the City’s legacy enterprise applications. With the exception of the Finance and Human Resources System, this was accomplished. See **Appendix A** for the accomplishments of the Strategic Technology Plan 2015 – 2017.

The foundation of the Strategic Technology Plan 2018 – 2020 (STP) leverages the accomplishments of the previous plan. Information technology supports virtually all business processes in City government. From issuing permits to paying our vendors, all have technology underpinnings. Interaction with our customers and residents is enhanced through the City’s website, email, and telephone system.

The more technology advances and is embraced by our residents, the greater the importance of keeping that technology working reliably. The use of technology will create avenues that will make government more accessible to its residents. Because technology is an increasingly critical component of the infrastructure of City government, it must be reliable, resilient, well managed, flexible and available to adapt to changing needs.

As with any core infrastructure, design, planning and maintenance must be done. This document contains the plan that will outline the City’s vision for technology as well as key initiatives that are needed to move us towards that vision.

The vision for technology is long term, and should remain stable year-over-year. The initiatives that move us towards that vision will change as the City’s needs and the technology continues to evolve. This enables the City to provide the most appropriate technical tools to City staff at the right level and at the right time to meet operational objectives. Without that vision and planned initiatives, technology can become fragmented.

The intended audiences for this report are the following groups/individuals:

1. The City Council
2. The City Manager
3. The City’s Leadership Team
4. The IT Division
5. Key department staff involved with technology initiatives
6. Residents and businesses of Shoreline
7. Other City staff

This report could not have been produced without the involvement, input and assistance from the following:

- The Information Technology Advisory Board
- Info-Tech Research Group (a technology consulting service to which the City subscribes)
- The staff of the Information Technology Division

Business Goals and Environmental Scan

It is critical that Shoreline's technologies are aligned with and support the City Council goals and the City Manager's work plan. The Shoreline City Council has adopted the following goals:

2017 – 2019 City Council Goals

Goal 1: <u>Strengthen Shoreline's economic base to maintain the public services that the community expects</u>
Goal 2: <u>Improve Shoreline's infrastructure to continue the delivery of highly-valued public service</u>
Goal 3: <u>Continue preparation for regional mass transit in Shoreline</u>
Goal 4: <u>Expand the City's focus on equity and inclusion to enhance opportunities for community engagement</u>
Goal 5: <u>Promote and enhance the City's safe community and neighborhood programs and initiatives</u>

Each goal has a number of tactical action steps for achieving each goal. Technology is a foundational component to the operation of City government (thus supporting all the goals). **Appendix B** outlines the Council Goal actions steps with implications for technology.

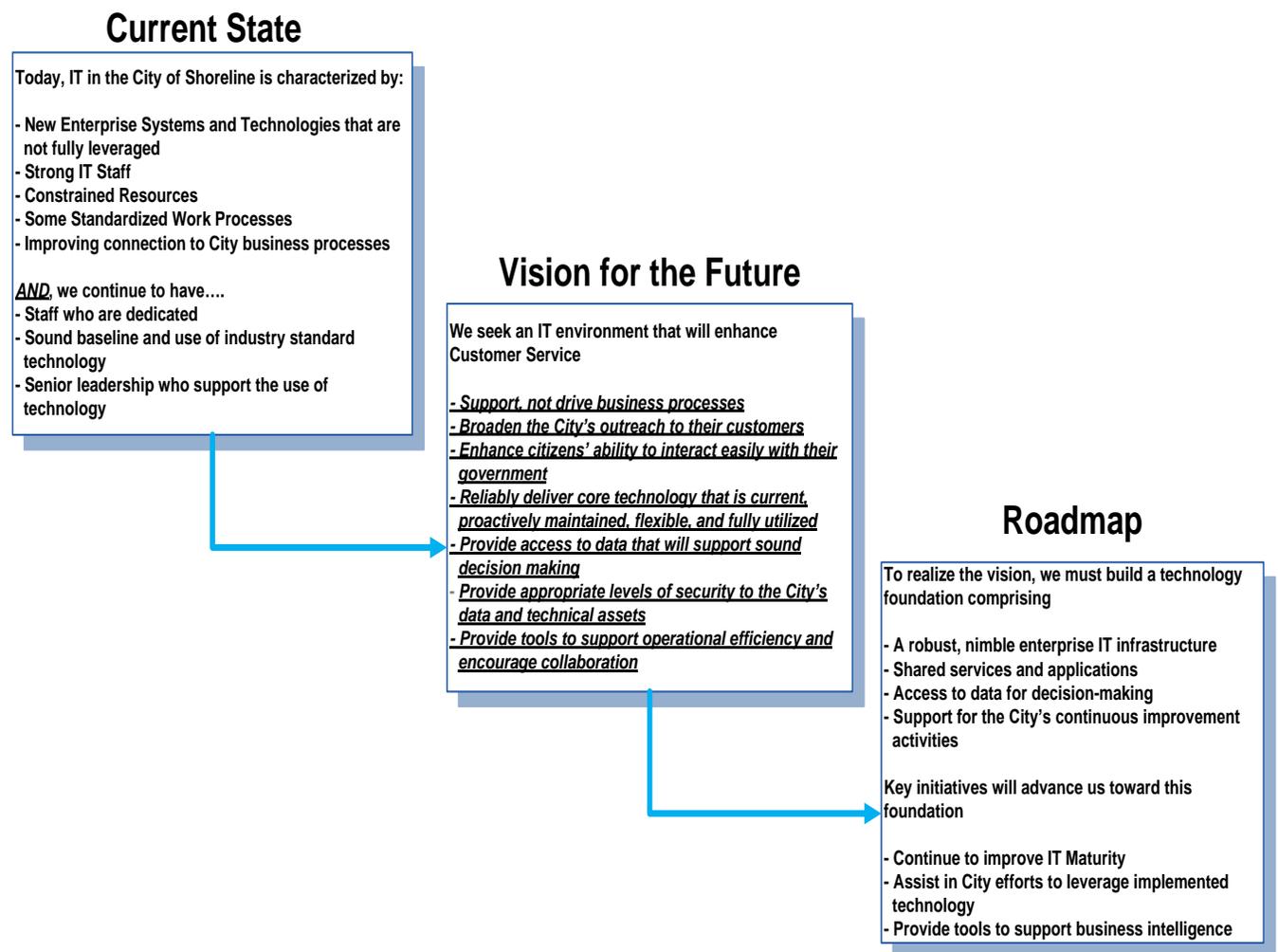
In addition to initiatives relating to goals, there are a number of opportunities for and challenges faced by Shoreline related to the City's work plan. They include:

- Overarching Challenges
 - The velocity of change
 - Need for 'virtual access' to services previously provided in brick and mortar locations
 - Increasing automation of everything (Internet of Things – IoT)
- Key Initiatives
 - The operation of Ronald Wastewater commencing in 2017 (ultimate assumption in 2019)
 - The consideration of a Business and Occupation tax
 - Point Wells Development
 - The completion of Master Plans for Surface Water and Transportation
 - Completion of City Hall build out to house Police
 - Continuous Process Improvement in all City departments
- Financial
 - Limited revenue sources
 - Exploration of a City Business and Occupation Tax
 - Economic development opportunities for revenue growth to enhance the overall quality of life in Shoreline

- Internal staffing and processes
 - Internal staffing levels are lean, with some areas struggling to maintain an acceptable level of service
 - Policies and procedures for the adoption and use of technology are needed
- Residents
 - Residents are demanding more services, greater hours of availability, better ways to engage with their government
 - The complexity of public disclosure requests is increasing, with a demand for more government transparency

The City's Journey

The following chart is a high level view of the Strategic Technology Plan (STP) for the City of Shoreline. Each section will be further detailed in this report.



Current State

Today, IT in the City of Shoreline is characterized by:

- New Enterprise Systems and Technologies that are not fully leveraged
- Strong IT Staff
- Constrained Resources
- Some Standardized Work Processes
- Improving connection to City business processes

AND, we continue to have....

- Staff who are dedicated
- Sound baseline and use of industry standard technology
- Senior leadership who support the use of technology

The City has replaced all but one of its enterprise systems. The Financial and Human Resource application will be replaced in 2018. While the City is now on a more modern application platform, we are still adjusting the initial configurations of those new systems to better support current and improving operational processes. There remain features and functions of these new applications that are not fully utilized.

The maturity of IT has grown over the past three years. A list of improvements and initiatives completed is included in **Appendix C**.

The skills of the Information Technology Division, noted as a weakness in the past, have improved dramatically through the replacement of several IT staff. What had been an opportunity for improvement in the past has become a key asset.

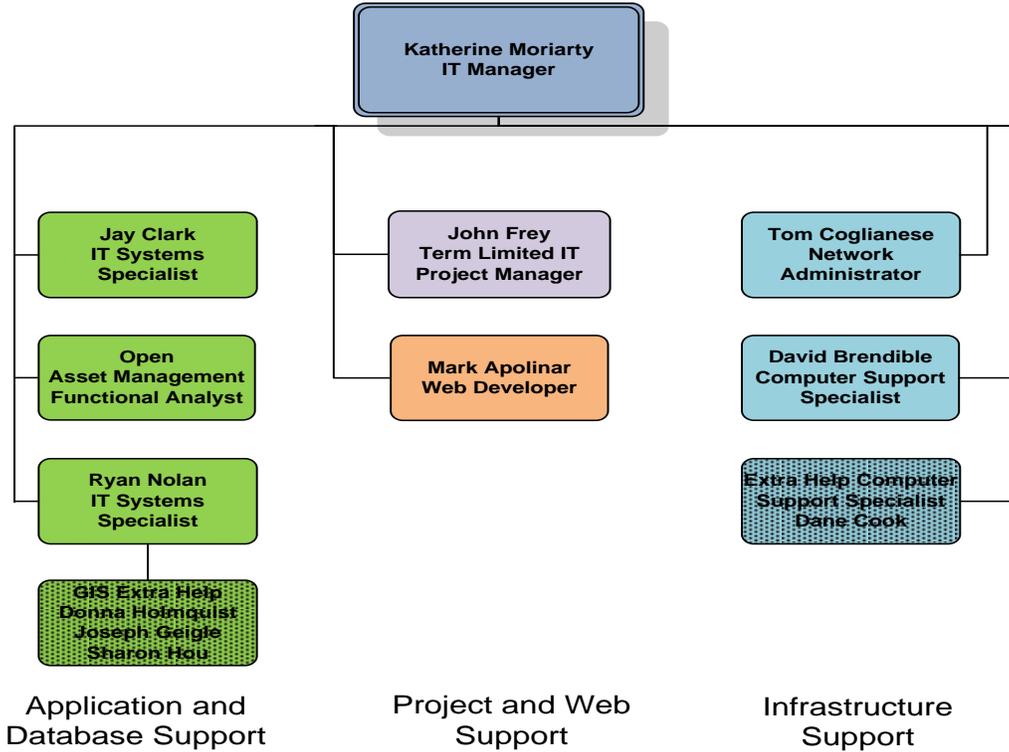
The City has made the following adjustments to IT staffing over the past three years.

- Addition of a Three-Year, Term-Limited Project Manager
- Reclassification of GIS System Specialist to IT Systems Specialist
- Reclassification of an Engineering Technician to Asset Management Functional Analyst
- Addition of an Extra Help Computer Support Specialist

We have had an Extra Help Computer Support Specialist since 2015. Service responsiveness has improved dramatically with the addition of that position, and the ITAB strongly recommends retaining it.

The following is an organizational chart of the City's IT Division:

City of Shoreline Information Technology Division



The **Information Technology Advisory Board (ITAB)** continues its role of advising the IT Manager in the planning, implementation and leveraging of the City’s technology. The ITAB is tasked with representing the operational needs of City departments and ensuring that there is appropriate technology to support those needs. It is also tasked with recommending overarching City prioritization of technology projects. See **Appendix D** for an outline of the role of the ITAB.

The City solicited the services of Info-Tech Research Group to determine if there were improvements in customer satisfaction with IT over the past three years (note, this survey was conducted in 2014 – results denoted as ‘Last Year’ in the results).

Overall Metrics

Overall Satisfaction and Value are key indicators of the overall impression of the IT department. These metrics let the IT leader determine at a glance if they are meeting the needs of the business.



The results show that improvement has been made in both satisfaction and value. While the overall score increased, there were departments where satisfaction either remained the same or declined. This is an area of concern. Results by department for both 2014 and 2017 may be found in **Appendix E**.

The biggest gains in satisfaction between 2014 and 2017 were:

1. Needs - Satisfaction with IT's understanding of customer needs (up 12%)
2. Execution - Satisfaction with the way IT executes customer requests and meets customer needs (up 11%)
3. Communication - Satisfaction with IT communication (up 13%)

IT capacity, a key theme for 2014, saw 2017 survey results that indicate that availability has improved. This is primarily due to the addition of an IT Project Manager and an extra help Computer Support Specialist. These gains will likely be lost if these positions are not continued, and it is strongly recommended that these positions be retained and continued.

There is solid alignment between the IT Manager, the City Manager, and the Administrative Services Director on the direction for the City's technology. All agree that better metrics on IT performance need to be established. See **Appendix F** for overall alignment.

A Strengths-Weaknesses-Opportunities-Threats (SWOT) chart is included in **Appendix G**. The SWOT was performed by both the ITAB and the IT Staff, and the appendix consolidates those exercises. Key areas of opportunity continue to be:

1. Greater collaboration between IT and operational staff
2. Data availability and analysis
3. Better mobility options – specifically for field workers
4. Further standardization and consolidation of technology
5. Support for continuous process improvement



Velocity of change. A key threat to technology in the City is the velocity of change. This is driven by the increasing frequency of enterprise application system enhancements, the introduction of new consumer devices, and the introduction of technology for all aspects of our lives (the Internet of Things – IoT). Think autonomous vehicles, the sophistication of SCADA (Supervisory Control and Data Acquisition associated with utilities), and other components that are embedded with electronics, software, sensors, and network connectivity that enables these objects to collect and exchange data.



Use of non-standard web-based tools. Another key threat is the explosion of web-based tools for niche industries or operational needs. It is all too easy to find an inexpensive tool on the internet to fit a particular operational need. Many of these needs can be satisfied through tools that the City already owns. Adding these 'browser-based' tools seems inconsequential (many of them less than \$100 per month), but every one of them adds complexity to the City's technology. Additionally, the use of these applications generally results in the storage of information entered into those systems in a separate repository outside the City's network. These separate repositories must be managed for records retention, and may result in difficulty pulling data from those repositories for reporting. Careful consideration should be given before adding these 'niche' applications to the City's technical portfolio.

An assessment of the City’s current IT processes against industry standards may be found in **Appendix H**. This analysis will be used to guide IT Maturity efforts.

Vision for the Future

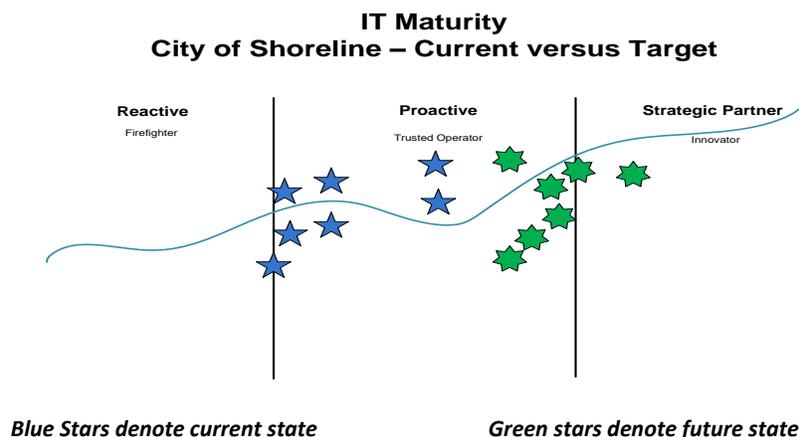
We seek an IT environment that will enhance Customer Service

- Support, not drive business processes
- Broaden the City's outreach to their customers
- Enhance citizens' ability to interact easily with their government
- Reliably deliver core technology that is current, proactively maintained, and flexible
- Provide access to data that will support sound decision making
- Provide appropriate levels of security to the City's data and technical assets
- Provide tools that can be used by City staff to create operational efficiency and encourage collaboration

The City of Shoreline is focused on fulfilling the community’s long-term vision, which is outlined in *Vision 2029*. Technology is an important tool to assist the City in achieving that goal. The following are core components of the technology vision for the City, and have remained consistent year-over-year:

- Technology supports, not drives business processes
- Technology broadens the City’s outreach to their customers
- Technology enhances residents’ ability to interact easily with their government
- Technology is current, proactively maintained, and flexible to the changing needs of the City
- Technology provides access to data that will support sound decision making
- Technology provides appropriate levels of security to City’s data and technical assets
- Technology that enables City staff to be more efficient and encourage collaboration

The culture and level of risk tolerated by an organization will drive the adoption of technology. Organizations such as Microsoft and Google have a high tolerance for risk, and will be on the leading edge of the adoption curve when considering new technology. The City has made progress in its IT maturity, with most ITAB members indicating that IT is on the low end of ‘Proactive’. It is interesting that the ‘future’ state moved more into the ‘Proactive’ from mostly bordering between ‘Proactive’ and Strategic Partner between 2014 and 2017. The ITAB is in alignment in their responses of the current and proposed future.



Technology Values

The ITAB identified the following values to guide the delivery of technology to the City:

1. Enterprise Architecture – (See **Appendix I** for a full explanation of these principles):
 - a. We should focus on achieving business results that provide value to customers over process
 - b. We should minimize the complexity of the customer experience
 - c. Business solutions should be adaptable with changing needs without significantly impacting cost or complexity for the organization
 - d. The City’s information and information technologies should be viewed from a City-wide perspective
 - e. IT Services should be designed to minimize the number of technologies to support
 - f. Consideration should be given to records management and legal requirements before bringing in new technologies
 - g. Technology has a lifespan that should be proactively considered in the City’s long-range financial planning.
 - h. Data should be managed to ensure its accuracy and quality to support informed operational decisions
 - i. Data should be easy to find and retrieve and present a single version of the truth
 - j. Manual tasks should be transitioned to managed workflows
 - k. Computer security is embedded into business, application, data and technology architecture.
2. The City values customer service as the focus for technology
3. Providing technology in the most efficient and effective manner is valued, unless it decreases customer service
4. Success must be defined and measured

The Roadmap

To realize the vision, we must build a technology foundation comprising

- A robust, nimble enterprise IT infrastructure
- Shared services and applications
- Common, effective management practices

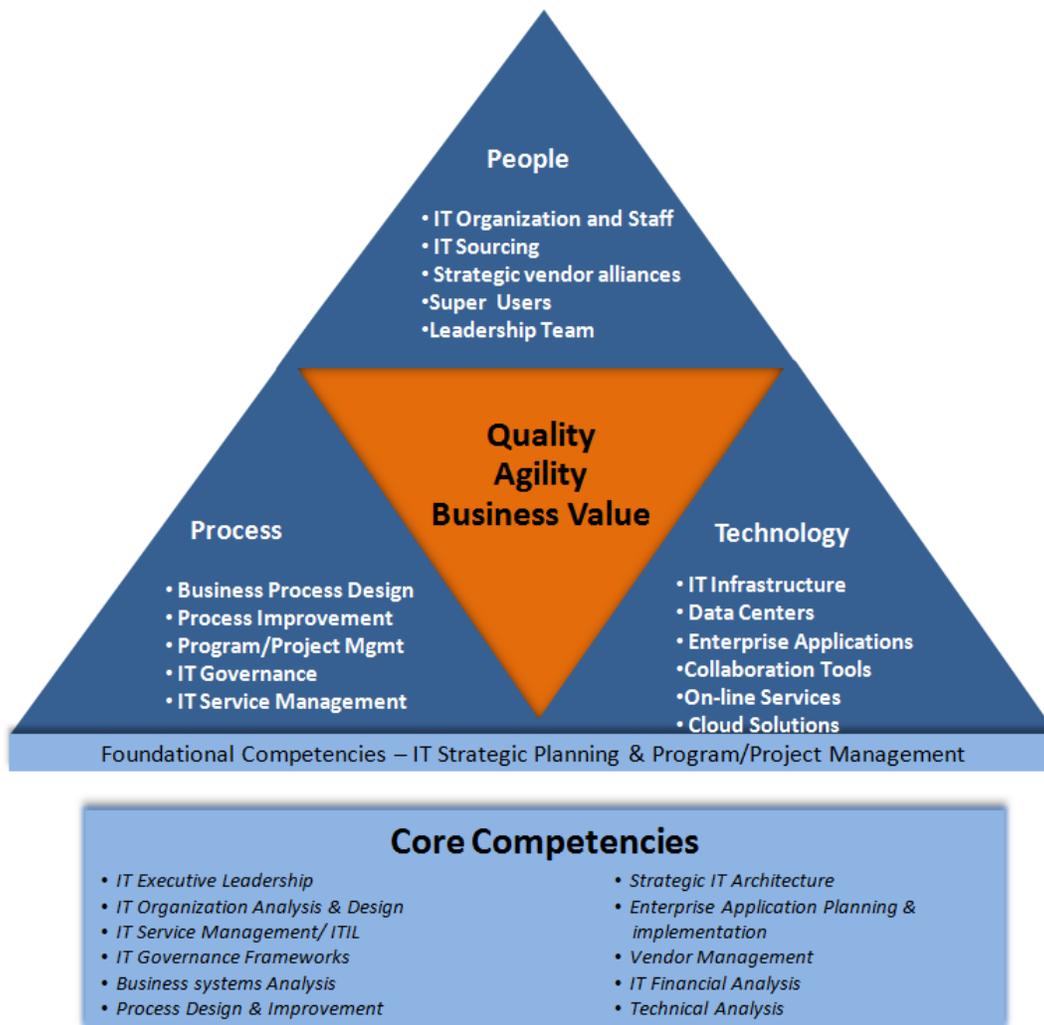
Key initiatives will advance us toward this foundation

- Strengthen IT skills and processes
- Define IT Services and standardize their delivery
- Modernize enterprise applications
- Move to cloud and software-as-a-service applications

The components of building and delivering effective technology are:

- **People** – The right IT staff with the right skills to support the technology with no major gaps in key skill sets, and City staff with the right skills to consume and leverage that technology.
- **Process** – The optimization, documentation, and continual improvement of delivering to and utilization of technology by City staff.
- **Technology** – The appropriate elements for the infrastructure (e.g. network, servers, monitoring tools), and the applications and tools that operate on that infrastructure to provide opportunities for operational effectiveness and continuous improvement.

Integrating People, Process, and Technology for Innovation and the Support of Process Improvement



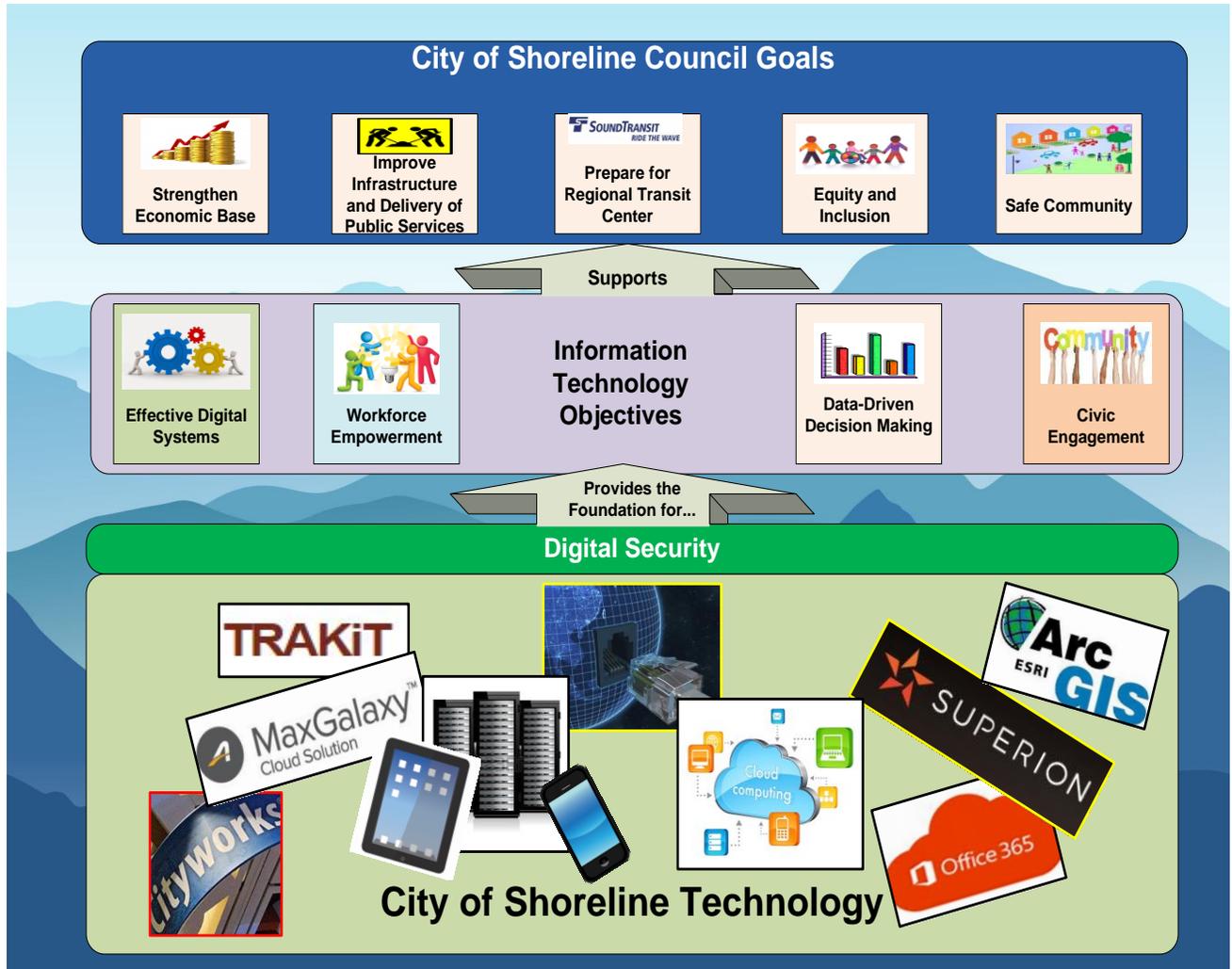
All three components (People/Process/Technology) are addressed in this plan:

- **People**
 - Enhance IT staff skills to support existing and new technologies
 - Provide City staff with opportunities to learn existing and new technologies, so that they will develop competency in the technology tools needed for their jobs
 - Ensure staff responsibility and accountability for the appropriate use of technology
 - Encourage all City staff to leverage standard tools (e.g. Office, SharePoint, enterprise applications, etc.) to improve business processes
- **Process** – identified, defined and measured
 - Enhance IT Service Maturity through standardized processes and measurements of their effectiveness
 - Enhance operational effectiveness through the use of technology as a tool to enhance improved processes and customer service
- **Technology** – we will continually:
 - Update and modernize technology as appropriate, and plan for obsolescence.
 - Provide technology that supports business processes and is driven by customer needs
 - Provide technology that is stable, reliable, and supported
 - Evaluate and leverage emerging trends to ensure the relevancy of the City's technology
 - Consolidate and integrate technology whenever possible
 - Ensure the City's data and computer assets are protected
 - Provide tools to support business intelligence

The foundation of People, Process and Technology are the tools on which the 2018 – 2020 STP are built.

Strategic Technology Plan – 2018 – 2020 – The Roadmap

The following diagram represents the City of Shoreline Strategic Technology Plan for 2018 – 2020.



Leveraging Technology for our Staff, our Citizens, and our Future

There are **four major objectives** driving the technology efforts for the City of Shoreline over the next three years. They are:



Effective Digital Systems. The City has invested in new enterprise application systems over the past three years. The emphasis will now turn to leveraging those systems to enhance operational efficiencies and customer service, as well as the infrastructure on which they operate.



Workforce Empowerment. There are many City processes that are not driven by enterprise applications. The emphasis in this objective will be to provide tools (using the City’s existing technology) to empower staff to support process changes that will be derived from the City’s continuous improvement efforts. Included in this effort will be to provide more flexibility through alternative methods to access the City’s technology.

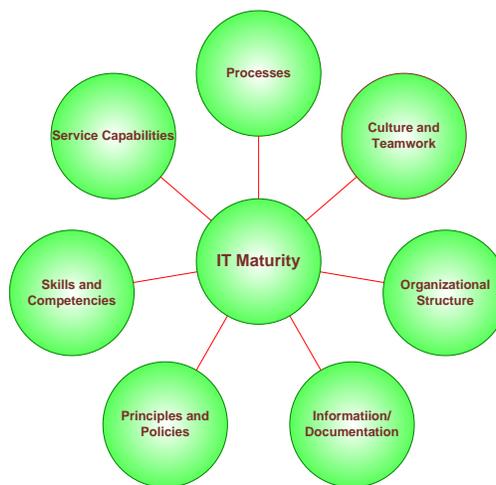


Data Driven Decision making. The City Manager has set a direction in which decisions will be based on data, not assumptions. In order to provide ready access to data, as well as tools to analyze it, the City must invest staff time and effort into getting accurate and quality data in, and that data out of ‘data jail’ and into the hands of staff. This objective involves data quality, availability and data analysis tools.



Civic Engagement. Technology is now providing more innovative ways to involve and engage residents. Virtual town hall meetings, remote council comment, and better polling methods are now readily available with little or no additional cost to the City. Technology can support the City Manager’s Office in exposing these technologies and evaluating them for use in Shoreline.

These four objectives will be built on technology and processes that are optimized and continually improved. **IT Maturity** will be a component of every Strategic Technology Plan



Technology Trends Supporting the Objectives

In order to achieve Shoreline’s technology goals, we need to evaluate both emerging and mature technologies and assess their value to supporting the City’s business processes. The following technologies are appropriate and should be actively assessed and adopted as appropriate.

Continuing Technology Trends

Cloud

The City has moved its backup and disaster recovery environment to the Amazon cloud. Further investigation will be undertaken to determine the advisability and feasibility of transitioning more of our on-premises hardware and data to the cloud. Savings in electricity, office space, and replacement cost will be considerations.

Software-As-A-Service (SaaS)

The move to software provided and hosted by outside vendors continues to be a useful strategy for the City, as well as an industry standard. The new Park Recreation Registration System, IT Ticketing System, HR performance management system, government recruiting are all provided from the cloud. We have also moved to the Microsoft suite of products (Office 365), which is hosted in the cloud.

The City should be using SaaS whenever appropriate from a cost/benefit standpoint.

SharePoint

The City implemented SharePoint in 2015. The old City intranet portal was retired, and useful content ported to the City’s ‘ShorePoint’ site.

In 2017, the SharePoint Records Center was implemented to support the full document lifecycle (creation, use, retention and destruction). SharePoint is a core technology that will enable City staff to automate manual processes through workflow (the electronic routing of documents and forms) and collaboration.

Geospatial Information System (GIS)

The use of the City’s geospatial information system (GIS) has increased over the past three years, and continues to offer greater benefits over the next three years. The completeness and quality of the data has improved. One example is inclusion of and the improved accuracy of the City’s wetland and other critical areas data in the GIS.

As a continuation of the 2015 – 2017 plan, a refresh of opportunities to leverage GIS in the City has been completed and is included as **Appendix J**.

Mobile Technology/eGovernment

Mobile technology is a transformative technology both for City staff and those who access City services. With the implementation of Cityworks and TRAKiT, tablet devices were introduced to support field work. There has been an increase of the use of smartphones by City staff. And people who access City services

are using mobile devices to access those services. The use of mobile technology will only increase over the next three years.

The City also needs to focus on providing more services electronically. The electronic filing of some permits was incorporated in 2017. Opportunities to leverage consumer technology and electronic access to City services should be pursued for every existing program that reaches out to our residents.

Open Data

Making more of the City's records available was a component of the 2015 – 2017 STP. The proposed project was delayed, and this remains a worthy objective. As the City receives more requests for records, identifying common requests and making those records available online would reduce staff time in making those records available.

The work involved with the review and creation/implementation of a technical environment is initially substantial. Appropriate options will be considered as a part of the 2017 – 2020 plan.

Emerging Technology Trends

Internet of Things (IoT)

Every aspect of our lives is being touched by the integration of technology. We can control our houses through wireless or Bluetooth devices that are tied to our smart phones. We have units that we can speak to that will give us access to hordes of information. Cars will drive themselves, automated control of infrastructure will increase in sophistication. The City needs to be aware of this as staff plans for the future of the infrastructure and services it provides.

Robotization/Artificial Intelligence

These technologies are not necessarily about the 'connection' of devices (IoT), but the ability to either perform tasks with machine resources, or to rely on computers to assimilate information and make both quantitative and qualitative decisions based on that information. Think IBM Watson. While government is not a leader in the adoption of technology of this nature, awareness and continued environmental scan of the technology landscape in these areas should be considered as the City develops long range plans.

Technology Initiatives – 2018 – 2020

The following are the initiatives that support the strategic direction of the City of Shoreline's technology. Completion of these initiatives is dependent on budget appropriation and support of the City Manager and the City Council. As each project is initiated, a project plan, including an assessment of benefits and associated metrics to measure those expected benefits will be completed.

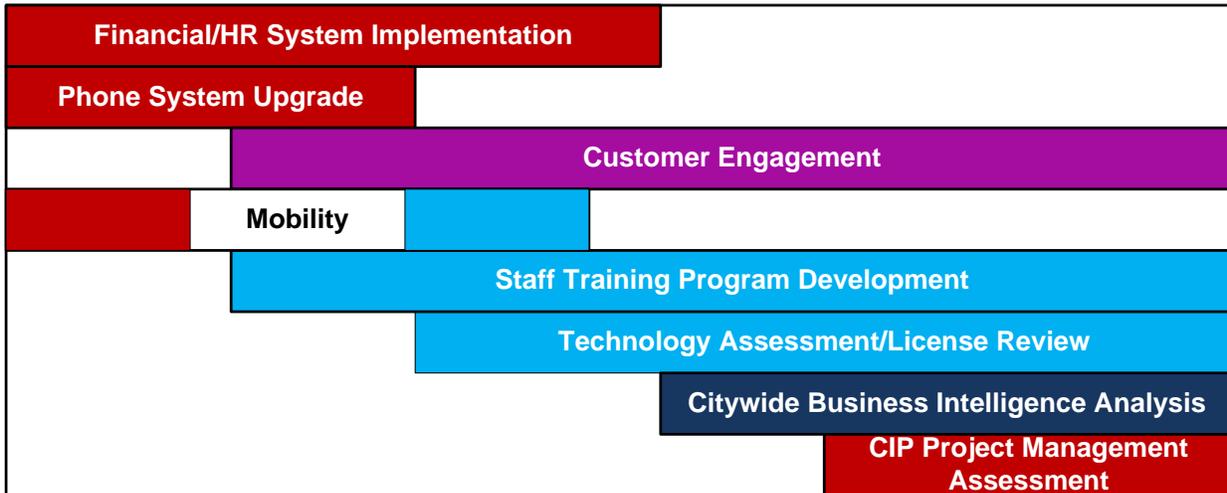
The greatest specificity is for the 2018 projects. In the event that a Business and Occupation tax is approved by Council, a project will need to be added to the 2018 plan to support the administration of this new tax. 2019 and 2020 projects will be detailed more fully during the budget process for each particular year. A reassessment of the plan will occur annually, and the impacts of projects that are not funded or completed will guide a revision to the plan.

2018 **Foundational Projects** **2020**

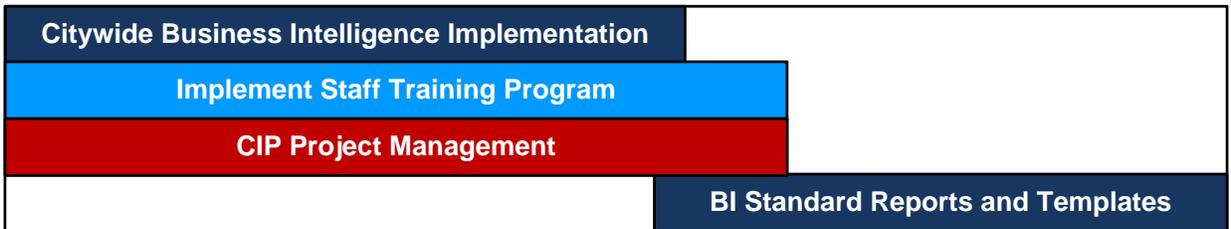
Update and Optimize Enterprise Systems			
Support Continuous Improvement			
Equipment Replacement			
Computer Security			
IT Maturity			
Effective Digital Systems	Workforce Empowerment	Aligns to All Core Initiatives	Data-Driven Decision Making Civic Engagement

2018 – 2020 Initiatives

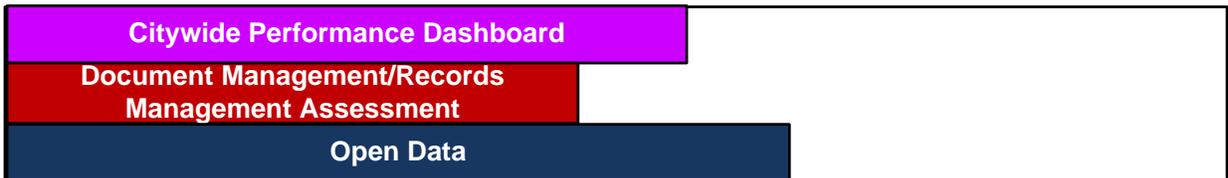
2018 Projects



2019 Projects



2020 Projects



Alignment

- Effective Digital Systems ●
- Workforce Empowerment ●
- Data-Driven Decision Making ●
- Civic Engagement ●

Foundational Projects 2018 – 2020

2018	Foundational Projects		2020
Update and Optimize Enterprise Systems			
Support Continuous Improvement			
Equipment Replacement			
Computer Security			
IT Maturity			
Effective Digital Systems	Workforce Empowerment	Aligns to All Core Initiatives	Data-Driven Decision Making Civic Engagement

The following projects are foundational to the City’s technology. They will be a component of each year’s tactical plan (with work plan deliverables), but are viewed as strategic in their own right. These projects are:

- Update and Optimize Enterprise Systems.** In the past, the City has made a large investment in both money and staff time to implement new applications, but has seen those systems decline as new functionality is released but not implemented. Systems do age and vendors slow the development of enhancements to those systems as new technologies emerge. However, the City has a history of delaying upgrades or ignoring new functionality due to lack of staff time to implement that functionality. Leveraging systems for enhanced customer service and operational efficiency are critical components of this plan.
- Continuous Improvement.** With the integration of a common language of continuous improvement into the Shoreline culture, it will be important to support those efforts with appropriate technology. New processes may necessitate configuration changes to enterprise applications, or the introduction of a new technology. Efforts in this area will focus on enhanced customer service and operational efficiency.
- Equipment Replacement.** Equipment and enterprise applications (e.g. those that support Finance, Asset Management, Permits, and Recreation) reach end of life. The City has an increasing reliance on the stable and reliable performance of its technology. While City Council has funded the replacement of our technical infrastructure through a standard budget allotment, application replacement is fully appropriated through one-time supplemental requests to the General Fund. It is recommended that consideration be given to introducing a reserve fund that has appropriate annual contributions to cover these expenditures in a more proactive manner.
- Computer Security.** The sophistication of computer malware and the sophistication of ‘hackers’ who mean to do harm to or derive value from infiltrating unauthorized networks or data is constantly increasing. The vendor that houses the City’s website has experienced it, and the result was the disruption of access to Shorelinewa.gov. It will take continued vigilance, staff training, and enhanced configuration of our existing defensive technical tools to ensure our technical environment is protected.

- **IT Maturity.** Technology changes. Best practices are updated. The need for IT to continue to evaluate its methods, standardize its processes, and ensure that the technical infrastructure is optimized and secure never ends. It is a foundational component of any strategic technology plan.

Descriptions follow:

Upgrades to Enterprise Systems



The City anticipates at least one consequential upgrade to its on premise enterprise systems annually and multiple upgrades for cloud-based applications. In the past, once an application was implemented, time and effort was not allocated to understanding and implementing functionality that was introduced in new releases of the software. The City pays maintenance on

applications, and software upgrades are included in the cost of that maintenance. In order to ensure that new functionality is understood and leveraged, and this work is legitimized, upgrades to enterprise systems will appear on each year of the STP. A project schedule will be prepared at the beginning of each year of the STP outlining projected dates for these upgrades. This is a key component of this plan – leveraging the technology the City already owns for improved customer service and operational efficiency.

Cost:

1. **SaaS Applications** – 5 hours (System Administrator), 10 hours staff time per update
2. **Enterprise Applications** – \$6,250 (IT Project Management) 70 hours (IT), 90 hours (operational staff) per system per upgrade. This does NOT include staff training for new functionality
3. **Office 365** – \$6,200 (IT Project Management), 70 hours (IT), 300 hours (operational staff) per upgrade – includes staff training on new functionality

Alignment

IT Vision

- Technology supports business processes
- Technology broadens the City’s outreach
- Technology enhances interaction with government
- Technology is current, maintained, and flexible
- Access to data supports sound decision making
- Technology is secure
- Technology that supports efficiency and collaboration

Council Goals

- Updated and stable technology is a foundational need for the achievement of all Council goals

Continuous Improvement



Technology is often viewed as the ‘solution’ to operational problems. That has been proven time and again to be false. However, technology can provide support to operational improvements through such efforts as the support of an automation of a new workflow, or the addition of edits on data entered to ensure data correctness and integrity. The City’s databases serve as a repository of information that can be analyzed to support better business decision making. The continued assessment of core processes that impact customer service and operational efficiency will expose opportunities to use the tools already owned by the City for improvements in these areas.

As a part of this plan, a mechanism for measuring the number of improvements supported by technology will be implemented and status reported periodically.

Cost: Costs or staff hours for this effort cannot be estimated. It is the intent of IT to provide a mechanism to gather the number and impact of changes made to technology that support work processes changes and improvements. A placeholder of 1,000 hours (IT and operational staff) and \$25,000 per year (project management) and will be included in the STP as a placeholder for this work.

Alignment

IT Vision

- Technology supports business processes
- Technology broadens the City’s outreach
- Technology enhances interaction with government
- Technology is current, maintained, and flexible
- Access to data supports sound decision making
- Technology is secure
- Technology that supports efficiency and collaboration

Council Goals

- Updated and stable technology is a foundational need for the achievement of all Council goals

Equipment Replacement



Equipment replacement will be a part of every annual update to the tactical initiatives of the City's Strategic Technology Plan. Each year, there will be different components that have reached end-of-life and must be replaced. Exploration will be undertaken in 2018 to determine the feasibility of a reserve fund for enterprise applications.

Cost: \$140,000 plus 500 hours of staff time per year (includes \$10,000 per year in project management)

Alignment

IT Vision

- Technology supports business processes
- Technology is secure

Council Goals

- Stable technology is a foundational need for the achievement of all Council goals

Computer Security



Computer security is an ongoing effort. The City has invested in the standard tools for cyber protection, and continually updates the configuration of these tools as new information regarding malware and hacking becomes available. The number one risk of a computer security breach is the City's own employees. As important as automated tools are to security, it is even more important to keep staff trained in recognizing and protecting the City from cyber security incidents. This project includes funding for new security tools, the staff time to implement and configure the City's security tools, and the staff time for cyber security training.

Cost: \$25,000 plus 1,500 hours of staff time per year (technical support hours + two hours per employee per year in cyber security training)

Alignment

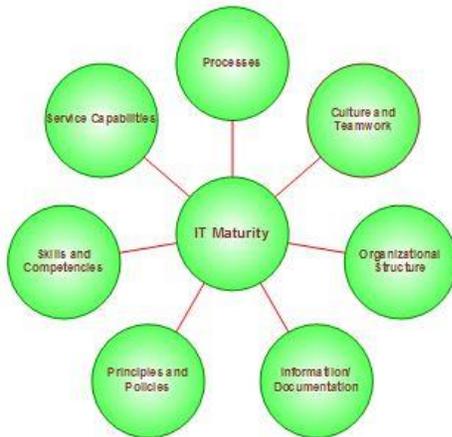
IT Vision

- Technology supports business processes
- Technology is secure

Council Goals

- Stable technology is a foundational need for the achievement of all Council goals

IT Maturity



The business of delivering IT to the City is critical to the City’s operational readiness and ability to deliver services to the community. The IT Manager recognizes that it is all too easy to focus on immediate customer service without considering whether those services can be delivered more reliably and efficiently, resulting in an improved customer experience. IT, as an operational unit, needs to focus on the ‘less glamorous’ aspects of technology that keep the lights on and the doors open reliably and securely. Just as with the rest of the City’s operational units, IT will never be ‘done’ improving and growing. While we do not anticipate requesting funding for additional tools, we may uncover an

opportunity that would require funding. Such funding will be requested through the normal budget cycle.

Cost: \$20,000 per year for project management and 750 hours from the IT Staff per year

Alignment

IT Vision

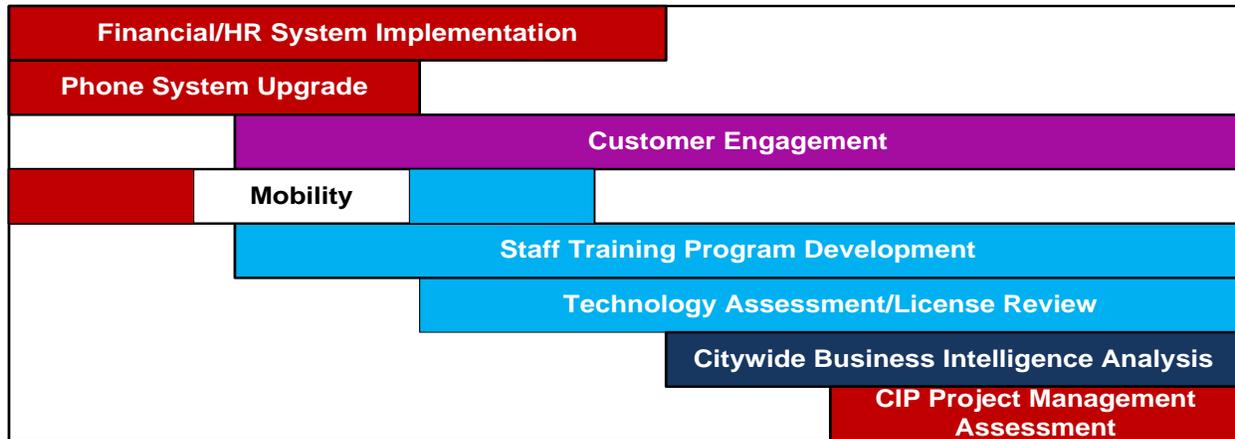
- Technology supports business processes
- Technology broadens the City’s outreach
- Technology enhances interaction with government
- Technology is current, maintained, and flexible
- Access to data supports sound decision making
- Technology is secure
- Technology that supports efficiency and collaboration

Council Goals

- Stable technology is a foundational need for the achievement of all Council goals

2018 Initiatives

2018 Projects



Objective – Effective Digital Systems



Financial and HR System Replacement



The assessment for a new Financial and HR System replacement was completed in 2016 as scheduled in the 2015 – 2017 STP. However, the desire to improve financial and HR processes prior to system implementation and imminent changes to the technology of the product that will provide a better fit with the City’s technical standards resulted in a delay of implementation to 2018.

Cost: \$760,000 and 7,500 hour of staff time (note – this project was funded in 2017 and is not included in the costs of this plan. The staff hours are included in estimates)

Note that the staff hours have been re-estimated from the 1,800 hours stated in the 2015- 2017 plan.

Alignment

IT Vision

- Technology is current, maintained, and flexible
- Access to data supports sound decision making

- Technology is secure
- Technology that supports efficiency and collaboration

Council Goals (supports)

- Goal 1, Action Step 3: Continue to implement the 10-year Financial Sustainability Plan to achieve sufficient fiscal capacity to fund and maintain priority public services, facilities, and infrastructure, with specific focus on Strategy 1 - encouraging a greater level of economic development, Strategy 5 - seeking to replace the General Fund support of the Roads Capital Fund with another dedicated funding source, and Strategy 6 - engaging the business community in a discussion regarding the potential implementation of a Business & Occupation Tax Agreement.
- Goal 2, Action Step 2: Determine a strategy for replacing the [Spartan Recreation Center](#) and the [Shoreline Pool](#)
- Goal 2, Step 7: Evaluate alternatives for City maintenance facility needs

Telephone System Upgrade



The City uses a ShoreTel unified communications system based on Voice over IP (VoIP) technology. The next version of the software provides some transformative capabilities that will provide a compliment to the City's SharePoint environment. Among the improvements is the capability of replacing expensive desktop telephone devices with a less expensive headset that can also be used to leverage Microsoft's Skype for Business (which the City already owns). This next upgrade, while low cost from a licensing and implementation perspective, introduces big changes to the user interface that will need to be managed. **Cost:** \$10,000 (vendor off-hour work and cost for 50 telephone headsets), \$10,000 for project management, and an estimated 500 hours (200 from IT Staff, 300 from line staff for training).

Alignment

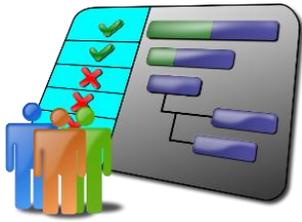
IT Vision

- Technology supports business processes
- Technology broadens the City's outreach
- Technology enhances interaction with government
- Technology is current, maintained, and flexible
- Technology that supports efficiency and collaboration

Council Goals

- The telephone system is a foundational infrastructure that supports the achievement of all Council goals

Capital Project Management Assessment



The Public Works Engineering Division has been working towards standardizing and improving the overall process of managing capital projects through AWP Certification. Included in this effort is a standard library of templates, as well as consistent work processes across all projects. In 2017 and into 2018, Public Works intends to continue this process improvement effort and to engage a consultant to assist with gathering requirements.

A significant area of challenge is financial management of projects. The interface to the City's financial system, as well as updating and tracking forecasts relating to change orders and other variables are common issues in the management of capital projects that must be addressed.

Upon completion of the initial standardization activities, Public Works will be ready to assess automated tools for leverage to 1) assist with ensuring standardization; 2) facilitate better communication and coordination between contractors and the City; and 3) provide a platform for integration with the City's financial system.

Cost: \$30,000 consultant fees, \$20,000 project management, and 500 hours of staff time.

Alignment

IT Vision

- Technology supports business processes
- Technology is current, maintained, and flexible
- Access to data supports sound decision making
- Technology is secure
- Technology that supports efficiency and collaboration

Council Goals – will support internal processes to support:

- This foundational tool will provide City staff with the ability to collaborate on projects, documents, and other electronic materials, as well as more accurate financial management of those projects that will further progress towards all Council goals.

Objective – Workforce Empowerment



Mobility to Support Staff Work and Processes



The City has implemented enterprise systems that support mobile workers. Work orders can be updated, inspections conducted, and code enforcement activities can be updated in the field, saving time and increasing efficiency and customer service. Mobility involves the equipment, applications and network connectivity provided.

The next generation of our workforce (the millennials) have grown up in a digital world, characterized by an unprecedented pace of innovation. While technology is only a small component of engaging this generation, providing flexible work options and the ability to use technology to innovate is important.

This project will be focused on the technical infrastructure that will be needed to provide flexible and secure access to the City's systems. The identification of WHO needs WHAT technology will be identified in another project (Technology Assessment/License Review).

Cost: \$25,000 for cellular boosters for maintenance vehicles, 120 hours IT staff time, and 120 hours line staff training to access the City's resources remotely.

Alignment

IT Vision

- Technology supports business processes
- Technology enhances interaction with government
- Technology is current, maintained, and flexible
- Technology is secure
- Technology that supports efficiency and collaboration

Council Goals

- **Goal 2, Action Step 6** - Implement a comprehensive asset management system, including asset inventory, condition assessment and lifecycle/risk analysis, for the City's streets, facilities, trees, parks, and utilities
- Provides support for the innovation to support all Council goals

Staff Training Program Development



It is critical to have a well-designed staff training program in order to achieve the outcomes detailed in this plan. The City can no longer afford to out-prioritize a formal and legitimate technical training program for staff. This project will result in a documented training program supported by a number of different approaches for technical training. Online, classroom, 1:1, and video training will be incorporated into this plan. All core technologies (applications and tools) will have resources identified and available to staff as a result of this project.

Cost: 500 hours IT staff time, and 150 hours associated line staff

Alignment

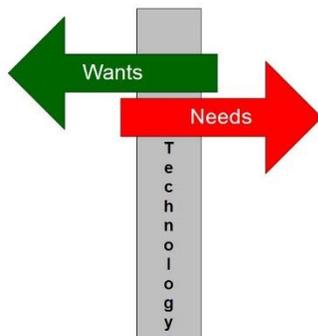
IT Vision

- Technology supports business processes
- Technology is current, maintained, and flexible
- Technology that supports efficiency and collaboration

Council Goals

- Ensures staff competency and ability to leverage technology for the innovation to support all Council goals

Staff Technology Assessment and Licensing Review



Current practice for acquiring technology for staff is a request to the IT Service Desk. If an expenditure is not planned in the IT budget, it is borne by the requesting department, and maintenance for any follow on service is budgeted by IT in the next fiscal year. This sometimes results in an unfair distribution of technology – a department that has budget is able to implement technology for staff where another department is not able to do the same for their staff. An example is the increasing use of smartphones and the resulting annual increase of \$500 for cellular service for each new smartphone or tablet. What seems like a small expenditure for a department becomes a sizable expense when consolidated Citywide.

Once this assessment is complete, results will be presented in a report that will outline each City position, the technology needed to perform job functions, and an estimate of the costs for this technology.

Cost: Estimated 145 hours from IT and ITAB members. There will be potential supplemental budget requests to address software and hardware needs identified during the assessment.

Alignment

IT Vision

- Technology supports business processes
- Technology broadens the City's outreach
- Technology enhances interaction with government
- Technology is current, maintained, and flexible
- Access to data supports sound decision making
- Technology is secure
- Technology that supports efficiency and collaboration

Council Goals

- Stable technology is a foundational need for the achievement of all Council goals

Objective – Data-Driven Decision Making



Citywide Business Intelligence Analysis



In order to make data-driven business decisions, it is important for the City to determine what needs to be measured and the location of the data that will support that measurement. In many cases, the data needed spans more than one data repository. This project will focus on refining the Citywide measures to be supported by the City's data, and where that data is located. The deliverables will provide the foundation for the creation of a business intelligence reporting environment to be

built in 2019.

Cost: \$10,000 project management, estimated 200 hours from IT and 100 hours from operational staff.

Alignment

IT Vision

- Technology supports business processes
- Technology broadens the City's outreach
- Technology enhances interaction with government
- Access to data supports sound decision making
- Technology that supports efficiency and collaboration

Council Goals

- Data can be used to support the prioritization and planning for all Council goals

Objective – Citizen Engagement



Customer Engagement



The City has implemented several technologies that have the ability to reach citizens and those with whom the City interacts. It is time to evaluate those technologies, and identify opportunities to leverage them to create greater access to City government. Technologies that will be included in this project are the City's newly designed website, the upgraded telephone system, video conferencing (Skype for Business), social media, and other standard technical tools that are now offering greater collaborative opportunities.

Cost: \$10,000 project management and 200 hours of staff time (IT and Communications staff).

Alignment

IT Vision

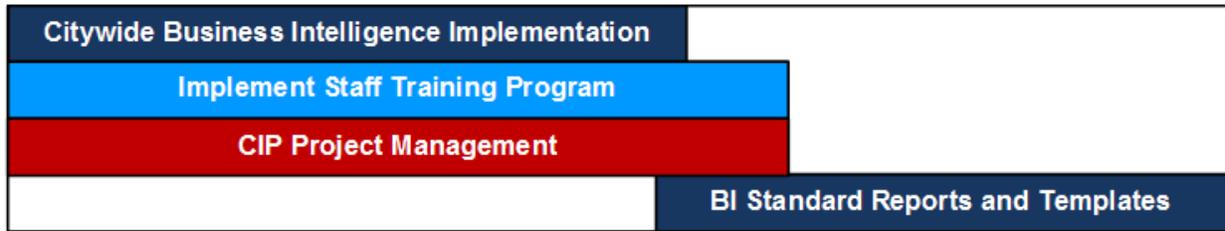
- Technology is current, maintained, and flexible
- Technology broadens the City's outreach
- Technology that supports efficiency and collaboration

Council Goals

- Goal 1, Action Step 5: Measure and maintain the 'Surprised by Shoreline' campaign that promotes Shoreline as a progressive and desirable community to new residents, investors, and businesses
- Goal 4, Action Step 5: Conduct community meetings with residents to discuss current issues, City policy and other changes that may impact the community
- Goal 4, Action Step 6: Continue to use social media to expand reach in the broader community and to solicit input and ideas on City business, events and policy issues
- Goal 5, Action Step 7: Partner with the business community to enhance communication on crime trends and crime prevention efforts

2019 Initiatives

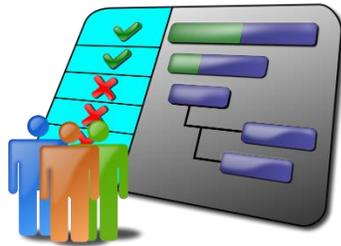
2019 Projects



Objective – Effective Digital Systems



Capital Project Management Implementation



In 2018, requirements were gathered to identify a Capital Project Management tool to be used by Public Works. This project will implement the selected tool. Given the constraints on the assessment timing (which cannot be commenced in Q3 2018 at the earliest due to the implementation of the new Finance/HR System), implementation of this software in 2019 will necessitate a supplemental funding request.

The estimates provided for this project are based on other municipalities and experience implementing enterprise applications in the City over the past three years.

Cost: \$225,000 plus 1,000 hours of staff time. This cost includes both the licenses/subscription for the tool as well as implementation services and project management.

Alignment

IT Vision

- Technology is current, maintained, and flexible
- Access to data supports sound decision making
- Technology is secure
- Technology that supports efficiency and collaboration

Council Goals

- This foundational tool will provide City staff with the ability to collaborate on projects, documents, and other electronic materials, as well as more accurate financial management of those projects that will further progress towards all Council goals.

Objective – Workforce Empowerment



Implement Staff Training Program



This project will implement the plan for staff training developed in 2018. The IT Division anticipates a rich program that satisfies the many learning styles of adjusts (including web-based, in person, written documentation, and 1:1 sessions) on common technical tools used within the City.

Cost: \$15,000 project management and 100 hours of IT time to implement the SharePoint site anticipated to be the ‘hub’ of the training program. This does not include staff training participation time – which will be measured and assessed for effectiveness.

Alignment

IT Vision

- Technology supports business processes
- Technology is current, proactively maintained, and flexible to the changing needs of the City
- Technology provides access to data that will support sound decision making

Council Goals – will support internal processes to support:

- Ensures staff competency and ability to leverage technology for the innovation to support all Council goals

Objective – Data-Driven Decision Making



Citywide Business Intelligence Implementation



In 2018, the City completed an analysis of data needed to support data-driven decisions for the City's core business functions, as well as the technical tools that will be used to construct that repository. The deliverable of this project is the construction of a data repository that can be leveraged by the City to support better decisions based on data rather than perception. This repository will provide the basis for the construction of standard reports and templates that is slated for 3rd quarter

2019.

Cost: \$25,000 project management and estimated 200 hours from IT.

Alignment

IT Vision

- Technology supports business processes
- Access to data supports sound decision making
- Technology that supports efficiency and collaboration

Council Goals

- Data can be used to support the prioritization and planning for all Council goals

Business Intelligence Standard Reports and Templates



The City has invested in the analysis and construction of a data repository to support core operational processes. The intent of this project is to provide standard mechanisms to consume that data. Standard operational reports, as well as easily approachable templates and queries that are available to

managers and staff to assess workload, the effectiveness of processes, and the metrics around core work processes will be developed. These standard tools will provide the foundation for a 2020 project that will introduce a Citywide Performance Dashboard on common and discrete metrics on the City's processes, products and services.

Cost: \$5,000 for a Dashboard tool. \$25,000 project management and estimated 300 hours from IT and 100 from operational staff.

Alignment

IT Vision

- Technology supports business processes
- Access to data supports sound decision making
- Technology that supports efficiency and collaboration

Council Goals

- Data can be used to support the prioritization and planning for all Council goals

2020 Initiatives

2020 Projects



Objective – Effective Digital Systems



Document Management/Records Management Assessment



The City transitioned to SharePoint as the standard collaboration and document management tool. In 2017, the City completed the configuration of the SharePoint records center to provide a managed repository for the retention and disposal of public records. Assessment and migration the City's shared document repositories (e.g. the K drive) is planned for 2018.

Many municipalities have not found SharePoint to be a sufficiently robust tool to manage records, and have purchased companion tools that integrate with SharePoint to satisfy that need. Should the City determine that the SharePoint records center is not sufficient to fulfill the City's operational needs in this area, it is proposed that a formal analysis be completed and a companion product be selected to fill the operational gap.

Cost: \$35,000 consulting, \$25,000 project management and 500 hours of staff time

Alignment

IT Vision

- Technology is current, maintained, and flexible
- Technology broadens the City's outreach
- Access to data supports sound decision making
- Technology is secure
- Technology that supports efficiency and collaboration

Council Goals

- State law mandates a schedule for the retention of public records. Whether the City finds SharePoint sufficient for document and records management or not, document/records management is a key component to manage all files and communication created in support of all Council goals.

Open Data



Data assessment and open data were projects that were deferred from the 2014 – 2017 Strategic Technology Plan. The City was focused on the replacement of enterprise applications, and that work needed to be completed prior to assessing the data needed for both operational decisions as well as public consumption. By 2020, there will be substantial pressure for the City to provide some core information easily and without the requirement to formally request the data. If current trends continue, the requests for City records will increase. Placing frequently requested information on a public portal that is searchable should reduce the number of public records requests made to the City and improve citizen satisfaction

through enhanced transparency. Additionally, many municipal governments do not have sufficient IT staff to write citizen-facing apps, and have encouraged citizens and other outside entities to use open data to fill that gap.

Cost: \$50,000 for tools, \$25,000 project management, 250 hours staff time

Alignment

IT Vision

- Technology is current, maintained, and flexible
- Technology broadens the City's outreach
- Access to data supports sound decision making
- Technology is secure
- Technology that supports efficiency and collaboration

Council Goals

- The publishing of standardly requested data for easy access will enhance citizen satisfaction which should support all Council goals.

Objective – Citizen Engagement



Citywide Performance Dashboard



Given the completion of earlier projects outlined in the STP, the City will have assessed data needed to manage operations, developed a data repository to house that data, and developed reports, templates and operational dashboards. The foundation is now laid to provide meaningful and data-supported measurements to our citizens on the overall performance of their City's government. This project will review the Citywide performance measures, identify the data needed to support those measures, and develop a dashboard that will be available on the City's website.

Cost: \$25,000 consulting, \$30,000 project management. Staff estimates are 300 hours

Alignment

IT Vision

- Technology broadens the City's outreach
- Access to data supports sound decision making
- Technology that supports efficiency and collaboration

Council Goals

- The publishing a Citywide performance dashboard will be a vehicle to enhance citizen satisfaction, improve communication, and support all Council goals.

Baseline Recommendations

This plan establishes a roadmap for the City's technology over the next three years. It is also important to establish a robust long-term foundation for the City's technology. The following recommendations should be considered in order to provide that foundation:

- **Operational Staff**
 - Modification of all current job descriptions to include an acceptable level of technical exposure and skills. This should span all job classifications.
 - Encouragement of staff to take advantage of technical training on the tools the City provides, and held accountable to use those tools.
- **IT Staff**
 - Continuation of a dedicated IT Project Manager to manage the annual projects. The costs for this position are included in each project (much like the CIP project managers costs are built into the projects they manage. As long as there is support for a Strategic Technology Plan, there will be projects that will require the leadership for a formal Project Manager.

- Approval in the 2018 budget for the transition of GIS extra help to a benefitted position, and the transition of a Computer Support extra help to a part time benefitted position.
- **Process**
 - Benefits realization (benefits and means to measure them) will be a component of every technology project.
 - Key manual processes will be assessed with an eye towards adopting the ‘no touch’ governing principle.
 - Continued adoption by IT of best practices outlined in the Information Technology Infrastructure Library (ITIL). This will build capacity to better assist operational staff in the use of technology to improve operational processes.
- **Technology**
 - Assess lifespan of the City’s technology, and explore the establishment of an enterprise fund similar to the vehicle replacement fund.

Costs

The following costs are estimates to be used for planning purposes. At the initiation of each project, project costs and effort will be refined. These costs do not include IT operational costs or upgrades to standard tools. As new technologies are introduced and new and cost-effective trends are adopted, these costs may change. These changes will be reassessed on an annual basis during the budget cycle.

The costs outlined in this plan involve the use of staff time rather than appropriated funds. This is in line with the direction of the plan to focus on the technologies we own rather than adding to our technology portfolio.

STP Cost Summary		
Year	Cost	Staff Hours
2018	\$333,333	13,685
2019	\$508,333	5,350
2020	\$403,334	4,700
Total	\$1,245,000	23735

*Does not include Financial/HR System funding (approved in 2017), but does include the staff hours

Detailed costs are included as **Appendix K**.

Conclusion

This plan outlines the strategic direction for technology for the City of Shoreline. An assessment of the current state of technology, a vision for the future, and a roadmap of projects to progress toward that vision are included. The focus of this refresh of the STP is to leverage the technology already owned by the City – ***Leveraging Technology for our Staff, our Citizens, and our Future.***

People -- In order to achieve the vision of the City's technology, the City must have staff that is trained on the use of the technology that we already own. Information Technology will develop a staff training program to facilitate that learning. We must staff the IT organization appropriately to lead efforts to apply our technology through project leadership and business analysis skills. And we must focus on hiring staff in all operational areas that are capable of using technology as a part of their job duties.

Process – Technology should not drive process, but neither should it be ignored when evaluating business processes. The first step, however, should be operational, not simply adopting technology that will drive the process. Focus on process first, and then identify technologies that can fundamentally support those processes.

Information Technology must continue to optimize the technology and the processes supporting that technology to bring the greatest value to the City. The maturity of the IT organization is a continuing requirement so the City can adopt appropriate new technologies that will deliver efficiency, stability and value to the City's technical foundation.

Technology -- The enterprise applications replaced over the past three years are modern and solid. We must manage technology just as we do any other major City asset by ensuring short term operability and long term sustainability. That means ensuring that software up-to-date and new available functionality is adopted. We should also plan proactively for the replacement of technology and avoid our continued reliance on large supplemental budget requests to fund that replacement.

The technologies also support data-driven decisions, a direction the City Manager has envisioned for Shoreline. The technology must be constructed in a manner that supports easy access to the data.

And we must leverage technical platforms such as SharePoint, the ShoreTel phone system, and GIS to further deliver core services to the citizens of Shoreline.

Leveraging Technology for our Staff, our Citizens, and our Future

Strategic Technology Plan – 2018 – 2020

Appendix A - Strategic Technology Plan Accomplishments – 2015 – 2017



Great progress was made under the City of Shoreline Strategic Technology Plan (2015 – 2017). The following are highlights of what has been accomplished:

- **Replacement** of the following City systems:
 - **Recreation Scheduling** - MaxGalaxy (January 2016)
 - **Permit/Customer Service** – TRAKiT and SeeClickFix (March 2017)
 - Online permits and inspections (June 2017)
 - **Email retention** - CommVault (March 2016)
 - **Intranet Portal** – SharePoint (September 2015)
 - **Microsoft Office** – Office 365 (July 2017)
- **Implementation of Cityworks** for Streets, Traffic, Engineering, CRT, Fleet/Facilities (May 2015) and, Parks and Ronald Wastewater (May 2017)
- **Implementation of SharePoint Records Center** to provide a repository for records management and retention (2017)
- **Selection of an updated Financial and Human Resources System** (to be implemented in 2018)
- **Enhancements in the City's technical infrastructure**, including the consolidation and reduction of servers, and moving data back up and disaster recovery to Amazon Web Services (see **Appendix C** – IT Maturity Accomplishments)
- **Enhancements to GIS**
 - Interface Pavement Management Software with Asset Management Software; Enhance spatial mapping capabilities for ROW inspections (11/2015)
 - Streamline neighborhood mailings using GIS to target mailing to specific areas for the City (10/2015)
 - Inventory of Parks Assets (6/2016)
 - Updated mapping of streams and wetlands, including buffers that highlight regulated areas (2/2016)
 - Imported new Fish and Wildlife data, updated stream and wetland areas, and adding new steep slope layer (7/2016)
 - Implemented city map of building and campus layouts in GIS format (6/2015)
 - Completed comprehensive update of site address layer to support quick dispatch of emergency vehicles to emergency incident sites (7/2016)
 - Conversion of LiDAR data into GIS format (2017)
 - Incorporated census data into the GIS to support the equity evaluation for future sidewalk locations (2017)
- **Increased customer satisfaction with IT**



There were four projects that were deferred in the 2015 – 2017 STP. These are listed below with an explanation of the delay and anticipated planning:

1. **Data Needs Analysis** – This project was intended to be a precursor for the analysis of cross functional performance metrics and the City’s Open Data initiative. We need to have all enterprise systems modernized prior to this effort. The Finance/HR System replacement will be complete in June 2018, and there is a new project around data analytics that will achieve the benefits laid out in this project.
2. **Open Data** – The Data Needs Analysis must be complete before embarking on Open Data. At this time, the provision of public datasets will be considered as capacity is available.
3. **Data Integration** – At the time of the creation of the 2015 – 2017 STP, it was anticipated that there would be a need for true dual direction integration between the City’s enterprise systems. Over the past three years, a reassessment has been completed. The volume of transactions between systems does not appear to justify the technical work to create the integrations. Data integration can likely be handled through data export and import. Cross-functional reporting will be handled through a consolidated data repository planned for 2018-2019. IT will continue to assess the need for true data integration as the City’s maturity of the use of new systems increases.
4. **Website Re-hosting** – The City has decided to remain with the current Web Hosting firm, Vision Internet. A redesign of the City’s website will be completed by the vendor in 2017.

Appendix B – Technology Alignment to Council Goals

Goal 1 – Strengthen Shoreline’s economic base

- **Action Step 2:** Enhance the attractiveness of Shoreline as a place for private investment, including investment by small and medium sized developments, by ensuring that the permit process is predictable, timely and competitive, and by constantly evaluating and improving the quality of regulations for the City and other local permitting organizations
- **Action Step 3:** Continue to implement the 10-year Financial Sustainability Plan to achieve sufficient fiscal capacity to fund and maintain priority public services, facilities, and infrastructure, with specific focus on Strategy 1 - encouraging a greater level of economic development, Strategy 5 - seeking to replace the General Fund support of the Roads Capital Fund with another dedicated funding source, and Strategy 6 - engaging the business community in a discussion regarding the potential implementation of a Business & Occupation Tax
- **Action Step 4:** Continue to foster innovative, community-supported place-making efforts that help create diverse communities with a mix of residential and commercial uses and promote economic development

Goal 2 – Improve Shoreline’s utility, transportation, and environmental infrastructure

- **Action Step 1:** Identify funding strategies, including grant opportunities, to implement the City’s Transportation Master Plan including construction of new non-motorized improvements
- **Action Step 2:** Determine a strategy for replacing the Spartan Recreation Center and the Shoreline Pool
- **Action Step 3:** Implement the Ronald Wastewater District Assumption Transition Plan and formally assume the District on October 2017
- **Action Step 4:** Continue to implement the Urban Forest Strategic Plan.
- **Action Step 6:** Implement a comprehensive asset management system for the City’s roads, streets, facilities, parks and utility systems.
- **Action Step 9:** Update and begin implementation of the Surface Water Master Plan, Transportation Master Plan and Parks, Recreation and Open Space Master Plan.

Goal 3 – Prepare for two Shoreline light rail stations

- **Action Step 1:** Work collaboratively with Sound Transit to support the development and review of environmental, architectural, engineering and construction plans for the Lynnwood Link facilities within the City of Shoreline through Sound Transit’s Special Use Permit and other permitting reviews.
- **Action Step 7:** Finalize and begin implementation of the light rail station subarea parks and open space plan, including adoption of park impact fees

Goal 4 – Enhance openness and opportunities for community engagement

- **Action Step 1:** Conduct community meetings with residents to discuss current issues, City polic and other changes that may impact the community.
- **Action Step 8:** Continue to use social media to expand reach in the broader community and to solicit input and ideas on City business, events and policy issues

Goal 5 – Promote and enhance the City’s safe community and neighborhood initiatives and programs

- **Action Step 1:** Use data driven policing to address crime trends and quality of life concerns in a timely manner
- **Action Step 5:** Continue to address traffic issues and concerns in school zones and neighborhoods using the City’s speed differential map and citizen traffic complaints
- **Action Step 7:** Partner with the business community to enhance communication on crime trends and crime prevention efforts

Appendix C – IT Maturity Accomplishments

The following improvements and efficiencies have been completed by IT between 2014 and 2017:

Efficiency

1. Server Reduction – Reduced server count from 127 to 90, including the reduction of physical servers.

Impact:

- a. Reduction in the number of operating system licenses needed
 - b. Consolidation of server rack space, enabling the elimination of one costly uninterrupted power supply (the batteries alone cost over \$700)
 - c. Reduction in power consumption (unable to measure)
2. Storage Area Network – Re-architected data center storage to provide robust environment for the City's data using tools and licenses the City already owns

Impact:

- a. Faster performance for document retrieval and application operation
 - b. Leverages equipment and software that the City has had for years and never appropriately implemented
3. The 5 s's

Standardization

4. Centralized repository for IT documentation – utilized SharePoint as a repository for all technical documentation

Impact:

- a. All IT staff are able to access documentation and contact information for any system or technology
 - b. Documentation available wherever there is an internet connection
5. New ticketing/asset management system for IT

Impact:

- a. More efficient workflow – customers are served more quickly
- b. Requests do not fall through the cracks
- c. Accurate inventory of hardware and where software is installed
- d. All IT and GIS Extra Help personnel have access – more accurate measure of workload

6. GIS Coordination – formation of informal GIS group

Impact:

- a. Standardization of efforts for GIS asset updates
- b. Sharing of expertise between extra help in IT and extra help in operational units

Risk Management

7. Data Backup -- Moved data backup from tape to the Amazon cloud

Impact:

- a. No risk of tape incompatibility with restoration software
- b. No risk of physical damage (tape corruption or overwrite of tape)
- c. Data available for recovery even if the City's data center is not accessible in the event of a disaster

8. Moved City's disaster recovery environment to the Amazon cloud

Impact:

- a. The disaster recovery environment is no longer located at the Police Station (1/2 mile from City Hall)
- b. Eliminated the need to purchase replacement servers
- c. Eliminated the need to locate and move hardware to a remote location with the move of Police to City Hall

Customer Alignment

1. Implementation of new enterprise-grade systems

Impact:

- a. Opportunity to learn more about operational processes
- b. Better alignment of technology with key operational processes

2. Formation of IT Advisory Board

Impact:

- a. Departments have a representative to represent technology needs
- b. Departments have input and review of the Strategic Technology Plan

3. Implementation of a governance structure for all enterprise applications

Impact:

- a. Better alignment to operational needs (end users and managers have 'a seat at the table')
- b. Improves communication of system and operational changes

Appendix D - IT Advisory Board

What do we do?

- Develop and maintain the IT Strategic Plan
- Develop high level recommendations for technology direction for the 1 – 3 year timeframe – updated annually
- Develop a process for the initiation of IT Projects
 - What comes to the IT Advisory Board? (see Appendix A-1)
 - What does NOT come to the IT Advisory Board? (see Appendix A-1)
 - Develop a process for submission of projects
 - Forms
 - Timelines for submission
- Consider IT projects from a Citywide perspective and prepare recommendations for the LT on project and budget priorities
 - Develop ‘Guiding Principles’ that provide a consistent set of criteria for decision making
 - Measure all project requests against criteria
 - Prepare a formal assessment of technology projects to support the annual budget process
- Provide general oversight for the portfolio of active IT projects – raise concerns to the LT if deemed appropriate
- Meeting frequency
 - Regular meetings – monthly for project status, new requests, and annual plan update
 - Budget cycle – meetings sufficient to consider all requests and develop recommendations for the City’s leadership

Decision Construct – Guiding Principles

Develop, annually review, and update criteria on which recommendations to the City’s leadership will be made. Criteria include:

1. Project cost – total cost of ownership
 - a. Implementation costs
 - b. New staff
 - c. Software maintenance
 - d. Upgrades in the first 5 years (vendor engagement)
 - e. Equipment replacement for technical hardware and server licenses
 - f. Ongoing staff costs (shifts in work processes)
2. Alignment to Citywide goals
3. Adherence to Citywide IT standards
4. Focus on customer service
5. Elimination of redundant tools/standardization within the environment

6. Satisfaction of business needs
 7. Risk/Regulatory requirements
 8. Council mandates
 9. Data availability and migration
- Alternatives analysis
 - Clear articulation of the project value
 - Creation of a more stable technical environment?
 - Creation of processes/procedures to support the automated package
 - Ensuring that the organization is not looking for a technical solution to a process problem
 - Opportunities to share software tools when appropriate and possible

All software purchases need to be reviewed and approved by the IT Manager.

Appendix D-1 – Technology Initiation

Technology Initiation

All requests for technology should be submitted to the IT Manager. This should include anything from an application for a mobile device to a cross departmental application for asset management. The IT Manager will review the request for the following:

- Is there another technology or application used in the City that will provide a solution to the operational issue being addressed?
- How does the technology ‘fit’ into the City’s technical environment (compatibility with our computer, server, and programming environments)?
- How much will this technology cost – Total cost of ownership?
- Do we have staff in the City to support the technology?

There may be technology that falls outside of the realm of support by IT. The following are examples of the types of systems and technologies that are outside of IT:

- Security cameras
- Mechanical system controls (i.e. building systems controls, access systems, SCADA, etc.)
- Audio/Visual Support

The IT Manager will work with departmental personnel to understand the operational need, and to provide input in the event technology is part of the solution. There will be instances when the technology is important enough to involve the IT Advisory Board. The IT Advisory Board is a cross-functional team comprised of representatives from all City departments that are charged with ensuring that the City makes good choices for the expenditure of funds for technology.

The following items will be brought to the IT Advisory board by the IT Manager:

What comes to the IT Advisory Board <i>(Generally items that cross departmental lines, introduce new technologies, or need funding or IT resources that need prioritization)</i>
➤ Purchase of additional licenses for software that we use that requires a separate appropriation request (i.e. either prior to the budget process (as defined in the IT Project Initiation process) or as a supplemental request during the budget year)
➤ Legacy application replacement (i.e. Class, Hansen, etc.)
➤ Any technology product that will be used by more than one department or cost >\$1K
➤ Any technology upgrades, additions or changes that will take more than 80 hours of IT support to implement (as determined by IT)
➤ Any additional technology that DUPLICATES functionality that the City already uses and IT supports
➤ Any custom system development done in a formal programming environment such as .NET, Visual Basic or Access
➤ Any technology that requires a server
➤ New system interfaces between city systems
➤ When the IT Manager and operational management/staff cannot come to consensus on a solution to an operational need

Appendix E - IT Satisfaction Scorecard

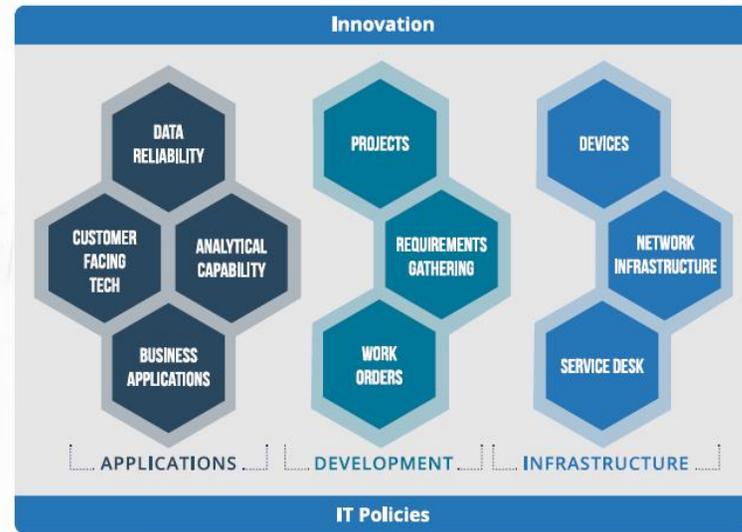


IT Satisfaction Scorecard

PREPARED FOR **City Of Shoreline**

Successful IT Model

Info-Tech has identified the following core services. Understanding and balancing the importance and satisfaction of the following core services is important to meeting the needs of the business.



This report was prepared by Info-Tech Research Group for City Of Shoreline on 2017-02-08.

Data is comprised of 28 responses, including responses by: Rachael Markle, Joanne Dillon, Ray Allshouse, Jarrod Lewis, Jeff Curtis, Heidi Costello, Eric Bratton, Jessica Simulcik Smith, James McCrackin, Mary Anne Kelly, Jessica Price, Tyce Murphy, Brett Abernethy, Mary Reidy, Randy Witt, Tricia Juhnke, Bob Earl, Kendra Dedinski, Uki Dele, Lance Newkirk, Susana Villamarin, Linda Pearl, Sara Lane, Joan Herrick, Paula Itaska, Stela Rajic, Rob Beern, John Frey

15 respondents did not complete the survey, including: Paul Cohen, Tavia Tan, Debbie Tarry, Heidi Webb, Kirk Peterson, Eric Friedl, Lynn Gabrieli, Amanda Zollner, Marianne Johnson, Nytasha Sowers, Paul Laine, David LaBelle, Dan Johnson, Rick Kirkwood, Margaret King

Completion Rate



powered by
INFO~TECH
RESEARCH GROUP

IT Satisfaction Scorecard

City Of
Shoreline
Total Survey Responses: 28



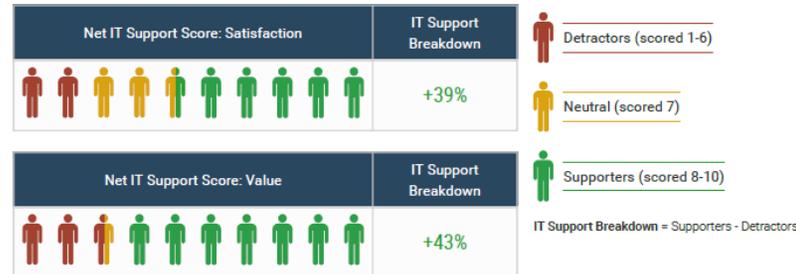
Overall Metrics

Overall Satisfaction and Value are key indicators of the overall impression of the IT department. These metrics let the IT leader determine at a glance if they are meeting the needs of the business.



IT Support Breakdown

The IT Support Breakdown charts are indicators of the percent of stakeholders that fall into three important categories. Promoters are loyal enthusiasts of IT. Neutral stakeholders are satisfied but unenthusiastic about IT. Detractors are unhappy stakeholders who can damage your reputation.



IT Relationship Satisfaction

Relationships are a key driver in stakeholder management. It is important that the business feels IT understands their needs and is getting enough communication.

Relationship	Satisfaction	Last Year
Needs Satisfaction with IT's understanding of your needs.	76%	12% ↑
Execution Satisfaction with the way IT executes your requests and meets your needs.	74%	11% ↑
Communication Satisfaction with IT communication.	71%	13% ↑

Business Satisfaction and Importance for Core Services

The core services of IT are important when determining what IT should focus on. The most important services with the lowest satisfaction offer the largest area of improvement for IT to drive business value.

Core Service	Satisfaction	Importance Ranking	Last Year
Network & Comm. Infrastructure Satisfaction with reliability of comm. Systems and networks	81%	2 nd	4% ↑
Devices Satisfaction with desktops, laptops, mobile devices etc.	80%	3 rd	8% ↑
Data Quality Satisfaction with providing reliable and accurate data	79%	6 th	12% ↑
Projects Satisfaction with large department or corporate projects	78%	7 th	13% ↑
Service Desk Satisfaction with responsiveness and effectiveness of service desk	76%	1 st	7% ↑
Requirements Gathering Satisfaction with BA's ability to understand and support the business	74%	10 th	19% ↑
Work Orders Satisfaction with small requests and bug fixes	72%	5 th	1% ↑
IT Innovation Leadership Satisfaction with providing opportunities for innovation and innovation leadership to improve the business	71%	10 th	16% ↑
IT Policies Satisfaction with policy design and enforcement around security, governance, etc...	70%	12 th	13% ↑
Business Apps Satisfaction with applications and functionality	70%	4 th	9% ↑
Analytical Capability and Reports Satisfaction with effective standard reports, custom reports capability, and the ability to generate business insights	63%	9 th	3% ↑
Client-Facing Technology Satisfaction with user experience and effectiveness	61%	8 th	3% ↓

IT Capacity Scorecard

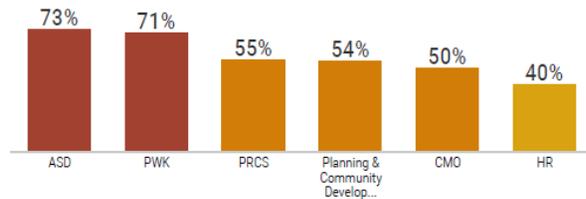
City Of
Shoreline
Total Survey Responses: 28



Capacity Metrics

Overall Capacity Constraint by Department

Different departments have different demands from IT and often tend to be constrained by IT from meeting their goals.



Showing 6 of 6 departments

Projects Capacity Satisfaction

Satisfaction with the ability to get IT capacity to complete Projects

Capacity Satisfaction	Last Year	IT Support Breakdown: Satisfaction	Support Score
76%	13% ↑		+40%

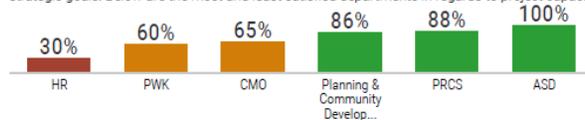
Ability to Deliver Effective Projects

Satisfaction with completed IT Projects ability to meet your business needs

Value Satisfaction	Last Year	IT Support Breakdown: Value	Support Score
80%	12% ↑		+56%

Projects Capacity Satisfaction By Department

Project capacity satisfaction indicates if departments are provided enough capacity to complete signification IT projects to meet strategic goals. Below are the most and least satisfied departments in regards to project capacity.



Showing 6 of 6 departments

Capacity Needs

To what extent is your group constrained and prevented from reaching your strategic goals by IT capacity?



Overall Dependency

To what extent does your ability to deliver results depend on effective IT services?



Overall Shadow IT

To what extent do you look externally and purchase IT services & applications without corporate IT involvement, due to a lack of internal IT capacity?



Work Orders Capacity Satisfaction

Satisfaction with the ability to get IT capacity to complete Work Orders

Capacity Satisfaction	Last Year	IT Support Breakdown: Satisfaction	Support Score
71%	0%		+17%

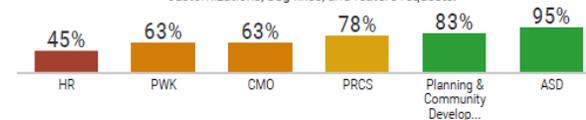
Ability to Deliver Effective Work Orders

Satisfaction with completed IT Work Orders ability to meet your business needs

Value Satisfaction	Last Year	IT Support Breakdown: Value	Support Score
73%	2% ↑		+24%

Work Orders Capacity Satisfaction By Department

Below are the most satisfied and least satisfied departments in regards to the capacity they receive from IT to complete small customizations, bug fixes, and feature requests.



Showing 6 of 6 departments

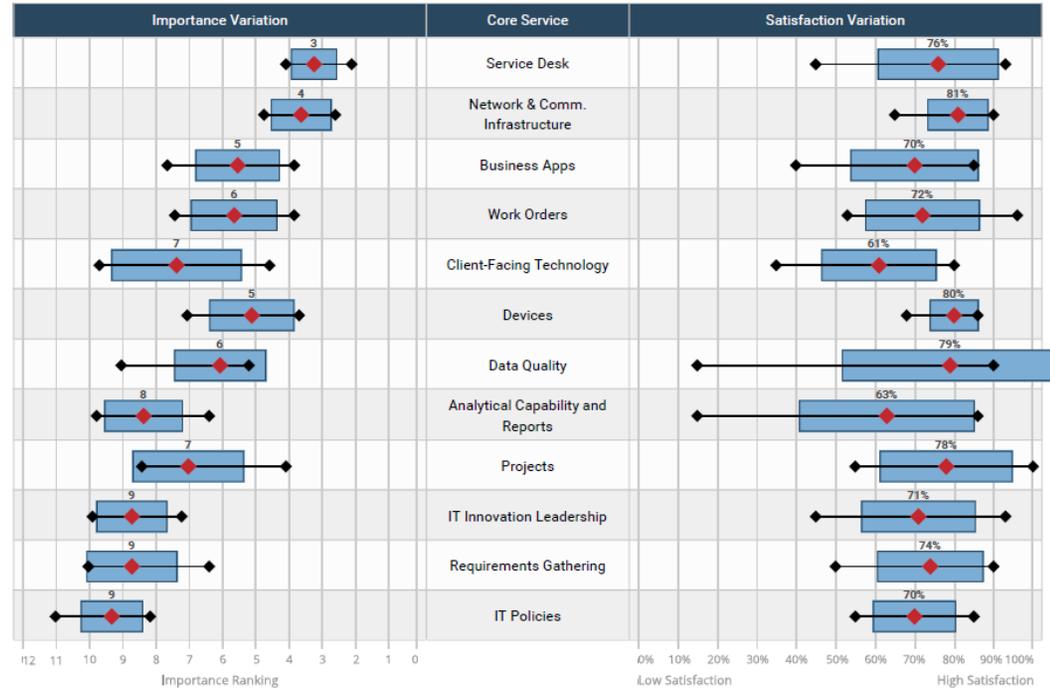
Core Service Overview

City Of
Shoreline
Total Survey Responses: 28



Service Gap Score

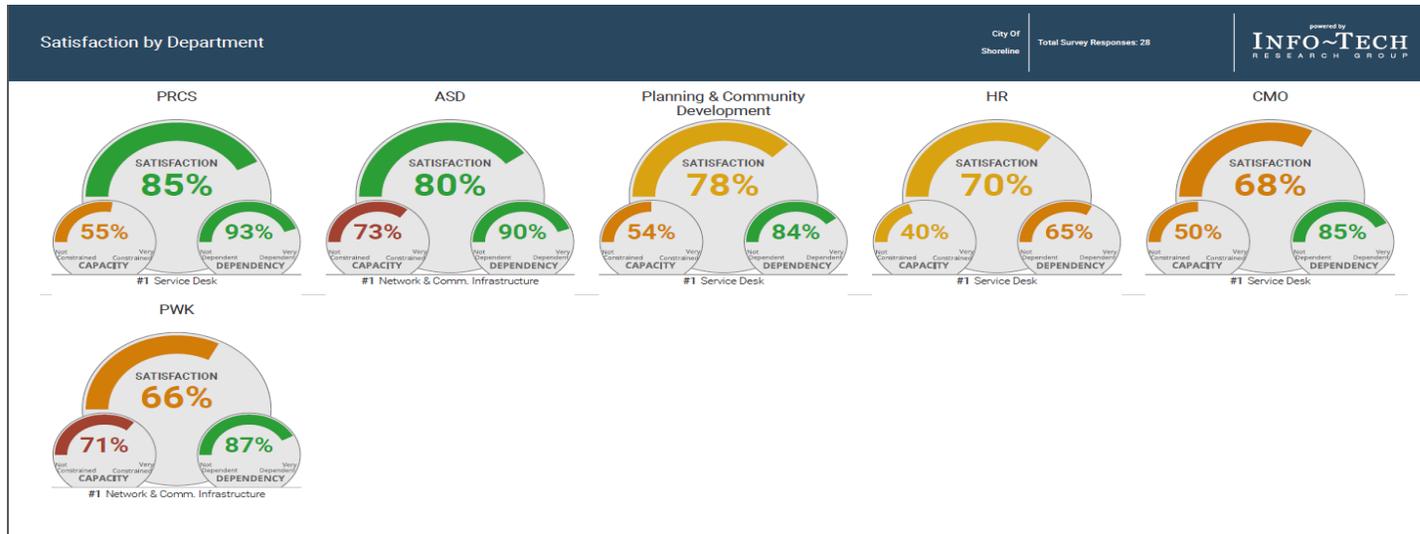
The chart below shows a comparison of satisfaction vs. Importance for all core services. Red bars with a negative score indicate an underserved core service. Green bars with a positive score highlight core services that are potentially over-provisioned.



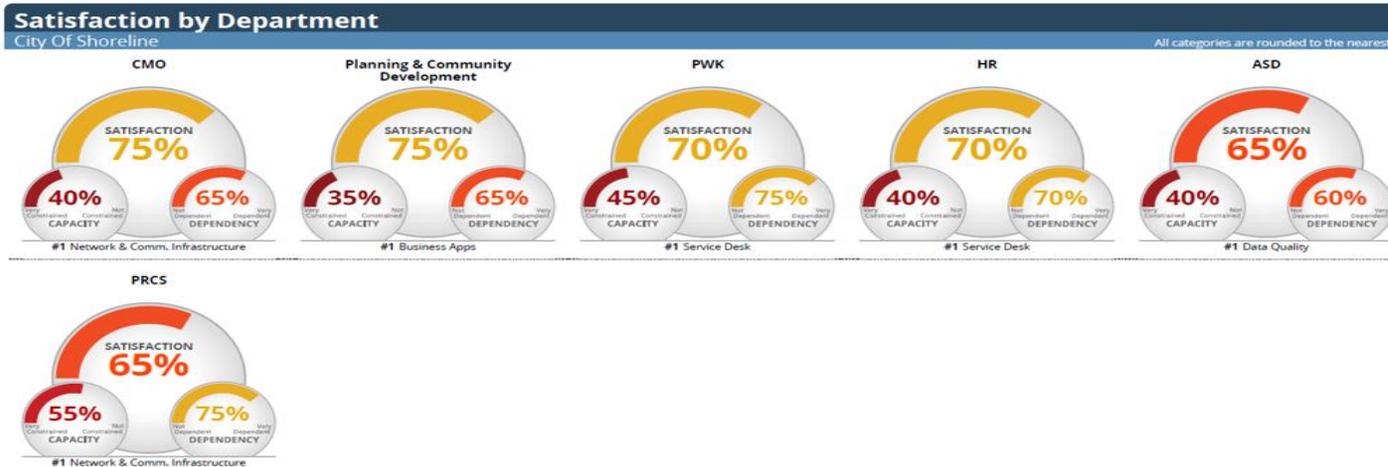
Importance Variation by Core Tool
Focusing on core services have a high degree of consensus around a high importance score will have a broad impact across the organization.

Satisfaction Variation by Core Tool
Outlying satisfaction scores can artificially inflate or deflate the average satisfaction score. When this occurs, take a closer look at specific departments that are pulling the score down to isolate the pain point.

Departmental Satisfaction – 2017



Departmental Satisfaction – 2014



Appendix F – City Manager/IT Manager Alignment

Keys to Effective Alignment at City Of Shoreline

Effective alignment starts with effective IT. Goals need to be defined and success needs to be evaluated in a tangible way. Baking alignment into every layer of IT governance supports long-term success of the IT-business partnership. Use Info-Tech's resources to build effective IT-business alignment in your business.

Rate your satisfaction with the following activities.

		Not Required	Significant Improvement Necessary	Some Improvement Necessary	Effective
Understand business goals 		Align to Business Goals You are here. You've started. Continue to take advantage of the CEO-CIO Alignment Program by following up with our experts to ensure a successful follow-through.			
Define and align IT strategy 		Align IT Strategy The IT Strategy workshop has one goal: Provide clear, measurable improvements to your IT Strategy, in a week. It provides you with: <ul style="list-style-type: none"> A clear understanding of business objectives, risk awareness, and specific criteria to the relevance, costs, and benefits of IT investments 			
Measure stakeholder satisfaction with IT 		Align with Stakeholders Stakeholder management is critical to IT success. The CIO Business Vision is a high impact program that requires little effort on your part. It provides you with: <ul style="list-style-type: none"> Detailed report cards on stakeholder satisfaction with IT and tools and indicators to improve your interaction with key stakeholders 			
Align IT project approval process 		Align the Project Portfolio Establish discipline and transparency around IT investments and contribution to business goals with the Portfolio Management workshop . It will provide you with: <ul style="list-style-type: none"> A streamlined process for requesting and allocating IT resources for projects and transparent project approval and prioritization procedures 			
Align IT budget 		Align the IT Budget Align the IT Budget: The Cost & Budget Management workshop will get you to manage IT spending so that IT services align with business goals and objectives. It provides you with: <ul style="list-style-type: none"> A forecast for next year's budget, cost improvement to optimize IT spend, and a comparison of key cost accounts to industry benchmarks 			
Measure IT project success 		Align Indicators & Metrics Performance Measurement & Assessment roadmap guides you on how to use IT metrics to evaluate accountability and success. It provides you with: <ul style="list-style-type: none"> A Metrics Selection & Reporting tool and best practices for communicating IT metrics 			

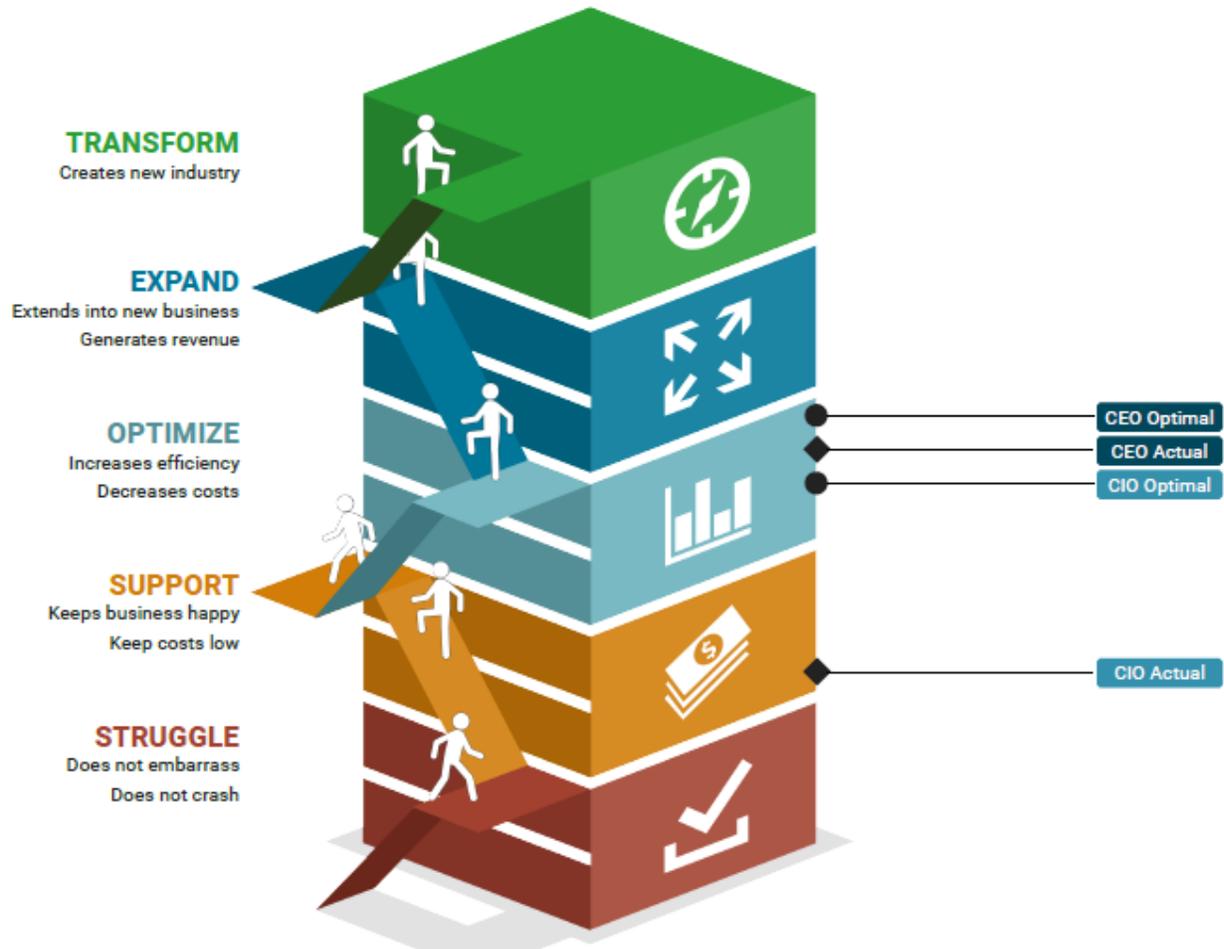
Aligning with Business Goals

For IT to serve as a valuable business partner, IT leaders must direct resources toward supporting and achieving business goals. A CEO functions as the primary business stakeholder. Not only does the CEO need to be consulted on these big ticket items, but more importantly he or she must be understood. IT leaders ignore this reality at their own peril.

The Role of IT at City Of Shoreline

Does IT struggle with, support, optimize, expand, or transform the organization? Understanding how the CEO defines the IT role is critical for the development of the IT mandate and a necessary precursor to building an IT strategy.

Describe the role of IT in your organization – now and in the future.

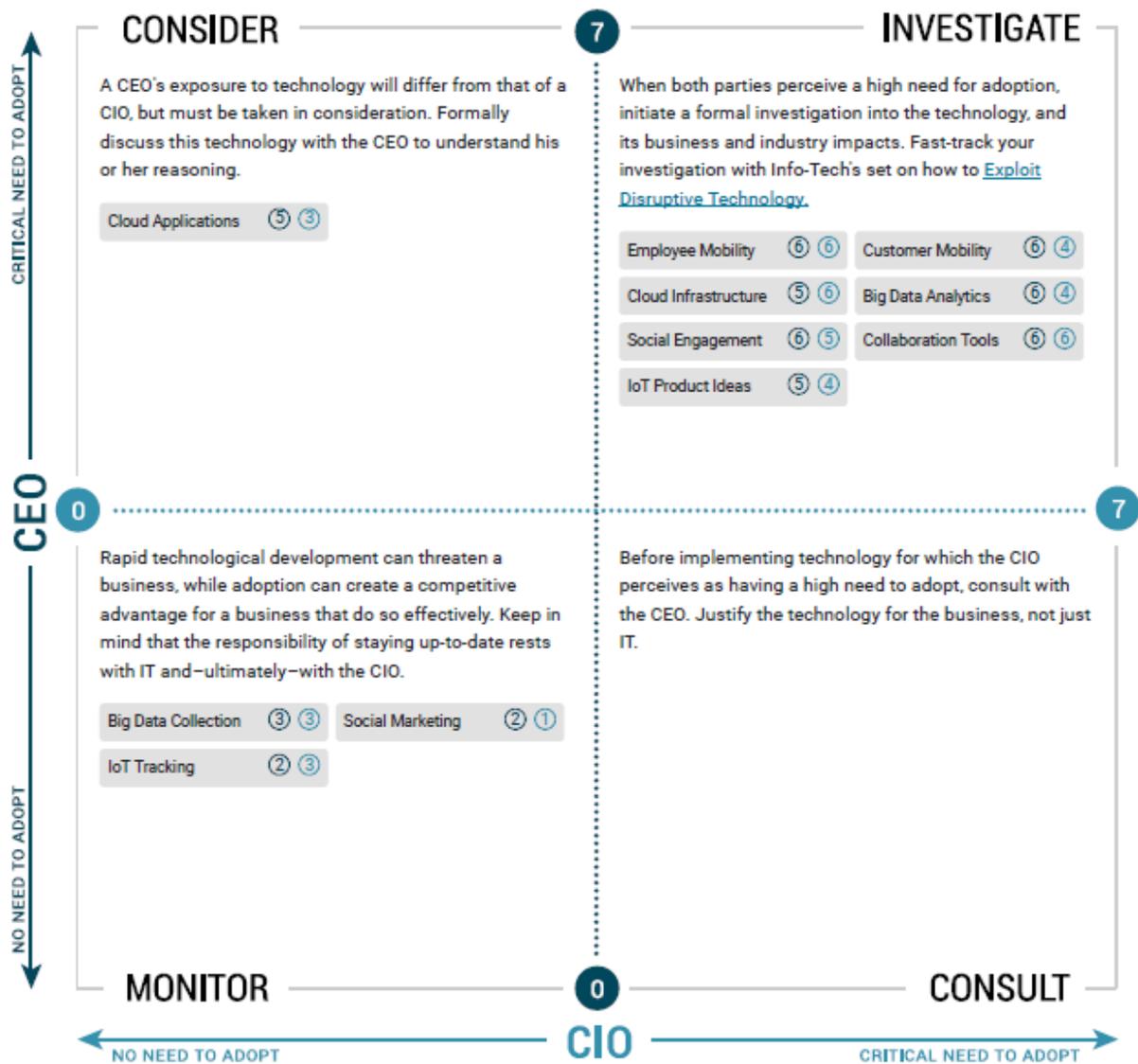


The role of IT needs to be defined by the business and realized by IT. Maximize value created by IT by ensuring that the CEO and CIO agree on how the IT role is defined so that IT effectively addresses business needs.

Appetite for Innovation Technology at City Of Shoreline

Understanding why the business wants to innovate with specific technologies is critical to successful implementation and user adoption.

In 3 to 5 years, should the business adopt these technologies?



Appendix F-1 – Administrative Services Director/IT Manager Alignment

Keys to Effective Alignment at City Of Shoreline

Effective alignment starts with effective IT. Goals need to be defined and success needs to be evaluated in a tangible way. Baking alignment into every layer of IT governance supports long-term success of the IT-business partnership. Use Info-Tech's resources to build effective IT-business alignment in your business.

Rate your satisfaction with the following activities.

		Not Required	Significant Improvement Necessary	Some Improvement Necessary	Effective
Understand business goals 		Align to Business Goals You are here. You've started. Continue to take advantage of the CXO-CIO Alignment Program by following up with our experts to ensure a successful follow-through.			
Define and align IT strategy 		Align IT Strategy The IT Strategy workshop has one goal: Provide clear, measurable improvements to your IT Strategy, in a week. It provides you with: <ul style="list-style-type: none"> A clear understanding of business objectives, risk awareness, and specific criteria to the relevance, costs, and benefits of IT investments 			
Measure stakeholder satisfaction with IT 		Align with Stakeholders Stakeholder management is critical to IT success. The CIO Business Vision is a high impact program that requires little effort on your part. It provides you with: <ul style="list-style-type: none"> Detailed report cards on stakeholder satisfaction with IT and tools and indicators to improve your interaction with key stakeholders 			
Align IT project approval process 		Align the Project Portfolio Establish discipline and transparency around IT investments and contribution to business goals with the Portfolio Management workshop . It will provide you with: <ul style="list-style-type: none"> A streamlined process for requesting and allocating IT resources for projects and transparent project approval and prioritization procedures 			
Align IT budget 		Align the IT Budget Align the IT Budget: The Cost & Budget Management workshop will get you to manage IT spending so that IT services align with business goals and objectives. It provides you with: <ul style="list-style-type: none"> A forecast for next year's budget, cost improvement to optimize IT spend, and a comparison of key cost accounts to industry benchmarks 			
Measure IT project success 		Align Indicators & Metrics Performance Measurement & Assessment roadmap guides you on how to use IT metrics to evaluate accountability and success. It provides you with: <ul style="list-style-type: none"> A Metrics Selection & Reporting tool and best practices for communicating IT metrics 			

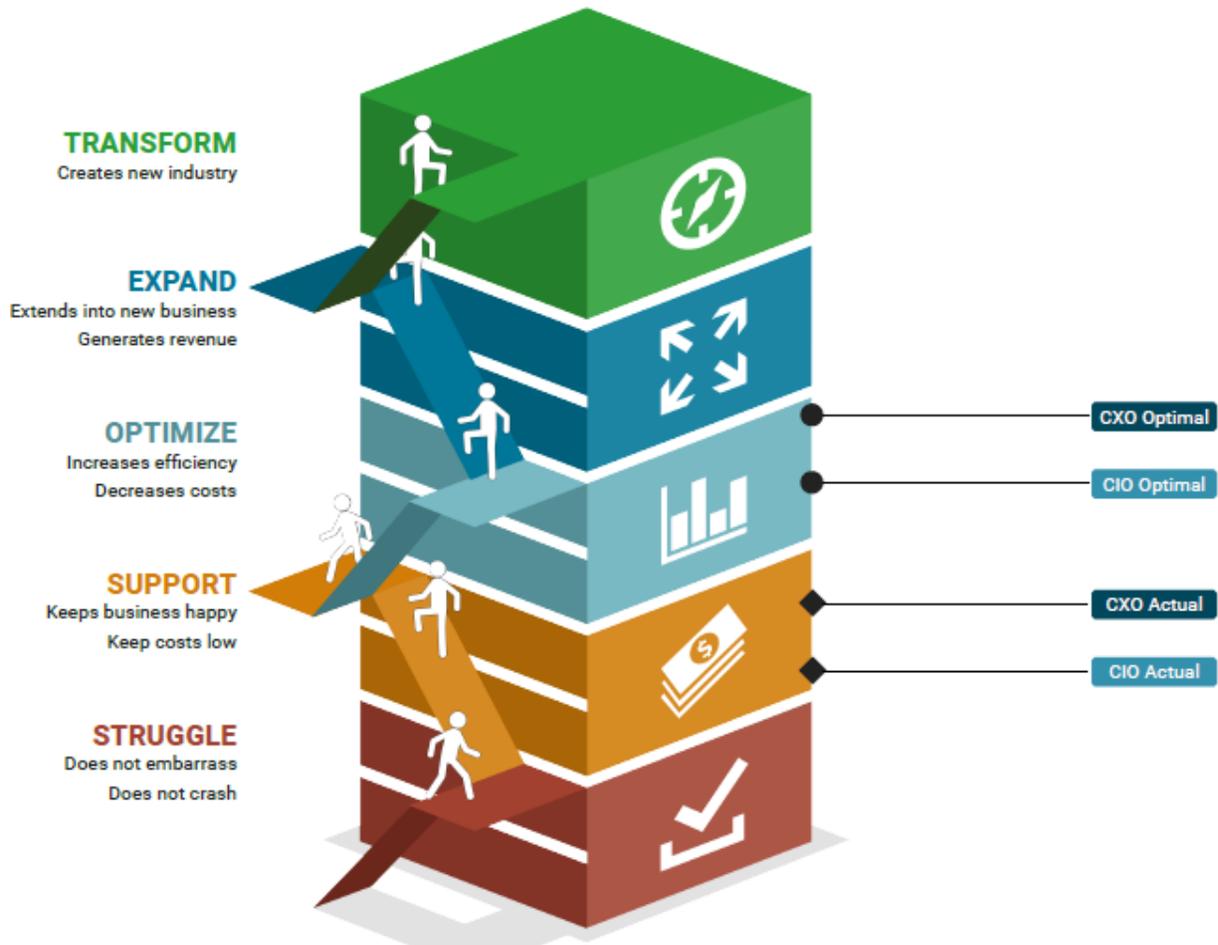
Aligning with Business Goals

For IT to serve as a valuable business partner, IT leaders must direct resources toward supporting and achieving business goals. A CXO functions as the primary business stakeholder. Not only does the CXO need to be consulted on these big ticket items, but more importantly he or she must be understood. IT leaders ignore this reality at their own peril.

The Role of IT at City Of Shoreline

Does IT struggle with, support, optimize, expand, or transform the organization? Understanding how the CXO defines the IT role is critical for the development of the IT mandate and a necessary precursor to building an IT strategy.

Describe the role of IT in your organization – now and in the future.

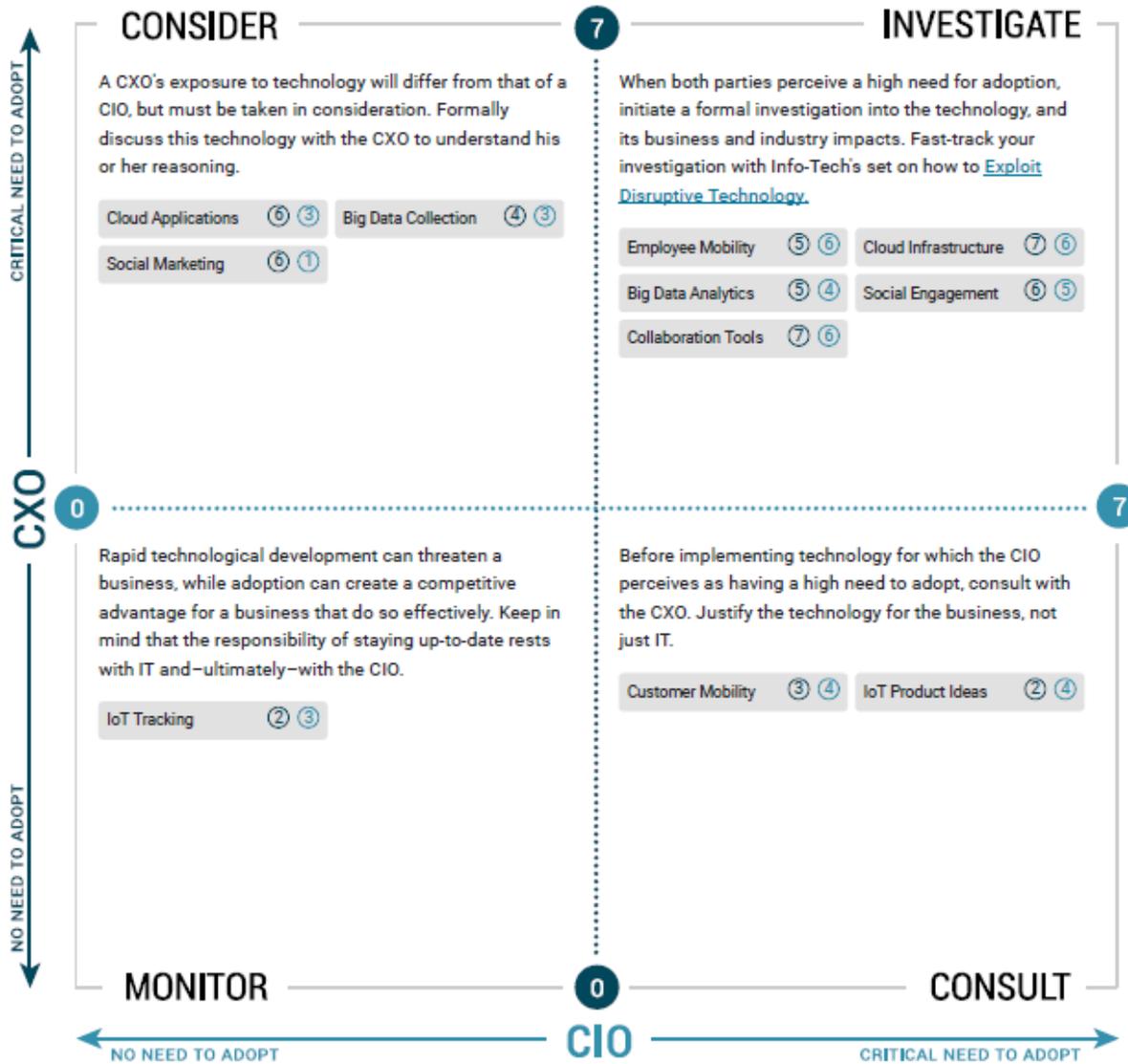


The role of IT needs to be defined by the business and realized by IT. Maximize value created by IT by ensuring that the CXO and CIO agree on how the IT role is defined so that IT effectively addresses business needs.

Appetite for Innovation Technology at City Of Shoreline

Understanding why the business wants to innovate with specific technologies is critical to successful implementation and user adoption.

2 In 3 to 5 years, should the business adopt these technologies?



Appendix G - Strengths, Weaknesses, Opportunities, Threats (ITAB/IT Staff)

SWOT ANALYSIS

Key Themes

Information
Technology
Advisory
Board and IT



Appendix H – Shoreline IT Division – Assessment of IT Discipline Performance

Importance Review	City Of Shoreline	# of Responses	4	powered by INFO~TECH
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No Importance 1.0 - 6.9	Limited Importance 7.0 - 7.9	Significant Importance 8.0 - 8.9	Critical Importance 9.0 - 10.0
----------------------------	---------------------------------	-------------------------------------	-----------------------------------

These are all of your IT processes ranked based on their perceived importance, from the most important to the least important. Use this data to understand which processes your team believes are crucial to them and to the organization.



Top 10 Areas of Disagreement

Critical Importance	Business Value 9	Cost & Budget Management 9	Enterprise Application Selection & Implementation 9		
Significant Importance	Service Desk 8.8	IT Organizational Design 8.8	Incident & Problem Management 8.8	Enterprise Architecture 8.8	Change Management 8.5
	External Compliance 8.5	Vendor Management 8.5	IT Strategy 8.3	Human Resources Management 8.3	Requirements Gathering 8.3
	Application Maintenance 8.3	Application Portfolio Management 8.3	Security Strategy 8.3	Stakeholder Relations 8	Security Management 8
	Cost Optimization 8	Knowledge Management 8	Data Architecture 8	Data Quality 8	Leadership, Culture & Values 8
	Organizational Change Management 8				
Limited Importance	IT Governance 7.8	Operations Management 7.8	Release Management 7.8	Service Management 7.8	Asset Management 7.8
	Configuration Management 7.8	Availability & Capacity Management 7.5	Business Continuity 7.5	Quality Management 7.5	Disaster Recovery Planning 7.5
	Business Intelligence & Reporting 7.3	Risk Management 7.3	Project Management 7.3	IT Management & Policies 7	Performance Measurement 7
	Manage Service Catalog 7	Business Process Controls & Internal Audit 7			
	No Importance				
	Innovation 6.8	Portfolio Management 6.5	Application Development Throughput 4.3	Application Development Quality 4.3	

Red	2.5 - 9	Significant Gap in Alignment
Yellow	1.1 - 2.4	Gap in Alignment
2.2		Application Development Quality
2.0		Application Maintenance
1.8		Quality Management
1.8		Application Portfolio Management
1.6		IT Organizational Design
1.6		Data Architecture
1.5		IT Governance
1.5		Configuration Management
1.5		Asset Management
1.5		Project Management
Green	0 - 1	Minimal Gap in Alignment

Not in Place N/A	Not Effective 0.0 - 4.9	Somewhat Ineffective 5.0 - 5.9	Somewhat Effective 6.0 - 6.9	Effective 7.0 - 10.0
---------------------	----------------------------	-----------------------------------	---------------------------------	-------------------------

This page shows all your IT processes in order of their perceived effectiveness, from least effective to most effective. Use this data to understand which processes your team believes are currently performing well and which processes are currently struggling or broken.



Top 10 Areas of Disagreement

Not In Place				
Not Effective				
Application Development Throughput 3	Risk Management 3.8	Business Process Controls & Internal Audit 3.8	Application Development Quality 3.8	Availability & Capacity Management 3.8
Quality Management 4	Business Intelligence & Reporting 4	Cost Optimization 4.3	Release Management 4.3	Incident & Problem Management 4.3
Portfolio Management 4.3	Disaster Recovery Planning 4.5	Configuration Management 4.5	Change Management 4.5	Service Management 4.8
Data Quality 4.8	Business Continuity 4.8	Organizational Change Management 4.8		
Somewhat Ineffective				
Operations Management 5	Enterprise Architecture 5.3	Performance Measurement 5.3	Security Strategy 5.3	Manage Service Catalog 5.3
IT Organizational Design 5.3	IT Governance 5.5	Business Value 5.5	Stakeholder Relations 5.5	Asset Management 5.5
IT Management & Policies 5.8	Innovation 5.8	Security Management 5.8	Application Maintenance 5.8	Data Architecture 5.8
Somewhat Effective				
IT Strategy 6	Application Portfolio Management 6	Service Desk 6	Knowledge Management 6	Project Management 6.3
Cost & Budget Management 6.5	Vendor Management 6.5	External Compliance 6.5	Human Resources Management 6.8	Leadership, Culture & Values 6.8
Effective				
Requirements Gathering 7.3	Enterprise Application Selection & Implementation 7.5			

Red	2.5 - 9	Significant Gap in Alignment
3.0		Risk Management
3.0		Disaster Recovery Planning
2.8		Data Quality
2.7		Performance Measurement
2.6		Innovation
2.6		Availability & Capacity Management
2.6		Business Continuity
Yellow	1.1 - 2.4	Gap in Alignment
2.3		Application Development Quality
2.3		IT Management & Policies
2.2		Business Process Controls & Internal Audit
Green	0 - 1	Minimal Gap in Alignment

Appendix I - City of Shoreline Technology Investment and Architectural Guiding Principles

What are Technology Investment and Architectural Guiding Principles?

The City is adopting technology to become more efficient, and to provide a better means of citizen interaction. As technology becomes more ingrained in the City's business processes, the investment in technology increases. In an effort to provide a means of effectively assessing the value of City technical investments, to ensure that these investments are leveraged efficiently, and establish a set of architectural standards that are needed to ensure compatibility and usability across the City's technologies, a set of IT Investment Guiding Principles have been established. These principles should be considered when new, replacement, or upgrades to existing technology are evaluated.

The Technology Investment and Architectural Guiding Principles

1. The Business Results Focus Principle – *We should focus on achieving business results that provide value to customers over process*

Our focus is on results, not process. This requires us to always look first at the business goals (the what) of a process, before focusing on the mechanics of the process (the how).

This means that staff should look at process improvement first, not just technology that they think makes their jobs easier. Get to the root of the issue first – you may find that simply making a change in the process will result in the results desired without the expense of a new computer program.

2. The Customer Experience Principle – *We should minimize the complexity of the customer experience*

Customers of City Services should be able to interact with the City in ways that are easy to understand, navigate, and are consistent and seamless across the access method used.

This means that we should focus our efforts on making it easy for our customers to access our services and us. On-line reservations for recreational programs and on-line permit applications are two examples of this.

3. The Minimize Cost and Complexity Principle – *Business Solutions should be adaptable with changing needs without significantly impacting cost or complexity for the organization*

We want to ensure constant improvement doesn't become constant churn. We should focus on resolving core problems and barriers to success. This means looking for opportunities to simplify and streamline, avoiding changes that don't add real value, and avoiding short-term workarounds.

This means that we need to focus our efforts on important areas. Making change for changes sake only prevents us from resolving the critical barriers to success. While making a change may make one person's job easier, it may add complexity that is costly to maintain, increasing the overall cost and complexity of technology.

4. The City-wide Perspective Principle – *The City's information and information technologies should be viewed from a City-wide perspective*

The City's information and Information Technologies consist of shared enterprise solutions (such as our financial system) as well as specialized department-specific solutions (such as the recreation management system for Parks). We should develop a single view that considers both in order to look for possible cost savings and the ability to deliver new and/or improved services by leveraging the technology we already own.

This means that we need to look at the technology we already have in our environment and leverage it to the fullest extent. We may find that we can deliver better customer service in all areas by adopting a single customer service technology that supports individual as well as City-wide needs.

5. The Minimal Number of Technologies Principle – *IT Services should be designed to minimize the number of technologies to support*

Shoreline IT should control costs by managing the number of technologies it is supporting.

This means that if you have your 'favorite' software to use for a particular function, and the City already has something that does that function, you should use what is already here unless you have a unique business need that cannot be met by the standard.

6. The Records Management and Legal Requirements Principle – *Consideration should be given to records management and legal requirements before bringing in new technologies*

Shoreline needs to be able to meet its legal requirements when using technology to conduct business.

This means consideration needs to be given to the retention of records through their lifecycle (creation, use, retention, destruction). This includes file format, ownership of data/records and storage, frequency of backups, preservation of metadata, and adequacy of security for exempt records.

7. Technology Lifecycle Principle – *Technology has a lifespan that should be proactively considered in the City’s long-range financial planning*

Technology is a basic infrastructure asset similar to a street, surface water catch basin, or vehicle. As such, it has an estimated lifespan. This lifespan for enterprise applications is 7 to 10 years, with hardware between 3 and 10 years. The replacement of technology should be considered as part of the City’s 10-year sustainability plan, and proactively funded.

8. Data as an Asset Principle – *Data should be managed to ensure its accuracy and quality to support informed operational decisions*

The City Manager has directed operational management to value decisions that can be backed up with verifiable data. The success of the data-driven approach is reliant upon the quality of the data gathered and the effectiveness of its analysis and interpretation.

This means it will be important to ensure data quality through appropriate auditing methods, and timely entry of data that is required for decision-making.

9. Data Accessibility Principle – *Data should be easy to find and retrieve and present a single version of the truth*

In order to meet the City Manager’s direction for a data-driven approach to decision-making, data needs to come from verifiable sources that are easy to access and reference.

This means that the way information is accessed and displayed should be sufficiently adaptable to meet a wide range of users and their corresponding methods of access.

10. Zero Touch Principle – *Manual tasks should be transitioned to managed workflows*

Manual tasks generally necessitate the routing of paper and other artifacts, which generally delays processing. In an effort to streamline these tasks, exploration of the use of existing tools (enterprise applications, SharePoint, etc.) should be made in order to automate these processes.

This means that the functionality and capabilities of the City’s technology will be exploited to the greatest advantage.

11. Computer Security Principle – *Computer security is embedded into business, application, data and technology architecture*

Computer security is more than a technical problem. Security needs to be incorporated into and managed at every level of the technical architecture.

This means that appropriate security is incorporated into every application, data repository, and technology the City provides. Staff is trained to use technology in a secure and responsible manner, and to report any potential breaches to IT.

Appendix J - GIS Gaps and Prior Plan Accomplishments

Division	GIS Business Requirements	GIS Service Gap	Implemented	Business Value
Public Works				
Engineering	Preliminary Engineering Map link to Drawing Archives Right of Way Survey Monuments	Use GIS for volume, length and area calculations; GIS interface for document management; GIS database of Street ROW survey control monuments that is complete and up to date		Eliminates many manual processes, and improves the accuracy of measurements. Preserve and maintain a database of land survey coordinates describing ROW monuments, a subdued task, but a critical resource whose preservation is State mandated. This is the critical and primary benchmark for how all property is mapped and developed. Having a reliable and accurate database of these monuments eliminates redundant and costly land survey efforts, while providing a resource to map property and related records, including City right of way, tax parcels, zoning and utilities. Having a complete inventory of these monuments and ensuring their preservation would reduce any ongoing costs as opposed to losing monument records or the monuments themselves and having to replace them. Losing these types of records sharply increases surveying costs and exposes the City to potential law suits. Local development is aided by these “nut and bolts” resources. Having a reliable, complete and accurate inventory of survey monuments provides another way to speed the development process while reducing costs. Furthermore, improving the interface between GIS and computer aided drafting (CAD) can facilitate lower costs for civil engineering construction design.
Traffic	Traffic Control, Signs, Neighborhood Traffic Safety, Program	Incomplete and out of date inventory for signs and traffic control assets; Fill gap of GIS expertise lost with recent staff resignations; Traffic map showing live cameras feeds and/or traffic congestion		Provide citizens and the public improved, real-time traffic information, saving time and possibly eliminating unnecessary trips for staff and/or emergency personnel responding to traffic incidents. Traffic accident maps highlight areas where roads do not meet standards. These maps also help us with grant applications related to designing safe streets.
Surface Water and Environmental Services	NPDES Reporting, Fee Calculation, Facility Mapping	Refine GIS process to update utility billing for changes in property boundaries or impervious surface; Improved GIS tools to meet NPDES requirements, such as GIS query of upstream and downstream facilities		Track changes in development so that the City collects new revenue on time. The City collects its surface water utility fee on a formula that includes the amount of impervious surface, the size of the parcel and the type of land use. These characteristics change often, and the GIS provides an effective tool to track them.
Utility Planning for Water and Wastewater	Inventory of Water and Wastewater facilities, Condition Mapping, Water Distribution Modeling	Incomplete and out of date inventory of water and wastewater assets; Build linkages between GIS inventory and water models; Provide Capital Improvement Project tools to automate cost calculations for new projects; GIS interface for water models and demographic data		Accurate and complete information about key City assets will eliminate costly site investigations and research about things like pipes, pumps or maintenance history. Investigations that take hours can be reduced to minutes if key information such as year installed, manufacturer, warranties, and condition reports are recorded in a timely manner to the GIS database. As-built information that is provided to us by contractors and developers adds \$100,000 of value to the GIS each year. These as-built records include precise locations of property lines and new infrastructure and set the stage for quick and reliable property related determinations down the road.
City Manager’s Office				
Economic Development	Economic Development Areas, Business Contact Database	Business database, including GIS site location, further developed and possibly maintained from license data. Target mailings to specific	Partially implemented, 8/2015	Provide tools to help businesses locate in the City of Shoreline. Such tools can help them with the permit process as well as inform them about advantages of locating here. Also, finer City demographic data, provided by our permit, assessor and

City of Shoreline Geographic Information System (GIS) Divisions Gaps

Appendix J

Division	GIS Business Requirements	GIS Service Gap	Implemented	Business Value
		areas of the City. Improve mapping for economic development sites		transportation data, is substantially more current and complete than commercially available sets and would help us and businesses make the best decisions about where to locate while reducing costs.
Community Services-Emergency Management	Disaster Response, Storm Ready	Develop GIS interface to FEMA HAZUS program to estimate losses for disaster response; Incomplete and/or out of date inventories for vulnerable populations, Improve GIS mapping linkage with incident database; Expand emergency management data layers for emergency shelters and resources beyond City Limit. Track mobile work force to provide more efficient and quicker dispatch to jobs.		During an activation of the emergency operations center, reliable and easy to obtain GIS information will provide for quicker decisions resulting in the protection of public health and safety.
Community Services-Customer Response Team	Encroachment and Abandon Vehicle Investigations	Improve mapping accuracy of ROW boundaries to save time and expense by quickly determining ownership of trees and location of abandon property and encroachments by physical structures.	Ongoing	Quicker and reliable information will provide the tools for the investigator to ascertain whether a car, tree, fence or other structure is located on private or public property.
Community Services-Human Services	Provide resources for populations of low and moderate income residents	Improved use of Federal Census data, including the American Community Survey, which can help target resources to specific areas of the City; Provide online map depicting agencies in the Shoreline area providing resources for low income residents. Use GIS to determine "Equity and Social Justice" balance in the City/Region.	Partially Implemented 5/24/2017	Obtaining and analyzing population trends in the City will help us match City services to the general public. Census data is available that tracks an assortment of demographic information, including age, race, spoken language, income and housing type.
Legal	Legal investigations that research land records and/or utility and street ownership and maintenance responsibilities	Our utility and land records sometimes fall short of mapping standards, preventing us from quickly determining who is legally responsible for maintaining a tree, sidewalk, street light or road asset. By continuing to improve the accuracy of our GIS, it can provide a quick, and low cost way to respond to these requests.	Continue to share GIS mapping updates provided by recent land surveys. Completed update of Richmond Beach area, and shared this with King County.	We recently averted two lawsuits because we demonstrated what agency was responsibility for sidewalk and street maintenance within feet of the City Boundary. If our maps did not meet these standards, such as a map accuracy of 1 foot or less, we would not have precisely shown where these utilities and sidewalks are located. Without these GIS mapping efforts, high costs would have resulted as a result of legal fees and/or the services of a professional land surveyor. Having GIS staff skilled in the application of legal descriptions helps us execute property or annex related transactions in faster time and with less cost.
Parks, Recreation and Cultural Services				
Recreation	Trail and Park Maps	Provide park maps with finer detail and cartographic design. One of the most common requests individual parks maps that include detail about where amenities are located within specific parks. Provide customers accurate brochures showing trails and other amenities for individual parks		Integrate park maps into the enterprise park reservation will help citizens plan their park outing. Also, detailed park maps, similar to those commonly prepared for national and state parks and some cities, are a frequent, but unfulfilled request.
Planning	Capital Improvement Project Planning ; Parks Recreation and	Reliable and updated data layers providing contours, aerial imagery, utilities and park		A key strength that GIS offers to the planning of parks capital improvement projects, is the automated calculations of costs associated with new construction of sidewalks,

City of Shoreline Geographic Information System (GIS) Divisions Gaps

Appendix J

Division	GIS Business Requirements	GIS Service Gap	Implemented	Business Value
	Open Space Planning	infrastructure. Track and analyze City for park system gaps.		pavement, landscaping or trails. Cost factors can be applied to the length or area of the linear or area of new infrastructure. Additionally GIS provides the preliminary data layers map new projects for the public to see and comment on.
Cultural	Interactive Public Art Map, Community Garden Map with Gardeners, Special Event Planning	Interactive tour of public art, featuring a map with walking routes. Dynamic map of City park facilities linking park amenity asset database with and facility reservations		There is always a steady interest in showcasing our park amenities. Have a visual reference, in a map format, helps the public plan visits in our community.
Planning & Community Development Services				
City Planning	Analysis of current and projected economic and development growth; Comprehensive Plan and Master Plan	GIS tools to automate and refine demographic and economic analysis. More maps for open houses and other community outreach. Digital archives, in an open GIS format, for our comprehensive plan and zoning maps- Improved soil and geology data for determining seismic and land slide hazards. Current data is not intended for and sometimes misused for site specific determinations. 3-D visualization tools.	<u>LiDAR data review for landslide hazard critical areas into GIS format was completed.</u>	Most of our GIS analysis is contracted out for planning processes. Contracting this type of work costs more and can lead to more errors due to redundant and multiple versions of the same GIS data. It is easier to work directly with the GIS data layers on premises, particularly when strategizing different land use options. Although GIS cloud technologies are stream lining some edit processes that occur simultaneously in house and from the offices of contractors, we are still seeing redundant GIS work tasks and datasets.
Code Enforcement	Enforce violation of City's development code	Improve GIS tools to investigate code violations by streamlining GIS data archive with permit archives.		
Police				
Incident Response	Field Maps	Floor plans and layouts for major buildings during crisis incidents.		This would provide quicker response times and more informed situational awareness in emergency response scenarios.
Patrol	Mapping support for police patrols	Maps showing nuisance areas, enforcement districts, including Aurora Village no trespassing areas and Stay Out of Drugs Area (SODA) and sequence of police patrols		These maps provide the police relevant information in response to crimes. Districts identify if there are other laws defined for specific areas.
Community	Block watch mapping	Mapped information for community block watch which is more robust, could show gas and water shut off values and nuisance areas		This would provide quicker response times in emergency response scenarios.
Administrative	Asset management	Asset database for police hardware, including weapons, computers and vests linked to location stored		This would help police find supplies and track which building areas to find them.
Administrative				
Budgeting	Revenue and Expenditure Analysis	Better integration using GIS tools with business and revenue data to measure return of investment for major projects like Aurora Ave or North City, Improve interactive maps that showcase major development/capital improvement project costs and schedules. Track tax revenue and expenditures by specific areas, such as neighborhoods. Improve ability to forecast financial liabilities		Currently, the process to highlight major capital projects is a time consuming manual process. As the map and associated quickly becomes out of date. Integrating the location of major development projects in our permit system, as well as capital improvement projects in our finance system can provide staff and the public real-time data about what is occurring throughout the City.

Division	GIS Business Requirements	GIS Service Gap	Implemented	Business Value
		of City infrastructure repair and maintenance by managing assets in a GIS database.		
Fire Department				
Planning	Analyzing Incident Data	Determine fire response travel times to different areas of the city. Analyze areas of the City with particularly high incident rates.		This information would help the fire department meeting standards matching fire response times.
Completed from last plan				
Public Works				
Streets	Pavement Management, ROW Maintenance, Ice Events	Interface Pavement Management Software with Asset Management Software; Enhance spatial mapping capabilities for ROW inspections (sidewalks, street cuts, utilities)	11/2015	Reduces the amount of work needed to plan street repairs and bituminous overlays. Currently this process is labor intensive, relying on field measurements and paper maps, sometimes showing outdated pavement condition. Integrating a pavement management interface within an asset management system will provide up to date condition data in an easy to use map format.
City Manager's Office				
Community Services-Neighborhoods	Neighborhood Communication, Community Maps	Stream line neighborhood mailings using GIS to target mailings for specific areas for the City. Deliver unique community maps for each neighborhood. Track and respond to new residents. Provide online map to show where upcoming community events are located. Develop interactive maps that allow for crowd sourcing, where residents can contribute to the content of online media.	Tracking and delivery of information to new residents (10/2015)	Targeting mailings based on where a citizen lives or a business is located, can reduce mailing costs and increase the effectiveness of communication. Otherwise, mailings that reach an unintended audience can diminish both the message and efficiency of Citywide communications, while increasing the costs.
Parks, Recreation and Cultural Services				
Maintenance	Maintenance of City Park facilities	Most park infrastructure are unmapped in GIS database	6/2016, Completed initial inventory of Park Assets by applying cloud based GIS for 13 asset types. Parks staff collected the GIS information. This inventory includes condition information for 15 asset types.	In response to the asset management implementation for public works, park infrastructure detail, including the location of benches, courts, fences and landscaping areas must be mapped. Work and inspection schedules will be tracked against these assets to determine the prior work that has been completed, as well as the associated maintenance and replacement costs.
Planning and Community Development Services				
Permitting	Permits for new construction, ROW use, Site development and events	Online map showing locations of open and completed permits. Conduct spatial queries of development activity in response to record requests. Improved accuracy and completeness of property mapping. Reliable and updated critical areas mapping. Better integration or consolidation of customer,	2/2016, in response to the critical areas ordinance, updated or mapping of streams and wetlands, including buffers that highlight	The process of obtaining a permit is dependent on GIS maps. Site constraints, such as wetland or stream buffers, building setbacks from adjacent property or planning district overlays must all be manually checked. GIS now provides the ability to query these things on the fly, by direct queries from our City GIS. Automating these map related tasks can save minutes to hours for permit applications.

City of Shoreline Geographic Information System (GIS) Divisions Gaps

Appendix J

Division	GIS Business Requirements	GIS Service Gap	Implemented	Business Value
		address, zoning, land use, and permit data that is duplicated in multiple database systems. Direct access of GIS data layers by next permit systems, to quickly process presence of critical areas, or other restrictions defined by current regulations and zoning codes.	regulated areas. <u>TRAKiT permit system automates plotting construction or other permits on a map.</u>	
Critical Areas Data	Ensure site conditions are adequate for site development and do not pose a threat to our sensitive areas such as streams and wetlands	Some of our critical is out of date or incomplete. We use the best available data to make decisions, but having complete and accurate information describes areas of naturally occurring sensitive areas that are susceptible to harm.	7/ 2016. Imported new Fish and Wildlife Data, Updated Stream and Wetland Areas, and are in the process of preparing a new steep slope layer.	Having complete and accurate critical information on hand can reduce the time to complete a permit process. We have begun to manage this information using GIS tools, to quickly find historical technical documents identify geologic, wetland and stream conditions.
Administrative				
Facilities	Building maintenance	City map of building and campus layouts in GIS format for Asset management	6/2015	Quickly dispatch facility work orders. Determine the cost for maintaining specific buildings or further detail about which floor or section of the building is the most expensive to maintain.
Fire Department				
Field Response	Information for Fire Response	Current maps for incident response depicting areas accessible by fire fighters and medics. These maps would show paved areas, topography, addresses and buildings. Building database provide key characteristics, including type of building, and presence of hazardous materials. Complete and accurate site addresses, including all apartment units, for incident dispatch using NORCOM E-911 system. Incorrect data will result in longer emergency response times than necessary.	7/2016, Completed a comprehensive update of our site address layer. This effort leveraged a low cost commercial api to determine the accuracy and completeness of approximately 24,000 site addresses.	A complete and accurate site address is entered in the City GIS and shared with NORCOM, our E-911 emergency dispatch center. Having this information helps ensure quick dispatch of emergency vehicles to the incident site.

Appendix K – Technology Plan Cost Estimates

Strategic Technology Plan - 2018 - 2020				
Project	Year	Estimated Cost	Staff Hours	Comments
Update and Optimize Enterprise Systems	All	\$75,000.00	3,300	Assumes 6 updates of MaxGalaxy, one update of Cityworks, TRAKiT, and One Solution per year for 3 years
Continuous Improvement	All	\$75,000.00	3,000	Placeholder of 1,000 per year for 3 years
Equipment Replacement	All	\$420,000.00	1,500	Total for 3 years
Computer Security	All	\$25,000.00	900	3 years labor (including 2 hours per year for each employee for cyber security training)- expenditures in 2019 - 2020 - requested during normal budget cycle as needed
IT Maturity	All	\$60,000.00	2,250	Total for 3 years
Financial andHR System Replacement	2018	\$760,000.00	7,500	Funding appropriated in 2017 and will be carried over in 2018
Telephone System Upgrade	2018	\$20,000.00	500	Headsets
Capital Project Management Assessment	2018	\$50,000.00	500	
Mobility to Support Staff Work and Processes	2018	\$25,000.00	240	Cellular boosters
Staff Training Program Development	2018	\$0.00	650	
Staff Technology Assessment and Licensing Review	2018	\$0.00	145	This may generate a supplemental request if staff technology needs are uncovered
Citywide Busiesss Intelligence Analysis	2018	\$10,000.00	300	
Customer Engagement	2018	\$10,000.00	200	
Capital Project Management Implementation	2019	\$225,000.00	1,000	
Implement Staff Training Program	2019	\$15,000.00	100	Set up only, not the hours staff will utilize the training
Citywide Business Intelligence Implementation	2019	\$25,000.00	200	IT Time only
Business Intelligence Standard Reports and Templates	2019	\$25,000.00	400	
Document/Records Management Assessment	2020	\$60,000.00	500	
Open Data	2020	\$70,000.00	250	
Citywise Performance Dashboard	2020	\$55,000.00	300	
Plan Totals with Financial/HR System		\$2,005,000.00	23,735	
Plan Totals without Financial/HR System Funding (already appropriated in 2017)		\$1,245,000.00	23,735	
<i>Internal PM costs included in cost</i>				