

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Presentation of the Information Technologies Strategic Technology Plan
DEPARTMENT:	Administrative Services Department/Information Technology Division
PRESENTED BY:	Katherine Moriarty, IT Manager
ACTION:	<input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution <input type="checkbox"/> Motion <input checked="" type="checkbox"/> Discussion <input type="checkbox"/> Public Hearing

PROBLEM/ISSUE STATEMENT:

Technology is becoming more ingrained in core City services, and is utilized to support operational improvements. First and foremost, technology must be stable and reliable, with a support structure that provides acceptable and timely levels of support. Beyond that, advances in technology are changing the way that the City operates, as well as the manner in which the City's residents expect to interact with government. It is therefore important that the City take both a long range and a tactical view regarding technology investments. A strategic technology plan for the City of Shoreline is crucial in order to align technical services, infrastructure, and citizen expectations to the operational needs of City government.

Given this, the Information Technology (IT) Division drafted the City of Shoreline Strategic Technology Plan (STP) in 2014. The STP addresses the issue that technology improvements cannot occur without both IT and operational staff resources, and includes a strategy for addressing the limitations in IT staffing. It also includes an approach to handle the significant workload relating to several major IT system enhancements included in the plan.

The STP was endorsed by the City Manager and distributed to the Council in September of last year, and was used in the development of the 2015 budget. The purpose of tonight's discussion is to provide a high level overview of the STP to outline the implications with respect to funding and staffing. Staff can also answer any questions that Council may have about the plan.

RESOURCE/FINANCIAL IMPACT:

Implementing the Strategic Technology Plan will require an investment of over \$2.5 million and more than 12,000 hours of staff time within the next three years. The costs below are estimates based on what is known at this point in time. As new technologies are introduced and new and cost-effective trends are adopted, these costs and staffing requirements may change. Costs will be reassessed on an annual basis.

STP Cost Summary

Year	Estimated Cost	Estimated Staff Hours
2014/2015	\$657,649	5,055
2016	\$835,000	3,665
2017	\$1,025,000	3,500
Total	\$2,517,649	12,220

RECOMMENDATION

No action is required as this item is for discussion purposes only. The 2015 portion of the plan is already included as part of the 2015 Budget. Ultimately, staff recommends that Council support the City of Shoreline Strategic Technology Plan in the 2016 and 2017 budget processes.

Approved By: City Manager **DT** City Attorney **MK**

INTRODUCTION

Information technology supports virtually all business processes in City government. The more technology advances and is embraced by our residents, the greater the importance of keeping that technology working reliably. The use of technology creates avenues that 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, and flexible to adapt to changing needs.

As with any core infrastructure, design, planning and maintenance must be done. This need prompted the development of a City of Shoreline Strategic Technology Plan (STP) that outlines the City's vision for technology as well as key initiatives that are needed to move us towards that vision.

This plan will guide budget requests for technology projects, and these requests will come to the Council for approval. Thus, it is important that the Council understand and support the plan, along with the principles that are applied to guide technology investments.

BACKGROUND

The STP was presented to the City's Leadership Team in August 2014, and endorsed by the City Manager and the Leadership Team in September 2014. The STP was subsequently provided to Council for their initial review. Tonight's discussion presents an overview of the plan and will provide time to respond to questions from Council.

An IT Advisory Board comprised of representatives from each City department was formed to work with and advise the IT Manager on the development of the STP, as well as form a governance board to provide oversight for technology projects. This team meets on a regular basis to discuss the current and future state of the City's technology and to represent the operational needs of the departments.

DISCUSSION

The STP outlines the current state of the City's Information Technology, provides vision for the future, and serves as the roadmap to achieve that future state. The following chart provides a high level depiction of the STP analysis.

Current State

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

- Aging Systems
- Constrained Resources
- Immature Work Processes
- Lack of connection to City business processes
- Uneven, fragmented IT Planning, services, skills, and implementation of technology
- BUT***, we are at the crossroads of a unique opportunity, with ...
- Staff who are dedicated
- Sound baseline and use of industry standard technology
- Senior leadership who support the use of technology

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

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 current state of the City's technology was assessed through a survey of 26 key staff members, an assessment by the IT Advisory Board, as well as the members of the IT Division itself. The City's technology is comprised of aging enterprise application systems, constrained resources, immature processes, and a lack of linkage between the technology provided by the IT staff and what is needed to support operational processes.

Our vision is to deliver technology that meets the needs of our customers (both internal staff and citizens), is current and proactively maintained, contributes to operational efficiency, and provides access to data that will support sound decision making.

In order to achieve the vision, improvements must be made in the areas of people, process and technology. Key initiatives to reach this vision are to enhance IT skills and develop more mature processes for delivering technology and the support of those technologies. The City also needs to upgrade an aging application portfolio.

Of primary concern to achieving the future vision is the constraint of IT staff. In the past five years, the staffing of the IT Division has been reduced by 17%, and certain professional contracts (specifically in the area of network support) have been discontinued. The current staffing of six leaves the City vulnerable, with single points of failure in a number of technology areas. There are few formal processes, and most of those are not documented. Partially as a result of this, cross training is behind where it needs to be. Challenges to cross training are exacerbated by the increase in skill

specialization that is needed to support increasingly complex technology. As systems become more complex we need to recognize that the City may not be able to cross train IT staff beyond rudimentary levels when key personnel are out of the office.

In addition, the need to devote resources to technology projects takes time away from performing critical day-to-day operations, many of which can only be completed by a particular staff member. The IT Advisory Board recommended that technology projects not already started be put on hold pending process improvements within the IT Division. A project entitled IT Maturity in the STP, and funded in the 2015 Budget, will include the development of solid processes that will improve the division's ability to support the technology improvements outlined in the STP.

The IT Advisory Board also developed the following Technology Investment Guiding Principles that will be considered when selecting technology for use in the City:

- **The Business Results Focus Principle** - We should focus on achieving business results that provide value to customers over process.
- **The Customer Experience Principle** – We should minimize the complexity of the customer experience.
- **The Minimize Cost and Complexity Principle** - Business Solutions should be adaptable with changing needs without significantly impacting cost or complexity for the organization.
- **The City-wide Perspective Principle** - The City's information and information technologies should be viewed from a City-wide perspective.
- **The Minimal Number of Technologies Principle** - IT Services should be designed to minimize the number of technologies to support.
- **The Records Management and Legal Requirements Principle** - Consideration should be given to records management and legal requirements before bringing in new technologies.

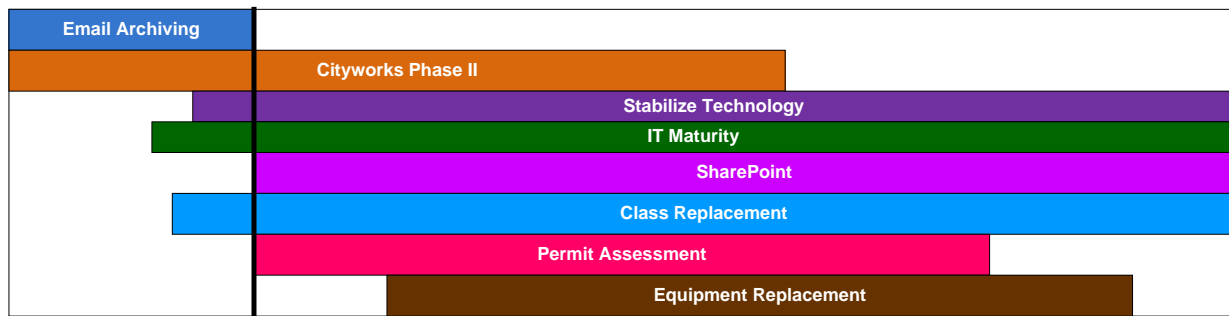
Schedule: There were several drivers that influenced the schedule for technology projects over the next three years:

1. Our current software for Parks and Recreation registration (Class) is discontinuing support of that product in 2016.
2. Our current Permit software is not meeting operational needs, and needs to be upgraded prior to the assumption of the wastewater utility.
3. The Ronald Wastewater District will be assumed by the City in 2017.
4. The need for utility billing.
5. The limited resources within IT (see discussion above).

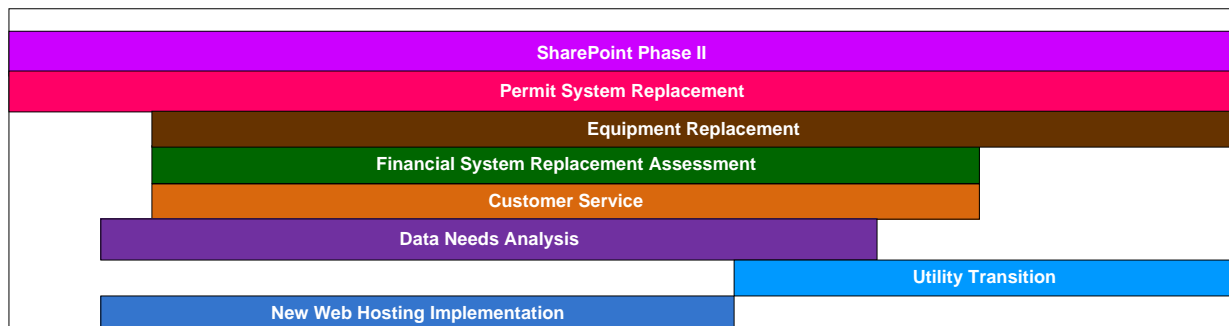
Based on these drivers, the following IT project schedule is proposed:

2014

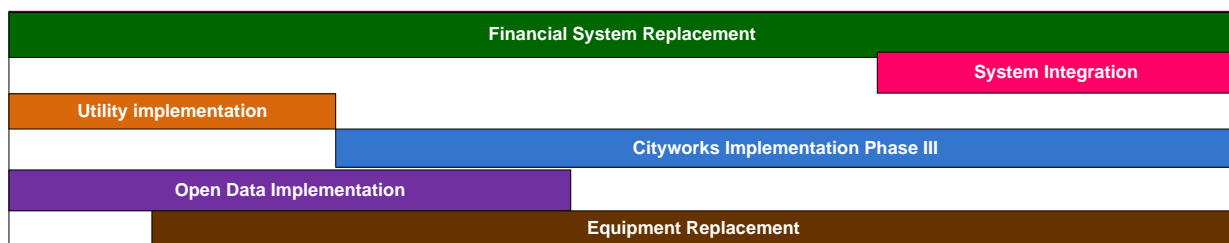
2015



2016



2017



The projects proposed for 2015 have been funded through the budget process.

For more information on a particular project (scope, cost, alignment to Council goals), please refer to the City of Shoreline Strategic Technology Plan (included as Attachment A).

RESOURCE/FINANCIAL IMPACT

The following is a high level view of the costs and resources needed to achieve the projects outlined in the City's STP. The cost is based on estimates based on current costs. The staff costs are hours that are required by current City staff (including the IT staff) to achieve the implementation of the selected solutions. There is no assumption of backfilling these staff hours with extra help or short term temporaries. The cost and effort for each phase will be assessed and revised on an annual basis during the budget process.

STP Cost Summary

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Total	\$2,517,649	12,220

RECOMMENDATION

No action is required as this item is for discussion purposes only. The 2015 portion of the plan is already included as part of the 2015 Budget. Ultimately, staff recommends that Council support the City of Shoreline Strategic Technology Plan in the 2016 and 2017 budget processes.

ATTACHMENTS

Attachment A: City of Shoreline Strategic Technology Plan

2014 - 2017

City of Shoreline Strategic Technology Plan



IT Division
City of Shoreline
2014 - 2017

Table of Contents

Executive Summary.....	1
Introduction	4
Business Goals and Environmental Scan.....	5
The City’s Journey	7
Current State	8
Vision for the Future	11
Technology Values	12
The Roadmap	13
Technology Trends Appropriate for Shoreline.....	16
Cloud	16
Software-As-A-Service	16
SharePoint.....	17
Geospatial Information System (GIS).....	17
Consumerization/Mobile Technology/eGovernment.....	18
Application Integration	18
Open Data	18
Tactical Initiatives – 2014 - 2017	19
2014/15 Initiatives	20
Email Archiving.....	20
Cityworks Phase II	21
Stabilize Technology.....	21
IT Maturity	22
SharePoint.....	23
Class Replacement	24
Permit System Assessment	25
Equipment Replacement.....	26
2016 Initiatives.....	26
SharePoint Phase II	27
Permit System Replacement.....	27
Equipment Replacement.....	28
Financial System Replacement Assessment	29

Customer Service	30
Data Needs Analysis.....	31
Utility Transition.....	32
New Web Hosting Implementation	33
2017 Initiatives.....	34
Financial System Replacement	34
System Integration.....	35
Utility Implementation.....	36
Cityworks Phase III	36
Open Data Implementation	37
Equipment Replacement.....	38
Costs.....	38
Conclusion.....	39
Appendix A - IT Advisory Board.....	40
Appendix A-1 – Technology Initiation.....	42
Appendix B - IT Satisfaction Scorecard	43
Appendix C - Shoreline IT Division – Current State Assessment – COBIT Maturity Levels	48
Appendix D - Shoreline IT Division – SWOT Assessment	49
<i>Appendix E - City of Shoreline Technology Investments.....</i>	<i>50</i>
Appendix F - GIS Gaps	53
Appendix G – Tactical Initiatives 2014 – 2017	58
2014 - 2015	58
Email Archiving.....	58
Cityworks Phase II	59
Stabilization of Existing Technology.....	60
IT Maturity	61
SharePoint.....	63
Class Replacement	65
Permit System Assessment	66
Equipment Replacement.....	68
2016 Initiatives.....	69
SharePoint Implementation Phase II	69

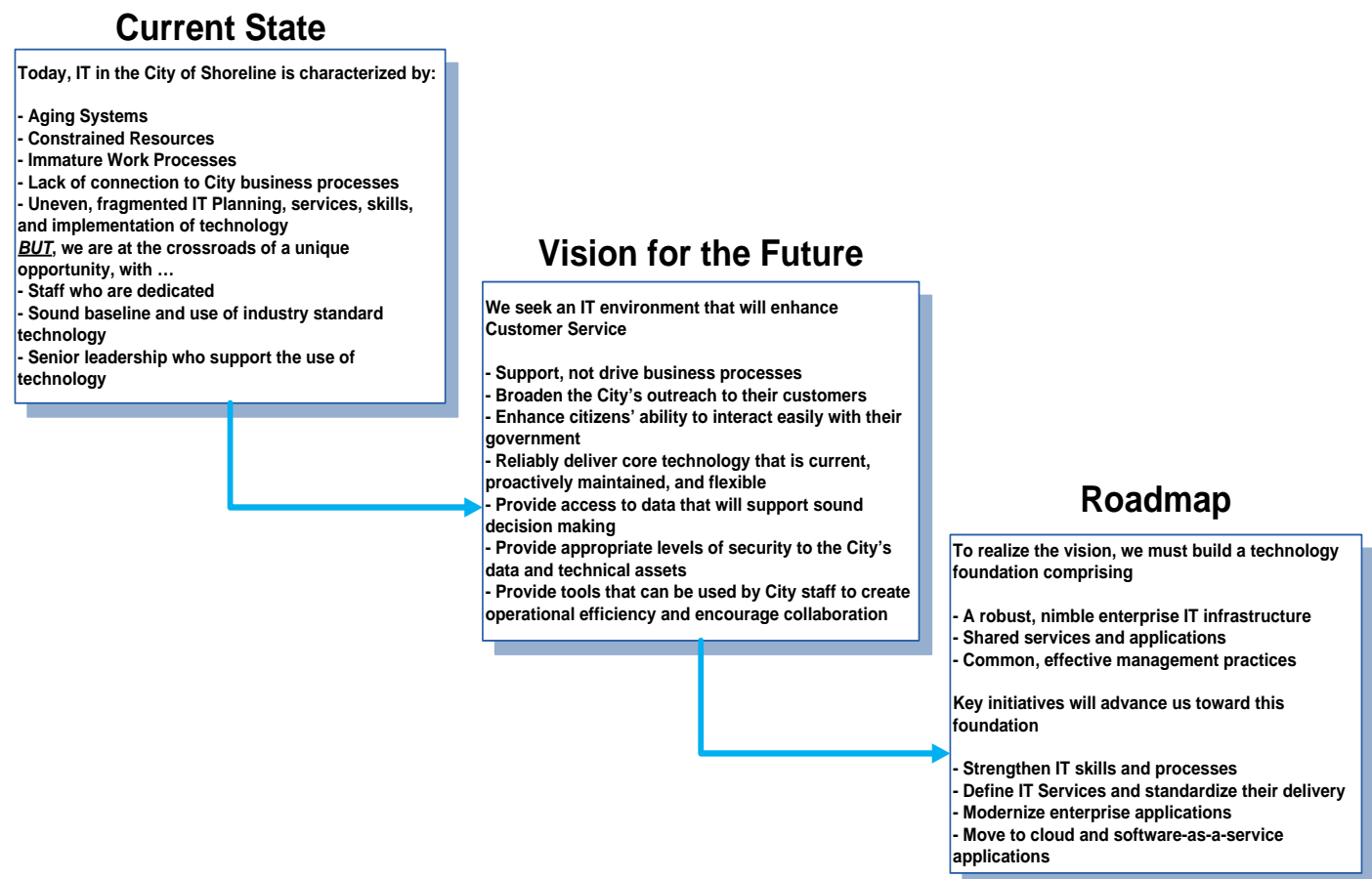
Permit System Replacement	70
Equipment Replacement.....	71
Financial System Replacement Assessment	72
Customer Service	74
Data Needs Analysis.....	75
Utility Transition Planning.....	76
New Web Hosting Implementation	77
2017 Initiatives.....	79
Financial System Replacement	79
System Integration	80
Utility Implementation.....	81
Cityworks Implementation Phase III	82
Open Data Implementation	83
Equipment Replacement.....	84
Appendix H – Technology Plan Cost Estimates	86

Executive Summary

A strategic technology plan for the City of Shoreline is crucial in order to align technical services and infrastructure to the operational needs of City government. This importance is only amplified as technology becomes more ingrained in core City services, and leveraged to support operational improvements. Technology must, first and foremost, be stable and reliable with a support structure that provides acceptable and timely levels of support. Beyond that, advances in technology are not only changing the way that the City operates, but the manner in which its residents interact with government.

As governments continue to experience constrained resources, it is more important than ever to provide 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 includes both transactional and transformative technologies that can be used by City staff to become more effective and efficient.

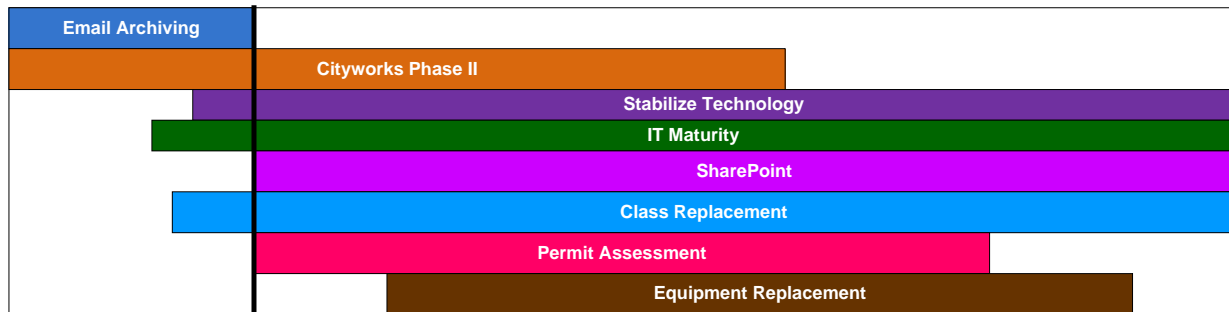
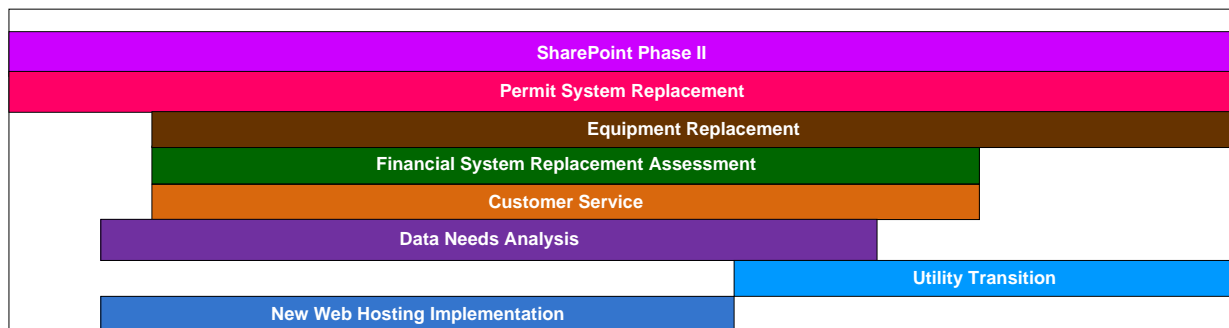
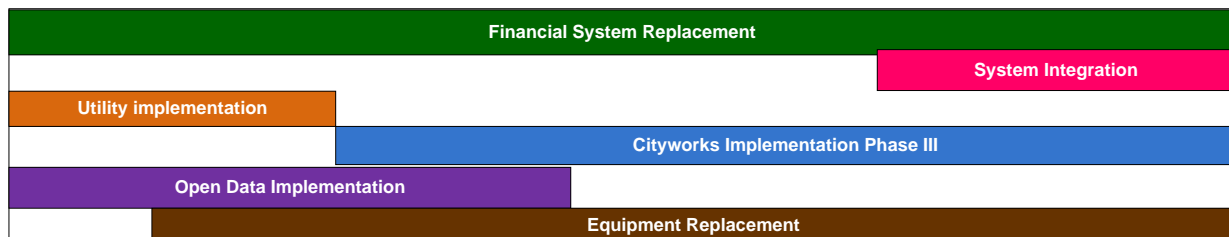
The following diagram represents the City's journey to a more functional and mature technical environment on which to build sound and responsive operational processes.



There are three emphasis areas of the plan

Objective	Outcomes/Benefits
People <ul style="list-style-type: none"> ➤ Strong IT Leadership ➤ Skilled IT staff ➤ City staff with the knowledge, interest and ability to innovate using technology 	<ul style="list-style-type: none"> ➤ Qualified staff to provide and support the technology, and City staff who can consume that technology ➤ Greater innovation leveraging the technology
Process <ul style="list-style-type: none"> ➤ Define services that IT provides and the service levels associated with the service ➤ Maturing the delivery of IT services <ul style="list-style-type: none"> ○ Standardized ○ Documented ○ Measured ○ Continually improved ➤ Strengthen IT Governance Structure ➤ Forge partnerships between IT and City operations 	<ul style="list-style-type: none"> ➤ Increased transparency of the IT Division so that it can partner with operations to support the technical needs of the City ➤ Consistent delivery of standard technology services to enable City staff to focus on providing service to residents ➤ Continually improving processes that allow IT to build capacity to better support the needs of City operations
Technology <ul style="list-style-type: none"> ➤ Stabilized ➤ Modernized ➤ Consolidated ➤ Flexible ➤ Integrated ➤ Protected ➤ Leverages useful emerging trends ➤ Focused on customer service and citizen interactions 	<ul style="list-style-type: none"> ➤ Improved access to City services ➤ Increased citizen participation in government ➤ Increased quality of service due to reduced downtime ➤ Fewer technical tools to support and for City staff to operate ➤ Supports business process improvements ➤ Breaks down barriers between government and their residents

Between 2014 and 2017, there are 22 IT projects totaling an estimated investment of \$2.5M and over 12,000 labor hours. The following illustrates the initiatives proposed.

2014**2015****2016****2017**

Introduction

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, and flexible to adapt to changing needs.

As with any core infrastructure, design, planning and maintenance must be done. This document contains the Strategic Technology Plan (STP) 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:

2013-2015 City Council Goals:

Goal 1: Strengthen Shoreline's economic base
Goal 2: Improve Shoreline's utility, transportation, and environmental infrastructure
Goal 3: Prepare for two Shoreline light rail stations
Goal 4: Enhance openness and opportunities for community engagement
Goal 5: Promote and enhance the City's safe community and neighborhood initiatives and programs.

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). However, there are some specific action steps that will require targeted technology initiatives in order to be fully achieved.

Goal 1 – Strengthen Shoreline's economic base

- **Action Step 2:** Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies
- **Action Step 4:** Implement marketing strategies to promote Shoreline as a progressive and desirable community to new residents, investors, and businesses

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

- **Action Step 4:** Develop a plan to merge the Ronald Wastewater District into City operations as outlined in the 2002 Interlocal Operating Agreement.
- **Action Step 6:** Begin implementation of Phase I of the Urban Forest Strategic Plan short-term recommendation.
- **Action Step 8:** Implement a comprehensive asset management system for the City's roads, streets, facilities and park systems.

Goal 3 – Prepare for two Shoreline light rail stations

- **Action Step 1:** Engage the community in an education and outreach plan to help residents and businesses prepare for the addition of new light rail stations and service.

Goal 4 – Enhance openness and opportunities for community engagement

- **Action Step 1:** Communicate and provide opportunities for public input on key policies and initiatives, including Vision 2029, light rail station planning, safe community initiatives, the Point Wells Transportation Corridor Study, and other City projects.
- **Action step 3:** Continue to provide documents online and improve the ease of use of the City's website.
- **Action Step 4:** Advance public engagement with the implementation of the City's e311 system, online communication and survey tools and social media platforms.

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

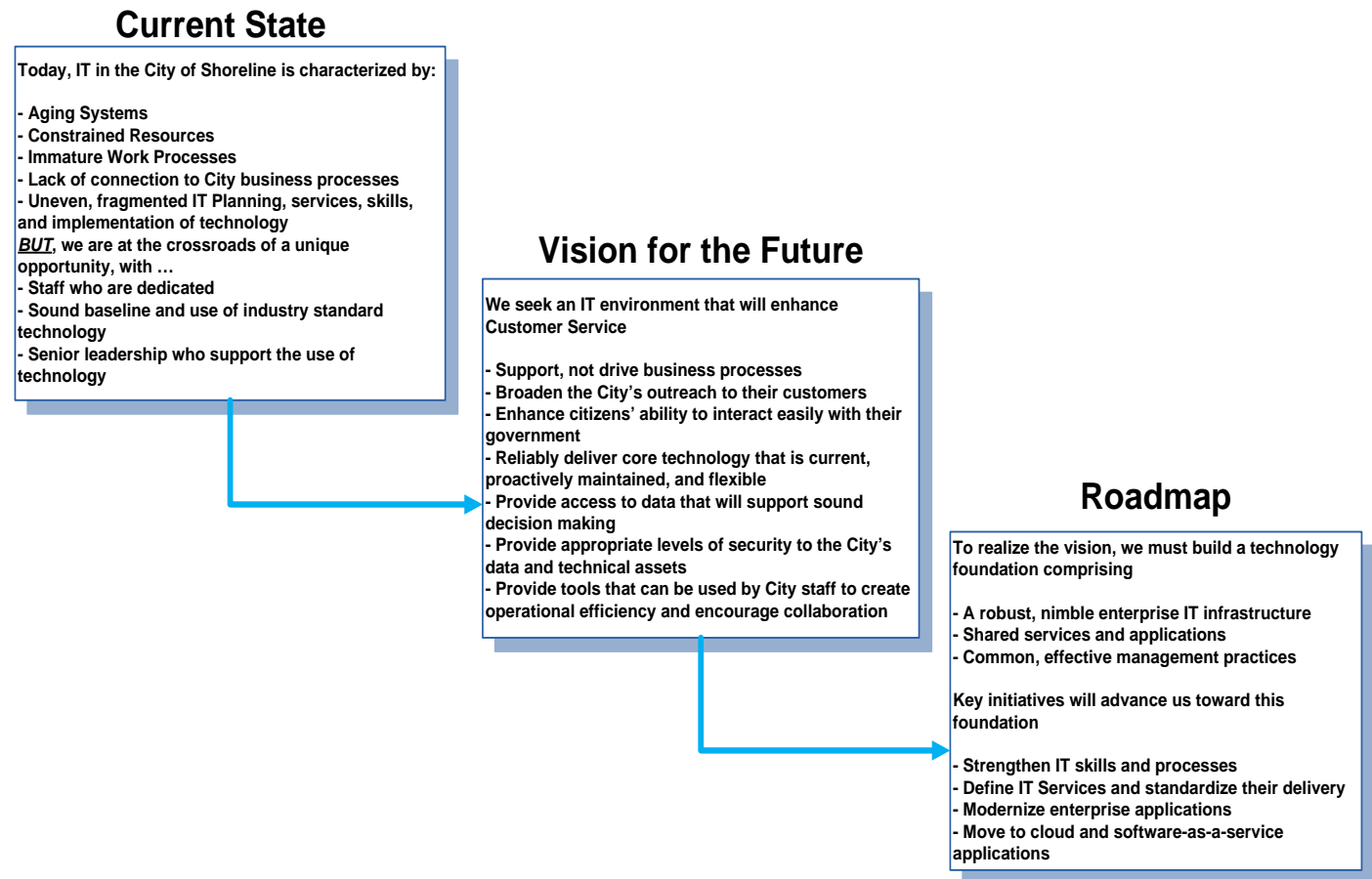
- **Action Step 1:** Utilize the City's cross-department safe community team to resolve issues and develop proactive programs related to traffic, code enforcement, and crime prevention efforts

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:

- Key Initiatives
 - The assumption of Ronald Wastewater in 2017
 - The purchase of water assets from Seattle Public Utilities that serve a portion of Shoreline in 2020
 - Point Wells Development
 - The creation of two light rail stations in 2023
 - Development of Aurora Square as a place for people/communication/event center
 - City Hall Build Out to house Police
- Financial
 - The 10-year sustainability model to balance future costs and revenues
 - Limited revenue sources
 - The end of Proposition No. 1, thus reducing for essential services in 2016
 - 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
 - Strengthen policies and procedures within the City
 - Current organization siloed – need to create greater synergies between business units and coordinate business processes
- 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 depiction 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:

- Aging Systems
- Constrained Resources
- Immature Work Processes
- Lack of connection to City business processes
- Uneven, fragmented IT Planning, services, skills, and implementation of technology

BUT, we are at the crossroads of a unique opportunity, with ...

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

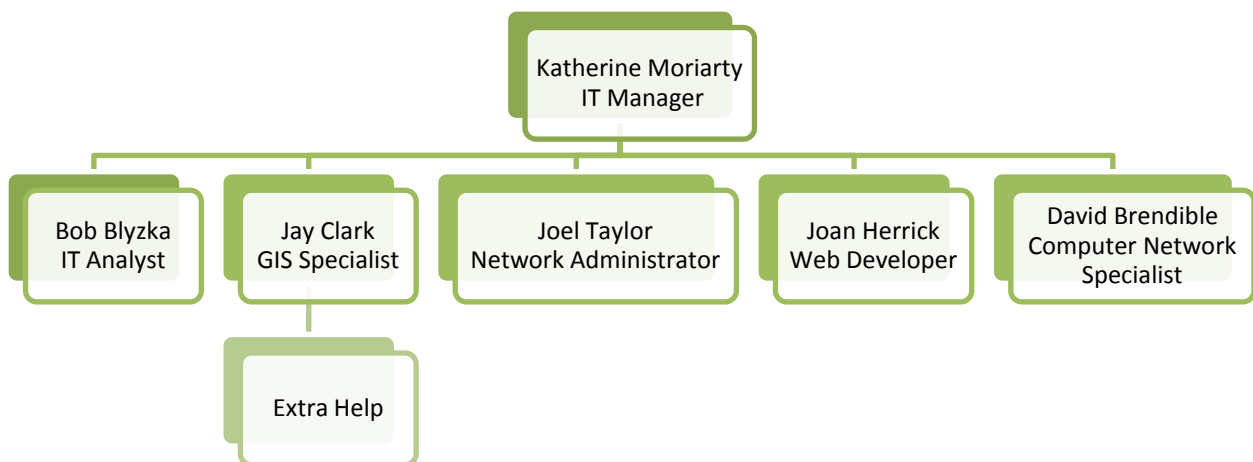
The City commissioned a report on the state of the Information Technology Division that was completed February 2013. That report identified a number of issues, including:

1. Inadequate staffing and organizational structure
 - a. Staff fragmented under three different managers and between two departments
 - b. Lack of collaboration
2. Poor delivery of services to City staff
3. Lack of appropriate planning for key enterprise initiatives

As a result of this study, a search was initiated for a new IT Manager, and the technology staff was consolidated.

The following organizational chart represents the staffing of the IT Division of the Administrative Services Department:

City of Shoreline Information Technology Division



The new IT Manager arrived in July 2013. The following observations were noted by the IT Manager:

	Strengths	Opportunities/Weaknesses
<u>Technology</u>	<ul style="list-style-type: none"> • Built on industry standards • Equipment Replacement Plan 	<ul style="list-style-type: none"> • Align technology with business goals and objectives • Ascertain the soundness of the implementation of core technologies • Modernize enterprise applications • Reduce redundancy (both applications and vendors) • Develop a full inventory of all hardware and software • Establish relationships with technology vendors
<u>People</u>	<ul style="list-style-type: none"> • Dedicated IT staff • Highly skilled GIS staff • Desire to improve processes • Existence of a few 'power users' 	<ul style="list-style-type: none"> • Insufficient IT staff to support current environment • Misalignment between current IT skills and needs • Cross training within IT • Uneven workload within IT • Collaboration with and trust in each other within IT • Raise the level of confidence of City staff in IT to provide working technology • Leverage 'power users' to support City staff who have difficulty adapting to new technology • Innovative technical training opportunities for City staff
<u>Process</u>	<ul style="list-style-type: none"> • IT Service Desk 	<ul style="list-style-type: none"> • Establishment of an IT Governance process • Raise the level of IT Maturity <ul style="list-style-type: none"> ○ Identify standard processes ○ Document the processes ○ Implement the processes ○ Monitor effectiveness ○ Improve the processes • Procure tools to measure work, assess costs, and guide improvements • Develop better mechanisms to guide proactive maintenance and replacement strategy for technology

The IT Manager formed an Information Technology Advisory Board (ITAB). This body was formed to work with 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 A for an outline of the role of the ITAB.

Key City staff was polled for feedback on the effectiveness of IT staff and their satisfaction with the technology that was provided to the staff and residents of Shoreline. 43 people were asked to complete the survey. 60% of those polled responded.



The results show that there is room for improvement in both the delivery of technology and the value the delivered technology brings to the City. This survey, conducted by Info-Tech Research Group, assesses scores of less than 80% as areas of concern. The importance versus the value of core services was surveyed. The following 4 services had the largest gap between performance and importance:

1. Business Applications
2. Service Desk
3. Network and Communications Infrastructure
4. Data Quality

These areas should be an initial emphasis for improvement.

Lack of staffing and the resulting lack of capacity for any new initiatives were predominant themes. All City departments believe that IT staffing is at a moderately to very constrained level to deliver normal services, much less to provide support for new initiatives.

Key areas must be addressed:

1. Staff skill – is it appropriate and are there gaps?
2. Staffing level – do we have enough people to support our environment?
3. Technology – are we providing the right tools to support the City?
4. Customer Service – what do we need to do to gain credibility with City staff?

Summary survey responses may be found in Appendix B.

A self assessment of the City's current IT processes was performed against the Control Objectives for Information and Related Technology (COBIT) standards. COBIT is an industry-standard framework for governance and management of enterprise IT. It provides globally accepted principles, practices, analytical tools and models to help increase trust in, and value from, information systems. There are 37 areas measured in COBIT, and ratings are based on the maturity of organizational processes and practices. The City's ratings may be found in Appendix C.

A Strengths-Weaknesses-Opportunities-Threats (SWOT) chart is included in Appendix D. The SWOT was performed by both the ITAB and the IT Staff, and the appendix consolidates those exercises.

Vision for the Future

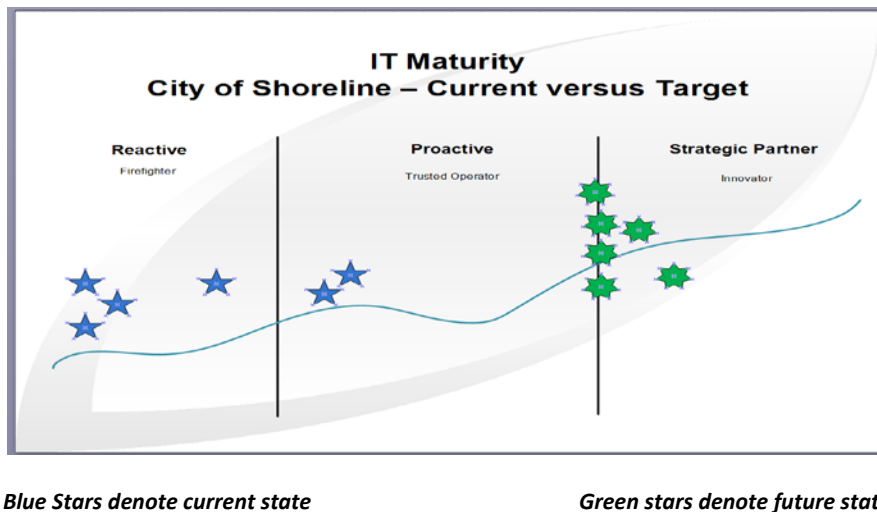
We seek an IT environment that will enhance Customer Service

- 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:

- 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. As the diagram below shows, The City of Shoreline currently lags behind current technology trends. The ITAB, when polled on this topic, would like to see IT proactively support the installed technology and to become more mature in its ability to introduce products and services that do not lag significantly behind industry standards.



Technology Values

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

1. Enterprise Architecture – (See Appendix D 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
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

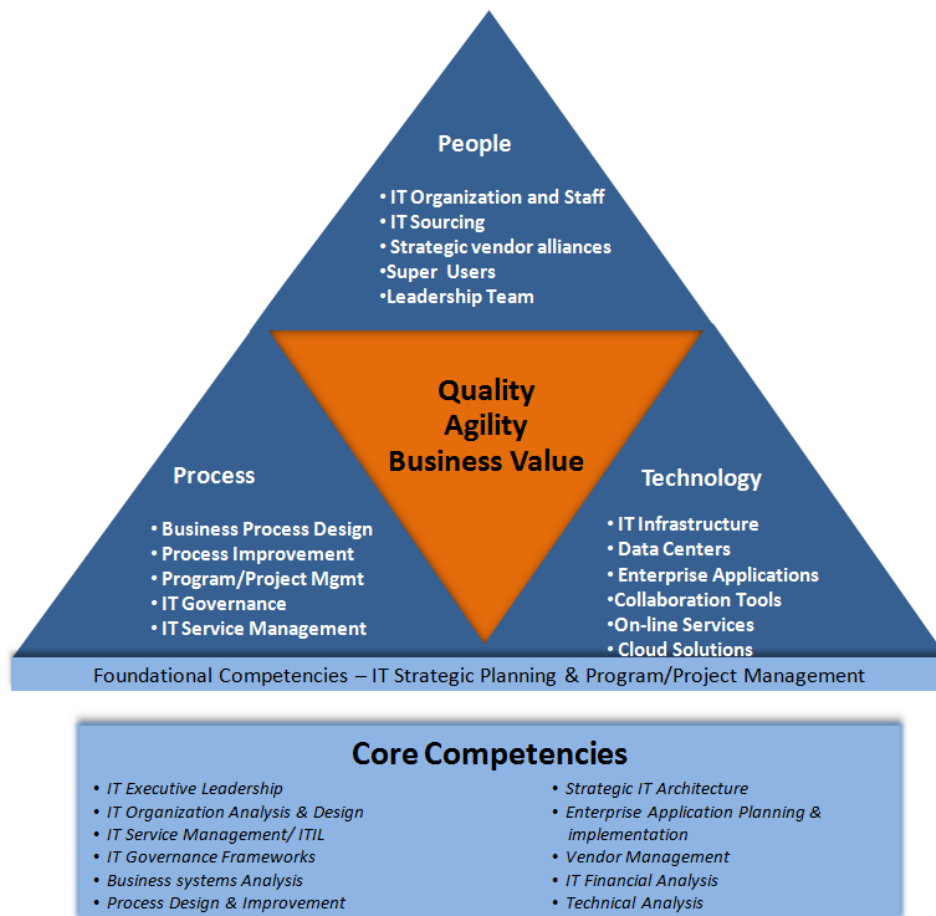
- Strengthen IT skills and processes
- Define IT Services and standardize their delivery
- Modernize enterprise applications
- Move to cloud and software-as-a-service applications

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 technology to City staff.
- Technology – The appropriate elements for the infrastructure (e.g. network, servers, monitoring tools), and the applications and tools that operate on those foundational pieces (email, productivity tools, applications). This includes keeping current with modern trends that best meet the operational requirements of the City’s staff, products, and services.

The following diagram represents this integration. This diagram includes foundational requirements that are needed for any technology organization as well as some specific elements for the City of Shoreline. Each component of this pyramid must be assessed and improved in order to deliver on the City’s vision for technology.

Integrating People, Process and Technology



In order to improve the technology, we must focus on the ability to define and deliver services in a more effective manner with technology that best satisfies the operational needs of the City. The basic tenet of IT maturity will be employed.

IT Service Improvements (Maturity) will increase the value of IT services to customers by maturing our service delivery processes and improving our services to better anticipate and match customer needs and expectations. As IT operates at an increasingly mature level, technology will operate at a more consistent and reliable level due to proactive maintenance, monitoring, and systematic replacement.

All three components (People/Process/Technology) must be addressed in order to deliver on the City's technology vision.

- People
 - IT Leadership – will continually:
 - Evaluate the skills needed to support our existing environment and adapt to emerging standards
 - Provide training opportunities to gain those skills

- Hold staff accountable for identifying their skill gaps and develop an approach to close those gaps
 - Fill gaps in skills with contract help when no other alternative is available
 - Strengthen a culture of collaboration
 - Work with Human Resources to include basic computer skills as a component of every benefitted job description
 - Continue to pursue excellence in customer service
- IT Staff -- will continually:
 - Keep their skills updated to technology that is used in the City
 - Keep current with technology advances in their area of discipline
 - Hold themselves accountable to deliver stable and reliable technology
 - Identify tools and resources that will assist City staff in using technology
 - Provide excellent customer service to those who use the City's technology
- City Staff –will continually:
 - Use the tools and resources provided by IT to learn the City's technology
 - Look for areas where technology can be used to improve processes
 - Leverage standard productivity tools (e.g. Office, Portal, SharePoint, etc.) to improve business processes
- Process – identified, defined and measured
 - Enhance IT Service Maturity
 - Identify processes
 - Standardize processes
 - Document processes
 - Measure progress
 - Build capacity (absorb the support of additional technology without adding staff)
 - Services Focus
 - Define in business terms what IT provides
 - Define the service levels of the services IT provides
 - Provide a mature and well defined IT Governance structure
 - Forge IT partnership with City operations
- Technology – we will continually:
 - Update and modernize technology as appropriate
 - 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

Technology Trends Appropriate for Shoreline

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.

Cloud

The City makes a substantial investment in both hardware and software to run applications, store data, and backup systems and data. We do this on a relatively small scale, and in order to be ready for a disaster or unexpected outage in our data center, we have purchased additional hardware and software that is located at the Police building.

Companies such as Amazon built huge data centers, and found that most of the capacity that they built was not being used by their business units. These companies began 'renting' their excess capacity to smaller organizations. This is a win-win situation – the service provider can leverage their excess capacity (which they can build cheaper because of the economies of scale), and smaller organizations can 'rent' that extra capacity cheaper than they can build it themselves. And instead of purchasing redundant hardware for disaster recovery, the City can establish a parallel environment that can be immediately activated in the event of a disaster. The Cloud will also allow the City to quickly expand and contract additional computing resources as needed. This will be helpful to respond to disaster recovery events that may happen. The City will not need to pay for the services when not needed, but can quickly establish a recovery environment if necessary.

The City should be exploring what makes sense and can be easily and economically moved to the Cloud. A strategy and roadmap will be built in 2015.

Software-As-A-Service

The architecture of applications has changed over the years. Much of the application software that is installed was housed within an organization in its data center. There is an up-front cost for hardware, software, and implementation services. The organization is also responsible for keeping the system maintained and updated.

As network capacity has improved and more information is stored and available from the internet (e.g. Cloud), vendors have begun offering application software that is installed and operates in the Cloud. Instead of purchasing the software, organizations can simply pay an annual fee for using that software, eliminating the need for the up-front investment and the maintenance of the software. This type of software is called Software-as-a-Service (SaaS)

There are some constraints to this technology. While SaaS is highly configurable, it may not be possible to configure it to support every operational need. Care must be taken to ensure that SaaS solutions satisfy all operational, legal and regulatory requirements for the operation it supports.

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

SharePoint

SharePoint is a Microsoft product that provides a number of features and functions that are needed by Shoreline:

- Replacement of the Shoreline Portal for collaboration and information sharing
- Document Management
- Records Management
- Basic workflow (e.g. routing of information such as purchase requests for approval)
- Cloud-based document storage (available from any device that has an internet connection)
- Accessible to individuals outside of the Shoreline network (e.g. to retrieve the results of a public disclosure request) with a City-issued account

Implemented correctly, SharePoint can be a transformative technology for Shoreline. There is insufficient IT staff to provide the creation of tools that can provide efficiencies for operational tasks. SharePoint is a tool that anyone can use – creating a team room for collaboration, creating simple workflow so that documents can be moved electronically, creating a meeting environment where tasks can be assigned to individuals and those tasks can be automatically updated to Outlook, create internal knowledge bases – the possibilities are endless.

While document and records management features in SharePoint are not as robust as other software products established for those purposes, the City currently has no tools to help address the legal requirements for electronic records retention (outside of email). SharePoint will provide the ability to create a structure and manage the documents within that structure.

SharePoint can be implemented either within the City, or as a SaaS solution. It is recommended that the SaaS environment be adopted in order to avoid the large capital investment that installation in the City's data center would require, as well as flexible access from anywhere there is an internet connection.

Geospatial Information System (GIS)

A geospatial information system (GIS) is a computer system designed to capture, store, manipulate, analyze, manage and present all types of geographical data. This technology is woven into the fabric the City's business as well as of everyday life. When someone searches for the nearest department store on the internet, a GIS-based map appears with red teardrops at the locations of branches of that department store.

While not a new technology, the City is only scratching the surface of GIS use. Large subsets of government records are maps showing where our City infrastructure, property, regulatory boundaries, businesses, community events, park facilities and emergency response resources are located. The City is investing in a computerized maintenance management system that will represent the City's assets on a map. Technicians can see the locations of all the City's surface water catch basins and plan their work in the most efficient manner. An assessment has been made of the opportunities for use of GIS in Shoreline, and the business value that such use could achieve. This is included as Appendix F.

One of the true powers of GIS is in the area of operational analysis. Imagine seeing a map of Shoreline with the locations of permits requested in the last 6 months. It would be easy to see at a glance where development was taking place. A report by address would be more difficult to analyze.

There are five levels of GIS Maturity, from ad hoc to highly optimized. Unfortunately, the City ranks at the lowest of the five maturity levels in GIS. We have good initiatives that are moving us toward greater maturity (use of a consolidated enterprise database for all City GIS data is one example). However, the City is still at the lowest maturity level in regards to the quality of core GIS data layers. Property, critical areas (including wetlands), and City infrastructure mapping are currently not at acceptable levels.

The City is fortunate to have a highly skilled GIS Specialist on the IT staff. In order to effectively leverage GIS, we will need more skilled resources in this area – both in IT and super users in the departments. The City has recognized this need and approved the hiring of an Engineering Technician in Public Works to maintain the GIS inventory in the City’s new Computerized Maintenance Management System.

Consumerization/Mobile Technology/eGovernment

The technology available to consumers is becoming more powerful. Consumers are also expecting more opportunities to interact with their government through the use of smart phones and tablets, and on-line through our website. The availability of mobile apps and on-line transactions must be included in the City’s requirements for every enterprise application that is modernized. Whether it is to report a problem with an asset, register for a class at Spartan Gym, or apply for a permit on-line, our residents are going to demand that their interactions with government be available electronically.

This growing aspect of technology must be incorporated into every replacement of an application and into every existing program that reaches out to our residents.

Application Integration

The City’s current application systems do not integrate. For example, the registration system for Recreation does not integrate with the financial system, so revenue is manually posted. The same is true for the Permitting system. In order to break down organizational silos and to enhance effectiveness and efficiency within business processes, the City needs to integrate systems and data to the greatest degree possible. The use of integration components such as Application Programming Interfaces (APIs) and Web Services will allow the City to reduce errors and redundant work. This should be considered as legacy systems are replaced.

Open Data

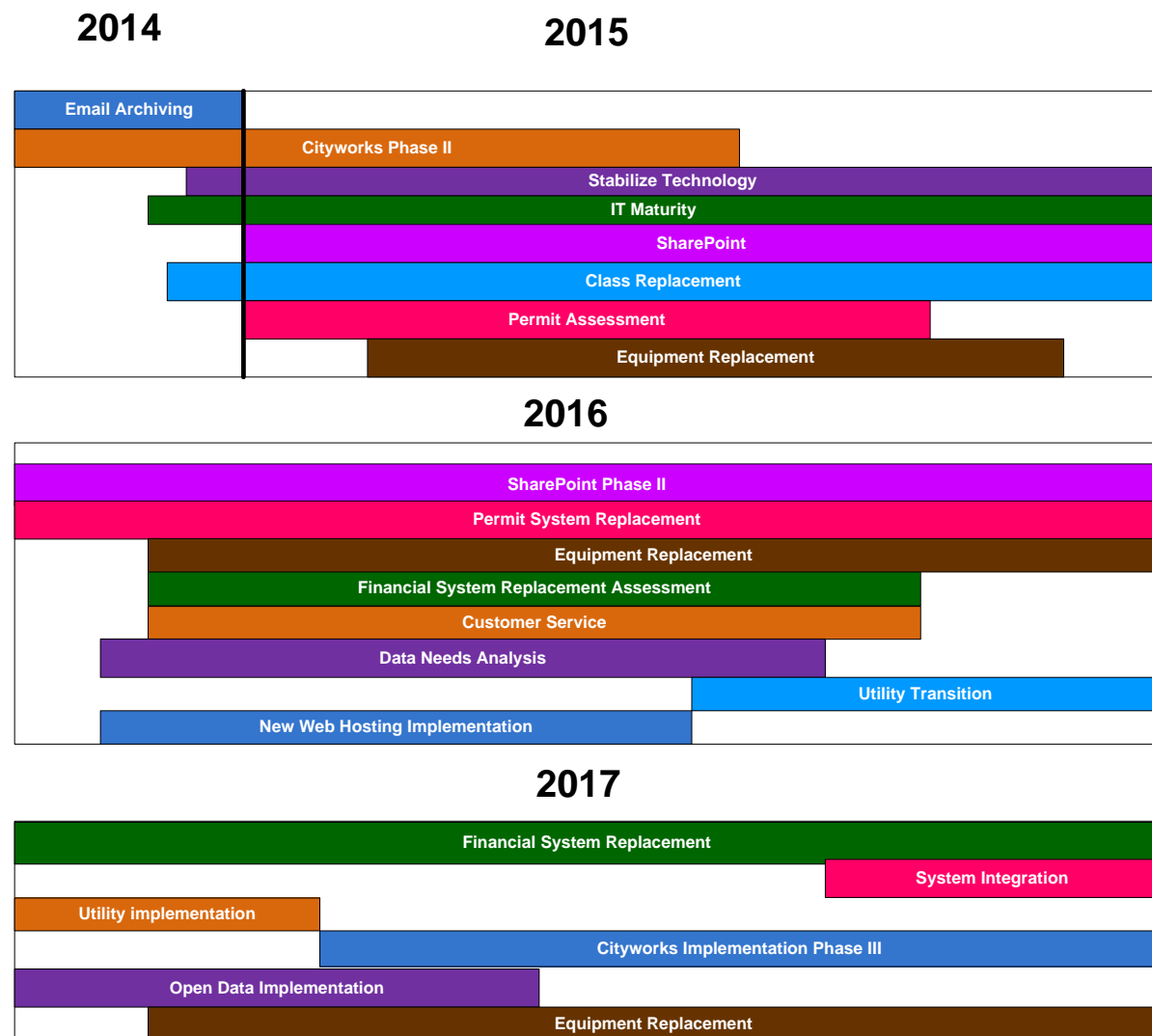
Residents are demanding more transparency in their government. And governments are more interested than ever in engaging their residents in the decision making of government. The Shoreline City Council has made community engagement a cornerstone goal - “Enhance openness and opportunities for community engagement”. One initiative that is being used by the federal and many state and local governments is to make open machine-readable data available to anyone who wants to consume that data. Such availability will create greater transparency of government operations by providing raw data (such as budget, asset management, and permit information). There are several local governments (e.g. Redmond, Seattle, King County) that have already started to provide this.

Seattle's site is located at <https://data.seattle.gov/> . This same open data can be made available in lieu of public disclosure requests, and can even be used to support internal decision making.

Tactical Initiatives – 2014 - 2017

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. Detailed descriptions of each project are included in Appendix G.

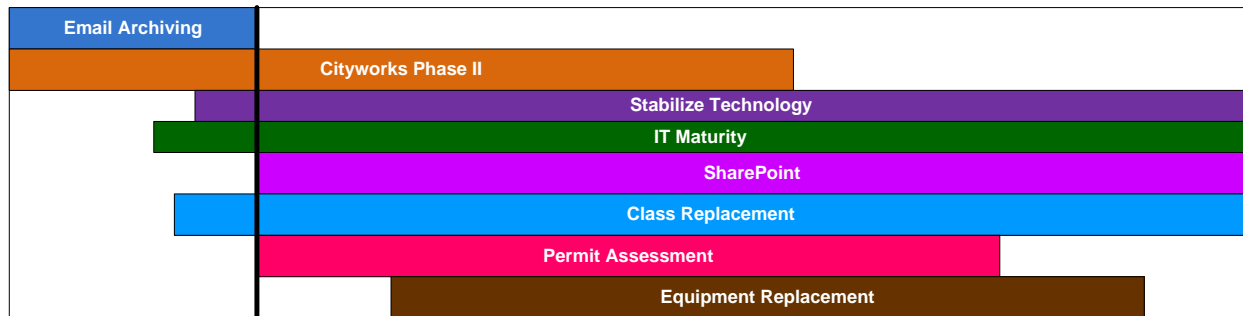
The greatest specificity is for the 2014 and 2015 projects. 2016 and 2017 projects will be detailed more fully during the budget process for each particular year. A reassessment of the plan will occur annually, and the impacts of projects that are not funded or completed will guide a revision to the plan.



2014/15 Initiatives

2014

2015



Email Archiving



The City currently makes a copy of every email sent to and received from the City's email system. The system that captures these emails can no longer handle the volume, and does not meet the need of the Clerk's Office to search and produce these records for public disclosure.

Cost: \$50,000 (funded in 2014). Staff involvement is estimated at 175 hours.

Alignment

IT Vision

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

Council Goals

- This technology is provided to comply with the legal requirement to respond to public disclosure requests.

Cityworks Phase II



This project continues the City’s implementation of a Computerized Maintenance Management System (CMMS) to capture and track the City’s assets for streets, traffic, fleet and facilities. This system is already in place for Surface Water assets.

Cost: \$236,899. Staff hours are estimated at 1,000 hours.

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

- Goal 2, Action Step 8 – Implement a comprehensive asset management system for the City’s roads, streets, facilities and park systems

Stabilize Technology



2014 introduced a number of technical components that have caused the technical environment to become unstable. These include Windows 7, the move to a new computer hardware platform (64-bit), replacing key components of our technical environment to comply with WCIA audit requirements, and the introduction of new copier devices. This project will assess and correct the underlying issues in order to provide a stable foundation to the City's technology.

Cost: \$70,000 for Network Consulting. Other activities are anticipated to be addressed with operational funds within the IT Budget. Primary cost is staff resources.

Alignment

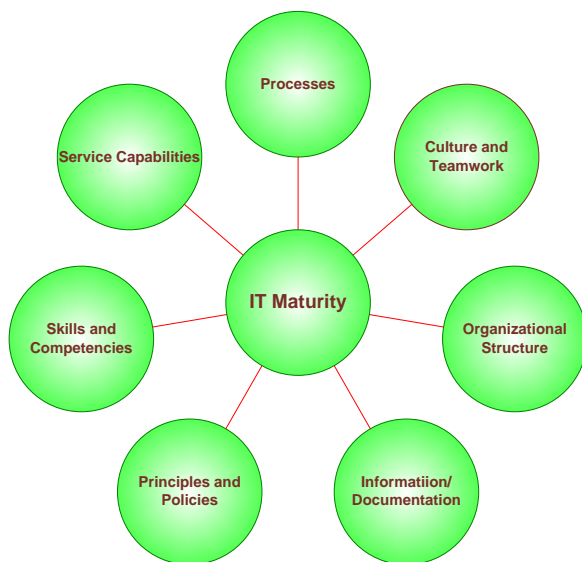
IT Vision

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

Council Goals

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

IT Maturity



Current alignment of staff skills and lack of processes impedes the delivery of stable and reliable technology to City staff. IT Division must focus on their business of delivering stable and reliable technology effectively and efficiently to City staff. Without this effort, the IT Division is not only unable to efficiently support any further the initiatives that are critical to Council goals. IT is also unable to support the technology that currently exists in the City. This is the most IT critical project in 2015.

Cost: \$7,000 (operational funds from 2014 budget for a new work management system) and an estimated 1,800 hours (500 from the IT Manager) from the IT Staff.

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

SharePoint



The current City Portal has reached end-of-life. It will not support browser versions later than IE9 and many of the City's current applications do not function efficiently on this browser. The situation will only get worse as our applications will no longer support IE9. The City has other gaps in technology tools that need to be addressed. These include Records Management, Document Management, collaboration tools for staff, and a tool that line staff can use to create efficiencies in operational processes. SharePoint provides a solution to these needs, and it will integrate well with our other Microsoft-centric tools.

Cost: \$68,750 and an estimated 900 hours of staff effort (700 from the current Web Developer)

Alignment

IT Vision

- Technology broadens the City's outreach to their customers
- 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 that enables City staff to be more efficient and encourage 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 that will further progress towards all Council goals.

Class Replacement



The computer system used by the Recreation division of Parks has reached end-of-life and must be replaced. The vendor, ActiveNet, has already discontinued the sale of the product, and will no longer support it after 2017.

Cost: \$65,000 (contingent on a SaaS solution) and 500 hours of staff time.

Alignment

IT Vision

- Technology supports business processes
- Technology broadens the City's outreach to their customers
- 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:

- Goal 1, Action Step 4 – Implement marketing strategies to promote Shoreline as a progressive and desirable community to new residents, investors, and businesses

Permit System Assessment



The current version of the City's permitting system, Hansen, is old and is currently the only application that remains on an Oracle database platform, which is costly to support in both license maintenance and outside vendor support. The current system does not offer on-line permit applications for residents and developers, nor the on-line review of permits. With the impending assumption of wastewater utilities, it is important to replace this system. Before a vendor selection can be made, it is strongly recommended that a formal assessment project be initiated and completed. This will ensure that not only are current needs identified, but that the needs of a permit system used for utility permits are identified and included in the requirements. Current processes should also be reviewed and improvements identified in order to ensure that the system requirements for a new system encompass those revised improvements. This project will lead to the selection of a system that will be installed in 2016.

Cost: \$30,000 plus 280 hours of staff time

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

- Goal 1, Action Step 2 – Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies

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.

Cost: \$130,000 plus 200 hours of staff time

Alignment

IT Vision

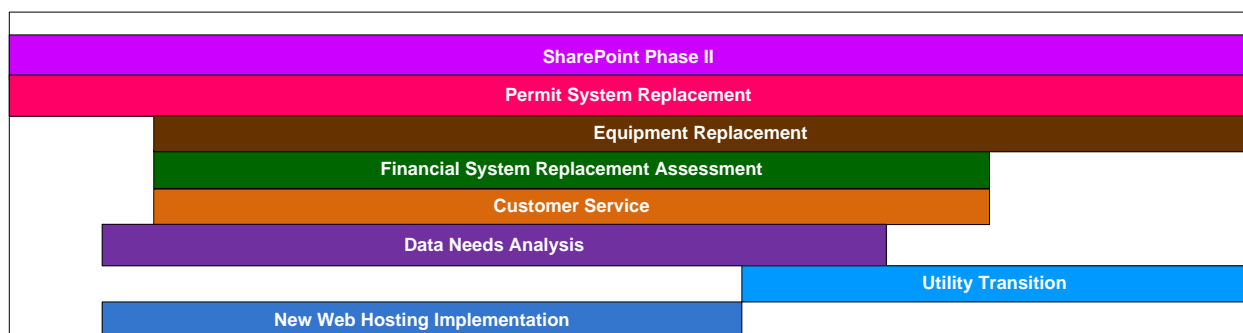
- Technology supports business processes
- Technology is secure

Council Goals

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

2016 Initiatives

2016



SharePoint Phase II



This is a continuation of the implementation of SharePoint for the City. During Phase II, SharePoint will be fully rolled out to all City employees, and further training will be done. Key personnel will be trained in the more sophisticated capabilities of the product and will ultimately be able to use it to create efficiencies in operational processes.

Cost: \$20,000 and an estimated 700 hours of staff effort

Alignment

IT Vision

- Technology broadens the City's outreach to their customers
- 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 that enables City staff to be more efficient and encourage 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 that will further progress towards all Council goals.

Permit System Replacement



The selection of a replacement for the Hansen system that is used for Permitting will occur in 2015. The reasons for replacement are the aging technology of the current system, as well as the need to prepare for utility permitting. This is the implementation of the replacement system selected in 2015.

Cost: \$450,000 and an estimated 1,250 hours of staff effort

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

- Goal 1, Action Step 2 – Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies

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.

Cost: \$130,000 plus 200 hours of staff time

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

Financial System Replacement Assessment



The City's current financial system is aging. It is currently built on legacy technology, and vendor response to system issues has been slow. With the introduction of utilities and the need to provide utility billing, and the need to integrate other City systems (recreation, permit, and asset management) to our financial system, it is necessary to either upgrade our current system or migrate to a new system. This project will guide the City through system requirements and vendor selection.

Cost: \$75,000 plus 200 hours of staff time. The actual software acquisition/upgrade is planned for 2017.

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

- Goal 1, Action Step 2: Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies
- Goal 2, Action Step 4: Develop a plan to merge the Ronald Wastewater district into City operations as outlined in the 2002 Interlocal Operating Agreement.

Customer Service



The City Council has a stated action step to implement a customer portal for access to City services. The customer service function is currently tracked in the City's permit system (Hansen). Requirements for customer service will be included in those for the Permit system. If the new Permit system does not provide an appropriate solution to customer service, this project will be needed.

Cost: \$50,000 (staff time cannot be estimated at this time)

Alignment

IT Vision

- Technology supports business processes
- Technology broadens the City's outreach to their customers
- Technology is current, proactively maintained, and flexible to the changing needs of the City

Council Goals – will support internal processes to support:

- Goal 1, Action Step 4 – Implement marketing strategies to promote Shoreline as a progressive and desirable community to new residents, investors, and businesses
- Goal 4, Action Step 1 – Communicate and provide opportunities for public input on key policies and initiatives, including Vision 2029, light rail station planning, safe community initiatives, the Point Wells Transportation Corridor Study, and other City projects.
- Goal 4, Action Step 4 – Advance public engagement with the implementation of the City's e311 system, online communication and survey tools and social media platforms
- Goal 5, Action Step 1 – Utilize the City's cross-department safe community team to resolve issues and develop proactive programs related to traffic, code enforcement, and crime prevention efforts

Data Needs Analysis



This project assesses the need for data for internal access and analysis and the provision of ‘open data’ for our residents. While our production systems contain data, it is sometimes difficult to access. The City also has little ability to consolidate data from diverse enterprise systems in order to provide high level business intelligence for the City Manager and Council. There is also an emerging trend to provide data to our residents in a form that they can analyze. “Open data’ will be a component of this assessment project.

Cost: \$50,000 (staff time cannot be estimated at this time)

Alignment

IT Vision

- Technology supports business processes
- Technology is secure
- Technology broadens the City’s outreach to their customers
- 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:

- Goal 1, Action Step 4 – Implement marketing strategies to promote Shoreline as a progressive and desirable community to new residents, investors, and businesses
- Goal 3, Action Step 1 – Engage the community in an education and outreach plan to help residents and businesses prepare for the addition of new light rail stations and service
- Goal 4, Action Step 1 – Communicate and provide opportunities for public input on key policies and initiatives, including Vision 2029, light rail station planning, safe community initiatives, the Point Wells Transportation Corridor Study, and other City projects.
- Goal 4, Action Step 4 – Advance public engagement with the implementation of the City's e311 system, online communication and survey tools and social media platforms
- Goal 5, Action Step 1 – Utilize the City's cross-department safe community team to resolve issues and develop proactive programs related to traffic, code enforcement, and crime prevention efforts

Utility Transition

The City anticipates the assumption of Ronald Wastewater in 2017. The technology that is currently used by Ronald will be assumed by the City. This project assesses that technology and what will be needed to assume it. Utility billing needs and strategy will be assessed at this time.

Cost: Cost and effort are unknown at this time

Alignment**IT Vision**

- Technology supports business processes
- Technology is secure
- Technology broadens the City's outreach to their customers
- 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:

- Goal 2, Action Step 4 – Develop a plan to merge the Ronald Wastewater District into City operations as outlined in the 2002 Interlocal Operating Agreement

New Web Hosting Implementation



The City's Communications Program Coordinator is planning to complete an assessment of the City's current website in 2015. The service and support from the current web hosting vendor has declined, as has the stability of its provided web environment. Unless the vendor support and the reliability of the site improve, it is recommended that we move to a different web hosting vendor concurrent with a redesign of the City's website.

Cost: \$60,000 plus 1,090 hours of staff time.

Alignment

IT Vision

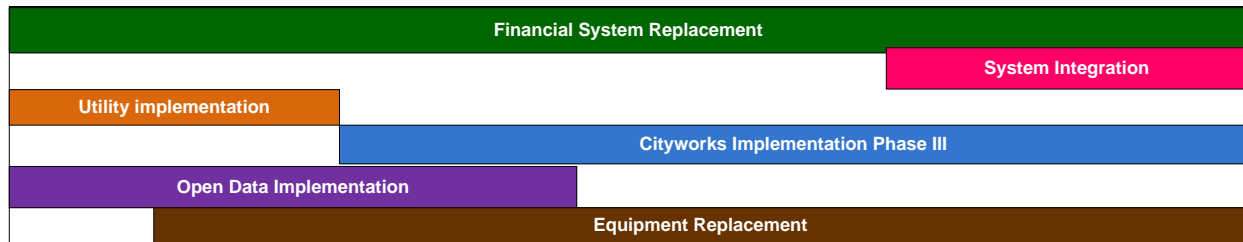
- Technology supports business processes
- Technology is secure
- Technology broadens the City's outreach to their customers
- Technology is current, proactively maintained, and flexible to the changing needs of the City
- Technology provides access to data that will support sound decision making

Council Goals – will support internal processes to support:

- Goal 1, Action Step 4 – Implement marketing strategies to promote Shoreline as a progressive and desirable community to new residents, investors, and businesses
- Goal 3, Action Step 1 – Engage the community in an education and outreach plan to help residents and businesses prepare for the addition of new light rail stations and service
- Goal 4, Action Step 1 – Communicate and provide opportunities for public input on key policies and initiatives, including Vision 2029, light rail station planning, safe community initiatives, the Point Wells Transportation Corridor Study, and other City projects.
- Goal 4, Action Step 3 – Continue to provide documents online and improve the ease of use of the City's website
- Goal 4, Action Step 4 – Advance public engagement with the implementation of the City's e311 system, online communication and survey tools and social media platforms

2017 Initiatives

2017



Financial System Replacement



In 2016, a project was proposed to assess the City's current financial system. That project was proposed because the current financial system is aging, built on legacy technology, and vendor response to system issues has been slow. The City will also need to provide utility billing with the assumption of Ronald Wastewater, and to integrate financial functions with other enterprise systems (recreation, permit, and asset management). This project will implement the system selected during the 2016 assessment.

Cost: \$400,000 and 1,400 hour of staff time

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 2: Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies
- Goal 1, Action Step 2: Develop a plan to merge the Ronald Wastewater district into City operations as outlined in the 2002 Interlocal Operating Agreement.

- Goal 2, Action Step 8: Implement a comprehensive asset management system for the City's roads, streets, facilities and park systems.

System Integration



This project will assess the opportunities to integrate our enterprise applications (asset management, permit, recreation and finance) so that business processes that require a flow of information between the systems will occur programmatically and will not require manual intervention. For instance, revenue from the City's Parks programs will be automatically and seamlessly updated to the general ledger. Hourly rates for staff that maintain assets will be automatically updated to the Computerized Maintenance Management System.

Cost: \$200,000. 500 hours of staff time are estimated.

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

- Goal 1, Action Step 2: Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies
- Goal 2, Action Step 4: develop a plan to merge the Ronald Wastewater District into City operations as outlined in the 2002 Interlocal Operating Agreement
- Goal 5, Action Step 1: Utilize the City's cross-department safe community team to resolve issues and develop proactive programs related to traffic, code enforcement, and crime prevention efforts

Utility Implementation



Planning for the assumption of the technical assets of Ronald Wastewater is scheduled for 2016. This project will transition those assets to the City.

Cost: Unknown at this time – dependent on the 2016 assessment

Alignment

IT Vision

- Technology supports business processes
- Technology is secure
- 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:

- Goal 2, Action Step 4 – Develop a plan to merge the Ronald Wastewater District into City operations as outlined in the 2002 Interlocal Operating Agreement

Cityworks Phase III



This project will incorporate the assets from Ronald Wastewater and Parks into Cityworks. Combining these two implementations will provide an economy of scale for the consulting engagement.

Cost: \$200,000. Staff estimates 1,175 hours

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

- Goal 2, Action Step 8 – Implement a comprehensive asset management system for the City’s roads, streets, facilities and park systems

Open Data Implementation



This project will implement the recommendations made in the 2016 evaluation performed in the Data Needs Analysis project.

Cost: \$50,000. Staff estimates are 225 hours

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

- Goal 2, Action Step 8 – Implement a comprehensive asset management system for the City’s roads, streets, facilities and park systems

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. This year, a major license renewal is required, which will increase the overall budget for 2017 by \$45,000.

Cost: \$175,000 plus 200 hours of staff time

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

Costs

Costs for technology are difficult to estimate. Mergers, acquisitions, and vendor product redesign can drive application replacement even when the application could have a longer useful life servicing the City. Two examples of this phenomenon are the retirement of our recreation software (Class) by ActiveNet, and lack of modernization of our current Portal software by Hewlett Packard.

In this plan, all enterprise grade software will be replaced by the end of 2017. Applications are currently trending towards the ‘pay as you go’ approach through Software-as-a-Service versus the large capital investment in hardware and software licenses. If this trend continues, and software that meets the City’s needs is available, the cost for applications will flatten and become far more predictable. And with the capital cost of implementation completed by 2017, the only major component of the City’s technical infrastructure that should need replacement before 2020 is the telephone system. That

replacement is anticipated in 2019, and the technology available at that time is anticipated to be far different than the City currently employs.

However, the costs below are estimates based on what is known at this point in time. As new technologies are introduced and new and cost-effective trends are adopted, these costs may change. Costs will be reassessed on an annual basis.

The following costs are provided for the initiatives contained within the plan. These estimates do not include the operational costs for IT or telephony, or the upgrade of standard software used by the City (e.g. Microsoft Office, Adobe Pro, etc.). Detailed costs are included as Appendix H.

STP Cost Summary

Year	Cost	Staff Hours
2014/2015	\$657,649	5055
2016	\$835,000	3665
2017	\$1,025,000	3500
Total	\$2,517,649	12220

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. Tactical projects for years 2014 – 2017 include the modernization of our permit, recreation and financial systems, as well as the introduction of SharePoint as a transformative technology that will assist staff in creating greater efficiencies in City operations. The main emphasis of this plan is to prepare for the assumption of Ronald Wastewater, which is slated to occur in 2017.

The schedule outlined is very aggressive, and is dependent on funding and support from the City Manager and the City Council. This plan will be updated annually by the IT Manager and the IT Advisory Board. It will be adjusted as needed to reflect planned projects that are not funded, or critical operational priorities that are addressed outside the plan. Cost and effort estimates will be recast annually. Questions should be directed to Katherine Moriarty, IT Manager at kmoriarty@shorelinewa.gov.

Appendix A - IT Advisory Board

What do we do?

1. Develop and maintain the IT Strategic Plan
2. Develop high level recommendations for technology direction for the 1 – 3 year timeframe – updated annually
3. Develop a process for the initiation of IT Projects
 - a. What comes to the IT Advisory Board? (see Appendix A-1)
 - b. What does NOT come to the IT Advisory Board? (see Appendix A-1)
 - c. Develop a process for submission of projects
 - i. Forms
 - ii. Timelines for submission
4. Consider IT projects from a citywide perspective and prepare recommendations for the LT on project and budget priorities
 - a. Develop ‘Guiding Principles’ that provide a consistent set of criteria for decision making
 - b. Measure all project requests against criteria
 - c. Prepare a formal assessment of technology projects to support the annual budget process
5. Provide general oversight for the portfolio of active IT projects – raise concerns to the LT if deemed appropriate
6. Meeting frequency
 - a. Regular meetings – monthly for project status, new requests, and annual plan update
 - b. 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
7. Alternatives analysis
8. Clear articulation of the project value
9. Creation of a more stable technical environment?
10. Creation of processes/procedures to support the automated package
11. Ensuring that the organization is not looking for a technical solution to a process problem
12. Opportunities to share software tools when appropriate and possible

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

Appendix A-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:

1. Is there another technology or application used in the City that will provide a solution to the operational issue being addressed?
2. How does the technology ‘fit’ into the City’s technical environment (compatibility with our computer, server, and programming environments)?
3. How much will this technology cost – Total cost of ownership?
4. 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:

1. Security cameras
2. Mechanical system controls (i.e. building systems controls, access systems, etc.)
3. 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>
1. 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)
2. Legacy application replacement (i.e. Class, Hansen, etc.)
3. Any technology product that will be used by more than one department or cost >\$1K
4. Any technology upgrades, additions or changes that will take more than 80 hours of IT support to implement (as determined by IT)
5. Any additional technology that DUPLICATES functionality that the City already uses and IT supports
6. Any custom system development done in a formal programming environment such as .NET, Visual Basic or Access
7. Any technology that requires a server
8. New system interfaces between city systems
9. When the IT Manager and operational management/staff cannot come to consensus on a solution to an operational need

Appendix B - IT Satisfaction Scorecard



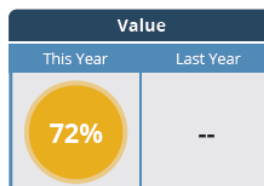
City of Shoreline

IT Satisfaction Scorecard

26 Responses

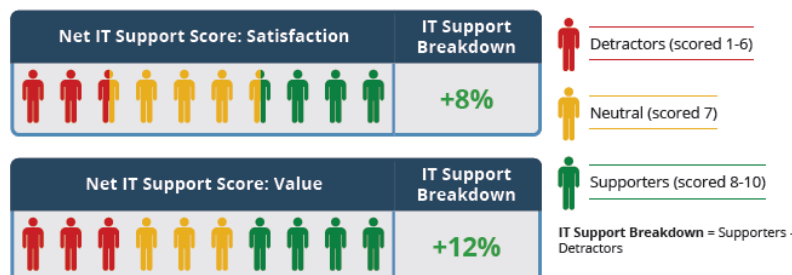
Overall Metrics

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.	64%	--
Execution Satisfaction with the way IT executes your requests and meets your needs.	63%	--
Communication Satisfaction with IT communication.	58%	--

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	77%	1 st	--
Devices Satisfaction with desktops, laptops, mobile devices etc.	72%	5 th	--
Work Orders Satisfaction with small requests and bug fixes	71%	6 th	--
Service Desk Satisfaction with responsiveness and effectiveness of service desk	69%	2 nd	--
Data Quality Satisfaction with providing reliable and accurate data	67%	4 th	--
Projects Satisfaction with large department or corporate projects	65%	8 th	--
Public-Facing Technology Satisfaction with user experience and effectiveness	64%	7 th	--
Business Apps Satisfaction with applications and functionality	61%	3 rd	--
Analytical Capability and Reports Satisfaction with effective standard reports, custom reports capability, and the ability to generate business insights	60%	9 th	--
IT Policies Satisfaction with policy design and enforcement around security, governance, etc...	57%	10 th	--
IT Innovation Leadership Satisfaction with providing opportunities for innovation and innovation leadership to improve the business	55%	11 th	--
Requirements Gathering Satisfaction with BA's ability to understand and support the business	55%	12 th	--

Page 2 of 32

City of Shoreline

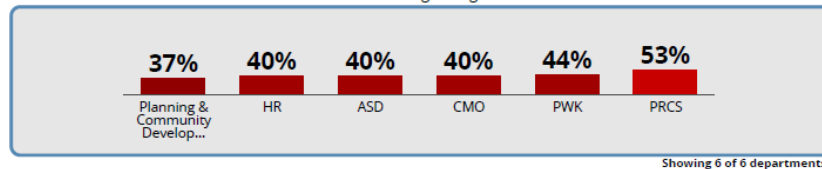
IT Capacity Scorecard

26 Responses

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.



Projects Capacity Satisfaction

Satisfaction with the ability to get IT capacity to complete Projects



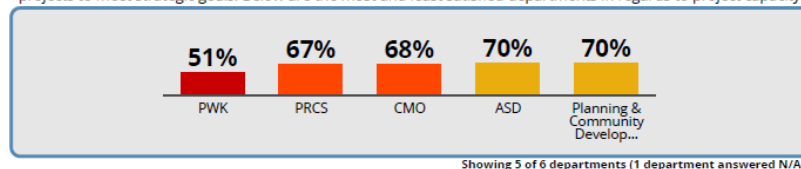
Ability to Deliver Effective Projects

Satisfaction with completed IT Projects ability to meet your business needs



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.



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



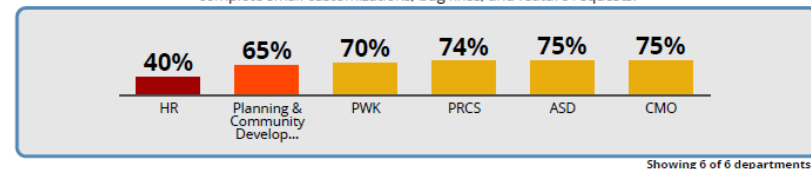
Ability to Deliver Effective Work Orders

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



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.



Page 3 of 32

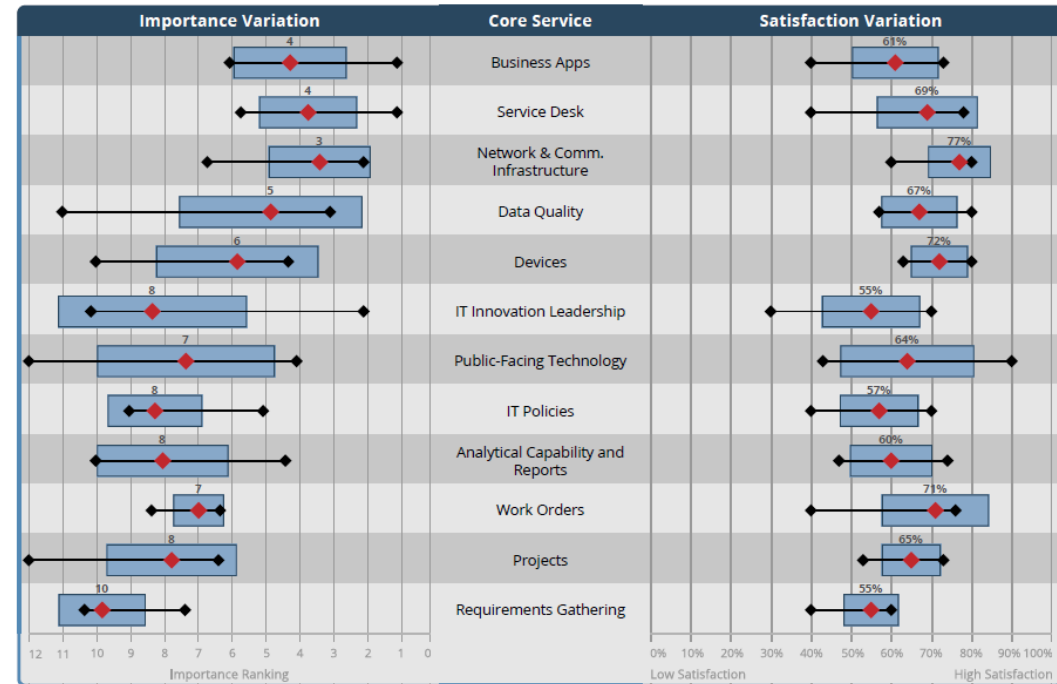
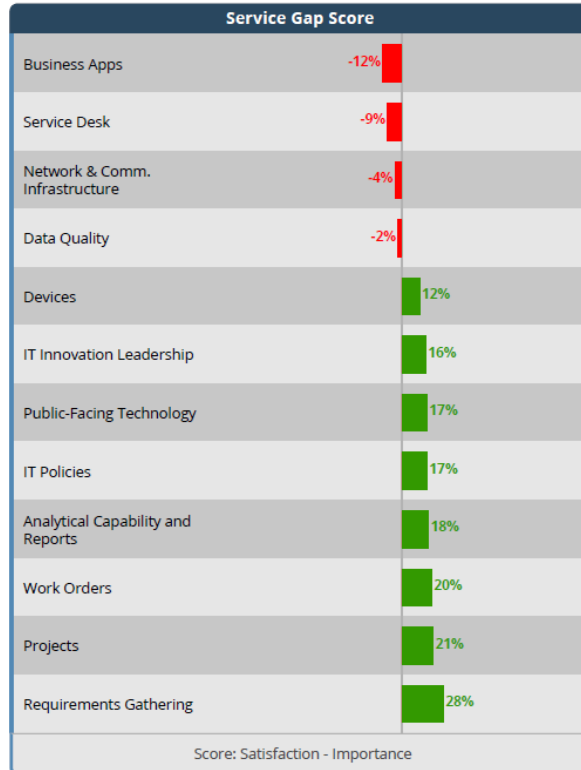
Core Service Overview

City Of Shoreline

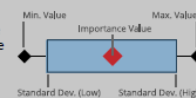
26 Responses

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.



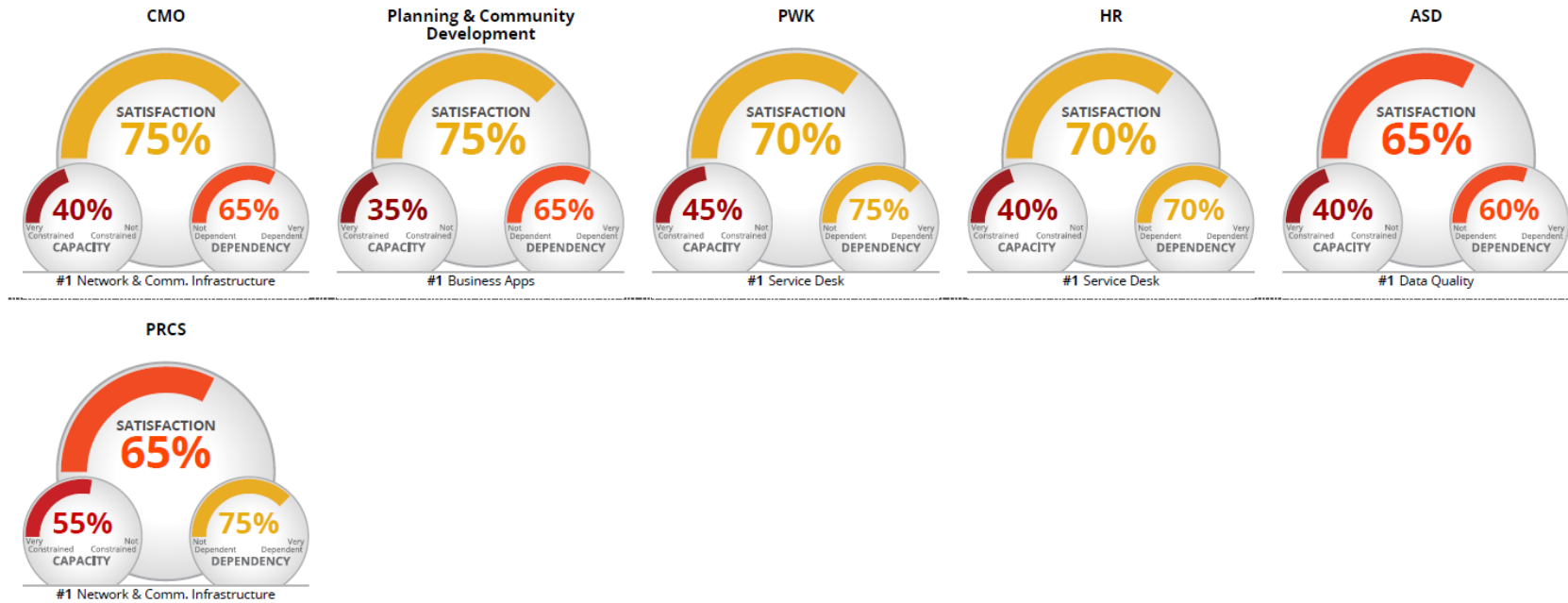
Satisfaction Variation by Core Tool
Outlying satisfaction scores can artificially inflate or deflate the average satisfaction score. When this occurs, take a closer look at specific departments that are pulling the score down to isolate the pain point.



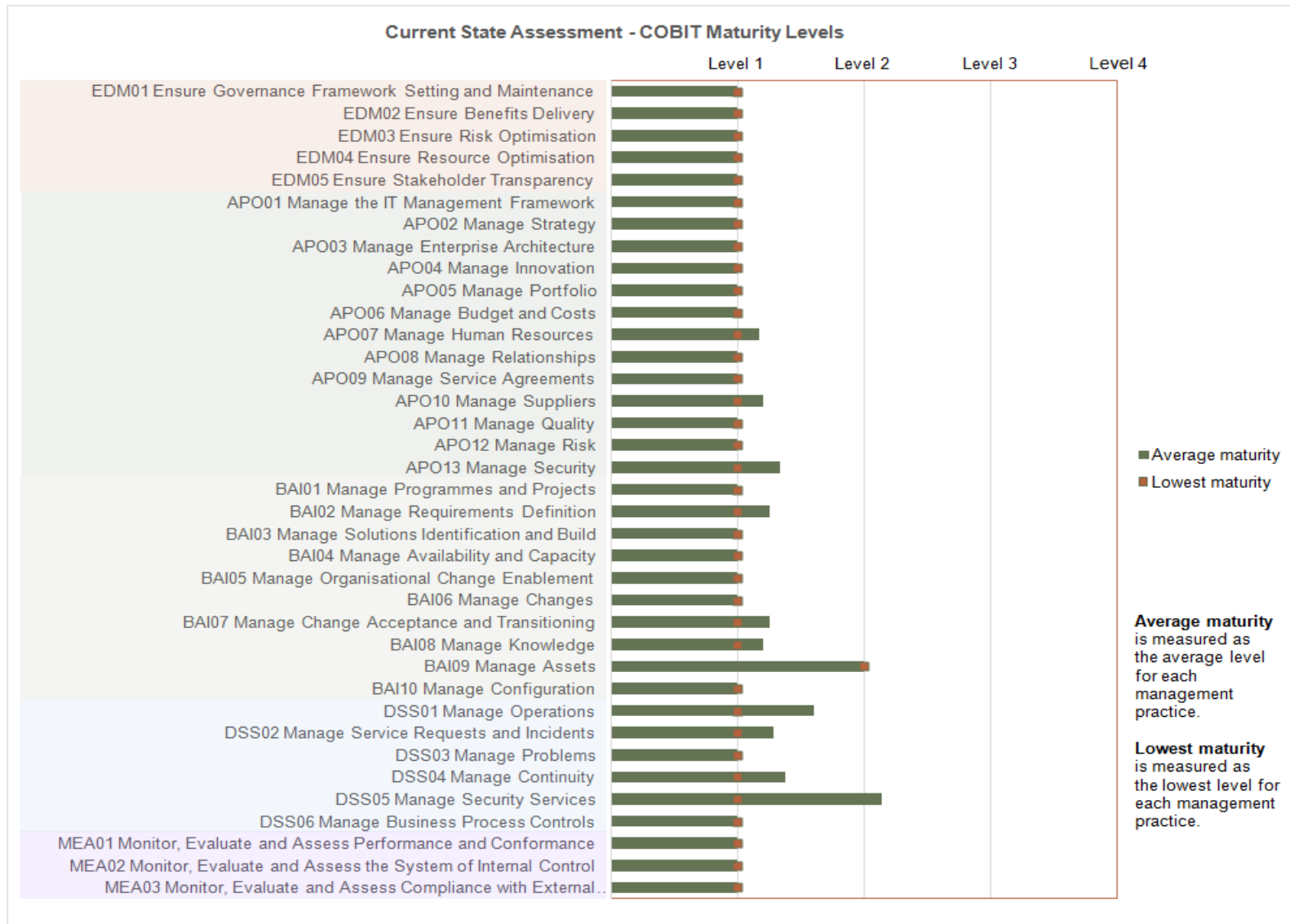
Satisfaction by Department

City Of Shoreline

All categories are rounded to the nearest 5.



Appendix C - Shoreline IT Division – Current State Assessment – COBIT Maturity Levels



Appendix D - Shoreline IT Division – SWOT Assessment

Information Technology Serving the City of Shoreline – Strengths, Weaknesses, Opportunities, Threats

Strengths	Weaknesses
<ul style="list-style-type: none"> ➤ Stability and availability ➤ Friendly staff ➤ Knowledgeable staff – experts ➤ Most times the IT Service Desk Line is answered by a person ➤ Multiple ways to reach IT ➤ IT staff care about doing a good job ➤ Website support ➤ GIS support ➤ Some staff are able to articulate technical information to the ‘common people’ 	<ul style="list-style-type: none"> ➤ Current staffing levels ➤ Reluctance to be innovative ➤ Communication of work request status ➤ Staffing levels ➤ IT staff can’t say no – results in work not getting delivered ➤ Lack of focus of direction ➤ Reactive, not proactive ➤ Supporting business applications ➤ IT is not agile ➤ GIS support – those who cry the loudest
<ul style="list-style-type: none"> ➤ Diversity of knowledge ➤ High level of institutional experience ➤ Continuity of staff ➤ Good GIS expertise ➤ City is willing to try new technology ➤ City supports the use of technology ➤ Staff has a strong desire to do good work 	<ul style="list-style-type: none"> ➤ Limited staffing ➤ Non-standardization of software and hardware ➤ Limited communication between IT/City staff of needs ➤ Lack of project management ➤ Lack of processes and procedures ➤ Little cross training/back up coverage ➤ Minimal technical training (funded for 2013) ➤ Lack of cohesive direction ➤ Limited communication between IT staff ➤ Use of GIS data is impacted due to lack of accuracy and completeness
Opportunities	Threats
<ul style="list-style-type: none"> ➤ Greater collaboration ➤ Bring technology innovations to the staff ➤ Being more proactive to resolve root causes of issues ➤ Better understand the business processes ➤ Better availability of data ➤ Managing customer expectations 	<ul style="list-style-type: none"> ➤ Disconnect between the business and IT ➤ Staff reduction when Network Admin was eliminated ➤ Budget Constraints ➤ Loss of key personnel to retirement or other opportunities ➤ No back up for key specialties ➤ IT-envy – wanting what larger organizations have
<ul style="list-style-type: none"> ➤ Many inefficient processes within the City that can be improved through the use of automation ➤ Utilities coming on-board ➤ Provide intelligent solutions for business needs (potentially avoiding the selection of tools such as Creative Suites) ➤ Full collaboration toolset ➤ We are on the cusp of innovation – City is maturing, technology is getting more approachable, staff is more interested in better efficiencies. ➤ Strategic Plan for Technology ➤ Greater leverage of GIS technology ➤ Elimination of redundant software offerings 	<ul style="list-style-type: none"> ➤ Organization can buy pretty much anything it wants ➤ Direction is set without true cost/benefit analysis ➤ IT is sometimes directed to a particular solution – does not have a ‘seat at the table’ ➤ City staff do not always include IT in their decisions ➤ Projects involving IT are managed by the business unit without full engagement of IT ➤ Lack of City staff training results in poor perception of IT staff

IT Advisory Board

IT Staff

Appendix E - City of Shoreline Technology Investments

Intended Audience – City Staff involved in proposing projects or interested in understanding the foundational concepts of technology investment decisions

Historical Perspective

The City has not had a systematic approach to purchasing technology. Some technology adoption was highly controlled by core departments (with and without the involvement of IT), while other technology was simply purchased by departments and individuals who either wanted the technology or thought it would be of use in the accomplishment of City work. Multiple technology tools (both hardware and software) were purchased to solve the same operational need. While staff were only trying to provide better and more efficient City processes, what developed was a technology landscape that lacked standards, was difficult to support, and costly to maintain.

The Present

The City has established processes that require technology purchases to be reviewed by Information Technology. However, these processes are not always followed, and there was little or no guidance provided to City staff to help them make good technology decisions. Purchases of technology are still being made on P-Cards, or categorized as non-IT products (such as systems that control traffic lights or facilities security).

The Desired Future State

The City will have standard technology offerings that meet the operational needs of City services. Consistency and standards will be valued, but when the standards do not satisfy the operations requirements of a City department or service, meeting those needs trump standardization. The City will leverage an increasing investment in technology wisely, with an emphasis towards customer service, quality and efficiency.

How Will We Get There?

A set of guiding principles outlining the City's values and outcomes for the adoption and use of technology have been developed and are included in this document. In order to assess the full cost of technology for the City, reduce multiple technical solutions to the same operational problem, and ensure the consistent and stable performance of the City's technical infrastructure, the accounting of all technology costs will be tracked through the City's IT budget. Technology purchases will, to the greatest extent possible, be planned and requested

as a part of the budget process. However, it is recognized that this is not always possible. A process will be developed for such situations.

What are Technology Investment 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, and to ensure that these investments are leveraged efficiently, a set of IT Investment Guiding Principles have been established. These principles should be considered when new or replacement technology investments are evaluated.

The Technology Investment Guiding Principles

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.

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.

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.

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.

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 a staff member has 'favorite' software to use for a particular function, and the City already has something that does that function, the standard should be used unless there is a unique business need that cannot be met by the standard.

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.

Appendix F - GIS Gaps

Division	GIS Business Requirements	GIS Service Gap	Business Value
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)	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.
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	<p>Eliminates many manual processes, and improves the accuracy of measurements.</p> <p>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.</p> <p>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.</p>
Traffic	Traffic Control, Signs, Neighborhood Traffic Safety, Program	Incomplete or out of date inventory for signs and traffic control assets will be mitigated in 2015 with the completion of our automated right of way asset inventory. Having this information available in a GIS centric asset management system will provide staff with tools to easily keep this information accurate and current. As we continue to move our GIS technology forward, we will more easily interface with other local, county, state and federal information systems, including those providing live camera feeds and real time traffic congestion.	Provide residents 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.

Division	GIS Business Requirements	GIS Service Gap	Business Value
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 areas of the City. Improve mapping for economic development sites	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 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-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.	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 city-wide communications, while increasing the 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.	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.

Division	GIS Business Requirements	GIS Service Gap	Business Value
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.	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.	We recently averted two lawsuits because we demonstrated what agency was responsible 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 could rapidly and precisely show 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 is for 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 residents 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.
Maintenance	Maintenance of City Park facilities	Most park infrastructure are unmapped in GIS database	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 orders 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	Capital Improvement Project Planning ; Parks Recreation and Open Space Planning	Reliable and updated data layers providing contours, aerial imagery, utilities and park infrastructure. Track and analyze City for park system gaps.	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, 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.

Division	GIS Business Requirements	GIS Service Gap	Business Value
Planning and Community Development Services			
Long Term 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.	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.
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, 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.	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.
Code Enforcement	Enforce violation of City's development code	Improve GIS tools to investigate code violations by streamlining GIS data archive with permit archives.	On many occasions staff have used our collection of aerial photography dating back to 1936. More recent aerial sometimes provide a quick resolution to investigations because recent aerials can provide a timeline for when a new structure, such as a deck, was built. Having this information indicates which owner built a deck, so that permit fees can be collected, if it was the current owner who was responsible.
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.	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. Work has begun to better ensure the accuracy of our wetland layer.
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. Map showing exact locations of the city boundary and property boundary.	These maps provide the police relevant information in response to crimes. Districts identify if there are other laws defined for specific areas. Police need precise information regarding the location of property boundaries.
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			
Facilities	Building maintenance	City map of building and campus layouts in GIS format for Asset management	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.

Division	GIS Business Requirements	GIS Service Gap	Business Value
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 of City infrastructure repair and maintenance by managing assets in a GIS database.	Currently, the process to highlight major capital projects is a time consuming manual process. As the map and associated project information 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.
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.	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.
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.

Appendix G – Tactical Initiatives 2014 – 2017

The tactical initiatives that are components of the first three years of the Strategic Technology Plan are outlined in this appendix. The greatest specificity is for those 2015 projects. 2016 and 2017 projects will be detailed more fully during the budget process for that particular year. All projects that require appropriation are dependent on approval and funding. A reassessment of the plan will occur annually, and the tactical plan revised to reflect projects that were completed or not funded.

Each project should result in a benefit to the City. The business unit gaining the benefit should define those benefits, as well as how it will measure effectiveness. A cost-benefit, as well as an alternatives analysis should be included for each project considered for funding.

2014 - 2015

Email Archiving

Background

The City has elected to journal and save all email communications for a period of 10 years in order to respond to public disclosure requests. The system that is currently implemented for this purpose (GFI) is aging and no longer meets the volume, indexing or search needs of the City. The Council approved the use of 2013 funds to replace this system in 2014. There are cloud-based systems that will now meet this operational need, and the intent is to identify, contract, and implement a new email archiving system in 2014.

2014 Initiative Scope

1. Develop requirements for the new system
2. Develop and publish an RFP
3. Evaluate responses
4. Contract with the vendor
5. Implement the system
6. Convert (or otherwise archive) the current email archive

Cost: \$50,000. Staff time associated with this project:

- City Clerk – 50 hours
- IT Manager – 50 hours
- IT Staff – 75 hours (includes data conversion)

Alignment

IT Vision

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

Council Goals

- This technology is provided to comply with the legal requirement to respond to public disclosure requests.

Benefits Realization: The following will be measurements of the success of this project:

- The system is implemented in 2014
- Searches for emails in conjunction with public disclosure requests are more accurate and quicker than the old system
- The current email archive is searchable in either the new system or some other repository

Cityworks Phase II

Background

In 2013, the City selected a new Computerized Maintenance Management System (CMMS) to house the City's assets. The initial implementation was for Surface Water Maintenance (SWM). This implementation was very successful, and Phase II of the project was approved in mid-2014. Phase II includes the following asset types: Streets, Traffic, Fleet, and Facilities. This project commences in September 2014, and is expected to complete in June 2015.

2014/2015 Initiative Scope

The following will be accomplished within the scope of this project:

- Revamp with City's licensing agreement with Azteca to incorporate an unlimited, enterprise wide license agreement
- Engage Woolpert, LLC to lead the City's implementation of Cityworks for streets, traffic, fleet and facilities
 - Define the goals of the system and the measurements that will be needed to achieve those goals
 - Review business processes and revise as appropriate
 - Define the service request types needed
 - Configure the system to appropriately gather the information needed
 - Train users
- Implement the system

Cost: \$236,899 -- \$30K for licensing, \$206,899 for consulting. Staff estimates are:

- IT Manager – 100 hours
- IT Systems Specialist – 100 hours
- GIS Specialist – 200 hours
- Public Works Cityworks Coordinator – 100 hours
- Central Services Cityworks Coordinator – 75 hours
- Line Staff Core Team – 500 hours (total)
- Other IT Staff – 75 hours

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

- Goal 2, Action Step 8 – Implement a comprehensive asset management system for the City's roads, streets, facilities and park systems

Benefits Realization: The following will be measurements of the success of this project:

- The system is implemented on time and on budget
- The system is used by all staff
- The measures identified in the project are gathered
- Efficiencies are realized (method to be developed as a part of the identification of metrics)

Stabilization of Existing Technology

Background

The current technical infrastructure does not provide consistently stable and reliable tools for City staff. There are some identified root causes for this:

- Implementation of Windows 7
- Upgrade to 64-bit environment (e.g. taking full advantage of hardware speed enhancements)
- Aging applications that prevent upgrade to the latest version of some components (e.g. internet browser, Java, Adobe Flash)
- Inconsistent technical components (e.g. disk technology, non-standard database technology)

In 2014, the IT Manager is initiating targeted consulting engagements to provide an assessment of the current state and recommendations for improvement. Additionally, IT staff is identifying the issues and attempting to resolve them.

2015 Initiative Scope

1. Evaluate the findings of the 2014 consulting engagements
 - a. Identify issues that can be accomplished without funding
 - b. Identify issues that can be accomplished within current operational funding
 - c. Identify issues that will need future appropriation
2. Develop roadmaps for all enterprise and key desktop applications used
3. Develop a project plan to address items 1a and 1b
4. Request 2016 appropriation for item 1c
5. Replace the Portal (see SharePoint project)

Cost: Unknown at this time. Cost will be defined when the project plan is developed. No emergency appropriation is anticipated.

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

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

Benefits Realization: The following will be measurements of the success of this project:

- Number of improvements completed (number to be defined when the project plan is developed)
- Number of operational issues addressed through the implementation (number to be defined when the project plan is developed)

IT Maturity

Background

The current staff and lack of processes impedes the delivery of stable and reliable technology to City staff. The following issues need to be addressed:

- Some staff lack the appropriate skills to fully function in their defined role
- Communication and collaboration within the IT Division needs to be strengthened to prevent a change in one area from disrupting another
- Processes are needed in order to deliver consistent and competent service – especially when a key member of the staff is away from the office

- The current work order system is not configured in a manner that allows for prioritization and is not used consistently
- Staffing constraints, specifically in the network and server area, delay troubleshooting and resolution of application problems.
- Vendor management is not effective

2014/2015 Initiative Scope

1. Skilled Staff
 - a. Review current IT job classifications and identify gaps
 - b. Review current staff skills against those required
 - c. Address gaps between staff skills and skills needed to support the City's technology
2. Process Improvements – the following will be addressed in 2015
 - a. Incident management (something is broken and needs immediate attention)
 - i. The Service Desk process – how we report and track incidents
 - ii. Prioritization of incidents
 - iii. Responsibility matrix - who is responsible for what
 - b. Problem management (something that needs to be permanently fixed)
 - i. Standard process for root cause analysis
 - ii. Responsibility matrix – who is responsible for what
 - c. Change management (something is being changed and how we go about making sure that a change in one area doesn't affect another)
 - i. Tool for tracking changes
 - ii. Formation of a Change Management Board (including both IT and non-IT application system administrators)
 - iii. Standard process for technology changes
 - d. Configuration management (how we install and maintain correct settings on our computers and applications)
 - i. Standard method of building a computer – with documentation
 - ii. List of application dependencies (such as internet explorer version and other software)
 - iii. Testing environment
 - iv. Patching methodology for non-Microsoft products
3. Replace our existing Help Desk system (begins in 2014)

Cost: The primary cost is staff time. The following is an estimate of the staff effort required:

- IT Manager – 500 hours
- Computer Network Specialist – 300 hours
- Network Administrator – 200 hours
- IT Systems Analyst – 100 hours
- GIS Specialist – 100 hours
- Web Developer – 100 hours

A new Help Desk tool is needed. We anticipate using a SaaS tool that will not require an initial capital investment, and we will keep the cost within our operational budget (current maintenance for TrackIT! is \$3,500).

- IT Systems Specialist – 200 hours
- IT Staff – 50 hours
- IT Manager – 50 hours

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

Benefits Realization: The following will be measurements of the success of this project:

- The successful implementation of a new IT Help Desk system
- All work performed in IT is tracked
- New staff will receive a computer that contains all the tools that they need
- Changes in the technical environment do not result in outages or other user disruption
- Backlog for resolving City staff issues is reduced
- Mean time to repair is reduced
- There will be capacity in 2016 to support new and critical City initiatives

SharePoint

Background

SharePoint is a key component of the technology strategy for the City. It is tied to several of the items within the technology vision.

The current Shoreline Portal has reached its end-of-life. The product is no longer being improved or modified to adapt to newer browsers and other supporting software components. Because we are reliant on the Portal for many functions, the City has been unable to upgrade the Internet Browser. This is causing disruption with other applications that do not work efficiently with older versions of the browser. The replacement of the Portal is critical to stabilizing the City's technical environment.

SharePoint is the product that will best serve the City as a replacement for the Portal. SharePoint will also provide solutions to the following issues:

- Document Management – While not as sophisticated as tools built specifically for document management, SharePoint offers a sound approach to handling document versioning, storage, and search capabilities
- Records Management – SharePoint has a Records Center for the management of electronic documents included in the product
- Collaboration – replacement and expansion of the functionality of the portal – anyone can post material and create collaboration areas
- Work efficiencies – it is easy to implement document routing and approval, process flows, and create document repositories without the assistance of IT.
- Emergency Management – A small SharePoint environment has been established for the EOC to automate emergency activations (previously done on paper)

2014/2015 Initiative Scope

As evidenced above, SharePoint is a feature rich tool that will address many of the gaps that currently exist in the City's technology. Implementing all facets of SharePoint will take at least two years. In 2015, the following is planned:

- Establish a sound structure for the City's SharePoint environment – Contract with a vendor with SharePoint expertise to guide the organization of the environment and establish a governance and standards that have proven to be successful in other SharePoint installations
- Establish the SharePoint environment
- Migrate the contents of the Portal to SharePoint and into the new standard structure
 - Train current portal core team in SharePoint
 - Migrate content
- Provide training and access to City staff to the migrated Portal content on SharePoint
- Retire the Portal
- Establish the Records Center
- Identify a pilot group to leverage SharePoint
- Evaluate Office 365 for Citywide use

Cost: \$68,750. The following is an estimate of the staff effort required:

- IT Manager – 50 hours
- Web Developer – 700 hours
- IT Staff – 50 hours
- Portal Core Staff – 150 hours (each)
- City Staff (1 - 2 hours each for training)

Alignment

IT Vision

- Technology broadens the City's outreach to their customers
- 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 that enables City staff to be more efficient and encourage collaboration

Council Goals – will support internal processes to support:

- Goal 1, Action Step 2 – Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies
- Develop a plan to merge the Ronald Wastewater District into City operations as outlined in the 2002 Interlocal Operating Agreement
- Utilize the City's cross-department safe community team to resolve issues and develop proactive programs related to traffic, code enforcement, and crime prevention efforts

Benefits Realization: The following will be measurements of the success of this project:

- The establishment and documentation of SharePoint governance
- Portal is decommissioned
- Staff is able to locate and use documents and information that was previously on the Portal

Class Replacement

Background

The current system used by the Recreation division of Parks is being phased out. This system is used for Spartan Gym, and pool, and City facilities scheduling. The last release of this software occurred in 2014, and support will cease in 2017. The system will need to be replaced in 2015 or 2016, and the functionality of the system will continue to degrade compared to other products during that time.

The ITAB has recommended that this system be deferred until 2016. However, the Permit and the Finance system must be priorities for 2016. So, the IT Manager is recommending that we move forward with replacement in 2015. The strong Class Systems Administrator will need to be fully leveraged in order for this implementation to be successful.

2014/2015 Initiative Scope

It is anticipated that product selection will take place in 2014. Requirements are complete, and the RFP can be released in September 2014. The 2015 scope is as follows:

- Contract is signed
- Implementation planning
- Product implementation

- User Training
- Retirement of Class

Cost: \$65,000 (contingent on a SaaS solution). The following is an estimate of the staff effort required:

- Systems Administrator – 300 hours
- IT Systems Analyst – 50 hours
- IT Manager – 50 hours
- Recreation staff – 100 hours (including training)

Alignment

IT Vision

- Technology supports business processes
- Technology broadens the City's outreach to their customers
- 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:

- Goal 1, Action Step 4 – Implement marketing strategies to promote Shoreline as a progressive and desirable community to new residents, investors, and businesses

Benefits Realization: The following will be measurements of the success of this project:

- The system is fully implemented by 12/31/2015
- The system provides better on-line tools (as assessed through a customer survey in 2016)
- Measures are defined by Parks to measure effectiveness of the system

Permit System Assessment

Background

In 2013, the City made a decision to implement a new Computerized Maintenance Management System (CMMS). At that time, the City owned Hansen, an application that supported the permit process, code enforcement and customer service, in addition to asset management. The Hansen system was not selected as the vendor for asset management, and the City implemented Cityworks as their CMMS vendor.

The Hansen system currently installed at the City is an old version that does not comply with many of the City's IT standards, nor the geospatial foundation that drove the selection of Cityworks.

In its current state, Hansen does not provide integrated access to the geospatial information, nor does it provide for a mechanism for permit application or review on-line. It also does not interface with the Cityworks system, which is needed when a service request or code enforcement activity requires a work order for an asset that is managed through Cityworks. And it does not integrate with the City's financial system to post revenue or collect unpaid fees.

This system will be critical when the City assumes utilities. Permits issued through this system will need to feed the utility billing system so that billing can start immediately upon a completed inspection. These requirements need to be considered along with the vision of the Council to provide permit software that makes the permit process predictable, timely and competitive. Because of the importance of this system, it is critical to be clear and complete in the documentation of requirements, and careful in the selection of the system.

2014/2015 Initiative Scope

The 2015 scope of this project is the following:

- Contract with a consultant to guide the assessment effort
- Evaluate 'as is' processes
- Determine 'to be' processes (including needed interfaces to other City systems)
- Business process analysis
- Functional and technical requirements for a new permitting system
- Identification of impacts of potential change to the organization
- Produce an RFP
- Review RFP responses and select a vendor
- Evaluate if customer service needs will be fully satisfied with selected solution
- Prepare budget request for 2016 (include a separate request for customer service if the selected vendor does not provide a full solution)

Cost: \$30,000. The following is an estimate of the staff effort required:

- IT Manager – 50 hours
- IT Systems Analyst – 30 hours
- Operational staff – 200 hours (total for all PADS and CS staff)

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

- Goal 1, Action Step 2 – Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies

Benefits Realization: The following will be measurements of the success of this project:

- As-is processes are documented and to-be processes are improved and documented
 - A minimum of 2 unnecessary steps are eliminated from the current process
 - Standard work is implemented
- Clear requirements are defined and incorporate utility needs
- Vendor selection is made

Equipment Replacement

Background

Each year, there will be a project to replace aging equipment. This is important to ensure a reliable and consistent technical environment. Equipment replacement includes the following equipment:

- Desktops, Workstations and Laptops
- Servers
- Storage
- Network components
- Telephony

2014/2015 Initiative Scope

In 2015, the following equipment is on the plan for replacement:

- Desktops, workstations and laptops that are more than 4 years old
- Core Switch Enhancement
- Storage replacement and expansion
- Uninterrupted Power Source (UPS) replacement

The scope of this effort will include:

- Order and implement new desktop, workstation and laptop computers
- Order and implement new Core switch, storage and UPS equipment
- Surplus old equipment
- Reassess 2016 requirements

Cost: \$130,000

IT Vision

- Technology supports business processes
- Technology is secure

Council Goals

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

Benefits Realization

- <1% of our replaced hardware fails
- <5% of our replaced UPS units fail due to battery failure
- Applications perform within established service level 90% of the time
- We do not have unplanned expansion of our disk storage

2016 Initiatives

SharePoint Implementation Phase II

Background

SharePoint has now been implemented as the Portal replacement and governance has been established. The environment for records and document management has been implemented, users are now transitioned to SharePoint from the portal, and a pilot group has used SharePoint to collaborate and create operational efficiencies.

Now is the time to roll this technology out to the rest of the City to use for collaboration and operational efficiency. The pilot group will provide guidance and leadership for other groups as they begin the journey to use this technology platform.

2016 Initiative Scope

In 2016, the following is planned:

- Develop a communications plan and training materials to provide to City staff
- Train users in the more advanced uses of SharePoint
- Establish a users' group for SharePoint

Cost: \$20,000 for consulting and the following staff effort is estimated:

- IT Manager – 20 hours
- Web Developer – 300 hours (program development, training and support)
- Pilot group – 50 hours
- City Staff (1 - 2 hours each for training)

Alignment

IT Vision

- Technology broadens the City's outreach to their customers
- 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 that enables City staff to be more efficient and encourage collaboration

Council Goals – will support internal processes to support:

- Utilize the City's cross-department safe community team to resolve issues and develop proactive programs related to traffic, code enforcement, and crime prevention efforts

Benefits Realization: The following will be measurements of the success of this project:

- The number of team rooms that are established
- The number of personal sites that are established
- The reduction of documents that are stored in personal folders versus SharePoint

Permit System Replacement

Background

The Permit System will provide a key component for the City's readiness for the assumption of wastewater utilities in 2017. In 2015, a project that analyzed current business processes, adjusted those processes for the future, developed requirements for a new system, and selected a replacement system was completed. The system selected is proposed to be implemented in 2016.

2016 Initiative Scope

In 2016, the following is planned:

- Contract is signed
- Implementation planning
- Product implementation
- Data conversion
- User Training
- Retirement of old Hansen system

Cost: \$450,000 plus the following staff hours:

- IT Manager – 75 hours
- IT Systems Analyst – 300 hours
- Operational staff – 750 hours (total for all PADS and CS staff)

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

- Goal 1, Action Step 2 – Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies

Benefits Realization: The following will be measurements of the success of this project:

- The system is fully implemented by 12/31/2016
- On-line permit applications and on-line review is part of the solution
- Measures are defined by Planning and Development to measure effectiveness of the system

Equipment Replacement

Background

Each year, there will be a project to replace aging equipment. This is important to ensure a reliable and consistent technical environment. Equipment replacement includes the following equipment:

- Desktops, Workstations and Laptops
- Servers
- Storage
- Network components
- Telephony

2016 Initiative Scope

In 2016, the following equipment is on the plan for replacement:

- Desktops, workstations and laptops that are more than 4 years old
- Upgrade data center licenses
- Upgrade Exchange Server Enterprise licenses
- Purchase replacement for disaster recovery servers (may be replaced with a cloud-based alternative)
- UPS Replacement

The scope of this effort will include:

- Order and implement new desktop, workstation and laptop computers
- Order and implement new licenses and equipment
- Surplus old equipment
- Reassess 2017 requirements

Cost: \$130,000 plus 200 hours in staff time

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

Benefits Realization

- <1% of our replaced hardware fails
- <5% of our replaced UPS units fail due to battery failure
- Applications perform within established service level 90% of the time
- We do not have unplanned expansion of our disk storage

Financial System Replacement Assessment

Background

The City has been using SunGard's One Solution product (previously known as IFAS) since 1999. A system upgrade in 2013 was difficult, and system has been problematic. Position budgeting took over a year to be correctly implemented, and there (in August 2014) are several remaining issues with the system.

Additionally, there are no current interfaces from the City's other enterprise applications. Entries from the Recreation system, permit system, and asset management system are manual. This increases the possibility of errors during data entry.

SunGard has announced that they are returning to an architecture that requires the installation of software on the desktop. This is in direct conflict with the strategic technology direction of the City, and will cause greater chance of workstation instability.

The City will also need to incorporate utility billing into their financial system. The timeframe for the assumption of wastewater for a portion of Shoreline is anticipated in 2017. The current utility has a system in place, but it is custom developed using legacy technology, and that will eventually need to be replaced. The selection of a new system should include a utility billing module.

The financial system should also be chosen to be easily interfaced with our other enterprise applications. This should be an important consideration when reviewing and selecting a new financial system.

It is recommended that the assessment of a new financial system take place in 2016, with implementation in 2017. While it is recognized that this timing will coincide with the wastewater assumption, the current system used by that utility can continue to be used as the City implements a new financial system.

2016 Initiative Scope

The 2016 scope of this project is the following:

- Contract with a consultant to guide the assessment effort
- Evaluate 'as is' processes
- Determine 'to be' processes (including needed interfaces to other City systems)
- Business process analysis
- Functional and technical requirements for a new financial system
- Identification of impacts of potential change to the organization
- Produce an RFP
- Review RFP responses and select a vendor
- Prepare budget request for 2017

Cost: \$75,000. The following is an estimate of the staff effort required:

- IT Manager – 50 hours
- IT Systems Analyst – 30 hours
- Finance Manager – 75 hours
- Operational staff – 150 hours

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

- Goal 1, Action Step 2: Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies
- Goal 1, Action Step 2: Develop a plan to merge the Ronald Wastewater district into City operations as outlined in the 2002 Interlocal Operating Agreement.

Benefits Realization: The following will be measurements of the success of this project:

- As-is processes are documented and to-be processes are improved and documented
 - A minimum of 2 unnecessary steps are eliminated from the current process
 - Standard work is implemented
- Clear requirements are defined and incorporate utility and application interface needs
- Vendor selection is made

Customer Service

Background

The City is currently tracking customer service requests through a module of the Hansen application that services Permits and Code Enforcement. The City will include the requirements for a customer service portal in the Permit Replacement RFP, but it will not be known until the Permit Replacement product is selected whether it will meet the needs of Customer Service. Additionally, the City currently owns a tool (See-Click-Fix) that could interface with both the permit and the asset management systems to provide a customer portal.

This project may not be required if the replacement for the permit system will incorporate all the customer service needs of the City.

2016 Initiative Scope

The scope for this project (and the need for it) will be determined at the conclusion of the Permit Replacement Assessment Project.

Cost: \$50,000 (this would be an estimate for interfacing the customer service portal to both the permit system and asset management). Staff effort will be estimated in 2015

Alignment

IT Vision

- Technology supports business processes
- Technology broadens the City's outreach to their customers
- Technology is current, proactively maintained, and flexible to the changing needs of the City

Council Goals – will support internal processes to support:

- Goal 1, Action Step 4 – Implement marketing strategies to promote Shoreline as a progressive and desirable community to new residents, investors, and businesses
- Goal 4, Action Step 1 – Communicate and provide opportunities for public input on key policies and initiatives, including Vision 2029, light rail station planning, safe community initiatives, the Point Wells Transportation Corridor Study, and other City projects.
- Goal 4, Action Step 4 – Advance public engagement with the implementation of the City's e311 system, online communication and survey tools and social media platforms
- Goal 5, Action Step 1 – Utilize the City's cross-department safe community team to resolve issues and develop proactive programs related to traffic, code enforcement, and crime prevention efforts

Benefits Realization: To be determined in 2015

Data Needs Analysis

Background

Data is a critical asset of any government. It is used to assess overall financial health, make key business decisions, and guide the maintenance of our assets.

This project addresses two aspects of data. The first is data that is needed to determine the effectiveness and efficiency of the government and its processes. The City will be incorporating the ability to measure operational effectiveness in each new enterprise system. For instance, Cityworks will incorporate the data needed to assess the effectiveness of the management of the City's assets. However, there are currently no formal mechanisms to roll up organizational effectiveness into a format that can provide the City Manager and Council with business intelligence that could be used to guide overall program improvements.

The second area to be assessed is open data. The City captures a broad range of different data that could be used by residents for some of the following reasons:

- Transparency and democratic control
- Citizen engagement
- Self-empowerment (residents can get what they need without asking for it)
- Improved efficiency and effectiveness of government services

Seattle has initiated an open data site: <https://data.seattle.gov/>. The Seattle site has a great deal of useful data which can be downloaded and analyzed to provide useful information for our residents, and is a model of a very approachable open data site. The Washington State site is <https://data.wa.gov/>.

2016 Initiative Scope

The 2016 scope of this project is the following:

- Contract with a consultant to guide the assessment effort
- Assess needs for both internal and external data
- Identify potential partnerships with regional governments
- Select a product for use
- Prepare budget request for 2017

Cost: \$50,000. The following is an estimate of the staff effort required:

- IT Manager – 50 hours
- IT Systems Analyst – 100 hours
- City Staff – 75 hours

Alignment

IT Vision

- Technology supports business processes
- Technology supports business processes
- Technology is secure
- Technology broadens the City's outreach to their customers
- 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:

- Goal 1, Action Step 4 – Implement marketing strategies to promote Shoreline as a progressive and desirable community to new residents, investors, and businesses
- Goal 3, Action Step 1 – Engage the community in an education and outreach plan to help residents and businesses prepare for the addition of new light rail stations and service
- Goal 4, Action Step 1 – Communicate and provide opportunities for public input on key policies and initiatives, including Vision 2029, light rail station planning, safe community initiatives, the Point Wells Transportation Corridor Study, and other City projects.
- Goal 4, Action Step 4 – Advance public engagement with the implementation of the City's e311 system, online communication and survey tools and social media platforms
- Goal 5, Action Step 1 – Utilize the City's cross-department safe community team to resolve issues and develop proactive programs related to traffic, code enforcement, and crime prevention efforts

Benefits Realization: The following will be measurements of the success of this project:

- As-is processes are documented and to-be processes are improved and documented

Utility Transition Planning

Background

The City anticipates that it will be assuming Ronald Wastewater in 2017. The technology that is being used by Ronald will be transitioned to the City upon assumption. At this time, the extent of Ronald's technology is unknown. We do know that they issue permits, bill their customers, and maintain their assets. These all have technical implications.

2016 Initiative Scope

- Assess the current state of Ronald Wastewater technology:
 - Applications
 - Infrastructure
 - Vendor Support
- Develop a transition plan to implement when Ronald is assumed
- Identify any funding needs

Cost: There is no anticipated cost to this project. The following staff effort is estimated:

- IT Manager – 40 hours
- IT Systems Specialist – 80 hours
- Network Specialist – 80 hours
- GIS Specialist – 40 hours
- Web Developer – 20 hours

Alignment

IT Vision

- Technology supports business processes
- Technology is secure
- Technology broadens the City's outreach to their customers
- 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:

- Goal 2, Action Step 4 – Develop a plan to merge the Ronald Wastewater District into City operations as outlined in the 2002 Interlocal Operating Agreement

Benefits Realization:

- A sound plan is developed

New Web Hosting Implementation

Background

The Communications section with the City Manager's Office is planning to review the City's website with the intent of a revamping and modernization of the site. IT will be an ancillary player in that project. The product and service provided by the City's current hosting vendor has declined sharply in 2014. As reliance on the City's website increases, the need to provide a stable and functional platform for our residents is most important. If the decline in reliability and service continues, it will be advisable to replace this vendor when the City's website is redesigned. Product selection is anticipated to be lead by the Communications Program Coordinator with the assistance of the IT Web Developer. Budget appropriation, if needed, will be prepared by the IT Manager in 2015.

2016 Initiative Scope

- Contract for new hosting environment
- Implementation of new hosting environment
- Implement foundational design for new website
- Migrate content to new website design

Cost: Unknown at this time. A placeholder of \$60,000 is suggested. The following staff effort is estimated:

- Communication Program Coordinator – 150 hours
- Communications Specialist – 250 hours
- IT Manager – 40 hours
- Network Specialist – 20 hours
- Web Developer – 150 hours
- Web Focal Points – 500 hours (redesigning and moving content)

Alignment

IT Vision

- Technology supports business processes
- Technology is secure
- Technology broadens the City's outreach to their customers
- 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:

- Goal 1, Action Step 4 – Implement marketing strategies to promote Shoreline as a progressive and desirable community to new residents, investors, and businesses
- Goal 3, Action Step 1 – Engage the community in an education and outreach plan to help residents and businesses prepare for the addition of new light rail stations and service
- Goal 4, Action Step 1 – Communicate and provide opportunities for public input on key policies and initiatives, including Vision 2029, light rail station planning, safe community initiatives, the Point Wells Transportation Corridor Study, and other City projects.
- Goal 4, Action Step 3 – Continue to provide documents online and improve the ease of use of the City's website
- Goal 4, Action Step 4 – Advance public engagement with the implementation of the City's e311 system, online communication and survey tools and social media platforms

Benefits Realization:

- To be determined once a direction is identified

2017 Initiatives

Financial System Replacement

Background

In 2016, an assessment of the City's requirements for a new financial system was completed. The deliverable from this process was the selection of a system to replace the current One Solution system from SunGard. This project implements the selected system.

2017 Initiative Scope

- Complete contract negotiations
- Implement the system
- Convert data or create a repository for historic data
- Train staff on new system

Cost: \$400,000. The following staff effort is estimated:

- IT Manager – 200 hours
- Finance Manager – 300 hours
- Payroll Coordinator – 200 hours
- Finance staff – 300 hours
- IT Systems Specialist – 300 hours
- IT Network Specialist – 100 hours
- Other IT (unknown at this time – dependent on the product selected)

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 2: Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies
- Goal 1, Action Step 2: Develop a plan to merge the Ronald Wastewater district into City operations as outlined in the 2002 Interlocal Operating Agreement.
- Goal 2, Action Step 8: Implement a comprehensive asset management system for the City's roads, streets, facilities and park systems.

Benefits Realization: The following will be measurements of the success of this project:

- The system is fully implemented by 12/31/2017
- Measures are defined by Finance to measure effectiveness of the system

System Integration

Background

A key gap in the City's technology is the integration of our enterprise systems. Our asset management system does not tie to the financial system, where staff costs reside. Parks and Permits are unable to directly update their revenue to the financial system. The financial system is the hub of the City's application systems. All enterprise systems should be replaced by 2017, and it is now time to integrate them. This will result in the following benefits:

- Integrated processes that do not require human intervention
- Greater accuracy (data does not need to be rekeyed)
- Consistent data between systems (better metrics and cross checks between systems)

While the City may have elected to implement some temporary interfaces to the old financial system, this project will reassess the need for integration between systems and this project will design and construct the interfaces to the new financial system. It is anticipated that this project will start in 2017, but will not complete until sometime in 2018. We anticipate the use of multiple consultants to guide us through the interfaces with particular products (e.g. Cityworks, new Parks system, new Permit system),

2017/8 Initiative Scope

- Assess interfaces required
- Develop a plan to construct the interfaces
- Design the interfaces
- Implement the interfaces

Cost: \$200,000. The following staff effort is estimated:

- IT Manager – 50 hours
- IT Systems Specialist – 400 hours
- IT Network Specialist – 50 hours

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

- Goal 1, Action Step 2: Implement efforts to make the permit process predictable, timely and competitive including the implementation of a new permit software system and enhancing the partnership with other permitting agencies
- Goal 2, Action Step 4: develop a plan to merge the Ronald Wastewater District into City operations as outlined in the 2002 Interlocal Operating Agreement
- Goal 5, Action Step 1: Utilize the City's cross-department safe community team to resolve issues and develop proactive programs related to traffic, code enforcement, and crime prevention efforts

Utility Implementation

Background

An assessment was made in 2016 regarding the transition that would need to occur upon the assumption of Ronald Wastewater. This project will complete the transition.

2017 Initiative Scope

- Transition (as-is or migrate) the following to City Hall:
 - Applications
 - Infrastructure
 - Vendor Support
- Assume the operation for all technologies that were assumed

Cost: Unknown at this time – dependent on the 2016 assessment. The following staff effort is estimated:

- IT Manager – 40 hours
- IT Systems Specialist – 80 hours
- Network Specialist – 100 hours

Alignment

IT Vision

- Technology supports business processes
- Technology is secure
- 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:

- Goal 2, Action Step 4 – Develop a plan to merge the Ronald Wastewater District into City operations as outlined in the 2002 Interlocal Operating Agreement
-

Benefits Realization: The following will be measurements of the success of this project:

- Transition complete by March 31, 2017

Cityworks Implementation Phase III

Background

Cityworks has been implemented since mid 2015 for all of Public Works, Fleet and Facilities. A project cost estimate was obtained in 2014 for a separate implementation of Parks. The cost was higher than it would have been in Parks had been included in Phase II because the City had an ‘economy of scale’ by implementing multiple business units concurrently.

It is anticipated that upon the assumption of Ronald Wastewater, the City will need to incorporate those assets into the Cityworks system. One of the driving forces of the computerized maintenance management program was to support the assumption of utilities. It will be critical to load the wastewater assets into Cityworks to support this vision.

It is recommended that Parks be implemented concurrent with Ronald to achieve the same economy of scale. With the impending retirement of the Parks director in early 2015, this provides an opportunity for a new director to have a role in defining operational goals before the implementation of a new system.

It should be noted that this project should be reassessed in 2016. A prioritization may be needed between this project and the new financial system.

2017 Initiative Scope

- [Note – if this project is to move forward in 2017, a budget request must be initiated in 2016]
- New or amended contract for implementation services
- Implement new system

Cost: \$200,000. Staff estimates are:

- IT Manager – 100 hours
- IT Systems Specialist – 100 hours
- GIS Specialist – 100 hours
- GIS Technician – 200 hours
- Parks Cityworks Coordinator – 75 hours
- Utility Cityworks Coordinator – 75 hours
- Line Staff Core Team – 500 hours (total)
- Other IT Staff – 75 hours

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

- Goal 2, Action Step 8 – Implement a comprehensive asset management system for the City’s roads, streets, facilities and park systems

Benefits Realization: The following will be measurements of the success of this project:

- The system is fully implemented by 12/31/2017
- Measures are defined by Parks and Public Works to measure effectiveness of the system

Open Data Implementation

Background

The 2016 project assessing both the internal and external need for data provisioning and access defined the needs and the tools that were appropriate to manage the City’s data. This project will implement those recommendations.

2017 Initiative Scope

- New contract for implementation services
- Implement data recommendations

Cost: \$50,000. Staff estimates are:

- IT Manager – 75 hours
- IT Systems Specialist – 150 hours

Alignment

IT Vision

- Technology supports business processes
- Technology supports business processes
- Technology is secure
- Technology broadens the City’s outreach to their customers
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Council Goals – will support internal processes to support:

- Goal 1, Action Step 4 – Implement marketing strategies to promote Shoreline as a progressive and desirable community to new residents, investors, and businesses
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- Goal 4, Action Step 4 – Advance public engagement with the implementation of the City’s e311 system, online communication and survey tools and social media platforms
- Goal 5, Action Step 1 – Utilize the City’s cross-department safe community team to resolve issues and develop proactive programs related to traffic, code enforcement, and crime prevention efforts

Benefits Realization: The following will be measurements of the success of this project:

- The system is fully implemented by 12/31/2017
- Measures are defined City staff who will either provide or use the data

Equipment Replacement

Background

Each year, there will be a project to replace aging equipment. This is important to ensure a reliable and consistent technical environment. Equipment replacement includes the following equipment:

- Desktops, Workstations and Laptops
- Servers
- Storage
- Network components
- Telephony

2017 Initiative Scope

In 2017, the following equipment is on the plan for replacement:

- Desktops, workstations and laptops that are more than 4 years old
- Upgrade SQL Server Enterprise licenses
- Purchase replacement servers for our virtualized environment
- Replace EOC Server
- UPS Replacement

The scope of this effort will include:

- Order and implement new desktop, workstation and laptop computers
- Order and implement new licenses and equipment
- Surplus old equipment
- Reassess 2018 requirements

Cost: \$175,000 plus 200 hours in staff time (note that this cost is \$45K higher than the normal year. This is due to the cost of the SQL Server Enterprise licenses.

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

Benefits Realization

- <1% of our replaced hardware fails
- <5% of our replaced UPS units fail due to battery failure
- Applications perform within established service level 90% of the time
- We do not have unplanned expansion of our disk storage

Appendix H – Technology Plan Cost Estimates

City of Shoreline Strategic Technology Plan Cost Estimates				
Plan Year	Initiative	Cost	Staff Hours	Comments
2014/2015	Email Archiving	\$50,000	175	
	Cityworks Phase II	\$236,899	1150	
				A plan will be established after an assessment. Anticipate ability to implement some changes with operational funding. Others may require a 2016 budget request.
	Stabilize Technology	\$70,000		
	IT Maturity	\$7,000	1800	
	SharePoint	\$68,750	950	
				Cost is based on a SaaS product selection. The majority of staff time is allocated to the current Class System Administrator who resides in Parks
	Class Replacement	\$65,000	500	
	Permit System Assessment	\$30,000	280	
	Equipment Replacement	\$130,000	200	
2014/2015 Totals		\$657,649	5055	
2016	SharePoint Phase II	\$20,000	700	
	Permit System Replacement	\$450,000	1250	
	Financial System Replacement			
	Assessment	\$75,000	200	
	Equipment Replacement	\$130,000	200	
				The cost and effort will be dependent on the Permit system selected. We will, at a minimum, need to create a customer portal (perhaps with See-Click-Fix)
	Customer Service	\$50,000		
	Data Needs Analysis	\$50,000	225	
	Utility Transition			Cost and effort are unknown at this time
				Project will be dependent on the 2015 Website assessment that will be completed by the City's Communications section of CMO
	New Web Hosting	\$60,000	1090	
2016 Totals		\$835,000	3665	
2017	Financial System Replacement	\$400,000	1400	
	System Integration	\$200,000	500	
	Utility Implementation			Cost and effort are unknown at this time
	Cityworks Phase II	\$200,000	1175	
	Open Data Implementation	\$50,000	225	
	Equipment Replacement	\$175,000	200	
2017 Totals		\$1,025,000	3500	
		\$2,517,649	12220	