



INFORMATION TECHNOLOGY STRATEGIC PLAN

2017 UPDATE



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Executive Summary

The Information Technology Strategic Plan was adopted in September 2016. As part of the ongoing process to maintain the plan, IS staff, along with key stakeholders, met in January of 2017 to assess current and future business needs, budget, and the overall strategic fit to the City’s overarching mission to: **“Provide quality service that ensures a safe, attractive, economically vital community while preserving the City’s natural environment and heritage.”**

The Information Technology Strategic Plan Update 2017 focuses on the short, medium, and long term recommendations, as well as those ongoing and completed prior to this update. It should be noted that the recommendations have been adjusted to better reflect a timeline of the stakeholder findings. Each recommendation is outlined according to the table below, with an addition of a “2017 Update” section, noting any updates or changes.

Item	Description
Strategic Recommendation	Mindboard’s recommendation associated with the corresponding strategic theme
Gaps Addressed	Gaps associated with the strategic area.
Action Steps	A sequence of steps that must be taken, or activities that must be performed well, for the strategic recommendation to succeed.
Prerequisite(s)	The action step or the activity that should have been completed prior to implementing the strategic recommendation.
Stakeholders	All parties that are involved in implementing the strategic recommendation.
Resources	Employees responsible for undertaking the action steps/activities defined in the plan.
Estimated Cost	Estimated costs for implementing the recommendation based on industry research and experience. Please note that cost estimates from Vendors were not directly obtained.
Impact/Comments	Additional comments associated with the corresponding strategic recommendation. If applicable, any Council Goals this project supports will be noted here.
2017 Update	Updates or changes made in 2017.

Project Recommendations Timeline (updated 2017)

Project #	Short Term	Project #	Medium Term	Project #	Long Term
1.	Streamline IT Procurement Process				
2.	Streamline IT Funding				
3.	Develop Fiber Business Plan				
6.	Combine City Web Sites and Social Media Accounts				
7.	Upgrade Exchange - Evaluate Cloud Based Email Alternative				
9.	Develop Disaster Recovery Plan				
10.	Develop IT Policies and Procedures				
12.	Implement New Financial ERP System (Including Utility Billing and HRIS)				
14.	Implement Integrated Land Management System (permitting, Inspections, Code Enforcement)				
15.	Promote Use of GIS as an Organizational Priority				
18.	Implement Email Archiving and E-Discovery Solution				
33.	Telemetry Upgrade				
34.	Office/OS Upgrade				
36.	Implement IT Auditing and Security Solutions				
		5.	Implement Event, Facility Booking and Volunteer Management System		
		8.	Implement Run Cutting System at SMART		
		11.	Use Cartegraph as an Enterprise Asset Management System		
		16.	Combine Payment Processing Systems and Merchant Accounts-Citizen Portal		
		21.	Implement a Collaboration System (Cloud Based?)		
		22.	Implement Integrated Security Access System		
		25.	Implement a Cloud Based VoIP Telephone System		
		35.	Fuel Management Software		
				17.	Implement Enhanced Interactive Voice Response (IVR) Solution
				19.	Implement Project Management System
				20.	Implement Integrated Time Tracking and Payroll System-Electronic Timesheets
				23.	Implement centralized, Integrated Customer Database and Portal
				24.	Implement a Business Intelligence (BI) Tool
				26.	Implement Virtual Desktops and Enhanced VPN Solution
				27.	Modernize Fare Collection System at SMART
				28.	Consider Implementing Automated Meter Reading (AMR) Infrastructure
Ongoing					
13.	Implement Laserfiche as City Wide Electronic Document Management System				
29.	Continue Standardizing IT Environment				
30.	Establish Periodic IT Skill Gap Review Process				
31.	Continue Enhancing Audio/Video and WilsonvilleTV Infrastructure				
32.	Implement Municipal Fiber Program				
Completed					
4.	Hire IT Assistant				

Project Recommendations List by Project Number

Project #	Project Recommendation Name	Identification Date	Completion Date
1	Streamline IT Procurement Process	2016	
2	Streamline IT Funding	2016	
3	Develop Fiber Business Plan	2016	
4	Hire IT Assistant	2016	2016
5	Implement Event, Facility Booking and Volunteer Management System	2016	
6	Combine City Web Sites and Social Media Accounts	2016	
7	Upgrade Exchange - Evaluate Cloud Based Email Alternative	2016	
8	Implement Run Cutting System at SMART	2016	
9	Develop Disaster Recovery Plan	2016	
10	Develop IT Policies and Procedures	2016	
11	Use Cartegraph as an Enterprise Asset Management System	2016	
12	Implement New Financial ERP System (Including Utility Billing and HRIS)	2016	
13	Implement Laserfiche as City Wide Electronic Document Management System	2016	Ongoing
14	Implement Integrated Land Management System (permitting, Inspections, Code Enforcement)	2016	
15	Promote Use of GIS as an Organizational Priority	2016	
16	Combine Payment Processing Systems and Merchant Accounts-Citizen Portal	2016	
17	Implement Enhanced Interactive Voice Response (IVR) Solution	2016	
18	Implement Email Archiving and E-Discovery Solution	2016	
19	Implement Project Management System	2016	
20	Implement Integrated Time Tracking and Payroll System-Electronic Timesheets	2016	
21	Implement a Collaboration System (Cloud Based?)	2016	
22	Implement Integrated Security Access System	2016	
23	Implement centralized, Integrated Customer Database and Portal	2016	
24	Implement a Business Intelligence (BI) Tool	2016	
25	Implement a Cloud Based VoIP Telephone System	2016	
26	Implement Virtual Desktops and Enhanced VPN Solution	2016	
27	Modernize Fare Collection System at SMART	2016	
28	Consider Implementing Automated Meter Reading (AMR) Infrastructure	2016	
29	Continue Standardizing IT Environment	2016	Ongoing
30	Establish Periodic IT Skill Gap Review Process	2016	Ongoing
31	Continue Enhancing Audio/Video and WilsonvilleTV Infrastructure	2016	Ongoing
32	Implement Municipal Fiber Program	2016	Ongoing
33	Telemetry Upgrade	2017	
34	Office/OS Upgrade	2017	
35	Fuel Management Software	2017	
36	Implement IT Auditing and Security Solutions	2017	

Short Term Project Recommendations

Recommendation	1. Streamline IT Procurement Process
Gaps Addressed	<ul style="list-style-type: none"> No Formalized IT Procurement Process No IT Strategic Plan or Formalized Process for Annual Plan Review
Action Steps	<ul style="list-style-type: none"> Adopt IT Strategic Plan as the City's definitive IT investment plan Ensure proposed projects conform to the standardized IT environment Make collective decision for IT investments Communicate proposed IT projects across the City Communicate potential changes to business process to all stakeholders Include IS Manager in Procurement Vetting and Contracting Process up front Refresh IT Strategic Plan Annually with Executive Team
Resources	<ul style="list-style-type: none"> Department Directors Information Systems Manager
Stakeholders	<ul style="list-style-type: none"> IS Staff All city staff
Prerequisites	<ul style="list-style-type: none"> None
Estimated Cost	<ul style="list-style-type: none"> Staff time - Internal
Impact/Comments	<p>A rolling 5 year IT Strategic Plan would incorporate an annual update with reprioritization of the IT Projects based on input from the City Manager and Executive Team. Technology projects seeking to be implemented outside the strategic planning process would come to the IS Department for vetting and procurement assistance.</p>
2017 Update	<p>IS staff will work in conjunction with Legal department staff to formalize the purchasing process for IT related purchasing.</p>

Recommendation	2. Streamline IT Funding
Gaps Addressed	<ul style="list-style-type: none"> • No IS Oversight of Enterprise Application Funding • Not all Large Projects have Set Asides for Implementation or Replacement
Action Steps	<ul style="list-style-type: none"> • Centralize IT Reserve Funding • Include IS Department in Funding Oversight • Make IS department owner of all IT projects across the City • Fund city-wide initiatives such as essential standard IT capability development from a centralized IT fund managed by IS Manager
Resources	<ul style="list-style-type: none"> • Department Directors • Information Systems Manager
Stakeholders	<ul style="list-style-type: none"> • IS Staff • All city staff
Prerequisites	<ul style="list-style-type: none"> • Streamline IT Procurement Process
Estimated Cost	<ul style="list-style-type: none"> • Staff time - Internal
Impact/Comments	<p>Continue current IT specific infrastructure funding and charge-back process for support. Enterprise applications replacement should have a centralized reserve fund overseen by IT but funded proportionately by the various stakeholder departments.</p>
2017 Update	<p>IS Manager will oversee funding for IT specific projects through CIP project budgeting.</p>

Recommendation	3. Develop Fiber Business Plan
Gaps Addressed	<ul style="list-style-type: none"> • Incomplete fiber business plan
Action Steps	<ul style="list-style-type: none"> • Complete and implement fiber business plan
Resources	<ul style="list-style-type: none"> • IS Manager • Municipal Fiber Consultant
Stakeholders	<ul style="list-style-type: none"> • IS Staff • All city staff
Prerequisites	<ul style="list-style-type: none"> • None
Estimated Cost	<ul style="list-style-type: none"> • Staff time – Internal • Consulting Fees
Impact/Comments	City fiber asset use based on results of the fiber business plan currently underway.
2017 Update	IS Manager is currently working with a consultant and has completed the process of information gathering through interviews with local businesses and staff, and online through surveys to obtain feedback from the public.

Recommendation	6. Combine City Web Sites and Social Media Accounts
Gaps Addressed	<ul style="list-style-type: none"> • Multiple Social Media Accounts • Inconsistent Branding and Messaging • Multiple Calendars of Events, News, Site Searches, and Notifications
Action Steps	<ul style="list-style-type: none"> • Conduct Web site usability analysis • Identify consolidation process • Hire Web site content management vendor to redesign and consolidate web sites • Publish new, consolidated web site • Clarify Web Site and Social Media content management responsibilities between IS and Communications staff • Allow Two-Way Communication between City and Citizens through Social Media Platforms • Track Web Analytics
Resources	<ul style="list-style-type: none"> • IS Department • Communications Department • City-wide Web Team
Stakeholders	<ul style="list-style-type: none"> • IS Staff • All city staff • Citizens
Estimated Cost	\$36,000 (Web design vendor) plus ongoing maintenance costs
Impact/Comments	<p>The City consolidates all individual websites under its parent domain and enforces a thematic framework to improve branding. The websites provide a common self-service framework to automate most common services to citizens and integrate with the ERP, Land management and CRM systems to provide real time automated workflow to users.</p> <p>The City investigates a social media consolidation tool to manage accounts and publish content to multiple channels in an efficient manner. The City allows two-way communication with citizens on its social media accounts and allows for comment on council meetings online. The City tracks, analyzes, reports and makes communication decisions (web site, social media, etc.) based on web traffic analytics for its web site.</p> <p>Formal policies are developed for content management and posting.</p>
2017 Update	<p>IS staff is currently seeking out web design vendors in order to get costs for consolidating the sites and updating the design to match the new logo. Administration department staff have developed a Social Media Policy and are actively participating in two way communications with citizens.</p>

Recommendation	7. Upgrade Exchange - Evaluate Cloud Based Email Alternative
Gap Addressed	<ul style="list-style-type: none"> On premise, self-hosted Microsoft exchange server in need of upgrade Email and attachment size limitations with on premise system
Action Steps	<ul style="list-style-type: none"> Conduct return on investment (ROI) analysis on continuing self-hosting email server vs migrating to cloud based service Select appropriate option and implement solution
Resources	<ul style="list-style-type: none"> IS Department
Stakeholders	<ul style="list-style-type: none"> IS Staff All city staff
Prerequisite	<ul style="list-style-type: none"> Develop Enterprise Architecture Standards
Estimated Cost	<ul style="list-style-type: none"> Cost of upgrade to Exchange server or per month per user charges for cloud based email services
Impact/Comments	<p>A self-hosted Microsoft Exchange application is currently used for the City's email system. The current Exchange version is reaching end of life and will need to be upgraded to continue to provide a functional and secure e-mail system.</p> <p>The City does not have an archiving tool, other than the limited built-in Exchange tool, which leads to user mailbox sizes growing rapidly and frustration with mailbox size limits that have been implemented to help staff better comply with State mandated records management regulations.</p> <p>Additionally, email attachment size restrictions (15 MB) create issues when sending large files. These physical limitations can be addressed by moving to a cloud-based exchange system, but a cloud-based system will not address the policy and compliance issues.</p>
2017 Update	<p>The determination was made to keep the self-hosted Exchange solution in place, however it will be upgraded to the latest version in the Summer of 2017.</p> <p>Upon approval from the budget committee, an email archiving solution will be implemented in the future.</p>

Recommendation	9. Develop Disaster Recovery Plan
Gap Addressed	<ul style="list-style-type: none"> • Lack of Geographic Dispersal for Mirror Site • Incomplete Disaster Recovery Plan and Testing Procedure • Lack of Redundancy in High Speed Business Internet Connectivity
Action Steps	<ul style="list-style-type: none"> • Assess risks to continuity of business operations • Implement redundant internet connections • Specify data backup procedures and plan for further expansion • Create plan for backup center of operations • Establish vendor relationships for emergency replacement of equipment • Create plan for re-establishment of operations • Test plan and refine based on results of initial and annual testing
Resources	<ul style="list-style-type: none"> • IS Department
Stakeholders	<ul style="list-style-type: none"> • All city staff
Prerequisites	<ul style="list-style-type: none"> • Hire 1 Full time IT Assistant
Estimated Cost	<ul style="list-style-type: none"> • Staff time
Impact/Comments	<p>The City uses a geographically dispersed location to house its mirror site.</p> <p>The City continues to use current practice of regular data backup and application/database redundancy to provide business continuity. A formal disaster recovery plan is completed and annual testing implemented. The City implements fault tolerant, duplicate internet connections for enhanced business continuity.</p>
2017 Update	<p>Due to low staffing levels planning for this recommendation has only begun. Research into cloud backup solutions has been performed and a solution may be implemented upon budget committee approval.</p>

Recommendation	10. Develop IT Policies and Procedures
Gap Addressed	Minimal formally documented IT Policies and Procedures
Action Steps	<ul style="list-style-type: none"> • Develop Enterprise Architecture Plan and Policies • Specify IT equipment and software standards • Specify staff and hardware authorized for remote access • Establish ramifications of non-adherence to policies • Publicize policies across City • Obtain end user signature on new policies as a form of acceptance
Resources	<ul style="list-style-type: none"> • IS Department • HR Department
Stakeholders	<ul style="list-style-type: none"> • All city staff
Prerequisites	<ul style="list-style-type: none"> • Hire one Full Time IT Assistant
Estimated Cost	<ul style="list-style-type: none"> • Staff time • \$20k plus ongoing costs for audit & permissions tool
Impact/Comments	<p>Approaches to computer usage, remote access, internet access, IT equipment procurement, and many other activities should be standardized and communicated throughout the City. Policies should be defined to establish Standard Operating Procedures (SOP) that are uniform and to establish the foundation for enforcement of these policies. Failure to maintain relevant policies and procedures places the City in a position of vulnerability as it relates to enforcement and expenditures on inappropriate use of IT infrastructure.</p> <p>IS develops formal policies in place of informal policies now utilized in the areas of mobile device management, IT equipment standards, remote access, physical access (key cards), etc.</p> <p>The City continues to use Mass360 to manage policy on mobile devices but augments Active Directory with a more comprehensive auditing and permissioning tool.</p>
2017 Update	IS Manager will work with Human Resources Manager to develop formal IT polices.

Recommendation	12. Implement New Financial ERP System (Including Utility Billing and HRIS)
Gap Addressed	<ul style="list-style-type: none"> • Manual Workarounds for Payroll, Utility Billing, HR and AP Processes • Lack of Integration with Asset Management System • Eden not used by Departments outside Finance for Budgeting and Reporting
Action Steps	<ul style="list-style-type: none"> • Perform detailed needs assessment for an ERP system • Scan the market for available ERP systems • Ensure ERP system conforms to the Enterprise Architecture • Perform cost/benefit analysis of each ERP system and select system • Develop plan and timeline to implement the ERP system • Communicate the plan to all department directors • Procure and Implement selected ERP system • Integrate ERP and other relevant enterprise IT systems with GIS database • If applicable, conduct training to relevant city staff on a “train the trainer” method • Roll out the new ERP system to all users
Resources	<ul style="list-style-type: none"> • IS Manager • External Consultant (needs assessment and implementation assistance) • Department-level Project Champions
Stakeholders	<ul style="list-style-type: none"> • IS Staff • All city staff (especially Finance/HR/Public Works – Utilities)
Prerequisites	<ul style="list-style-type: none"> • Hire 1 full time IT Assistant • Develop IT Policies, including Enterprise Architecture plan
Estimated Cost	<ul style="list-style-type: none"> • \$1,000,000 - \$1,200,000 plus annual maintenance fees (~\$100,000)
Impact/Comments	<p>An Enterprise Resource Planning (ERP) system is used as a single repository for all information regarding the city’s business operations. The ERP system provides seamless access to all relevant users based on roles and responsibilities to track preset operational metrics real-time.</p> <p>The ERP system automates common business processes such as accounts receivable, accounts payable, budgeting etc. to improve efficiency and is integrated with other enterprise systems to have relevant data across departments (HR, Payroll, Inventory control, Asset Management, Utility Billing, etc.) The ERP system is accessible remotely (desktop and mobile) for appropriate users.</p>
2017 Update	<p>IS Manager will serve as the project manager. Select staff have participated in demonstrations of potential new systems.</p>

Recommendation	14. Implement Integrated Land Management System
Gaps Addressed	<ul style="list-style-type: none"> • Paper based Inspection Processes • Inaccurate Land Parcel Information – not Integrated with GIS • Eden IVR, Online and Mobile Systems are Inadequate
Action Steps	<ul style="list-style-type: none"> • Perform detailed needs assessment for a comprehensive land management system • Scan the market for available solutions • Compare the available features of the solutions with needs of the city • Ensure that the chosen solution integrates with ERP and other enterprise IT systems • Perform cost/benefit analysis of each solution • Develop plan and timeline to implement the solution • Communicate the plan to all relevant department directors • Procure and Implement selected solution • Conduct training to relevant city staff on a “train the trainer” method • Roll out the new solution to all users
Resources	<ul style="list-style-type: none"> • GIS Manager • IS Manager • Relevant City staff • Implementation Consultant
Stakeholders	<ul style="list-style-type: none"> • All city staff
Prerequisites	<ul style="list-style-type: none"> • Consolidation of GIS and AutoCAD databases • Hire 1 full time IT Assistant • Development of Enterprise Architecture Standards
Estimated Cost	<ul style="list-style-type: none"> • Staff time • Land Management System Licenses
Impact/Comments	<p>The City uses a Comprehensive Land Management system that streamlines all actions based on parcels including permits, inspections, investigations, reviews, zoning, project plans, code enforcement, etc. The land management system is built on a GIS platform so that any changes to the property information in the City’s GIS system are automatically up to date in the land management system. This system is also integrated with the Financial ERP and Customer Database to provide a single view of the customer and track code conformance over a period of time.</p> <p>The land management system is mobile enabled to allow field workers to compile inspection reports remotely, including a template based</p>

	<p>document generation system to speed completion of inspection reports in the field.</p> <p>The land management system utilizes an automated workflow to route items between staff both within and across departments for assignment, review, notification and approval. It also includes timers and ticklers to keep projects flowing and ensure that all appropriate items are tracked, notified on, and completed – including long term land use actions, agreements, and conditions.</p> <p>Finally, the land management system includes a modern web interface that provides customers with a fast and easy way to schedule inspections and pay for permits online. The web interface integrates with the City’s customer portal and single merchant account for payment processing and customer service.</p>
2017 Update	<p>The IS Manager along with the Building Official will lead this project. Select staff have participated in demonstrations of potential new systems. Depending on the outcome of the needs assessment this may be a part of the ERP System.</p>

Recommendation	15. Promote Use of GIS as an Organizational Priority
Gaps Addressed	<ul style="list-style-type: none"> • Duplicative GIS and CAD Databases • No Automated Integration with Utility Billing and Permitting Systems • Outdated, Inadequate Self-Service Tools
Action Steps	<ul style="list-style-type: none"> • Consolidate GIS and AutoCAD databases • Conduct customer needs assessment to determine self-service GIS tool and data needs • Acquire and implement GIS self-service tools • Train users on self-service tools
Resources	<ul style="list-style-type: none"> • IS Manager • GIS Manager • Engineering Staff
Stakeholders	<ul style="list-style-type: none"> • All city staff • Public
Prerequisites	<ul style="list-style-type: none"> • Development of Enterprise Architecture Standards
Estimated Cost	<ul style="list-style-type: none"> • Staff time • Cost of GIS Self Service Tools (~\$40,000)
Impact/Comments	<p>The city has developed a robust database of GIS data for major assets, land use and accompanying attributes and provides three interfaces (internal and external version of Wilsonville Maps and internal use of Arc view) to access the GIS data. The city also separately maintains a different database with similar information for use with AutoCAD.</p> <p>A single, authoritative, GIS database replaces the existing multiple databases and new enterprise permitting and utility billing applications fully integrate with GIS for parcel and addressing information – without manual processing. New web based self-service GIS tools built on current technology offer faster performance, greater flexibility, and enhanced visual appeal, which leads to GIS staff spending more time on GIS infrastructure, data updates, and training and less time making maps.</p>
2017 Update	<p>IS and GIS are working in conjunction with Engineering staff to upgrade software and hardware to make more efficient use of data. Upon approval of the budget committee, the self-service tools will be updated in fiscal year 2017-2018 (FY17-18).</p>

Recommendation	18. Implement Email Archiving and E-Discovery Solution
Gap Addressed	<ul style="list-style-type: none"> • Space Limitations for Email and Attachment Size Limits when Sending Large Files • No Email Archival or E-Discovery System
Action Steps	<ul style="list-style-type: none"> • Obtain required equipment • Create implementation schedule • Determine archiving Estimated Timelines based on Records Retention Schedule for the State of Oregon • Prepare environment for implementation • Train management and end users on use of system • Incorporate email archiving into a Disaster Recovery Plan • Go Live with Email Archiving system
Resources	<ul style="list-style-type: none"> • IS Department • Legal Department • City Recorder
Stakeholders	<ul style="list-style-type: none"> • All City staff
Prerequisite	<ul style="list-style-type: none"> • Upgrade Microsoft Exchange Server or Migrate to Cloud Based Email System • Obtain clarification on email retention policies from Legal Department
Estimated Cost	~\$100,000 plus annual maintenance costs
Impact/Comments	<p>The installation of an archiving system will provide a means for migrating email and PST files. In addition, email archiving will reduce the server requirements of the current system. Once policies are established for mailboxes, emails and other Microsoft Outlook (or cloud based email) data will automatically be archived on a separate server.</p> <p>An additional consideration of archiving is the ability to provide legal discovery (eDiscovery module), which will enable faster search and retrieval of emails, calendar items, contact list, etc. across the organization for legal discovery purposes. Some advanced systems can archive and simultaneously search across multiple social media accounts as well.</p>
2017 Update	IS staff have participated in demonstrations from vendors who provide this service. A solution has been identified that is considerably cheaper than the initial estimate. Upon budget committee approval this project will occur in the FY17-18.

Recommendation	33. Telemetry Upgrade
Gap Addressed	<ul style="list-style-type: none"> Existing telemetry system has been built in stages over time Standards are missing or different on each segment
Action Steps	<ul style="list-style-type: none"> Assist Engineering in creating and implementing a telemetry standard that will utilize the City Fiber.
Resources	<ul style="list-style-type: none"> Engineering department Utilities Department IS Department
Stakeholders	<ul style="list-style-type: none"> City Staff Veolia Staff CH2M Staff
Prerequisite	<ul style="list-style-type: none"> City Fiber installed at all main telemetry sites.
Estimated Cost	~\$40,000 in design costs ~\$10,000 a year to pick up various sites in the City
Impact/Comments	Updating and standardizing the Telemetry software will modernize the system and make it much easier and cost effective to maintain in the future.
2017 Update	The Engineering Department has started working with a vendor to create the specifications required for the Telemetry system.

Recommendation	34. Office/Operating System Upgrade
Gap Addressed	<ul style="list-style-type: none"> • Dated Microsoft Office software • Operating System Software is not the current version
Action Steps	<ul style="list-style-type: none"> • IS Staff to test software prior to Citywide rollout • Prepare environment for implementation • Create end user training materials • Coordinate rollout of software to end users
Resources	<ul style="list-style-type: none"> • IS Department
Stakeholders	<ul style="list-style-type: none"> • All City Staff
Prerequisite	<ul style="list-style-type: none"> • All current software is tested for compatibility
Estimated Cost	~\$53,000 for Office Licenses ~\$30,000 for Operating System Licenses
Impact/Comments	Microsoft Office and the Windows Operating System are the most used software applications by all staff, therefore this project will impact everyone's day to day work. IS staff will train and educated staff on the new software thus minimizing the interruption this will cause.
2017 Update	IS staff have tentatively planned this project to occur in the Summer of 2017.

Recommendation	36. Implement IT Auditing and Security Solutions
Gap Addressed	<ul style="list-style-type: none"> • Auditing of servers and IT infrastructure is minimal • Lack of auditing capabilities requires strict access control in some departments that prevents easy sharing of data • IT threats are increasing. Current security technology may not keep up with newer threats
Action Steps	<ul style="list-style-type: none"> • Evaluate current software technology and update where necessary • Examine the IT environment and identify areas where efficiencies can be gained due to new software.
Resources	<ul style="list-style-type: none"> • IS Department
Stakeholders	<ul style="list-style-type: none"> • IS Staff • All City Staff
Prerequisite	<ul style="list-style-type: none"> • None
Estimated Cost	~\$90,000 plus annual maintenance costs
Impact/Comments	Adding new software to increase Auditing and Security capabilities will help keep the City protected against emerging threats. It will also allow a collaborative environment for the departments to work in.
2017 Update	Several add packages have been submitted that will address areas identified such as new email antivirus protection and auditing software. If approved by the budget committee, they will be implemented in FY 17-18.

Medium Term Project Recommendations

Recommendation	5. Implement an Enterprise wide Integrated Event, Facility Booking and Volunteer Management Systems
Gap Addressed	<ul style="list-style-type: none"> • No City-wide Event Registration, Facility Booking and Volunteer Management System • ActiveNet is not User Friendly and is Expensive per Transaction • Volunteer Works is Unsupported by its Developers • No Integration with Financial ERP for Reconciliation of Financial Transactions • No Access to Event Management for Other City Departments such as Administration
Action Steps	<ul style="list-style-type: none"> • Perform detailed needs assessment for an enterprise wide event registration and volunteer management system • Scan the market for available solutions • Compare the available features of the solutions with needs of the city • Ensure the solution conforms to the City’s strategic plan • Select an event registration and volunteer management system • Develop plan and timeline to implement the solution • Communicate the plan to all relevant department directors • Procure and Implement selected solution • Integrate ERP and other relevant enterprise IT systems with the solution • Conduct training for relevant city staff on a “train the trainer” method • Roll out the new solution to all users
Resources	<ul style="list-style-type: none"> • IS Staff • Relevant City staff
Stakeholders	<ul style="list-style-type: none"> • All City staff • All city residents
Prerequisites	<ul style="list-style-type: none"> • Streamline IT Procurement • Development of Enterprise Architecture Standards
Estimated Cost	<ul style="list-style-type: none"> • Staff time • Cost of event registration and volunteer management system
Impact/Comments	<p>Implementation of this recommendation will ensure that the City has user-friendly enterprise event registration, facility booking and volunteer management systems, which are integrated with the financial ERP system and Citizen database and portal. The new integrated solution automates all event management processes and manages payment with minimal manual intervention and integrates with a single</p>

	sign-on customer portal and backend single payment/merchant account processor.
2017 Update	This recommendation was pushed to the medium term from the short to allow the recently hired Parks & Recreation Director time to familiarize with the software program. Interviews with current staff show that they would like a solution that is a one-stop shop that is user friendly and takes payments for citizens, but also provides internal staff tools to more easily plan and accommodate for City wide events.

Recommendation	8. Implement Run Cutting System at SMART
Gap Addressed	<ul style="list-style-type: none"> No Run Cutting System – manual process (rarely used in the public transit industry) managed by staff member who is about to retire
Action Steps	<ul style="list-style-type: none"> Perform detailed needs assessment for a run cutting system Scan the market for available systems Compare the available features of the run cutting systems with needs of the City Develop plan and timeline to implement the system Procure and implement selected system Integrate run cutting system with fixed route scheduling system Roll out the new system
Resources	<ul style="list-style-type: none"> IS Department SMART Staff
Stakeholders	<ul style="list-style-type: none"> IS Staff SMART Staff
Prerequisites	<ul style="list-style-type: none"> Budget Approval
Estimated Cost	<ul style="list-style-type: none"> \$40,000 - \$60,000 plus ~20% for annual maintenance
Impact/Comments	<p>The City uses an automated run-cutting process to improve efficiency and accuracy of its fixed route transit operations. In conjunction with the newly implemented routing and Computer Aided Dispatch (CAD) and Automated Vehicle Location (AVL) systems, a run cutting software will greatly reduce manual processes.</p> <p>This application is critical due to the upcoming retirement of the Transit Operations Manager, the only staff person trained in run cutting. Staff currently perform this process manually, which involves a skillset that is no longer trained and rarely found.</p> <p>Supports Council Goal 9 – Multi-Modal Transportation Network</p>
2017 Update	<p>The Transit department decided to extend this recommendation another year to look for either a run cutting program or, more beneficial, a route and planning software application.</p>

Recommendation	11. Use Cartegraph as an Enterprise Asset Management System
Gaps Addressed	<ul style="list-style-type: none"> • Asset Information is inconsistent with Eden (Finance) Fixed Assets - No Integration Between ERP and Cartegraph System • Detailed Inventory Process Not Utilized • Parks Maintenance does not utilize Cartegraph • Fleet does not use RTA for inventory management
Action Steps	<ul style="list-style-type: none"> • Develop plan and timeline to add all city assets in shared GIS database • Communicate the plan to all Department Directors • Make Department Directors accountable for accuracy of relevant asset information in GIS database • Integrate ERP and other enterprise IT systems with GIS database • Reconcile and update asset data in GIS database with that in Eden • Eliminate asset data from Eden • Make Department Directors accountable for using Cartegraph to track all activities on assets • Use Cartegraph as the single repository for all asset related information
Resources	<ul style="list-style-type: none"> • GIS Manager • Relevant City staff • Asset gathering assistance – interns or vendor
Stakeholders	<ul style="list-style-type: none"> • All city staff
Prerequisites	<ul style="list-style-type: none"> • Consolidation of GIS and AutoCAD databases • City-wide asset condition assessment
Estimated Cost	<ul style="list-style-type: none"> • Staff time • License costs for Cartegraph • Intern/vendor costs for initial asset gathering and input • Additional mobile hardware for expanded field use
Impact/Comments	<p>An Enterprise Asset Management (EAM) system is used as a single repository for all asset related data (purchase date, useful life, depreciation, work performed, etc.). This system, in coordination with the GIS database provides extensive asset management information.</p> <p>Relevant departments that maintain assets record all activities on assets through work orders generated in this system.</p> <p>ERP system is seamlessly integrated with the Enterprise Asset Management System to track process efficiency and asset related reporting.</p>

Recommendation	11. Use Cartegraph as an Enterprise Asset Management System
	<p>The EAM is mobile enabled to allow field workers to receive, complete and track work orders seamlessly. Work order information submitted in the field is updated in real time with the EAM.</p> <p>The EAM is used in an inventory management capacity (parts attached to relevant work orders, reorder points, etc.) and real time information is maintained on inventory utilized for each work order and for the maintenance of each asset.</p>
2017 Update	<p>Some major backend infrastructure upgrades occurred in 2017 to allow for the most up-to-date software to be utilized. Currently working to get Work Director and Parks modules online. Possibly look at future projects with pavement and fleet asset management.</p>

Recommendation	16. Combine Payment Processing Systems and Merchant Accounts
Gaps Addressed	<ul style="list-style-type: none"> Multiple merchant Accounts for City Web Sites and related payment processes No single sign-on for online payments and transactions for customers
Action Steps	<ul style="list-style-type: none"> Conduct a needs assessment for citizen portal system Develop a technical specification of applications, points of integration, and functionality for portal based, in part, on results of needs assessment Identify single payment processing system and merchant account to meet the requirements or find a web integration vendor to develop a citizen portal
Resources	<ul style="list-style-type: none"> IS Manager Finance Department Relevant City staff External payment portal vendor and/or integrator Current web site vendor (CivicPlus)
Stakeholders	<ul style="list-style-type: none"> Finance department staff IS Department City residents
Prerequisites	<ul style="list-style-type: none"> Consolidate City web sites
Estimated Cost	<ul style="list-style-type: none"> Staff time Cost of new payment processing system and merchant account (TBD)
Impact/Comments	<p>The payment process for different websites are streamlined and consolidated to achieve cost efficiency, better user interface and better integration with other enterprise systems (such as financial ERP, Land Management, CRM, etc.).</p>
2017 Update	<p>Finance is currently doing an audit of the City's merchant accounts. The goal would be to set standards for future contracts involving payment processing.</p>

Recommendation	21. Implement a Collaboration System (Cloud Based?)
Gap Addressed	<ul style="list-style-type: none"> No project management system Size limitations on email attachments and shared drive storage
Action Steps	<ul style="list-style-type: none"> Develop new process for file sharing and collaboration Identify collaboration systems in the market – consider cloud based Select appropriate system based on City’s collaboration needs Implement system and processes for collaboration Conduct training and roll out to all relevant staff
Resources	<ul style="list-style-type: none"> IS Department
Stakeholders	<ul style="list-style-type: none"> Relevant City staff
Prerequisites	<ul style="list-style-type: none"> Develop Enterprise Architecture Standards
Estimated Cost	<ul style="list-style-type: none"> Cloud-based systems range in cost from free, basic accounts for small teams with tools such as Slack (www.slack.com) to \$8 or more per user per month for enhanced capabilities (searchable archive, unlimited integrations, custom retention policies, etc.) On premise systems have one time licensing fees and server costs (TBD)
Impact/Comments	<p>A cloud based collaboration system, working in conjunction with a project management tool will allow City users to cut back on or eliminate sending emails back and forth with attachments, thus saving valuable on premise individual mailbox and email server space.</p>
2017 Update	<p>Community Development is interested in utilizing a cloud based collaboration system but cautious of the City owning the data that is in this system. Further research is needed.</p>

Recommendation	22. Implement Integrated Security Access System
Gaps Addressed	Multiple instances of facility security access systems
Action Steps	<ul style="list-style-type: none"> • Identify replacement or upgrade for the Keri security access system • Follow City’s procurement processes to acquire new system • Implement consolidated system City-wide
Resources	<ul style="list-style-type: none"> • IS Staff • Facilities Division
Stakeholders	<ul style="list-style-type: none"> • All City staff
Prerequisites	<ul style="list-style-type: none"> • None
Estimated Cost	<ul style="list-style-type: none"> • Staff time • Cost of Security Access System (TBD)
Impact/Comments	The IS department streamlines the key-card access management process to allow centralized administration and oversight of physical access to all facilities and secured areas. Security systems are managed as part of remote access and control systems, building on the City’s Internet of Things (IoT) infrastructure.
2017 Update	The current system is almost at maximum capacity. IS Manager and Facilities Manager will discuss how to move forward and will be looking to consolidate into one database.

Recommendation	25. Implement a Cloud Based VoIP Telephone System
Gaps Addressed	Aging phone network with insufficient reporting capability and an error prone and unfriendly IVR system
Action Steps	<ul style="list-style-type: none"> • Develop plan for rollout • Conduct cost/benefit analysis on “on-premise” v/s cloud based VoIP telephone system • Establish emergency 911 connection if network is down • Ensure Quality of Service (QOS) for voice traffic over data traffic • Educate end user on phone operations • Rollout new phone according to predetermined schedule
Resources	<ul style="list-style-type: none"> • IS Department
Stakeholders	<ul style="list-style-type: none"> • All City staff • City residents and customers • City Dispatch and call takers
Prerequisites	<ul style="list-style-type: none"> • Adequate funding built up through annual set-aside
Estimated Cost	<ul style="list-style-type: none"> • Staff time • Cost of VoIP system (\$100,000 - \$200,000, depending on number of ports and connections) and ongoing maintenance – cloud-based system costs TBD
Impact/Comments	The City uses a user -friendly Voice over Internet Protocol (VoIP) based unified communication system with detailed reporting capability. The City also provides a user-friendly, robust IVR system that is integrated with different enterprise systems (such as financial ERP, CRM, Asset Management, Utility Billing, Permitting, etc.).
2017 Update	The City has been setting aside funds over the past few years for a new phone system. The current plan is to evaluate, select, and implement a phone system in FY18-19.

Recommendation	35. Fuel Management Software
Gaps Addressed	Current Fuel Management system does not work for our environment. It has no safeguards against user error which makes reporting extremely difficult.
Action Steps	<ul style="list-style-type: none"> • Evaluate Fuel Management Software options • Reference ERP, asset and fleet management systems in use at the City to find a system that is compatible.
Resources	<ul style="list-style-type: none"> • Fleet Department • IS Department
Stakeholders	<ul style="list-style-type: none"> • Fleet Department • Finance Department
Prerequisites	<ul style="list-style-type: none"> • Selection of ERP system
Estimated Cost	<ul style="list-style-type: none"> • TBD
Impact/Comments	A new Fuel Management system will significantly help the Fleet Manager and Finance department to get accurate consumption and costs associated with fueling the City vehicles and busses.
2017 Update	Fleet Manager is interested in finding a new solution to the current ineffective fuel management system.

Long Term Project Recommendations

Recommendation	17. Implement Enhanced Interactive Voice Response (IVR) Solution
Gaps Addressed	Cumbersome IVR based payment process and unfriendly system
Action Steps	<ul style="list-style-type: none"> • Perform detailed needs assessment for an IVR system across all City departments • Scan the market for available IVR systems • Compare the available features of the IVR systems with needs of the city • Select an IVR system • Develop plan and timeline to implement the IVR system • Integrate IVR with ERP and other relevant enterprise IT systems • Roll out new IVR system and publicize to the Citizens
Resources	<ul style="list-style-type: none"> • IS Department • Building Department • Utility Billing
Stakeholders	<ul style="list-style-type: none"> • IS Department • Building Department • Utility Billing • Contractors/Developers • Utility Customers
Prerequisites	<ul style="list-style-type: none"> • Implementation of new ERP (including HR and Utility Billing modules) and Land Management systems • Consolidation of payment processing and merchant accounts
Estimated Cost	<ul style="list-style-type: none"> • Staff time • Cost of IVR system
Impact/Comments	<p>An enhanced and integrated IVR solution allows the City to provide an option to the Citizens to communicate with the City via an automated system, obtain status information, make payments over the phone, etc. The City provides a user-friendly, robust IVR system that is integrated with different enterprise systems (such as financial ERP, CRM, Asset Management, Utility Billing, Permitting, etc.).</p>
2017 Update	<p>Potential IVR replacements will be evaluated in the new ERP implementation projects (12 and 14). IS will work in conjunction with the Building Official to find something that meets the City's requirements.</p>

Recommendation	19. Implement Project Management System
Gaps Addressed	No City-wide Project Management Tool or Formal Processes
Action Steps	<ul style="list-style-type: none"> • Establish City-wide project management standards and policies • Identify and implement project management tool • Train staff on project management tool and processes
Resources	<ul style="list-style-type: none"> • IS Department • Executive Team
Stakeholders	<ul style="list-style-type: none"> • All City staff
Prerequisites	<ul style="list-style-type: none"> • Develop IT Policies and Procedures • Hire 1 full time IT Assistant
Estimated Cost	<ul style="list-style-type: none"> • Staff time • Cost of Project Management tool (Cloud based systems range from \$7.99 per user per month to \$100 per user one time fees. On premise systems range from \$45+ per user in one time fees plus server costs.)
Impact/Comments	<p>The City uses a standard process of documenting and managing projects across all departments of the city. Relevant departments use standard project management software to proactively track and manage the budget and schedule of projects.</p> <p>The data in project management software is in sync with time tracking system to accurately measure variances. Data in project management software is kept updated and historical data is used to improve project planning continuously.</p>
2017 Update	Moved the timeline for this recommendation from the medium to the long term to allocate resources for more urgent projects.

Recommendation	20. Implement Integrated Time Tracking and Payroll System
Gaps Addressed	<ul style="list-style-type: none"> No Electronic Time Tracking System Heavy Reliance on Spreadsheets
Action Steps	<ul style="list-style-type: none"> Conduct needs assessment with Finance, HR, and relevant staff to determine time tracking needs and requirements Roll out Replicon or similar system to all relevant City staff If Replicon is used to track time, ensure that the chosen ERP system integrates with Replicon to exchange data electronically Configure approval workflows for time reporting Conduct training on use of time reporting system
Resources	<ul style="list-style-type: none"> IS Staff Payroll
Stakeholders	<ul style="list-style-type: none"> All City staff
Prerequisites	<ul style="list-style-type: none"> None
Estimated Cost	<ul style="list-style-type: none"> Replicon (or similar) Licenses (~ \$10/user/month) ERP Integration Costs - TBD Staff time
Impact/Comments	<p>Time tracking software is used by all employees of the City to report time spent on defined and undefined activities at regular intervals. Time tracking software keeps track of the time worked by individual employees. The ERP system automatically reconciles and balances benefits accounts.</p> <p>The time tracking system is integrated with the Human Resource Management Information System (HRIS) and ERP system to automate the payroll process.</p>
2017 Update	<p>With the possibility that the new ERP system will have a solution to this recommendation, it has shifted from the medium to the long term.</p>

Recommendation	23. Implement Integrated Customer Database and Portal
Gaps Addressed	<ul style="list-style-type: none"> • Customers Forced to Use Multiple Payment Services Online • No definitive “single view” of the customer • No single “account management” process for customers
Action Steps	<ul style="list-style-type: none"> • Perform detailed needs assessment customer information • Evaluate Customer Relationship Management functionality of the chosen ERP system <ul style="list-style-type: none"> ○ If the functionality provided by ERP is insufficient, scan the market for available solutions • Ensure that the chosen solution integrates with the ERP system and other enterprise IT systems • Develop plan and timeline to implement the solution • Communicate the plan to all relevant department directors • Procure and Implement selected solution • Integrate customer database and portal with City Web site
Resources	<ul style="list-style-type: none"> • IS Staff
Stakeholders	<ul style="list-style-type: none"> • All City Staff • Customers
Prerequisites	<ul style="list-style-type: none"> • Consolidate City Web sites • Consolidate Payment Processing and Merchant Accounts • Implement New ERP System
Estimated Cost	<ul style="list-style-type: none"> • Staff time • Cost of ERP system and Web site integration
Impact/Comments	<p>The city should use a comprehensive customer database to serve as the single repository for all customer information. The database should be integrated with Land Management system, and the City should capture information about customers at different points of interaction, such as registration for classes or events, to build a robust database.</p> <p>The city should use the information in the database to direct multi-channel communications to increase access to information and services, improve opportunities for engagement and offer members of the community a choice in how they receive information from the City.</p> <p>Additionally, a single Customer Portal, integrated with the City’s web site should allow the customer to log in and access various City services and make payments and conduct transactions seamlessly.</p>
2017 Update	<p>This recommendation will likely be incorporated into the new ERP system.</p>

Recommendation	24. Implement a Business Intelligence (BI) Tool
Gaps Addressed	<ul style="list-style-type: none"> • No Dynamic Tool for Real Time Ad-Hoc Reporting • No Dashboard Tool to Support Executive Decision making
Action Steps	<ul style="list-style-type: none"> • Perform detailed needs assessment for reporting needs of all stakeholders of the city • Evaluate reporting feature of the chosen ERP system <ul style="list-style-type: none"> ○ If the reports provided by ERP is insufficient, evaluate data needs for required reporting and dashboards • Create a plan to consolidate relevant data from different systems • Scan the market for available solutions • Compare the available features of the solutions with needs of the city • Ensure that the chosen solution integrates with consolidated data • Perform cost/benefit analysis of each solution • Select a BI solution • Develop plan and timeline to implement the solution • Procure and Implement selected solution • Conduct training to relevant city staff on a “train the trainer” method • Roll out the new solution to all users
Resources	<ul style="list-style-type: none"> • IS Staff • Executive Team
Stakeholders	<ul style="list-style-type: none"> • Executive Team
Prerequisites	<ul style="list-style-type: none"> • Implementation of new ERP System • Implementation of new Land Management System • Use Cartegraph as City’s Enterprise Asset Management System
Estimated Cost	<ul style="list-style-type: none"> • \$175,000 - \$250,000 plus 20% annual maintenance
Impact/Comments	<p>The City uses a robust Business Intelligence (BI) tool to provide historical, current, and predictive views of business operations enabling users to analyze data from different perspectives to make better business decisions. The BI solution provides common functions such as reporting, analytics, data mining, business performance management and benchmarking. The BI solution also provides role-based access to staff members to visualize operational data in real time and enables decision-making based on multi-dimensional data. It should enable the city to optimize resource usage by effective use of predictive analytics.</p>
2017 Update	<p>With the current evaluation of a new ERP system, this recommendation may be incorporated into that system.</p>

Recommendation	26. Implement Virtual Desktops and Enhanced VPN Solution
Gaps Addressed	Lack of Virtualized Desktop Environment
Action Steps	<ul style="list-style-type: none"> • Continue to virtualize the City’s network infrastructure • Move enterprise applications to cloud based Software as a Service (SaaS) model where applicable • Develop plan for desktop virtualization • Install appropriate network hardware and software to facilitate desktop virtualization • Roll out virtualized desktops City-wide
Resources	<ul style="list-style-type: none"> • IS Department
Stakeholders	<ul style="list-style-type: none"> • All City staff
Prerequisites	<ul style="list-style-type: none"> • Virtualized network infrastructure
Estimated Cost	<ul style="list-style-type: none"> • Staff time • Cost of network upgrades • Virtual licensing (Office, Windows, Virtualization SW Licenses, etc.) – onetime costs ~\$250,000 plus ongoing maintenance costs
Impact/Comments	<p>The City expands its virtual desktop infrastructure to all standard desktop configurations for its staff while providing sufficient computing power as required by staff members.</p> <p>Virtual desktop infrastructure enables more robust remote access functionality, allowing the City to expand its remote access functionality and policies.</p>
2017 Update	<p>IS will consider this recommendation as improvements in the City network infrastructure occur and make this improvement more cost effective. To accomplish this the City will also need to move towards SaaS oriented applications as well.</p>

Recommendation	27. Modernize Fare Collection System at SMART
Gaps Addressed	<ul style="list-style-type: none"> • Bus Passes are not Available at the Transit Center – only online (physically mailed) and at City Hall • Bus fare collection and reconciliation with Financial ERP is a manual process
Action Steps	<ul style="list-style-type: none"> • Define changes to fare collection policy and process • Identify technology to be used (mobile apps, magnetic or RFID card based, etc.) • Procure and implement selected technologies • Ensure integration with Financial ERP and other relevant enterprise systems
Resources	<ul style="list-style-type: none"> • SMART Staff • IS Department
Stakeholders	<ul style="list-style-type: none"> • SMART Staff • Finance Staff • SMART Riders and Wilsonville Employers
Prerequisites	<ul style="list-style-type: none"> • Re-definition of fare collection processes and policies
Estimated Cost	<ul style="list-style-type: none"> • \$250,000 - \$500,000 (depending on retrofitting required with existing fare box system)
Impact/Comments	<p>The City’s Finance Department receives online pass payment notifications via e-mail and physically mail the paper passes to customers. They also receive the fare boxes from SMART daily, and two Finance staff members manually empty, count, and track the money from the boxes. The percentage of transit revenue from fares is low and the processing and accounting time for the fare collection process is high.</p> <p>The City features automated kiosks at the transit center and major bus stops to sell monthly passes. The City also provides a cashless magnetic card based ticketing and/or mobile app based system for riders.</p>
2017 Update	<p>With the knowledge of the Transit Directors retirement this recommendation was moved to the long term to allow for the new director to evaluate the current systems.</p>

Recommendation	28. Consider Implementing Automated Meter Reading (AMR) Infrastructure
Gaps Addressed	<ul style="list-style-type: none"> • Lack of Automated Meter Reading infrastructure for real time view of city-wide water usage • No facility for rapid leak detection • Difficult for customers to monitor water usage
Action Steps	<ul style="list-style-type: none"> • Conduct study for assessing the feasibility of an AMR system • If feasible financially and operationally, implement AMR system
Resources	<ul style="list-style-type: none"> • IS Staff • Utilities Billing Staff • Utility Management Contractors
Stakeholders	<ul style="list-style-type: none"> • Relevant City staff • Citizens
Prerequisites	<ul style="list-style-type: none"> • Implementation of a new ERP system that includes a robust Utility Billing module
Estimated Cost	<ul style="list-style-type: none"> • TBD
Impact/Comments	<p>An Automated Meter Reading (AMR) infrastructure may allow the City to collect meter readings for its 5,000 utility billing accounts automatically, thereby eliminating the current manual, contracted process.</p> <p>It can provide utility billing staff with real time water usage and meter reads to eliminate dispatching crews to perform emergency and one-time, customer requested reads. It can also provide real time usage trends to assist in rapid leak detection. Detecting leaks conserves water and can save both the City and the customer money and frustration.</p>
2017 Update	<p>The Utilities Supervisor is investigating implementing an AMR solution. Overall costs of that project will keep this recommendation in the long term category at this time.</p>

Ongoing Project Recommendations

Recommendation	13. Implement Laserfiche as City Wide Electronic Document Management System
Gaps Addressed	No City-wide Electronic Content/Document Management System
Action Steps	<ul style="list-style-type: none"> • Develop an inventory of business processes used across the city • Identify the documents used in each business process and how the documents and related data flows through the processes • Identify the different IT systems used across each of the business processes • Identify integration needs between Laserfiche and other IT systems to ensure smooth data and document flow through the process • Prioritize integration between Laserfiche and other IT systems based on business needs and cost/benefit analysis • Integrate Laserfiche with other IT systems • Fine tune configuration and workflows as necessary
Resources	<ul style="list-style-type: none"> • IS Department • Implementation Consultant • City Recorder • Department-level Project Champions
Stakeholders	<ul style="list-style-type: none"> • All City Departments
Prerequisites	<ul style="list-style-type: none"> • Successful roll out of Laserfiche to Finance Department • Hire 1 Full Time IT Assistant
Estimated Cost	<ul style="list-style-type: none"> • Staff time • Laserfiche licenses • Implementation Consultant costs
Impact/Comments	<p>The City uses Laserfiche for its document management needs along with facility for electronic review, update and approval of documents through workflows. The document management tool stores metadata about documents as well as audit trail of activities on the documents to enable easy search and retrieval operation.</p> <p>City uses web based tools for accessing documents and picture files that are appropriately tagged for easy retrieval.</p>
2017 Update	Moved this recommendation from the medium term on the timeline to ongoing. Completed implementation of the Leave Request form and Municipal Court records in 2017.

Recommendation	29. Continue Standardizing IT Environment
Gaps Addressed	<ul style="list-style-type: none"> No Integrations between Major Enterprise Applications No Formally Documented Standardization Policy
Action Steps	<ul style="list-style-type: none"> Develop Formal IT Standardization Policy Continue Standardization of IT Environment, but Include Major Enterprise Applications in Standardization Virtualize IT Environment, Including Virtual Desktops
Resources	<ul style="list-style-type: none"> IS Staff
Stakeholders	<ul style="list-style-type: none"> IS Staff All City Staff
Prerequisites	<ul style="list-style-type: none"> Develop Enterprise Architecture Standards
Estimated Cost	<ul style="list-style-type: none"> IS Staff time
Impact/Comments	<p>Continue current level of standardization of IT Environment and focus future efforts on standardization of business enterprise software systems. Wherever possible, data duplication should be eliminated across the organization through consolidation and integration of overlapping systems and system functions.</p>
2017 Update	<p>IS is investigating opportunities to standardize client databases and other processes in the replacement of the ERP system. Greater efficiencies between departments should be achieved.</p>

Recommendation	30. Establish Periodic IT Skill Gap Review Process
Gaps Addressed	<ul style="list-style-type: none"> • No Formal Skill Gap Management Process • No Succession Planning • No Formal Hiring and Retention Plan
Action Steps	<ul style="list-style-type: none"> • Develop IT Skill Gap management process • Communicate process with IS Staff • Implement and regularly monitor skill gap review process
Resources	<ul style="list-style-type: none"> • IS Staff • Human Resources Staff
Stakeholders	<ul style="list-style-type: none"> • IS Staff
Prerequisites	<ul style="list-style-type: none"> • None
Estimated Cost	<ul style="list-style-type: none"> • Internal
Impact/Comments	<p>IT skill gap management process is developed. Cross-functional training is provided among IT personnel either through formal or through informal channels to improve the capacity of the team.</p> <p>Effective documented plan is created to hire and retain IT support personnel. Additionally, effective succession plan should be developed along with creation of a standard operating procedure for each role.</p>
2017 Update	<p>FY16-17 has brought a lot of change to the IS department. An IS Assistant was hired at the end of 2016 and a replacement Network Administrator will be hired in the first part of FY17-18. The new hires will be trained and brought up to speed during 2017. The IS Manager will work with HR to hire and retain personnel and start the creation of the succession planning and standard operating procedures for each role.</p>

Recommendation	31. Continue Enhancing Audio/Video and WilsonvilleTV Infrastructure
Gaps Addressed	<ul style="list-style-type: none"> • Lack of clarification of AV control room support roles. • Incomplete 5-year rolling PEG replacement plan. • Not all City facilities have video conferencing or AppleTV functionality at their locations.
Action Steps	<ul style="list-style-type: none"> • Clarify Support Roles between IS and City’s Communications Staff • Implement Video Conferencing Facilities City-wide • Implement 5 year Rolling Replacement Plan for AV Resources • Use Periscope or other Live Broadcast Tools with City’s web site • Consider using a Tool for Interaction between Citizens and Council during Council Meetings • Consider Maximizing Utilization of AV Equipment to Offer Additional Video Content for the Public
Resources	<ul style="list-style-type: none"> • IS Manager • Communications Manager
Stakeholders	<ul style="list-style-type: none"> • IS Department • Communications Department • All City Staff • Viewing Public
Prerequisites	<ul style="list-style-type: none"> • None
Estimated Cost	<ul style="list-style-type: none"> • Internal
Impact/Comments	<p>Clarified roles surrounding the AV control room support removes staff confusion and a rolling 5-year replacement/enhancement plan for AV resources is completed, vetted with stakeholders and put in place.</p> <p>All major City facilities have video conferencing capabilities in their main conference room areas, as well as AppleTV functionality for interfacing with staff iPads and iPhones.</p>
2017 Update	<p>The Library’s Oak Room and the Public Works conference room AV capabilities were upgraded in FY16-17. HD cameras and new LED lighting for the Council Chambers are planned for FY17-18. The City also entered into a partnership with Wilsonville High School to create content for the Wilsonville Government channel in exchange for camera and video editing equipment.</p>

Recommendation	32. Implement Municipal Fiber Program
Gaps Addressed	<ul style="list-style-type: none"> Enhanced utilization of City fiber asset
Action Steps	<ul style="list-style-type: none"> Complete municipal fiber “ring” for fiber fault tolerance Complete build out of fiber to City facilities, telemetry locations, parks, security infrastructure, and transportation systems Implement fiber program adopted in Fiber Business Plan
Resources	<ul style="list-style-type: none"> IS Manager Others as defined by Fiber Business Plan
Stakeholders	<ul style="list-style-type: none"> All city staff Business Community Residents
Prerequisites	<ul style="list-style-type: none"> Fiber Business Plan
Estimated Cost	<ul style="list-style-type: none"> Staff time – Internal Annual set-aside for continuing fiber build for City connections - \$55k/year TBD – See Fiber Business Plan
Impact/Comments	<p>Depending on the recommendations set forth in the adopted Fiber Business Plan, the fiber program has the potential to provide significant positive economic development benefits to the City, enhance the competition, reduce costs, improve telecommunications and internet services for the Wilsonville business community, and potentially even offer high-speed internet access at reduced rates to Wilsonville residents.</p> <p>At the least, continued development of the fiber asset for City purposes will reduce long term telecommunications costs for the organization, enable enhanced connectivity and functionality in intelligent transportation systems throughout town, provide fast, reliable connectivity for telemetry monitoring of critical City utility infrastructure, and offer interconnection for data and service sharing between the City and other local government agencies.</p>
2017 Update	<p>The City will complete its Fiber Business plan in 2017 which will help inform the City Council on decisions regarding fiber investment.</p>

Complete Recommendations

Recommendation	4. Hire one (1) full-time Helpdesk Support Staff (IT Assistant)
Gaps Addressed	No dedicated IT Assistant (helpdesk)
Action Steps	<ul style="list-style-type: none"> • Develop a job description • Conduct interviews with the selected candidates • Hire the most suitable candidate and assign responsibilities • Train the new hire (6 months until fully functional)
Resources	<ul style="list-style-type: none"> • IS Manager • IS Staff • Human Resources Manager
Stakeholders	<ul style="list-style-type: none"> • All city staff
Prerequisites	<ul style="list-style-type: none"> • Budget Approval
Estimated Cost	<ul style="list-style-type: none"> • Staff time • \$75,000 per year (fully loaded)
Impact/Comments	<p>Hiring an IT Assistant will provide the City with staff dedicated to supporting users with services such as desktop, email and printer related troubleshooting and basic training. This position would also maintain an inventory of IT hardware and software across the city and rollout new computers/devices.</p> <p>A full-time IT Assistant will allow experienced IS resources to perform higher level, strategic tasks. Currently, entry-level helpdesk tasks are addressed ad-hoc by existing staff, negatively impacting higher value enterprise project and support efforts.</p>
2017 Update	Hired an Information Systems Assistant I in December 2016.