

Town of Greenwich



Strategic Technology Plan

Final 1

April 16, 2013

Prepared for:

Town of Greenwich
101 Field Point Road
Greenwich, CT 06830

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Version	Delivered Date	Update Reason
Draft 1	March 26, 2013	Draft 1 delivered to the Town Project Manager
Version 1	April 11, 2013	Version 1 updated to include feedback from the IT Director
Final	April 16, 2013	Final Version updated with additional feedback

Table i: Version History of the Report

Acknowledgements

BerryDunn would like to thank the employees of the Town of Greenwich for collaboratively working with us to develop this Strategic Technology Plan for the Town. Not only did department representatives participate in the planning process, but also each department valued the opportunity to participate and demonstrated an understanding that a successful strategic technology plan is as much about participating in the process as it is about the final plan. We truly appreciate the level of cooperation, support, and feedback we received from the employees of the Town.

Throughout the project, we met with members of Town leadership so that executive level input could be contributed to the plan. We would like to thank the members of Town management for their time and contributions to the project. The key ingredient for future success of technology initiatives is the commitment level of necessary financial and managerial resources.

1.0 Introduction

This section describes the background of the project leading up to the report, the format of the report, and the work performed in the development of the report.

1.1 PROJECT BACKGROUND

The Town of Greenwich has approximately 942 employees who serve a population of approximately 60,000 residents. The Town recognizes that their information systems and business processes have evolved in a reactionary manner to meet the growing needs of employees interacting with the information systems on a regular basis. The IT Department of the Town of Greenwich increases the quality and efficiency of the Town's information systems by approaching problems with an enterprise-level focus.

The Town has conducted technology planning projects in the past with assistance from external consultants resulting in Strategic Technology Plans in 2002 and 2007. In continuing with this focus on technology planning, the Town issued a Request for Proposal (RFP) in January 2012 for a Strategic Technology Plan.

In July 2012, the Town of Greenwich, Connecticut, retained Berry Dunn McNeil & Parker (BerryDunn) to conduct a strategic technology planning project that would result in the development of a three-year Strategic Technology Plan. As part of the first phase of this project, BerryDunn conducted an assessment of the current information technology (IT) environment that resulted in a list of Strategic Technology Issues. This list contains descriptions of the current environment and recommendations for improvement based on the technology assessment.

1.2 REPORT FORMAT

This report is comprised of four sections, as described below:

1. **Introduction.** This section describes the background of the project leading up to the report, the format of the report, and the work performed in the development of the report.
2. **Planning Framework.** This section contains the Town-wide Strategic Issues that were prioritized, the mission and goals of the IT Department, the objectives of the Town, and the sources of benchmarking and best-practice research utilized throughout the project.
3. **Town-Wide Technology Initiatives.** This section contains the Strategic Initiative Reference Table, which describes those Initiatives currently in progress and presents the Prioritized Plan Initiatives.
4. **Implementing the Strategic Technology Plan.** This section contains the budget and timeline for the Prioritized Plan Initiatives, projected funding levels for the Plan, and describes the approach to ongoing governance of the plan.

1.3 WORK PERFORMED

The first phase of this project focused on assessing the current technology environment at the Town. BerryDunn began by requesting background documentation from the Town in order to gain a better understanding of the current IT environment. In addition, a Strengths, Weaknesses, Opportunities, and Threats (SWOT) Worksheet was distributed to Department Leads to complete. Nearly all departments participated in the SWOT survey process.

In September 2012, BerryDunn conducted on-site fact-finding meetings with all Town departments. The focus of the fact-finding meetings was to understand the technology tools currently in use and their related strengths and weaknesses. The discussions also included potential technologies Town staff were interested in to improve business processes. Also while on-site, BerryDunn toured the Town's IT facilities and met with IT Department employees individually to gain an understanding of the roles and responsibilities of the IT staff and the current technology environment in the Town.

The findings from the assessment phase resulting in a summarized list of technology strategic issues identified by both BerryDunn and the Town. A strategic issue is a challenge or problem faced by the Town that relates to the use and/or management of technology. This preliminary list of issues was delivered to the Town in November.

In November, the Preliminary List of Strategic Issues was discussed, confirmed, and prioritized as part of the "Strategic Issue Prioritization Work Session" facilitated by BerryDunn. This work session included representatives from all departments in a collaborative discussion designed to build consensus in the resulting priorities assigned to each Strategic Issue identified as part of the assessment. The prioritized list of issues is contained in Section 3.1 of this plan.

Immediately following the Strategic Issue Prioritization Work Session, department representatives were then asked to review the prioritized list of strategic issues and complete initiative planning worksheets to document technology projects that would address the strategic issues. Each department submitted two to three projects which allowed a variety of perspectives to contribute to the combined list that would eventually form this Strategic Technology Plan.

BerryDunn developed a second list that was combined with those initiatives submitted by Town department representatives. The "Projects and Initiatives Work Session" facilitated by BerryDunn in December allowed departments to discuss, confirm, and score each initiative or project. Collaboration and involvement of all departments was a key ingredient to this successful effort, which became the basis for the Strategic Plan.

The information gathered from Town stakeholders, the results of work sessions, research activities, and existing documentation was used to create this plan. Active involvement on the part of Department Heads will be necessary to continually update and refine the plan in the coming years.

2.0 Planning Framework

This section contains the Town-wide Strategic Issues that were prioritized, the mission and objectives of the IT Department, and the approach to benchmarking and best-practice research.

2.1 TOWN-WIDE STRATEGIC ISSUES

During fact-finding meetings with Department Leads, issues and needs related to technology were identified. The interviews allowed Department Heads to identify Town-wide strategic issues that are impacting their departments.

As a result of the fact-finding meetings, a draft list of strategic issues was developed. A strategic issue is a challenge or problem faced by the Town that relates to the use and/or management of technology. This list of strategic issues was reviewed and discussed as part of the “Strategic Issue Work Session” that included representatives from each Town department. The strategic issues were confirmed and prioritized by the Town departments.

These priorities provide high-level guidance from the Town’s perspective to determine when each issue should be resolved during the timeframe of the plan. The strategic issues were prioritized using the three categories described in the table below.

Table 2.1: Priority Key

Priority for Strategic Issues	
 Critical	Critical - should be addressed during the first year of the Plan.
 High	High - should be addressed during the second year of the Plan.
 Medium	Medium - should be addressed during the third year of the Plan.

Participants in the work session scored each issue based on the priority descriptions above, which were assigned a priority number. Critical Issues were given a score of three, a two for High, and a one for Medium. The points for each issue were added by BerryDunn. Among the final scores, higher numbers represent higher priority issues. The resulting scores are contained in Table 2.2 to follow.

Each strategic issue has been allocated to one of three functional areas: management and operations, applications, and technical. The list of strategic issues is organized based on these categories, further defined below:

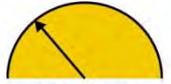
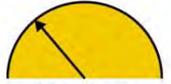
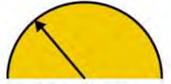
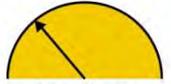
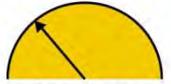
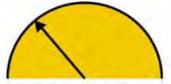
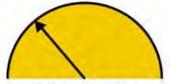
- ❖ **Management and Operations (M):** Management and Operations Issues are related to how the Town supports the technology tools and infrastructure in place, how technology is planned for and acquired, and how resources are positioned to support technology in the Town.
- ❖ **Applications Issues (A):** Applications Issues are related to the applications that are used to support Town users in core business processes, including providing services to Town citizens.
- ❖ **Technical Issues (T):** Technical Issues are related to the Town’s core technology infrastructure and how it is developed and maintained to be cost efficient and effective.

The resulting list of prioritized strategic issues, documented in the table below, guided the development of the initiatives identified in Section 4.0.

Table 2.2: Prioritized List of Strategic Issues

Prioritized List of Strategic Issues			
No.	Issue Description	Score	Priority
A1	The Human Resources Department reported that the Munis application is not meeting their needs for human resources and payroll functionality.	56	 Critical
T6	The Town does not always receive timely network support.	53	 Critical
M1	There are instances when the support provided by the Town Help Desk does not meet department needs.	52	 Critical
T4	Town staff could have increased connection capabilities while working in the field.	52	 Critical
M3	An established Town-wide IT Steering Committee does not exist.	48	 Critical
M2	The Town’s desktop replacement schedule does not optimize standardization or utilize laptops or tablets.	47	 Critical
A3	The Town is using multiple software applications to manage the permitting, inspection, and code enforcement processes.	46	 Critical

Prioritized List of Strategic Issues			
No.	Issue Description	Score	Priority
A8	Multiple departments are using manual and paper-based processes, disparate databases, and outdated/not-upgraded applications for primary business processes.	45	 Critical
M5	The Town does not have a current IT Disaster Recovery and Business Continuity Plan.	45	 Critical
M6	Technology training end users is limited.	44	 High
T2	Users reported an unmet need for wireless access to the internet or to the Town network in some Town buildings.	43	 High
M7	The Town does not have a framework or process in place for the management of technology projects.	42	 High
M8	A Town-wide policy regarding the use of social media sites does not exist.	42	 High
A7	The Town's email system is creating challenges for end users as well as for the IT staff who manage it.	40	 High
A2	Town staff reported challenges with the Munis query and reporting functionality.	39	 High
A9	It was reported that functionality provided by current Town applications are not meeting the needs of the Town's Tax Collector and Assessor.	39	 High
M10	GIS data could be further leveraged in the Town.	38	 High

Prioritized List of Strategic Issues			
No.	Issue Description	Score	Priority
A4	Use of the Town's document management system could be increased.	37	 High
M4	Collaboration between all Town-wide IT resources can be improved.	36	 Medium
M11	The Town does not have proactive technology communication methods.	35	 Medium
T5	The Town's domain controllers are on an older server version than most others in the Town.	35	 Medium
T7	Town departments are concerned with the appropriate amount of available bandwidth to perform operations and meet citizen demand.	35	 Medium
M12	The concept of system ownership at the department level can be improved.	34	 Medium
A6	Department management of the Town's website could be increased.	32	 Medium
A10	A Town-wide application for scheduling meeting rooms is not available for decentralized access by all Town staff.	26	 Medium
M9	Staff is not all aware of the Town's mobile telephone and mobile communication policies.	24	 Medium
T1	The Town is not currently using Voice over IP telephone technology in all areas.	23	 Medium

2.2 MISSION AND OBJECTIVES

The following sub-sections outline the mission and objectives of the Town of Greenwich IT Department as well as for the Town’s use of technology. These guiding principles were developed by the IT Director, Town leadership and BerryDunn.

A mission statement is a written statement of purpose that is used to communicate an organization’s reason for existence. It serves to guide business processes, decisions, and interaction with others. Objectives are activity-based targets for performance that are designed to support a mission statement in a short time-period. In some cases, objectives are specific to a certain context, such as this Strategic Technology Plan. Understanding the overall mission and objectives of the IT Department helps guide the development of initiatives intended to solve the Strategic Technology Issues that may exist in the Town.

The IT Department’s mission and objectives are contained in the table below. These were originally developed for the Department’s content in the Town’s Annual Operational Plan (FY 2011-2012) and were confirmed for inclusion in this Plan.

Table 2.3: IT Department Mission and Objectives

IT Department Mission and Objectives
<p>Mission:</p> <p>The Town of Greenwich Information Technology Department provides and supports cost-effective solution and technical leadership in the Information Technology area to accomplish organizational and departmental goals that facilitate delivery of excellent services to the Town departments/divisions and to the Town Residents.</p> <p>Objectives:</p> <ul style="list-style-type: none"> • Procure, install, and maintain computer hardware, software, and computer-related services for the Town of Greenwich municipal departments. Services included but are not limited to the Town-wide Municipal and Local Area Networks, Internet access, Email, web related services and multiple departmental applications. • Assist all Town departments in developing and evaluating proposals for all projects that have any association with use of Information Technology. • Provide computer related training and education to develop a technology literate work force. • Maintain data standards in order to improve data interchange between different applications. • Manage and maintain the Town’s GIS data with 54 layers and GIS related applications/services. • Maintain operations of GIS office distributing maps and GIS data to the Town employees and general public.

Similar to understanding the mission and objectives of the IT Department, it is important to understand the Town technology objectives in developing a Strategic Technology Plan. At a higher level than those of the IT Department, these statements can be used to guide the initiatives and projects in the Plan.

The following table contains the Town technology objectives for the Plan.

Table 2.4: Town Technology Objectives

Town Technology Objectives
<p>Objectives:</p> <ul style="list-style-type: none"> • Implement technologies that are progressive but not on the verge of cutting edge. • Increase the Town’s use of mobile computing technologies where they support specific business processes. • Implement technology tools to track performance measures to understand improvements in services as well as returns on investment. • Continue to leverage technology to support increased efficiencies and effectiveness in serving the Town’s residents.

2.3 RESEARCH CONSIDERATIONS

BerryDunn considered sources of best practices and benchmarking research at various points in the project and specifically when developing the project and initiatives in this Plan. The following sub-sections further describe these sources.

2.3.1. Best Practice Sources

While there are several IT related best-practice organizations that provide standards and guidelines related to technology services in governments, BerryDunn primarily considered the information prescribed by organizations most consistent and familiar to Town staff. The eight organizations BerryDunn referenced are:

- **Information Technology Infrastructure Library (ITIL):** ITIL has prescribed five core processes that provide a framework for delivering IT services to an organization in order to “enable organizations to deliver appropriate services and continually ensure they are meeting the business goals and delivering benefits.”¹ These processes are documented in Version 3 of the Library, published in 2007.
- **Computer Economics:** Computer Economics provides metrics for IT management, focusing on research and advisory information regarding the “strategic and financial management of information systems.”² The study *IT Spending and Staffing Benchmarks* was the primary document from Computer Economics referenced for this project.
- **Project Management Institute (PMI):** PMI is a “leading not-for-profit membership association for the project management profession.”³ PMI provides concepts and a framework for best practices in project management and also certifies practitioners in project management with its certifications including the Project Management Professional (PMP) certification.

¹ Information Technology Infrastructure Library (ITIL); *What is ITIL?*; www.itil-officialsite.com

² Computer Economics; *About Computer Economics*; www.computereconomics.com

³ Project Management Institute (PMI); *About Us*; www.pmi.org

- **International Organization for Standardization (ISO):** ISO is the world's largest developer and publisher of international standards with over 18,500 published standards.⁴ Several standards are directly applicable to government organizations in a variety of topics such as security, risk management, and disaster recovery.
- **COBIT Framework (COBIT):** The framework created by the Information Systems Audit and Control Association (ISACA) for information technology management and IT governance.⁵ The current release of the framework is 4.1 and it defines 34 processes to manage IT and their respective sets of control objectives.
- **National Incident Management System (NIMS):** Provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment.⁶
- **National Institute of Standards and Technology (NIST):** Advancing the state-of-the-art in IT in such applications as cyber security and biometrics, the National Institute of Standards and Technology accelerates the development and deployment of systems that are reliable, usable, interoperable, and secure; and conducts research to develop the standards infrastructure for emerging information technologies and applications.⁷
- **Institute of Electrical and Electronics Engineers (IEEE):** IEEE develops a wide range of standards that make the exchange of technical knowledge and information possible among technology professionals.⁸

BerryDunn has leveraged the standards and best practices described by these organizations in developing some of the recommendations and initiatives in this plan. The IS Division has indicated that leveraging industry best practices is one of their goals as they move towards standardizing their business processes. Where appropriate, specific references to these organizations and the information they have published are contained in the initiatives described in section 4.0 Town-Wide Technology Initiatives.

2.3.2. Benchmarking Sources

BerryDunn leveraged benchmarking information collected from previous strategic technology planning projects with similar organizations. In addition to using information from similar organizations,

⁴ International Organization for Standardization (ISO); *About ISO*; www.iso.org

⁵ Information Systems Audit and Control Association; *COBIT Framework for IT Governance and Control*; www.isaca.org/knowledge-center/COBIT

⁶ National Incident Management System; *About Us*; www.fema.gov/emergency/nims

⁷ National Institute of Standards and Technology; *About Us*; www.nist.gov

⁸ Institute of Electrical and Electronics Engineers; *About Us*; www.ieee.org

BerryDunn utilized information from larger, progressive cities and towns where appropriate, due to the Town's unique use of technology in some areas.

3.0 Town-Wide Technology Initiatives

This section contains the Strategic Initiative Reference table, describes those Initiatives currently in progress, and presents the Prioritized Plan Initiatives.

3.1 STRATEGIC INITIATIVES DEVELOPMENT

The table below lists all of the initiatives developed collaboratively among BerryDunn and the Town following the Strategic Issue Prioritization Work Session. In addition to those that were developed by BerryDunn, each Department Head submitted multiple projects and initiatives.

Table 3.1: Preliminary List of Strategic Initiatives

List of Strategic Initiatives		
ID	Initiative	Strategic Issue(s) Addressed
A	Conduct a gap-fit analysis related to the Munis application's core financial modules.	A2
B	Conduct a needs assessment related to CityView for the Town departments not using the application.	A3
C	Develop a Document Management Action Plan.	A4
D	Document and communicate the procedure for managing content on the Town's website at the department level.	A6
E	Identify deficiencies in the Town's email system and develop an action plan to meet Town needs.	A7
F	Establish Town IT Working Group(s); one with a focus on Town Departments and another on inter-agency (BOE, Police, Libraries).	A8, M3, M4, M12
H	Implement a Town-wide system for scheduling meeting rooms.	A10
I	Adjust the Help Desk model in the IT Department and develop a plan for functional improvements.	M1
J	Create a Project Management focus in the Town for enterprise projects.	M7, M11
K	Reorganize the Desktop Replacement Plan and identify the need for laptops and tablets.	M2
L	Update the Town's IT Disaster Recovery Plan.	M5
M	Plan and implement technology training for end users and IT Department staff.	M6
N	Develop, update, and communicate IT policies and procedures.	M8, M9, M10
O	Transition the Town to Voice over IP telephony (VoIP).	T1
P	Perform an analysis of the Municipal Area Network and Internet access.	T2, T4, T6, T7
Q	Conduct an IT Security Audit.	-

The final list of projects and initiatives described in Section 3.4 of this plan is a result of the Project and Initiatives Work Session facilitated by BerryDunn. In the work session, the preliminary projects and initiatives were discussed, confirmed, edited, and in some cases combined. One project was also determined to be currently in progress, as depicted in the table below and further discussed in Section 3.2.

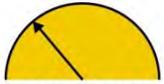
Table 3.2: Strategic Initiatives Currently in Progress

Strategic Initiatives in Progress		
ID	Initiative	Strategic Issue(s) Addressed
G	Select and implement an Assessing and Tax Collection/Billing system.	A9

At the end of the work session, 16 Strategic Projects or Initiatives remained and each department was asked to choose six that they thought should be addressed in the first year of the Strategic Technology Plan. This ranking of each project or initiative was given a weight of 15% towards the final prioritization. The input from Town Department representatives was combined with the strategic issue rank to determine a total 35% of the score for each strategic project or initiative. Each project or initiative was scored based on the number and priority of each strategic issue it addressed.

The remaining 65% of the overall score for each project initiative was determined by BerryDunn and confirmed by the Town Project Team. Twenty-five percent of this score was allotted to the cost benefit of the project or initiative, which was high, medium, or low. The ease of implementation was given 20%, and was ranked as easy, medium, or hard. The final 20% of the score was based on the maturity of the technology involved in the project or initiative. It was either established or leading edge technology. A summary of these categories is contained in the table below.

Table 3.3: Strategic Initiatives Weighted Prioritization Categories

Strategic Initiatives Weighted Prioritization Categories				
Town				
Strategic Issue Rank	15%			
		<p>Critical High Medium</p> <p>Summary: The Strategic Issue Rank is based on the scoring of each Strategic Issue during the Strategic Issue Work Session.</p>		
Department Priority	20%			
		<p>Critical High Medium</p> <p>Summary: The Department Priority is based on the scoring of each Strategic</p>		

Strategic Initiatives Weighted Prioritization Categories		
		Initiative/Project during the Strategic Projects and Initiatives Work Session.
BerryDunn		
Cost Benefit	25%	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  High </div> <div style="text-align: center;">  Medium </div> <div style="text-align: center;">  Low </div> </div> <p>Summary: Cost benefit is based upon the likelihood that the Town will be able realize a return on its investment in a reasonable amount of time. An indicator of high, medium, or low was assigned on a relative basis among all Strategic Initiatives.</p>
		<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  Easy </div> <div style="text-align: center;">  Medium </div> <div style="text-align: center;">  Difficult </div> </div> <p>Summary: Ease of implementation is based upon both the amount of work effort required to complete the Strategic Initiative and the extent that specialized knowledge or experience is needed. An indicator of easy, medium, or difficult was assigned based on the current capacities in IT resources at the Town.</p>
Maturity of Technology	20%	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  Established </div> <div style="text-align: center;">  Leading Edge </div> </div> <p>Summary: The Town and the IT Department has established a vision to implement technologies that are established in local government and will not consider bleeding edge technologies at this time. Because of this, indicators of established and leading edge were assigned among all Strategic Initiatives.</p>

The following figure depicts the distribution of the weighted prioritization categories including the higher level distribution of 35% Town prioritization and 65% BerryDunn prioritization.

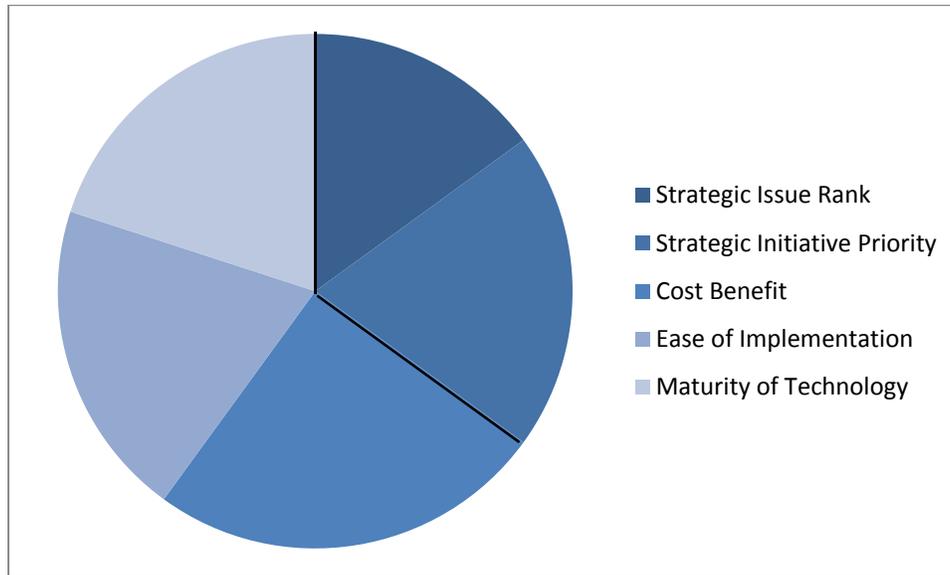


Figure 3.1: Weight Prioritization Categories

3.2 STRATEGIC INITIATIVES IN PROGRESS

The Town is currently undertaking multiple technology projects that were either identified as Strategic Initiatives during the planning process, or are closely related to the Strategic Initiatives within this Plan. Projects were determined to be “in progress” based on whether or not funding has been allocated to them and whether work had started on the project. It is important that this group of projects and the Strategic Initiatives in the Plan be considered together as each group will depend on one another. Not considering these projects together may result in fragmented projects that do not help in achieving the Town’s Mission and Goals. In addition, excess expenses may result from a lack of coordination between these two groups of projects.

During the associated work sessions, one project was determined to be in-progress. This project is listed in the table below along with a summary status of the project as well as considerations that should be made in light of this Strategic Technology Plan.

Table 3.4: In-Progress Strategic Initiatives Summary

In-Progress Strategic Initiatives Summary			
ID	In-Progress Initiative	Status	Considerations
G	Select and implement an Assessing and Tax Collection/Billing system.	This project has been funded and is planning to be initiated in the current fiscal year.	Considerations related to this project largely consist of managing resources with the other projects in this Plan as well as understanding areas of application integration.

3.3 OVERVIEW OF STRATEGIC INITIATIVES

Each initiative in Section 3.4 has been presented utilizing a standard form to document each planned initiative. An initiative may also be referred to as a project. Below, BerryDunn has provided a sample template that includes a description of each field in the form and its contents.

Greenwich Strategic Initiative - Template				
This section of the template will contain the initiative or project ID and name.				
Initiative Description				
This section of the template will contain a description of the initiative or project.				
Initiative Source Information				
Functional Area:	Management and Operations Issues, Application Issues or Technology Issues			
Priority Ranking:	X of XX, where X is this initiative or project's ranking among the total number of initiatives.			
Related Strategic Issue(s)				
#	This section of the template will contain a listing of the strategic issue(s) that this initiative or project addresses.			
Benchmarking and Best Practice Information				
This section of the template will contain relevant findings from benchmarking and best-practice research.				
Initiative Ranking				
(Each initiative or project ranking will be given an icon to help the reader understand the challenges inherent in each initiative).				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
Rating of Strategic Issue Rank (Critical, High, Medium)	Rating of Priority to Departments (Critical, High, Medium)	Rating of the Cost Benefit (High, Medium, Low)	Rating of the Ease of Implementation (Easy, Medium, Difficult)	Rating of the Maturity of the Technology (Established, Leading Edge, Bleeding Edge)
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> Year One: Year Two: Year Three: Three-Year Cost: 			

Budget Description	This section of the template will contain a high-level description of the cost estimate, including the methodology used to determine cost as well as the estimated cost over the next three years.
Action Items to Implement Initiative	
<p>This section of the template will contain a checklist of the action items that are needed to implement the initiative or project.</p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	
Anticipated Benefits	
<p>This section of the template will contain a checklist of the anticipated benefits that are expected from the initiative or project.</p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	

3.4 PRIORITIZED PLAN INITIATIVES

Each initiative in Section 3.4 has been presented utilizing a standard form to document each planned initiative. An initiative may also be referred to as a project. Below, BerryDunn has provided a sample template that includes a description of each field in the form and its contents.

Greenwich Strategic Initiative
F: Establish a Town IT Working Group(s); one with a focus on Town Departments and another on inter-agency (BOE, Police, Libraries)
Initiative Description
<p>In the current environment at the Town, there are staff in departments outside of IT (BOE, library, police) that perform IT-related functions including supporting department specific applications, implementing new technology applications and in some instances, providing network troubleshooting at remote locations. During the fact finding interviews, many Town staff reported a desire for department specific applications (e.g., Health Department systems) to support non-enterprise wide business needs. A mechanism for Town departments to work with an IT group to assist in systems planning (and improvement to existing systems) can assist with the improved use of existing systems, and planning for new systems to meet departmental needs. In some instances, the current department IT resources may have knowledge of existing Town applications in their respective departments that could be leveraged by other departments.</p> <p>This initiative is to establish a Town IT Working Group (ITWG). The ITWG should be comprised of the IT Director, IT representative from Board of Education, Police and Library as well as a department head representative from two to three other departments (potentially public works, community development, and finance). The composition of the group should not exceed 8-10 members. The ITWG will have two primary focus areas; improving collaboration between IT resources across departments with current IT staff (Police, Library, BOE) and assisting in the process of supporting all departments in the selection and prioritization of IT applications/needs. Each of these focus areas are described below.</p> <p><u>Collaboration:</u></p> <p>BerryDunn recommends that the core ITWG group (Town IT Director, Police, Library, BOE) meet on a quarterly basis to collaborate on IT issues. The purpose of the meeting will be to discuss current challenges, provide updates on current projects, and collaborate on solutions to IT issues impacting the Town. These resources have a wide base of knowledge related to their department specific application and IT needs. Sharing the information related to troubleshooting issues, planning for new technology and leveraging existing resources can be beneficial.</p> <p><u>Departmental Support:</u></p> <p>The ITWG's role in supporting department level IT needs will be focused on assisting departments (from a technical perspective) in identifying specific application needs (and challenges), providing support for developing technical requirements for new systems and prioritizing the implementation schedules for new applications. As department's identify needs for new applications or upgrades to existing applications, the business need will be reviewed with the ITWG and the ITWG will provide support by providing the departments with the technical requirements to be adhered to by the new application, potentially assist the department in researching potential vendors, assist in the procurement process (from a technical standpoint) and to educate the department on a</p>

suggested project management framework (Initiative J) once implementation begins.

The role of the ITWG in working with departments is not to replace the current IT help desk process; however, it is meant to serve as a resource for departments that are struggling with a current application or have needs for a new application. Potential solutions that the ITWG could be involved in directing departments could involve assisting in selecting new applications, ensuring a department is on the newest release of an application, and assisting in planning for the roll out of mobile applications where supported.

BerryDunn recommends that the ITWG plan to meet to discuss and conduct planning activities related to departmental needs on a quarterly basis (as needed).

Summary:

BerryDunn recommends that the Town develop a Charter for the ITWG that describes the role of the ITWG (improving collaboration and supporting departments), meeting frequency, overall goals, and composition. It is important that the ownership of applications (current and new) remain at the department level and that responsibility for implementing and maintaining the use of the application remain within Town departments.

Initiative Source Information	
Functional Area:	Management and Operations Issues and Application Issues
Priority Ranking:	1 of 16
Related Strategic Issue(s)	
A8	Multiple departments are using manual and paper-based processes, disparate databases, and outdated/not-upgraded applications for primary business processes. The use of manual and paper-based processes or disparate databases includes the public beaches and the senior center. Several applications such as Lucity, Cornerstone, and AutoCAD are not at the most recent version available. Additionally, some departments reported they have unmet needs due to a lack of department specific application or with currently used applications, such as Time Matters in the Law Department.
M3	An established Town-wide IT Steering Committee does not exist. A Town-wide IT steering committee comprised of cross-functional department representatives to assist in IT planning and decision making does not exist. This has created challenges with long-term technology planning, collaboration as well as communication.
M4	Collaboration between all Town-wide IT resources can be improved. Many Town departments including Police, Library, and Board of Education (BOE) have their own IT resources. Collaboration between all Town IT resources related to planning, communication and application sharing (where appropriate) can be improved.
M12	The concept of system ownership at the department level can be improved. Limited ownership of applications at the department level has in some instances created a lack of buy in and accountability for the use of Town-wide applications. This challenge has created instances where applications are not being fully utilized.
Initiative Ranking	
Town	BerryDunn

Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Critical	 Critical	 High	 Medium	 Established
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> • Year One: \$0 • Year Two: No Activity • Year Three: No Activity • Three-Year Cost: \$0 			
Budget Description	This initiative will be completed by internal staff time and so no funding is needed.			
Action Items to Implement Initiative				
<input checked="" type="checkbox"/> Identify Town staff to participate on the working group <input checked="" type="checkbox"/> Develop a charter for the group which includes, roles and responsibilities				
Anticipated Benefits				
<input checked="" type="checkbox"/> Town department involvement in the planning and implementation of technology related projects <input checked="" type="checkbox"/> Increased collaboration between departmental IT resources <input checked="" type="checkbox"/> Increased accountability at the department level of technology projects through greater involvement in the planning and implementation of technology systems <input checked="" type="checkbox"/> Guidance in prioritizing of department level application needs				

Greenwich Strategic Initiative

C: Develop a Document Management Action Plan

Initiative Description

The Town currently uses the Onbase Document Management System (DMS). The system has been in place for a number of years and has reportedly been implemented with varied improvements among departments. Multiple departments reported challenges with effectively using the system in regular business processes. This was attributed in most cases to inefficient scanning methods and a lack of integration with Onbase and other Town applications.

The purpose of this initiative is to develop an action plan to further leverage the existing document management system. This initiative will largely utilize Town resources with investment needed to fund outside scanning assistance. This initiative will consist of the following tasks:

Task 1: Establish DMS Working Group

The first task of this initiative is to establish a working group that will manage the development of the action plan. This group should be smaller than the Town IT Working Group (established in the preceding initiative, Initiative F) but have a similarly mixed composition with representatives from a variety of functional areas. Emphasis in representation should be given to those departments likely to utilize the DMS more than others, and a member of the IT Department should also be included. In order for this DMS Working Group to be successful, it must be empowered by either Town leadership or the Town IT Working Group to make critical decisions related to the focus of the DMS Action Plan.

Tasks 2: Document areas of inefficient document management

The second task of this initiative is for the DMS Working Group to collaboratively document areas of inefficient document management. This should be done through fact-finding with all departments that either currently use the DMS, or may benefit from its use. It will be important that this fact-finding effort is inclusive or the Town will risk not incorporating all needs into a single plan.

Task 3: Categorize areas of inefficient document management

Having met with all current and potential DMS users, the DMS Working Group should categorize the areas of inefficient document management as the third task. Categorizing the needs will allow the Town to initiate improvements based on the type of need instead of by individual department and will likely allow improvements more efficiently. Some of the categories that may be used include:

- Onbase user licensing
- Scanning hardware
- Scanning resource workload
- Application integration

Task 4: Develop Draft DMS Action Plan for Town approval

Based upon the areas and categories of inefficient document management that the DMS Working Group discovers, task four is to develop an action plan to address them. The appropriate phasing of the improvements in the Action Plan will ultimately depend on the categories that are identified. Focus should be given to initiate as many improvements in a streamlined fashion as possible, within the capabilities of Town resource levels to

support. This will allow the Town to realize the benefit of effective document management in a shorter amount of time.

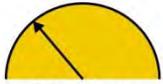
Some of the improvements that may be identified include:

- Adjust Onbase user licensing to ensure users have appropriate access
- Purchase and install expanded scanning hardware in departments
- Secure outside scanning resources to augment existing scanning efforts
- Implement interfaces between Onbase and other Town applications

The DMS Working Group should develop the plan in draft for review by the Town IT Working Group. Once that larger group has reviewed the Action Plan, it can be updated for wider distribution and implementation.

Task 5: Communicate and initiate DMS Action Plan

Once the DMS Action Plan is finalized, it will be important that it is communicated to a wide audience in the Town as action items are initiated. This communication should take place as part of task five. Wide communication will support buy-in for the plan and help users understand when their document management needs will be met, as well as the justification for the prescribed timing.

Initiative Source Information				
Functional Area:	Application Issues			
Priority Ranking:	2 of 16			
Related Strategic Issue(s)				
A4	<p>Use of the Town’s document management system could be increased. It was reported by some departments that despite the implementation of the OnBase Document Management system, they are not leveraging all of the functionality available. Some departments have attributed this to inefficient scanning and indexing methods. In addition, OnBase is not integrated with the primary enterprise applications in use in the Town including Munis and CityView.</p>			
Initiative Ranking				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 Critical	 High	 Medium	 Established
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> • Year One: \$0 • Year Two: \$50,000 • Year Three: \$50,000 • Three-Year Cost: \$100,000 			
Budget	Year-one expenditures are zero because this will be work effort of internal staff time to			

Description	develop the Action Plan. Year two and year three funding of \$50,000 is for outsourced scanning assistance as well as funding to implement interfaces to existing or new applications.
Action Items to Implement Initiative	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Establish DMS Working Group <input checked="" type="checkbox"/> Document areas of inefficient document management <input checked="" type="checkbox"/> Categorize areas of inefficient document management <input checked="" type="checkbox"/> Develop Draft DMS Action Plan for Town review <input checked="" type="checkbox"/> Communicate and initiate DMS Action Plan 	
Anticipated Benefits	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Expanded use of existing document management system <input checked="" type="checkbox"/> Expanded document retention capabilities <input checked="" type="checkbox"/> Improved efficiencies in department business processes <input checked="" type="checkbox"/> Reduced need for paper document storage 	

Greenwich Strategic Initiative

I: Adjust the Help Desk model in the IT Department and develop a plan for functional improvements.

Initiative Description

In the current environment, several departments reported instances where support provided by the Help Desk in the IT Department does not meet their needs. This was reported in most cases during after-hours support and also related to application-specific support. Additional consideration should be given to supporting the new technologies to be implemented as part of this Strategic Technology Plan and the extent that existing and new support needs could be met by outsourced resources.

In the past, the IT Department had a part-time position that was eliminated and has sought to secure an additional resource. The eliminated part-time position was for Level 1 support and the position the Department attempted to add was for application support. To date, this position has not been filled. As a result, IT staff with specializations in networking, applications, and other areas are often spending a large amount of time responding to more minor help desk support requests.

The initial activity of this initiative is to secure an additional resource to serve as a Help Desk Technician. Once the additional help desk resource is securing, the department should plan for the following considerations:

- Existing IT Department staffing levels, job descriptions, and skillsets
- External support currently utilized
- Department support needs not currently being met
- Expected future support needs

Potential resolutions to meet areas of need will typically follow into three types, as further described below:

- **Adjustments to skill-sets within the IT Department:** These adjustments related to staff in the IT Department may include additional training to establish expanded knowledge in specific technologies. An example may be training an existing staff member with specialized knowledge in a technology that has typically been supported by an external resource.
- **Adjustments to resource levels and skill-sets within other departments.** These adjustments may include providing technical training to select staff within departments to provide support to a group of users of a particular technology instead of utilizing the IT Department staff for that specialized support. An example may be a particular software application that is used for limited business processes.
- **Adjustments to the use of external resources.** These adjustments may include securing the use of external support resources with specialized knowledge in a particular technology instead of utilizing IT Department staff for that specialized support. For example, application support from the providing vendor may be increased.
- **Adjustments to the policies and procedures related to IT support.** As additional resources are added to the IT Department, it will be important that policies and procedures related to IT support are updated. These adjustments to the way in which it is requested and provided may address challenges in the current environment. For example, changes to the Service Level Guarantee of the IT Department (with appropriate adjustments to staff allocation) may improve response times to end-users after hours.

Following the initial adjustments, it will be important for the Town to regularly consider future adjustments to the IT support mechanisms. A variety of factors will contribute to the need for adjustments including evolving technologies, changes in staff in particular Town positions, and changes in personnel or policies at external

support sources. Two practices frequently employed by similar organizations to continually monitor the effectiveness of technology support are listed below:

- **Regular end-user satisfaction surveys:** Utilizing an annual end-user survey will provide insight into areas of unmet support needs. It will be important that any information collected in the survey is confirmed through working with department directors and the IT Working Group (established in Initiative F). Similarly, if multiple areas of need are identified, they should be prioritized using the IT Working Group.
- **Analysis of support during the selection and implementation of new technologies:** During the time of technology selection, consideration should be given to how support will be provided. This consideration should be confirmed during the final stages of the implementation to ensure initial projections are valid given any changes to the scope that may have occurred during implementation. This is most applicable to application support but may also include other technologies.

Initiative Source Information

Functional Area:	Management and Operations Issues
Priority Ranking:	3 of 16

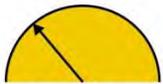
Related Strategic Issue(s)

M1	There are instances when the support provided by the Town Help Desk does not meet department needs. Instances of insufficient support were reported by department users including after regular business hours and during the upgrade process for certain applications. In addition, users reported that it is not always clear who within the IT Department is assigned as the “lead” for support of specific applications.
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Benchmarking and Best Practice Information

Several organizations publish best-practice information related to metrics of support staff to end-users, workstations, and other factors. One example is Computer Economics, identified in preceding sections of this Plan. This source typically prescribes one help desk technician for every 150 users or 150 workstations.

Initiative Ranking

Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 Critical	 Medium	 Medium	 Established

Estimated Initiative Budget

Annual Budgets	<ul style="list-style-type: none"> • Year One: \$25,000 • Year Two: \$60,000 • Year Three: \$60,000 • Three-Year Cost: \$145,000
Budget Description	The budget for this initiative is based upon the internal staff conducting planning and hiring activity in the first half of year one. The remaining funding in year one and years

two and three is to fund the position.

Action Items to Implement Initiative

- Develop recommended adjustments to technology support
- Implement changes with regular opportunities for measuring effectiveness
- Communicate status of changes
- Regularly re-assess technology support

Anticipated Benefits

- Improved timeliness of receiving technology support
- Improved quality in technology support received
- Increased leverage of existing technologies
- Increased ability to react to changes in technology support needs

Greenwich Strategic Initiative

P: Perform an analysis of the Municipal Area Network and Internet access

Initiative Description

The Town of Greenwich has recognized the need for an analysis to determine their needs regarding network connectivity. This is a two-part initiative that includes external connectivity to the Internet as well as internal access to Town resources.

A. External Network Connectivity

The Town has several concerns regarding their external network connectivity. The first is the reliability and support from their Internet Service Provider. The second is the availability of bandwidth into the future. These two concerns are further discussed below.

A.1. LightPath Reliability and Support

Currently, the Town is connecting to the Internet utilizing LightPath, a division of CableVision, which provides a 1Gbps, high speed connection. The Town has reported that this Municipal Area Network (MAN) is not completely reliable and support by LightPath has been unsatisfactory at times. Reports from the Town indicate that LightPath's network is a 'hybrid' containing elements of both fiber and coax; that LightPath's routers are still using Spanning Tree Protocol (STP), an outdated routing protocol; and that the customer support is 'unresponsive.' Times of unsatisfactory support are generally during periods of reduced performance and not during outages. It was reported that support during outages is generally satisfactory.

After researching these claims by contacting LightPath, they stated that all LightPath customers are connected by 100% fiber optic lines without exception and that all routers are using established routing protocols with completely modern encryption and authentication techniques. They did admit that there was a time that their customer service was lacking and that they have since remedied this.

Phase I: It is recommended that the Town develop a brief survey, sent internally to all departments, to identify any issues that may still be occurring regarding Internet connectivity. Although several of these issues have already been reported, some examples occurred in years past and it is important the Town understand what issues are still present.

Phase II: The IT Department should work with the end users to verify that the issues they may be experiencing are actually related to LightPath's network, and not a symptom of a separate, unrelated issue.

Phase III: The Town should work with LightPath to resolve any discovered issues. It is possible that the impression of poor customer service and unreliability may be a persistent perception based on past performance.

Phase IV (optional): If it is discovered that there are existing issues with connectivity or support, and they are unable to be acceptably resolved by working with the vendor, it is recommended for the Town to conduct a cost analysis of alternative providers that compete with Lightpath. If any can verify that they provide the same, or a better, level of service and support at a comparable cost, it is recommended that the Town consider switching providers.

A.2. Future Bandwidth Requirements

Another concern reported by one of the Town departments was regarding the amount of bandwidth required for possible future endeavors. For example, the Library foresees a time when they may be offering services that include videoconferencing and expanded media services (audio and video) to the public. The concern was that there may not be enough bandwidth to the Internet for all of their potential future offerings.

Looking at the connection speeds of 150 Mbps for connectivity (100 Mbps on the backup connection), there is no recommendation for increasing this. The Town should communicate current performance capabilities and explain to users where limitations may or may not exist. This topic should be revisited as new technologies and applications are added to the Town. Please see the benchmarking section for explanation.

B. Internal Network Connectivity

Internally, it was discovered that the Town employees had further networking concerns and desires. These include expanding internal wireless connectivity to include access to the Town network and expanding connectivity to mobile devices in the field.

B.1. Internal Wireless Connectivity

It was reported by several departments that increased wireless connectivity is desired. This is in addition to an increased use of laptops and other 'untethered' devices, such as tablets and smartphones. These devices would connect to the internal network to provide access to shared drives and applications. IT also reported concerns that end users desiring these capabilities may not all understand the implications related to support and security. It is recommended that this initiative be consistent with any policies and procedures that apply to both computer and telephone use.

Phase I: The Town should determine who will have access to the public wireless network and what devices will be used. Any users who have a legitimate business need to access wirelessly should be considered.

Phase II: Analyze current policies and procedures to verify their efficacy regarding wirelessly accessing the Town's network. Also, verify that current policies cover any and all actions pertaining to wireless devices. If new policies need to be created, Strategic Initiative N may need to be referenced first.

Phase III: Once valid business cases are made, the Town should then develop a project related to the implementation of a wireless network with internal Local Area Network connectivity available.

B.2. Remote Access from the field

Several Departments have indicated that there are business needs to be able to access the Town's network from the field. Tasks such as capturing GIS points, receiving and closing work orders, meter reading, and time entry can reportedly free up a large amount of time for employees and management.

Phase I: Similar to B.1., it is recommended that the Town determine which departments should have remote access and what applications would be available to them. Some of the current applications used by the Town may already have mobile applications that could be utilized.

Phase II: Analyze current policies and procedures to verify their efficacy regarding remotely accessing the Town's network. Also, verify that current policies cover any and all actions pertaining to wireless devices. If new policies need to be created, Strategic Initiative N may need to be referenced first.

Phase III: Once the users, devices, applications, and method of connectivity have been determined as viable reasons, the Town should develop an action plan for implementation.

Initiative Source Information

Functional Area:	Technology Issues
Priority Ranking:	4 of 16

Related Strategic Issue(s)

T2	Users reported an unmet need for wireless access to the internet or to the Town network in some Town buildings. Wireless access has been established to the Internet in the Town Hall. However, users reported inconsistent performance and the ability to wirelessly connect to the Town network is not available. While the Town does not currently have a large instance of laptop and mobile devices, this will likely increase in the future, creating a greater need for wireless connectivity.
T4	Town staff could have increased connection capabilities while working in the field. Several departments reported a lack of a capability to connect to the Internet or Town network while working in the field using aircards, Wi-Fi hot-spots, or other means. This includes the Department of Public Works, Parking, and Parks and Recreation
T6	The Town does not always receive timely network support. It was reported that due to the unique configuration of the Town's network, support provided by Cablevision/Lightpath is not always responded to timely or it is difficult to reach someone who is able to assist the Town. While this has not historically created significant challenges, it presents a risk if immediate support is needed, and a risk of support availability in the long-term.
T7	Town departments are concerned with the appropriate amount of available bandwidth to perform operations and meet citizen demand. It was reported by some departments that although they currently receive adequate performance, they are not confident that the Town has sufficient bandwidth to support increased mobile technologies and the greater user of web-based applications. In addition, the libraries expect an increased demand for internet usage as content is increasingly delivered over the Internet.

Benchmarking and Best Practice Information

This section includes a summary of the research performed in developing this initiative.

A.1. Lightpath Support

Research for this initiative included reaching out directly to LightPath for comment on issues that were discovered during BerryDunn's fact finding mission. They provided information supporting their claim that, while there may have been issues in the past, it is no longer the case. In a 2009 press release they stated:

JERICHO, NY, November 9, 2009 – Optimum LightpathSM, a market leader in Ethernet-based, communication solutions for New York metropolitan area businesses, today announced it won the 2009 Carrier Ethernet Service Provider Award for Best Marketing Americas, issued by industry standards body, the Metro Ethernet Forum (MEF). Also named finalist for the MEF's Best Service Innovation and Service Provider of the Year Americas awards, Optimum Lightpath is recognized for the fourth straight year for its excellence and leadership in Carrier Ethernet Services.⁹

A.2. Future Bandwidth Requirements

Regarding best practices for audio and video, it is generally recommended for audio to have at least 128Kbps for an acceptable quality up to 384Kbps for good quality. Video starts at 384Kbps up to 1Mbps for good quality.

At 1Gbps, an estimate is that the Town is possibly using 20 - 50Mbps for everyday general usage for

and data. This can be expanded to 30 - 70Mbps as an estimate if the Town develops a Voice over IP (VoIP) telephony system. A 1Gbps network is equivalent to 1000Mbps. There is likely sufficient remaining capacity to support the projects and initiatives of this Plan.

B.1. Internal Wireless Connectivity

This is highly prevalent throughout the world. It is well-established technology and with the proper planning, policies, procedures, and security measures, it can be as secure as a wired network. From Microsoft's Technet:

IEEE 802.11 wireless LANs have the historical reputation of being unsafe. While that may have been true for the original 802.11 standard, the latest developments in wireless standards such as IEEE 802.1X, Wi-Fi Protected Access™ (WPA™), and Wi-Fi Protected Access 2™ (WPA2™) provide strong protection for wireless traffic in the most rigorous security environments. If you deploy the latest set of wireless standards with a strong authentication method, there are substantial cryptographic barriers to unauthorized wireless clients and passive attackers.¹⁰

B.2. Remote Access from the field

According to Gartner, 'Mobile Device Battles' is one of the top 10 Strategic Technology Trends for 2013¹¹. Bring Your Own Device, or "BYOD," is becoming very prevalent throughout the world. Employees have their own smartphones or tablets that they use as their primary devices. However, there are many concerns regarding these devices, primarily around support and security. One of the largest drivers and users who want this the most are the decision makers at the executive level of an organization.

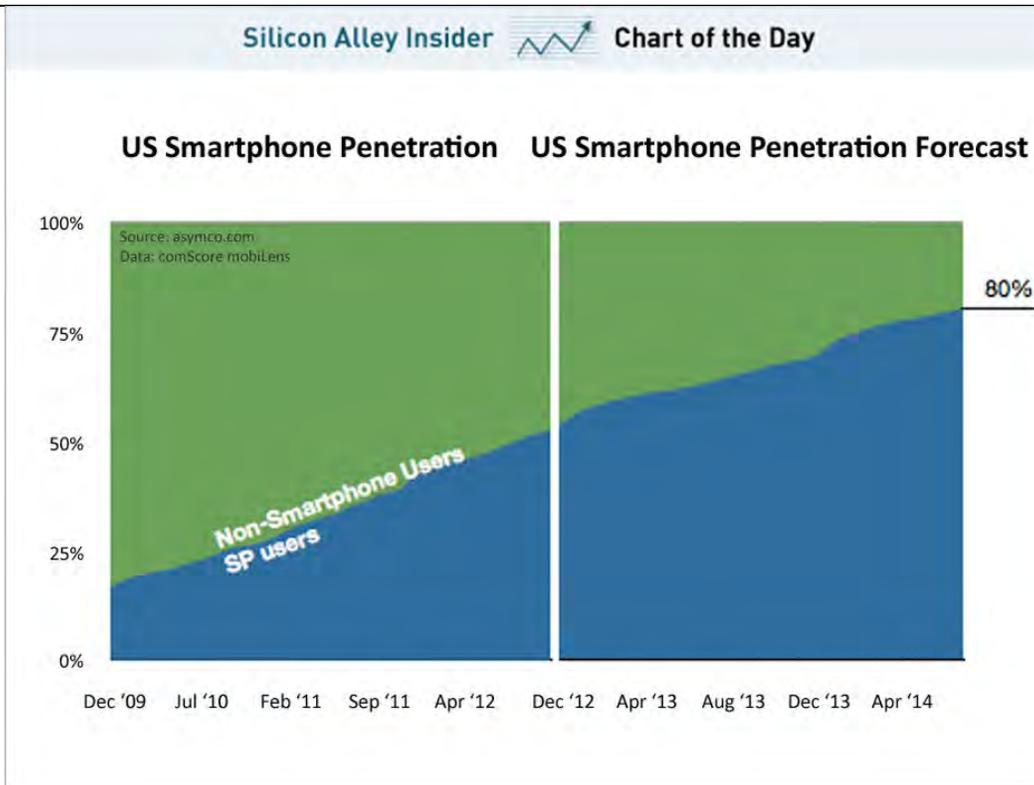
Based on metrics tracked since 2010, it was correctly predicted that smartphones would reach 50% penetration into US Businesses by the end of 2012. Using the same rate of penetration, it is expected to approach 80% by sometime in 2014.¹²

⁹ <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a.UuZe0dUTtM>

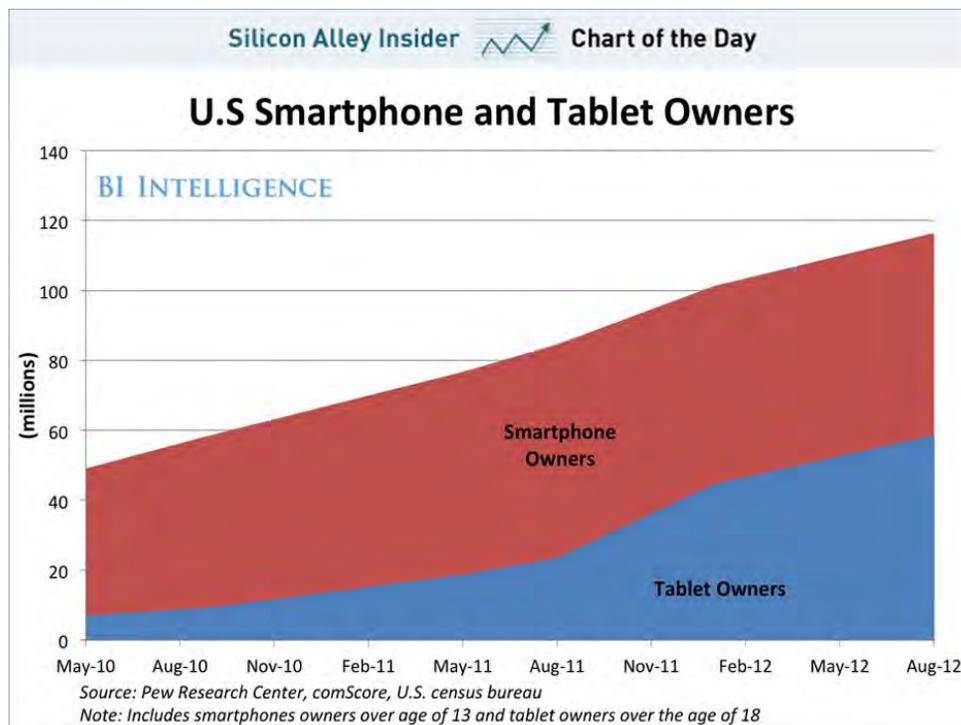
¹⁰ <http://technet.microsoft.com/en-us/library/bb457091.aspx>

¹¹ <http://www.gartner.com/newsroom/id/2209615>

¹² <http://www.businessinsider.com/chart-of-the-day-smartphones-us-saturation-2013-1>



Further, the trend goes for tablets, as well¹³:



¹³ <http://www.businessinsider.com/chart-of-the-day-tablet-penetration-2012-12>

Initiative Ranking				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Critical	 Medium	 Medium	 Medium	 Established
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> • Year One: \$0 • Year Two: No activity • Year Three: No activity • Three-Year Cost: \$0 			
Budget Description	There is no funding needed for this initiative as it will utilize internal resource for planning efforts.			
Action Items to Implement Initiative				
<p>A.1. LightPath Reliability and Support</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Create and distribute survey to Town employees, identifying issues related to connectivity performance. <input checked="" type="checkbox"/> Identify and verify issues identified by the survey <input checked="" type="checkbox"/> Work to resolve with current provider <input checked="" type="checkbox"/> (Optional) Perform cost analysis of alternative providers <p>A.2. Future Bandwidth Requirements</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> No recommendations at this time <p>B.1. Internal Wireless Connectivity</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Determine business case <input checked="" type="checkbox"/> Analyze current policies and procedures <input checked="" type="checkbox"/> Develop Project <p>B.2. Remote Access from the field</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Determine business case <input checked="" type="checkbox"/> Analyze current policies and procedures <input checked="" type="checkbox"/> Develop Project 				
Anticipated Benefits				
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Verification of Network issues will reduce negative perceptions of IT in general <input checked="" type="checkbox"/> Implementation of remote connectivity will increase productivity saving time and money. 				

Greenwich Strategic Initiative

L: Update the Town's IT Disaster Recovery Plan

Initiative Description

The Town of Greenwich recognizes the need for an updated and tested Disaster Recovery Plan (DRP). Based on recent weather-related events throughout New England, this need has been further reinforced. A DRP provides for the rehabilitation of an organization's most critical systems at an alternative site, in the event of a disaster. The plan provides Recovery Time Objectives (RTOs), contact information of essential personnel, and a step-by-step, keystroke-by-keystroke roadmap that can be followed by a trained member of the IT Department. In addition to the Plan that the Town already has in place, the Town has several tools that do put them in a good position for Disaster Recovery. This includes a recovery site, virtualization, and strong backup techniques. However, it was indicated that the plan may be outdated. The purpose of this initiative is to revisit the plan and perform an update.

Phase I: Disaster Recovery Plan Analysis

The Town should perform an analysis of the current DRP against the Town's current environment. This first phase will identify and allow prioritization of any discrepancies found. The current plan should be compared to benchmarking information, such as NIST Special Publication 800-34 Rev.1, "Contingency Planning guide for Federal Information Systems." This document is an effective starting point and maps out how to build a contingency plan for any given system, regardless of the organization. It is also recommended that this be performed by an independent third-party.

Phase II: Implementation

Once the discrepancies are identified and prioritized, the Town will be able to create action plans to bring their environment into alignment with the Plan. For instance, storage requirements, server resources, power requirements, and security vulnerabilities, must all be taken into consideration. Some of these are likely to become projects themselves.

Further, this phase should include not only the removal of any non-applicable recovery techniques that are no longer relevant, but the adjustment of any existing processes that may need to be updated. For instance, an outdated application that is no longer used by the Town may appear in the Plan and need to be removed.

Phase III: Testing and Training

The Town should periodically perform training of critical personnel and testing of the Plan. This step will help identify any further discrepancies within the Plan. It is recommended to perform a test of a system at least once a quarter with a full test of the Plan should be performed once a year. Often times a fictional scenario can be used for simulation.

Phase IV: Revision

The Town's systems are ever changing. New applications, or updates to existing applications are common. This may alter a given process that has been included in the Plan. As this is the case, the Plan should consistently be revisited and revised. Trigger events such as new applications, application upgrades or removals, new employees, or loss of an employee would necessitate a review and potential revision of the DRP.

Initiative Source Information				
Functional Area:	Management and Operations Issues			
Priority Ranking:	5 of 16			
Related Strategic Issue(s)				
M5	<p>The Town does not have a current IT Disaster Recovery and Business Continuity Plan. While forms of these plans do exist, they are outdated. A lack of these plans that are regularly reviewed, updated, and tested presents a risk to the Town of being able to recover and resume operations after a disaster.</p>			
Benchmarking and Best Practice Information				
<p>NIST provides an extensive framework for best practices related to documenting Disaster Recovery Plans. They are the Federal Government's standards provider related to Disaster Recovery and Cybersecurity.^{14*} NIST Special Publication 800-34 Rev.1, "Contingency Planning guide for Federal Information Systems," has forms to assist in the step-by-step development of the Disaster Recovery Plan.</p>				
Initiative Ranking				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 High	 Medium	 Medium	 Established
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> • Year One: \$100,000 • Year Two: \$0 • Year Three: No activity • Three-Year Cost: \$100,000 			
Budget Description	<p>The budget estimate for this initiative is based on the cost to retain an independent third-party to assist with developing the DRP. Implementation activities in year two would be performed by Town staff dependent on availability. It is recommended that external resources be utilized to implement recommendations in instances where they are time sensitive and Town staff is not available.</p>			
Action Items to Implement Initiative				
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Perform analysis of current plan against the current environment. <input checked="" type="checkbox"/> Implement action plans to bring plan and environment into alignment. <input checked="" type="checkbox"/> Continually test the plan and train employees. <input checked="" type="checkbox"/> Continually review and revise the plan. 				
Anticipated Benefits				

¹⁴ <http://www.nist.gov/index.html>

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| <ul style="list-style-type: none"><input checked="" type="checkbox"/> Increased likelihood of recovering from a disaster within the RTO<input checked="" type="checkbox"/> Increased confidence of staff being prepared for disaster<input checked="" type="checkbox"/> Lower cost for recovery from a disaster<input checked="" type="checkbox"/> Increased protection from any sort of calamity |
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Greenwich Strategic Initiative

D: Document and communicate procedure for managing content on the Town’s website at the department level

Initiative Description

Several departments in the Town reported a desire to increase the ability to manage website content at the department level. In some cases, departments had a desire for more frequent content updates and in others, departments had a desire to expand the capabilities offered through the website. It is important to note that some departments reported high satisfaction with the current management of the website and so the purpose of this initiative is to coordinate this process to expand the level of satisfaction.

This initiative will consist of the following tasks:

Task 1: Establish a Website Management Working Group

The first task of this initiative is to establish a working group that will manage the development of policies and procedures related to managing Town website content. This group should be smaller than the Town IT Working Group (established in the preceding initiative, Initiative F) but have a similarly mixed composition with representatives from a variety of departments. Emphasis in representation should be given to those departments likely to utilize the website more than others, and a member of the IT Department should also be included. In order for this Working Group to be successful, it must be empowered by either Town leadership or the Town IT Working Group to make critical decisions related to Town website content management.

Tasks 2: Document areas of inefficient website content management

The second task of this initiative is for the Working Group to collaboratively document areas of inefficient website content management. This should be done through fact-finding with all departments that either currently use the website to large extent, or may benefit from expanded use. It will be important that this fact-finding effort is inclusive or the Town will risk not incorporating all needs into the resulting policies and procedures.

Task 3: Categorize areas of inefficient website content management

Having met with all current and future users, the Working Group should categorize the areas of inefficient website content management as the third task. Categorizing the needs will allow the Town to initiate improvements based on the type of need instead of by individual department and will likely allow improvements more efficiently. Some of the categories that may be used include:

- Lack of timely website content management by the current processes.
- Lack of ability for departments to make their own updates.
- Lack of specific capabilities of the Town website.
- Lack of understanding of existing capabilities among departments.

Task 4: Develop draft policies and procedures for Town approval

Based upon the areas and categories of inefficient website content management that the Working Group discovers, task four is to develop updated policies and procedures to address them.

Some of the improvements that may be identified in the updated policies and procedures include:

- Adjust the process to request content updates made by the webmaster
- Provide the means for departments to manage their own content
- Expand the capabilities provided on the Town website including launching specific pages for some departments
- Educate Town users on the processes for managing Town website content

The Working Group should develop the policies and procedures in draft for review by the Town IT Working Group. Once that larger group has reviewed them, the policies and procedures can be updated for wider distribution and implementation.

Task 5: Communicate and initiate the policies and procedures

Once the policies and procedures are finalized, it will be important that they are communicated to a wide audience in the Town as action items are initiated. This communication should take place as part of task five. Wide communication will support buy-in.

Initiative Source Information				
Functional Area:	Application Issues			
Priority Ranking:	6 of 16			
Related Strategic Issue(s)				
A6	<p>Department management of the Town’s website could be increased. Currently there are varying levels of department involvement in the management and content updates on the Town’s website. Several departments have a desire to be able to manage their own content on the website. In addition, there is a desire for increased eGovernment capabilities.</p>			
Benchmarking and Best Practice Information				
<p>Similar organizations have found that there are some key considerations related to effectively managing website content:</p> <p>Ensure that all content is managed within prescribed standards throughout the organization.</p> <p>Ensure that departments regularly update content. The level of content on the website should not exceed what the group or department can effectively manage to keep current.</p> <p>Where groups or departments may need content beyond prescribed standards, manage this content separately with corresponding policies and procedures.</p>				
Initiative Ranking				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 Medium	 High	 Easy	 Leading Edge

Estimated Initiative Budget	
Annual Budgets	<ul style="list-style-type: none"> • Year One: \$0 • Year Two: \$0 • Year Three: No activity • Three-Year Cost: \$0
Budget Description	There is no funding needed for this initiative because it is anticipated to be completed by internal staff resources. Activity will take place in the first and second years of the Strategic Technology Plan.
Action Items to Implement Initiative	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Establish Working Group <input checked="" type="checkbox"/> Document areas of inefficient website content management <input checked="" type="checkbox"/> Categorize areas of inefficient website content management <input checked="" type="checkbox"/> Develop draft policies and procedures for Town review <input checked="" type="checkbox"/> Communicate policies and procedures 	
Anticipated Benefits	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Expanded use of the Town website <input checked="" type="checkbox"/> More frequent updates to the Town website <input checked="" type="checkbox"/> Expanded web-based capabilities for citizen access 	

Greenwich Strategic Initiative
H: Implement a Town-wide system for scheduling meeting rooms
Initiative Description

The Town has identified a need for a meeting management application. Currently, this task is performed manually with a paper-based process. An individual end user controls the meeting rooms and they are emailed when there is a scheduling need. The risks of this process could result in possible double bookings, unavailability of the person who schedules, or other related issues that may be based on human error.

This could be better managed by an application that would allow transparency to all meeting rooms. It would allow end user self-service of bookings. Additionally, scheduling for specific items could also be managed with this application, such as projectors or laptops. In the current environment, the Town may be able to leverage its existing email client for this functionality, Lotus notes.

Phase I: Identify Requirements

The Town should identify and document the Town’s requirements for scheduling meeting rooms. This should include a comprehensive list of what rooms, resources, or people may need to be included.

Phase II: Application Analysis and Selection

The Town should undergo a system analysis and selection process. Consideration should be given to functionalities and integration with current applications. For instance, the ability to send email notifications or reminders to meeting attendees. The initial analysis should focus on the Lotus Notes email system that exists in the Town today. If the desired functionality may be met with Lotus Notes, this may be the most beneficial solution. If it is determined other applications may be able to provide expanded functionality, the Town should pursue these through a structured system selection process. The Town may also decide to have vendor demonstrations to assist in the selection process.

Phase III: Implementation and Training

Once decided on a system, the Town should implement the system and conduct training for the end users.

Initiative Source Information

Functional Area:	Application Issues
Priority Ranking:	7 of 16

Related Strategic Issue(s)

A10	<p>A Town-wide application for scheduling meeting rooms is not available for decentralized access by all Town staff. In the current environment, meeting rooms are centrally managed and staff must phone or e-mail requests for meeting space. Users reported the desire to be able to access this application themselves, and have greater access to be able to reserve rooms efficiently.</p>
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Benchmarking and Best Practice Information

There are several applications that could provide the Town with needed functionality. Many of them will provide all the functionality required by the Town and may even provide unanticipated features that would be a value

add for the Town. Many of these will integrate with the Town's email system to provide automatic notifications, as well.

Initiative Ranking				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 Medium	 High	 Easy	 Established
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> • Year One: \$10,500 • Year Two: \$2,000 • Year Three \$2,000 • Three-Year Cost: \$14,500 			
Budget Description	<p>The first year's \$10,500 reflects \$8500 for the approximate costs for (estimated) 10 concurrent user licenses. \$2000 per year for maintenance and support is included in the budget estimate in each of the three years. This budget is based on the Town selecting and implementing a new application for meeting room management. It is anticipated that if the Town were to utilize the existing Lotus Notes application, this budget may be utilizing for external assistance in configuration adjustments or end user training.</p>			
Action Items to Implement Initiative				
<input checked="" type="checkbox"/> Identify and document Town requirements. <input checked="" type="checkbox"/> Evaluate and select a meeting manager product. <input checked="" type="checkbox"/> Implement the selected product and train employees.				
Anticipated Benefits				
<input checked="" type="checkbox"/> Self-service meeting room booking <input checked="" type="checkbox"/> Transparency regarding meeting room availability <input checked="" type="checkbox"/> Ability to book resources, such as projectors, screens, laptops, etc.. <input checked="" type="checkbox"/> Reduction in duplication <input checked="" type="checkbox"/> Improved efficiency and streamlined booking process				

Greenwich Strategic Initiative

A: Conduct a gap-fit analysis related to the Munis application’s core financials modules

Initiative Description

The Town currently uses Tyler Technologies, Munis applications for managing financial, human resource, payroll, and tax billing business processes. During the fact-finding interviews with Town staff conducted by BerryDunn as part of the IT planning project, challenges related to the use of Munis were reported. Some of the challenges identified by Town staff are summarized below.

End-users reported the Munis application used for financial management is not user friendly and presents challenges with generating reports. Multiple end users reported the use of external spreadsheets for reporting purposes because the analytical and reporting capabilities of the Munis modules are not widely understood, cumbersome, or non-existent.

In addition to increased user-friendliness, there is a desire for workflow functionality, integration with other Town systems and web-based vendor self-service. It was also reported that there is a desire in multiple departments to expand e-Government capabilities through the Town website.

This initiative is to work Tyler to address the needs identified by Town staff. BerryDunn has recommended that the Town go through a process to conduct a needs assessment and gap analysis to identify the unmet needs of Town departments. The process would involve facilitated work sessions with Town staff followed by a work session with Tyler staff to review the issues identified and provide responses on how the issues can (or cannot) be addressed. The needs identified by Town staff during meetings with BerryDunn to capture the IT related strategic issues can be categorized into three areas; additional training, a need for additional modules or increased functionality, and integration with other Town systems. These areas are further described below:

Additional Training: Additional training needs relate to issues where Town staff have reported a lack of functionality; however, functionality may exist and Town staff require training to understand how to use it. This area is also for re-training needs on current functionality to help Town staff use the Munis system more efficiently and improve Town business processes and training on reporting tools. It is important that Town staff are able to articulate the data required for a report or by identifying the process they are trying to manage. Understanding the data needs and the process being managed can assist in defining reporting requirements.

Additional Modules: Additional modules needs relate to purchasing additional modules to address Town needs identified for additional functionality. The additional modules identified include, but are not limited to, contract management, grant management, and E-government modules.

Integration: Integration relates to integrating Munis with other existing Town systems to improve functionality and efficiency. Integration needs could include, (but not limited to) integration with CityWorks, and any future E-government modules purchased.

BerryDunn recommends the Town develop a “needs” list with stakeholders from each department that represent all functional areas (purchasing, finance, community development, etc.) as a result of the facilitated work sessions. The Town should then require Tyler to respond to the list of needs with cost (and resource) estimates for training, new modules, and integration; and provide the Town with an estimate for when required functionality will be made available.

Initiative Source Information				
Functional Area:	Application Issues			
Priority Ranking:	8 of 16			
Related Strategic Issue(s)				
A2	<p>Town staff reported challenges with the Munis query and reporting functionality. Several Town staff indicated that running reports and performing data analysis from the Munis application is challenging. This was reported by users from several different functional areas.</p>			
Benchmarking and Best Practice Information				
Organizations similar in size and complexity to the Town of Greenwich rely on enterprise wide systems to support town business processes. Gaps in functionality and challenges with reporting can create issues for town staff attempting to complete daily business functions. It is common for organizations to also integrate their enterprise systems to other systems and the town website to offer E-Government services.				
Initiative Ranking				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 Critical	 Medium	 Medium	 Leading Edge
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> Year One: No activity Year Two: \$35,000 Year Three: \$30,000 Three-Year Cost: \$65,000 			
Budget Description	The budget for this initiative is comprised of two phases. Phase one funds (\$35,000) is for a consultant to facilitate a meeting with all Town departments to identify and document challenges and needs in the current environment. Phase 2 funds (\$30,000) are allocated for any additional training needs identified as part of the gap fit analysis or additional modules that need to be purchased to address town needs.			
Action Items to Implement Initiative				
<input checked="" type="checkbox"/> Conduct a work session to document the needs/challenges related to the use of Munis. <input checked="" type="checkbox"/> Discuss unmet requirements with Munis to understand options for meeting requirements. <input checked="" type="checkbox"/> Develop an action plan based on the responses from Munis that includes an approach for conducting training, implementing new modules, and potentially integrating Town systems with Munis.				
Anticipated Benefits				
<input checked="" type="checkbox"/> Greater use of Munis by Town staff <input checked="" type="checkbox"/> Increased efficiencies with Town business processes				

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| <ul style="list-style-type: none"><input checked="" type="checkbox"/> Less reliance on duplicate data entry through integration with other systems<input checked="" type="checkbox"/> Town staff trained to use more of the functionality provided by Munis<input checked="" type="checkbox"/> Improved adoption/acceptance of the Munis system in use today |
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Greenwich Strategic Initiative

K: Reorganize the Desktop Replacement Plan and identify the need for laptops and tablets

Initiative Description

The purpose of this strategic initiative is to develop and secure funding for an adjusted desktops replacement schedule that will replace workstations on a department basis. The replacement schedule will include desktops and laptops as well as new tablets in the Town.

The first step in this initiative is for desktop specifications to be updated. These should include both technical and application standards so that consistent and current version of applications will be used throughout the Town. As new desktops replace those older ones in the Town, progress will be made towards a standardized environment. An important consideration in the development of these standards is where dependencies exist for particular versions of operating systems by older applications in the Town. For example, there may be an application that will not be supported using a Windows 7 operating system.

The Town currently leases its desktops and users generally have a high satisfaction with the performance of their workstations. Challenges were reported with the way in which some users within a particular department may receive newer workstations before others which creates instances of incompatibility as well as training issues. Due to the configuration of the three-year replacement schedule, all desktops within a particular department are not replaced in the same cycle. Recently, the Town has made adjustments to increase standardization in all newly deployed desktops. This is done by updating the image of other workstations in the department where the new workstation is being deployed to increase standardization.

The second step in this initiative is to adjust the replacement cycle so that it is based upon departments ensuring all users in a department receive new desktops in the same cycle. It is anticipated that this may cause a different number of desktops to be replaced in each year of the three-year replacement cycle.

This initiative plans for laptops to also be purchased for use by some departments. As new or updated applications are implemented throughout the organization, expanded use that includes mobile computing may be promoted by the use of tablets. An example may be data collection in the field with the new or updated Community Development application.

Effectively implementing the use of laptops in the Town will also require a documented strategy to be developed, as there are unique considerations related to these types of devices. There may be some opportunities for Town staff that perform remote or mobile business processes to move towards using a laptop on a regular basis as opposed to a desktop or laptop. The development of a mobile computing strategy will need to outline how the Town will maintain security with these new devices and how they can help move the Town further towards a paperless environment. It will also be important for the Town to determine the applications that can be used on a laptop to improve business processes and reduce the reliance on desktop-based applications. As with other policies, procedures, and documentation it will be important that the strategy is developed collaboratively, effectively communicated throughout the organization, and regularly reviewed.

Initiative Source Information

Functional Area:	Management and Operations Issues
Priority Ranking:	9 of 16

Related Strategic Issue(s)

M2	<p>The Town's desktop replacement schedule does not optimize standardization or utilize laptops or tablets. The current desktop replacement schedule utilizes leased workstations with most in the Town replaced within three years of use. Desktops are not all replaced on the same cycle within a particular department, however. This can lead to challenges with a lack of standardization. Staff across the Town also reported a desire to use laptop and tablet computers. Users as well as the IT Department also reported that the amount of time needed to deploy individual workstations is significant.</p>			
Benchmarking and Best Practice Information				
<p>Best practice information related to workstation replacement schedule includes details of standardization and the recommended frequency of replacements. Currently, the Town is in line with these best practices.</p>				
Initiative Ranking				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 High	 Medium	 Easy	 Leading Edge
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> • Year One: No activity • Year Two: \$105,000 • Year Three: \$30,000 • Three-Year Cost: \$135,000 			
Budget Description	<p>It is anticipated that adjusting the replacement cycle from a per-user basis to a per-department basis will require an increase in funding in some years of the cycle. As an estimate, \$1,500 is included for 50 desktops in year two for this cost. \$30,000 is included in year three for the purchase of 15 laptops.</p>			
Action Items to Implement Initiative				
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Update technology standards for the desktop specifications <input checked="" type="checkbox"/> Adjust desktop replacement schedule from a per-user to a per-department basis <input checked="" type="checkbox"/> Implement expanded laptops 				
Anticipated Benefits				
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Improved standardization among users within a department <input checked="" type="checkbox"/> Improved remote and mobile computing capabilities for end users 				

Greenwich Strategic Initiative

M: Plan and implement technology training for end users and IT Department staff

Initiative Description

The purpose of this initiative is to improve training opportunities for general Town staff as well as for the members of the IT Department. The desire for additional training was reported by nearly all participants in the fact-finding meetings facilitated by BerryDunn. In several instances, employees felt they may be able to better leverage existing technologies if they were trained on the full capabilities available. Specific examples ranged from desktop productivity tools to the Munis applications. Similarly, the IT Department reported that improving the training levels of the user-base would likely result in more efficiencies in the use of current technologies.

Technology training and the scope of the policies and procedures that are developed should consist of the following:

- New Hire Training
- Ongoing “refresher” training
- Training related to technology changes

BerryDunn recommends that leadership for this initiative be shared by member of the IT Department as well the Human Resource Department. With overall responsibility for the management of training Town-wide, Human Resource will need to be involved and the subject matter expertise from the IT Department is similarly important.

There are five tasks associated with this initiative:

Task 1: Inventory training processes currently used. It is important for those leading the initiative to compile all current or historical training policies and procedures as an initial step in this initiative. BerryDunn has found that organizations have typically had more robust training plans in past years than in today’s current environment with budget challenges. Understanding what plans used to exist will be especially helpful when understanding the needs of long-tenured employees.

Task 2: Understand the needs of the organization from varying perspectives. With an understanding of the current and historic training documentation, those individuals leading this initiative should begin to meet with a variety of staff at the Town. Participants should vary in their functional areas as well as level of leadership in the organization. It will be important that a variety of levels are involved, ranging from staff to Department Directors. All members of IT should also be involved as they will ultimately support those being trained and will need specific training themselves.

Task 3: Develop policies and procedures. Based on the feedback collected from meeting with individuals in the Town with varying perspectives, the policy and procedure documentation can begin to be developed.

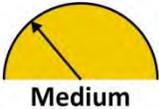
Task 4: Communicate the policies and procedures that are developed. Once the documentation is finalized, it should be communicated back to the organization and made available at a central location, such as an Intranet or shared drive. It will be important that the end-users understand the process for requesting training and what standards they will be expected to meet.

Task 5: Regularly evaluate and update policies and procedures. Just as the technology needs of the organization will change over time, the training needs will change as well. In order to keep the training policies and procedures actively used, the Town will need to regularly evaluate their effectiveness and make any necessary updates. This evaluation should again consider the perspectives of a variety of employees. And any

changes that are made should be adequately communicated across the organization.

The policies that are developed should identify who will receive training, the type of training to be received, the frequency of training, and the time when refresher training will be conducted. The Town should consider that training be included as part of the new hire process, as well as when new systems are deployed. The IT Department does not need to be the single source of training resources. In some instances, training on department specific systems can be provided at the department level. The following is a sample table of contents for a training policy and procedure manual.

As an additional component of this initiative, the Town should consider leveraging an application to track training and certifications. Commonly provided as a function of an enterprise resource planning system, such applications have been helpful to organizations to add structure and accountability to complement their policies and procedures. The instance of this application will enable human resources and other departments to more effectively track employees' training and certifications as well as the administration of training programs. Currently, this data is largely tracked in external data stores and it was reported that this may create challenges with ensuring employees receive appropriate and adequate training.

Initiative Source Information				
Functional Area:	Management and Operations Issues			
Priority Ranking:	10 of 16			
Related Strategic Issue(s)				
M6	Technology training for end users is limited. It was reported that in recent years IT Department staff have not pursued proactive training and professional development. Similarly, technology training for end users is limited. Users reported a need for training particularly when applications are implemented or upgraded.			
Initiative Ranking				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 High	 Medium	 Easy	 Established
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> Year One: No activity Year Two: \$20,000 Year Three: \$20,000 Three-Year Cost: \$40,000 			
Budget Description	The budget estimates of \$20,000 in both the second and third years are for additional training for IT Staff. There is no budget needed for end user training because it would be funded from the Human Resource Department's budget.			
Action Items to Implement Initiative				

- Inventory training processes currently used
- Understand the needs of the organization from varying perspectives
- Develop policies and procedures
- Communicate the policies and procedures to Town staff
- Regularly evaluate and update policies and procedures

Anticipated Benefits

- Increased efficiencies and use of existing Town technologies
- Increased risk mitigation with employees training in proper and acceptable use of technologies

Greenwich Strategic Initiative

N: Develop, update and communicate IT policies and procedures

Initiative Description

The IT Department recognizes the importance of documented policies and procedures and has made efforts in recent years to develop this documentation. Multiple cases still exist of policies that although are generally standardized, are not documented. The current IT Policies and Procedures are not widely understood or necessarily adhered to by all Town staff and may not address some critical IT related issues. This initiative will allow the Town to update the existing policies to address new IT issues as well as recurring issues that are impacting Town processes.

BerryDunn recommends that the Town identify sources of reference as they develop policies and procedures. These may include standard bodies of knowledge, professional organizations, and comparative municipalities. One potential source of guidelines and standards is the Information Technology Infrastructure Library (ITIL) which publishes a large amount of information to base policies. Utilizing a source such as ITIL will improve the Town's ability to establish policies that are consistent with industry standards.

As the Town develops documented policies and procedures, it will be important that they receive the appropriate input and in some cases approval from the employees they affect. Effective communication related to new policies will be an important factor in increasing end user buy-in and adoption.

This initiative is to develop policies and procedures related to the management of technology at the Town. The policies and procedures should address topics such as social media, mobile computing, and GIS management. Many of these topics are addressed as part of other specific projects in this plan.

Phase I: Identification of Policy Areas

1. Social Media

The Town currently has an interest in utilizing social media for a variety of functions but lacks a documented policy and procedure for this use. Several similar organizations have experienced challenges when a lack of documented policies and procedures exist. The Town should document which social media platforms will be utilized and the process for managing how information is pushed to them, including who will be responsible for managing these communications.

2. Tablet and Mobile Devices

The Town has an interest in deploying tablets and mobile devices to employees. It will be important for the Town to assess the needs of employees related to tablets and determine how the devices will be supported and how access to Town systems will be accommodated using tablets and other mobile devices. Current policies and procedures cover a broad set of considerations and meet the needs in the current environment. It is anticipated that as more tablet and mobile devices are deployed in the organization there may be a need to adjust the policies and procedures.

Phase II: Documentation and Implementation

Once Phase I is complete, documentation of the exact policies will be developed. These will then be published in the appropriate places, i.e. Employee Handbook. Employees will be asked to sign-off that they have been notified and agree to comply with the new policies.

Phase III: Enforcement				
Once the policies are in place and employees have signed off on them, the Town must follow up and ensure that all policies are enforced and in alignment with the Town's Goals and Objectives.				
Phase IV: Review and Revision				
The Town will periodically review and revise the policies once a year. Addendums may be released for employee sign off as triggered events occur, such as new technology implementation.				
Initiative Source Information				
Functional Area:		Management and Operations Issues		
Priority Ranking:		11 of 16		
Related Strategic Issue(s)				
M8	A Town-wide policy regarding the use of social media sites does not exist. A town-wide policy that governs the use of social media sites (Facebook, Twitter, etc.) does not exist which has created instances of individual departments creating their own accounts on social media sites. A lack of a standardized approach to social media management can result in inconsistent messaging and confusion to citizens.			
M9	Staff is not all aware of the Town's mobile telephone and mobile communication policies. The Town has adopted a mobile telephone policy and has restricted mobile telephone usage. Staff reported a desire for mobile telephones that would have web and email access as well and were not aware of the Town's policy.			
M10	GIS data could be further leveraged in the Town. While the Town has developed a comprehensive GIS database, staff reported an opportunity to further integrate GIS with other applications to leverage this data. It was also reported that due to some compatibility challenges with the CityView application, the Town is not utilizing the most current version of ArcGIS and there may be a need for more licenses.			
Benchmarking and Best Practice Information				
Many of the topics likely to be documented in the Town's expanded policies and procedures have been studied in the past and provisions exist for best-practices in the industry. These sources should be considered in the development of this initiative.				
It is likely that Greenwich has peer organizations that have effectively developed policies and procedures in some of the subject areas the Town will focus on. The Town would benefit from understanding how these peer organizations have addresses these areas.				
Initiative Ranking				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology

 High	 High	 Medium	 Medium	 Leading Edge
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> • Year One: No activity • Year Two: \$0 • Year Three: \$0 • Three-Year Cost: \$0 			
Budget Description	There is no funding needed for this initiative because it will utilize internal staff resources for completion. Work activity is planned in years two and three of the Plan.			
Action Items to Implement Initiative				
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Identification of areas requiring policies, specifically the abovementioned <input checked="" type="checkbox"/> Documentation, Publication, and Employee Signoff of written policies <input checked="" type="checkbox"/> Enforcement of policies <input checked="" type="checkbox"/> Review and Revision of policies 				
Anticipated Benefits				
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Greater project forecasting related to budgeting and IT resources for upcoming projects. <input checked="" type="checkbox"/> Increased ability for organization to be responsive to requests for changes. <input checked="" type="checkbox"/> High level governance over all Town IT resources through a mandate to adhere to IT policies and procedures. <input checked="" type="checkbox"/> Increased standardization in Town business processes. <input checked="" type="checkbox"/> Increased risk mitigation by following approved policies and procedures. 				

Greenwich Strategic Initiative
B: Conduct a needs assessment related to CityView for the Town departments not using the application
Initiative Description

Town departments are using multiple applications to manage the permitting, inspection and code enforcement processes. The applications in use include Microsoft Access, Microsoft Excel, Cornerstone, and CityView.

It was reported by some departments that the use of Cornerstone will end soon due to the potential retirement of the Cornerstone system by the current vendor. The departments using Cornerstone reported that they had looked into using CityView when it was initially implemented at the Town; however, they felt CityView could not meet their needs. Upon learning that Cornerstone is being phased out by the vendor, Town departments have indicated the need to perform a needs assessment related to CityView and identify a plan to address unmet (real or perceived) needs and potentially implement CityView in their department(s).

This initiative is to conduct a needs assessment with the appropriate Town departments to identify the requirements for use of CityView. The initiative includes a phase to facilitate work sessions with Town staff and document the needs followed by a phase to work with CityView to develop an action plan.

BerryDunn recommends the Town develop a “needs” list with stakeholders from each department that represent all functional areas (permitting, planning, inspections, etc). The Town should then require CityView to respond to the list of needs with cost (and resource) estimates for training, new modules, and implementation services. As a result of the documented needs, the Town can then work with CityView to develop a plan to address the needs which could include implementing CityView in appropriate departments.

Initiative Source Information

Functional Area:	Application Issues
Priority Ranking:	12 of 16

Related Strategic Issue(s)

A3	<p>The Town is using multiple software applications to manage the permitting, inspection and code enforcement processes. Town departments are using multiple applications to manage the permitting, inspection and code enforcement processes. The applications in use include Microsoft Access, Microsoft Excel, Cornerstone, and CityView.</p>
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Benchmarking and Best Practice Information

Using multiple applications to perform similar business processes, can impede efficiencies, and create duplicate data entry issues for Town departments.

Initiative Ranking

Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 High	 Medium	 Medium	 Leading Edge

Estimated Initiative Budget	
Annual Budgets	<ul style="list-style-type: none"> • Year One: No activity • Year Two: \$30,000 • Year Three: \$40,000 • Three-Year Cost: \$70,000
Budget Description	<p>The budget for this initiative is comprised of two phases. Phase one funds (\$30,000) is for a consultant to facilitate a meeting with appropriate Town departments to identify and document challenges and needs in the current environment. Phase 2 funds (\$40,000) are allocated for any additional training needs identified as part of the gap fit analysis or additional modules that need to be purchased to address town needs. Funding can also be used for re-implementation services for CityView in departments not using CityView today.</p>
Action Items to Implement Initiative	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Conduct a work session to document the needs/challenges and unmet needs related to the use of CityView. <input checked="" type="checkbox"/> Discuss unmet requirements with CityView by departments not using the application to understand options for meeting requirements. <input checked="" type="checkbox"/> Develop an action plan based on the responses from CityView that includes an approach for implementing CityView in appropriate Town departments or working with CityView to understand how gaps in needed functionality can be addressed. 	
Anticipated Benefits	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Greater use of CityView by Town staff <input checked="" type="checkbox"/> Increased efficiencies with Town business processes related to the use of CityView <input checked="" type="checkbox"/> Reduction of duplicate data entry through combined use of CityView (and retirement of Cornerstone) <input checked="" type="checkbox"/> Improved adoption/acceptance of the CityView system in use today 	

Greenwich Strategic Initiative

J: Create a Project Management focus in the Town for enterprise projects

Initiative Description

In the current environment at the Town, the IT Department does not have an appropriate set of information technology Project Management tools or an agreed upon methodology to track the status of IT projects. To increase the likelihood of project success, it is important that projects are tracked and reported on to measure progress against key project milestones or metrics. Failure to track, plan, and report on projects increases the likelihood that projects will not achieve desired results and will ultimately lead to failed projects.

BerryDunn recommends that the IT Department develop a standard set of project management tools to track projects, assist in planning for resource needs, and facilitate the overall prioritization process. Many organizations struggle with tracking projects which often leads to initiating more projects than can be supported. With a standard set of project management tools for project tracking, resource planning, and reporting, the IT Department will be able to better plan and manage projects. Many organizations have moved towards using a centrally managed project management and tracking tool such as MS SharePoint to track the status, risks and issues and overall progress made on projects.

Web-based project management applications have also been developed recently that can operate on smart phones and allow project team members access to project documents, track status, and communicate with the team. As the Town begins the planning process for the projects identified in the Strategic Technology Plan, it will be important to implement the recommendations identified here to increase the likelihood of success for Town IT projects.

This initiative is to develop IT project management policies and procedures and tools to assist in the management of the Town's IT projects. This initiative may require that the IT Department seek outside assistance in the development of the project management policies and tools.

As part of the first phase developing overall project management standards, we recommend that the Town first develop and implement standard tools to use in project management. These tools should include but not be limited to standard project plan template, project status reporting tool, the metrics that will be measured on each project to gauge overall project health, quality assurance processes, and project closeout procedures. Once these tools and templates have been developed and agreed upon, the Town can begin to develop a process for selecting and prioritizing projects.

The Town currently has numerous IT projects in progress. The Town's IT Department is responsible for managing, overseeing, and ensuring the success of all IT projects. This process has placed a great deal of strain on existing IT resources and made project planning and prioritization difficult. In addition, a methodology for selecting and prioritizing projects does not exist. The lack of a project prioritization process has forced the IT Department to operate in a reactive mode, responding to project issues and addressing immediate needs as opposed to strategically planning, selecting, and prioritizing projects. BerryDunn recommends that the IT Department develop a methodology for selecting and prioritizing IT projects.

BerryDunn recommends that as part of the development of project management standards, the Town track key project indicators to monitor overall project health. At a minimum, reporting should be done on project scope, schedule, and budget (known as the triple constraints) along with staffing on larger projects. Monitoring and regularly reporting on key project indicators can increase the likelihood of project success and allow the Town to shift resources to projects where necessary.

The IT Department should also consider documenting project dependencies, identifying a project schedule and documenting the critical path activities as well as the identification of potential risks and issues that could impact the project. BerryDunn recommends that the IT Department develop a policy of always collecting functional and technical requirements prior to starting any project. The collection of requirements should involve both IT resources as well as departmental stakeholders.

Initiative Source Information

Functional Area: Management and Operations Issues

Priority Ranking: 13 of 16

Related Strategic Issue(s)

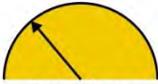
M7 **The Town does not have a framework or process in place for the management of technology projects.** With several recent cross-functional projects and more planned in the future, the Town has a need for a framework of technology project management. A framework that includes roles and responsibilities, communication mechanisms and project documents can increase the likelihood of project success.

M11 **The Town does not have proactive technology communication methods.** Several end users reported that they are not always made aware of changes in technology, such as during the upgrade of applications. Additionally, communication to the IT Department of new employees needing workstations and system access was reported to be inefficient.

Benchmarking and Best Practice Information

A documented project management framework for initiating, planning, and implementing technology projects can increase the likelihood of project success and the likelihood that projects meet intended business goals. Most organizations develop a project management framework based on best practices identified by the Project Management Institute (PMI).

Initiative Ranking

Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 High	 Medium	 Medium	 Leading Edge

Estimated Initiative Budget

Annual Budgets

- Year One: No activity
- Year Two: \$45,000
- Year Three: No activity
- **Three-Year Cost: \$45,000**

Budget Description Budget for this project is to hire outside assistance to develop a high level project management framework including standards, tools, templates, and overall approach for managing projects.

Action Items to Implement Initiative

- Document policies and procedures for selecting, prioritizing, and managing technology projects (project management framework).
- Communicate and train Town staff on policies related to IT project management.
- Obtain project management certifications for appropriate staff.

Anticipated Benefits

- Documenting project requirements will help ensure projects meet business expectations
- Increased planning, prioritization and selection of technology related projects will increase the likelihood of appropriate level of IT support for projects
- Increased likelihood of project success
- Greater project forecasting related to budgeting and IT resources for upcoming projects
- Increased ability to support purchased technologies

Greenwich Strategic Initiative

E: Identify deficiencies in the Town's email system and develop an action plan to meet Town needs

Initiative Description

Through the fact finding meetings and the department submitted projects, it was reported that many of the Town employees are not satisfied with the current email system. The Town is currently using the Lotus Domino email platform, with Lotus Notes as the end user client. The largest reported challenge for the Town's employees was a lack of user friendliness. However, it is possible that some of the challenges could be overcome with training.

Phase I: Issue Identification

The Town should conduct an internal survey to develop a documented list of issues experienced by the Town's end users. These should be weighted and prioritized. For instance if a majority of users have the same issue, it would rise to a higher priority.

Phase II: Implement Solutions

Once the Town has captured the list of issues and prioritized them, solutions can be researched. It is possible that the functionality that is perceived as lacking is actually available. There is also a possibility that many of the challenges the users face can be resolved through training or configuration adjustments. IT may have a resolution, or it may be resolved with assistance by the vendor.

Phase III: Migrate to New Platform (optional)

Based upon the issues identified the availability of solutions within Lotus Notes, the Town may choose to replace the current Lotus Domino/Notes environment. Through the fact-finding it was discovered that the majority of end users had a general feeling of dissatisfaction with the application. Should the Town select to migrate away from Lotus Notes, there are several options available.

Initiative Source Information

Functional Area:	Application Issues
Priority Ranking:	14 of 16

Related Strategic Issue(s)

A7	The Town's email system is creating challenges for end users as well as for the IT staff who manage it. The Town is currently using Domino Lotus Notes for its email. A large number of Town staff reported challenges with the email system not being user-friendly and lacking certain functionality. In addition, in some instances the integration between Active Directory (AD) and Domino can be interrupted, causing users to have to re-enter login/passwords.
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Initiative Ranking

Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology

 Medium	 Critical	 Medium	 Difficult	 Established
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> • Year One: No activity • Year Two: No activity • Year Three: \$0 • Three-Year Cost: \$0 			
Budget Description	<p>It is anticipated that this initiative will be completed using internal staff resources and so no funding is available. Depending on the course of action the Town decides upon, funding may be needed in the first year following this Plan to implement these actions.</p>			
Action Items to Implement Initiative				
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Conduct internal issues fact-finding mission <input checked="" type="checkbox"/> Determine if issues are resolvable <input checked="" type="checkbox"/> (Optional) Choose a new platform and migrate away from Lotus Notes 				
Anticipated Benefits				
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Better end user experience <input checked="" type="checkbox"/> Tighter integration with existing Active Directory network <input checked="" type="checkbox"/> Increased efficiency 				

Greenwich Strategic Initiative

O: Transition the Town to Voice over IP telephony (VoIP)

Initiative Description

Currently, the Town's Avaya phone system server is reaching end of life. There will shortly be no more support given for their current version. This presents an opportunity for the Town to update and upgrade their current system to a full-featured Voice over IP telephony platform.

The Town's current core system is capable of being able to transition from digital to VoIP. The factors here include upgrading the hardware and software. There may need to be additional hardware purchased such as Power over Ethernet (PoE) switches.

Phase I: Planning

It should be determined if the Town will upgrade all at once or perform a phased implementation. BerryDunn recommends a phased implementation approach for this project. Although this project is designed to start in the final year of the Plan, this initiative is designed as a three-year project.

All necessary hardware and software will need to be taken into consideration. BerryDunn recommends that the Town of Greenwich remain with their current vendor, as it is possible, using the current base install to upgrade to VoIP. Additionally, the Town has an existing quote for all the hardware, software, and licensing necessary for this project.

One of the larger benefits of VoIP is that it runs over an existing Local Area Network. It is typically unnecessary to run any additional lines. Bandwidth concerns of the Town are minimal, considering the high speeds at which they are capable. A typical call requires just a single channel of 64Kbps. However, it is highly recommended to create a separate voice Virtual LAN (VLAN) on the current LAN, for ease of management regarding both bandwidth and security.

It is possible that the Town may need to implement Power over Ethernet (PoE) switches to allow the phones to obtain their power from the LAN. This would make it unnecessary to add outlets or additional power strips at the end user's desk. Also, there needs to be a consideration for which phones will be used. Most vendors offer a variety of models. Finally, as part of the planning process, the Town should determine which Town locations, and which end users at a location, should receive priority for upgrade to VoIP.

Phase II: Implementation

The Town should implement the new system based on the results of the previous phases. Starting with the server hardware and software upgrade, the process would expand to infrastructure resources, such as the PoE switches and culminate in the deployment of the new phone desk sets. It is highly recommended to perform the implementation with assistance from the vendor.

Phase III: Training

Finally, the Town should implement end user training to include expanded features of the updated telephone system.

Initiative Source Information				
Functional Area:	Technology Issues			
Priority Ranking:	15 of 16			
Related Strategic Issue(s)				
T1	<p>The Town is not currently using Voice over IP telephone technology in all areas. In the current environment the schools and public safety use VoIP telephony but a legacy system is in place in the Town Hall. The Town Hall telephony is administered by an employee in the Purchasing Division as this is mostly an outsourced effort. The Town may experience efficiencies and cost savings with standardizing on a single telephone technology.</p>			
Benchmarking and Best Practice Information				
<p>Voice over IP telephony is a well-established technology. It has been evolving for several years and provides quality, reliability, and integration into other applications. Best practices include IP phones be placed on their own subnet/VLAN.¹⁵ The footnoted document below provides very technical best practices data for Avaya on Cisco networks.</p>				
Initiative Ranking				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 High	 Low	 Difficult	 Established
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> Year One: No activity Year Two: No activity Year Three: \$100,405 Three-Year Cost: \$100,405 			
Budget Description	<p>The \$100,405 potential cost for the first year, includes desk phones, PoE switches, server hardware/software, and licensing that would be needed to upgrade the current system. Some of these can be budgeted for since users can be added piecemeal over time. The current phone system does allow for a hybrid configuration (i.e., some VoIP, some digital). Years two and three (beyond the years in this Plan) are anticipated to be closer to \$55,000 per year. However, the price thereafter would only be maintenance and administration.</p> <p>BerryDunn's research (below) coincides with the quote from the Town's Avaya vendor. It is recommended the Town defer to the quote from their vendor for more accurate charges.</p>			

¹⁵ <http://www.slideshare.net/packetbase/avaya-voip-on-cisco-best-practices-by-packetbase>

	Initial	Year 1	Year 2	Year 3	Total 3 Year Plan
Number of Users		400	300	300	1000
Hardware Cost per Phone (avg)		\$80,000.00	\$60,000.00	\$60,000.00	\$200,000.00
Number of PoE switches		5	5	6	16
Hardware Cost per Switch		\$5,000.00	\$5,000.00	\$6,000.00	\$16,000.00
Avaya Upgrades Hardware	\$7,500.00				\$7,500.00
Avaya Upgrades Software	\$7,500.00				\$7,500.00
Total	\$15,000.00	\$85,405.00	\$65,305.00	\$66,306.00	\$232,016.00

Strategic Initiative O: Table 1

Action Items to Implement Initiative

- Conduct planning for Voice over IP (VoIP) network
- Implementation and installation
- Training

Anticipated Benefits

- Cost Savings
- Integration points with other applications
- Unified Communications potential
- Phone portability

Greenwich Strategic Initiative
Q: Conduct an IT Security Audit
Initiative Description

In 2010, the Town of Greenwich received a Network Vulnerability and Security Analysis report from Topgallant Partners. This report, according to the Executive Summary, covered policies and procedures involved with network security. Additionally, the Town of Greenwich scored high marks for the majority of the items assessed. However, there were some vulnerabilities discovered.

Phase I: Security Assessment Gap Analysis

The Town should perform a gap analysis of the previous Security Assessment against the Town’s current environment. For instance, there were some high priority risks listed along with the recommendations by which to mitigate them. It should be verified by the Town that these have indeed been mitigated. That table is below in the Benchmarking and Best Practice Information section.

Phase II: Implementation of Mitigations

Once any discrepancies are identified and prioritized, the Town will be able to create action plans to bring their environment into alignment with the Plan. For instance, if the recommended logging systems have not yet been put in place for compliance with PCI Standards, HIPAA/HITECH, and Access Rights, the Town should create an action plan by which to carry out this recommendation.

Phase III: Periodic Security Audit

BerryDunn recommends that a network security audit should be performed 3-5 years or as needed. This is dependent on the criticality of the network, systems, or data. If there are many changes to a network within a short period of time, it is likely that the audit should be done more often. If a network is more static in nature, with few changes, it may be able to withstand a longer period between audits. However, with the level of intrusions and attacks growing, one may not be aware they have been attacked until it is too late.

Initiative Source Information

Functional Area:	None
Priority Ranking:	16 of 16

Related Strategic Issue(s)

-	None
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Benchmarking and Best Practice Information

According to the InfoSec website, "A security audit only provides a snapshot of the vulnerabilities in a system at a particular point in time. As technology and the business environment changes, periodic and ongoing reviews will inevitably be required. Depending on the criticality of the business, a security audit might be conducted yearly, or every two years."

Also, from the Town's previous Network Vulnerability and Security Analysis:

Security Controls	Vulnerability	Suggested Mitigation	Priority
Access Rights	No Logging; No Forensic Trails	Implement Logging System	High
Systems Development	Vulnerabilities Identified	Mitigate per Vulnerability Assessment Plan	High
HIPAA/HITECH	No Logging; No Forensic Trails	Implement Logging System	High
PCI Standards	No Logging; No Forensic Trails	Implement Logging System	High
Business Continuity	Needs Updating	Update and Review Yearly	Medium
Authentication	None	Adequate	
Network Access	None	Adequate	
Operating Systems Access	None	Adequate	
Service Provider Oversight	None	Adequate	
DMZ and Firewall	None	Adequate	
Email Application Access	None	Adequate	
Remote Access	None	Adequate	
Malicious Code Prevention	None	Adequate	
Passwords	None	Adequate	
Wi-Fi	None	Adequate	
Physical Media	None	Adequate	
Personnel Security	None	Adequate	

Initiative Ranking				
Town		BerryDunn		
Strategic Issue Rank	Department Priority	Cost Benefit	Ease of Implementation	Maturity of Technology
 Medium	 Medium	 Medium	 Medium	 Established
Estimated Initiative Budget				
Annual Budgets	<ul style="list-style-type: none"> • Year One: No Activity • Year Two: No Activity • Year Three: \$75,000 • Three-Year Cost: \$75,000 			
Budget Description	This budget estimate is based on the cost of a comprehensive assessment. There are varying levels of assessment, depending on what elements are being used. This could include penetration testing, network analysis, social engineering, or even physical access controls			
Action Items to Implement Initiative				
<input checked="" type="checkbox"/> Verify completion of original Network Vulnerability and Security Analysis. <input checked="" type="checkbox"/> Complete any outstanding sections. <input checked="" type="checkbox"/> Perform another Vulnerability and Security Analysis.				
Anticipated Benefits				
<input checked="" type="checkbox"/> Identification of potential data network vulnerabilities <input checked="" type="checkbox"/> Verification of properly functioning security systems				

4.0 Implementing the Technology Plan

This section contains the budget and timeline for the Prioritized Plan Initiatives, contains funding considerations for the Plan and describes the approach to governance of the Plan.

4.1 BUDGET AND TIMELINE

The previous Section 3.0 of the Strategic Technology Plan provided detailed descriptions for each initiative and what each entails, identified which strategic issue(s) are addressed by the initiative, estimated budgets and timing for the initiative, identified action items to implement the initiative, and listed anticipated benefits of the initiative.

The following table presents summaries of the budgets for the recommended initiatives that have been presented in this plan. The timeline provides a framework for budgeting project costs and for planning implementation timeframes over a three-year planning horizon. The costs presented are estimates and will vary based on the Town budget, competing technologies, the availability of support resources, and the specific technical approach used to undertake an initiative.

Table 4.1: Initiative Budget and Timeline Matrix

Initiative Budget and Timeline Matrix					
Strategic Initiative		Year 1	Year 2	Year 3	Total
Initiatives Starting in Year One					
F	IT Working Group(s)	0	-	-	\$0
C	Document Management Action Plan	0	50,000	50,000	\$100,000
I	Help desk model and staffing	25,000	60,000	60,000	\$145,000
P	Municipal area network and Internet analysis	0	-	-	\$0
L	IT Disaster Recovery Plan update	100,000	0	-	\$100,000
D	Website content management	0	0	-	\$0
H	Meeting room scheduling software	10,500	2,000	2,000	\$14,500
Initiatives Starting in Year Two					
A	Munis core financials gap-fit analysis	-	35,000	30,000	\$65,000
K	Desktop replacement plan reorganization and laptops	-	105,000	30,000	\$135,000
M	Technology training	-	20,000	20,000	\$40,000
N	Updated IT policies and procedures	-	0	0	\$0
B	CityView needs assessment	-	30,000	40,000	\$70,000
J	Project management focus	-	45,000	-	\$45,000
Initiatives Starting in Year Three					
E	Email system action plan	-	-	0	\$128,000
O	VoIP transition	-	-	100,405	\$100,405

Initiative Budget and Timeline Matrix					
Strategic Initiative		Year 1	Year 2	Year 3	Total
Q	IT Security Audit	-	-	75,000	\$75,000
		Year 1	Year 2	Year 3	3-Year Total
Total Plan Initiatives Budget		135,500	347,000	407,405	\$889,905

Each initiative in the tables can be started and/or completed within a given fiscal year. Rather than attempting to determine exactly when a particular project would be undertaken, this table is intended to identify the fiscal year(s) that a project should be initiated. If a fiscal year has a zero presented for the initiative cost or hours, this signifies no budget amount is expected as existing internal resources will be utilized to complete the initiative. A dash indicates that there are no planned activities for the initiative during the respective fiscal year.

The following figure depicts the three-year trend of the combined budget amounts for the Strategic Initiatives in each of the Plan years.

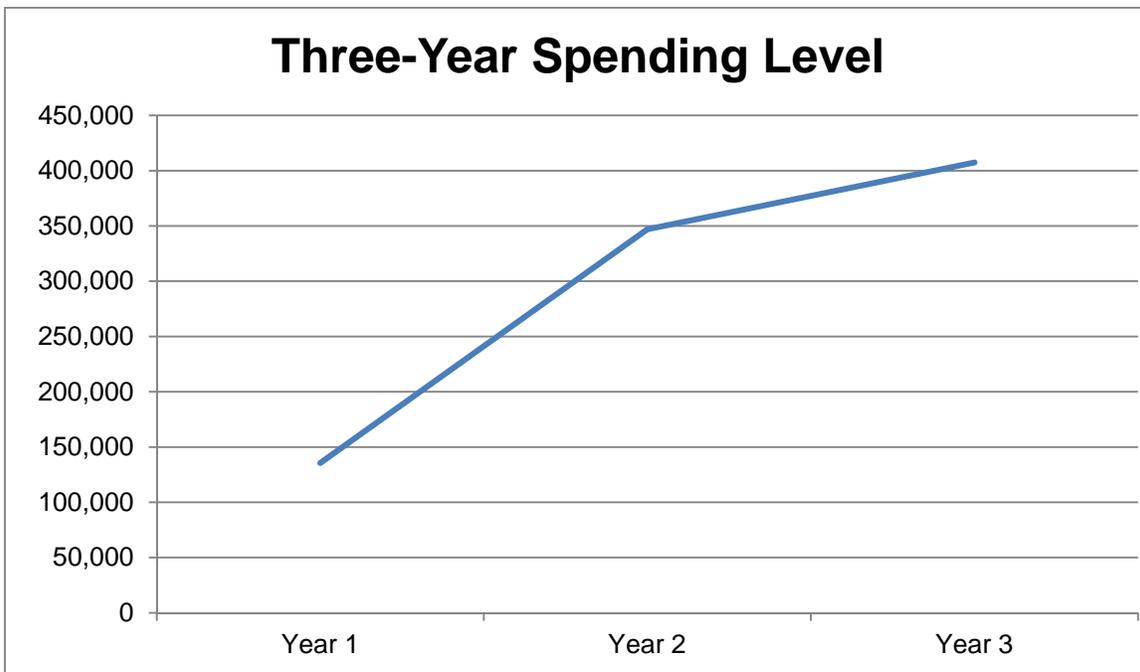


Figure 4.1: Three-Year Budget Levels

As the nature of projects in the first year are generally internal projects designed to increase documented policies and procedures so that the Town is prepared for projects in later years of the Plan, there is not a large level of estimated funding needed to support these first projects. Similar organizations undertaking strategic planning projects typically follow this approach to have the increased budget levels mostly be realized in the second and third year of the plan to ensure adequate timing to secure funding. The increase in budget levels in years two and three of the Plan represent the investment related to initiatives for new applications.

In addition to new funding that may be needed to support new Strategic Initiatives that are identified, additional operational funding will need to be secured in cases where new application or technologies are implemented as part of the plan.

4.2 FUNDING

The following table contains the Town’s historic IT spending ratios based upon total IT spending and the Town’s General Fund budget.

Table 4.2: Historical IT Spending Ratio

Historical IT Spending Levels (\$)			
	FY2011	FY2012	FY2013
Total IT Budget	3,057,305	3,189,209	3,239,999
Town Budget	102,463,796	103,656,406	105,750,606
IT Spending Ratio	2.98%	3.08%	3.06%

The historical IT spending ratios are depicted in the figure below.

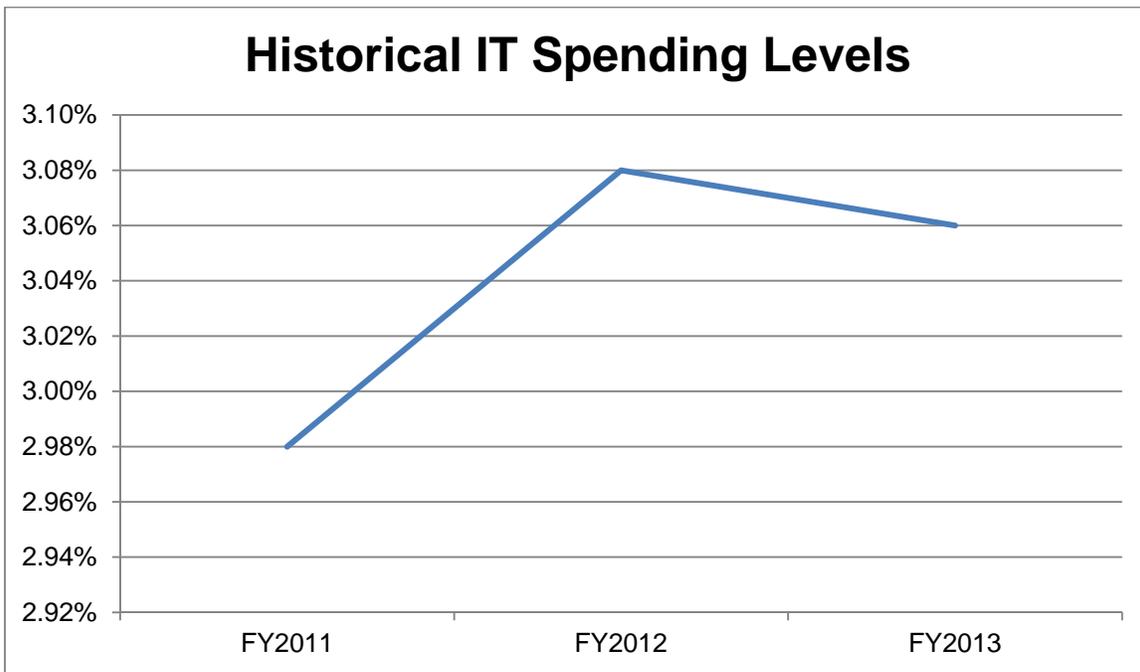


Figure 4.2: Historical IT Spending Ratios

The ratio of IT spending to the total budget is a measure often used to compare the IT commitment of various organizations. Typically, this percentage can range from two to four percent. As evident by the calculations above, the Town has historically been spending within the range of a typical organization.

As the annual IT budget is developed, it is important that operational funding is secured to support those investments made in the previous year. Typically the necessary level of funding is 20% of the

investment for software, and 10% of the investment for hardware. Based on the nature of the strategic initiatives, these rates have been applied. It is important to note that additional operational spending is only necessary for those initiatives that will not directly replacing existing hardware or software.

The following table contains the total plan budget for each year as well as the necessary operational funding estimates resulting in the total plan IT spending in the three years of the plan.

The following table contains calculations of future IT spending ratios in each of the three years of the Strategic Technology Plan. Rates of increase of 2.5% for the IT Budget and 1.5% for the Town Budget have been applied, based on past trends.

Table 4.3: Future IT Spending Ratio

Future IT Spending Levels (\$)			
	Year 1	Year 2	Year 3
Increased Base Budget	3,320,999	3,404,023	3,489,125
Strategic Plan Budget	135,500	347,000	407,405
Total IT Budget	3,456,499	3,751,023	3,896,530
Town Budget	107,336,865	108,946,918	110,581,122
IT Spending Ratio	3.22%	3.44%	3.52%

The future IT spending ratios are depicted in the figure below.

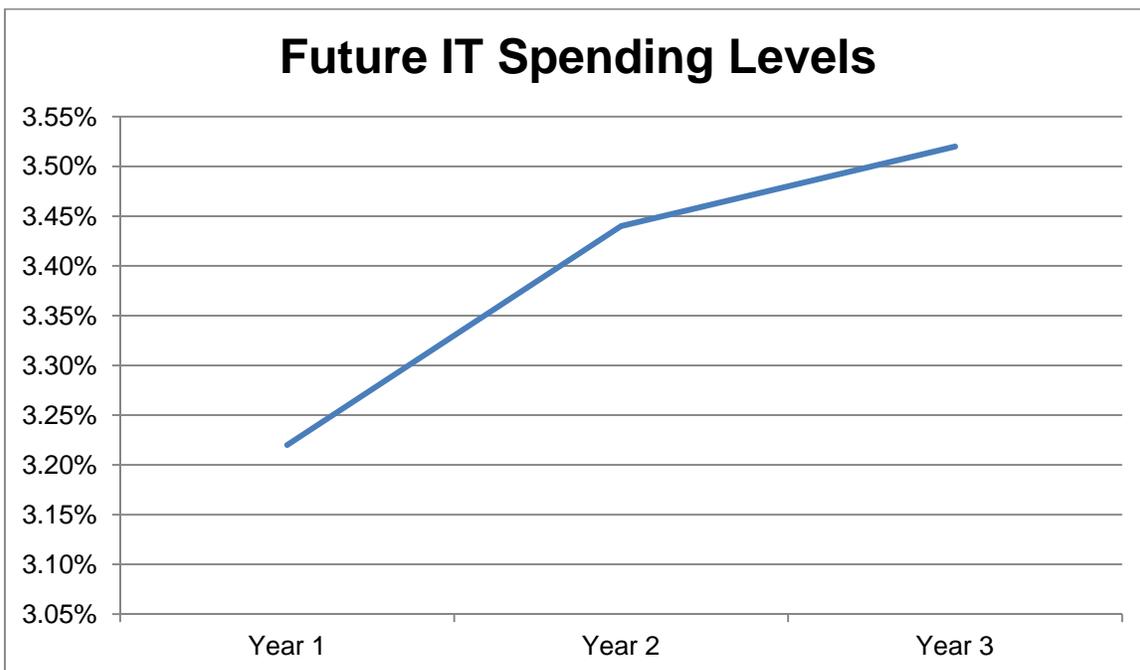


Figure 4.3: Future IT Spending Ratios

The investments required as part of this Strategic Plan drive the ratios up in the future years of this plan. Future potential cost savings will in turn drive down this ratio, which will occur in the years beyond the three-year planning horizon.

The Strategic Plan involves significant future investments in the IT environment in the Town over the next three years. These investments are in addition to those currently in the operational budget and will comprise the majority of the capital expenditures in the coming years. It is important to note that as new needs arise, additional capital projects will be identified. These will significantly contribute to the capital budget, especially in the later years of the Plan. The process for identifying these projects is described in section 4.3, Strategic Plan Governance.

4.3 STRATEGIC PLAN GOVERNANCE

The Town will begin the implementation of the projects and initiatives contained in this plan during the next fiscal year. The Strategic Technology Plan will greatly impact the operations of the Town. Planning, selecting, deploying, and managing for improved systems and service delivery mechanisms will require strong leadership, clear strategic and tactical plans, and, where reasonable, comprehensive needs assessments to help identify the most important technology-related Town challenges.

Once new technologies are implemented, the Town will need to actively communicate those services and their benefits to both internal and external stakeholders. For example, the Town should not expect that new e-government services will be widely used unless the services are effectively communicated, trained, and promoted.

New technology services create significant opportunities to change how the Town manages daily operations. The Town must plan for significant business process changes that streamline operations and focus on using technology to improve customer service. The Town should consider the following requirements that a plan of this magnitude necessitates:

- Active executive management involvement and sponsorship will be critical to the successful adoption and continued support of the plan.
- Implementing a successful Strategic Technology Plan will require significant planning, increased capital investment, and human resources in order to successfully implement the Plan Initiatives.
- Project goals and objectives should be clearly communicated to stakeholders and progress should be proactively monitored.
- Business processes should be evaluated, and, where necessary, redesigned to take advantage of new technologies in order to meet the Town's desired objectives.
- Many changes will be non-technical. Rather, they will be cultural shifts, process changes facilitated by change management and policy and procedure adjustments.
- Departments must work cooperatively and collaboratively to facilitate effective change that is in the best interest of the Town.

- Technical support staff will be critical to the success of the IT Strategic Plan's implementation. Internal stakeholders must be ready, willing, and able to use new technology and embrace effective change.

Updating the Plan

BerryDunn recommends that the Town review and update the plan twice a year. The review process should include executive management and The IT Director. The review meetings should address the following:

- a. The first update of the year should be to track the progress made against initiatives.
 - b. The second update during the year should focus on reassessing upcoming projects and re-prioritizing the order of projects for the upcoming fiscal year. While individual department input is important, the overall decision to re-prioritize initiatives should be made by IT. As part of this update, IT should meet with Department Heads to obtain their input and communicate plans for the upcoming year.
2. It is anticipated that new projects will be identified throughout the year. Some of these projects may be the result of new State mandates or other unexpected events that create the need for an IT project. IT should be responsible for assessing new projects as they are identified and determine how they can be incorporated into the IT plan.

Incorporating New Projects into the Plan

BerryDunn recommends that projects be selected and prioritized based on overall return on investment to the Town, funding and resource needs, overall benefit to the Town, other projects in progress, and the ability for the Town to dedicate appropriate resources to the project to increase the likelihood of success. The Town can use the methodology and tools provided during the development of this IT Strategic plan by identifying and prioritizing critical issues impacting Town needs and select new projects to be added to the plan based on the number of issues the project addresses in addition to the factors identified previously.

Assessing Current Projects

As important as selecting and prioritizing projects to be added to the plan in the future, will be the process of assessing the overall status of "in progress projects." BerryDunn recommends that the Project Owner develop project status reports to track and report on the status for all projects. Many organizations assess the overall "health" of a project by analyzing the scope, schedule and budget of the project, also known as the "Triple Constraints." Indicators can be assigned to each of these project factors and a project that is failing to perform in one of these critical areas can be further analyzed to develop a corrective action plan to address project performance issues.

Many of the projects contained in this Plan include the implementation of enterprise-wide systems, such as a time and attendance system. For enterprise-wide system projects, the Town can identify specific areas to assess as part of reviewing an in-progress project to determine the overall likelihood of a successful implementation of the system. BerryDunn recommends that the Town consider

analyzing the areas in the table summarized below when assessing an in-progress project that involves implementing an enterprise-wide system.

Table 4.4: Project Assessment Areas

Critical Assessment Areas		
No.	Assessment Areas	Description
1	Project Participants Understand Activities Remaining Prior to Go-Live	All project activities and tasks must be adequately communicated to the responsible individuals and adequate resources must be designated to complete them.
2	Design, Development, and Configuration Activities are Complete	Design, development, and configuration activities must be completed in order for remaining project activities to occur. Design, development, and configuration activities that are completed after the official completion of appropriate User Acceptance Testing (UAT) testing would require additional testing.
3	Deliverables from vendors are Complete and Approved	All deliverables identified in the contract between the vendor and the Town must be provided and accepted (signed off) by the Town prior to live operation. In the event that modifications have been made to allow certain deliverables to be accepted after Go-Live, the deliverables schedule must be updated to reflect this. Deliverables that are intended to document the results of a testing phase, for example, should be used by the Town as a means by which the phase can be evaluated and whether or not the Town should proceed to the next phase.
4	Security is in Place and has Been Tested	A critical component of this project is the appropriate planning for, and implementation of, system security.
5	Interfaces are Complete	This assessment area relates to the various interfaces that are being developed during the implementation of the system. The development of these interfaces is critical to ensure full system functionality to users. Interfaces should be tested along with the testing of other system functionality and signed off on by the Town.
6	Reports are Complete	As part of the system implementation, the Town will identify standard reports needed in the system to replace the reports currently used. Areas where custom reporting needs exist will also need to be identified and the vendor and the Town will need to develop a plan to create them. High quality, reliable, properly formatted and complete reports are often key indicators for how project stakeholders will ultimately define project success.
7	Testing is Complete	The Town must be assured that appropriate testing methodologies have been implemented to prove that the system is capable of meeting expectations set in a Testing Plan delivered by the vendor. Furthermore, testing will prove that the system is able to operate in the live environment without significant system errors, defects, performance issues or other issues that could jeopardize daily operations. The Town must sign off on the completion of UAT.

Critical Assessment Areas		
No.	Assessment Areas	Description
8	Department Readiness	This project activity considers those project tasks departments need to either complete or be aware of prior to go-live.
9	Training is Complete	Town personnel need appropriate end-user training in preparation for live operation. Without proper training, Town staff will not be adequately prepared to perform their daily responsibilities in the new system environment.
10	Town Support Structure is Established	With any enterprise-wide system implementation, there is a large impact on the support structure in the organization. The implementation of an enterprise-wide system has similar implications and may require some dedicated roles within IS. Identifying and training these individuals is a critical activity in the project.

The indicators in the table below can be used to categorize the status of the assessment areas.

Table 4.5: Project Assessment Indicators

Project Assessment Indicators	
Status	 Complete
	 In Progress: On Schedule
	 In Progress: Behind Schedule
	 Not Started

It will be important that the IT Department have an active role in the projects contained in the IT plan. However, the IT Department involvement will vary depending on the project. The table below summarizes the IT Department's involvement depending on the particular project. The IT Department will either Lead (have ultimate responsibility for the entire life cycle of a project from initiation to completion) or Participate (be an active advisor and participant in a project and serve in an advisory role to departments that are identified as the Lead for a project) on the projects in the plan.

Table 4.6: IT Project Roles

IT Project Roles		
ID	Project Description	IT Dept. Role (Lead or Participate)
A	Conduct a gap-fit analysis related to the Munis application's core financial modules.	Participate

IT Project Roles		
ID	Project Description	IT Dept. Role (Lead or Participate)
B	Conduct a needs assessment related to CityView for the Town departments not using the application.	Participate
C	Develop a Document Management Action Plan.	Participate
D	Document and communicate the procedure for managing content on the Town's website at the department level.	Lead
E	Identify deficiencies in the Town's email system and develop an action plan to meet Town needs.	Lead
F	Establish Town IT Working Group(s); one with a focus on Town Departments and another on inter-agency (BOE, Police, Libraries).	Lead
H	Select and implement a Town-wide system for scheduling meeting rooms.	Participate
I	Adjust the Help Desk model in the IT Department and develop a plan for functional improvements.	Lead
J	Create a Project Management focus in the Town for enterprise projects.	Lead
K	Reorganize the desktop Replacement Plan and identify the need for laptops and tablets.	Lead
L	Update the Town's IT Disaster Recovery Plan.	Lead
M	Plan and implement technology training for end users and IT Department staff.	Participate for Town staff Lead for IT staff
N	Develop, update, and communicate IT policies and procedures.	Lead
O	Transition the Town to Voice over IP telephony (VoIP).	Participate
P	Perform an analysis of the Municipal Area Network and Internet access.	Lead
Q	Conduct an IT Security Audit.	Lead

Success Factors for the Plan

One of the critical success factors for the implementation of the Strategic Technology Plan will be executive support for the projects in the plan. The IT Department has committed to undertaking the projects in this plan and support will need to be provided to allocate the appropriate Town resources, as well as ensuring that projects outside the scope of this plan in current and future years are thoroughly evaluated before adjusting the existing priorities of the projects in the plan.

As described in Initiative J (Create a Project Management focus in the Town), the Town can improve the process of selecting, prioritizing, tracking, monitoring and reporting on IT projects. In order to implement the projects in this plan, it will be critical for the Town to implement the recommended project management practices. Implementing the projects and initiatives in this plan not only take

Town resources and appropriate staff, but also a structured project management methodology to increase the likelihood of project success.

It will be important for the Town to continue to evaluate the use of outsourced services where appropriate. Similar to the Munis application hosting service currently used by the Town, other opportunities to outsource specific IT services may arise. It is important to weigh the service level that can potentially be compromised when outsourcing services when compared to in-house support.

It is important that over the next three years the role of IT at the Town continue to evolve and continually be assessing leading edge technology tools to solve technology issues at the Town. The role of IT should focus on problem solving while balancing other organizational needs such as security, access to data and E-government services. Some of the initiatives in this plan will assist IT in moving further towards a proactive focus on IT planning.

Appendix A: List of Strategic Issues

This appendix contains the List of Strategic Issues confirmed as a result of the Strategic Issue Work Session.

Prioritized List of Strategic Issues		
No.	Issues Description	Priority
<i>Applications Issues</i>		
A1	The Human Resources Department reported that the Munis application is not meeting their needs for human resources and payroll functionality. The Town reported that the current functionality provided in the Munis application does not meet their needs	Critical 56
A2	Town staff reported challenges with the Munis query and reporting functionality. Several Town staff indicated that running reports and performing data analysis from the Munis application is challenging. This was reported by users from several different functional areas.	High 39
A3	The Town is using multiple software applications to manage the permitting, inspection and code enforcement processes. Town departments are using multiple applications to manage the permitting, inspection and code enforcement processes. The applications in use include Microsoft Access, Microsoft Excel, Cornerstone, and CityView.	Critical 46
A4	Use of the Town's document management system could be increased. It was reported by some departments that despite the implementation of the OnBase Document Management system, they are not leveraging all of the functionality available. Some departments have attributed this to inefficient scanning and indexing methods. In addition, OnBase is not integrated with the primary enterprise applications in use in the Town including Munis and CityView.	High 37
A6	Department management of the Town's website could be increased. Currently there are varying levels of department involvement in the management and content updates on the Town's website. Several departments have a desire to be able to manage their own content on the website. In addition, there is a desire for increased eGovernment capabilities.	Medium 32
A7	The Town's email system is creating challenges for end users as well as for the IT staff who manage it. The Town is currently using Domino Lotus Notes for its email. A large number of Town staff reported challenges with the email system not being user-friendly and lacking certain functionality. In addition, in some instances the integration between Active Directory (AD) and Domino can be interrupted, causing users to have to re-enter login/passwords.	High 40
A8	Multiple departments are using manual and paper-based processes, disparate databases, and outdated/not-upgraded applications for primary business processes. The use of manual and paper-based processes or disparate databases includes the public beaches and the senior center. Several applications such as Lucity,	Critical 45

Prioritized List of Strategic Issues		
No.	Issues Description	Priority
	Cornerstone, and AutoCAD are not at the most recent version available. Additionally, some departments reported they have unmet needs due to a lack of department specific application or with currently used applications, such as Time Matters in the Law Department.	
A9	It was reported that functionality provided by current Town applications are not meeting the needs of the Town's Tax Collector and Assessor. The Town's Assessor and Tax Collector reported that the functionality provided by the Munis application is not meeting their needs both by limited data access and query capabilities as well as the need for several manual steps and calculations in regular business processes.	High 39
A10	A Town-wide application for scheduling meeting rooms is not available for decentralized access by all Town staff. In the current environment, meeting rooms are centrally managed and staff must phone or e-mail requests for meeting space. Users reported the desire to be able to access this application themselves, and have greater access to be able to reserve rooms efficiently.	Medium 26
<i>Management and Operations Issues</i>		
M1	There are instances when the support provided by the Town Help Desk does not meet department needs. Instances of insufficient support were reported by department users including after regular business hours and during the upgrade process for certain applications. In addition, users reported that it is not always clear who within the IT Department is assigned as the "lead" for support of specific applications.	Critical 52
M2	The Town's desktop replacement schedule does not optimize standardization or utilize laptops or tablets. The current desktop replacement schedule utilizes leased desktops with most in the Town replaced within three years of use. Desktops are not all replaced on the same cycle within a particular department, however. This can lead to challenges with a lack of standardization. Staff across the Town also reported a desire to use laptop and tablet computers. Users as well as the IT Department also reported that the amount of time needed to deploy individual desktops is significant.	Critical 47
M3	An established Town-wide IT Steering Committee does not exist. A Town-wide IT steering committee comprised of cross-functional department representatives to assist in IT planning and decision making does not exist. This has created challenges with long-term technology planning, collaboration as well as communication.	Critical 48
M4	Collaboration between all Town-wide IT resources can be improved. Many Town departments including Police, Library, and Board of Education (BOE) have their own IT resources. Collaboration between all Town IT resources related to planning, communication and application sharing (where appropriate) can be improved.	Medium 36
M5	The Town does not have a current IT Disaster Recovery and Business Continuity Plan. While forms of these plans do exist, they are outdated. A lack of these plans that are regularly reviewed, updated, and tested presents a risk to the Town of being able to recover and resume operations after a disaster.	Critical 45
M6	Technology training end users is limited. It was reported that in recent years IT Department staff have not pursued proactive training and professional development.	High

Prioritized List of Strategic Issues		
No.	Issues Description	Priority
	Similarly, technology training for end users is limited. Users reported a need for training particularly when applications are implemented or upgraded.	44
M7	The Town does not have a framework or process in place for the management of technology projects. With several recent cross-functional projects and more planned in the future, the Town has a need for a framework of technology project management. A framework that includes roles and responsibilities, communication mechanisms and project documents can increase the likelihood of project success.	High 42
M8	A Town-wide policy regarding the use of social media sites does not exist. A town-wide policy that governs the use of social media sites (Facebook, Twitter, etc.) does not exist which has created instances of individual departments creating their own accounts on social media sites. A lack of a standardized approach to social media management can result in inconsistent messaging and confusion to citizens.	High 42
M9	Staff is not all aware of the Town's mobile telephone and mobile communication policies. The Town has adopted a mobile telephone policy and has restricted mobile telephone usage. Staff reported a desire for mobile telephones that would have web and email access as well and were not aware of the Town's policy.	Medium 24
M10	GIS data could be further leveraged in the Town. While the Town has developed a comprehensive GIS database, staff reported an opportunity to further integrate GIS with other applications to leverage this data. It was also reported that due to some compatibility challenges with the CityView application, the Town is not utilizing the most current version of ArcGIS and there may be a need for more licenses.	High 38
M11	The Town does not have proactive technology communication methods. Several end users reported that they are not always made aware of changes in technology, such as during the upgrade of applications. Additionally, communication to the IT Department of new employees needing workstations and system access was reported to be inefficient.	Medium 35
M12	The concept of system ownership at the department level can be improved. Limited ownership of applications at the department level has in some instances created a lack of buy in and accountability for the use of Town-wide applications. This challenge has created instances where applications are not being fully utilized.	Medium 34
Technology Issues		
T1	The Town is not currently using Voice over IP telephone technology in all areas. In the current environment the schools and public safety use VoIP telephony but a legacy system is in place in the Town Hall. The Town Hall telephony is administered by an employee in the Purchasing Division as this is mostly an outsourced effort. The Town may experience efficiencies and cost savings with standardizing on a single telephone technology.	Medium 23
T2	Users reported an unmet need for wireless access to the internet or to the Town network in some Town buildings. Wireless access has been established to the Internet in the Town Hall. However, users reported inconsistent performance and the ability to wirelessly connect to the Town network is not available. While the Town does	High 43

Prioritized List of Strategic Issues		
No.	Issues Description	Priority
	not currently have a large instance of laptop and mobile devices, this will likely increase in the future, creating a greater need for wireless connectivity.	
T3	The generator at the Town's Disaster Recovery site may not support the server room in a power loss event. It was reported that the generator in place in the nursing home building is inadequate in powering the building during power loss. As this generator is also used for backup power in the Disaster Recovery server room, there may be a challenge with providing needed generator power in a power loss event.	Critical 52
T4	Town staff could have increased connection capabilities while working in the field. Several departments reported a lack of a capability to connect to the Internet or Town network while working in the field using aircards, Wi-Fi hot-spots, or other means. This includes the Department of Public Works, Parking, and Parks and Recreation	Critical 52
T5	The Town's domain controllers are on an older server version than most others in the Town. The Town's domain controllers are currently on a Microsoft 2003 server, which is currently in the Extended Support phase and scheduled for end-of-life in 2015. At that point, security updates will not be available.	Medium 35
T6	The Town does not always receive timely network support. It was reported that due to the unique configuration of the Town's network, support provided by Cablevision/Lightpath is not always responded to timely or it is difficult to reach someone who is able to assist the Town. While this has not historically created significant challenges, it presents a risk if immediate support is needed, and a risk of support availability in the long-term.	Critical 53
T7	Town departments are concerned with the appropriate amount of available bandwidth to perform operations and meet citizen demand. It was reported by some departments that although they currently receive adequate performance, they are not confident that the Town has sufficient bandwidth to support increased mobile technologies and the greater user of web-based applications. In addition, the libraries expect an increased demand for internet usage as content is increasingly delivered over the Internet.	Medium 35

Appendix B: Project Participant List

This appendix contains the list of participants in the project.

No.	Department
1	Assessor
2	Board of Education
3	Commission on Aging
4	Conservation Commission
5	Finance Department
6	Board of Estimate and Taxation (BET)
7	Fire Department
8	First Selectman Office
9	Fleet Department
10	Greenwich Library
11	Health Department
12	Human Resources Department
13	Information Technology Department
14	Inlands Wetlands Watercourses Agency
15	Law Department
16	Nathaniel Witherell/Nursing Home
17	Parking Services
18	Parks And Recreation Department
19	Perrot Library
20	Planning & Zoning
21	Police Department
22	Public Works Department
23	Purchasing/Administrative Services
24	Registrars of Voters/Democrat
25	Social Services Department
26	Tax Collector
27	Town Clerk