

IT Assessment Summary

As part of the assessment, each of the assessment areas, components, and sub-components were reviewed and assessed against best practices. Each was assigned a maturity rating (“gap analysis”) and risk to the Town relative to the current situation and not performing the suggested remedies. The following scales have been developed to measure the maturity and risk levels for the various IT assessment areas:

Rating	Maturity Description	Risk	Level
●●●●●	Best Practice in the Industry	Low	■
●●●●○	Mature or Fully Implemented	Moderate	▲
●●●○○	Progressing / Fair	High	●
●●○○○	Improvements Identified		
●○○○○	Needs Significant Improvement		

It is rare that a 5-star rating is given in any area, as it represents an absolute best practice in the industry. Plante Moran recommends organizations identify strategic and high value service areas and strive for 4-stars or better in those areas. In addition, depending on an organization’s tolerance for risk, Plante Moran recommends moderate or low level of risk. Any high risk areas should be addressed immediately through risk mitigation strategies (e.g., risk transference, elimination of risk, etc.).

The table below provides a summary of maturity and risks associated with the assessment areas identified for the IT review:

Assessment	Maturity	Risk
<i>Organization</i>		
Governance		
Organizational Structure	●●●○○	▲
Organization Benchmarks	●●●○○	■
Succession Planning	●●○○○	■
Staff Compensation	●●●○○	▲
Support		
Staff Complement	●●●●○	■
Staff Development	●●○○○	▲
Job Descriptions	●●●○○	■
Staff Competencies	●●●●○	■

Assessment	Maturity	Risk
Performance Evaluations	●●●●○	■
Recruiting	●●●○○	■
External Service Providers	●●●○○	■
User Liaisons	●●○○○	■
Steering Committee Role	●●○○○	▲
Service Level Agreements	●●●○○	▲
User Satisfaction		
Responsiveness	●●●●○	■
Effectiveness	●●●○○	■
Communication	●●●○○	▲
IT Leadership		
Technical	●●●○○	■
Business	●●○○○	▲
<i>Administration</i>		
Delivery		
Project Management Approach	●●○○○	▲
SLA Reporting	●●○○○	▲
Problem Reporting	●●○○○	▲
Helpdesk Administration	●●○○○	▲
Network / Workstation Management	●●○○○	▲
Software Deployment	●●○○○	▲
Application Development	●●●○○	■
Document Management	●●○○○	■
IT Strategy		
Current Plans	●●○○○	▲
Project Prioritization	●●○○○	▲
Technology Procurement	●●○○○	▲
Budgeting	●●●○○	■
Project Portfolio Management	●●○○○	▲
Business Case Development	●●○○○	▲
Standards	●●●○○	■
Planning Process	●●○○○	▲
Policy		

Assessment	Maturity	Risk
User Policies & Procedures	●●●○○	■
IT Policies and Procedures	●●○○○	▲
Business Continuity Planning	●●○○○	■
Security Management	●●○○○	▲
Disaster Recovery	●●○○○	●
<i>Technology</i>		
Internet		
Remote Access	●●●○○	■
Website & Security	●●●○○	■
Web Strategy	●●●○○	■
Cloud Computing	●●○○○	■
Data		
Data Backup	●●●○○	■
Network (LAN/WAN)		
Servers/Storage	●●●○○	■
NOS	●●○○○	▲
Network	●●●○○	▲
Applications		
Enterprise Software Applications	●●●○○	■
Line of Business Applications	●●●○○	▲
Reporting/Analytics	●●○○○	■
Integration	●●○○○	■
End-User Computing		
Workstation Strategy	●●●○○	■
Printer Strategy	●●●○○	■
Office Automation	●●○○○	■

Key Recommendations

- 1) **IT Governance Process.** We recommend establishing a formalized IT governance process including an IT steering committee. For many municipalities, the management team serves as this committee by allocating a portion of its weekly meeting agenda to technology topics. Topics will include:
 - a. IT policy
 - b. IT spending priorities
 - c. IT standards
 - d. Major projects and ROI

An IT governance model will be included for consideration by the Town during future Visioning and Strategic Planning activities. The cost of this recommendation is nominal, but the benefits to Nantucket will be significant. These benefits will include:

- a. IT policies to allow for full implementation and integration of systems and data
 - b. IT standards and protocols to encourage efficiency
 - c. Enhanced IT decision making and greater clarity for IT staff
 - d. A prioritization and decision making process that includes all stakeholders
- 2) **Project Management/Project Portfolio Management.** We highly recommend a formal and more structured approach to project management. These disciplines will ensure that projects are completed on time and on budget so that project benefits are realized by the Town. Currently, there is no formal project portfolio management methodology to manage the IT workload. This is a key best practice to an efficient and effective IT organization. The costs of this will be limited to training of key staff; the benefits will extend to every future project.
- 3) **Project Request Process.** We highly recommend formalizing and consistently communicating a standard process for initiating and reporting on project requests. Information Technology's customers are universally unaware of the current process is for requesting a project, based on the interviews.

As a part of defining and formalizing the process, make sure the following elements are included:

- a. A clear definition of what constitutes a project.
 - b. A clear consistent mechanism such as web-based form, for initiating a project request.
 - c. A consistent method and approach for prioritizing project requests. IT governance will play an important role in this process.
 - d. A mechanism for reporting information regarding the project request back to the project requestor.
 - e. A clean transition between request, approval, and initiation processes.
- 4) **IT Metrics.** We recommend further defining IT performance measures and service standards, including defining implementation timelines for all projects, and incorporating these into a service level agreement (SLA) with the Town's technology users. We observed little reliance on actual data to drive performance as well as a number of "lingering" projects. A few strategically placed performance standards can improve productivity and IT staff morale.

- 5) **Internet Connectivity and Cloud Computing.** The Town's unique island geography creates challenges with internet connectivity that its mainland peers will not encounter. The Town's internet connection is supplied by Comcast via its fiber optic cable that is run under the ocean from the mainland to Nantucket. According to staff reports, there have been times when the entire island loses internet connectivity due to the single point of failure with this connection, so the Town is reluctant to host significant applications off-premise (cloud) without a backup plan in place.

We recommend that this does not deter the Town from evaluating and implementing cloud-based applications when the existing applications near the end of their useful life. This recommendation assumes that the Town conducts due diligence in its software selection process that includes a requirement for the application to be able to operate offline during an internet outage and sync to the cloud server when the connection resumes. This functionality is becoming fairly common in cloud-based applications.

Cloud-based applications have some advantages that could benefit the Town's IT operations:

- a. Decreased technical administration workload for Town IT staff. There would be potential cost savings associated with reduced demands on IT personnel related to software maintenance and infrastructure.
 - b. Reduced capital expenses related to hardware and software licenses.
 - c. Typically, there are fewer workstation software installation requirements, potentially lengthening workstation replacement cycles.
 - d. The software vendor is responsible for installing the system and for the system's subsequent support. Technical issues can often be immediately isolated to the software client or host application providing the software.
 - e. The Town would be able to predict and control costs more accurately, which are based on the negotiated subscription contract.
- 6) **Workload and Staffing.** The IT & GIS Department is currently staffed by five full-time resources and one part-time resource. This current staffing shortfall leaves the IT department shorthanded when handling its various daily responsibilities, which includes:

- Help desk
- Training
- Software maintenance
- Hardware maintenance
- Clerical duties (e.g., contract management and AP processes)

The IT department and its end users also identified a gap in the help desk's after-hours availability for the departments that operate outside of the 8:00 a.m. to 4:00 p.m. workday. Some of these responsibilities, such as hardware and software maintenance, could be shifted to third parties by evaluating cloud hosting options when the Town's enterprise applications approach the end of their useful life. Additionally, the Town may consider strategically sourcing specific IT functions such as after-hours help desk support to provide an enhanced level of customer service.

We propose that the IT department's highest and best use is to operate more strategically as a business partner rather than simply as a service provider for the Town's departments.

7) **Create a Chief Information Officer (CIO) Role**

The Town should consider creating a Chief Information Officer position responsible for executing the Town's information technology strategic plan as well as oversight of information technology project management. This would shift the IT department's current responsibilities away from the previously listed tasks to instead encompass:

- Project management
- Business analysis
- Vendor management

Preliminary IT Strategic Goals

Plante Moran has developed the following five technology goals to ensure that defined projects and technology initiatives are aligned with the overall IT goals and supportive of general business goals of the Town.

Goal #1: Align technology investments and services with IT Strategic Plan

Ensure that the Town's future technology investments and IT services are aligned and prioritized according to the Town Strategic IT Plan. Acquisitions should be driven by business needs.

Objectives:

1. Refine existing processes that directly relate to project planning, budgeting, and deployment-related processes.
2. Establish and implement a technology governance process to direct and oversee the acquisition, development, and deployment of technologies which meets ROI guidelines and are consistent with the plan.
3. Establish consistent procedures across the Town to ensure that all departments, as part of the development and deployment of technology-based solutions, add value to services that meet Town business needs.
4. Develop and regularly review a technology implementation program.
5. Strategically source new technologies, and look to external vendors to bridge gaps with in-house resources.

Goal #2: Maximize Quality of Service

Ensure that services and infrastructure provided by the IT Department are adequately supporting the critical business functions of the Town.

Objectives:

1. Ensure excellent communication between the IT Department and Town stakeholders.
2. Refine the Town's Project Methodology detailing the steps for initiating projects, having projects approved, prioritized, tracked and ultimately implemented.
3. Implement tools, technologies, and procedures that will enhance the ability to more effectively and efficiently support and manage the existing IT infrastructure.

4. Initiate activities that will improve the overall security of technology assets and data within the Town.
5. Implement technology-based solutions that hold benefit for customers.
6. Implement technologies and associated processes that reduce technology costs, including, but not limited to, cloud-based software.
7. Implement web-based tools and mobile applications to better serve the Town's citizens and visitors.
8. Review open source systems to determine long term viability and replace where feasible.

Goal #3: Enforce standards, policies, and procedures

Establish, communicate, and implement a framework of standards, policies, and procedures that results in a consistent methodology for the achievement of operational excellence.

Objectives:

1. Establish and implement a standards-based environment for the Town-wide acquisition, development, and deployment of technologies. This includes standardizing, to the greatest extent practical, databases and hardware to encourage single points of data entry and ease of data extraction.
2. Adopt a policy to streamline departmental IT purchases including technical requirements to which purchases must adhere.
3. Establish consistent procedures when interacting with departments as part of the development and deployment of technology-based solutions.
4. Implement practices and procedures to mitigate/minimize risks associated with technology initiatives.

Goal #4: Adopt processes to move towards a paperless environment

Develop and implement policies and procedures that result in a consistent methodology for archiving electronic records, reducing the need to retain paper files.

Objectives:

1. With the implementation of a new ePermitting system, evaluate record retention needs to determine the data that need to be converted.
2. Determine easy and low-cost opportunities to move the Town culture towards a paperless environment.
3. Evaluate document management systems to insure that files are integrated with financial transactions, quickly, easily and retrievable.
4. Ensure that proper attention is given to data security.

Goal #5: Move toward Digital Government model

An increasingly mobile and sophisticated constituency and workforce calls for technological solutions with critical business information available in real-time that are aligned with service innovation. This

goal looks to most effectively implement digital solutions that take into account changing expectations of increasingly connected people.

Objectives:

1. Implement e-Government / m-Government technology solutions to innovate or improve government services as well as interactions with citizens, employees, businesses and other government agencies.
2. Improve online services for citizens/customers in terms of access to service, navigation, consistent look and feel, and usability.
3. Document the critical business reporting requirements, and ensure that the requirements are met when implementing future computer systems.

Preliminary Project Portfolio

Below is the list of current and future IT projects that were identified by the Town and Plante Moran during our engagement with the Town. Projects have been added in correlation with for the recommendations that were made in the IT Assessment Report. A preliminary priority and timing has been applied to each project that was identified; however, this list should be continuously updated by the Town using the project prioritization criteria outlined in this section and in connection with the IT Governance process.

Project	Priority	Timing	Cost*
1. Improvement of Surfside Wastewater Treatment Plant Network	Medium	2017-2018	\$
2. Installation of New Switches	Medium	2016-2017	\$
3. MUNIS Upgrade/Replacement	Medium	2018-2019	\$\$\$\$
4. Install Radius Wi-Fi at Visitor Services	Medium	2016-2017	\$
5. Install Fiber - Wannacomet and Our Island Home	High	2017-2018	\$\$\$\$
6. Install VOIP Wannacomet, NRD, HR	Medium	2017-2018	\$
7. Implementation of Permit Tracking (ePermitting) System	High	2016-2017	\$\$\$\$
8. Wireless WAN Testing Initiative	Medium	2017-2018	\$
9. Archive and Backup Retention Periods	Medium	2016-2017	\$
10. Guest WiFi Network Configuration Review	Medium	2016-2017	\$

Project	Priority	Timing	Cost*
11. Symantec Upgrade	Medium	2016-2017	\$
12. Installation of Barracuda Archiver	Medium	2016-2017	\$\$
13. Group Policy Development for Power Management of Desktops	Medium	2016-2017	\$
14. Tyler Enhancement - Using PO's, not reqs	Medium	2018-2019	\$
15. IT Assessment Project	Medium	Completed (2016)	\$\$
16. Establish remote Access to MUNIS for CPC	High	2018-2019	\$
17. Improvement of Networking at Sheriff's Building	Medium	2017-2018	\$\$
18. Utility Billing System Upgrade	High	2016-2017	\$\$\$
19. SCADA Upgrade	High	2018-2019	\$\$\$\$
20. Website Upgrades and Social Media Expansion	Medium	Ongoing	\$
21. Email system upgrades/collaboration tools	Medium	2017-2018	\$\$
22. Implementation of Point Click Care at Our Island Home	High	2016-2017	\$\$
23. Plan for Document management systems (Docstar and LaserFische)	Medium	2018-2019	\$\$\$
24. Implementation of CRM System	Low	Long Term	\$\$\$
25. Archiving of Historical Records	Medium	On-going	\$\$\$
26. EarthChannel Video Upload Speed Problems	Medium	TBD	\$
27. Server Replacements	Medium	TBD	\$\$
28. Wannacomet E-Mail Migration	Medium	TBD	\$\$
29. Brant Point Network & VOIP	Medium	TBD	\$\$

Project	Priority	Timing	Cost*
30. MUNIS HR Module	Medium	Long Term	\$\$\$
31. Downtown Wi-Fi Hot Spot at Visitor Services	Medium	TBD	\$\$
32. Town Building Cabling	Medium	TBD	\$\$\$
33. GIS / Vision GeoDatabases	Medium	TBD	\$\$\$
34. Wannacomet New Building	Medium	TBD	\$\$\$\$
35. Chrome Evaluation	Low	2016-2017	\$
36. Office 365	Medium	2017-2018	\$\$

Tactical Plan

Tactical activities have been identified for the more complex of the strategic initiatives outlined above. The tactical items help to break down large tasks into more manageable ones for a successful implementation.

IT Governance Tactical Items

1. Finalize the Town's IT Governance Model. Obtain buy-in from stakeholders including Town Manager's office, elected officials and Department heads.
2. Formalize the IT Steering Committee and participation.
3. Establish a Governance Charter for the IT governance team which coincides with the overall IT Governance Model.
4. Formalize the IT Standards Committee and participation.
5. Establish a Standards Charter for the IT Standards Committee which coincides with the overall IT Governance Model.
6. Develop appropriate documentation (e.g., policies, procedures, standards, etc.) to formalize IT Governance.
7. Communicate expectations regarding IT Governance through the IT Communication Plan.
8. Create a link between the governance structure and the annual budget process. This will ensure that technology planning is conducted in an organized fashion
9. Establish a formal communication channel and process between all levels. This allows IT staff to provide feedback to management and is critical to the success of the IT Governance Model.
10. Work with Information Technology Staff and Management to develop and recommend Town IT standards, for those areas that are deemed as core to the Town IT function, these may include usage, records retention, system architecture, remote access, security, etc.
11. Maintain the IT standards repository for the Town.
12. Develop and maintain IT standard deviation request process for items falling outside of an established standard.

13. Define Service-Level Agreements with Departments as established by Information Technology. Modify, as appropriate.
14. Modify IT governance team meetings/agendas to integrate the IT planning process with the business planning processes. This will help to facilitate the decision-making process in a manner that is consistent and clearly understood by all those involved.

Project Portfolio Management (PPM) Tactical Items

1. Establish Project Criteria/Definitions. Clearly establish criteria for the elements that define a formal project.
2. Finalize PPM Framework. Finalize the standard framework to prioritize all Town IT projects in order to generate a more complete and quantifiable analysis.
3. Establish Information Technology Project Management Office as having primary responsibility for maintaining the Project Portfolio Database and providing updates via an IT Communication Plan.
4. Develop a Project Portfolio Database.
5. Apply Prioritization Methodology to Existing Projects. Apply the framework and definition to the existing project backlog list within the Project Portfolio Database.
6. Establish Request/Approval Process and Communicate. Utilize the same project approval template for end users to formally recommend a project for approval. This should identify specific milestones. Each project request should support and be aligned with the business plans.
7. Integrate IT Planning with Business Planning. Establish a structure to integrate the IT planning process with the business planning processes within the departments. This will help to facilitate the process of making decisions in a manner that is consistent and understood.
8. Conclude on Priorities. Conclude on priorities, based on the Project Portfolio Management tactical plan. Provide direction to Information Technology Management on the implementation of technology.

