Town of
Southborough

Municipal Technology Committee

Technology Strategy

March 2022

Draft 5.3

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1.) Executive Summary

The objective of the Southborough town technology strategy is to guide the direction, decisions and investment for town technology. We also seek to establish guiding principals for technology investment in alignment with future technology trends. Our goal is to be a data-driven town, leveraging key metrics for budget and other decisions.

Our focus is on the customer journey for residents, Southborough town departments and school administration.

It is our intention to establish a set of guiding principles to help the town evaluate technology options and investments

- Evaluate technology from a customer-first vantage point
- Adopt a cloud-first approach for services and applications
- Create a shared-services model of core functionality across departments
- Look for opportunities to automate
- Evaluate all technology options for data privacy and security
- Partner with vendors who are familiar with town government

To evaluate satisfaction with town services, we have created and administered an annual survey. The first survey was run in 2021. From this survey we have prioritized the following projects and applied for ARPA funding.

- Upgrade town website for better communication and collaboration
- Upgrade town WiFi for better connectivity to services
- Install event mgmt. and registration system for town departments
- Implement interactive conference room capabilities

We have also developed a 5-year technology plan for the town that seeks to include the following key technology trends:

- Smart Cities- a smart city is one that leverages technology to increase efficiencies and improve the quality of services and life for its residents.
- Connectivity- continue to keep pace with bandwidth increase and provider options.
- Communications and Social Networks- utilize on-line services and sites to provide citizens with news, events and services.
- Security and Privacy- protect town data and that of our citizens.
- Cloud and Software-as-a-Service Applications- cloud based applications offer better total cost of ownership and lower administration.
- Internet of Things- the interconnection via the internet of computing devices embedded in everyday objects, enabling them to send and receive data.

The strategy will be updated annually, after each town survey.

2.) Introduction and Purpose of this Document

The Town of Southborough, MA has created a Municipal Technology Committee (MTC) to assist the town in the evaluation, selection and implementation of technology services, infrastructure and products. A primary responsibility of the Technology Committee is to create a 5-year technology strategy for the town. This strategy will help guide the direction, decisions and investment in the coming years.

The purpose of this document is to outline that technology strategy, including major milestones and how the strategy will be implemented. This document is intended to be directional in nature and will be updated each year, as more information is gathered and validated.

3.) Goals for the Southborough Technology Strategy

The Southborough Technology Strategy is aligned with the Southborough Master Plan. As such, our goal for the technology strategy is to further the goals of the Master Plan, create goals distinct from the Master Plan and look for ways to implement these goals in efficient and modern ways.

Southborough is a small New England town with a population of 10,169 (2018). Southborough is known for its physical beauty, extraordinary views and distinct rural character. Southborough has a small-town atmosphere with a focus on giving back. (1)

The goal of the Master Plan is to “preserve Southborough’s classic rural New England character and charm while enhancing the village centers and neighborhoods.” (1)

The Master Plan lays out specific goals across a number of areas including:

- Land use and zoning
- Housing
- Economic development
- Open space and recreation
- Natural, historic and cultural resources
- Transportation, transit and circulation
- Municipal facilities and services
- Southborough villages

In today’s high-tech world, there are many opportunities to further our town’s goals by leveraging technology. The goal of the Technology Strategy is to work in conjunction with the Master Plan to build towards this future state vision of Southborough.

4.) Customer Journey Vision

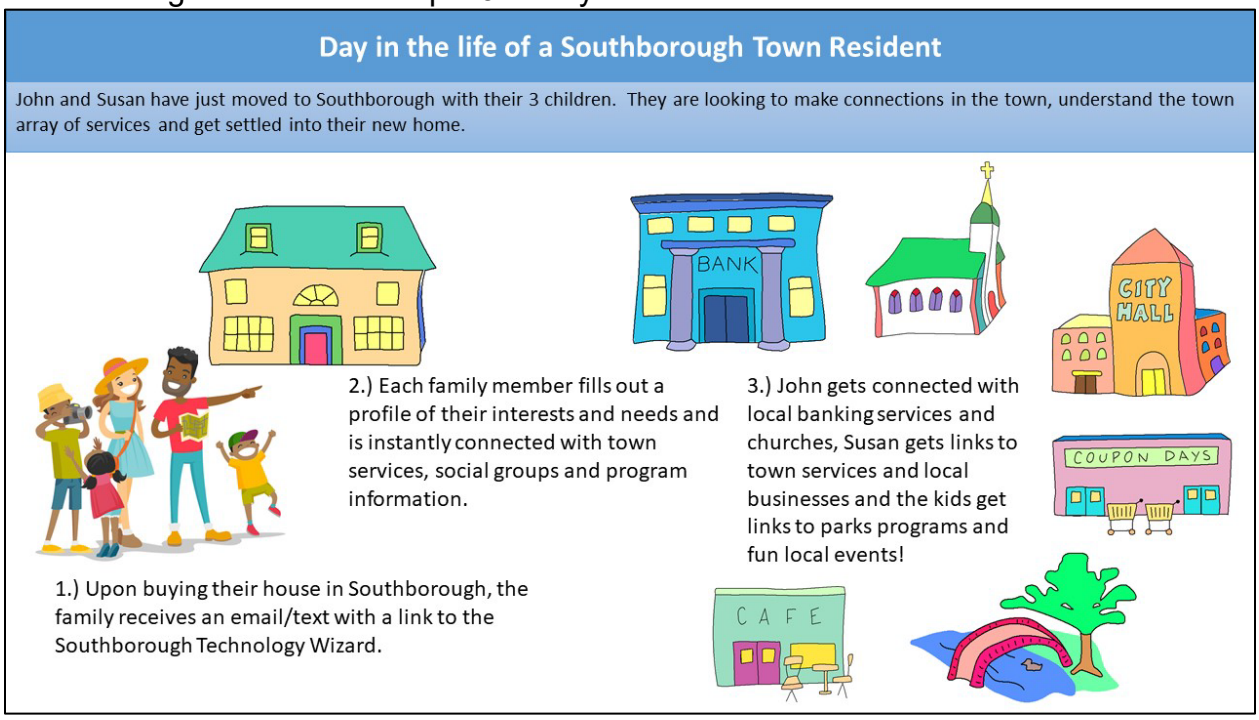
Southborough has several diverse technology stakeholders. Each of these stakeholders has unique needs and requirements from the town. The stakeholders can be categorized as follow:

- **Southborough Residents**- individuals and families who reside in Southborough and who leverage the town's services
- **Southborough Town Employees\Town Departments**- individuals who work for the town of Southborough and require technology to support their roles and activities
- **Southborough Contractors and Vendors**- individuals and companies who provide on-going or one-time outsourced services to the

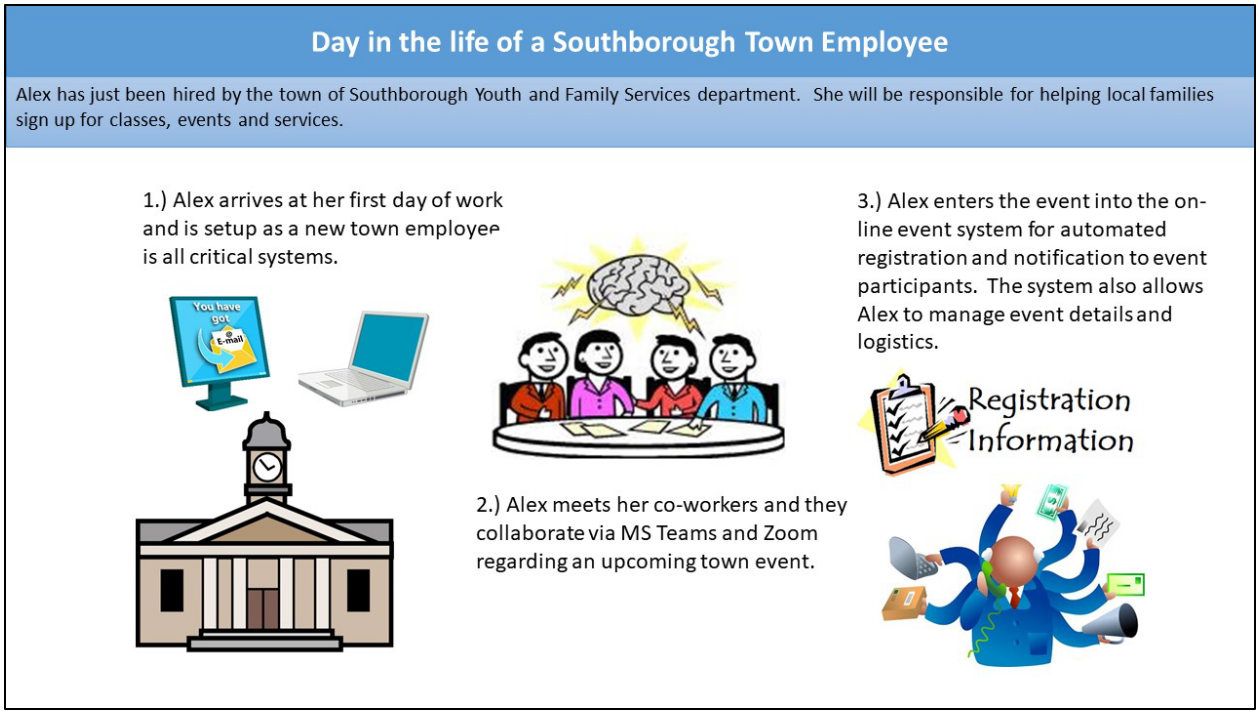
The Southborough school technology requirements for student learning are outside the scope of the MTC and are handled separately. However, the school administrative technology is within the MTC scope.

Within each stakeholder group, there are varying degrees of technology knowledge, competence and comfort. As we think about the town technology strategy going forward, we must address the range of technology literacy from low to high.

Southborough Resident Example Journey



Southborough Town Employee Example Journey



5.) Guiding Principles for Southborough Technology Standards

It is also our intention to establish a set of guiding principles for the way the town thinks about and evaluates technology options and investments.

Town of Southborough technology guiding principles:

- **Evaluate all technology from a customer-first vantage point**- within our limited town technology budget, it is important that we are providing the highest value services for all stakeholders. We should consider the technology impact of any new service across all stakeholder groups and look for opportunities to provide services centrally that benefit all stakeholders.
- **Adopt a cloud-first approach for all services and applications**- we want to move away from town-owned and maintained technology infrastructure, instead focusing on SaaS (software as a service) based models where we pay a subscription fee, and the vendor handles upgrades, maintenance and incident response.
- **Create a shared-services model of core functionality across departments**- work across all town departments to understand common requirements and provide central systems for these needs vs. having each department create its own solution. Consistently look to simplify architecture with an eye towards flexibility and speed.
- **Look for opportunities to automate**- Review areas of heavy manual processing and look for opportunities to automate and increase efficiency.
- **Evaluate all technology options for data privacy and security**- conduct regular audits of security services for all providers and ensure they are adhering

to security best practices. Focus on the basics, such as good backups/restoration and industry-standard security mechanisms and procedures.

- **Partner with vendors who are familiar with town government**- look for partners who can help us leverage key resources, discounts and have experience working with local governments. It is important to obtain multiple quotes for services to insure competitive pricing. Total cost of ownership for technology investments is also a key consideration- not just one time costs, but on-going cost to operate.

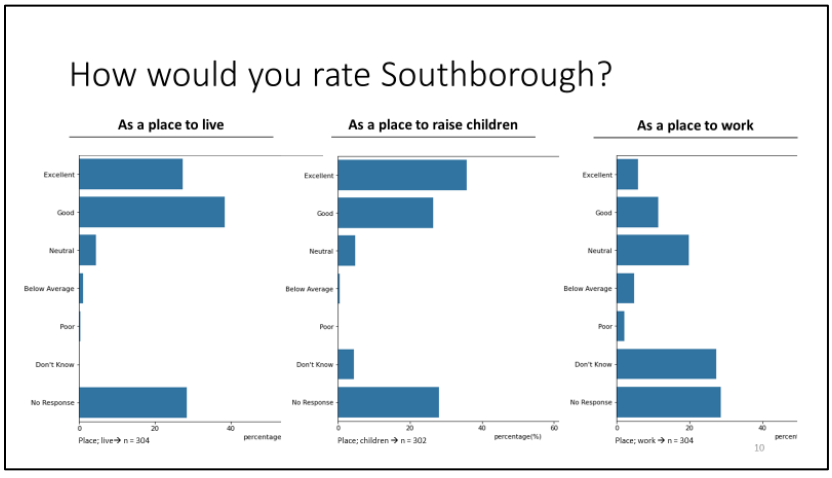
6.) Developing a Data Driven Approach to Strategy

In May 2021, the town ran its first survey to solicit feedback from residents on the services they desire.

Survey results were analyzed by Maryann & Brian Beauvais, Southborough residents and volunteers, who are trained data scientists. 423 individuals participated in the survey.

Survey summary:

- Overall, most residents are **somewhat satisfied** with the town perception (town perception←what does this mean?) and services
- **Greatest satisfaction**: Great place to raise children in good schools with supportive programs and attentive public safety services
- **Greatest dissatisfaction**: Lack of safe and accessible communal space and non-transparent leadership provided by Southborough Town administration
- Propose to **create, communicate, and execute** action items from survey results to inform Town projects and policies



While most respondents rated Southborough high as a place to live and raise children, it was not rated high as a place to work. This may have been the result of residents filling out the survey vs. town employees. This strategy document is augmented by individual department interviews that the MTC has conducted, where we seek to understand the current and desired technical services for each group.

About 44% satisfied w/ overall perception of Southborough

Description Item	% Satisfied+
Overall quality of services provided by the Town	50%
Overall value you receive for your Town tax dollars and fees	35%
Overall image of the Town	50%
Overall quality of life in the Town	60%
Overall feeling of safety in the Town	70%
How safe you feel in your neighborhood	70%
Overall quality of education system w/in the Town	50%
Physical appearance of your neighborhood	60%
Police services	60%
Fire and ambulance services	60%

Description Item	% Satisfied+
Public works (streets, water, transfer station)	40%
Town recreation programs/facilities	40%
Trails and open spaces	50%
Health department services	25%
The Library	55%
Senior Center and services	15%
Customer service you receive from town employees	50%
Overall effectiveness of town communication with the public	35%
Public transportation	10%
Town planning and development services (e.g. issuing permits)	20%
Youth, Family and Social Services	25%

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The survey reflects that we could increase resident satisfaction by improving our town communication systems. There was also a general lack of knowledge about key town services and information.

Varied frequency use of different Southborough communication channels

Communication Channel	Frequency
Citizen facebook groups about the Town (e.g. Southborough Babysitting network, etc)	Daily
MySouthborough.com (citizen run blog)	
Local Freecycle groups	
Town's Twitter feed	Weekly
Specific department websites (like Rec department, Library, etc)	Monthly
Town boards/committees websites	
Town boards/committees meetings on zoom/youtube	
Town's calendar of events	
Town's Facebook presence	
Online payment of Town taxes/fees	Yearly
Cable channel: Southborough Access Media (SAM)	Less than Yearly

- Nearly 75% - 85% of respondents did not respond or replied *don't know* to whether they were satisfied with the Town's technology and communication services
- 75% of respondents were either *neutral*, *satisfied*, or *very satisfied* with **cell phone signal strength in Town**
- Top 2 preferred methods of receiving information: **Email notifications** & **Citizen Blogs (MySouthborough)**
- The 2 priority communication methods to develop over next two years: **Usefulness of Town's website** & **Opportunity to engage/provide input into decisions made by the Town**

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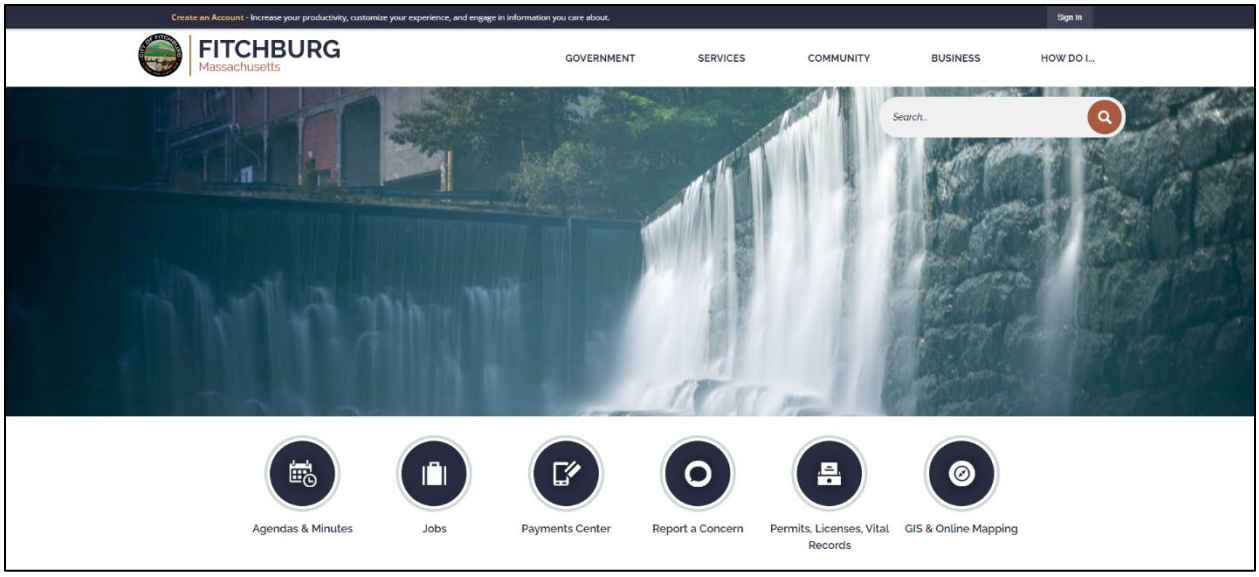
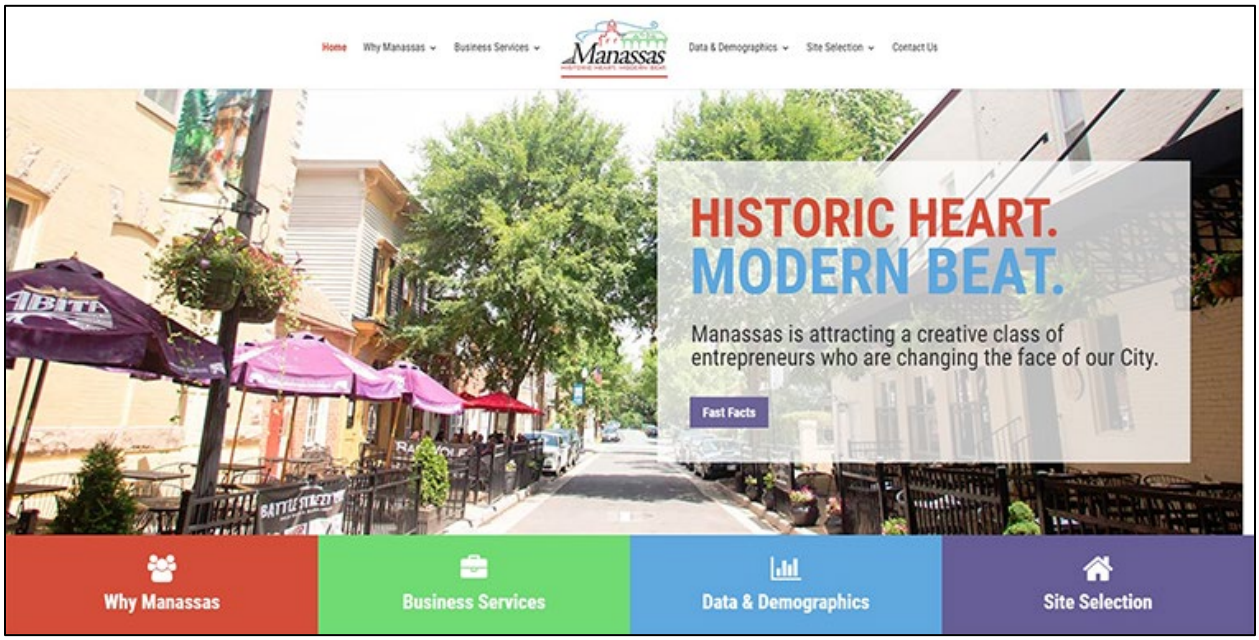
Residents are looking for new ways to collaborate and interact with the town. Our current, mostly static, website does not provide residents with the ability to quickly and easily understand each town department, what it offers, how to sign-up for activities and how to provide input on key decisions.

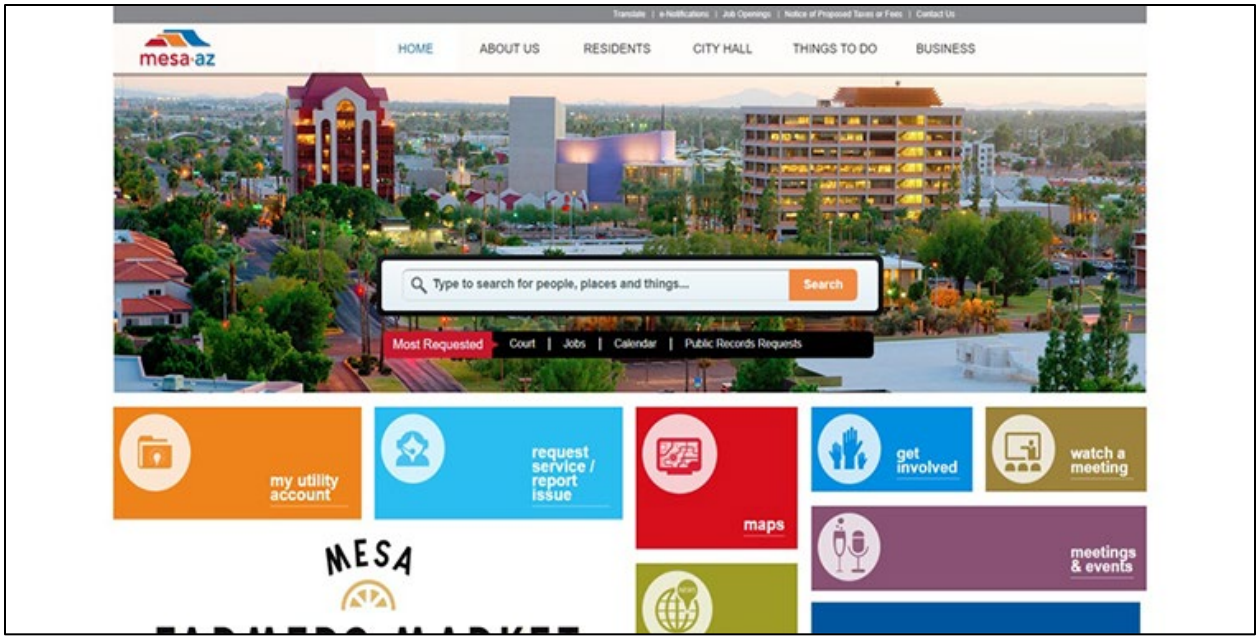
Based on the results of the survey, the MTC is recommending that the following projects be considered for budget/grant funding:

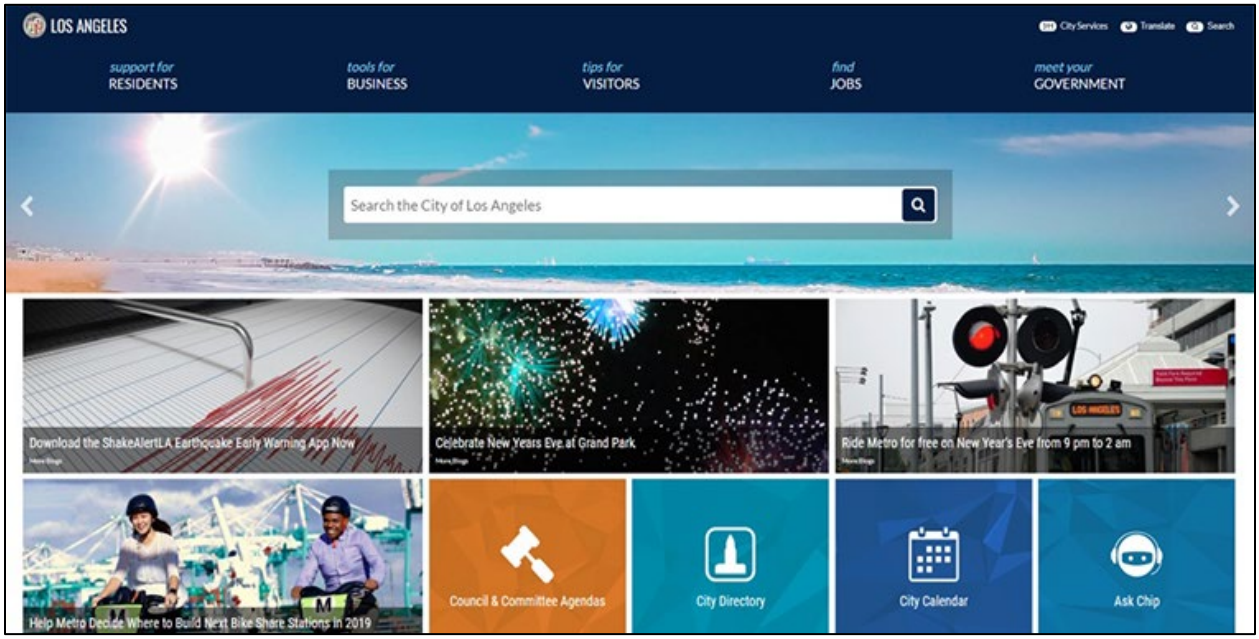
- Upgrade the town's website to support more collaborative features
- Upgrade the town's WiFi capabilities at specific town facilities
- Implement a town-wide event scheduling and registration system
- Implement interactive conference room capabilities

Some sample local government websites are shown below to illustrate what can be achieved.


Create an Account - Increase your productivity, customize your experience, and engage in information you care about.
Sign In
FITCHBURG
Massachusetts
GOVERNMENT
SERVICES
COMMUNITY
BUSINESS
HOW DO I...
Search...
Agendas & Minutes
Jobs
Payments Center
Report a Concern
Permits, Licenses, Vital Records
GIS & Online Mapping


Home
Why Manassas
Business Services
Manassas
Data & Demographics
Site Selection
Contact Us
HISTORIC HEART.
MODERN BEAT.
Manassas is attracting a creative class of entrepreneurs who are changing the face of our City.
Fast Facts
Why Manassas
Business Services
Data & Demographics
Site Selection





7.) Snapshot of Current Southborough Technology Systems

To plan for the future, it is important to take stock of Southborough's current technology inventory and the state of that inventory.

The town of Southborough Technology Department is responsible for operating the town's technology systems for all town departments except the school learning systems. This includes 6 buildings, support for ~200 town employees, 110 computers, technology infrastructure, including the fiber infrastructure and a host of software applications.

At the time of this writing, most of the technology infrastructure has been replaced in the past four years- with a small number of servers, printers and other technology components coming due for replacement in 2021.

Most of the software systems are leveraged via a SaaS (software as a service) model, where the vendor is responsible for providing the infrastructure and software and we act only as consumers. We maintain servers and infrastructure for systems where no SaaS equivalent exists or where privacy and security prevent moving the application to the cloud. Systems that are not cloud-based at this time should be regularly evaluated to understand the vendor roadmap and their plans to move to the cloud.

In our highly evolving and continually virtual world, we would recommend the following as part of the on-going technology strategy:

- For each town application and technology component, create a software/hardware lifecycle plan that outlines current setup, evaluates competing products and services and forecasts end of life and transition plans
- For current in-house systems, continue to look for options to move these services, securely, to the cloud- including evaluating competing products and government certified cloud options
- Continue to enhance and expand virtual collaboration options
- Continue focus on cyber security and create a small, security focused working team to create a security policy and recommendations for the overall technology strategy
- Appoint a member of the Municipal Technology Committee as liaison to the Technology Department, with weekly meetings to support the strong connection between the town's Technology Department and Technology Committee

We would also recommend that for all investments, the town continue to abide by the Massachusetts guidelines on technology purchasing.
https://www.mass.gov/doc/charts-on-procurement-procedures-effective-june-15-2018/download

8.) Town Technology Staff Members

Technology is an ever-evolving area. Add to this the fact that the scope of technology is both broad and deep. For this reason, it is essential that the town invest in high quality technology resources that not only have the appropriate knowledge to run the town's technology on a day-to-day basis but can also have the personal bandwidth to deep dive into the requirements of each town department and assist these groups with critical technology issues. Depending on a single resource, expected to cover everything from assigning new email addresses to creating a town security strategy, is not feasible. The MTC recommends that Southborough invest in the required personnel to effectively run the town's technology infrastructure. In addition to the Town IT Manager, we support the hiring of an additional IT resource for redundancy, vacation and sick time coverage and to allow focus in different areas. This will also help prevent burn-out of the singular resource, so we are not in a position to replace the role repeatedly.

9.) A Five-Year Plan and Timeline

Technology changes significantly every year. In order for the town of Southborough to stay current with the best uses of technology, we will use this Technology Strategy as a tool to help guide us. This includes reviewing the latest technology trends that are impactful for our town.

Year	2021	2022	2023	2024	2025
Data driven strategy activities	Draft Technology Strategy document for discussion and input ✓	Implement recommended projects based on survey feedback	Measure quality improvements for major town technology services	Move to smart city vision for town services, facilities	Continued implementation of smart city services
Data driven execution activities	Run first town wide technology survey- analyze and assess results ✓	Run 2nd town wide survey- increase participation with focus on both residents and town employees.	Run 3rd town wide survey- increase participation with focus on both residents and town employees.	Annual town survey now in place each year and part of planned town budget	Target first citizen dashboard for survey results
Major service improvements	Assessment	Upgrade town website for better communication and collaboration. Upgrade town WiFi for better connectivity to services. Install event mgmt. and registration system for town departments.	TBD	TBD	TBD

10.) Technology Trends

Through a collection of techniques, skills, methods, and processes, technology can help us improve the daily life of employees, volunteers, and citizens. It is the responsibility of the Town of Southborough to continually evaluate its use and efficacy. Most notably, the areas of technology that the Town can immediately benefit from are those in wired and wireless connectivity, mobile access to services, communication and social networks, security, privacy, cloud and Software-as-a-Service applications, the Internet of Things, and green energy.

Smart Cities
Evolution of the “Smart City”- “A smart city is one that leverages technology to increase efficiencies and improve the quality of services and life for its residents. Smart city initiatives can cover anything from power distribution, transport systems, street lights,

and even rubbish collection. The idea is to use data and technology to make everyday life easier and better for the people who live and work in the city, while maximizing the use of resources."

"…This is all possible thanks to a "perfect storm" of technology trends – trends that allow us to create spaces in which humans and technology interact in a more connected, intelligent, and automated way. Think of trends such as artificial intelligence, big data, the Internet of Things (IoT), and autonomous vehicles. Combined, advances like these are changing the world and how we live in it. Our cities are no exception." (2)

One report by McKinsey Global Institute found smart city technology can improve key quality of life indicators – such as the daily commute, health issues, or crime incidents – by 10 to 30 percent. (3)

"*One of the really exciting things about smart city technology is that it encourages residents to get more involved. Common examples include apps that allow citizens to report local issues more easily, or community networking platforms that allow neighbors to connect and share resources. In another example, a low-cost environmental testing kit is encouraging residents to collect local environmental data. The Smart Citizen Kit can be placed in locations like balconies and window sills to gather data on the local environment, including air pollution and noise. The data is streamed to an online platform, effectively creating a crowdsourced map of data from all over the world."* (2)

Connectivity
As network infrastructure continues to improve, the speed at which we can transfer data increases. As network hardware begins to age and/or degrade, the Town's ability to implement new and efficient technologies will increase our network capacity. Technology providers often consider outdated hardware as end-of-life, declining to maintain existing hardware to previously accepted standards.

Communication and Social Networks
A majority of the population of Southborough has Internet access, and an ever-increasing number of citizens expect to receive most of their news and updates electronically. It is cost-effective, and oftentimes more accessible, for most to receive important notifications via e-mail, social media, or a Town-hosted website. Through the use of surveys, the Town should keep a finger on the pulse of its citizens to understand how best to communicate. Another important measure is the availability of multiple Internet providers, in order to provide options for citizens and promote price and service competition.

Security and Privacy
The increasing reliance on electronic communications and cloud software applications provides a challenge for data security and privacy. The Town must continue to stay on top of security trends and protect its data through the use of physical access restrictions, proper use of firewalls and software security systems, and education. Proper data security also includes a robust data backup process and tested data

restoration process. The town departments house critical and sensitive data which must be protected from threats but also common data loss due to hardware failure.

Cloud and Software-as-a-Service Applications
The technological landscape has seen a significant shift from applications hosted on servers behind Town firewalls to applications hosted on vendor-managed systems in the cloud. Applications hosted off-site provide a tangible benefit in terms of scalability, redundancy, and cost-effectiveness.

Internet-of-Things
Many Town services are offered by isolated departments that are separated both logically and physically. This presents a challenge when attempting to gather information on the use of technology throughout the Town. With the rise of innovations in Internet-of-Things, improvements to monitor usage and access of technology will generate data that can be used to make more informed purchasing decisions.

11.) Key Metrics

Improving Citizen Experience and Engagement with Town Technology

Description:

One of the goals of the MTC is to provide guidance to town departments on how to use technology improve their service to our citizens. In order to do this, we need to determine how our citizens use technology, their level of engagement, and how satisfied they are with the technology-based resources available in town.

Our method of collecting this information is to use questionnaires — both on paper and online. We have developed an initial set of questionnaires for several constituencies in town: citizens, town employees, small businesses, etc. These initial questionnaires are fairly broad and general, since we don't yet know where the "hot buttons" and "pain points" are. They try to identify what technologies are being used, how they are accessed, which municipal technology capabilities are being accessed, etc.

The information that we collect in the questionnaire will be used to:
A. Understand the current "pain points" and "hot buttons". What (technology) issues are causing problems for our residents or are seen as lacking by our residents. This will allow us to begin working with Town departments to try to address some of these issues.
B. Measure the effectiveness of initiatives created to address the issues (after the first year)
C. Tune the questionnaire. The first questionnaire is intended to collect information. Subsequent questionnaires will have the dual purposes of collecting new information and determining how well the Town is addressing issues that have been raised.

Key Stakeholders (including those who execute the plan and those that benefit from the plan):

Objectives and Key Metrics:

Objective	**Key Metrics**	**2020 (estimate only)**	**2022**	**2025**
Improve Citizen Satisfaction with interaction with town Services	% of town services covered via a single phone number with voice and digit based-routing to the appropriate department/individual.	40%	50%	100%
	% of town services covered via a single web domain with law compliant governance.	80%	85%	100%
	% of committee services covered via a single web domain	20%	35%	100%
	% of town and committee services contributing to common public-facing knowledge base. (common search)	10%	30%	100%
	% of town emitted bills covered via a single accounting, invoicing, reporting, payment system	30%	45%	100%
	% of town and committee public meetings streamed live and recorded on one or more free streaming platforms (SAM, YouTube live, etc.)	15%	25%	100%

Recommendations to achieve key metrics:
Our primary goal is to become a *data-driven town*. Our population is diverse. There is a broad range of technical expertise and technical comfort among our residents, and it is important to ensure that we consider the gamut as we contemplate technology initiatives in the town. By putting out a questionnaire and soliciting participating from all residents we hope to be able to gain the necessary broad exposure.

Our documented/measured goals will change over time. Some of them will be achieved and become moot. Some of them will drop off and new items will be added as our residents react/adapt to technology trends.

Improving Employee and School Admin Experience with Town Tech

Description:

Everything described for Residents in the previous section also apply to Town Employees including School Administrators. This area is more focused however, since most Residents interact with the Town technology resources on a sporadic basis whereas Employees do it every day—they use Town networks, Town computers, Town equipment, software acquired by the Town, etc. So, in this case, not only is the Town interest in personal satisfaction of the targeted group, but there is a direct impact on Town efficiency and effectiveness.

The approach for Town Employees is the same as for Residents. Annual questionnaires will be developed to focus our attention on the issues and put initiatives in place to address “pain points”.

Key Stakeholders (including those who execute the plan and those that benefit from the plan):

Objectives and Key Metrics:

Objective	**Key Metrics**	**2020 (estimate only)**	**2022**	**2025**
Improve Mobility and Accessibility for employee facing town IT services	% of employee facing town IT services with mobile app or browser accessibility (as appropriate)	No Data	20%	100%
	% of employee facing town IT services with remote accessibility	No Data	20%	100%
	% of employee facing town IT services covered in a semi-annual employee satisfaction survey	0%	50%	100%

Recommendations to achieve key metrics:
Goal: The goal for this section is the same as the previous section. Collect data, initiate programs to address issues, measure the effectiveness of these programs.

Achieving Cost Savings through Consolidation/Efficiency

Description:

The town of Southborough currently employs a vast array of technologies that serve to facilitate the day-to-day lives of town employees, officials, and citizens. Since town departments largely operate in virtual silos, with minimal sharing of resources, it is important that we, as a town, perform a continuous evaluation of the efficiency, cost-effectiveness, usefulness of technological services and resources. The Municipal Technology Committee has selected(?), and will iterate upon, a set of metrics that will serve to track progress towards the consolidation of resources, an increase in the awareness of new technologies, and a net gain of efficiency of employees and officials in each governmental department. The following metrics seek to serve this purpose:

Key Stakeholders (including those who execute the plan and those that benefit from the plan):

Objectives and Key Metrics:

Objective	**Key Metrics**	**2020 (estimate only)**	**2022**	**2025**
Maximize sharing of technology assets maintained by the town	% of buildings with at most 1 printer/copier/fax/scanner per 5000 sq. ft. or per floor (where possible)	0%	20%	100%
	% of fax numbers converted to electronic fax	0%	20%	100%
	% of town sites that are using the main internet connections.	42%	50%	100%
Minimize energy use	% of square footage of town buildings with smart (example: auto-off motion activated and natural light cognizant) interior lights.	0%	20%	100%
	% of square footage of town buildings with smart thermostats	0%	20%	100%
	% of exterior lights on town buildings that are smart lights	0%	20%	100%
Increase overall technological awareness	% of technology plans reviewed by the MTC	25%	40%	100%

Recommendations to achieve key metrics:
In order to achieve success against these key metrics, the Town of Southborough must:

- Attempt to break down silos created between departments by increasing inter-departmental communication
- Dedicate resources to migrating existing systems to more efficient providers, ideally in the cloud.
- Continually inform employees and officials of the latest trends in technological innovation.
- Continuously evaluate new software and systems for possible use by the town. It is far too easy for software systems to become stagnant, out-of-date, and insecure if there is no continuous evaluation process.

The Southborough Municipal Technology Committee is dedicated to improving efficiency by increasing awareness, facilitating inter-departmental communication, and providing continuous technological evaluation.

Improving Communications and Processing Infrastructure and Connectivity

Description:
Improving communications, processing infrastructure and connectivity involves selecting the local and cloud-based equipment and services that provide the best mix of initial investment, functionality, reliability, usability, and on-going costs. We should then seek to integrate those resources into the appropriate communications systems (phone, physical mail, email, text messages, voice calls, browser-based access to information and transactions, payment systems, and computer-to-computer interactions.) This will allow the key stakeholders served by, employed by, or interacting with Southborough government to best utilize these services.

Key objectives in this area are to:

1. Improve inbound and outbound internet connectivity to, from, and between key stakeholders and town processing resources hosted locally or remotely
2. Improve the processing infrastructure required to run the Southborough government in terms of lowered initial and ongoing costs, greater ease of use by all stakeholders, and greater reliability and resiliency to recover from unavoidable outages or unexpected increases in processing volumes.
3. Improve the integration between different Southborough processes and applications
4. Improve specialty communications channels used by public safety officials such as public safety radio
5. Improve other communications channels employed for Southborough government affairs such as phone, physical mail, email, text messages, browser-based access to information and transactions, and payment systems that allow for communications to, from and among Southborough stakeholders related to Southborough government affairs

Key Stakeholders (including those who execute the plan and those that benefit from the plan):

- Southborough citizens (ease of use, increased functionality, increased efficiency and effectiveness in interacting with Southborough government, increased reliability, improved connectivity with other Southborough citizens, Southborough government employees and systems)
- Southborough tax payers (lowered on-going operations costs from more streamlined, efficient, and effective Southborough government processes)
- Southborough government employees (ease of use, increased functionality, improved job efficiency and effectiveness, increased reliability, improved connectivity with citizens, taxpayers, other Southborough government employees and systems, state and federal government entities, businesses, and vendors)
- Southborough public safety officers such as police and fire fighters
- Businesses interacting with Southborough government (ease of use, more streamlined, effective, and efficient interactions with Southborough government)
- Communications infrastructure and services providers (key stakeholder for implementation)
- Vendors of local and cloud-based processing capabilities (key stakeholder for implementation)

Objectives and Key Metrics:

Objective	**Key Metrics**	**2020 (estimate only)**	**2022**	**2025**
Improve Internet connectivity	% of square feet of occupied town building space covered by public Wi-Fi with annual heat map review and validation	50%	70%	100%
Improve integration among town applications and processes	% of applications reviewed for possible integration (process integration and/or consolidation).	0%	100%	100%
Improve Specialty Communications for Public Safety Officials	% of town covered by Redundant Safety Radio repeaters (each with UPS/generator protection)	Unknown	TBD	100%
Improve Other Communications Channels	% of outbound communication channels that are integrated	0%	20%	100%

Recommendations to achieve key metrics:
In order to achieve this metrics, the Town of Southborough should do the following activities:

- Continue to enhance Internet connectivity options, allowing for competitive services to insure price, quality and service options for consumers
- Centralize key services on a shared infrastructure backbone, with high availability, redundancy, security and disaster recovery plans in place
- Continue to increase digitization of paper-based systems- move departments away from paper and leverage scanning with optical character recognition and on-line systems to provide greater service at lower cost

Increasing Citizen and Employee Privacy and Cyber Security

Description:
It is critical that data stored and/or processed on town governed systems is protected with best-practice Privacy and Security controls. In this section we propose key objectives and five-year strategic goals with respect to security and privacy.

Ensure appropriate levels of **security**, **privacy**, and **data integrity** for all data collected/used.

- Access controls
- Data validation
- Disclosure via 3rd parties
- Collect minimum PII (← expand that) necessary to accomplish tasks - resist "nice to have".
- Data de-anonymization resistance
- Clear, accurate and complete disclosures of any data sharing, retention, logging, data breach - and user responsibilities
- Authentication/ID verification (citizens using automated services as well as employees)
- Safe disposal of used equipment
- Audits - internal and external

Key Stakeholders include Southborough residents, town of Southborough employees and town of Southborough vendors and partners.

Objectives and Key Metrics:

Objective	**Key Metrics**	**2020 (estimate only)**	**2022**	**2025**
Maximize Authentication Security for Employees and Committee members	Percent of town tech services covered by Single Sign-On (SSO)	0%	0%	100%
	Percent of town tech services covered by Multi-Factor Authentication (MFA)	0%	0%	100%

	% of former employee and committee members who had their access revoked to all IT systems within 4 hours of notice of discontinuing their role	50%	100%	100%
Physical Security	% of network and server components in locked locations only accessible by electronic key card	0%	20%	100%
	% of local network and server spaces that are monitored 24x7 via motion activated security cameras with off-site storage.	0%	10%	100%
	% of critical town infrastructure (water towers, etc.) that is monitored 24x7 via motion activated security cameras and alerting.	0%	10%	100%
	% of general door locks in town facilities that are electronic (key card)	1%	5%	100%
Audit/Accounting	% of Town IT services feeding user and admin access (accounting) logs to a tamper-proof log repository.	0%	20%	100%
	% of electronic door locks that are feeding access logs to tamper-proof offsite log repository.	0%	20%	100%
Availability	% of Town IT services meeting an monthly SLA of 99.9% or higher	Unknown but high	100%	100%
	% of public internet facing Town IT services with Anti-DDOS protection	0%	100%	100%
Data Durability	% of Town services with HA replication across 2 or more geo-diverse locations	Unknown	20%	100%

	% of Town maintained files/documents with replication across 2 or more geo-diverse locations	100%	20%	100%
Confidentiality	Achieved goal of 0 non-approved data disclosure incidents over last year.	0%	100%	100%
	% of town workstations and servers protected by anti-malware software	100%	100%	100%
	% of town devices scanned weekly by a vulnerability scanner	0%	20%	100%
	% of town devices patched within 3 days of all critical level vulnerabilities (CVSS scoring)	0%	20%	100%
	% of town devices patched within 7 days of all high level vulnerabilities (CVSS scoring)	50%	60%	100%
	% of town devices patched within 30 days of all medium and low level vulnerabilities (CVSS scoring)	100%	100%	100%
	% of public internet facing Town IT services with Web Application Firewall (WAF) protection	0%	50%	100%
	% of public internet facing Town IT services with TLS enabled and required	10%	50%	100%
	% of town IT services passing annual PCI-DSS audits (including 3rd party pen-testing)	20%	40%	100%

Recommendations to achieve key metrics:

We propose the creation and execution of a proactive town-wide security strategy focused on protecting sensitive data and services.

- Evaluate the current state of security practices.
- Identify opportunities to improve the management of cyber security threats.
- Identify security controls necessary for supporting the stated goals of the Strategic Tech Plan.
- Achieve consistent application of security controls.
- Continually track and measure the effectiveness of the town's security strategy.

12.) Conclusion

It is the goal of the Southborough Municipal Technology Committee to create a town Technology Strategy in alignment with our overall town Master Plan. This strategy will be data-driven, with input from Southborough residents on an annual basis. We have begun the process by benchmarking the use and quality of current technology services. Based on this feedback, we are recommending three key initiative- upgrade town's website, upgrade town's WiFi network and implement an event management and registration system be undertaken for 2022.

(1) **Southborough Master Plan-**
https://www.southboroughtown.com/planning/pages/2008-master-plan-project-deliverables

(2) https://www.forbes.com/sites/bernardmarr/2020/07/02/the-smart-cities-of-the-future-5-ways-technology-is-transforming-our-cities/?sh=350b001e73f8

(3) https://www.mckinsey.com/mgi/overview

Other Resources:

https://www.southboroughtown.com/
https://www.thedrum.com/news/2013/12/13/welcome-tech-town-how-technology-will-begin-change-way-our-towns-and-cities-work
https://www.clearpointstrategy.com/technology-local-government-transparency/
https://www.strategy-business.com/article/10-Principles-for-Modernizing-Your-Companys-Technology?gko=6ff05
https://oit.ncsu.edu/governance-strategy/strategic-planning/it-guiding-principles/