



Information Technology in the Hilltown Collaborative Communities of Massachusetts

Blandford | Chester | Huntington | Middlefield | Montgomery | Russell

*A summary of current conditions, vulnerabilities,
and opportunities for Municipal IT improvement*



Catalyst for Regional Progress

PVPC

Prepared by:

Pioneer Valley Planning Commission

District Local Technical Assistance (DLTA)

December 2017



Executive Summary



Catalyst for Regional Progress

PVPC

Timothy W. Brennan, Executive Director



Molly Goren-Watts presents report at Hilltown Collaborative meeting

The present economic climate and the growing needs of the region are drastically shifting the fiscal landscape of cities and towns in the Pioneer Valley. The 6 Gateway Hilltown region located in the Pioneer Valley is an example of this of this paradigm, proven by a recent assessment completed by the Division of Local Services (DLS), made possible through the Commonwealth's Community Compact Program. It was identified how the changing demographics are making town budgets increasingly tight, making it difficult for the local governments of the Gateway Hilltowns to maintain even the most basic municipal services for its residents. Regardless, local leaders have statutory responsibilities that require them to perform specific municipal functions, therefore

communities are beginning to think creatively to investigate

new ways to do business to meet their legal responsibilities with less and still deliver the level of service that taxpayers demand. This report will focus specifically on how the towns can improve services and achieve economies of scale through a shared service capacity or through other means on the topic of Information Technology (IT), a critical municipal component that can achieve municipal efficiencies and mitigate liability.

Molly coordinates collaboration, helping people, organizations, businesses, foundations, and municipalities use data and information to develop shared strategies to improve our communities and region. She also manages a regional database to provide basic socio-economic data for grant writing and analysis for local and regional plans.

Molly Goren-Watts

Principal Planner

Manager of Regional Information & Policy Center
Pioneer Valley Planning Commission

Contents

A. Overview	6
B. On Site Community IT Assessments.....	8
Blandford	8
Chester	8
Huntington	9
Middlefield	9
Montgomery	9
Russell	10
C. Existing Vulnerabilities	12
D. Budget Analysis	13
E. Areas of Overlapping Need and Opportunities for Collaboration	15
Appendix: Detailed IT Assessments by Community.....	19

A. Overview

In 2017, the Pioneer Valley Planning Commission (PVPC) awarded the 6 Gateway Hilltown region District Local Technical Assistance (DLTA) to evaluate the existing information technology and related systems. PVPC worked directly with the Hilltown Collaborative, a representative body of the 6 Gateway Hilltown region which includes the Massachusetts towns of Blandford, Chester, Huntington, Middlefield, Montgomery, and Russell, to achieve its project tasks. The goal was to provide some analysis and recommendations of what could be done to improve the use and support of IT in these communities with a particular focus on opportunities to create improved function or savings in finances by approaching solutions in a collaborative manner.

To this end, PVPC analytical and IT staff conducted IT assessments of each of the communities, explored technology expenses and budgets by municipality, and researched best practices for IT expenditures and shared services. This report summarizes that analysis for each community, identified improvements needed in each community, key vulnerabilities that were found among many of the communities, as well as a variety of actions that could be taken independently and collaboratively to improve IT systems and support in the Hilltown Collaborative communities.

The staff and volunteers of the Hilltown Collaborative Communities have been universally warm, welcoming, and forthcoming with information to assist PVPC with this analysis. It is clear that they care about doing their jobs well and helping others in their community. It is also clear that, in many cases, the technology available to them is not helping them as much as it could be. Communities with little to no IT support put an additional burden on their staff when they ask them to maintain, research, and make purchases for equipment that they are not expert in. Additionally, when the town relies on people who do not have IT expertise to maintain the technology that supports the workings of the town's government, it puts the community at risk of losing critical financial, personal, and historical information as well as risking unnecessary or inflated costs because things are not done in an educated, systematic, or efficient manner.

A couple of the Hilltown Collaborative communities are in pretty good shape, while others need complete upgrades and overhauls of their system. Most can benefit from at least a few significant upgrades. All of the communities have the potential to save money and have more efficient and secure maintenance of their data and networks through strategies outlined in section E of this report. These may be taken as a menu of options and it is possible for many of these recommendations to be followed with different combinations of communities participating in each one. Of course, the more communities collaborate, the higher the potential is for savings and efficiency.

Key Staff

IT assessments and analysis were conducted by the following PVPC staff:

Molly Goren-Watts, PVPC

Project Manager, Lead Analyst, Report Author

Jamie Duran, PVPC

IT specialist, On Site Assessment Lead, Co-Author

Joshua A. Garcia, PVPC

Municipal Services Manager, DLTA Project Manager

Questions, comments, or corrections regarding this analysis may be directed to:

Molly Goren-Watts
Principal Planner/Manager
Regional Information and Policy Center
Pioneer Valley Planning Commission
60 Congress Street, Floor 1
Springfield, MA 01104-3419

mgoren-watts@pvpc.org

Tel. (413) 781-6045

Other questions regarding DLTA and overall DLTA Project Management, contact:

Joshua A. Garcia
Municipal Services Manager
Community Development Section
Pioneer Valley Planning Commission
60 Congress Street
Springfield, MA 01104-3419

jgarcia@pvpc.org

Tel. (413) 781-6045

B. On Site Community IT Assessments

Following are general summaries of each of the Hilltown Collaborative communities' current status and needs. More detailed information about configuration and needs can be found in the Appendix of this report.

Blandford

Overview

Blandford is a small to medium sized office that has some recent equipment but is in need of some additional or improved systems for back up, security, and network management. They have some upgraded workstations and laptops. They have a pieced together wifi system that works in some areas. They are currently setup on the Mass Broadband fiber connection through Axia. They have a server in a server room with a portable AC unit to control the temperature.

Opportunities for Improvement

Consistency between machines, putting systems in place for security protocols and other software updates, better informed purchases of hardware and software. They should be setup with a new server and a domain setup. They should setup a cloud based backup and a central location for data. They will need Exchange 365 or other cloud-based service for email and the wiring will need to be cleaned up and have any old equipment disconnected and disposed of. They could also invest in back up APC units for all equipment.

Chester

Overview

Chester is a small to medium sized office that is in need of a lot of upgrades and re-organizing. Their wiring is of great concern and needs to be redone to code. Their workstations need to be replaced and or upgraded. Their internet connection is adequate. They do require some IT help from time to time and have no clear online or offline backup procedure present. They have been provided with the fiber connection from the MassBroadband but are not utilizing it. They are in need of someone to oversee and plan strategically for how they are using technology to ensure that the staff have what they need to do their work efficiently and securely.

Opportunities for Improvement

Chester is in great need of an overall plan for how they use technology in their building and are also in need of many upgrades, rewiring, and networking to make their office run more efficiently and smoothly. In addition, they are in great need of someone to turn to for technology related questions and needs.

They will need a complete overhaul of their wiring throughout the office. They will need new workstations and a server to hold all data and setup a cloud based backup. They will need a new VOIP System. They will also need to utilize the Mass Broadband system. They are currently using Comcast. And their emails are @comcast.net. They will need Exchange 365 or other cloud-based service so that their emails can be changed to @Townofchester.org for example. They will need Backup APC units to

support equipment. They will also need to establish a network domain environment for secure access to data.

Huntington

Overview

Huntington is a small to medium range office. They are in the best shape of all and a good example of what other towns need to be upgraded to. Their workstations are all the same specifications and their wiring seems to be up to code and much of it has been recently re-done. They have a cloud based backup system and have a data server that is managed by Northeast IT. They have a plan and system for hardware replacement and rotation of older equipment. Unfortunately they are not utilizing the fiber connection provided to them by the MassBroadband.

Opportunities for Improvement

Huntington does not need many improvements at this time since everything seems to be upgraded and working efficiently. It is important to note, however, that much of the recent upgrades and great systems that are in place rely upon a volunteer and are not institutionalized into the workings of the municipality in a manner that would guarantee this ongoing quality should that volunteer no longer be available to provide this planning and assistance. They could still find cost savings and create more reliable systems through service sharing with neighboring communities. They should be setup on the Mass Broadband Fiber connection.

Middlefield

Overview

Middlefield is a small office with a few workstations and printers. They are in fairly good shape. They do have a cloud based backup system and the wiring is also in good shape. They are using the MassBroadband fiber through Crocker Communications. They have a 6 line phone system but no VOIP system. They will need backup APC units for all equipment. They would benefit from a server for centralized data sharing and a cloud based backup and to be setup with a domain for secure access to data.

Opportunities for Improvement

Middlefield would benefit from a server for centralized data sharing and a cloud based backup and to be setup with a domain for secure access to data. They need a cell booster in their town hall to allow for any reliable cell service within the building. They would also benefit from an upgrade to their phone system and backup APC units for all equipment. While Middlefield is generally in good shape for IT, they rely heavily on volunteer support and knowledge which is a great asset but also creates vulnerability for the town.

Montgomery

Overview

Montgomery is a small office with only a few workstations and printers and a copier. They are in need of many upgrades, some rewiring, and the creation of more secure systems for storing and backing up

data. They have Windows 7 Machines. Some of their wiring is not completed. It is recommended that they obtain an Exchange 365 or other cloud-based service for email. They will need some IT advice on how to clean up network issues and will need a centralized server for data and a cloud based backup and a domain setup for secure access to data. They will need new workstations. They will need a Firewall device (such as SonicWall) for remote access if staff continue to work in that manner. They are in need of someone to oversee and plan strategically for how they are using technology to ensure that the staff have what they need to do their work efficiently and securely.

Opportunities for Improvement

Montgomery needs some work to clean up their network and centralize, and secure their data. They need a server and a cloud based backup system. They also need a domain set up for secure access to their data and a Firewall device (such as SonicWall) if they want to have secure remote access to files. They would benefit from updated work stations and ensuring that all staff know how to keep their work secure by saving their data in the proper location. A system for software and security updates should be put in place. Exchange 365 or other cloud-based service should be purchased and set up for secure email. Some of their wiring needs to be completed or cleaned up.

Administrative Chief of Police has computer from previous chief but can't use it or open it because they don't know the password.

Russell

Overview

PVPC staff were not able to arrange an onsite analysis of Russell's IT arrangements, despite repeated attempts, but had a detailed conversation with Wayne Precanico who provides IT support to the community. This assessment is based on information provided in that and other follow up conversations.

Russell has some decent IT systems in place and is also in need of some upgrades and additional support to make them happen. They have a Selectboard member who is an IT specialist, and he is called on to provide paid support as needed. They are using the Westfield Gas and Electric for their ISP and have a fiber connection between municipal buildings. They are not using the MassBroadband connection. They have an older file server that is cloud based with back up. Their network is setup as a workgroup and most workstations are newer with some older printers. They are running Windows 7 Pro on most machines with one Windows 10 Pro workstation. Machines are not all consistent between staff and departments. They do have an older VOIP system that should be upgraded. They do not have remote access to the network. They would benefit from an upgrade of their server and a domain set up for better group policy administration and security. They would benefit from additional support resources to complete upgrades to their server and phone system. Russell also has their own cable TV system and provide internet to the town.

Opportunities for Improvement

There are some key areas that the security and back up of town data could be improved. The new server should be set up with a domain, and systems should be implemented with all staff to ensure they are saving files to the server that gets protected and backed up regularly. Systems should also be implemented to ensure that software and security updates get implemented uniformly across all work stations. The phone system is also ready for an upgrade.

As someone in the IT field for a long time, their IT manager tries to make systems easy on a relatively small budget but he feels they could probably be doing a little more if they had the resources. He has a new server ready to use, but the process of transferring from the old server is arduous. Similarly, wants to transfer to upgraded VOIP system but hasn't had the time to do so.

They are interested in Online Permitting using the cloud version of the Point software.

C. Existing Vulnerabilities

Following are a list of key areas that members of the Hilltown Collaborative are vulnerable to based on their existing technology arrangements and configurations. These are not listed in order of priority. If changes are not made, many of the Hilltown communities will remain at significant risk of losing sensitive financial and personal data, using staff time inefficiently, and spending scarce resources in an inefficient manner, or being taken advantage of by hackers and scammers. Concerns listed below do not all apply to every single community in the Hilltown Collaborative, but all do apply to many. Details on specific communities can be found in the On Site Community IT Assessments section of this report.

- a. Data could be easily stolen or deleted due to lack of security procedures that are systematic or ongoing.
- b. Lack of off-site back up of data means that natural disasters such as flood, fire, or lightning strike could destroy all data if it is not consistently backed up off-site. The type of data maintained by a municipality can be hard to replace, ranging from longtime historical records, to sensitive finance, tax, zoning, and personal information. Staff time to replace this type of data loss is expensive and hard to quantify.
- c. Communities relying on volunteer support, no matter how helpful and well intentioned, could lose access to knowledge of all municipal technology systems, passwords, account information, and other historical knowledge if that volunteer is suddenly no longer available to provide support. In this scenario, there is the additional risk that there would be a large gap in existing support and maintenance until a new person or method of support is brought on board.
- d. Small communities who do not have an IT knowledgeable person managing outsourced support risk being taken advantage of by IT companies and paying more or purchasing unnecessary hardware, software, and services. Extreme, but real, examples include scams where IT companies market themselves to a small office while simultaneously infecting their computer with a virus in order to receive a call for technical support to fix the problem that they created. A less extreme case is when equipment leasing companies set photocopiers to the most expensive color setting so that monthly use is more expensive than necessary.
- e. Existing wiring in many communities poses a fire hazard and are not done to code.
- f. Less than current and fully implemented network security makes communities vulnerable to hacking and risk of infection by viruses.

D. Budget Analysis

A note about the technology budgets of Hilltown Collaborative communities

One of the goals of this analysis was to examine existing budgets that the Hilltown Collaborative communities spend on technology annually in order get a sense of the existing costs, where they are allocated, and potentially, what resources are available for alternative configurations of managing technology within and across the communities. To this end, PVPC requested the budgets and/or expenditures each municipality allocated towards technology, including hardware, software, networking, and any kind of IT support. The results of this request varied, with some communities designated specific line items for technology costs in their town's budget while others basically had no allocated budget for technology costs and little or no specific tracking of the purchases that were made throughout the year. In many cases, technology costs and budgets are not separately identified in the budget of a town or department, but simply embedded as part of the department budget itself.

Purchases are made on an as needed basis as challenges or needs arise. This creates a challenge in trying to compile a comprehensive analysis of existing budgets and costs. It is also one of the challenges identified for individual communities. A lack of budget allocated specifically for technology each year makes it difficult to plan equipment replacement on a schedule that will keep the office current, without major service interruptions. This often leads to higher expenses and data loss when repairs or replacements occur as emergency situations rather than done in a relaxed manner in alignment with a full technology plan for the municipality. Further, it is impossible to quantify the cost of the loss of critically important data that cannot be replicated or will take an exorbitant amount of time to recreate. More on this can be found in section E of this report.

Given this reality, PVPC has done its best to summarize and compare technology expenditures for a single year to give a sense of the starting budget communities have to work with and suggest where consolidation of costs may be possible. *It must be highlighted that PVPC staff think it is likely that certain IT related expenditures may have been missed in the process of this analysis.*

Current Expenses

It is important to note that, while the follow reflect our best analysis of current IT expenditures by Hilltown Collaborative communities, this reflects budgets that are, in many cases, leaving significant challenges or vulnerabilities for the towns as described in section C of this report.

IT Support

In Fiscal Year '17, Hilltown Collaborative communities spent approximately \$128,386 on IT support expenses.

General IT Support – Many communities have an ongoing, paid relationship with a person or outsourced company for IT support on an ongoing or as needed basis. At least \$31,225 of that total IT support expenses were spent on this type of support. These type of contracts are an area that create great opportunity for shared IT support contracts, whether it be with a private company, a dedicated staff member, or another regional service provider. More details can be found in section E of this report.

Software Support - Some of these expenses were paid directly to propriety software companies to support software that had been purchased or subscribed to through them. In these cases, it is unlikely that an IT director or on-call support contract would be able to take on the work of those contracts. However, it is possible that sharing software instances or shared procurement of software support contracts may still produce reduced costs.

While many of the expenditure line items were vague and require further research, it is estimated that at about \$113,916 of these expenses are for items that have definite or possible reductions through a collaborative approach.

IT Purchases

Fiscal Year '17, Hilltown Collaborative communities spent at least \$85,174 on IT services, equipment, and software. While many of these purchases are equipment that have a more fixed cost, there are many opportunities for cost savings through shared procurement, bulk purchasing, sharing of software licenses, or sharing of equipment. More details can be found in section E of this report.

While many of the expenditure line items were vague and require further research, it is estimated that at about \$60,838 of these expenses are for items that have definite or possible reductions through a collaborative approach.

Summary of Hilltown Collaborative Fy'17 IT Expenses

	Total	Definite or Possible Reductions Through Collaboration
Total IT Support	\$128,386	\$128,386
General IT Support	\$31,225	\$31,225
Software Support	\$113,916	\$97,161
IT Purchases	\$85,174	\$60,838

E. Areas of Overlapping Need and Opportunities for Collaboration

After examining the current conditions, needs, and budgets of all six communities of the Hilltown Collaborative, PVPC has examined areas of individual and overlapping needs, potential cost savings, and improved functionality. Following are a list of options that would provide cost savings, improved functionality, more efficient use of funds within a community or between multiple communities, better long term planning, and/or better security and reliability. Some of these recommendations can be implemented within a single community and some require collaboration between multiple communities. These recommendations are not listed in order of priority and many may be made in conjunction with others.

- a. **Create town budget line-items for IT costs such as hardware, general office software, printing, networking, security, and backup systems.**

This will ensure that budget is available for replacing technology when it is necessary rather than postponing upgrades beyond the point of efficiency and effectiveness. At a certain point, older technology becomes more prone to viruses and other security issues, is not compatible with newer software updates and devices, and slows down the work flow of staff. Creating a method for funding technology at a town-wide level also creates the opportunity for more consistency in purchases across departments and more efficiency in making purchases. For example, if two printers break around the same time in two different departments, it may be more efficient to purchase one, higher capacity networked printer or to explore leasing a high efficiency and user friendly copier that can do the same job.

- b. **Technical upgrades or system modifications for each community individually.**

These include hardware, network, phone system, email, and back up protocols. Specific recommendations are made for each community in section **B** of this report.

- c. **Shared document storage and back up that could be conducted on a centralized server for multiple towns.**

Some Hilltown communities are working with no server at all to manage and back up files, while others need significant upgrades to a newer server so that they can set up a domain system for email, website management, and document sharing. In some cases, a somewhat functional server system is still not being used effectively for storing documents or does not have an appropriate backup system in place for retaining those files off site. For those who do have a working server and backup system, like Huntington, the capacity of their server and back up storage space they are required to pay for are well beyond the capacity required for a small town meaning that they are paying for more space than they need.

Sharing server and backup space would create a system that does not currently exist for towns lacking server and backup protocols while also saving money for those communities that do already have this set up. It would allow for easier sharing of software installations and management. In this scenario, a server would be purchased or expanded that would be large enough for all participating communities and located in one community or another secure

location off-site with backup and power redundancy. The server would be partitioned so each community had its own area for storage. Communities would connect to this server remotely through their local networks. This could be set up for secure remote access, thus protecting and retaining files that staff may work on from their homes. Backups, updates, and security protocols would only need to be managed and funded for the single server rather than each community paying for a separate server, software, backup space, and IT management.

Note: Options d and e are two alternative solutions to the same problem. Towns would likely want to implement one of these options or the other, not both.

d. Hire a shared part-time IT director for multiple towns with back up 24/7 IT support from a third party company.

The shared IT director could be responsible for immediate upgrades and adjustments, developing IT plans, coordinating shared purchasing, and ongoing maintenance, support, and technology replacement. Creating this position would ensure that there is a point person who is responsible for thinking about the full array of technology needs for the communities, not simply reacting to an immediate need or problem raised by one staff person. This person also would not profit from additional money spent by the community as a third party company with an on call support contract might. This person would be planning for the longer term. While many communities currently have some sort of IT support from a private company or volunteer, creating this position would institutionalize the support and ensure the big picture thinking that does not always occur from an on-call support or managed server contract. In this case, this position would continue to be supplemented by an ongoing outsourced IT support contract to allow for ensuring 24/7 support and dealing with situations beyond the capacity of a part-time IT director. This contract may include ongoing management of a shared server or individual community servers. When the IT director needed more support for a challenging situation or larger project, they would call on this support contract.

e. Hire PVPC to provide IT management services with back up 24/7 IT support from a third party company.

An alternative to hiring and managing dedicated IT staff through the collaborative could be to determine a level of services for which PVPC provides IT management and support. This would similarly ensure that there is a point person who is responsible for thinking about the full array of technology needs for the communities, not simply reacting to an immediate need or problem raised by one staff person. Scope of services could range from the full scope described in item D to any combination of those services such as creating security and back up protocols and guiding their implementation, creating long term plans, implementing those plans, providing ongoing IT support and requests for assistance, and any additional tasks listed in this report or otherwise agreed upon. PVPC have an expertise in shared public procurement and existing relationships with many hardware and software vendors that could benefit the purchasing power of the collaborative as well.

In this case, PVPC support would continue to be supplemented by an ongoing outsourced IT support contract to allow for ensuring 24/7 support and dealing with situations beyond the

capacity of part-time PVPC services. This contract may include ongoing management of a shared server or individual community servers. When the PVPC would require more assistance for a challenging situation or larger project, they would call on this support contract.

f. **Explore shared purchase of software and hardware at a discount (in-house or by PVPC).**

If a shared server is used, there may be discounts for fewer licenses or more shared licenses of a particular software. In addition, there may be some financial benefit found in seeking a single vendor to bid on providing specialized software for multiple towns. This could require some communities migrating from one specialized software (accounting, payroll, etc.) to another.

PVPC has an expertise in shared procurement and could conduct this exploration and procurement for the Hilltown Collaborative, if desired. This could also be explored in collaboration with efforts through MassIT.

g. **Create IT plans for each municipality that include planned upgrades and replacements of software and hardware.**

This will allow for accurate budget planning and ensure that systems are more often replaced in a thoughtful, organized and financially responsible manner that focuses on reliable transfer of data and the right choice of equipment at a good price rather than occurring in a rushed manner because work flow has been interrupted and the priority is to do things quickly.

This could be done by an in-house or outsourced IT manager. It is recommended that these plans be created by a party who will not financially benefit from hardware and software purchases. Additionally, the creation of these plans should be in conjunction with a plan of who will continue to implement them moving forward. This could be an in-house or shared IT director or an outsourced IT manager through a private company or PVPC.

h. **Conduct a shared procurement of a vendor to pick up and properly dispose of old, unused equipment. Create a system for how equipment can be disposed of in a timely manner in the future.**

On site assessments identified that at least five of the communities visited had a significant amount of old and unused equipment sitting around in need of being disposed of. Because computer equipment contains hazardous materials and because these machines are likely to have sensitive personal and financial information for the towns, they need to be disposed of in a safe and responsible manner. Many companies in the region provide this service. If a single company was hired to dispose of equipment for all communities, this would allow one company to make a single trip to the Hilltown region to pick up all equipment resulting in lower travel costs. This reduced travel cost, combined with the purchasing power of a shared procurement process, would like result in a lower cost for all participating communities. Once the existing equipment has been disposed of, a system should be designed for how retired equipment will be dealt with in the future. This could range from simply knowing who is the best company to call when the need arises to scheduling an old equipment pick up day for all communities once every year or two. PVPC could conduct this procurement, if desired.

- i. **Ensure that all departments in each municipality know where they should be storing files and that there is a reliable and daily system for backing up those files.**

In many communities visited, there was huge variation in where various staff were storing files and whether or not they were getting backed up. In some cases, there is a centralized server that gets backed up, but it is not being used by all staff, and thus files are not protected. Creating a town-wide system of how this should be done, training staff in what to do, and following up to ensure implementation will ensure that the work of Hilltown communities' dedicated staff and the critical data associated with it do not get lost.

In cases where a centralized server or daily backup system do not exist, this should be implemented in some capacity. This could be done through the shared document storage solution described in this report, cloud based server and back up, or the set up of an on-site server.

- j. **Collective request for state to help explore lingering challenges with MassBroadband.**

Four out of six communities in the Hilltown Collaborative have been provided a fiber line from MassBroadband but are not currently using it. There are varying reasons for this, but most seem to center around challenges with communication, unsuccessful attempts to get assistance in repairs or installations, concerns about cost, misunderstanding of how they could or should use the connection, or concerns that they would have no one to contact if they rely on the fiber line and it breaks. Middlefield has problem with a low hanging wire that may be hit by delivery trucks, and has been waiting for over a year to have it fixed. The collaborative could make a collective request to the state to help them sort out these issues and determine if they can get established on using their fiber connection in a reliable and affordable manner.

- k. **Shared procurement for document scanning and organizing.**

Like most government offices, many of the Hilltown Collaborative communities have an extensive amount of paper containing important historical or sensitive information, sitting around in large piles and at high risk of being destroyed by flooding fire, or simply lost. Some communities have rooms full of paper they are storing that have been flooded at some point and are growing mildew, putting the health of staff in the building at risk. There are companies in the region that can be hired to scan, organize, and then shred all of these old documents to retain the information in an accessible manner, free up space, and create a healthier work environment. Shared procurement of these services could provide many communities with an easier process to research companies and a lower cost of services. PVPC could conduct this procurement, if desired.

Appendix: Detailed IT Assessments by Community

Appendix: Hilltown Collaborative IT Assessments - Community Details and Comparison

Town	General summary	Who manages IT?	IT support contracts?	Is there a server?	Where are documents stored?	Back up system
Blandford	Blandford is a small to medium sized office that has some recent equipment but is in need of some additional or improved systems for back up, security, and network management. They have some upgraded workstations and laptops. They have a pieced together wifi system that works in some areas. They are currently setup on the Mass Broadband fiber connection through Axia. They have a server in a server room with a portable AC unit to control the temperature.	IT management and support varies by municipal department with some paid support, some volunteer support, and some ad-hoc work as needed. <i>Town Administrator is ultimately responsible for ensuring management of the IT.</i> They have a contract with Akuity for some of their IT management. This covers their network but does not include their email. The police department, in the same building as the municipal office, has a server that is maintained Pro Bono by a staff member's cousin.	Yes, with Akuity	Yes	They have a server in a server room with a portable AC unit that controls the temperature, however use of the server for file storage is not consistent across all staff. Some staff store documents only on their local computers which do not get backed up to the server or anywhere else.	Server is backed up regularly by Akuity. However, individual machines were not being backed up and staff were saving files to the local machines instead of the server.
Chester	Chester is a small to medium sized office that is in need of a lot of upgrades and re-organizing. Their wiring is of great concern and needs to be redone to code. Their workstations need to be replaced and or upgraded. Their internet connection is adequate. They do require some IT help from time to time and have no clear online or offline backup procedure present. They have been provided with the fiber connection from the MassBroadband but are not utilizing it. They are in need of someone to oversee and plan strategically for how they are using technology to ensure that the staff have what they need to do their work efficiently and securely.	No one. It is done completely ad-hoc from department to department. Staff with little or no IT expertise make decisions about hardware and software purchases.	No. Hire a company for a specific job when needed.	No	On individual computers. There is no server. This is true for the electric company as well which is also housed in the same building.	There is no consistent back up system. One or two staff members do some periodic back up on their own.
Huntington	Huntington is a small to medium range office. They are in the best shape of all and a good example of what other towns need to be upgraded to. Their workstations are all the same specifications and their wiring seems to be up to code and much of it has been recently re-done. They have a cloud based backup system and have a data server that is managed by Northeast IT. They have a plan and system for hardware replacement and rotation of older equipment. Unfortunately they are not utilizing the fiber connection provided to them by the MassBroadband.	Volunteer, John McVeigh has been doing extensive work getting everything upgraded, re-wired, backed up, and consistent. He has been getting assistance from Northeast IT to do this work and they have an ongoing support contract with them. All IT requests for any department now go through the Selectboard with the hope to more centrally manage and provide consistency to the decision making and purchases made.	Yes, with Northeast IT	Yes	Most staff in town save documents to centralized server which ensures everything is backed up and easy to find when staff turn over or for historical purposes.	Server is regularly backed up to the cloud. Local machines are backed up to the server. Server has battery back up, though the battery ran out during our visit and needed to be replaced.

Appendix: Hilltown Collaborative IT Assessments - Community Details and Comparison

Town	General summary	Who manages IT?	IT support contracts?	Is there a server?	Where are documents stored?	Back up system
Middlefield	Middlefield is a small office with a few workstations and printers. They are in fairly good shape. They do have a cloud based backup system and the wiring is also in good shape. They are using the MassBroadband fiber through Crocker Communications. They have a 6 line phone system but no VOIP system. They will need backup APC units for all equipment. They would benefit from a server for centralized data sharing and a cloud based backup and to be setup with a domain for secure access to data.	Volunteer, Steve Harris, does most of the IT work as a volunteer and chair of the communications committee. When they need additional support, they sometimes call the IT manager at the Gateway School District for help.	No. Hire a company for a specific job when needed.	Yes	Individual work stations and server.	Individual work stations and server backed up to the cloud.
Montgomery	Montgomery is a small office with only a few workstations and printers and a copier. They are in need of many upgrades, some rewiring, and the creation of more secure systems for storing and backing up data. They have Windows 7 Machines. Some of their wiring is not completed. It is recommended that they obtain an Exchange 365 for email. They will need some IT advice on how to clean up network issues and will need a centralized server for data and a cloud based backup and a domain setup for secure access to data. They will need new workstations. They will need a SonicWALL device for remote access if staff continue to work in that manner. They are in need of someone to oversee and plan strategically for how they are using technology to ensure that the staff have what they need to do their work efficiently and securely.	Selectman who is IT savvy helps when there is a problem with Jane's computer. Assessor and accountant are pretty computer literate.	No offsite tech support.	No	No consistent system between departments. Document storage varies between departments and even from computer to computer.	"Maybe the assessor's computer is backed up somewhere." No consistent back up system between departments. When back ups do happen, they use USB thumb drives, but these are not a secure or reliable form of back up. They are unstable and can be lost or easily destroyed. Administrative Chief of Police said she does not believe the laptop she uses is getting backed up.
Russell	<p>PVPC staff were not able to arrange an on site analysis of Russell's IT arrangements, despite repeated attempts, but had a detailed conversation with Wayne Precanico who provides IT support to the community. This assessment is based on information provided in that and other follow up conversations.</p> <p>Russell has some decent IT systems in place and is also in need of some upgrades and additional support to make them happen. They have a Selectboard member who is an IT specialist, and he is called on to provide paid support as needed. They are using the Westfield Gas and Electric for their ISP and have a fiber connection between municipal buildings. They are not using the MassBroadband connection. They have an older file server that is cloud based with back up. Their network is setup as a workgroup and most workstations are newer with some older printers. They are running Windows 7 Pro on most machines with one Windows 10 Pro workstation. Machines are not all consistent between staff and departments. They do have an older VOIP system that should be upgraded. They do not have remote access to the network. They would benefit from an upgrade of their server and a domain set up for better group policy administration and security. They would benefit from additional support resources to complete upgrades to their server and phone system.</p> <p>Russell also has their own cable TV system and provide internet to the town.</p>	Wayne Precanico, Selectman and paid IT Consultant	Sort of. They hire Selectboard member, Wayne Precanico, as needed. Some work is done as a volunteer as well.	Yes	Mostly on shared server that is an older IBM Lenovo. This includes cable company, accountant, fire, and police departments.	Server is backed up to the cloud using iBackup professional. Unclear whether all staff are saving to the server, however, so some staff or departments may not be adequately backed up. Setting up a domain would help with this.

Appendix: Hilltown Collaborative IT Assessments - Community Details and Comparison

Town	System for updates	Email & website	Printing & copier	Consistency between departments (equipment and systems)	IT budget across departments?	Are municipal computers taken home?
Blandford	Akuity likely manages updates to the server. Unclear if there is a consistent system for choosing or conducting updates to local machines.	Website and email url are .com instead of .gov. Town Administrator expressed desire for this to change. This could be done if they shifted their server or email system. They are in need of a new server and domain set up.		Systems for storing and backing up files varies between department, as do protocols for security and general software updates. There is no consistent system to ensure proper updates are being run or to manage machines or file storage. Hardware is not consistent between staff or departments.	Yes, there appears to be an overarching IT support and purchasing line item in the town budget.	No, but historically sometimes files.
Chester	No consistent system for ensuring proper updates occur. Computers were found to be very far behind on running software updates.	Email is through Comcast. Staff reported constant problems with Xfinity email. Email addresses are @comcast.net. They will need Exchange 365 so that their emails can be changed to @Townofchester.org for example. Website is .net instead of .gov. Website recently updated but may need help maintaining it.	Printers and copiers are not networked and are used inconsistently and inefficiently between departments. Different printers are used throughout the building requiring separate purchases of ink. There is a copier that can be printed to through a network but not all staff eligible to use it know how to do so. There was a brand new printer purchased by the electric company that was not being used because no one had set it up yet.	No consistency between departments or even within a department for computers, printers, systems for software updates, back up, or security protocols.	No. Each department responsible for its own IT costs as they arise.	Yes or staff work on own computer.
Huntington	They seem to have an organized system for maintenance of software and security updates.	URL is .us not .gov and email addresses are @comcast.net. Could use domain set up on server to standardize this. About to hire someone to create a new website. They have been working on moving everyone to the town website.	In the process of centralizing networked copiers and printers throughout the office.	Everything is recently upgraded to be consistent across departments. All departments are consistent with types of machines and software. System has been put in place to plan which computers are replaced each year. Older computers get rotated to work stations with less intense use and needs.	Yes. They have an IT budget for the town offices as a whole. Water and Sewer, Fire, Highway, and Police departments are all separate entities and add to their IT budget when they need to upgrade.	Not mentioned.

Appendix: Hilltown Collaborative IT Assessments - Community Details and Comparison

Town	System for updates	Email & website	Printing & copier	Consistency between departments (equipment and systems)	IT budget across departments?	Are municipal computers taken home?
Middlefield	No specific system was highlighted, but work stations appeared to be updated and current.	Website and email are .net instead of .gov. Could use a domain set up on server to standardize this. Email is hosted by InMotion hosting and managed in house.	They have a copier that is on the network and anyone can print to it.	They have consistent computers between departments. There are only a few people who each work part time in the office, and they seem to coordinate their work and systems fairly well.	No. Technology related replacements usually come out of department budgets. There is one person who makes decisions about technology purchases across the office after checking in with the needs of the individual, so that does encourage more consistency.	Not mentioned.
Montgomery	Town clerk uses a state computer that they update "periodically." No systematic process to ensure regular updates. No IT staff to monitor which updates should or shouldn't happen.	Website looks good but says it is under construction. It uses a URL with .gov as it should. Email address is @rcn.com. These should be made consistent.	They have a copier, not networked.	No	No. Line items for specific department or software support but not general IT support and upgrades.	Staff work on own computer.
Russell	Unknown. Sounds like it may be managed by individual users, therefore having inconsistent results.	Website is .us instead of .gov. Email addresses are @Russell.net. No onsite email system. Could use a domain set up on server to standardize this. Website is maintained on a volunteer basis and could use an upgrade.	A couple of older printers but nothing "really old" according to Wayne. Could probably use some upgrades to network printers and/or copier.	Equipment is not consistent between departments. In some cases, staff are researching and purchasing their own machines which does not ensure that there is good compatibility or consistency of software or operating systems between staff and departments. Most computers are running windows 7, but one is on Windows 10.	Somewhat. Town Hall has one overarching IT budget and then each department has their own separate little budget as well that is allocated for IT.	Staff may work on own computers and accessing town computers remotely, but it's unofficial and not clear to what extent this is happening.

Appendix: Hilltown Collaborative IT Assessments - Community Details and Comparison

Town	Municipal files protected if staff work remotely? (Yes, No, NA)	Municipal files backed up if staff work remotely? (Yes, No, NA)	Security and disaster recovery plan	Some software used	Wiring	Phone system	Internet & Wifi
Blandford	No	No - This is an effort in progress. Trying to limit remote access.	Security/virus protection is done ad-hoc. There is no consistent system to ensure machines are protected and updated on a regular basis.	MS Office Licensed through Akuity Soft right - Financial, server-based Harpers - Web based pay roll ArcGIS - Assessor Accela - Accounting, Treasurer, Collections Harpers - Payroll Patriot - Appraisal	Need some rewiring.	Do have VOIP through Access Plus.	Wired internet is reliable in the building. They are working on getting Wifi throughout more of the building but currently have a pieced together wifi system that works in some areas. They are currently setup on the Mass Broadband fiber connection through Axia.
Chester	No	No	No consistent or ongoing security protocols in place.	SoftRight - Accountant/Treasurer CAMA System - Collector, Assessor Accela - Accounting/Treasurer Microsoft Office Universal CSC	Needs complete overhaul.	Do not have a VOIP system or the ability to page or forward calls as would be beneficial. Most of municipality uses Comcast for phone. The electric company uses Verizon for land-line phone as a back up during power outages.	Internet speed is reported as decent but the wireless networks are not set up correctly. There were 10-11 different wireless networks observed in and around the building that were interfering with each other. A signal booster was too close to the modem and interfering with the source signal. They have been provided with the fiber connection from the MassBroadband but are not utilizing it.
Huntington	Yes, staff can work remotely through Office 365 which is secure.	Yes, staff can work remotely through Office 365.	Security and virus protection is all standardized and done as a system across the office.	Software is consistent and updated throughout the office. Microsoft Office365 SoftRight - Accountant Patriot - Assessor Accela - Accounting/Treasurer Sage - Payroll	Good.	In the process of upgrading to VOIP. This will save time for receptionist who was constantly having to direct calls to specific staff rather than having direct lines available for phone calls. Allows voicemail to go right to email for when part time people are not in the office for periods of time.	They have internet through Comcast. Wired internet is reliable and wifi exists throughout building. Every single building will now have internet and phone. Using point to point to get the internet to various buildings. They are NOT on MassBroadband because it was way too expensive and hard to have them fix anything. Huntington asked them to box in the wires connected to the building for safety reasons and MassBroadband wouldn't do it. The library is going to get faster internet for free with Comcast. Mass Broadband charged the library for service while Comcast provides free service to libraries. Gateway school district uses the fiber line but has had problems getting things fixed or knowing who to call when something breaks. They willing to switch to MassBroadband if given assistance.

Appendix: Hilltown Collaboartive IT Assessments - Community Details and Comparison

Town	Municipal files protected if staff work remotely? (Yes, No, NA)	Municipal files backed up if staff work remotely? (Yes, No, NA)	Security and disaster recovery plan	Some software used	Wiring	Phone system	Internet & Wifi
Middlefield	NA, there are probably some files taken home and worked on remotely without protection.	NA, there are probably some files taken home and worked on remotely without a system of back up outside of the staff member bringing the file back to the office and saving it.	No specific system was highlighted, but work stations appeared to be updated and current.	CAMA - Accountant SoftRight Berkshire Online Permitting CSC UMAS Accela - Accounting/Treasurer Excel Universal	Good.	They have a 6 line phone system but not VOIP. Cell service in the building is very poor. There is a desired to put in a cell booster for about \$900.	Their wired internet is reliable and they have reliable wifi throughout the building as well. They are on MassBroadband. Have some concerns about outside wiring and they have been waiting for over a year for it to be fixed.
Montgomery	No. Tax collection work, including cash book and Selectboard minutes are often conducted at home without any specific system to protect or back up data.	Files are backed up to a disk every now and then but not as frequently as she should.	Administrative Chief of Police uses Avast and tries to remember to do it at the beginning of every month.	Softright -Payroll Accela - Treasurer/Accounting Excel Point - Taxes Taxman - Excise Patriot - Assessor	Need significant rewiring or completion of wiring.	Cornerstone/Magna 5? Administrative Chief of Police has a desk located in the basement but no access to a phone line. She has a printer with fax capacity but no line connected to it. Should be upgraded to VOIP.	Town hall has broadband. Administrative Chief of Police works in basement using wifi because wiring for internet and phones are not down there. Currently working on getting a phone in the basement. Fire Department and Highway department are across the street and do not have broadband. Highway department across the street has one computer to print reports, but they aren't connected to the internet. They'd love to have it if they could.
Russell	No	Not systematically. Only if staff take the initiative to do this.	No specific system highlighted. It sounds like staff members mostly manage their own work stations, so this may be inconsistent and create a vulnerability.	Vision - Assessor Point - Assessor Surpass - Library Peachtree - Accounting Excel Checkwriters - Payroll	Unknown.	Have an older VOIP system but would like to upgrade it.	Municipality is a cable TV provider and supplies internet for the town. Internet is fairly robust, though not redundant. Their ISP is Westfield Gas and Electric. They are not using MassBroadband. Town hall does not have Wifi for public use and there is limited use for town hall employees.

Appendix: Hilltown Collaborative IT Assessments - Community Details and Comparison

Town	Old equipment to be disposed of	Staff thoughts on IT Support	Areas for potential improvement	Hardware and Software Recommendations (Subject to adjustments of brand/company or if communities move to shared server or other software)
Blandford	Lots of old equipment sitting in stacks throughout the building. They want to/are trying to get rid of them and want a system in place for disposing of old machines in the future.	They struggle with hardware purchasing since they don't have an IT person who can help them decide what is best for their needs. Akuity helps with specific support needs but isn't thinking strategically about their office. They would like to do shared purchasing of hardware. Very open to shared service, server, and software.	Consistency between machines, putting systems in place for security protocols and other software updates, better informed purchases of hardware and software. They should be setup with a new server and a domain setup. They should setup a cloud based backup and a central location for data. They will need Exchange 365 for email and the wiring will need to be cleaned up and have any old equipment disconnected and disposed of. They could also invest in back up APC units for all equipment.	SonicWALL TZ 300 Wireless 4TB External USB Hard drive Carbonite Cloud Based Backup Backup APC 1500 Office Suite 2016 Exchange 365 for Email Wiring adjustments Backup power supply APC Domain Consolidation Remote Access Scenario
Chester	Plenty of equipment piled throughout areas of the building ready to be disposed of.	They would definitely like some support and direction. They have some ongoing frustrations with particular issues such as email, wifi, and technology purchasing. At least some staff also voiced a distrust of cloud-based solutions.	Chester is in great need of an overall plan for how they use technology in their building and are also in need of many upgrades, rewiring, and networking to make their office run more efficiently and smoothly. In addition, they are in great need of someone to turn to for technology related questions and needs. They will need a complete overhaul of their wiring throughout the office. They will need new workstations and a server to hold all data and setup a cloud based backup. They will need a new VOIP System. They will also need to utilize the Mass Broadband system. They are currently using Comcast. And their emails are @comcast.net. They will need Exchange 365 so that their emails can be changed to @Townofchester.org for example. They will need Backup APC units to support equipment. They will also need to establish a network domain environment for secure access to data.	SonicWALL TZ 300 Wireless Dell X10 52 48 port Server T310 or T410 4TB External USB Hard drive Carbonite Cloud Based Backup Cat 6/6E Wiring Surface Mounting Backup APC 1500 Office Suite 2016 Exchange 365 for Email Power Strips 30,000 Jewels All in One AIO OptiPlex 7000 Series DELL Workstation Wiring overhaul Backup power supply APC Conversion to VOIP Domain Consolidation Remote Access Scenario
Huntington	Some in basement.	They are currently in good shape, but there is room for saving money through sharing some services with neighboring communities. Very open to shared opportunities for cost savings. They encouraged the idea of one central server for all six towns (or many). They could then share the cost of a single support contract for one server with all updates and security managed a single time. They would be willing to host this since they are centrally located and currently in good shape with their technology. It would be the size of a small company. Also suggested that getting older documents shared and organized could be a shared procurement opportunity.	Huntington does not need many improvements at this time since everything seems to be upgraded and working efficiently. It is important to note, however, that much of the recent upgrades and great systems that are in place rely upon a volunteer and are not institutionalized into the workings of the municipality in a manner that would guarantee this ongoing quality should that volunteer no longer be available to provide this planning and assistance. They could still find cost savings and create more reliable systems through service sharing with neighboring communities. They should be setup on the Mass Broadband Fiber connection.	Office Suite 2016 Exchange 365 for Email Remote Access Scenario

Appendix: Hilltown Collaborative IT Assessments - Community Details and Comparison

Town	Old equipment to be disposed of	Staff thoughts on IT Support	Areas for potential improvement	Hardware and Software Recommendations (Subject to adjustments of brand/company or if communities move to shared server or other software)
Middlefield	None noted.	Staff feel that things are working pretty well. Cell signals are very poor in the building, so they want to add a cell booster to the building. Staff feel that as long as they can get a hold of Steve, who has been doing this for 10 years, then they are okay. They have some concerns about potentially losing capacity from what they currently have if they move towards regionalizing services.	Middlefield would benefit from a server for centralized data sharing and a cloud based backup and to be setup with a domain for secure access to data. They need a cell booster in their town hall to allow for any reliable cell service within the building. They would also benefit from an upgrade to their phone system and backup APC units for all equipment. While Middlefield is generally in good shape for IT, they rely heavily on volunteer support and knowledge which is a great asset but also creates a vulnerability for the town.	SonicWALL TZ 300 Wireless Dell X10 52 48 port Server T310 or T410 4TB External USB Hard drive Carbonite Cloud Based Backup Backup APC 1500 Office Suite 2016 Exchange 365 for Email Power Strips 30,000 Jewels Backup power supply APC Conversion to VOIP Domain Consolidation Remote Access Scenario Professional Cell Signal Booster
Montgomery	Lots of old equipment, mostly in police dept office in basement, not being used and ready to be disposed of.	Thinks sharing an IT person would be beneficial even though change is hard. Currently, many communities are relying on volunteers.	Montgomery needs some work to clean up their network and centralize, and secure their data. They need a server and a cloud based backup system. They also need a domain set up for secure access to their data and a SonicWall device if they want to have secure remote access to files. They would benefit from updated work stations and ensuring that all staff know how to keep their work secure by saving their data in the proper location. A system for software and security updates should be put in place. Exchange 365 should be purchased and set up for secure email. Some of their wiring needs to be completed or cleaned up. Administrative Chief of Police has computer from previous chief but can't use it or open it because they don't know the password.	SonicWALL TZ 300 Wireless Server T310 or T410 4TB External USB Hard drive Carbonite Cloud Based Backup Backup APC 1500 Office Suite 2016 Exchange 365 for Email Wiring Cost to be determined by location. Backup power supply APC Conversion to VOIP Domain Consolidation Remote Access Scenario
Russell	Some. They have some old battery back ups, cable equipment, and perhaps a couple of computers. They generally bring them to Staples, after removing the hard drives.	There may be mixed feelings about this in the community. Wayne is open to exploring many options including document sharing, server sharing, online permitting, and a Part Time IT director. The primary concern is increased costs in a community that doesn't have a lot of wiggle room. There is also some question about whether or not it is beneficial to have someone from outside of the community provide this support if someone within the community can do so.	There are some key areas that the security and back up of town data could be improved. The new server should be set up with a domain, and systems should be implemented with all staff to ensure they are saving files to the server that gets protected and backed up regularly. Systems should also be implemented to ensure that software and security updates get implemented uniformly across all work stations. The phone system is also ready for an upgrade. As someone in the IT field for a long time, their IT manager tries to make systems easy on a relatively small budget but he feels they could probably be doing a little more if they had the resources. He has a new server ready to use, but the process of transferring from the old server is arduous. Similarly, wants to transfer to upgraded VOIP system but hasn't had the time to do so. Interested in Online Permitting using the cloud version of the Point software.	SonicWALL TZ 300 Wireless Dell X10 52 48 port Server T310 or T410 4TB External USB Hard drive Carbonite Cloud Based Backup Cat 6/6E Wiring Surface Mounting Backup APC 1500 Office Suite 2016 Exchange 365 for Email Power Strips 30,000 Jewels All in One AIO OptiPlex 7000 Series DELL Workstation