

Town of BARRE

Report prepared By: Allison Poirier, Amelia Percentie, and Michael Hamel

Photo Credit: Wikimedia Commons – John Phelan in Barre, Massachusetts

EXECUTIVE SUMMARY

The Town of Barre adopted the Business Continuity best practice in August of 2015, as part of a Community Compact agreement signed with the Baker-Polito Administration. Barre partnered with the Office of Municipal and School Technology at MassIT to develop a Business Continuity Plan and procured the services of Rutter Networking Technologies to perform a comprehensive IT assessment. The City chose the Business Continuity best practice to gain insight into the current state of their IT environment and identify vulnerabilities that could be documented, prioritized and remediated. Applying business continuity best practices will allow Barre to quickly and confidently respond to any disruption of their IT environment, minimizing disruption to Town services.

Community Profile

The Town of Barre is located in Central Massachusetts. Surrounding towns include: Phillipston, Hubbardston, Rutland, Oakham, New Braintree, Hardwick and Petersham. The Town has played an important role in our nation's history from its farming equipment contributions during the Industrial Revolution to the supply of gunpowder to the Union Army during the Civil War.

Population is 5,398 residents*

Annual Budget is \$11.9M (FY 2017)

Median Household Income is \$67,536*

*As of 2010 census

In partnership between:

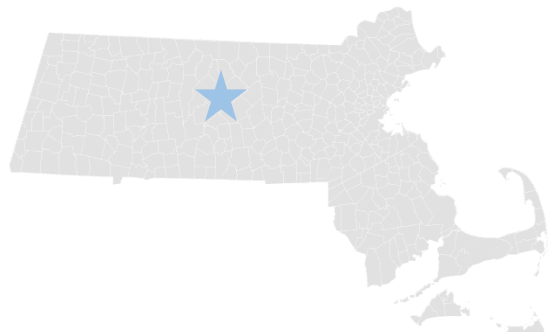




Photo Credit: Wikimedia Commons – Daderot in Barre, Massachusetts

PROJECT PROCESS

In 2014, the Town of Barre began to incorporate written disaster recovery procedures into their Administration and Finance Policies, as well as their Procedures Manual. The Town had just finished upgrading their IT infrastructure when they joined the Community Compact Cabinet (CCC) in 2015. The upgrade consisted of an off-site backup implementation that would later support the CCC Business Continuity initiative. MassIT and Town leadership worked together to determine the best strategy for discovery and analysis of the Town's IT infrastructure. A team of Barre's Department Leads, and subject matter experts, participated in a series of working sessions with MassIT. During the sessions they developed a Business Impact Analysis (BIA), a master document that is an essential part of Business Continuity Planning. Following this, Rutter Networking Technologies conducted an IT assessment focused on Business Continuity/Disaster Recovery and Security to supplement the BIA.

In 2016, the Town of Barre hired Adam Suzor to be the regional IT Director for both Barre and the Town of Rutland. Today, Adam is also the IT Director of the Regional Dispatch Center for Rutland, Hubbardston and Oakham. Seeing that Barre was already involved in a number of regional initiatives, it made sense to continue joint services between Barre and Rutland for municipal IT.

Barre's Business Impact Analysis (BIA) Overview

The BIA documents the Town's IT infrastructure and systems, as well as the essential functions and services they support. Below is a snapshot of Barre's BIA work leveraging MassIT's Business Continuity Playbook, a four-step strategy containing the following milestones: (1) Identify Essential Functions, (2) Develop findings for each essential function, (3) Create an Action Plan for functional gaps – findings & recommendations, and lastly (4) Develop detailed remediation plans. These four steps were repeated, cyclically, until the findings were complete.

Step 1: Identify Essential Functions

In this initial step, the Town was asked to identify and document the essential functions (EF) or services they depend on. Each essential function was prioritized and analyzed. Barre also documented the following terms: Recovery Time Objectives (RTO) -- the maximum outage timeframe an organization can tolerate; and Recovery Point Objectives (RPO) -- the maximum amount of data that can be lost before it becomes unmanageable to reconstruct.

EF#	ESSENTIAL FUNCTION	DEPARTMENT	PRIORITY
1	Communications	Public Safety - Police-Fire-EMS Support	1
2	Internet Access	Multiple	2
3	Financial Systems	Multiple (Administrator/Treasurer/Collector)	3
4	Public Health Management	Public Health-Public Safety-Animal Control	4
5	Disaster Recovery	IT Department	5

Step 2: Develop Findings for each Essential Function

In this step, the goal for the team was to develop findings for the essential functions identified in the previous step. The team focused on the public safety application, hosted in Rutland.

Step 3: Create Action Plan for Functional Gaps (Findings/Recommendations)

Advanced VMWare technologies, like the ones hosted in Barre, can provide zero downtime failover when the virtual machines are hosted on shared storage. With just one backup site, the Town would need to build a second site to achieve the desired RTO for some of their applications.

Step 4: Detailed Remediation Plans

Barre has designed, provisioned and implemented a cross-site Disaster Recovery model with Rutland, to include advanced protection and recovery capabilities. They should continue to move applications to integrated technologies to support recent improvements.

MassIT's objectives were to educate, train, and provide workshops and working sessions to Barre's stakeholders. Town departments were involved and participated in identifying their essential business functions. The process of mapping business functions to IT infrastructure helped the departments understand the complexities and interdependencies of their business functions on the technology they depend on. The Town of Barre benefits from understanding the essential functions and services of their departments. Barre's IT department has completed their BIA, the Disaster Recovery and Emergency Response Plans are underway and nearly complete. The Town will utilize these plans to mitigate service disruptions, in the event of a disaster. The documents will be stored in a secure location outside of the Town's infrastructure, where it can be accessed virtually, by all key stakeholders.

IT Assessment Overview

Barre hired Rutter Networking Technologies in 2016 to complete a comprehensive IT analysis. The focus of the Rutter engagement was to examine the Business Continuity and Disaster Recovery practices currently employed at the Town, and to provide recommendations based on their findings. Rutter searched for issues that would affect most municipalities such as: Power outages, IT system crashes, file corruption, and hardware failures. They also completed an onsite discovery and analysis of Barre's IT infrastructure, focusing on the following:

- Network
- Security Infrastructure
- Wireless
- Back Up
- Email
- Anti-virus
- Telecommunication/Mobile Devices
- Users Workstations
- Server Hardware
- Server Operating Systems
- Other Devices

Barre's BIA results enabled Rutter to develop quantitative disaster recovery goals for the Town. Rutter's assessment results were also addressed in the Town's remediation plans.

MASSIT Recommendation

MassIT recommends the Town consider implementing Configuration Management, or Change Management, to ensure the important BIA information identified in this project is updated regularly, preferably on an annual basis, or as IT systems are added, updated, or taken offline so any changes can be captured and analyzed in the context of the larger environment. The ongoing process of reviewing and updating the existing plans will help Barre identify and record new information necessary to manage IT services, by re-documenting the relationships between IT components and essential functions. Having this system in place will help the IT Director control and maintain the various hardware and software installations going forward.

Conclusion

Communities across the Commonwealth struggle to balance day to day technology requirements with new initiatives, but this is especially true in Barre where expectations are increasing and communities have competing priorities. Despite these challenges, Barre and Rutland have built an IT environment that is robust and scalable. They have achieved high availability by going through the Business Continuity Planning process and implementing recommendations from the IT assessment. The Town was also instrumental in convening the first regional IT meeting, in partnership with MassIT, this May, demonstrating their commitment to exploring opportunities to collaborate with neighbors, and providing an example for their peers.