



*Town of*  
**EASTHAM**

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

Photo Credit: Flickr – David Montiverdi

## **EXECUTIVE SUMMARY**

The Town of Eastham adopted the Business Continuity best practice in November of 2015 as part of a Community Compact agreement signed with the Baker-Polito Administration. Eastham partnered with the Office of Municipal and School Technology (OMST) at the Executive Office of Technology Services and Security (EOTSS) to develop a Business Continuity Plan and leveraged State resources to procure the services of Partners Technology to perform a comprehensive network performance assessment. The Town chose the Business Continuity best practice in part because it aligns well with the Town’s long-term goal of becoming more resilient against unexpected events, including data loss.

### Community Profile

The Town of Eastham is located on Cape Cod in Barnstable County. Eastham is best known as a summer vacation destination, which began as early as 1830 when the Methodist Church established a summer camp meeting ground in town. Residents and visitors alike continue to be attracted to Eastham for its National Park landscapes and classic Cape Cod charm.

**Population** is 4,956 residents\*

**Annual Budget** is \$25.6M (FY17)

**Median Household Income** is \$60,760\*

\*US Census Bureau

*In partnership between:*

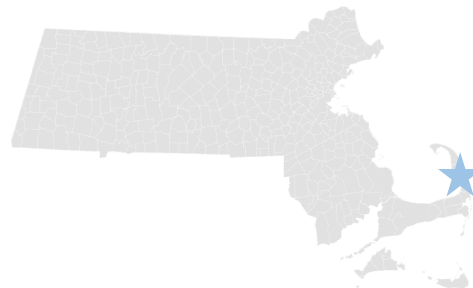




Photo Credit: Flickr – Massachusetts Office of Travel and Tourism

## BACKGROUND

Like other Cape Cod towns, Eastham has a rich, vibrant history which has largely been documented on paper. This growing amount of paper is both an asset for the context it can provide citizens and Town employees but also a liability if an unexpected event like a fire were to impact the Town.

Eastham has recognized this growing area of risk and has already begun large scale digitization of their archive of documents to guard against potential loss. They are also currently utilizing several web-based applications for remote data backup. These efforts to preserve data are being performed in conjunction with a revitalization of the Information Technology department in Eastham, including the formation of a technology workgroup to help plan technology improvements for the Town.

This workgroup has identified several goals it wishes to accomplish in the near future:

- Hardware and software upgrades for all Town technology infrastructure
- Education and training to improve staff protocols for digitizing paper and backing up data
- A written business continuity plan to ensure continuity across the entire municipal organization

The Town has already taken a really important step by leveraging fiber available to them to connect their buildings, which has opened new opportunities for consistent technology processes and strategies. By entering into a Community Compact and choosing the Business Continuity best practice area, Eastham is making a commitment to continuous improvement of technology and continuity of services across the entire Town.

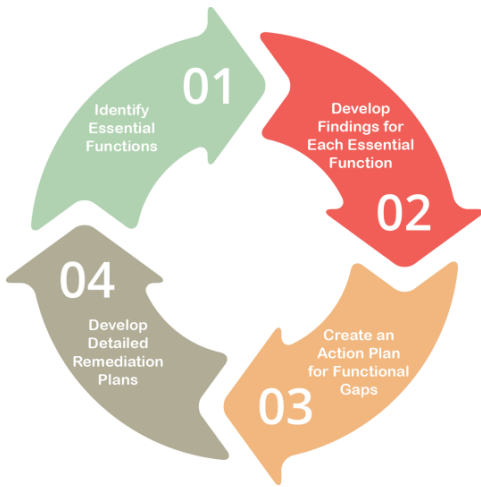
“The Town of Eastham is committed to maintaining comprehensive and effective business management practices to ensure the safety and security of our data,” said Paul Lagg, Eastham’s Town Planner.

Having a written business continuity plan is important for a Town of Eastham’s size and location on Cape Cod. Eastham also provides technology services to schools in neighboring Towns, which makes continuity of operations especially vital. By taking these planning steps before an unexpected event occurs, Eastham can be prepared to act swiftly and confidently to stay online and continue to provide important services.

# PROJECT PROCESS

## Eastham’s Business Impact Analysis (BIA) Overview

EOTSS’s Office of Municipal and School Technology partnered with Eastham to start the development of a Business Continuity Plan for the Town by assisting with a Business Impact Analysis. The BIA process consists of four steps, as outlined in EOTSS’s business impact analysis diagram (figure left). The BIA process consists of four steps: (1) Identify Essential Functions, (2) Develop Findings for Each Essential Function, (3) Create an Action Plan for Functional Gaps, and lastly (4) Develop Detailed Remediation Plans. These four steps were repeated, cyclically, until the findings were complete and documented in a BIA master document.



### Step 1: Identify Essential Functions

In this first step, Town departments documented essential functions which citizens heavily depends upon. Following that, recovery time objectives (RTOs) were identified. An RTO is the maximum amount of time a business service can be unavailable without causing unacceptable consequences. In addition to RTO’s, recovery point objectives (RPO) were also documented. An RPO is the maximum amount of data that can be lost before it becomes unmanageable to reconstruct. A table of Eastham’s departments and essential functions is below:

DEPARTMENT	ESSENTIAL FUNCTIONS
<b>Accounting</b>	Maintain the General Ledger system, perform internal audits, coordinate external audits, payroll audits and prepare required reports and account payable administration.
<b>Administration</b>	Supervision and coordination of all Town activities and services and implementation of all BOS and Town meeting policies.
<b>Assessing</b>	Full and fair market valuation of real and personal property.
<b>Building and Maintenance</b>	Upkeep of all Town-owned property and grounds.
<b>Building</b>	Enforces Massachusetts building code regulations, issues building, plumbing, gas and electrical permits. Conducts appropriate inspections in support of building regulations and permits.
<b>Town Clerk</b>	Registration, recording, and management of all vital records and events. Conducts elections and maintains election records. Issues various licenses, certificates, and permits.
<b>COA/Senior Center</b>	Identifies designs, promotes, and implements services and programs to fulfill the needs of residents 59 and over.

<b>Conservation</b>	Protection of wetlands and coastal marshes, dunes, banks, beaches, streams, swamps, and wildlife habit areas. Enforcement of state wetland protection laws and review/permitting of certain activities within the buffer zone to those areas. Oversight of Town–designated conservation lands.
<b>Fire</b>	Preservation of life, property, and environment from fire, medical emergency, and other hazardous conditions. Public education, code enforcement, and emergency response.
<b>Health</b>	Water quality testing, septic permits, well permits, inspections, beach water monitoring.
<b>Human Resources</b>	Job postings, compliance monitoring, and personnel management.
<b>Library</b>	Provides educational and leisure books, videos, musical recordings, and public access computer terminals for residents and visitors.
<b>MIS</b>	Manage and maintain Eastham's computers, networks, software, applications, email, website, and telephone system.
<b>Natural Resources (Harbormaster and Shellfish Officer)</b>	Preserve and enhance the natural resources of the town through conservation, education, regulation, and management. As Harbormaster: manage moorings, issue permits and protects the shoreline. As Shellfish Officer: issue licenses and permits for shell fishing and direct the Salt Pond Nursery grow-out facility. Enforce all Federal, State, and Local Environmental Laws, Rules & Regulations.
<b>Planning and Zoning</b>	Staffing of the Planning Board and Zoning Board of Appeals, support for land use related committees established by the Town, coordination of long term planning projects.
<b>Police</b>	Public safety, law enforcement, school resources.
<b>Public Works</b>	Road repairs, maintenance, snow plowing, operation of the transfer station.
<b>Recreation &amp; Beach</b>	Management of municipal beaches and waterfront property; issuance and enforcement of beach stickers and permits.
<b>Treasurer/Collector</b>	Billing and collection of all revenue including property and excise taxes, fees, permits and other departmental receivables committed to them to collect; maintaining tax title accounts and for receiving, managing and disbursing all monies belonging to the Town, in addition to processing and distributing bi-weekly payroll and administering benefits for town employees and retirees.

**Step 2: Develop Findings for each Essential Function**

Eastham’s Town Clerk has identified a gap with the security of Town vital records:

DEPARTMENT	ESSENTIAL FUNCTIONS	GAP IDENTIFIED	GAP FINDING
Town Clerk	Registration, recording, and management of all vital records and events. Conducts elections and maintains election records. Issues various licenses, certificates, and permits.	Many vital records only exist on paper.	Vital records existing only on paper is a risk to the Town.

**Step 3: Create Action Plan for Gap Findings**

An action plan has been created and is currently being executed upon:

DEPARTMENT	ESSENTIAL FUNCTIONS	GAP IDENTIFIED	GAP FINDING	ACTION PLAN
Town Clerk	Registration, recording, and management of all vital records and events. Conducts elections and maintains election records. Issues various licenses, certificates, and permits.	Many vital records only exist on paper.	Vital records existing only on paper is a risk to the Town.	The Town is actively working to digitize vital records to remediate this gap.

**Step 4: Develop Detailed Remediation Plans**

OMST staff hosted several Business Continuity workshops that Eastham actively participated in. OMST also provided Eastham with emergency response plan and disaster recovery application templates. Informed by the BIA findings, Eastham leveraged OMST’s tools and developed detailed remediation plans for all the gaps identified.

IT Assessment Overview

Eastham leveraged State resources to hire Partners Technology to assess the performance of their network while their BIA work was ongoing. The goals of the assessment were to ensure Eastham’s network backbone and infrastructure solution is designed properly, integrates seamlessly with all equipment using it, operates at peak performance, and maximizes every tax dollar spent on it. A review was requested of each Town building, with the following elements:

- *Network Review* – gathered and baselined pertinent data across all network elements that are expected to support network services
- *Network Analysis* – analyzed all gathered data to identify network issues, performance gaps, and/or bandwidth concerns that may affect network and data services
- *Network Troubleshooting Assessments* – identification and isolation of network troubles, along with recommended paths of improvement
- *IP Telephony Readiness Assessments* – determined and provided overall network readiness results and recommendations

Partners delivered their assessment documents in April of 2017, with reviews, recommendations, and network diagrams provided for Eastham Town Hall, the Department of Public Works, the Council of Aging, the Police Station, the Fire Station, and the Town's Library. These documents will be very helpful as the Town looks to expand the services offered over the network without compromising quality of service or security during the expansion.

#### Recommendations and Conclusion

OMST recommends that Eastham continue to revisit their BIA materials on a regular basis. These documents are most effective when they are regularly updated as changes are made to the environment, new threats to operations emerge, and as departments take on new or revised functions or implement new systems. Eastham's work digitizing vital records is equally important and efforts so far are applauded. As the network is expanded, OMST recommends that business continuity planning continue in parallel so the expanding environment is as resilient as the environment it's growing out from. As the Town's business continuity practices evolve, OMST recommends that the Town think about opportunities for cloud-based backup off-Cape. With proper planning, Eastham can be one of the leaders on the Cape in technology and readiness for its year-round and seasonal visitors.