Information Technology Review

Town of East Bridgewater

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ABOUT THE COLLINS CENTER

Established in July 2008, the Edward J. Collins, Jr. Center for Public Management is dedicated to improving efficiency, effectiveness, governance, and accountability at all levels of government, with a particular focus on state and local government. The Center's aim is to enable public entities to provide high quality services to the people they serve on a sustainable basis. The Center is located within the John W. McCormack Graduate School of Policy and Global Studies at the University of Massachusetts Boston. For more information, please visit the Center's website: http://www.umb.edu/cpm

Profile of the Information Technology Department

- Staffing consists of an IT Director, District Data Manager, and Level 1 Software Integration Specialist. The District Data Director and Level 1 Software Integration Specialist are focused exclusively on school district support. The IT Director position is currently open.

- More in-depth technical support is outsourced to Hub Technical Services.

- Expense for FY2017 was $276,247 (Town) and $290,821 (District), not including benefits. District figures do not include the strictly educational support staff and related $40,586 in educational software.

Computer Hardware/Servers

- Servers are located in the Police Department, the Junior/Senior High School, and one file server at the Department of Public Works. Virtualization of systems is in place.

- There are 114 desktop and laptop devices in use in Town departments.

- The IT Department supports a school district with approximately 2,300 students. There are 584 desktop/laptop client devices in use in the District. The District has made a significant commitment to technology and has deployed 2,000 Chromebook laptop computers, 300 IPads (tablets), and 170 Smart boards.

- The East Bridgewater Library is part of the SAILS Consortium. The library has approximately 90 client devices.

Major Application Software

Town - Locally Hosted

- Softright Financial Management (cloud-based enterprise financial/business system for the Town and school district)
- PK Assessment System, PK Valuation Group, (Computer Assisted Mass Appraisal (CAMA) system). Expect to be cloud-based starting in 2018.
- GeoTMS (Permitting/Licensing Software), Accela, Inc.
- IMC Police Software RMS (Records Management and Dispatch software),Tri-Tech Software Systems.
- IMC Fire software, Tri-Tech Software Systems, being implemented.
- Firehouse (in the process of being replaced by IMC Fire).
- AmbuPro EMS ePCR, (EMS/Ambulance Software), AmbuPro EMS.
- CDS Payroll System, Customized Data Services.
- Veeam Availability Platform, (Backup and Replication Software).

Town - Cloud Based

- SimpliCity, PeopleGIS.
- MySeniorCenter Software, (Senior Center Management System).
- SchoolDude, (DPW Work Order System for Facilities), Dude Solutions, Inc.
- UtilityCloud, (DPW Asset Management Software), Advanced Enterprise Systems Corporation.
- SAILS Library System, SAILS Library network.
- Webroot (Anti-Virus software), Webroot Inc.

School Department - Locally Hosted

- Nutrikids, (Food Service Point of Sales System), Heartland School Solutions.
- MS System Center Configuration Manager
- Veeam Availability Platform, (Backup and Replication Software), Veeam Software.

School Department - Cloud Based

- SchoolBrains (Student information system), Aptium LLC.
- Aesop (Absence Management System), FrontLine Technologies Group, LLC.
- SmartPD, (Teacher Professional Development Software), SmartPD
- Google Suite for Education,
- TeachPoint, (Teacher Evaluation System), TeachPoint.
- E-Sped, (Special Education Software), FrontLine Technologies Group, LLC.
- SchoolDude, (Building Rental Program), Dude Solutions, Inc.

Networks, Data, and Voice Communications

- All buildings with the exception of DPW and the Library are linked via a fiber-optic network terminating in the Police Headquarters Data Center. Network upgrades were approved at a recent town meeting to extend the network to DPW and the Library.

- Voice communications employs Voice Over Internet (VOIP) technology for all Departments, except Police, Fire, and the Library, which are served by an older analog system.

<u>Backup/Disaster Recovery (BDR) Measures</u>

- The Town and District server rooms are climate-controlled with battery backup and backup generators.

- Both server rooms have Veeam backup/replication servers. The server at the School Department takes daily incremental file backups and performs a full backup on the weekend. Town incremental file backups are performed twice daily with a full backup on Sunday. The DPW file server is backed up to the Town backup/replication server.

KEY FINDINGS AND RECOMMENDATIONS

Key Finding Number 1: IT Department Leadership, Organization, and Staffing

- Leadership for the IT Department has suffered over the past four years with staff turnover.

- Prior to 2015, the District employed a Director and staff, while the Town relied on HUB Technical Services for support. In 2015, an IT Director responsible for both Town and District IT was hired, resigning after five weeks to take a position in another town. In November 2015, an existing staff member was appointed Director. That employee has recently resigned. The IT Director position is currently open.

- No position description exists for the Director position, and the other staff job descriptions do not reflect current duties and responsibilities.

Recommendation

- The Town has an opportunity with an open director position to fill it with a person with a pro-active approach to IT and its potential for improving operations. The position must be a hands-on working one with strong project management skills.

- The Town is moving forward with a shared IT Director position (Town only responsibilities) with the Town of Hanson. The Center encourages that approach as it may offer the opportunity to attract a higher skilled candidate at lower shared cost.

- The District will move forward independently of the Town.

Key Finding Number 2: Information Technology Strategy

- There is no long-term information technology strategy or plan for technology upgrade, replacement, or growth.

Recommendation

- East Bridgewater needs to create and update annually a comprehensive information technology plan linked to the Town's capital improvement plan. This will provide a strategic vision for the town and form the framework for making rational, consistent choices regarding information technology.

- Since implementation initiatives and funding can extend over multi-year periods, the planning horizon should reflect that and extend beyond a year. Results against plan should be reported monthly. The plan should be reviewed and approved by the IT Steering Committee and the Board of Selectmen.

Key Finding Number 3: Information Technology Initiatives Selection and Priority

- There needs to be a clear process to determine what IT activities should be undertaken. The prioritization of initiatives and allocation of IT resources are critical to the success of IT .

- The IT function can face unlimited demands for service while dealing with limited resources. Individual departments press for services (or projects) which may or may not result in the highest and best use of limited IT resources for the Town as a whole.

- The IT Director acting alone may not have the full overall perspective to choose the best course of action.

Recommendation

- The Center recommends creating an Information Systems and Technology Steering Committee or Advisory Committee to provide feedback and better align IT strategy with the strategic goals of the Town.

- An information systems and technology steering committee is a governance body that reviews, monitors, and prioritizes major IT activities/projects from a cross-functional perspective.

- The mission of this committee would be to provide guidance, overall perspective, and direction to the IT Director .

Information Technology Steering Committee

Membership	Meeting Frequency
• Key managers representing the major IT-affected departments across the Town.	• Regularly scheduled monthly meetings with agendas issued in advance and results/minutes published. • More frequent meeting may be involved when acting in a project steering capacity, especially when nearing deployment stages.

An Alternative Way: Information Technology Steering Committee

Two principle concerns:

Alignment	Ownership
• The committee helps ensure that IT strategy is aligned with the strategic goals of the Town.	• The departments represented on the committee have ultimate ownership over the larger IT strategic decisions since those decisions will impact their organizations and processes.

Key Finding Number 4: Comprehensive Business Continuity/Disaster Recovery Process and Planning

- In the event of disaster, <u>retention of backup data</u> (incremental daily and weekly data file backups) <u>on-site at the Town and School server rooms is a risk.</u>

- In the event of an outage, daily incremental file backups combined with the full back up from the previous week allows data to be recovered up to the previous day. A half day (Town) to full day's (District) transactions would need to be re-entered and <u>a potentially time consuming file restoration process would be involved if the outage occurs later in the work week.</u>

- There is no formal written comprehensive business continuity/disaster recovery plan.

Recommendation

- The Center recommends the Town and District develop a formal comprehensive written business continuity/disaster recovery plan.

- The Center recommends consideration of facilities to support real-time (or near real-time) logging of transactions to another site (geographically distant) that supports prompt recovery of operations with limited or no re-entry of data in the event of an outage.

- At a minimum, the backup data should be stored weekly on magnetic media at a geographically remote site.

Key Finding Number 5: Shadow Accounting Systems/Redundant Record Keeping

- Larger departments are maintaining redundant (in one case multiple) accounting records to track expenses versus budget information during the month.

Recommendation

- The Center recommends departments be given access to the SoftRight financial system for real-time view of their expense vs. budget information and eliminate the redundant posting and maintaining/tracking of departmental expenses via Excel spreadsheets.

Key Finding Number 6: Payroll Process

- There are opportunities for process improvements as time and attendance and other compensation data is captured in a variety of ways and in departmental systems.

- Payroll-related <u>account</u> information is entered by Accounting and District Business Office staff after the fact into the SoftRight financial system.

- Accrual balances are maintained in the Accounting Department and in Town departments on paper logs or in spreadsheets. District balances are maintained in the Aesop System for access by employees. Accrual information is not printed on pay stubs.

Recommendation

- The Center recommends review of the following to determine the feasibility of file interfaces (imports/exports) to transfer time and attendance and payroll account-related data electronically to and from the payroll system.

    - An export file from the Police and Fire IMC software.
    - Data from the District's Aesop system.
    - Payroll-related account data from the payroll system for direct import into the SoftRight financial system.
    - Electronic feed between the Aesop and SchoolBrains systems.

- The ability of the payroll system to maintain accrual data should be investigated with the option to print same on pay stubs.

- The Center also recommends that the Town and District consider replacing the current timesheet collection and time reporting processes with a Time and Labor Management System (Labor collection system) to allow direct, timely, straight-forward electronic capture of time worked and maintenance of accrual information.

- Gathering time directly from employees electronically can more likely assure accurate time reporting and payroll expense. These systems place responsibility for time submission on the employee with an act to indicate their presence at work.

Key Finding Number 7: System applications with the potential for new commercial software solutions.

- The Department of Public Works could benefit from a DPW-focused work order system, supporting tablet access in the field to capture/access information directly as staff are deployed across the Town. This type of system could schedule work and issue work orders against which labor and material costs could be associated.

- GeoTMS, the Town's licensing/permitting software, is being used to a varying extent across the regulatory departments and is not fully serving the needs of the Town. Some of the issues expressed by end users were:
  - Not intuitive, hard to use, older technology;
  - Not used to print permits in some departments, "Easier to use Word"; and
  - Not integrated, no cross departmental sharing of information or access.

Recommendation

- The DPW Department should consider a work order (WO) software system that could provide the following benefits:

  - Electronic approval capability;
  - Serial numbered WO's and ability to track progress;
  - Costing of WO's from both internal and external sources, material and labor;
  - An ability to associate WO's to larger assets and those that can carry warrantees (e.g. boilers, roofs, etc.) in order to call upon warrantee provisions where applicable and to track maintenance costs for possible future replacement consideration;
  - Work scheduling;
  - Field based access via tablets;
  - A tie into purchasing and payroll systems including an electronic time and labor collection facility may also streamline the gathering of data.

- Town regulatory departments would benefit with a solution to allow one-stop online application and fee payment with all data related to the application contained in one place (by parcel) and integrated across all affected departments.

  - The ability of applicants being able to submit requests in one place that will alert and involve all Town regulatory areas has potential to improve service.
  - Ability to use tablets for field based access should also be a requirement.

- The Center recommends a software search be done with all affected departments involved in the process.

<u>Key Finding Number 8: Geographical Information Systems</u>

- GIS technology is at an early and limited stage of adoption in East Bridgewater. There is no internal engineering department, which typically is the driver of this technology.

- As GIS technology functions are considered in a variety of departments and citizen demand for related information increases, the Center is concerned that without a planned, coordinated approach the result will not deliver full benefits from this technology.

Recommendation

- The Center recommends expansion of the existing GIS Committee to include a wider representation of potential use departments including DPW/Water, Assessors, Police, Fire, Planning/Zoning/Building and Conservation.

- The Committee's role should include considering issues such as application, access, control and ownership of geographical information and outputs. GIS oversight could be part of the IT Steering Committee's role in lieu of the above.

- Use in areas of the Town's infrastructure, such as water, storm water, highways, and other land related/regulatory departmental uses, may be future considerations. The Town of Falmouth has made extensive use of GIS and may serve as an example.

Key Finding Number 9: Voice Communications

- The voice communications system elicited negative comments from a number of departments. The system was installed in January 2017 and supports all departments except Public Safety and the Library (analog equipment in those departments is aging). The system is under a three year lease.

Recommendation

- The Center recommends reviewing the overall voice needs, current system setup, and use.

Key Finding Number 10: Procurement

- Paper purchase orders are created (and numbered independently) in Town Departments, while the District uses the Softright financial system's purchasing facilities with electronic approval of purchase requisitions/orders.

Recommendation

- The Center recommends the Town consider use of the purchasing facilities inherent in the SoftRight financial system to enter and approve requisitions/purchase orders electronically and generate standard purchase orders that are serially numbered across all Town departments.

- Electronic workflow used to approve requisitions by supervisory personnel could be subject to ranges of approval by dollar amount. Board member sign-off of certain expenditures may limit the electronic solution in some instances.

Thank You.

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