MassIT’s mission is to drive the digital business of state government to meet the continually evolving needs of constituents, schools, businesses, and local government.

Getting IT Right

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Strategy Considerations – Current State

- Where are we today?
- Are our building connected?
- Is there a recognition of the important role technology now plays in day to day operations?
- Do we how IT dollars are spent in departments across the organization?
- Have we, or are we prepared to make IT investment a priority?
- Have we developed a strong IT foundation, or are we getting distracted by the “cool stuff” without getting our house in order?

Are you here? Or are you here?
Strategy Considerations - Organizational

• Regional Consolidation
  – Do you have in-house IT resources today?
  – How are your relationships with surrounding communities?
  – Is it sustainable?

• Municipal Consolidation
  – Are Town, School and Public Safety staff collaborative?
  – Do you have or are you an engaged executive sponsor?
  – What are the outcomes you’re looking for?
  – Are you ready to deal with the overlapping and divergent needs of these different groups
Strategy Consideration - Pace

- You can take a big bang approach, but you don’t have to, incremental change is good too!

- How did you answer the previous questions?
  - What steps need to be taken encourage collaboration across departments?
  - How can we open the lines of communication with neighboring communities?
  - How are we going to wrap our arms around what we spend on IT as an organization?
  - Who will be our champion?
  - Have we defined our organizational priorities?
Backup and Recovery

**Good**

Data is consistently backed-up and backups are periodically tested

**Better**

Data is backed-up to a different location in or near town, following generally accepted industry standards, and backups are periodically validated

**Best**

Data is backed-up to a location at least 30 miles away that meets strong industry standards, backups are periodically validated and there are well defined service-level agreements.

MassIT recommends that reputable cloud solutions be considered for this purpose.
What is "The Cloud"?

The practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer.

-Oxford Dictionaries
The Cloud Computing Stack or Cloud Flavors

• Infrastructure as a Service (IaaS)
  – A way of delivering Cloud Computing infrastructure – servers, storage, network and operating systems – as an on-demand service. Rather than purchasing servers, software, datacenter space or network equipment, clients instead buy those resources as a fully outsourced service on demand.  

• Platform as a Service (PaaS)
  – A computing platform that allows the creation of web applications quickly and easily and without the complexity of buying and maintaining the software and infrastructure underneath it.

• Software as a Service (SaaS)
  – A computing platform that allows applications to be delivered directly to the end-user, typically through a web browser.

Even More Flavors!

- **Public Cloud**
  - You are generally sharing resources with public and private parties. This model maximizes the economies of scale.

- **Private Cloud**
  - Similar to a public cloud offering, but the resources are dedicated to a single organization.

- **Hybrid Cloud**
  - Public and Private Cloud resources are connected.

- **Virtualization**
  - Creating virtual resources to better leverage technology infrastructure assets. Virtualization is typically fundamental to a cloud service – but also applies to internal resources not available over the internet.
Cloud Considerations

• Do you know if you're in the cloud?
  – Email, Collaboration Tools, Social Media?

• Not all cloud services are created equal
  – It is a reputable, standards-based service, or is this cloud in someone's basement down the street?

• Datacenter security
  – Does the provider follow industry standard security practices?

• Datacenter Redundancy & Location
  – Does the provider backup your data to a secure geographically dispersed site, and where are these sites?

• Data Ownership and Retrieval
  – Are you the clear owner of your data, and how do you get it back if you end the relationship with the provider?
Cyber Security

• Increasingly important as more and more essential functions move from paper and pen to computers.

• Basic cyber security begins by implementing minimum security standards across your entire network:
  – Consistent, enforced password policy with regular password changes
  – Licensed, updated anti-virus and anti-malware software
  – Written and enforced acceptable use policies for network usage
  – Written plan in place if a cyber security incident occurs

• Most important: employee cyber security awareness
  – Employees are front line protection against threats
  – Should know how to prevent and respond
  – Should exercise good “cyber hygiene”
Cyber Security – What steps do we take?

- Count, Configure, Control, Patch, Repeat – Top 5 Priorities

- Municipal leaders should be able to answer these questions:
  - Do we know what is connected to our systems and networks?
  - Do we know what software is running on our systems and networks?
  - Are we continuously managing our systems using “known good” configurations?
  - Are we continuously looking for and managing “known bad” software?
  - Do we limit and track the people who have the administrative privileges to change, bypass, or over-ride our security settings?

Center for Internet Security:
https://www.cisecurity.org/
Data Standards

- Data standards can open opportunities to collaborate, integrate or analyze data with external organizations – but standards can also open opportunities for collaboration and analysis across departments within your organization.

- Parcels and Addressing

- Building & Land Development Specification (BLDS)

- Local Inspector Value-Entry Specification (LIVES)

- General Transit Feed Specification

- Open311 - GeoReport v2

- License Validation API
HOW DO WE GET THERE?
Regional IT Meetings

- We believe regional IT groups provide great value, we support their formation, and are happy to participate where we can add value.

- These groups typically meet regularly to discuss relevant municipal technology issues and collaboration opportunities.

- Current groups include:
  - Western Mass Regional IT Directors
  - South Shore Regional IT Directors
  - Barnstable County IT Directors
  - Metro West IT Directors (New!)

- Interested in participating or starting your own group?
  - Send an email to omst@mass.gov and we can help.

- You can also check out the statewide Mass Government Information Systems Assoc. (MGISA) at MGISA.org
Cyber Security

MULTI-STATE
Information Sharing & Analysis Center™

- Network monitoring
- Early threat warning and advisories
- Mitigation and Incident Response
- Education Opportunities

https://msisac.cisecurity.org
How can MassIT help?

The Office of Municipal and School Technology is focused on providing value for our cities, towns and school districts.

• Discuss Grant and Technical Assistance Opportunities

• Investigate Procurement Opportunities

• Provide Data and Recommend Standards

• Facilitate Collaboration
Community Compact Cabinet

Governor Baker’s first executive order created the Community Compact Cabinet to increase partnership between state and local government.

- Best Practices Program
- Efficiency and Regionalization Grant Program
- IT Grant Program

http://www.mass.gov/ccc
CCC Best Practice Program

Around 275 communities have applied and we’re working with more than 100 communities on IT Best Practices.

• Strategic Planning

• Transparency & Data Standards

• Business Continuity
  – Including Cyber Security

• Citizen Engagement

http://www.mass.gov/ccc
Community Compact Participation

http://www.mass.gov/ccc
CCC Efficiency and Regionalization Program

• Competitive grant program to support implementing regionalization and other efficiency initiatives that allow for long-term sustainability.

• Open to:
  – Municipalities
  – Regional school districts
  – School districts considering regionalization
  – Regional planning agencies and councils of governments

• You can submit both a local and regional application.

• Round 1 closed last month; Round 2 is open until February 1st at 5pm.

http://www.mass.gov/ccc
CCC Efficiency and Regionalization Awards

Examples of awards from Round 1 include:

- Regional Animal Shelter / Animal Control (North Adams, Adams, Williamstown) - $200,000
- Regional Dispatch (Gardner and Athol) - $103,279
- Regionalize Fire and EMS (Winchendon and Templeton) - $50,000
- Regional Wastewater Management with Joint Base Cape Cod (JBCC) (Falmouth, Bourne, Mashpee, Sandwich) - $135,000
- MAPC Regional Approach to Stormwater Management (Acton, Bolton, Boxborough, Carlisle, Concord, Hudson, Lexington, Lincoln, Littleton, Maynard, Stow, Sudbury) - $50,000

http://www.mass.gov/ccc
The CCC IT Grant is a competitive grant program intended to support one-time, capital investments innovative and transformative technology.

Last year, 110 applications requested a total of $16 million in grant funds. We were able to award 52 grants using the $2 million in available funding.

This year, the program is open to CCC Best Practice communities who were not awarded IT Grant Program funds last year.

The next round opens on March 1st.

http://www.mass.gov/ccc
Examples of IT Grants from 2016 Include:

- **Upton** – Implementation of a modern permitting system
- **Haverhill** – Implementation of a 311 platform
- **Dartmouth** – Technology to better manage beach facilities
- **Barre & Rutland** – Improved regional communication technology
- **Hinsdale** - Technology related to usage-based water-metering
- **Ayer** – Improved infrastructure at the wastewater treatment plant

[http://www.mass.gov/ccc](http://www.mass.gov/ccc)
Digital Connections Partnership School Grant

- A competitive matching grant program to improve school infrastructure and support next generation teaching, learning and assessment.

- 74 schools across 25 districts have received support for wiring and WiFi throughout their buildings, and we expect that to double soon.

- MassIT submits the E-Rate Category 2 application on behalf of awarded districts, handles all procurement, and provides project management.

See the results at:
https://www.youtube.com/user/MassInnov8/
In support of the Digital Connections Grant Program, the Massachusetts School Building Authority (MSBA) established an IT Loan program in 2016.

The MSBA has allocated $50 million over a five year period for zero interest loans to Digital Connections awardees.

Loans can be used to cover the local match required from school districts prior to the start of construction.

Loans can be paid off using the federal E-Rate reimbursement that MassIT applies for as a consortium on behalf of school districts.
Device Bundles

- We are working with the Department of Elementary and Secondary Education and the Operational Services Division on a school device bundles purchasing solution for school districts:
  - Platform agnostic – whatever solution is best for your students and staff
    - Apple/iOS
    - Chrome/Android
    - Windows
  - Single price per student/seat
  - Services and accessories that districts are looking for
  - Simplified procurement process with volume discounts that leverage the purchasing power of the state
  - Anticipated availability in the fall of 2017

WORK IN PROGRESS
MassGIS Free Resources

We work very closely with MassGIS and are happy to help you access their resources.

- A huge library of data layers
- Google Ortho Imagery
- An evolving addressing standard
- Standardized Parcel Mapping
- MuniMapper GIS visualization tool for small towns
Thank you!

Please feel free to reach out anytime!

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