Regionalizing IT Services

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Gap Analysis

Explore and discover gaps in the IT Services framework

+ Planning – measure the overall efficiency/value of IT delivery
+ Infrastructure – where are the gaps in the underlying infrastructure
+ Network – comparing the current implementation to “best practice”
+ Security – Protecting data, users, and environment from unauthorized access
+ Disaster Recovery – Readiness to survive damage to operations (continuity)
+ Support – what are the requirements and are they being met
+ Opportunities – general areas where additional value can be realized

Key Areas for Improvement

Implementing change in a structured framework

+ Everything should not be done at once!
+ Organize change based on value and overall return
+ Consider existing contracts and investments in the planning
+ Prioritize first steps to focus on security and infrastructure
+ Build a living plan that is regularly maintained and updated
+ Build a transition plan that maximizes success

IT Service Delivery - Current Status

Feasibility Study Identified Issues

- Lack of IT planning and strategy
  - Cost savings, performance improvements
- Lack of formal policy and process
  - Risk and efficiency
- Lack of standards
  - Weakens overall performance
  - Sub-optimal use of assets
- Improve leverage for purchasing
  - Cost savings, performance improvements
- Lack of lifecycle planning around IT assets
  - Weakens overall performance
  - Sub-optimal use of assets

IT Service Delivery - Recommendations

Recommendation	Benefits
Regionalization of IT Services • Migrate toward regional IT service delivery • Implement a regional data center in Danvers	• Recover lost productivity with town staff • Close identified critical gaps in disaster recovery • Establish important IT planning services and capabilities
IT best practices and IT policy • Implement regional standards and designs • Implement foundational IT policies	• Improved service levels and consistent performance • Reduces complexity and simplifies support and maintenance • Reduces risk and enhances town security
Implement change management • Implement a basic process to govern change • Create change control board	• Better control and prioritization of tasks • Better communication of changes across the region • Critical step to properly balance work between regional and local
Regional hardware and services purchasing • Leverage regional volume to reduce costs	• Better pricing for hardware for all Towns • Reduced costs for services and support • Better leverage for expanded training opportunities

IT Service Delivery - Recommendations

Recommendation	Benefits
Implement lifecycle planning • Process and potential tool based approach • Asset management	• Better deployment, support, and inventory management • Ensures predictable management of on-going costs • Develops efficient retirement and repurposing of assets
Standardize desktops and laptops • Implement regional standards and designs • Implement device imaging for all deployed assets	• Improved service levels and consistent device performance • Reduces complexity and simplifies support and maintenance • Shorter repairs times and costs
Implement Cloud based phone services • Migrate to a cloud based fully managed service • Retire antiquated systems	• Better overall performance and reliability • High success approach to upgrade a tired voice environment • Rapidly reduce expose to antiquated and inadequate systems
Regional management of cellular services • Regional purchase approach for plans and services • Influence regional coverage improvements with carriers	• Better pricing for service plans for all Towns • Options to deployed pooled minute plans and reduce costs • Potential to improve regional signal quality for everyone

General Town Operations - Current Status

Feasibility Study Identified Issues

- High cost of premium town applications
  - Cost savings, performance improvements
- Desire to maintain local services
  - Customer service and performance
- Sub-optimal deployment of applications
  - Cost savings, performance improvements
  - Improved disaster recovery
- Lack of advanced IT support
  - Cost savings, performance improvements
- High potential opportunities
  - Cost savings, improved efficiency
- Requirements for effective regional governance
  - Cost savings, improved efficiency

General Town Operations - Recommendations

Recommendation	Benefits
Deploy key applications Regionally • Implement Munis regionally • Implement AssessPro regionally • Implement GIS regionally	• Improved accessibility to “best in class” applications • Lower cost of ownership for all regional users • Simplify maintenance and disaster recovery • Reclaim lost productivity with town staff
Other potential regional candidates • Implement a standard DPW solution regionally • Implement IMC regionally	• Improved service levels and consistent performance • Simplify maintenance and disaster recovery, reduce risk • Ability to maintain local dispatch if desired
Migrate select on-premise services to the cloud • Move MS Office productivity apps to Office365 • Move MS Exchange email to Office365	• Proactive step to simplify software maintenance • Improved accessibility and disaster recovery • Improved reliability, simplifies desktop/laptop configuration
Standardized document management solution • Design and implement document management	• Elimination of paper based documents, reclaimed space • Fast and easy access to documents for processing • Significant enhancement for police and fire personnel

General Town Operations - Recommendations

Recommendation	Benefits/Tasks
Other potential service additions • Standardized meeting and agenda solution • Regionally managed electronic voting service	• Enhanced overall productivity, and a standardized process • Opportunity for cost reductions for electronic voting
Establish regional leadership team • Equal representation for each town • Led by individual TA/TM's and regional IT Director	• Ensures transparency for all aspects of regional operations • Determine priorities, resolve conflicts, ensure collaboration • Provide approvals, set regional direction, measure success
Implement continuous improvement process • Implement measurable KPI's • Support and influence change	• Define tangible measurements to track effectiveness • Regularly monitor, and modify goals, to feed improvements • Improved user experience and productivity
Recover lost productivity • Allow staff to focus on primary areas of responsibility • Position IT responsibilities regional	• More efficient and productive staff • IT responsibilities placed with proper qualified staff members • Improved service levels, eliminates single points of service

Infrastructure – Current Status

Feasibility Study Identified Issues

- Lack of LAN standards
  - Weakens overall performance and adds risk
  - Sub-optimal use of assets
- Lack of proactive monitoring
  - Efficiency and support
  - Performance and stability
- Lack of perimeter standards
  - Weakens overall performance and adds risk
  - Design, efficiency and support

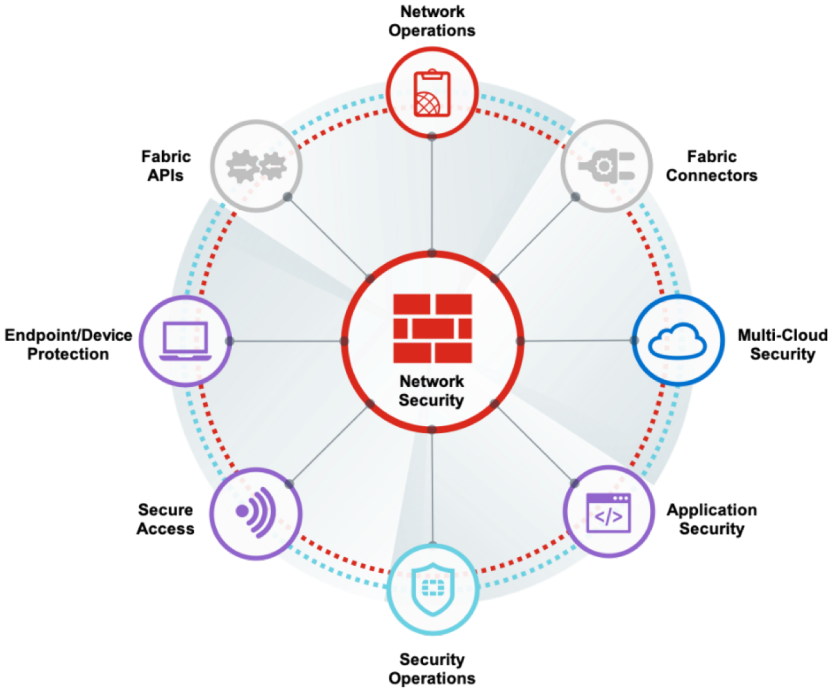
Infrastructure - Recommendations

Recommendation	Benefit
Update LAN Infrastructure • Standardize switch design • Deploy recommended hardware and reorganize	• Significant performance improvements • Simplified design, better integration • Enhanced reliability and scalability
Implement monitoring and alerting • Review potential monitoring solutions	• Transition from reactive to proactive issue management • Ability to avoid service outages before they happen • Better visibility of performance, efficiency, problems
Update network documentation	• Important step for troubleshooting and support • Establish process and operational standards • Simplified support, improved knowledge capture

Security – Current Status

Feasibility Study identified issues

- Lack of standard firewall design
  - Security, performance and design
- Lack of centralized firewall policy management
  - Security and stability
- Potential exposure at the perimeter
  - Security, performance and design
- Edge and town separation
  - Security, stability and design
- Weak remote access solution
  - Weakens overall performance and adds risk
  - Design, efficiency and support
- Multiple Virus/Malware solutions
  - Complexity, supportability



Security - Recommendations

Recommendation	Benefit
Standardize security approach and design • Consider unified security platform for all towns • Performance, scalability, reliability and high availability • Centralized policy management	• Significant edge security improvements • Numerous improvements from older security technology • Single security solution to build technical expertise • Reduced risk, highly scalable
Unify Virus/Malware solution • Implement single security solution across towns	• Simplified support with enhanced security • Centralized policy management • Stronger threat prevention, broader coverage
Standardize remote access solution • Deploy scalable unified solution • Deploy two-factor authentication	• Provide a secure integrated solution • Enhanced security capabilities and highly compliant • Improved disaster recovery support
Other recommendations • Standardized regional video surveillance • Standardized regional door locking system	• Simplify design and troubleshooting • Continue the theme of regionally tested solutions • Faster and cheaper deployment and support

Network – Current Status

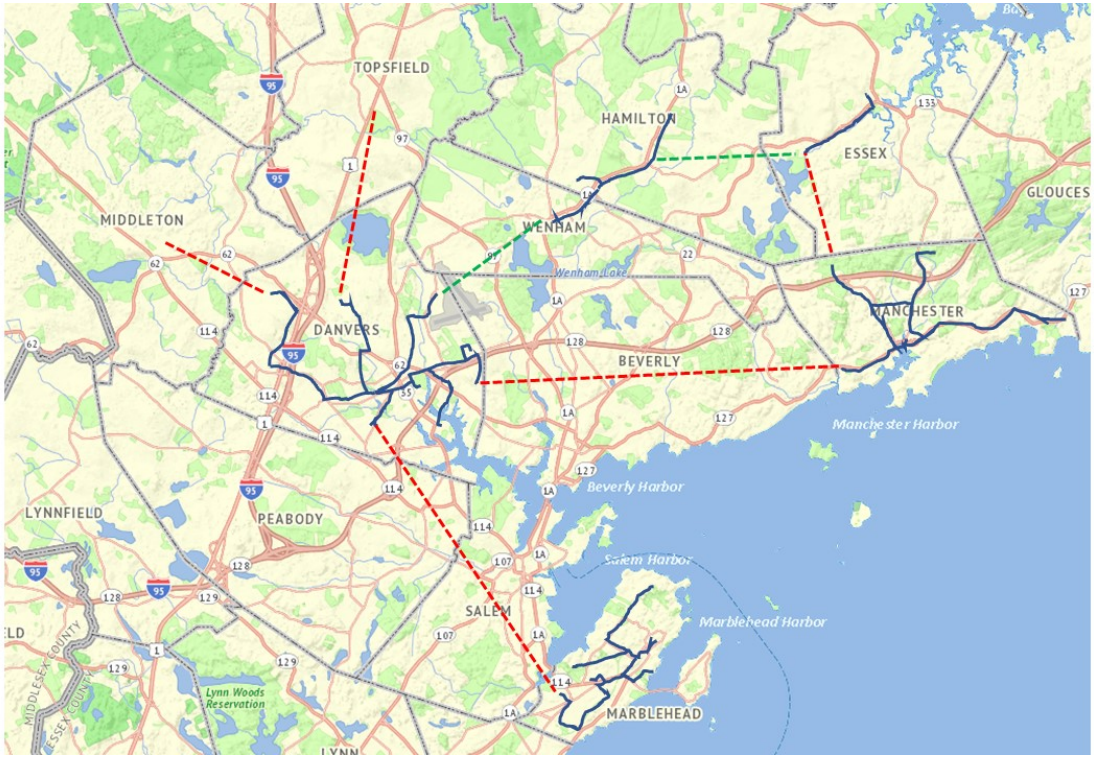
Feasibility Study Identified Issues

- Expand deployment of fiber networks
  - Performance, value and design
- Internet connectivity sub-optimal
  - Performance, value and design
- Ensure redundancy at regional data center
  - Resilience and design
- Lack of standard WIFI design
  - Performance and design
- Leverage central purchasing for network
  - Management and value
- Lack of tools to properly manage network
  - Performance and design

Network - Recommendations

Recommendation	Benefit
Continue to implement fiber networking • Deploy fiber between primary town buildings • Create regional fiber network between towns	• Improved performance for both production and for D/R • Reduces risk and lowers perimeter security costs • Cornerstone for successful regionalization of IT services
Consider redesign for internet connectivity • Migrate toward dedicated higher bandwidth options • Reduce and secure outside points of access	• Potential network cost reductions, faster performance • More reliable and consistent service levels • Enhanced disaster recovery over fiber when needed
Revisit regional data center designs • Ensure capacity and redundancy is in place	• Remeasure capacity requirements based on town volumes • Redundancy at regional DC benefits Towns D/R planning
Standardize regional WIFI design • Develop and deploy standard WIFI solution regionally • Partner with regional vendor for consistent implementation	• Provides a tested solution ready for implementation anywhere • Simplifies support, establishes regional design expertise • More secure with consistent performance, reliability
Leverage central purchasing power for network • Negotiate regional deal for participating towns	• Reduces cost and increases reliability • Access to business vs. residential class services

Network - Recommendations



Support – Current Status

Feasibility Study Identified Issues

- Current service levels are sub-optimal
  - Efficiency, value, and support
- Lack of true helpdesk services
  - Efficiency, value, and support
- Insufficient local knowledge for key systems
  - Risk, efficiency and support
- Loss of staff productivity
  - Efficiency and support
- Gaps in training across towns
  - Risk, efficiency and support
- Gaps in knowledge management
  - Risk, efficiency and support

Support - Recommendations

Recommendation	Benefit
Select regional support vendor • Establish clearly defined service level and scope • Establish measurable SLA's to track performance	• Better value to cost ratio for support services • Establish measurable service levels with penalties • Improved support = increased staff productivity
Implement regional helpdesk services • Select single vendor to deliver across region • Integrate with other core service platforms	• End users will have direct access to support • Better benefit/value from technology investments • Continuously measure to drive improvement
Create "Center of excellence" teams • Create regional support team for key systems • Create local matrix team to bridge town and regional	• Create much needed subject matter expertise • Focus team members on creating business value • Improved understanding of available services
Implement regional plan for training • Establish a balanced plan for training • Develop partnership with training vendor	• Improved efficiency and reduced waste • Create more consistent and positive outcomes • Empower staff productivity and success

Disaster Recovery – Current Status

Feasibility Study Identified Issues

- General ability to recover
  - Risk and design
- Lack of a formal disaster recovery plan
  - Risk and design
- Lack of formal recovery objectives
  - Risk and design
- No standard backup or recovery solution
  - Risk, design, and value
- Gaps in redundancy
  - Risk and design
- Reliance on backup for recovery
  - Risk and design
- Key user data at risk
  - Risk and design

Disaster recovery - Recommendations

Recommendation	Benefits/Actions
Improve the recoverability of key systems • Ensure availability of hardware and network • Ensure users can get access to systems	• Ensure hardware/network to facilitate recovery • Focus on redundancy, eliminate single points of failure, standardize wherever possible
Leverage regional data center • Leverage virtual environments and replication • Process must include mirrored environments • Establish retirement plan for regionalized systems	• Centralize and protect key systems in regional DC • Improve RPO/RTO objectives significantly • Immediately fills gaps in disaster recovery planning • Future savings can be realized upon retirement
Standardize backup and recovery • Leverage recovery tools (Veeam and VMware) • Eliminate backup as a means for disaster recovery	• Ensure all required data is part of the data plan • Limit backups for data archival only • Simplify the tools deployed, and build expertise
Develop a disaster recovery plan • Include underlying technology in plan • Include business focused goals and objectives	• Formalize recovery time and data loss objectives • Include testing to ensure a successful recovery • Consider alternate user access to systems in planning

Disaster recovery - Recommendations

Recommendation	Benefits/Actions
Leverage regional or cloud for user data • Establish “google drive” like repository for user data	• Simplifies recovery of user workstations • Integrates with remote access allowing access from anywhere • Organizes and centralizes user data
Other areas for consideration • Protect exposed data closets • Remediate water based fire suppression systems	• Minimize exposure to service outage from flooding • Protects critical IT assets from damage in the event the fire suppression system is activated accidentally

Executive Dashboard

Phase One Priorities (Plan)

A. Establish regional governance team
B. Make decision on regional IT services (Yes/No)
C. Establish a realistic timeline (18 months)
D. Standardize security and LAN designs
E. Remediate gaps in Towns infrastructure (budget)
F. Plan and budget for town fiber networking (budget)
G. Organize current IT costs and spending (standard model)
H. Establish regional purchasing process and select partners
I. Start process to regionalize support (RFP and vendor selection)
J. Start process to regionalize helpdesk services (RFP and vendor selection)
K. Start process to select cloud based phone service (RFP and vendor selection)
L. Start process to select monitoring and alerting tools

Executive Dashboard

Phase Two Priorities (Design)

A. Determine scope and priority for applications to be regionalized
B. Collect cost data by service, and start allocation model
C. Implement change management process
D. Agree on regional allocation model
E. Execute fiber network plans
F. Redesign internet access strategy
G. Execute restructure for regional data center in Danvers
H. Develop regional disaster recovery plan
I. Establish structure for center of excellence and matrix teams
J. Create a central knowledgebase for region
K. Create basic policy framework to govern assets and user access
L. Select and implement asset management
M. Establish desktop and laptop standards, partner with vendor to create images
N. Create standardized model for printer usage
O. Identify at risk local applications for migration to regional data center

Executive Dashboard

Phase Three Priorities (Execute)

A. Implement continuous improvement program
B. Implement regional intranet website
C. Implement regional data center plan
D. Implement standardized virus/malware across region
E. Implement standardized remote access with two-factor authentication
F. Implement monitoring and alerting tools
G. Implement basic capacity planning process
H. Implement central security policy management across region
I. Establish standard maintenance schedule
J. Implement standardized cloud phone solution across region
K. Start process to regionalize training (RFP and vendor selection)
L. Implement regional helpdesk services
M. Migrate MS Office to the cloud
N. Migrate Email to the cloud and eliminate local systems
O. Establish a central repository for user data (Regional or cloud)
P. Implement replication and backup tools
Q. Implement central purchasing model for desktops and laptops
R. Deploy limited shared application pilot for proof of concept