**Transforming Local Government Service Delivery through Technology**

**Technology Subcommittee of the MORE Municipal Efficiencies Committee**

**October 27, 2015**

**Final Report**

**Goal:** To remove barriers, provide opportunities, and create incentives to transform the delivery of state and local government services through technology. To develop best practices and models to enhance productivity, maintain information security and reduce cost for local and regional government service delivery. The implementation of these best practices and models will enhance the wellbeing of our citizens and strengthen the economy of the State of Connecticut by integrating and upgrading the technology supporting local governments and local educational services.

The solutions outlined below should be viewed as an **investment** in local government operations that will increase productivity in the long-term. Since savings calculations are wholly dependent on individual town operational structures, this committee recommends engaging the New England Policy Center to establish a town-by-town operational baseline with activity based costing that would then compare to the outcomes of the implemented solutions.

1. **SUPPORT the creation of a Statewide Technology Plan**

**Action: Identify and convene key stakeholders to provide input to a Statewide Technology Plan that informs the Plan of Conservation and Development at the local, regional and statewide level and include state and local technology linkages.**

**Action: Amend Subsection 16a-27 of the general statutes by adding new subsection (i) as follows: *(Effective October 1, 2016)*:(i) Any revision made after October 1, 2016, shall take into consideration the application and use of technology to enhance efficiencies, foster collaboration, increase transparency and access to information and reduce costs.**

**Action: Acknowledge the Connecticut Commission for Education Technology and request they consider the goals and activities of the proposed technology state plan.**

A State Wide Technology Plan should include towns and schools and encourages town/school collaboration and regional collaboration through Council of Government (COG) and Regional Educational Service Centers (RESCS.) These plans must be tied to the local, regional and statewide Plans of Conservation and Development (POCDs).

The MORE Subcommittee on Technology recommends the State create a statewide technology plan to streamline government services and to coordinate and meet the current and long term needs of our residents, businesses, and education. We recognize that technology is a core aspect of our residents' daily lives and can be a major economic driver. We recommend assessing current data, infrastructure and best practices to ensure compatible systems/programs, redundancy, efficiency, capacity, access, security and infrastructure. We also recommend the creation of an actionable plan that is funded and updated every three years to adapt to changing technology.

1. **EXPAND Nutmeg Network and Support its Funding and Use**

**Action: Support towns in connecting to the Nutmeg Network and using it for their core operations as well as maintaining state funding for the network. The estimate for connecting the remaining towns to the Nutmeg Network is slightly more than $2 million. This funding is distinct from connecting all town facilities to the network.**

**Action: The state should consider additional costs for converting town facilities to the network and leveraging federal grant money to assist.**

A total of 105 towns (60% of municipal governments) are part of a statewide plan to connect municipalities to the state’s high-speed broadband fiber Nutmeg Network with the support of the MORE Commission in the 2013 legislative session. Only 6 municipalities were connected prior to the legislation. This access is the foundation for efforts moving forward to use technology to deliver local government services efficiently and with higher quality and responsiveness to citizens and State agencies.

It is imperative that the state continues level funding for the Nutmeg Network for use by towns to promote safety and economic development, as well as by schools and libraries. Since its initial build out, the network has been free to use for schools and libraries. Vitally important information travels over this network (including state-wide school testing) and it should be funded by the state to reflect that importance.

1. **DEMONSTRATE the Value of the Nutmeg Network.**

**Action: Continue to support the implementation of the five Nutmeg Network Demonstration Projects. Promote the value of these tools among all municipalities.**

There are five pilot programs underway to demonstrate the value of the fiber connectivity of the Nutmeg Network. These projects were conceived of and supported by the MORE Commission in the 2014 legislative session. The Capitol Region Council of Governments is implementing these projects in partnership with the Connecticut Center for Advanced Technology. The first three projects are nearing completion (Hosting Services, Streaming Video and Voice over Internet Protocol). These three projects are meant to level the playing field between those towns who have been investing in IT for decades and those who have been hesitant (or unsure) about adopting new technology. In addition, towns who already use these types of services will find cost savings in the collaborative approach.

The last two pilot programs (Electronic Document Management and a Human Resources Portal) use technology to improve the fundamentals of local government service delivery (process and people). Towns of all sizes will benefit from the outcomes of these last two pilot projects.

• Hosting Services: Providing customized, hosted solutions based on individual municipal/public entity needs. Provide the ability for participating municipalities to house virtual servers or back up their data to a redundant and secure system through the Nutmeg Network that will protect the personal information of our citizens. Pilot project is concluding in late October 2015.

• Streaming Video: Enabling municipalities to have live video streaming of Council, Board of Selectmen and Committee meetings over the internet, enhancing public information and education. This may potentially be a less expensive and more mobile alternative (extensive recording equipment not needed) for towns to use, depending on the system being replaced, if any.

• Voice Over Internet Protocol: Providing telephone services carried over the Nutmeg Network including other types of advanced communications such as web and video conferencing.

• Electronic Document Management (Recruiting towns in October 2015): Pilot towns will develop and have access to a cooperatively purchased Electronic Document Management System (EDMS) and service support to routinely digitize, route and archive municipal data. This will provide not only ready access for Freedom of Information requests, but also lays the groundwork for daily operational efficiencies of local government.

• Human Resources Portal (Recruiting towns in October 2015): Pilot towns will develop and have access to a CRCOG Human Resources online portal on the Nutmeg Network, including, but not limited to, a clearinghouse of municipal wage and classification information and other templates that can help develop Human Resources (HR) policy at the local level.

1. **PROMOTE Statewide Municipal Connections to the Nutmeg Network.**

**Action: Discuss additional identified shared software opportunities in the Technology Subcommittee and encourage input from municipal officials, state officials, professional groups (such as Connecticut Association of Public School Superintendents (CAPSS) Technology Group and the Government Managers of Information Systems (GMIS)), and Commissions such as the Commission for Educational Technology.**

For most towns in Connecticut, IT Infrastructure is a capital intensive expense that is **both** difficult to fund and to operate.  Some of the operational challenges include **maintaining** security, performance, and uptime.  These operational challenges are **common** in government IT, where hardware and software are increasingly more complex to manage and ever more critical to the core operations of government.  The reality is that citizens require and demand more immediate access to services and information than the current model of onsite hardware and software can provide**.    Citizens demand 24/7 access to government**.

To meet this challenge, CRCOG and CCAT have established a Connecticut Municipal Cloud (CMC) that is a private cloud infrastructure that provides a robust and secure technology platform on which municipalities can deliver the services their citizens now expect.  This technology infrastructure is operated by CCAT through CRCOG oversight and operationalizes IT costs to allow for responsible fiscal planning and spending **of IT budgets**.  The CT Municipal Cloud provides enterprise class hardware like Dell Blade chassis and Tegile hybrid SANs and Microsoft and VMWare vCloud software resources to all municipalities, leveling the digital divide in Connecticut and providing access to secure and resilient **technology** resources.  For municipalities with their own technology staff, **a** municipalities resource within the CT Municipal Cloud can be self-provisioned and managed.  For towns that require technology assistance, their IT service partners can work within the cloud to provision and manage technology resources on their behalf.

* **Technology Improvements Will Afford Resiliency During Emergency and Disasters**

The **CMC** infrastructure resides in two geographically distinct datacenter locations that leverage the state’s fiber Nutmeg Network for data transport and communication.  The CMC platform allows for secure delivery of critical services like hosted servers, VOIP, video streaming, backup and disaster recovery, and many more in the future.  While the CMC will provide benefits to CT Municipalities every day, the CMC will be invaluable during emergencies and disasters to provide critical services for municipalities that need to operate from secure alternate sites and emergency operations centers.  The CMC ensures that government will be able to operate and access services in what would otherwise be extended service outages.

Continued development of on-network software and collaboration opportunities is vitally important to expand the use and benefit of the Nutmeg Network. Build this development around the strategic goals of the Commission for Educational Technology.

1. **MAXIMIZE Use of Education Data while Reducing Costs**

**Actions:**

* **The Commissioner of Education shall identify a common student information system to be offered to all public schools and school districts in Connecticut, (possibly administered through the RESCs.)**
* **Establish a statewide data standard to reduce costs, increase accuracy and comparability, and improve the availability of real time data.**
* **Allocate incentive grants to ensure that districts needing to transition to a different student information system will do so without additional cost to the school district. ($3 million)**
* ***Coordinate with the SDE’s efforts to provide IEP software for schools – 2015 budget implementer §§ 272 & 273 — Digital IEP Form Software.***
* **Fund pilots: Allocate funds to pilot student indicator monitoring software on a regional basis, and evaluate such pilots for cost savings and impact on student achievement.**

Each Connecticut school district purchases and uses a student information system to manage and report demographic, scheduling, grades, and other student data. At this time, approximately 70% of public school districts in Connecticut use PowerSchool.

Efficiencies could be achieved if all school districts in the State utilized the same student information system, administered potentially through Connecticut’s six regional educational service centers (RESCs):

* *Lower pricing for hosting based on a volume discount.* For example, the Capitol Region Education Council (CREC) has created a hosting consortium for PowerSchool. Participating districts receive the lowest available price, up to $2 per student less than what they would pay through a standalone district contract.
* *Reduce data reporting burdens.* If all school districts reported data through the same student information system, data could be uploaded seamlessly to the State Department of Education, eliminating the need for some currently required data collections, thus freeing administrators and other educators to spend more time on curriculum and instruction.
* *Improved transition for students moving between school districts.* If all districts were on the same student information system, electronic student records could be swiftly transmitted to a student’s new district upon transfer, in accordance with state and federal privacy laws and policies. This would ensure that demographic and educational programming data would be readily available to the new district, eliminating significant delays resulting from a paper record transfer process.
* *Enhanced use of the software product, without additional human resources.* RESCs could administer the student information system for the districts, utilizing staff with a high level of expertise in the software product. Doing so would free up school personnel resources, eliminating the need for each district to pay for staff to maintain and provide reports to the Connecticut State Department of Education. Under a regionalized management and support model, districts would benefit from making full use of the system’s capabilities.
* *Support for regional planning.* A regional administration of student information system would support regional planning for programs and services such as transportation, English language learners, and special education, resulting in coordinated, high quality services at a lower cost.

The utilization of a common student information system in Connecticut’s public schools aligns with the requirement that school districts use a digital individualized education program purchased by the State Department of Education (PA 15-5, Sec. 270), as recommended by the MORE Commission Special Education Subcommittee. This move toward statewide software purchases will drive down costs, improve reporting, and support shared professional development.

1. **PROVIDE INCENTIVE FUNDS to facilitate increased sharing of Board of Education and Town Services**

**Action: Encourage Councils of Government (COGs) and Regional Educational Service Centers (RESCs) to facilitate sharing between general government and education operations. Areas such as finance and facilities can be explored for consolidated operations.**

Many communities wish to explore the potential of shared town and school operations but lack a neutral facilitator to help them through the discussion. By involving COGs and RESCs, towns and Boards of Education can be given best practice examples to consider and discuss their options in a facilitated discussion.

1. **ENCOURAGE COORDINATION EFFORTS between municipalities and the State Department of Education**

**Action: Convene a meeting with State Department of Education officials to discuss sharing data.**

Begin a dialogue to discuss ways the state Department of Education could support regional collaboration and the sharing of data through RESCs in order to facilitate initiatives. For example, non-identifiable data could be available to the RESCs in order to evaluate shared special education transportation route options among school districts.

Integrate technology opportunities and improvements into the state Department of Education Master Plan for Education

1. **AVAILABILITY OF Technology Contracts**:

**Action: Request that the Government Administration and Elections Committee to encourage a state compilation of technology contracts and all contracts so they are readily accessible to political subdivisions.**

There is a need for towns to know what contracts from the state are available for political subdivision use.

1. **MONITOR the state’s Gigabit Initiative:**

**Action: Invite representatives from the new Office of State Broadband to discuss a funding mechanism and the roles and responsibilities of municipalities in the statewide availability of broadband access. Request the Office of Consumer Counsel and the Office of State Broadband within the Office of Consumer Counsel and Municipal Opportunities and Regional Efficiencies (MORE) Commission to report annually to the legislative Committee of cognizance outlining the roles and responsibilities of municipalities.**

Coordinate with the Office of Consumer Counsel and the new Office of State Broadband within the Office of Consumer Counsel (established under Section 429 of the Senate Bill 1502) which is required to facilitate the availability of broadband access and the adoption of ultra-high-speed gigabit capable broadband networks. The Commission should help formulate a funding mechanism and to identify the roles of responsibilities for municipalities.

1. **Address the Digital Divide**

**Action: Develop public-private partnerships to support universal access to high speed internet in Connecticut.**

A digital divide exists in Connecticut, largely determined by geographic and socioeconomic factors. An increasing number of health, educational, social, and municipal services are most readily available over the internet. Those families in Connecticut who live in rural and/or impoverished households often do not have access to such services. Per the most recent available census data (2013 American Community Survey), the percentage of households per metropolitan area in Connecticut without high speed internet access ranges from 12.1% to 19.9%. Opportunities which many take for granted – online access to health care services, payment of taxes and other bills, use of tutoring services and online test preparation courses, and many more – are not available to nearly one-fifth of Connecticut’s population. This lack of access negatively impacts Connecticut’s economic development opportunities, as well the well-being of many of its citizens.

* Include universal access to high speed internet for all of Connecticut’s regions and citizens in the Statewide Technology Plan.
* Building from existing programs for students eligible for free and reduced lunch, fund a partnership with one or more providers to support access to high speed internet for students eligible for free or reduced lunch. Approximate cost to pilot in one RESC region: $1.65 million.