

State of Connecticut Municipality Connection Plan

Connecting Municipalities to the Connecticut
Education Network in two years

This document describes the timeline, goals, approach and resources required to connect Municipalities and Regional Councils of Government to the Connecticut Education Network (CEN). This plan is required under Section 256 of [Public Act 13-247](#).

Prepared by the Department of Administrative Services /
Bureau of Enterprise Systems and Technology



Acknowledgements

The Department of Administrative Services wishes to acknowledge the contributions of the following individuals whose leadership, active participation and guidance were instrumental in the development of this plan:

Mark N. Paquette
Executive Director,
Windham Region Council of
Governments
Chairman, CARPO

John Vittner
Director of IT Policy
CT Office of Policy and
Management

Scott Taylor
Director
Connecticut Education
Network (CEN)



Contents

Acknowledgements.....1

From the Office of the CIO3

Background3

Approach3

Timeline5

 Overall Plan.....5

 Tier I (1-6 months)5

 Tier II (4- 9 months).....5

 Tier III (1-15 months).....6

 Tier IV (16-24 months)6

Resources7

 Personnel7

 State Resources.....7

 Municipal and Regional.....7

 Financial7

 Municipal Reimbursement and Revenue Account (MRRA)7

 Regional Performance Incentive Program (RPIP).....7

 Operating Adjustments8

Next Steps8



Municipal and RCOG Connection Plan

Background

The Connecticut Education Network (CEN) provides reliable, high-speed internet access, data transport and value added services to its members. Historically, the members of CEN were the K-12 public schools and the institutions of higher education within the State of Connecticut.

In 2009 the State applied for, and received a grant from the US Department of Commerce, National Telecommunications and Information Administration to upgrade and extend the network. This grant from the Broadband Technology Opportunity Program (BTOP) was intended to make high-speed network technology more available to the citizens of the State. The BTOP grant was completed in August 2013.

In June 2013, the Connecticut General Assembly, working to implement recommendations of the MORE Commission, passed statutory language that required the Department of Administrative Services to work with the regional councils of government (RCOGs) to develop a two year plan to connect municipalities and regional councils of government to the network.

Approach

Shortly after the enactment of the legislation, the Department of Administrative Services began to develop a draft plan for consideration. DAS engaged with the Connecticut Association of Regional Planning Organizations (CARPO) in a joint effort to learn from best practices in engaging the RCOG community.

CARPO leadership distributed draft documents and organized meetings for RCOG review and input into the two year plan.

*From the Office
of the CIO*



The State of Connecticut embraced the value of high-speed networking in 1999 and continued to invest in this area to the benefit of the State. The recent federal Broadband Technology Opportunity Program (BTOP) extended the reach of State fiber to blanket even the most difficult to reach locations. We currently have multiple fiber connections in each town in the State.

With the implementation of this plan, we will extend the reach of this network into municipality and regional council of government offices. These new connections will enable a greater sharing of regional resources and encourage collaboration that would be previously been unattainable.

- Mark

Municipal and RCOG Connection Plan



This document contains the final work product of those discussions.

It should be noted that all plans may change over time and that the brevity of the planning process prevented engagement directly with individual municipalities. When detailed implementation discussions occur with the municipalities and RCOGs, changes to the plan may be required.



Timeline

Overall Plan

The recent experience implementing the BTOP grant across the State provided planners with an excellent baseline of the time and effort required for connecting a large number of new locations to the network. This plan reflects a desire to immediately connect those locations that do not require physical construction, leveraging those investments already made through BTOP project, while waiting on those locations that may require additional design or planning efforts to complete. The working premise behind the plan was to connect organizations as quickly as possible while not investing in locations that may require substantial short term change.

Quickly connecting to the network would mean that each municipality or RCOG would need to utilize the connection methods and services that are available on CEN today. New services would require time to design new types of connections so as not to disrupt current network users.

Grouping	Approx. Connections	Timeline (Months)																								
		Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	
TIER I	20	Implementation																								
TIER II	60				Implementation																					
TIER III	60	Design New Service Models						Build New Services		Implementation																
TIER IV	37															Implementation										
Total	177																									

Tier I (1-6 months)

During the initial analysis of the potential installation sites, the planning team noted approximately twenty sites where municipal town addresses were the same as already existing network locations. The planning team believes that it would be possible to connect these locations fairly quickly to the network. These initial network connections would be to existing network services and would begin to provide those locations with high-speed reliable services within 6 months.

Tier II (4- 9 months)

Tier II sites are those that may require some type of fiber construction to connect a location to the network. The RCOGs and municipalities that plan to use the existing CEN services would fall within



this timeline. These connections will take slightly longer as construction of fiber needs to be planned and estimated. Additional RCOG and municipal hardware will likely need to be ordered and installed.

Tier III (1-15 months)

We fully recognize there may be additional services that RCOGs and municipalities may wish to use on the network. New services need to be identified, designed and assessed for impact on current network operation. We have planned to start the design process for these new services immediately; however we recognize that these activities must be completed prior to implementing new connections to new services. We propose that the implementation of new services will begin in July 2014.

Tier IV (16-24 months)

We expect some of the municipalities and RCOGs will not be ready to connect to the network immediately. There are three reasons that we believe will contribute to connections occurring late in the two year plan. A pragmatic concern is that municipalities and RCOGs may have entered into longer term network contracts with existing providers. They may be unable to exit from those commitments to join the network. Secondly, the RCOGs are expected to undertake a consolidation over the first year of this plan. We expect there will be uncertainty in final RCOG locations that will push installation activities of those locations into the second year of the plan. Finally, some organizations may choose not to participate initially until they more fully understand the funding that will be available for them to offset their costs.

DAS/BEST anticipates that the plan implementation will begin on or about October 1, 2013.



Resources

There are two major types of resources that will be required to implement this plan: Personnel and Financial.

Personnel

State Resources

CEN and DAS/BEST networking staff require time to assess connection requests, design new services, coordinate and test the installation of new services. These activities are being added to existing teams with no increase in personnel. A part time project manager will be added to the team for the duration of the project to coordinate this effort. These efforts are critical for this recommended plan to be completed within the two year period of time.

Any substantial statewide disaster that negatively impacts the network may result in delays to the plan as the personnel assigned to implement the plan would be utilized to respond to any such disaster.

Municipal and Regional

This plan relies heavily on expected involvement and leadership by regional and municipal personnel. Regional Councils of Government and municipalities will develop the business cases behind use of the network and advocate to the membership the rationale and costs for using the network.

Financial

Municipal Reimbursement and Revenue Account (MRRA)

Public Act 13-247 created a two year appropriation of \$1,087,000 for each year to be used for capital costs associated with connecting RCOGs and municipalities to the network.

Early estimates for total costs to connect a new site to the network range from \$28,000 to \$93,500 per site depending on distance from current network locations and type of equipment required at the new location. The total costs to connect all municipalities and RCOGs are estimated to be between \$5M to \$7M.

Additional funding will be required to complete the two year goal. The Regional Performance Incentive Program may be able to fill some of that need.

Regional Performance Incentive Program (RPIP)

Public Act 13-247 also expanded the use of the Regional Performance Incentive Program to allow municipalities and RCOGs to apply for operating and capital funding for connecting to the State network. These funds are revenue dependent and grants from these funds allocated by OPM are competitive with other regional initiatives.

It is unclear at this time if any funds will be available from this funding source for municipalities and RCOGs to operate and/or connect to the State network.



Operating Adjustments

As more locations are added to the network, the costs to manage the network may rise. Additional miles of fiber require additional maintenance for repairs. New capacity equipment will bring higher maintenance costs for hardware and software. New services may also bring additional costs along with the additional benefits to the State.

Incremental operational funding will be required for the Connecticut Education Network to account for the long term operational needs of the network.

Next Steps

1. The State will continue to work with RCOGs and municipalities regarding final timeline and expected use of services. A survey will be conducted of all entities to gauge interest and further refine connection timelines.
2. Continued education will be important for regional and municipal leadership on the benefits and uses of the network. While the RCOGs and the [Connecticut Chapter of the Government Information Management Sciences](#) (GMIS) have agreed to take facilitating roles for regional service development, there will continue to be needs for the CEN team and the State to raise awareness with this new constituent group.