



# Annual Report of the Commission for Educational Technology

## Calendar Year 2017

*Submitted in Accordance with CGS Ch. 61a, Sec. 4d-80(c)(8)*

*Hartford, Connecticut  
January 2, 2018*

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## Introduction

The Connecticut Commission for Educational Technology (“the Commission” or “CET”) was established in 2000 by Public Act 00-187 to serve as the State’s principal educational technology policy advisor. This document summarizes the Commission’s activities and progress in attaining its statewide technology goals during the past calendar year, in accordance with its governing statute ([CGS Section 4d-80](#)). The report serves to inform and provide recommendations to the joint standing committee of the General Assembly having cognizance of matters relating to education, appropriations, and the budgets of state agencies; the State Board of Education; and the Board of Governors of Higher Education. Note that readers accessing this report online may use the embedded links to view meeting minutes, publications, and Web sites directly.

## Background and Membership

Name and Position	Representing or Appointed By
Mark Raymond, CIO, Chairman	Department of Administrative Services
Catherine Smith, Commissioner	Department of Economic and Community Development
Michael Mundrane, Vice Provost and CIO	University of Connecticut
Ken Wiggin, State Librarian	Connecticut State Library
Ellen Cohn, Deputy Commissioner	Connecticut State Department of Education
John Vittner, Director of IT Policy	Office of Policy and Management
Scott Zak, Senior Director of Learning Technologies	CT Board of Regents for Higher Education
Bill Vallee, State Broadband Policy and Program Coordinator	Office of Consumer Counsel
Jennifer Widness, President	CT Conference of Independent Colleges
Nick Caruso, Senior Staff Associate	CT Association of Boards of Education
Scott Shanley, General Manager, Town of Manchester	CT Conference of Municipalities
John Elsesser, Town Manager, Town of Coventry	CT Council of Small Towns
Colleen Bailie, Director, West Haven Public Library	CT Library Association
Bart Stanco, Vice President, Gartner	Governor's Office
Russell Feinmark, CT General Assembly	Speaker of the House
Rich Mavrogeanes, President, Discover Video	President Pro Tem of the Senate
VACANT	Minority Leader of the Senate
Charles Dumais, Superintendent, Region 5 (Amity) Public Schools	Governor's Office
Tom Dillon, Founder, Flagship Networks	Minority Leader of the House

During the 2017 calendar year, several changes in membership took place. Commissioner Dianna Wentzell appointed Deputy Commissioner Ellen Cohn to serve on the CET following the departure of Isabelina Rodriguez from the Department of Education. Lisa Pellegrini left her position as First Selectman in Somers, leaving open her appointment by the Minority Leader of the Senate. Jeffrey Kitching left his post on the Commission, with the Governor's Office tapping Charles "Chip" Dumais, Superintendent of Region 5 (Amity) Public Schools to fill that appointment. The Commission leadership and members sincerely appreciate the contributions of its outgoing members and welcome the already rich contributions of Drs. Cohn and Dumais.

## Leadership

Mark Raymond, the Chief Information Officer for the State, continued his service as Chair of the Commission by the appointment of Governor Malloy. Douglas Casey serves as the Commission's Executive Director, with responsibility for the CET's planning and activities, as described on the Connecticut General Assembly Web site ([Chapter 61a](#)) and on the Commission Web site in the [Bylaws section](#).

In addition to the Commission Chair, Executive Director, and members, the CET benefits from the insights of Advisory Council members who address the Commission's three focus areas of Digital Learning, Infrastructure, and Data and Privacy. Ten Commission members and alternates as well as nearly 40 subject matter experts from across the state serve on these Advisory Councils, representing a broad diversity of constituencies to inform the Commission's priorities and programs. The list of Advisory Council members follows:

### Data and Privacy Advisory Council

- Brian Czapla — Superintendent, Somers Public Schools
- Ben FrazziniKendrick — Associate, Shipman & Goodwin LLP
- Brian Kelly — Chief Information Security Officer, Quinnipiac University
- Scott Matchett — Director of Technical Operations and Services, South Windsor Public Schools
- Jason Pufahl — Chief Information Security Officer, University of Connecticut
- Bethany Silver — Director of Assessment, Evaluation, and Research, Bloomfield Public Schools
- Michael Swaine — Northeast Regional Manager, Gaggle

### Digital Learning Advisory Council

- Nick Caruso (Chair) — Senior Staff Associate for Field Service, CABE\*
- Katie Bauer — Director of Library Research Services & Collections, Trinity College
- Kevin Corcoran — Executive Director, Connecticut Distance Learning Consortium
- Jonathan Costa — Assistant Executive Director, EdAdvance
- Larry Covino — Director, Bristol Adult Education
- Andy DePalma — Director of Technology, EASTCONN
- Sarah Edson — Dean of Academic Technology and Innovation, Ethel Walker School
- Josh Elliott — Director of Educational Technology Graduate School of Education and Allied Professions, Fairfield University
- John Elsesser — Town Manager, Town of Coventry\*
- Barbara Johnson — Library Media Specialist, Colchester Public Schools

- Jason Jones — Director of Educational Technology, Trinity College
- Jae-Eun Joo — Director of Online Programs, Neag School of Education, University of Connecticut
- Karen Kaplan — Technology and Communications Director, Hamden Public Schools
- Marijke Kehrhahn — Head of School, Independent Day School
- Clint Kennedy — Supervisor of Innovation, Personalized Learning and Magnet Program, New London Public Schools
- Dawn La Valle — Director, Division of Library Development, Connecticut State Library\*
- Shannon Marimón — Director of Talent and Operations, RISE Network
- Laura McCaffrey — School Support and Academic Services, Hartford Archdiocese
- Greg Mcverry — Professor, Southern Connecticut State University
- Jim Mindek — Information Technology, Connecticut Technical High School System
- Josh Smith — Superintendent, New Milford Public Schools
- Karen Skudlarek — Educational Technologist, University of Connecticut
- Jim Spafford — Coordinator of Business Services and Partnerships, Manchester Adult Education
- Shelly Stedman — President, Connecticut Association of School Librarians
- Chinma Uche — Computer Science Teacher, CREC Academy of Aerospace and Engineering, and President, CT Computer Science Teachers Association
- Jennifer Widness — President, CT Conference of Independent Colleges\*
- Scott Zak — Senior Director of Learning Technologies, CT State Colleges and Universities\*

#### **Infrastructure Advisory Council**

- Tom Dillon (Chair) — Founder, Flagship Networks\*
- Colleen Bailie — Library Director, West Haven Public Library\*
- Joe Campbell — Educational Technology Consultant, Connecticut Technical High School System
- George Claffey — Chief Information Officer, Western Connecticut State University
- Robert DeVito — Technology Director, University of Hartford
- Aaron Herold — Director of Technology, New Fairfield Public Schools
- Fred Kass — Director of Networking & Infrastructure Services, Trinity College
- Kerri Kearney — Supervisor of Instructional Technology, Manchester Public Schools
- Michael Mundrane — Vice Provost and CIO, University of Connecticut\*
- Susan Shellard — Chief Administrative Officer, Department of Economic and Community Development\*
- Sabina Sitaru — Former Chief Innovation Officer, Metro Hartford Information Systems
- Bill Vallee — CT Broadband Policy and Programs Coordinator, CT Office of Consumer Counsel\*
- Rick Widlansky — System Manager, Libraries Online (LION)
- Rob Wilson — Director of Technology and Information Services, Somers Public Schools

\*Also serves as a Commission member or alternate.

Note: Early in 2017, the Practices Advisory Council and Digital Learning Advisory Council combined, given the strong alignment of the work of these two groups.

## Meetings

The dates and agendas of the Commission and Advisory Council meetings appear below, with full meeting minutes — and in some cases, video archives — available from the Commission Web site, [www.CT.gov/CTEdTech](http://www.CT.gov/CTEdTech).

### Commission Meetings

Monday, March 6

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- Student Data Privacy
- Endorsement of Skills21 Grant Application
- CEN Updates and Funding
- Expansion of CEN Services
- Strategic Planning Process
- GoOpen Adoption
- Digital Equity

 [Meeting Minutes](#)

Monday, June 5

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- Policy on Commission Endorsements
- Design of Educational Software Hub
- Review and Approval of State Educational Technology Goals and Plan
- CEN Updates (New Director, Library Buildouts, and DDoS Mitigation)

 [Meeting Minutes](#)

Monday, September 11

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- Personalized Learning Study
- Launch of Educational Software Hub
- CEN Updates (New York and Library Buildouts)
- Endorsement of ISTE Educator Standards

 [Meeting Minutes](#)

▶ [Video Archive](#)

Monday, December 4

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- Frontiers in Student-Centered Learning
- Trusted Learning Environment Launch
- Efforts to Maximize E-rate Funds
- CEN Updates (FY 19 Pricing, Staff, and Buildouts)
- ISTE Standards Adoption
- Access to Online Research
- Net Neutrality

 [Meeting Minutes](#)

▶ [Video Archive](#)

## Advisory Council Meetings

### *Data and Privacy Advisory Council*

Wednesday, May 10

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- Framework for Privacy and Security
- Student Data Privacy Statute
- Educational Data Needs

 [Meeting Minutes](#)

### *Digital Learning Advisory Council*

Friday, March 3

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- Open Education Resources Initiatives and Opportunities

 [Meeting Minutes](#)

Wednesday, May 10

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- Educational Technology Priorities
- Statewide Initiative Planning

 [Meeting Minutes](#)

Thursday, August 3

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- Commission Goals and Plan
- Operationalizing Technology Standards
- Open Education Resources Needs

 [Meeting Minutes](#)

Thursday, November 9

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- Student-Centered Learning
- Technology Standards Adoption
- Open Education Resources Planning

 [Meeting Minutes](#)

### *Infrastructure Advisory Council*

Wednesday, February 15

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- Digital Equity Priorities and Data Collection
- Toolkit Design and Planning

 [Meeting Minutes](#)

Monday, May 15

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- CEN Services
- Equity Toolkit Refinements

 [Meeting Minutes](#)

## State Educational Technology Goals and Plan

In 2017, the Commission released its five-year [State Educational Technology Goals and Plan](#), which continues work already underway in areas such as digital equity, open education resources, and student technology proficiencies. The initiatives outlined in that document address the CET's statutory responsibilities, still relevant since their definition in 2000, as well as new concerns that reflect the changing needs of our State's students, educators, and institutions.

### Planning and Development

Early in 2017, the Commission began a strategic planning process to identify and prioritize its work for the coming five-year period. These efforts follow its statutory charge of developing and acting against statewide "long-range plan" that helps ensure the effective use of technology in schools, libraries, and institutions of higher education. In order to guide this work, the Commission forged a Vision Statement:

*THAT EVERY LEARNER AND EDUCATOR IN CONNECTICUT BENEFITS FROM THE FULL POTENTIAL OF TECHNOLOGY TO SUPPORT PERSONALIZED AND IMPACTFUL TEACHING, LEARNING, RESEARCH, AND ADVANCEMENT.*

To support that vision, the following Mission Statement defines the strategies and activities of the Commission:

*DESIGN, STEWARD, AND PROMOTE POLICY, PROGRAMS, INSIGHTS, AND RESOURCES THAT SUPPORT THE EFFECTIVE USE OF TECHNOLOGY FOR ALL LEARNERS AND EDUCATIONAL ORGANIZATIONS IN CONNECTICUT.*

Throughout January and February of this year, Director Casey facilitated discussions among Commission members and Advisory Council representatives to define the work of the CET and the priority of various proposed initiatives. In addition, members responded to a formal survey through which they could provide feedback on, and rank, a set of proposed initiatives. The detailed results of this survey appear as a [separate report](#) under the March 2017 meeting minutes.

Following this information-gathering process, Director Casey drafted the State Educational Technology Goals and Plan. This document reflects the priorities expressed on behalf of the Commission's diverse constituents, accounts for the CET's statutory obligations, and provides enough flexibility to address time-sensitive challenges and opportunities as they arise. The Goals and Plan supports both long-term, overarching objectives such as equity of access as well as time-constrained projects and deliverables. The substantial subject matter expertise that went into the Goals and Plan also helps to ensure its alignment with the objectives of other state agencies and national best practices.

Following a thorough review of its content and implications, the members unanimously approved the Goals and Plan at the June quarterly meeting. Organized around the CET's three focus areas, specific initiatives include the following:

#### *Digital Learning*

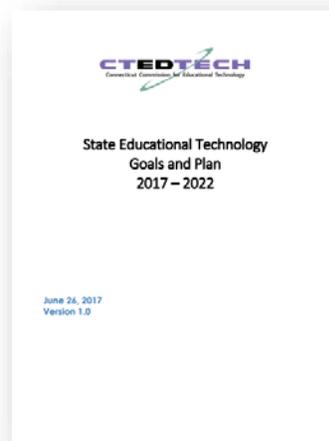
- Open Education Resources
- Student-Centered Learning
- Technology Proficiency Standards

#### *Infrastructure*

- E-rate Maximization
- Digital Equity
- Educational Technology Standards and Best Practices

#### *Data and Privacy*

- Privacy Compliance
- Privacy Best Practices



To build awareness of the Commission's work, Director Casey shared the Goals and Plan with nearly 40 state and national organizations including the state's libraries, superintendents, boards of education, and technology directors. Districts have referenced the Goals and Plan, and at least one uses the document as the basis for its local technology strategy. On a national level, feedback from other states and national organizations has been positive. Joseph South, former director of the Office of Educational Technology within the U.S. Department of Education and current Chief Learning Officer with the International Society for Technology in Education (ISTE), provided feedback on what he termed an "amazing ed tech plan":

*"I read the whole thing and loved it! Made me want to move my children to Connecticut! Thanks for the work you are doing on behalf of schools to accelerate the effective use of technology in learning and teaching."*

The Commission will continue to execute against and improve the Goals and Plan through intentional collaboration within the state and with national education leaders. The following sections provide updates on progress made against calendar year 2017 initiatives, organized by focus area: Digital Learning, Infrastructure, and Data and Privacy.

## Digital Learning

### Open Education Resources

Connecticut adopted the U.S. Department of Education's GoOpen framework by the unanimous vote of the Commission members at the March quarterly meeting. Doing so provides a structure and network of supports with 19 other states to address the high cost of instructional and learning materials to students, educators, and institutions. Increasing access to open education resources (OER) opens the door to affordable, dynamic, modular, standards-aligned materials of high quality that take advantage of today's digital learning environments.

The first part of the Commission's OER strategy has raised awareness of its benefits to the K – 12, higher education, and library communities. Through formal meetings and conversations, these efforts have brought together statewide OER leaders to define areas of best practice, collective needs, and potential challenges for scaling the use of open resources. For details, see the [minutes](#) of the Digital Learning Advisory Council from March 3.

Within the K – 12 community, Director Casey has worked with district curriculum directors as key stakeholders in the OER movement. Through conversations with the co-chairs of the Connecticut Association of Public School Superintendents (CAPSS) Executive District Leaders Roundtable (EDLR) and a formal presentation on OER to more than 100 district curriculum leaders, he clarified a number of misconceptions about open resources. He has also recruited several district leaders to serve as advisors in the selection, configuration, and governance of an OER repository.

A key component of the GoOpen framework, a repository will provide an online platform for educators to create, share, revise, and freely distribute standards-aligned materials within their own department, building, district, state, or the broader learning community. This sharing occurs based on permissions that educators control. Selection of a repository that leverages the Learning Registry standard for interoperability will also provide visibility into high-quality materials from other states, significantly expanding the benefits of this work to Connecticut teachers and broadening their professional learning networks.

To identify the platform that will best support the diverse educational communities within the state, Director Casey has enlisted educators and leaders to provide a list of needs and concerns regarding a Connecticut OER repository. He collected this input in a document shared with Commission members, Advisory Council members, and OER supporters this fall. Overall, enthusiasm remains high for the potential not only to facilitate the creation and sharing of high-quality instructional materials but also to do so across K – 12, higher education, and libraries. For example, those in K – 12 have expressed a need for college-level materials for students ready for more rigorous coursework. Leaders from community colleges, in turn, see potential in leveraging K – 12 content tied to the CT Core standards to help ensure more consistency across general education and remedial courses. Librarians see a shared OER platform and practices as encouraging ongoing partnerships with local school districts and colleges.

Regarding the selection, launch, and support of an OER platform, the following areas of potential challenge and opportunity emerged:

- Governance: Establishment of a leadership advisory to steward high-level access and usage permissions
- Training: Enlistment of experts and resources statewide to support adoption and best practice use of OER
- Quality: Design of peer review and crowdsourced tools to allow OER users to provide feedback on and improve the quality of digital resources
- Ownership: Ability for local educators and institutions to control access to and distribution of their materials
- Cost: Identify strategies for implementation and support expenses
- Diverse Communities: Select a platform with the flexibility to support the K – 12, higher education, library, and adult learning communities

Director Casey has also culled invaluable insights on the benefits and challenges of switching to open resources by participating in national OER groups, including those facilitated by the Council of Chief State School Officers (CCSSO) and the State Education Technology Directors Association (SETDA). Through these groups, he has enlisted the input of colleagues from other states (e.g., Michigan, North Carolina, and Wisconsin) who have led recent OER deployments. Insights from this research as well as documented requirements will guide the review and selection of an OER repository in 2018. To support the OER movement in Connecticut, the Commission is also encouraging districts to attend the Northeast OER Summit next summer at the University of Massachusetts at Amherst.

## Student-Centered Learning

The effective use of technology can deepen and help scale personalized, mastery-based learning, though Connecticut's K – 12 community has not seen a wholesale adoption of these practices. To identify the opportunities and barriers to adoption in personalized learning, the Commission engaged in a study with CAPSS and Innovation Partners, with \$50,000 in support by the Jacquelyn Hume Foundation.

In order to address the complexities of bringing about innovation through student-centered learning, the researchers sought input from more than 40 educational leaders from across the state and region, soliciting their qualitative and quantitative feedback on how well the state as a whole addresses the following issues:

- Leadership: Educational leaders define and address the barriers to support better outcomes for students.
- Resources: Spending reflects a commitment to innovation and improvement.
- Collaborative Mindset: Educators and leaders commit to an enlightened self-interest, with benefits that may not flow directly or immediately back to their own organizations.
- Capacity: People and organizations at every level have the knowledge and skills to improve outcomes for students.
- Policy: State policy not only allows but also promotes and supports educational improvements using innovative, technology-enabled approaches.

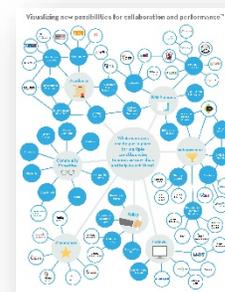


- Learning and Improvement Agenda: Educators articulate and measure the challenges to deep learning that new approaches to teaching address.
- Equity: Efforts to improve learning outcomes must address and accommodate for different socioeconomic circumstances.
- Scale: The design and support of technology-rich teaching and learning must include ways to broaden impact as needs increase and diversify.

The candid responses to these questions reflect a common will to improve K – 12 education in the state, regardless of how strongly respondents agreed or disagreed with the above statements. The resulting report, [Charting New Frontiers in Student-Centered Learning](#), includes their feedback verbatim, shared anonymously to ensure candor. The authors also conducted extensive research statewide and nationally, benefitting from the experience of lead researcher Lisa Duty. Ms. Duty co-founded the Learning Accelerator and has designed digital education initiatives in other states. Local interviews and national research led to five key recommendations:

- ONE** Develop a **common vision** of student mastery by the conclusion of high school
- TWO** Use this new vision to drive an intentional framework for **state and local policy**, recognizing the need for different pathways to success for a diversity of learners
- THREE** Encourage collaborative work that brings about more educational **research and development** in the state
- FOUR** Identify and amplify the work of cross-sector, student-centered **pioneers that showcases** the graduate of the future
- FIVE** Identify and analyze **untapped resources** in Connecticut, in regional and national networks, and online

The report also celebrates and points to the existing collaborations and potential partnerships within the state. The document highlights great work already taking place in Connecticut among researchers, non-profits, education advocates, entrepreneurs and business owners, community-based organizations, policy-makers, the education technology community, and — of course — K – 12 districts. "Frontiers" includes a visual representation of these relationships to increase awareness of and spur conversations among leaders. Doing so should help match educational challenges with human, financial, and technology resources.



To date, the Commission has seen more than 1,700 downloads of the report, which outlines ways the state as a whole can come around the above recommendations. The document invites the continued collaboration among education stakeholders to strengthen teaching and learning through the power and scale of technology.

## Technology Proficiency Standards

The Commission made significant progress this past year in its efforts to strengthen the technology proficiency skills of students and teachers [[CGS Sec. 4d-80\(c\)\(2\)\(D\) and \(E\)](#)]. Prior to this work, the state had an outdated set of student technology standards, dating from 2003, which provided little useful guidance to educators looking to support 21<sup>st</sup> century teaching. In addition, the State has not recently endorsed or shared any official teacher or administrator technology proficiencies. Educators, district leaders, students, and families require clear, research-based standard frameworks upon which to gauge progress in preparing learners for college and careers.

Following its September 2016 endorsement of the ISTE Student Technology Standards, the Commission adopted the updated ISTE Educator Technology Standards in September 2017. Both motions followed thoughtful discussions among the members of the Digital Learning Advisory Council, some of the state's foremost experts in defining and supporting digital learning proficiencies. With the adoption of the Educator standards, Connecticut became the first state to endorse both the student and teacher frameworks.

The Commission's Goals and Plan identifies a number of avenues that should support the practical adoption of these frameworks:

- **Accreditation:** Engage with organizations such as the New England Association of Schools and Colleges to address in more detail the levels of technology integration that schools should demonstrate in core teaching and learning.
- **Advocacy:** Through conferences, presentations, and other communications, engage with leaders and groups on the merits of adopting the ISTE standards.
- **Integration with Other Standards:** Create crosswalks among ISTE and other standards (e.g., CT Core, AASL, etc.) to provide a unified set of proficiencies.
- **Policy Integration:** Support the modernization of school and university acceptable use and other policies to reflect the expected skills that students and teachers should demonstrate as part of 21<sup>st</sup> century, digital learning.
- **Self-Assessments:** Design and share tools to help students, teachers, and districts identify areas of strength and weakness, as well as resources to support professional learning and continuous improvement.
- **Shared Curriculum:** Aligned with the Commission's OER initiative, provide a platform for developing and sharing technology-rich lesson and unit plans, instructional videos, and other digital learning materials.
- **Teacher Preparation:** Partner with schools of education to help ensure that teacher candidates can leverage technology to support student-centered learning and can model and teach digital literacy skills.

Given the expansive scope of the above efforts, the Commission and Advisory Council members have engaged with the broader education community to support standards adoption. Director Casey has introduced and gathered feedback on the new standards at conferences and presentations across the state. He serves on the boards of the Connecticut Educators Computer Association (CECA, the state's ISTE chapter) and Connecticut Educational Technology Leaders (CTETL, the state's chapter of the Consortium

for School Networking, or CoSN). He has enlisted support from these boards and the broader educational technology community around standards adoption. As a result of these efforts, CECA has established a subcommittee designed to support the Commission's efforts, especially around standards adoption.

In 2018, work to integrate the ISTE standards into Connecticut classrooms will continue on multiple fronts. Deputy Education Commissioner Ellen Cohn and Director Casey have developed a plan to gather public comment on the Student Standards, which they will present to the State Board of Education for adoption next spring. Director Casey also serves on ISTE's technical working group to update the Administrator Standards, designed for principals and superintendents and set for release in June 2018.

## Infrastructure

### E-Rate Maximization

As defined in its statute ([CGS Sec. 4d-82](#)), the Commission has continued work to reduce the administrative burden and maximize the return on investment of the federal E-rate program for schools and libraries. Data from the Universal Services Administrative Company (USAC), which oversees E-rate, indicates that up to \$24M in funds may still be available across 161 Connecticut school districts to offset the costs of local-area and wireless networks.

To ensure that eligible K – 12 schools and libraries maximize these funds, the Commission has launched several initiatives. In the fall of 2017, the CET hosted a series of informational Webinars to provide schools and libraries with the technical, process, and procurement background to help them make the most of available E-rate funds. Partner providers E-rate Online and Kellogg & Sovereign as well as Maria Bernier, State Library E-rate Coordinator, delivered these trainings free of charge to attendees.

In November, the CET announced the [Connecting Connecticut Classrooms \(C3\)](#) initiative, a partnership among the Office of the Governor, the Commission, and educational nonprofit Education SuperHighway. The C3 program includes online training sessions and consulting services provided by Education SuperHighway at no cost to the State or its schools. The online trainings include the following titles and topics:

#### [150 Reasons to Upgrade Your Internal Networks](#)

Learn how to use E-rate Category 2 Funds to improve classroom connectivity:

- Understand your available E-rate Category 2 funding of up to \$150/student
- Get up to date on technology standards and best practices for planning your K – 12 Wi-Fi and WLAN network

#### [E-rate Category 2 Procurement Masterclass](#)

Learn how to maximize your Category 2 procurement options:

- Prepare your E-rate Form 470 / RFP
- Learn about vendors and VARs that can support you
- Understand potential costs and pricing for your network upgrade

#### [Smart Guide to Category 2 Bid Evaluation](#)

Tips and best practices to get your internal network upgrade funded through E-rate:

- Evaluate your upgrade options
- Drive buy-in for your upgrade among district leadership

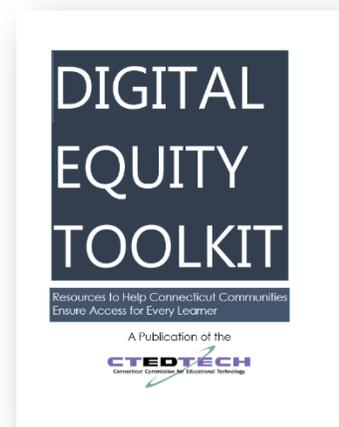
Director Casey announced the C3 initiative in an e-mail invitation sent to nearly 250 technology directors statewide. Through partnerships with CAPSS and CABE, the announcement reached all Connecticut superintendents and more than 1,500 members of local boards of education.

Following the free information sessions, broadband consultants from Education SuperHighway will reach out to Connecticut schools to offer free network design and procurement support. They will target first those districts with the greatest potential to receive E-rate reimbursement awards. Throughout these efforts, Director Casey has facilitated discussions between Education SuperHighway staff and technology leaders in districts with outdated (slow) and expensive fiber connections to discuss upgrade options.

## Digital Equity

Connecticut is one of the most connected states in the nation, with 100 percent of districts meeting or exceeding the 100 Kbps per student benchmark (Education SuperHighway). Commission survey responses indicate that 58 percent of middle schools and 71 percent of high schools provide computers for every student (i.e., 1:1 computing programs). Of the 530,000 public school students, 500,000 have district-issued Google accounts, connecting them to services such as Google Classroom and the “G Suite” of productivity, creativity, and collaboration tools.

Despite this increasing access to and meaningful application of technology in Connecticut’s classrooms, many learners cannot take advantage of digital learning outside of school. Across the state, roughly 8 percent of students, or 42,000 children, do not have access to broadband at home, according to data from the U.S. Census Bureau and Pew Research Center. This disparity between in-school and out-of-school technology access remains a central concern of the Commission and led to its development of the state’s first [Digital Equity Toolkit](#).



The document points to digital equity programs as community undertakings. This approach — brought to light through the diversity of perspectives within the Infrastructure Advisory Council — acknowledges the unique set of resources and challenges that any city or town possesses. The document offers recommendations and a menu of options rather than a prescriptive list of steps.

Drafted in the summer and fall of 2017 and presented to the Commission for review and revision at the December quarterly meeting, the Toolkit provides guidance on how to design and support a digital equity program:

- **Leadership:** Communities should start by considering the “team” of participants to plan the work of getting learners online. Doing so leverages the collective insights of leaders and advocates who can define the local context of connecting students.
- **Measurement:** Designing effective ways to identify students in need of broadband and devices outside of school remains a challenging and nuanced endeavor. The Toolkit provides exemplars to help communities gather the data to make informed decisions about where to focus resources to connect learners.
- **Existing Resources:** Whether national connectivity initiatives or local programs offered by carriers, libraries, and businesses, many channels may already exist to provide

broadband access. Simply creating and sharing an inventory with families can provide immediate benefits. This work also addresses the development of digital literacy skills among parents and students to make effective use of technology.

- Expansion Programs: Communities may consider a variety of proven models used to connect students, including public wireless zones and installing access points on school busses. No solution works for every community, but the local perspective on all of these options will guide plans around adoption and sustainability.

The Commission will release the Toolkit for public use early in 2018, following review by national experts including CoSN and Digital Promise as well as district leaders who have successfully launched equity programs in other parts of the country. In the meantime, the Commission has already engaged in supporting digital equity initiatives. For example, Commission member Bill Vallee (the State Broadband Coordinator) and Director Casey recently assisted the Hartford Public Library to propose funding a digital equity program. Leaders in other communities have already expressed interest in leveraging the Toolkit to design equity programs, and the Commission will engage with cities and towns to support these efforts. These lessons will help expand future versions of the Toolkit to include case studies that will benefit many Connecticut cities and towns.

## Data and Privacy

### Privacy Compliance

The passage last year and revisions this year to the state's first student data privacy law ([CGS Secs. 10-234aa-dd](#)) put in place important directives to protect against the misuse of student information, records, and content and to promote transparency in the use of data in education. The law addresses contracts between boards of education and software providers and does not provide schools with State support. As a result, districts and providers have largely addressed compliance independently, leading to significant inefficiencies. Responses from school leaders to a Commission survey indicate that districts invested a collective 80,000 staff hours (translating conservatively into \$5M in indirect costs) statewide just to address the new requirements of the law. The consumption of staff time had an opportunity cost as well, in that these educators and leaders did not have the time to launch or support other initiatives with direct benefits to teaching and learning. In addition to these indirect costs, schools had significant out-of-pocket legal expenses for contract reviews and negotiations.



To assist districts and software providers in complying with state privacy statutes, the Commission designed and launched the [Connecticut Educational Software Hub](#) in August. The Hub provides a single point of reference for software developers to understand the State's relevant laws and commit to a [Student Data Privacy Pledge](#). Educators and district leaders can log into the site and search for software developed by companies that have signed the Pledge and that have taken steps to comply with state privacy laws.

Since its launch, made possible with Year-1 support from the RESC Alliance, the platform has received the endorsement and support of legislators, educators, and the press. State Representative Gail Lavielle (R), Ranking Member of the General Assembly's Education Committee, called the site "a powerful solution that addresses the intent of the law, which is to ensure that operators and vendors working with Connecticut's school districts are compliant with student data privacy requirements." The Hub should dramatically reduce the burden of compliance on districts and vendors alike and "fulfills our goal of protecting students' privacy without restricting the creative use of technology in education," according to State Representative Cristin McCarthy Vahey (D), also of the Education Committee.

Director Casey has led support in these efforts, demonstrating the Hub's features at conferences and meetings statewide and responding to vendor inquiries regarding

compliance. He enlisted the support of CABE, CAPSS, and the Connecticut Association of Schools (CAS) to co-sign a letter to educational software providers. That communication encourages them to learn about Connecticut's statutes and leverage the resources developed by the Commission to attain compliance. He has also engaged directly with technology companies with a significant client base in Connecticut — Apple, Google, Microsoft, PowerSchool, and others — to take steps to comply with state privacy law.

To date, more than 1,000 educators and leaders representing 1,192 schools have created accounts on the Hub, generating more than 100,000 page views in November 2017 alone. Vendors have also engaged with the platform for information and resources that assist them with compliance. Providers of 81 educational software products have taken the Pledge and adopted language to align with Connecticut law. With the approaching deadline of July 1, 2018 to comply with the statute's contractual requirements, use of the Hub by both educators and vendors should grow. The Hub will continue to help streamline compliance efforts by both districts and providers, supporting the use of powerful technology tools that deepen and scale personalized learning without sacrificing the confidentiality of student data.

### Privacy Best Practices Framework

Compliance with Connecticut's student data law represents one aspect of a broader privacy framework that educational institutions should follow. Some school and library leaders may have not identified or developed a mature set of practices to ensure the privacy and security of personal information, data, and content. Districts would benefit from having a consistent set of standards.

In response to this need, the Commission has promoted the Trusted Learning Environment (TLE) framework ([www.TrustedLearning.org](http://www.TrustedLearning.org)) for designing and operating institutional privacy programs. This framework comes from CoSN in partnership with the national associations for superintendents, boards of education, curriculum directors, and school business officers and so



speaks to the specific concerns of schools and libraries. Institutions can leverage the free TLE handbook and self-assessment to identify strengths and weaknesses in five practice areas:

- Leadership: Collaboration with stakeholders to establish governance rules and policies concerning student data protections and effective use
- Business: Establishment of vetting and purchasing processes that address applicable compliance laws while supporting innovation
- Data Security: Development of network and security best practices, including audits to assess data privacy and security
- Classroom: Implementation of processes to ensure responsible use of data for instruction, coupled with the development and modeling of digital literacy skills
- Professional Development: Delivery of privacy and security training, both standalone and integrated into other professional development areas, to address the human factors in security and model best practices to students and families

Districts enrolled in the TLE program receive feedback on their demonstrated practices from experts and peers across the country. Institutions demonstrating proficiency in these areas receive the TLE Seal, which districts can use to signify publicly their competency in the five practice areas.

Through electronic campaigns and presentations at statewide conferences and association meetings, Director Casey has raised awareness of the TLE program. A November 30 launch co-sponsored by CoSN and CTETL attracted teams from 27 school districts. Those leaders received a day of free training in the TLE framework and information about next steps in assessing their privacy and security practices. Districts that commit to join the state's first TLE cohort will pay a modest fee (between \$100 and \$400, depending on CoSN membership and student enrollment) to participate in six months of instructor-led training, support, and peer networking within the national TLE community. The Commission will continue to work with its partners to promote and support best practices in privacy and security in 2018.

### Related Activities

In addition to efforts in support of its core initiatives, the Commission has engaged in other activities that support its mission of promoting the effective use of technology for teaching and learning.

#### *Computer Science Education*

According to the Conference Board, National Center for Education Statistics, and the College Board, Connecticut has 6,473 open jobs requiring computer science degrees and skills. To address this shortage in the long term, and computer science education in the short term, the Commission has contributed to efforts underway at the State Department of Education (SDE) and Department of Economic and Community Development (DECD). Director Casey serves on the SDE's Computer Science Advisory Group, tasked with providing expert input on identifying a statewide computer science curriculum, in the form of standards or a framework. The group has also contributed to defining teacher certifications in computer science and — in partnership with DECD — strengthening ties among schools, universities, and employers. The Commission members have expressed strong support for these efforts, and Director Casey has shared progress against the SDE's goals through meetings with statewide leadership organizations (e.g., CAPSS, CECA, etc.).

#### *Cyber Security Awareness and Training*

Following the release of the [Connecticut Cyber Security Strategy](#), which highlights the importance of an informed citizenry in the areas of digital and cyber literacy, the Commission researched training opportunities in these areas. Under Chairman Mark Raymond's guidance, Director Casey designed a survey distributed to leaders of libraries as well as adult and continuing education centers.

Responses indicate that libraries statewide provide a diverse array of online and in-person courses to build general computing, digital literacy, and cyber security skills. Local libraries also provide significant amounts of drop-in or ad hoc training to patrons. While aggregate

enrollment data is not available, Connecticut's local libraries undoubtedly educate many thousands of citizens a year on cyber security and digital literacy.

Among adult and continuing education centers, more than half (58 percent) of respondents include digital or cyber literacy training as part of General Education Development (GED), English as a Second Language (ESL), and citizenship courses. Elective course catalogs include cyber and computer literacy training among 65 percent of respondents. Of those that do not provide courses in these areas in 2017, 77 percent say they will next year. Meeting the demand for training in cyber security and digital literacy remains a priority, given that citizens of all ages leverage Internet-based services across every aspect of life, from digital government and education to finance and healthcare.

### *Connecticut-Based Educational Technology Companies*

The Commission has facilitated efforts to leverage educational technology for the specific needs of Connecticut's education community while supporting innovative businesses that have chosen to operate in our state. In May, Director Casey organized an "Educational Technology Showcase" at the CEN Conference. The "speed meeting" session provided the opportunity for conference attendees to learn about and provide feedback on products and services presented by the founders of five Connecticut-based companies:

- Doors to Explore (Newtown): Matches students to university programs and Connecticut companies offering internships technical and STEM disciplines
- Kula Ed (Simsbury): App designed to serve children with conditions on the autism spectrum, securely connecting family members with schools to maximize social supports and student learning
- Language Zen (Stamford): Dynamic world language platform that leverages contextual content (music, media, etc.) to support personalized learning
- Level Up Village (Greenwich): Digital collaboration platform and training to provide teams of students in the U.S. and abroad with project-based learning experiences in the STEM disciplines
- Renzulli Learning (Storrs): Personalized learning engine that matches student pace and learning styles to digital learning materials

## Communications and Outreach

To raise awareness of work and gain insights from its diverse constituents, the Commission leverages several online media channels, including the CET Web site, Twitter account, and listserv. Director Casey has also engaged in outreach by presenting at state and national events, producing research and publications, submitting news to educational media outlets, and participating actively in a number of advocacy groups. The following sections provide highlights of these communication and outreach efforts.

### Online Media

- **Web:** The site, [www.CT.gov/CTEdTech](http://www.CT.gov/CTEdTech), continues to serve as the reference point for information about the body and its members, meeting minutes, and publications, among other resources. Director Casey will migrate and expand the site's content to the State's new, responsive content-management system in 2018.
- **Twitter:** The Commission's Twitter account, @CTEdTech, serves as a means of communicating important research, policy, and funding updates to its more than 200 followers.
- **Statewide Listserv:** In early 2016, the Commission launched a statewide e-mail listserv through the Department of Administrative Services as a platform to share research, best practices, and announcements with the K - 12 educational technology community. Since that time, the list has grown to include 250 subscribers across nearly every public school district in the state. In the past year, contributors have submitted more than 1,000 posts that include event announcements, requests for recommendations on software and hardware solutions, and time-sensitive security alerts. Comments from district technology leaders indicate that the service provides an easy and powerful means of quickly communicating with and sharing best practices among members of the Connecticut educational technology community.



## Presentations

Director Casey and other members of the Commission took advantage of many opportunities to share the CET's work statewide and nationally. The following list summarizes these presentations and speaking engagements.

Event	Topic(s)	Date
Area Cooperative Education Services (ACES) Technology Council	Technology Standards, Open Education Resources, and Student Privacy	Mar 8
Colchester Public Schools Technology Open House	Best Practices in Digital Learning	Mar 15
Fairfield University Collaboration Day	Commission Overview (Mission and Initiatives)	Mar 16
CoSN Annual Conference (Chicago)	Innovation Clusters as Models for Public-Private Partnerships	Apr 5
CT Council of Governments Monthly Meeting	Value of CEN to Municipalities	Apr 18
CEN Annual Conference	Sessions on CT-Based Educational Technology Firms, Open Education Resources, and Student Data Privacy <sup>1</sup>	May 12
Cooperative Education Services (CES) Technology Council	Student Data Privacy and Open Education Resources	May 19
Fairfield County Bar Association Quarterly Meeting	Student Data Privacy Roundtable	Jun 15
CTETL School Security Summit	Overview of Commission Goals and Plan	Oct 5
ACES Technology and Library Councils	School Technology Planning and Trusted Learning Environment	Oct 6
SETDA Leadership Summit (Washington, DC)	Strategies to Support Adoption of Student Technology Standards	Oct 24
CECA Annual Conference	Privacy Best Practices and Tools for Educators	Oct 30
Capitol Region Education Council (CREC) Technology Council	Commission Strategic Plan and Updates	Nov 16
CABE-CAPSS Annual Conference	Innovation for All: How the Future of Learning Provides Equity for All Learners <sup>2</sup>	Nov 17
District Curriculum Directors	Open Education Resources	Dec 1
National Business Institute	Student Data Privacy Best Practices	Dec 8
CES	Technology Proficiency Standards, Open Education Resources, and Student Privacy	Dec 15

1. With Commission members Nick Caruso and Ken Wiggin
2. With Commission Chair Mark Raymond and members Nick Caruso and Tom Dillon

## Media Coverage

Outreach campaigns and publishing opportunities promoted the work of the Commission and resulted in coverage across a number of media channels this year. The following table lists stories, interviews, and publications that highlight the Commission's efforts and impact.

Publisher	Title	Date
<b>Jonathan Pelto (Blog)</b>	<a href="#">Connecticut Alliance for Privacy in Education Speaks Out Against Changes to New Student Privacy Law</a> (References Commission Compliance Supports)	Mar 9
	<a href="#">States Act on New Legal Requirements to Address Student Data Privacy Concerns</a>	Mar 22
	<a href="#">Under Trump, Ed-Tech Leadership Is Big Question Mark</a>	May 5
	<a href="#">Broadband Imperative II White Paper (Doug Casey, Contributor)</a>	Apr 1
	<a href="#">Connecticut Education Technology Leaders Embrace Strategy for Student Data Protections</a>	Oct 5
	<a href="#">EdTech Hero: Doug Casey Protects Connecticut's Students from Privacy Threats</a>	Oct 9
	<a href="#">Connecticut Becomes First State to Endorse ISTE Standards</a>	Oct 19
	<a href="#">November 2017 CABE Journal: Connecticut Educational Software Hub</a>	Nov 2
	<a href="#">Connecticut EdTech Chief Details Effort to Meet Strict Student Data Law (Video Interview with Editor Wyatt Kash)</a>	Nov 10
	<a href="#">Innovation in Connecticut: Frontiers in Student-Centered Learning</a>	Nov 21
	<a href="#">imagineED Newsletter: Frontiers in Student-Centered Learning</a>	Nov 21
	<a href="#">Connecticut Report Calls for Mastery-Based Learning in K-12 Schools</a>	Nov 27
	<a href="#">Schools Grapple with Digital Divide</a>	Dec 1
	<a href="#">CAS Conversations Podcast</a>	Dec 11
	<a href="#">Connecticut Has a Game Plan for ISTE Standards Adoption</a>	Dec 15

## Professional and Advocacy Groups

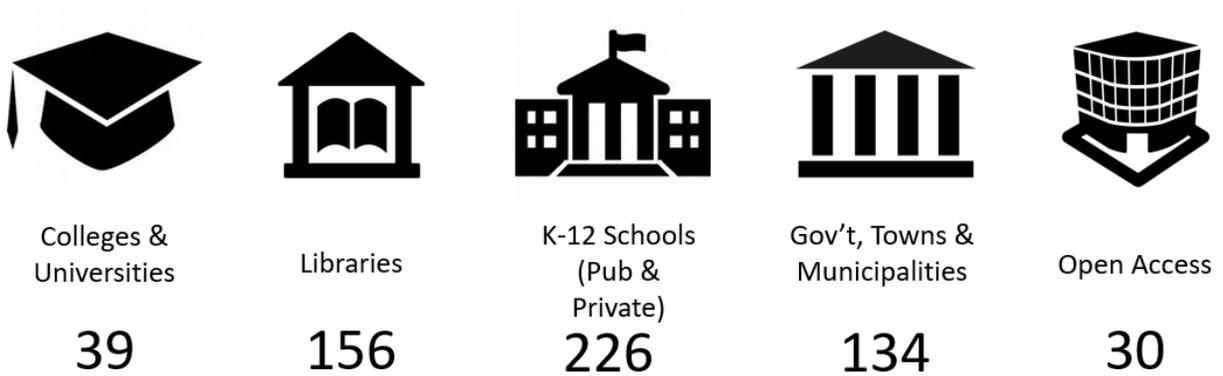
In an effort to build alliances around important Commission initiatives — e.g., digital equity, personalized learning, and proficiency standards — deepen understanding of constituent needs, and identify funding opportunities, Director Casey actively participates as a member of the following groups:

- CAPSS Technology Committee: Monthly Commission updates to state superintendents
- CCSSO and U.S. Department of Education State GoOpen Leadership: Monthly opportunities to share best practices around the design and governance of state-level OER programs
- CECA Board: Monthly meetings, including chairing a CECA subcommittee dedicated to supporting the Commission's statewide initiatives
- CTETL Board: Partnership efforts to build awareness of programs such as TLE
- Digital Promise Equity and Innovation Groups: National working groups sharing best practices around digital equity and public-private partnerships
- ISTE Technical Working Group — Administrator Technology Standards: Collaboration with other national leaders to define the competencies of school and district leaders
- Representative Elizabeth Esty's Council on Science, Technology, Engineering, and Mathematics (STEM): Identification of needs in Connecticut to inform national legislative agenda to promote STEM education and workforce preparation
- Skills21 Board: Support to organization providing technology-based curriculum and programming in STEM subjects
- State Department of Education Computer Science Advisory Council: Assistance in establishing statewide curriculum, certification, and talent pipeline initiatives
- SETDA: Service on State Action and Broadband committees to build awareness of, and gain insights that inform, Commission initiatives

## Connecticut Education Network (CEN)

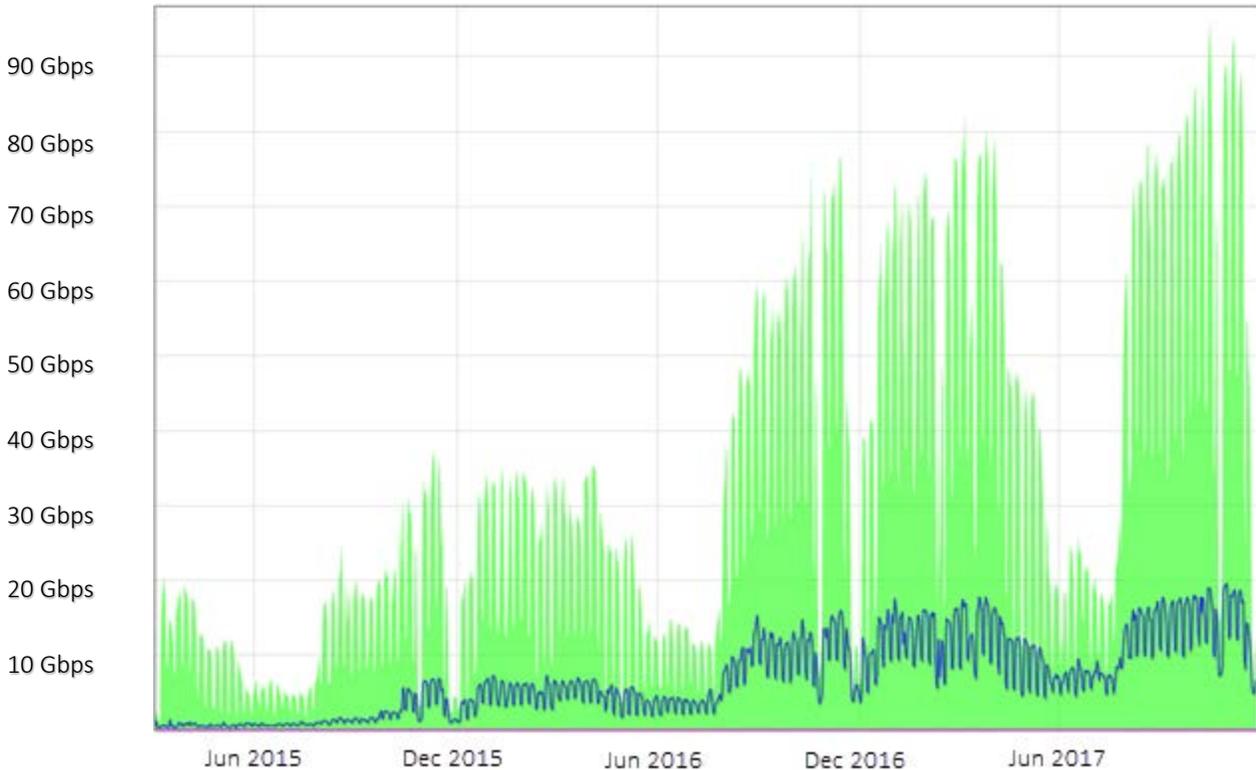
### Overview

The Connecticut Education Network (CEN) remains a model of efficient and effective service delivery since its launch in 2000, providing high-performance, high-speed Internet connections to the State’s schools, libraries, and institutions of higher education. In recent years, CEN has supported the growth of research, healthcare, business, and cultural institutions with the addition of “open access” members such as Jackson Laboratories, UCONN Health, and the XL Center in Hartford. The Network connects more than 530,000 K – 12 school students, 1.5M+ library patrons, nearly 200,000 college students, and 107 towns and councils of government. A summary of connections by member type includes the following totals:



### Accomplishments

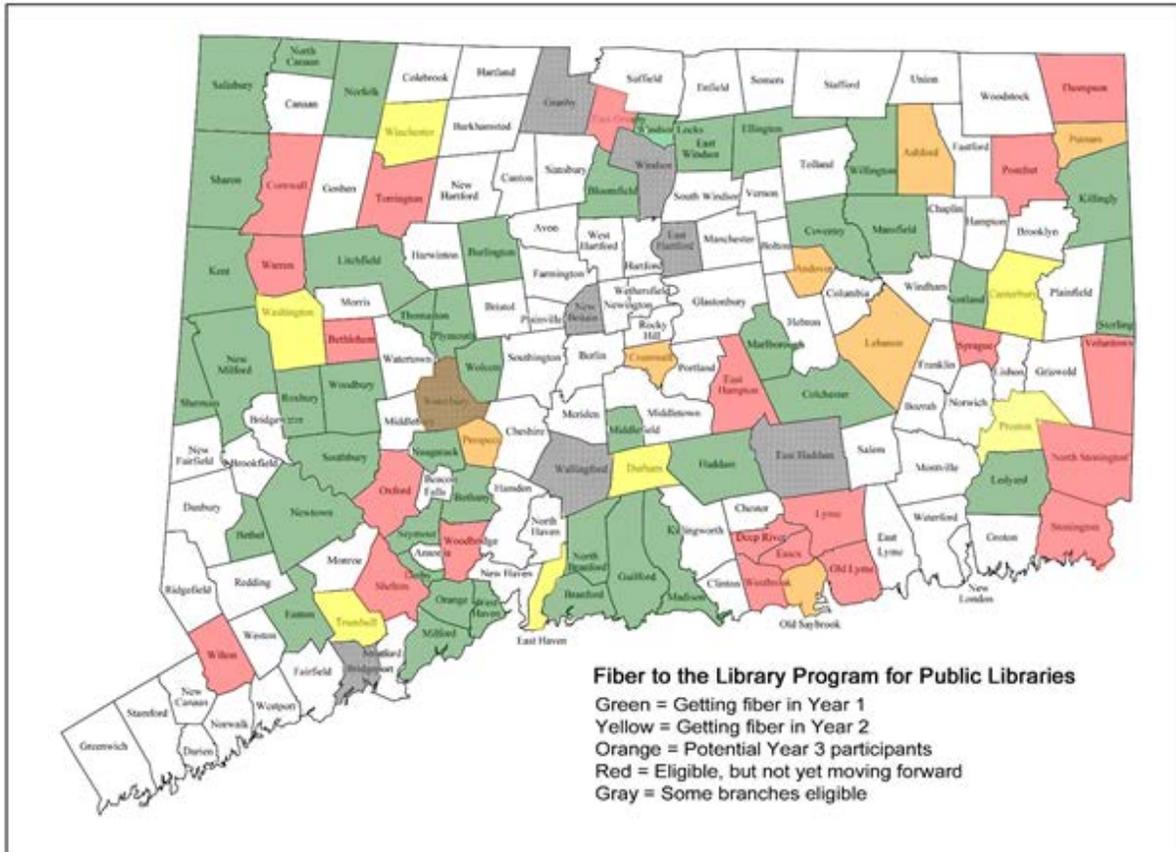
During the 2017 calendar year, CEN expanded its member base and brought online new customers as it adopted a self-sustaining business model. While schools and libraries previously received State subsidies for data circuits and now pay for these connections to CEN, and all K – 12 customers have remained connected the Network. CEN leadership has intentionally kept FY18 and FY19 service rates flat to help retain these valued members.



*Aggregate Bandwidth Consumption 2015 – 2017*

The Network continues to grow in usage as well as in membership. The 2017 calendar year saw an approximate 50 percent growth in aggregate bandwidth consumption, an annual trend since 2014 (see chart below, “Aggregate Bandwidth Consumption 2015 – 2017”). During peak daytime periods, CEN carries 80 gigabits per second (Gbps) of traffic to schools, libraries, colleges, towns, and open access customers. In addition to this volume of traffic, the Network has provided critical cybersecurity protections to fend off distributed denial of service (DDoS) attacks, at no additional cost to members. Since the start of school this fall, the CEN team has detected and mitigated more than 100 attacks, primarily on K – 12 schools. Many of these attacks would have effectively taken districts offline for days, if not weeks, without CEN’s service.

In 2017, CEN entered year two of a four-year project to move libraries off older (slower) connections to high-speed broadband circuits. Thanks to \$3.6M in grants from the CT State Library, as well as funding from the federal E-rate program, 55 public libraries will install high-speed fiber connections to CEN in 2017 and 2018. These libraries will transition from digital subscriber line (DSL, 3 – 6 megabits per second) to fiber optic network connections supporting speeds of 1 Gbps initially, with room to grow to 40 Gbps.



In addition to expanding service and protecting its members, CEN has provided an engaging set of training and networking opportunities over the past year. The 2017 Annual Conference, held in May, attracted the largest number of attendees ever (550 guests), underscoring the value of the event even in financially challenging times. Throughout the year, CEN keeps members updated through quarterly newsletters and offers a variety of free professional development opportunities. Online training sessions provide insights into technical matters such as filtering and cloud storage, and in-person events such as the annual CIO Roundtable and Connected Campus day offer peer networking opportunities.

## Staffing



In March of this year, Ryan Kocsondy began as CEN's new Director. He brings more than 17 years of experience and strong ties to the program, given his previous roles within UConn as the Manager of Network Engineering and Data Center Operations, and just prior to joining CEN as Director of Technology for the newly constructed UConn Hartford campus.

*Ryan Kocsondy — CEN Director*



As a top priority, Director Kocsondy hired Rick Cheung, who started in September as the Senior Network Engineer and team lead of the Network Services group. Mr. Cheung brings to the team his in-depth service provider experience from more 15 years at Sprint Corporation. He has acclimated quickly to the Network and is providing value and leadership to CEN's engineering, design, and operational functions.

*Rick Cheung — Senior Network Engineer*

Interviews to fill a Marketing Coordinator position are underway, with plans to have a candidate in place in January or February of 2018. An organizational chart depicting CEN staff and roles is available online through the University of Connecticut's Information Technology Web site, <http://uits.uconn.edu>.

## Financials

The Network has made significant progress in shifting to a self-sufficient business model supporting annual operations while delivering unparalleled value to its expanding member base. Increases in revenue have come primarily through the expansion of core Internet services to new members.

Following the state budget deliberations of the summer and fall, CEN received its General Fund appropriation, including holdbacks, and then saw an accompanying sweep of its revenue account, resulting in a net reduction for the fiscal year (FY18). Additionally, as of

FY18, subsidies provided as part of federal BTOP sustainability program are no longer available.

New member growth on core lines of business continues and will help bridge the shortfall created by the legislative and OPM sweep since the budget was initially established.

### **CEN Operational Budget**

	<u>FY17 Actual</u>	<u>FY18 Projected</u>
<b>Revenues</b>		
State Appropriation	\$1,067,000	\$857,616
BTOP Sustainability	\$300,000	—
Customer Billing	\$4,467,223	\$4,786,345
USAC (E-rate) Reimbursement	\$659,682	\$700,000
Member Conference	\$154,163	\$160,000
OPM Adjustment		(\$1,000,000)
<i>Total</i>	<i>\$6,648,068</i>	<i>\$5,503,961</i>
<b>Expenditures</b>		
Staff (Salary & Benefits)	\$2,268,133	\$2,019,833
CET (Salary & Benefits)	\$279,636	\$279,636
Contractuals	\$1,105,098	\$1,316,859
Fiber Maintenance	\$1,339,848	\$1,419,048
HW & SW Maintenance	\$660,909	\$636,614
Member Conference	\$103,774	\$120,000
Professional Services	\$8,000	—
<i>Total</i>	<i>\$5,765,398</i>	<i>\$5,791,990</i>

### **2018 Outlook**

Despite these financial challenges, the Network remains healthy and serves a vibrant membership. To serve its educational, municipal, and open access customers, CEN leadership will develop a new Strategic Plan that maps future Network growth, including a buildout to New York City, and the addition of value-added services. CEN will reestablish advisory councils comprised of members representing the K – 12, library, higher education, municipal, and open access member groups. Outreach efforts will also include efforts to share the value of the Network to state legislators and other key stakeholders.

## Acknowledgements

CEN Leadership as part of this annual report formally acknowledges and thanks the following individuals and groups:

- The CEN staff for their dedication and diligent work in operating and expanding the network.
- The CEN Membership for their loyalty and helping the network become more than the sum of its individual parts.
- The Commission members and Advisory Councils for their leadership and advocacy on behalf of the program.
- Mark Raymond and Michael Mundrane, who serve as trusted advisors providing insights on strategy and direction.
- Members of the Connecticut Legislature, who are critical and integral to CEN's long-term success.

## Connecticut State Library



### researchIT CT

As part of the Connecticut Education Network and administered by the Connecticut State Library, researchIT CT ([www.researchitct.org](http://www.researchitct.org)) provides all Connecticut students, faculty, and residents with online access to essential library and information resources. The researchIT CT service provides a core level of information resources, including secured access to licensed databases is available to every resident in Connecticut. These resources support the Division of Library Development's effort around the seven literacies, including Digital Literacy, Health Literacy, Financial Literacy, Legal Literacy, Civic/Social Literacy, Basic Literacy, and Early Literacy. In addition, college students and faculty have access to specialized research information. The researchIT CT service also includes a collection of downloadable eAudios and eBooks for access on mobile devices such as smartphones and tablets.

Goals of researchIT CT are as follows:

- Ensure universal access to a core level of library and information resources for every resident of Connecticut through their public library, school, and college and from home
- Provide necessary information resources to every school in Connecticut so that all students are prepared to function in an information society
- Provide information resources to the increasing number of students taking advantage of online courses at Connecticut's colleges and universities
- Support the information needs of all Connecticut residents

### Budget

Legislative and gubernatorial cuts to the researchIT CT database line item were absorbed by renegotiating payment schedules with database vendors.

### **Annual Savings / Cost Avoidance (FY 2017)**

The value of all researchIT CT databases to local communities exceeds \$38 million in one year, while the cost to provide those databases was in excess of \$1.6 million. This represents a cost avoidance of more than \$36 million. For more details, see the following publication:

[Cost Benefit: What researchIT CT Saves the State's Libraries and Municipalities](#)

The researchIT CT Word Press Web site was enhanced with the addition of Best Bets pages for academic, K – 12, and public library users. Pages feature links to high-demand resources for each of those user groups. The researchIT CT team worked with database vendor EBSCO to produce an instructional video that shows users how to use the explora interface. This

video also promotes use of researchIT CT by K – 12 students and educators. The researchIT CT team also integrated its EBSCO resources into Google Scholar and PubMed, so that searches therein will lead users to researchIT CT EBSCO items.

### Usage (FY2017)

For researchIT CT's licensed full-text databases, there were a total of 7,410,898 page views (a measure of when search results are actually viewed), with 745,231 or 10.1% from public library patrons; 1,473,994 or 19.9% from school library patrons; and 5,191,673 or 70.1% from academic library patrons. The total number of page views represents a 12.3% decrease compared to the previous fiscal year. In addition, public libraries viewed Connecticut State Library Collections in Ancestry.com 12,057,798 times in FY 2017.

The researchIT CT statewide collection of downloadable eAudios and eBooks includes 3,574 titles, which were checked out 9,266 times, a 0.6% decrease compared to the previous year's activity.



### findIT CT

findIT CT, Connecticut's statewide library catalog, went live in May 2016 and now contains the holdings of more than 280 libraries in Connecticut, with more libraries being added on an ongoing basis. As of November 1, 2017, findIT contained 10.7 million records and 17.9 million items. Rollout of requestIT CT, the statewide Interlibrary Loan service in findIT CT, began in September 2017, and as of December 15, 141 libraries in Connecticut participate in the service. The servers and equipment that run findIT and requestIT are located at Digital Back Office (DBO) in Milford, CT. DBO's data centers connect directly to CEN, so findIT CT and requestIT CT take full advantage of the Network's speed and capacity.

### Digital Collections

The Treasures of Connecticut Libraries digital collection remains available and had 5,638 item views in 2017. It contains 1,869 objects from 51 libraries and their partnering institutions. Readers can find more information about the Treasures project at:

<http://cslib.cdmhost.com/cdm/landingpage/collection/p128501coll0>

The State Library added the first issues of the Newspapers of Connecticut digital collection in 2011. This collection includes 7,359 newspaper issues from 90+ newspaper titles. The collection had 17,227 item views in FY2017 and has remained in the top 5 most popular Connecticut State Library digital collections for the past 6 years. During FY2017, the State Library added 18 of these newspapers to the Connecticut Digital Archive. Readers can find more information about the project at:

<http://cslib.cdmhost.com/cdm/landingpage/collection/p15019coll9>

## Increasing Usability and Removing Barriers to Access

Given the rebranding from iCONN to researchIT CT, the State Library converted existing iCONN permalinks to the new domain name to ensure ease of access. The researchIT CT Web site took the same WordPress theme used for the State Library site, providing a consistent look and navigation toolset across those properties. The site also includes new accessibility functions such as toggled high contrast, grayscale, and font size adjustments; a revised color scheme for accessible contrast levels; and Google text translation. All database researchIT Web buttons now include voice browser – readable tags.



*Books. Research. Historical Documents. Go!*  
*A service of the CT State Library*

## eGO

Currently in development, eGO will serve as the State Library's statewide eBook platform. When completed and fully functional, eGO will make it possible for public library users throughout the state to access their own library's eBooks, the researchIT CT collection of eBooks, and possibly a regional library network collection of eBooks, all from a single mobile app in either the iOS or Android platform, with a Kindle app to follow. Digital developer LYRISIS is working with Library Connection, Inc. in a pilot to develop an eGO multitenant circulation manager for libraries in Library Connection, and the State Library is in a multistate partnership with the Digital Public Library of America to procure eBook content for eGO.