**Goal:** Deliver high quality Internet access, client network engineering, Identity services, Web Security Filtering, Managed Firewall Service, and E-rate support that benefit all NC public schools.

**Status:**
- 115 LEAs (100%) and 132 Charters (71%) are connected to the North Carolina Research and Education Network (NCREN) providing Internet access at no cost to the local district/charter
- Average participation of state provided Web Security Filtering and Managed Firewall: 57%
- Supported 51 LEAs and 40 charter schools in 2016 with client network engineering (CNE) support services, through 148 total CNE engagements (91 LEA and 57 charter school)
- Managed a wireless infrastructure and services procurement supporting over $55M total in purchases for 72 LEAs and 25 charter schools
- The Federal Communications Commission and the federal E-rate program administrators use NC as a model for delivering cost-effective solutions to schools
- For 2016 the School Connectivity Initiative was a $125M program supported with legislative funding of $31M leveraged against FCC E-rate program reimbursements in excess of $93M

**Current Legislation:** The School Connectivity Initiative (SCI) was created by S.L. 2007-323 § 7.28.(d).

**Recommendation(s):**
1. **Firewall and web security funding.** Increase funding for web filtering, firewall services and other security and privacy measures that may be deemed prudent in order to mitigate network risks. Some of these services were previously federally funded, but they are no longer eligible for E-rate funding after the changes made to the program in 2015.
2. **Performance Monitoring.** Explore the use of network sensors and applications that can be used by school and district technology staff and teachers in the classroom to measure school Wi-Fi performance at specific times, such as before standardized tests or when streaming video performance is poor.
3. **Procurement Policy.** Modify statute SL 2013-360 Section 7.6 to enable all NC schools and libraries to purchase from contracts bid by the UNC system, specifically NCSU.

**Issue(s):**
1. **Firewall and Web Security.** Previously eligible for 70% E-rate funding assistance, the state must now fully fund managed firewall and web security services. The 2016-17 projected cost is $5.5M and increases with Internet utilization each year.
2. **Charter School Costs.** Internet bandwidth costs are disproportionately higher per student as compared to LEAs; the level of support provided by SCI is higher due to the reduced local resources for technology planning, implementation, and E-rate program management.
3. **Performance Monitoring.** Obtain cost-efficient network sensors and applications for school technology staff to measure and record detailed network utilization, including content and application usage statistics.
4. **Procurement Policy.** Investigate procurement provision that allows DPI to establish contracts for LEAs to include libraries and any other State entity that is eligible for E-rate. Modify that statute (SL 2013-360 Section 7.6) so that the contracts bid from the University (or specifically NCSU) can be used by an LEA or library.
The NC School Connectivity Initiative

- Internet capacity to meet LEA and Charter needs; simple, managed upgrade paths
- No-cost to schools enables local funds to be used for student devices
- Content-filtering and firewall services included
- Goal: “Digital Ready Classroom” level Wi-Fi access in every classroom by end of 2018

- Technology Planning assistance, network assessments and recommendations, and advanced IT troubleshooting
- E-rate application filing and support during audit and appeal processes
- Publishing best-practices for K-12 IT Environments white papers, technical seminars, E-rate Applicant Training
- Certified Education Chief Technology Officer training through UNC School of Government
- Development and management of Cooperative Purchasing Agreements reducing costs, ensuring quality purchases, and minimize school-level efforts
  - Every $1 in state funding is leveraged with at least $3.50 in federal E-rate funds to deliver fiber-based Internet to every school and Wi-Fi to every classroom.

“In our nationwide review of state approaches, we found North Carolina’s model to be one of the most effective in the country.”
- Jon Wilkins; Chief, Wireless Telecommunications Bureau and former Managing Director; Federal Communications Commission