CONDUCT REGULAR ACCESSIBILITY AUDITS
Don’t wait for a problem to arise. Conduct accessibility audits of your technology programs, devices, activities, and digital content regularly. If you haven’t done this yet, consider starting with core curriculum resources and the most popular or frequently used content for students. It’s also helpful to solicit feedback from students, parents, teachers, aides, and school librarians, to evaluate the accessibility needs in the learning environment. As you evaluate the results of these regular audits, you can chart progress, identify areas for improvement, and share your findings with your stakeholders to underscore your commitment to educational equity.

STAY CURRENT WITH FEDERAL AND STATE LEGISLATION
Innovations in technology continually change the way students can engage and interact with educational materials and the settings where learning takes place. By keeping current with regulations, and adjusting your accessibility policies as needed, you can adjust and update your policies to address students’ needs and opportunities proactively. It’s helpful to review the accessibility policies of other districts. Designating an accessibility coordinator often helps to keep your programs and policies current.

DEVELOP AND COMMUNICATE A DISTRICT-WIDE POLICY FOR ACCESSIBILITY INCLUDING GUIDELINES FOR ACCESSIBLE PURCHASING
Your district’s accessibility policies and procedures should be, that’s right, accessible…on your website, your student and parent information materials, employee handbooks, annual report, and other district information resource channels. Part of any 21st century accessibility policy should be guidelines for the purchase of technology equipment, content, and programs. Many districts now inform vendors and publishers that they expect digital textbooks, resources, and learning materials to be built according to industry accessibility standards. This language is included in all vendor contracts. Further, reviews for accessibility are often embedded into the purchasing and procurement process.

BUILD STAFF CAPACITY
Accessibility is a shared responsibility and a system-wide commitment. Professional development programs, regular updates about new tools and resources for making materials accessible, and support for extending accessibility to communication with parents and guardians, all help to build staff and faculty’s ability to make sure every student has an equal opportunity to learn and participate in the learning environment. Building staff capacity not only serves students but also works to save time and money, and helps protect the district from liability.

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SET EXPECTATIONS. MODEL ACCOUNTABILITY.
Establish a clear expectation that accessibility is mandatory and advantageous to every student, teacher, staff member, and stakeholder. Encourage the “accessibility” mindset and encourage teachers, technology leaders, and curriculum developers to think “accessibility first, accommodation second.” Visibly demonstrate accessibility in your communications and outreach to students, board members, faculty, staff, and parents.

For a complete Accessibility Toolkit to share with your learning community, go to cosn.org/accessibility.
The majority of IT workloads are already running in the cloud as districts turn to software-as-a-service (SaaS) for e-mail and other productivity tools, learning management systems, and other learning solutions. But SaaS is only one way to engage with the cloud – there are many other ways!

- Solving a particular pain point, such as backups to protect against ransomware
- Providing for disaster recovery
- Trying new software and services quickly and easily
- Simplifying network management
- Refocusing on education and getting out of the data center business

New technologies and applications are being developed in the cloud for numerous industries with many now becoming available to schools and districts.

- Data sharing across applications
- Data analytics solutions using disparate data from multiple sources to create insights about improving learning
- Management and innovation in the Internet of Things
- Data-informed personalization technologies

Moving to the cloud offers great benefits, but also requires new skills and analysis to determine what, when, and how to move.

- Leveraging enterprise cloud security tools to better safeguard data
- Re-skilling of the IT team to move from hardware maintenance to customer-facing support
- Careful analysis of actual utilization of existing hardware, rather than a complete life-and-shift, to determine a valid estimate of potential cost savings in the cloud

CoSN has developed a comprehensive Guide to the Cloud to support your technology and leadership teams in making critical decisions about the move to cloud computing. You can access this valuable resource at http://send2.cosn.org/send-cloud/
THE IMPORTANCE OF CYBERSECURITY

With the increasing concerns about security among families, districts, and legislators, and with increased teacher and student reliance on internet accessibility, school cybersecurity is subject to more scrutiny than ever. Alarming, many districts are not being sufficiently aggressive in getting ahead of cybersecurity problems.

BELOW ARE THE TOP 5 REASONS WHY DISTRICT TECH LEADERS MUST MAKE CYBERSECURITY A PRIORITY.

1. LIABILITY
   Districts and technology leaders may be held liable for network security incidents. The costs of these incidents can be extremely high and can include the cost of determining the cause, the cost of preventing future breaches, the cost of legal counsel, the cost of public relations to regain trust, and the cost of remediation. In the case of Ransomware, there may be the cost of ransom itself if the district chooses to pay, though that is often not recommended by law enforcement. Further, district tech leaders as individuals may be sued by families whose data was compromised by a security breach.

2. LEGAL REQUIREMENTS
   Depending on the state, there may be legal requirements for how data is secured, generally requiring reasonable security measures. As concerns about data privacy continues to ratchet up, more state-level legislative action is being taken, which is creating a patchwork of privacy laws including such restrictive laws as requiring districts to keep all data stored within the state. At the federal level, regulators require "reasonable security," leaving the data holder to determine what that requires, depending on security standards, best practices, and the sensitivity of the data.

3. PROFESSIONAL REPUTATION
   The reputation of both the district and the technology leader are damaged when the network or district data are compromised. Network breaches often become the subject of media focus, creating a much bigger public relations disaster and leading to reputations being widely compromised.

4. TEACHING AND LEARNING
   When the network is unavailable, as with a Distributed Denial of Service (DDOS) attack, schools lose precious instructional hours. Teachers who are prepared to use technology in the classroom need to take the time to find and fall back on non-digital resources.

5. STUDENT DIGITAL RECORDS
   Student records may be breached and maliciously modified. The risk is not only external hackers, but students themselves. Breached student records may negatively impact future college applications or employment. Student identities may be stolen with no one the wiser until the students apply for college financial aid.
LEADERSHIP FOR DIGITAL LEARNING

HOW CAN DISTRICTS FIND SUCCESS WITH 1:1 IMPLEMENTATIONS? START WITH THE “WHY”!

Too many districts haven’t thought through the fundamental reasons why they need 1:1 devices for their students—they start with superficial reasons such as “keeping up with the digital natives,” or “fulfilling a board mandate.” Without a coherent, shared reason for implementing 1:1, the project is likely to be diluted and not have as strong an impact. But, when districts rally around reasons like “preparing students for life and work in modern times,” their decision making grows stronger and their impact is multiplied.

For maximum impact, districts need to prepare both their technological and human platforms for new ways of doing things and for continual, ongoing improvement.

Technological Platforms
- Adequate bandwidth for current needs and future growth
- Robust, reliable infrastructure
- Resilient networks with multiple paths
- Personal, connected devices for each student
- Efficient cloud strategy

Human Platforms
- Shared goals and metrics that align to the “why” of 1:1 implementation
- Continual improvement process for teacher practice
- Student-centered approaches
- Data-informed instruction and decision-making

Districts also need to execute the nuts and bolts of delivering the program.

Program Management
- Planning
- Implementation
- Continual Improvement

Communications
- Marketing to press, community, parents, students, and district staff
- Clear lines of communication within district
- Feedback obtained from students, teachers, parents, and other stakeholders

Leadership for Mobile Learning is a CoSN focus area. For a comprehensive collection of downloadable resources, videos, case studies, and more, go to cosn.org/LDL
ONLINE ASSESSMENT
AN EVOLVING LANDSCAPE. NEW OPPORTUNITIES.

Just three years ago, school districts were moving swiftly to prepare for online summative assessments. It was far more than simply adding technology. The move to digital assessments has ushered in significant impacts on teaching and learning. Technology rapidly emerged as an essential tool in planning, creating, delivering, and evaluating successful instruction. Now online assessments are becoming the standard and are in use regularly, not only for summative or high stakes assessments, but for interim and formative testing as well. The May 24, 2017 Special Report from Education Week, entitled “Student Testing: What’s Next,” notes that schools are expected to spend nearly $1.6 billion on classroom assessment tools. Additionally, the report stated that in a 2016 survey, “…83 percent of district or school leaders said their teachers were using one or more digital tools for conducting formative assessments during the 2015-16 school year.”

As district leaders continue to plan for and implement effective online assessment infrastructure and programs, these recommendations can help ensure the broader education community of students, teachers, parents, administrators, and school board members continue to benefit from the value of online assessments.

NINE KEY RECOMMENDATIONS FOR LEVERAGING ONLINE ASSESSMENT CAPABILITY AND CAPACITY

1. **Create and Sustain a Cross-Functional Strategic Planning Team**
   Key departments typically include curriculum and instruction, professional development, assessment, and technology. Collaboratively, this team can provide support for current and new initiatives that will determine how best to use the district’s online assessment system to improve instructional outcomes.

2. **Ensure Ongoing Funding**
   To succeed over the long term, funding for building digital learning environments must be continuous. This supports a robust network infrastructure and should eventually ensure that every student has an Internet-connected device.

3. **Embed Technology in Instructional Practice**
   When using technology is part of every student’s daily instruction, digital assessment becomes a natural part of teaching and learning rather than a special event that requires special preparation.

4. **Invest in Sustained Professional Development**
   Professional learning is more crucial than ever to help teachers move successfully to digitally enhanced instruction, emphasizing not only the “how” in using digital content and assessments but the “why” to support personalized learning and the development of higher order thinking and problem solving skills.

5. **Build and Maintain a Robust Infrastructure**
   Making sure your network infrastructure can support the demands of new assessments is a continuous commitment. You can find more information about bandwidth requirements online at www.setda.org/priorities/equity-of-access/broadband-imperativeii-2016/

6. **Select Devices Strategically**
   Tap the expertise of a range of stakeholders to ensure that devices meet the ongoing academic needs of students and teachers, and address the considerations of cost, maintenance, warranties, required peripherals, screen size, content availability, battery life, and power.

7. **Communicate Often and Thoroughly**
   Create and enhance mechanisms for proactive communication to school sites and all key stakeholders in your larger education community, emphasizing how data gathered from assessments is better informing instruction and student outcomes.

8. **Consider Logistics**
   Develop procedural manuals that include all necessary detail. This will streamline everyone’s work during key testing windows and ensure online assessments are delivered consistently and successfully.

9. **Use Assessment Data Effectively**
   Prepare and support teachers in using interim assessment data to gain deeper knowledge about students and use that information to personalize instruction.

CoSN has recently updated the Online Assessment: From Readiness to Opportunity tootokit and offers a comprehensive set of resources, planning tools and other information to support next-generation online assessment deployment. You can access it at cosn.org/assessment.
RESPONSIVE, RESPONSIBLE PRIVACY ADMINISTRATION AND MANAGEMENT MITIGATES RISK.

Continual management of a compliance program that designates rules, procedures, and the individual or group responsible for decisions is the starting point. The Student Data Principles, created by CoSN and the Data Quality Campaign (http://studentdataprinciples.org) offer 10 critical guidelines to serve as the foundation of administration and management practices.

STAY CURRENT AND COMPLIANT WITH FEDERAL AND STATE LAWS.
Working with your district’s legal counsel and coordinating compliance with your technology, assessment, curriculum, student services, human resources, and all technology vendors, is the first priority. While technology programs, employee behavior, and products and services are key components in compliance, the mandate begins at the district’s executive level. Many districts designate a single senior leader or leadership team to ensure legal compliance and currency.

ADDRESS COMMUNITY AND STAKEHOLDER EXPECTATIONS EARLY AND OFTEN.
On your website, in your student handbooks, parent communications, staff policies, vendor documents, annual reports, and any other available outreach, provide a clear review of your data privacy policy and compliance practices. At the same time, ask stakeholders about their expectations for data privacy and take those concerns into consideration when developing your policy. Communications and clarity go a long way in preventing issues, misunderstanding, and in some cases, legal challenges.

KEEP INSTRUCTIONAL IMPACTS IN THE PICTURE.
Student data is essential in supporting learning and success. Data enhances continuous academic improvement and the power to personalize learning. The challenge is balancing instructional needs and opportunities with the need for privacy. Students, families, educators, school leaders, and vendors alike, all play a role in striking the appropriate balance between access to learning resources and services and privacy.

FIVE CRITICAL GUIDELINES FOR ENSURING DATA PRIVACY IN YOUR USE OF TECHNOLOGY

1. STAY CURRENT AND COMPLIANT WITH FEDERAL AND STATE LAWS.
2. ADDRESS COMMUNITY AND STAKEHOLDER EXPECTATIONS EARLY AND OFTEN.
3. KEEP INSTRUCTIONAL IMPACTS IN THE PICTURE.
4. RESPONSIVE, RESPONSIBLE PRIVACY ADMINISTRATION AND MANAGEMENT MITIGATES RISK.
5. TRAINING. TRAINING. TRAINING.

Anyone who collects or has access to students’ personal information needs and deserves training and resources. From the swimming coach to school bus driver, school librarian to the nurse, teachers, counselors, and administrators in every department—everyone should learn how to use student data securely, effectively, legally, and ethically, in keeping with your district’s policies and requirements.

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STUDENT DATA PRIVACY.
A SCHOOL SYSTEM PRIORITY. AN ESSENTIAL COMMITMENT.

As citizens, students, educators, parents, employees, and consumers, we all have concerns about maintaining the privacy of our personal data. For school districts, data privacy is a multi-stakeholder priority, and it touches every aspect of operations—from student transportation to instruction, assessment to athletics, and counseling to community initiatives. Today and going forward, student data privacy policies and their implementation are hard-wired to governance, discipline, purchasing, and communications practices. Assessing privacy and compliance policies and practices related to your system-wide use of technology is a continual priority.

Student data privacy is a long-standing area of CoSN engagement, expertise, and experience. You can access CoSN’s comprehensive portfolio of resources at CoSN.org/privacy and TrustedLearning.org.
SMART NETWORK DESIGN FOR TRANSFORMATION & INNOVATION

SMART EDUCATION NETWORKS BY DESIGN (SEND)

Education networks have evolved from addressing district operational and administrative needs to serving students and teachers in and beyond the classroom, anywhere and anytime. Innovative technologies, more access to the Internet, and powerful communication, creation, and collaboration tools are driving instructional transformation. Rapid change is increasing demand for greater network capacity and reliability. In the not-too-distant future, innovations in data visualization, embedded digital formative assessment, immersive, adaptive digital content, and interoperability will place additional demands on district networks. And all this comes in an uncertain funding environment.

How can district leaders make high-stakes infrastructure investment decisions when technology, teaching and learning priorities, and funding are changing so rapidly and so constantly? Here are six core characteristics of the “new” network to include in your network design and architecture planning.

Multiple Paths to the Internet
The Internet is a destination for every education stakeholder. The new network will offer higher capacity and reliability through multiple connection points, either through multiple providers or multiple paths from a single provider.

Two or More Data Centers and/or Cloud Services
The goal is to increase reliability, ensure disaster recovery, reduce costs, and add agility to ensure future-ready design.

Reduction in Single Points of Failure
District WAN is designed to deliver increased reliability and to reduce the impact of any outages on students.

Software and Services Hosted in the Cloud
This provides greater Internet bandwidth, gives students reliable anywhere/anytime access, and streamlines access control requirements.

Near-term Requirements are Met with a Clear Vision for the Future
Your LAN is designed to meet near and mid-term performance demand and a roadmap is established to address long term demand.

Support for Students’ Use of Devices
Your network supports not only 1:1 but 1:3-5 student devices and the accompanying high density WiFi demand and delivery, streamlined support, and security for BYOD devices.

As districts experience growing demand for capacity, reliability, and mobility, the need for the new network is critical. That’s where CoSN’s Smart Education Networks by Design (SEND) resources are on point and valuable for both your leadership and technology teams. Download the guide at https://sites.google.com/site/cosnsend/home
STUDENT OUTCOMES AND BUDGET MANAGEMENT

Making technology central to the teaching and learning mission supports the drive to increase student achievement even as budgets shrink. While short-term cuts in IT funding may seem prudent when budgets are on the chopping block, too often this leads to increased expenses for the school system in terms of computer down-time and end user time dealing with technology issues. Reframe budget challenges as an opportunity to rethink and strengthen technology investments, operations, programs, staffing plans, and results.

The CoSN SmartIT initiative gives district leaders tools and resources to evaluate, rethink and strengthen technology decision making, aligning investments with your strategic goals, financial and human resources, and improvements in student learning.

STRATEGIC TECHNOLOGY PLANNING AND INVESTMENT

ALIGNING PRIORITIES. BALANCING CHOICE, COST & OUTCOMES.

Technology investments can be complicated and more often than not, the challenges begin almost from the moment a district begins to consider next steps in the overarching technology plan. With tight budgets and multiple stakeholders involved, each with valid concerns, a framework for evaluating technology initiatives and tools for arriving at well-supported decisions are more important than ever before.

The CoSN SmartIT initiative gives district leaders tools and resources to evaluate, rethink and strengthen technology decision making, aligning investments with your strategic goals, financial and human resources, and improvements in student learning.

THREE ESSENTIAL FOCAL POINTS FOR SMART IT DECISIONS

When technology initiatives are viewed as investments rather than simply costs, we have the opportunity to apply decision-making analytics that are meaningful in an education context. With this framework, we can think of investment planning as a triangle, with three equally important, interdependent perspectives.

1 TOTAL COST OF OWNERSHIP

Educational technology comes with direct and indirect costs. Using Total Cost of Ownership (TCO) analysis addresses the initial investment and the operational and support costs over the life of the investment for your entire technology environment. A TCO perspective helps all decision-makers holistically understand the costs of implementing and maintaining devices and related infrastructure. A sound TCO assessment will give you and your team the data you need to make informed decisions about technology initiatives and investments going forward.

CoSN offers a comprehensive set of TCO tools available at cosn.org/tco to assist in calculating the TCO of your district’s entire IT environment, including the costs of acquiring and maintaining the district’s entire IT infrastructure and operations. The tools cover all infrastructure, user hardware and software, staff support costs, and user-related costs. This kind of comprehensive assessment will help you articulate in quantifiable terms the overall effects of proposed budget cuts, investments in new initiatives, delays in previously established plans, and other strategic decisions.

2 STUDENT OUTCOMES AND BUDGET MANAGEMENT

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3 VALUE OF INVESTMENT

The decision to approve or amend a specific technology project also deserves strategic thought. For investments focused on educationally critical, yet qualitative benefits, Value of Investment (VOI) is a helpful perspective when working to gain School Board approval, articulating costs and benefits, comparing cost/benefit among competing projects, and determining if a project should be continued.

CoSN offers two helpful workbooks, the VOI Project Benefits Workbook and the VOI Project Cost Estimator Workbook to help district leaders measure the quantitative and qualitative costs and benefits of proposed technology projects. The tools help you connect projected benefits to your district’s mission, goals, and mandates. This toolset can be found at cosn.org/voi

SmartIT Resources ARE JUST A CLICK AWAY cosn.org/SmartIT
CLOSING THE HOMEWORK GAP

DIGITAL EQUITY STRATEGIES FOR LEARNING BEYOND THE CLASSROOM

Nearly 20 years ago, the E-rate program was created to provide basic Internet connectivity for all classrooms. Since that time, significant new challenges have emerged. Learning simply doesn’t begin and end in the classroom. The promise of anywhere, anytime learning for all students requires that we close the “homework gap” and the widening disconnect that impacts parents and guardians as well.

THINK OUTSIDE THE BOX TO ACHIEVE DIGITAL EQUITY

1. Create a Common Vision
   Technology literacy in a community is directly tied to economic growth and development. Local officials, such as mayors, understand that expanded broadband access is today’s interstate highway system. District leadership teams, including the Superintendent, Chief Academic Officer, Chief Technology Officer, and Chief Financial Officer, now have the imperative to address digital equity with new strategies and partners. They should partner with local officials and be a passionate voice for why broadband is essential to today’s learning.

2. Convening Your Community for Action
   Libraries, community centers, community-based organizations, and faith-based organizations can make great partners for school leaders in the drive to improve digital equity. Banding together with unexpected community partners can expand broadband access and serve families who are under-connected.

3. Get Creative About Wi-Fi & Hotspot Deployment
   Start by mapping out free Wi-Fi in your community and creating a directory that lists locations where students can access Wi-Fi for free and do their homework. Installing Wi-Fi on school buses can increase time for students to do homework and reduce disciplinary issues. Schools and public libraries are providing mobile hotspots with age-appropriate filters for students that lack broadband at home.

4. Learn How Others Are Closing the Homework Gap
   See examples and get underway with CoSN’s free, Digital Equity Action Toolkit http://www.cosn.org/DEtoolkit

5. Don’t Forget the Training
   Digital equity requires more than a device and a fast connection. Work with libraries, nonprofits, or community centers to provide training on how to navigate the internet safely, utilize software, and connect relevance to their lives.