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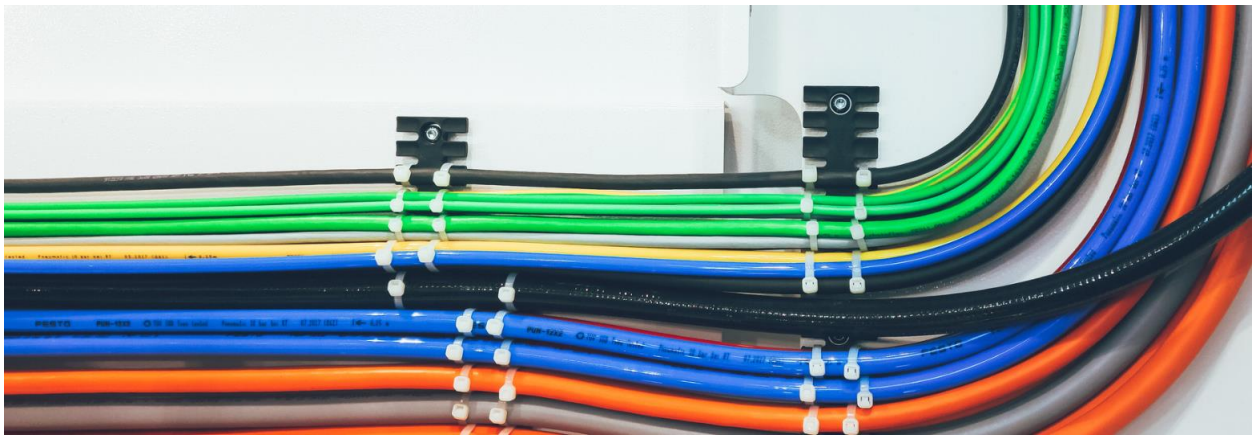
What is CoSN's 'new network design' for schools?

Written by [Stacey Pusey](#)
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School- and district-wide wireless internet access is no longer a nice-to-have — it's a must have.

And with staff, teachers, parents, and students needing 24/7 access, there's never a good time for down time. During [a recent webinar](#)hosted by edWeb.net — entitled "Smart Network Design for Transformation and Innovation: Reaching in and Beyond the Classroom" — two educational technology leaders reviewed [the six elements of new network design](#) for continuous service conceived by the Consortium for School Networking.

The paper shows how schools can take steps to ensure their critical infrastructure is secure and resilient. EdWeb.net's speakers added their own thoughts about the importance of each of the design's key elements.

1. Multiple paths to the internet

With multiple services provided to multiple buildings, districts can't afford to be down for even five minutes, said Frankie Jackson, the chief technology officer for Independent K-12 in Houston, Texas. Moreover, now that almost all of a school's information is digital — from student grades to employee information to building finances — districts need to make access a high priority. She says that from the beginning, technology plans need to provide for multiple paths and sustainability.

Glenn Robbins, the superintendent of Tabernacle Township School District in New Jersey, added that even in smaller schools and districts, leaders need to think about how they can help provide reliable access outside of the school and for the community.

2. Two or more data centers and/or cloud services

If schools need multiple ways to access their data and programs, they also need multiple ways to ensure that their data is secure. With the increased number of data hacks and ransomware attacks, as well as potential outages, Jackson says it's time for schools to start treating themselves like an enterprise. She advocated for districts to look at using multiple data centers and also consider having essential data housed in a Tier 4 data center, which is defined as having military-grade back up and protection.

For smaller districts, Robbins said budget and resources might put a high-end data center out of reach. By using multiple cloud services, though, these schools can still achieve peace of mind. Whether using multiple data centers or cloud services, both presenters agreed that the schools benefit from the tech provider being responsible for security and maintenance.

3. Reduction in single points of failure

Whether a single school or a large district, school administrators need to map their networks and understand where they have exposure. However, for budget reasons, schools need to focus on the most important places to reduce single points of failure and make sure school boards understand that if they want the best technology services, they will need to pay for them. In addition, Robbins emphasized the need to always have an up-to-date map of the network structure and understand how any changes impact reliability and sustainability.

4. Software and services hosted in the cloud

First and foremost, by using cloud-based programs, schools don't need to worry about having the staff and skills to maintain the programs. Using cloud services also gives schools versatility. They can manage the bandwidth and priority of services.

5. Near-term requirements are met with a clear vision for the future

A five to 10 year strategic plan is no longer viable — technology changes too quickly. Robbins said that every year, schools should be gathering stakeholders to ask what the school should look like in the future.

Jackson added that when planning for tech, she asks stakeholders what the kindergartners will need and what to do for them.

6. Support for students' use of devices

It's not just the students coming in with multiple devices. Teachers and staff have them too. Administrators should track network and program usage data and then plan around it. For example, in many schools, the bulk of users sign off at 3 p.m., so the school network needs less support after hours, but teachers, parents, and students are streaming their content all night. Schools need to make sure those programs are easily available from outside the school network.

With all of the discussion of data centers and outsourcing services, the presenter reminded attendees that they still need to provide staff with security training. "The weakest link in any security — whether it's infrastructure, whether it's a building, whether it's your house — is the human element," Robbins said. "We can do a lot of training, but if you forget to train that one person, that's the way in for something to happen."

About the presenters

Frankie Jackson is an independent chief technology officer serving as a catalyst for performance excellence in K-12 leadership. She started her career as a software engineer at NASA supporting Space Shuttle and Station Operations. Quickly moving up in the organization, she served as a Baldrige quality examiner and program manager of the Safety, Reliability and Quality Assurance contracts. She then moved to the K-12 education sector as CTO of Cypress Fairbanks ISD in Texas. As a nationally recognized influential leader at one of the nation's largest districts, she led an IT team of professionals in building the largest K-12 SMART Education Network by Design (SEND) in the nation using the most innovative, best-of-breed technologies. She is currently working on a new book that focuses on the critical aspects of transformational leadership and managing performance excellence in technology service organization. The book is due to be released in 2020.

Glenn Robbins is Superintendent of Tabernacle Township School District in New Jersey. His passion is harnessing a school culture that thrives on design thinking skills, innovative digital spaces, high caliber professional development, exponential thinking, BYOD/1to1, and makerspaces. Glenn encourages all students to have a voice, not only in building a school

culture, but also in designing student-led courses. He was named as a Digital Principal of the Year by NASSP for exhibiting bold, creative leadership in his drive to harness the potential of new technologies to further learning goals for staff, students, and the school community. Glenn has been recognized by numerous organizations for his innovative technology implementation methods and has been a featured speaker at numerous events across the globe. By empowering students and staff to have a growth mindset through design thinking, while implementing digital tools, we better prepare them for the profound shifts that they will encounter in life.

About the host

Ann McMullan is a 34-year veteran educator who served as the executive director for educational technology in the Klein Independent School District, located just outside Houston, Texas until September 2013, when she and her family moved to Los Angeles, California. For 16 years Ann led the team in Klein ISD that provided professional development on technology and 21st century instructional strategies to over 4,000 professional educators serving over 50,000 students. During that time Ann also co-chaired the Texas Education Technology Advisory Committee which developed the Texas Education Agency's Long Range Plan for Technology, 2006-2020.

Today, Ann is based in Los Angeles, California, working as a public speaker, writer, and independent education consultant focused on supporting leadership, visioning and planning to meet the needs of today's students. She is a frequent presenter at state, national and international education conferences. Ann serves on the Advisory Council of Project Tomorrow and is a leadership consultant with Executive Service Corps of Southern California, serving non-profit associations. In the fall of 2016 Ann co-authored and published *Life Lessons in Leadership*.

Join the community

Super-Connected is a free professional learning community on edWeb.net for school superintendents, district leadership, and aspiring district leaders.

The edWeb webinar referenced above, co-hosted by CoSN and edWeb.net and sponsored by ClassLink, can be found here.

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