

# Education Connectivity & IT Infrastructure **Playbook**

# Technology and education go hand-in-hand.

## The right IT plan goes a long way in **supporting academic success.**

The “one-size-fits-all” approach does not work when choosing IT infrastructure services for educational institutions. The right combination can be a competitive differentiator, but it’s important to choose wisely. With so many options, analysis paralysis can set in fast.

**Let the nature and purpose of your institution be your guide.**

There’s one thing successful educational institutions have in common: a winning technology game plan focused on connectivity, cybersecurity, voice, cloud, and colocation. We created this playbook to help you sort through the noise.





# A Winning Technology Lineup.

Choosing the right IT foundation is critical to fostering academic growth and student success. Given the high stakes, it can also be intimidating. There are many infrastructure options to build your foundation across four key domains.

## THE PLAYING FIELD



### ● CONNECTIVITY

The foundational network elements used to connect students, faculty, and administrators across campus and online learning environments.



### ● CYBERSECURITY

Robust security solutions to protect sensitive data and critical systems from accidental exposure or malicious exploitation.



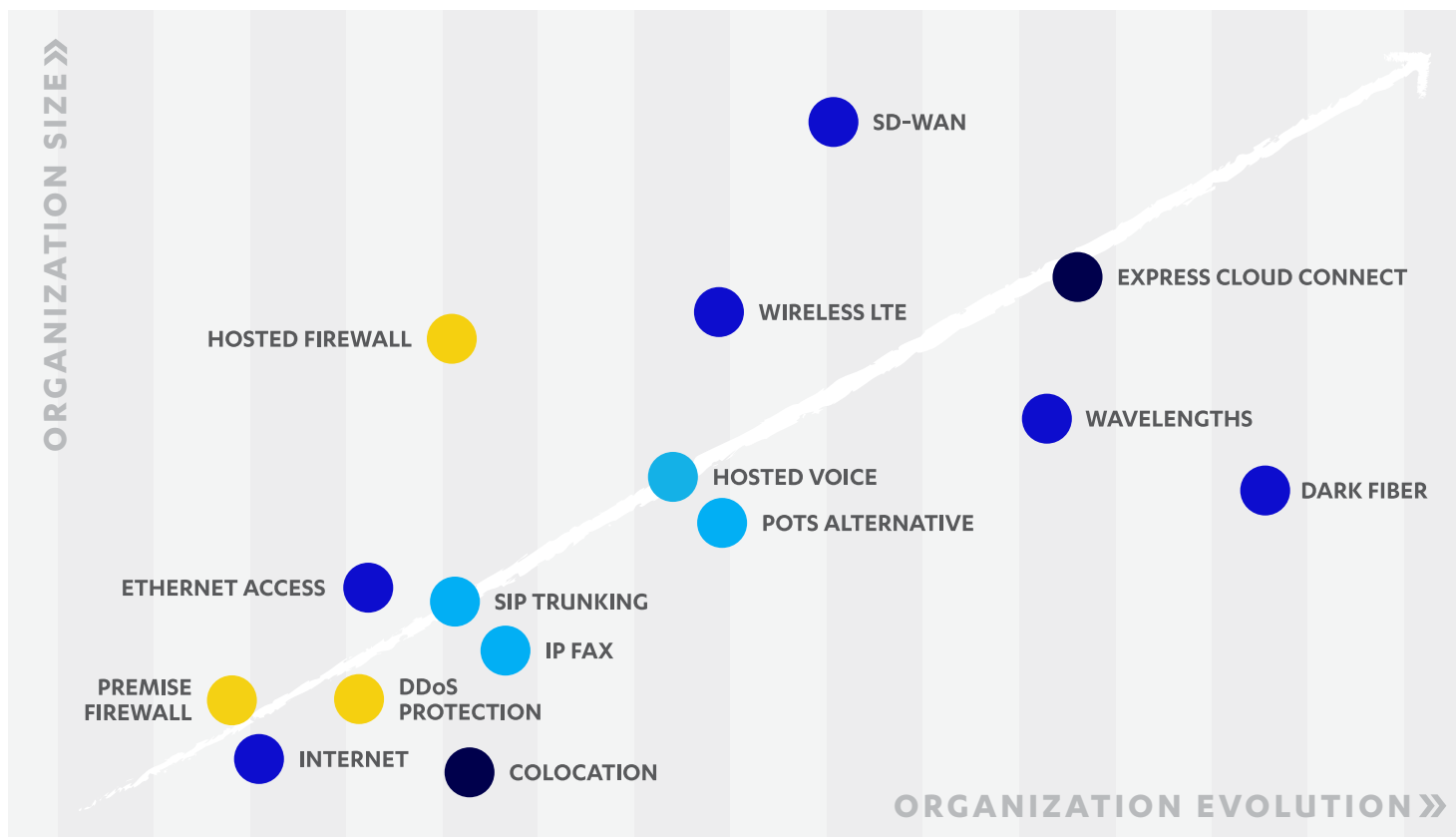
### ● CLOUD & COLOCATION

Secure, reliable data center solutions for traditional and hybrid environments, and a fast, dedicated connection.

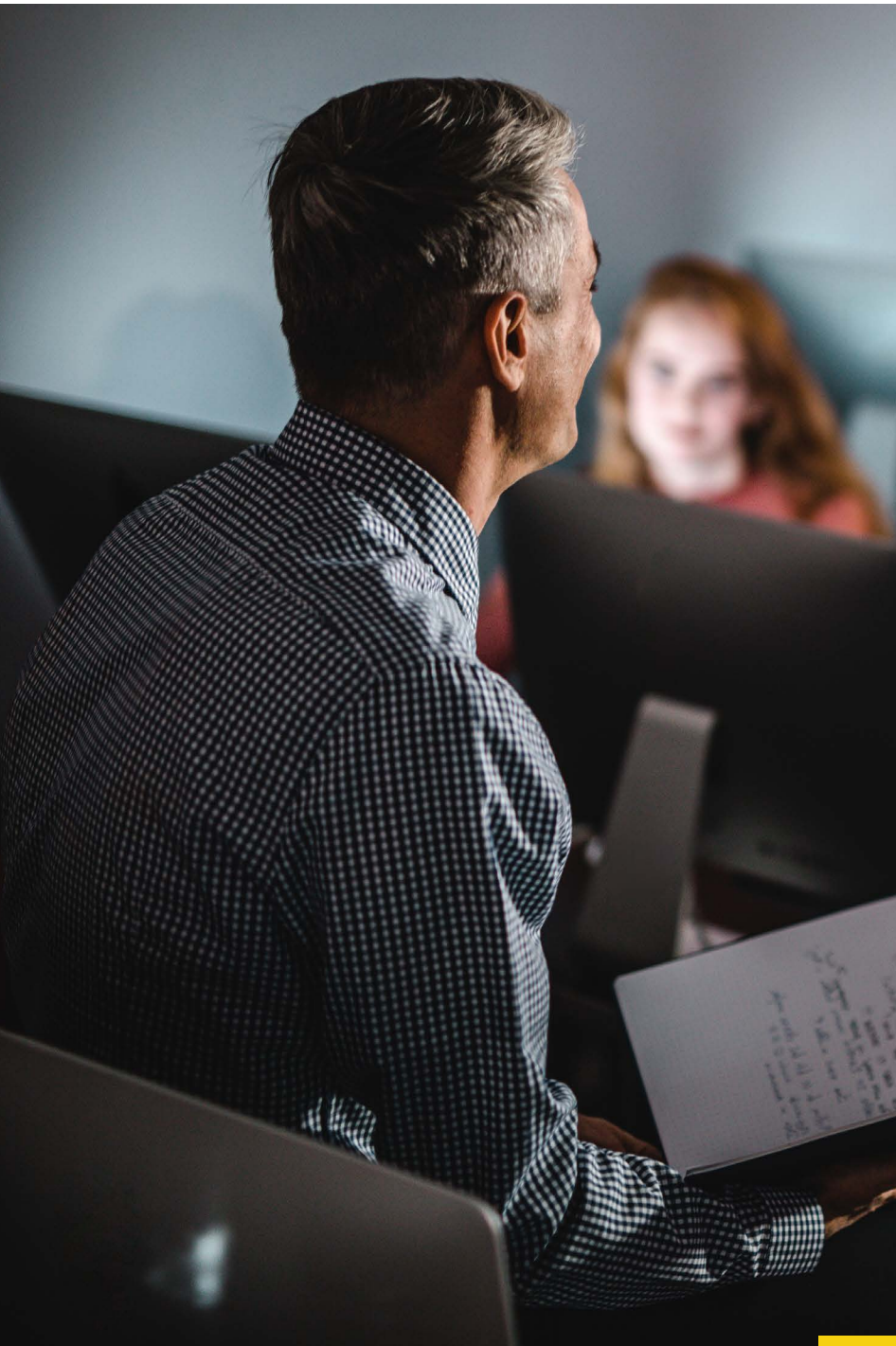


### ● VOICE

Combined voice and data solutions and tools to enable shared, seamless conversations across multiple platforms.







EdTech innovations have taken opportunities for learning beyond the classroom walls and transformed the ways educators and students interact. Whether in-person or remote, high-quality e-learning starts with high-quality IT.

- Maintaining fast, secure, and scalable network infrastructure to support digital learning devices, applications, and diverse learning environments from standardized testing to remote, hybrid and distance learning
- Protecting sensitive faculty, student and staff information as well as administrative records against accidental or malicious exposure
- Leveraging real-time data to identify focus areas and help students thrive
- Leveling the academic playing field and fostering academic equity
- Streamlining administrative processes from reporting and budget management to accreditation, while establishing governance frameworks for responsible AI use across teaching, learning, and operations
- Maintaining clear internal and external communications throughout all levels and departments

Successful execution across these strategic imperatives can help improve learning outcomes, streamline administrative processes and protect the school's reputation in the eyes of their staff, students and the public.

A solid IT infrastructure foundation must be flexible enough to support evolving demands, scalable enough to accelerate data transfers and secure enough to thwart bad actors.

## USE CASE 1: K-12 School District

Preparing the minds of tomorrow starts with IT that can match the needs of the present and adapt to the challenges of the future.

### ● **CONNECTIVITY:** Internet + SD-WAN + Ethernet Access or Dark Fiber

- Guaranteed bandwidth, symmetrical upload and download speeds, and dedicated access are ideal for seamless digital instruction.
- Streamlined network management and scalable, secure infrastructure deliver consistent performance that can handle the growing bandwidth demands of in-class technology across an entire district.
- For larger districts with multiple campuses and dedicated IT staff, dark fiber can provide the flexibility to build customized network solutions that scale with district-wide connectivity needs.

### ● **CYBERSECURITY:** DDoS Protection + Firewall

- Schools are an easy target for bad actors. Ensuring the troves of personal information stored on district computers never fall into the wrong hands requires strong perimeter defenses as a key element to protect against bad actors.
- Sometimes an attack on your systems is merely a diversion. DDoS mitigation systems ensure your networks are never brought down by a “smoke screen” of coordinated malicious botnet tactics.

### ● **VOICE:** Hosted Voice

- Productive remote learning, effective student collaboration and meaningful parent communications begin with a clear, crisp connection.



## USE CASE 2: Public University

From supporting a personalized collegiate education to enabling groundbreaking academic research to effective tuition and financial aid management, a foundation of reliable IT is essential for digitalized higher education.

### ● **CONNECTIVITY:** Internet + Ethernet Access

#### + Wave Services

- Dedicated bandwidth with symmetrical upload and download speeds supports seamless online lectures and cloud-based learning tools for students and faculty without the distractions found in substandard connectivity.
- For universities with multiple campus locations, data centers, or research facilities requiring high-capacity interconnection, wavelengths provide a scalable foundation to support campus-wide network aggregation and enable the performance demands of advanced research computing.

### ● **CYBERSECURITY:** Firewall + DDoS Protection

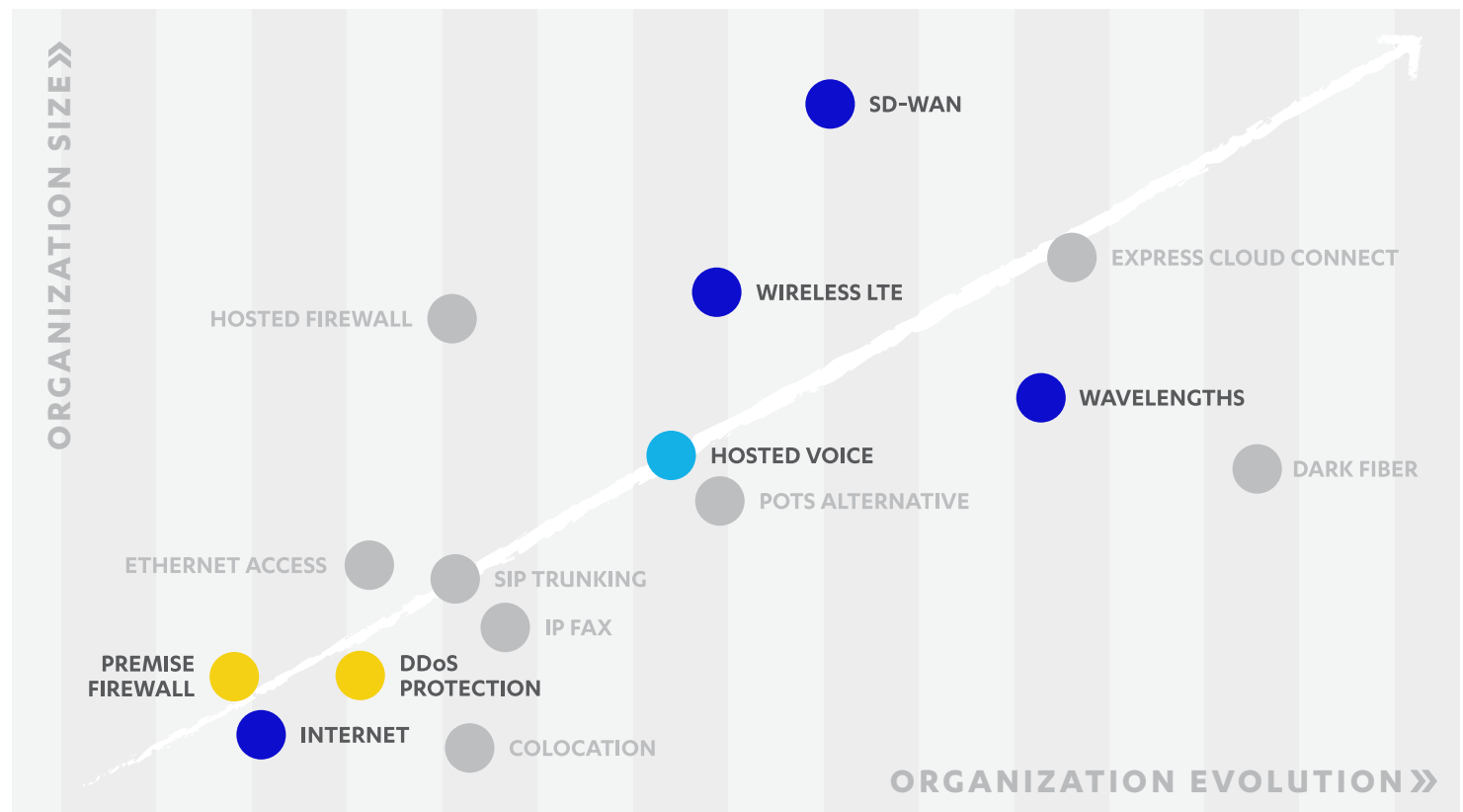
- Strong network perimeter defenses shield university offices, online portals and sensitive student records and research data from

cyberattacks, thereby fostering trust that academic pursuits and administrative processes won't be compromised by bad actors.

- Critical online resources could be knocked out by a successful DDoS attack. Active threat detection systems can spot and block malicious traffic in real time, ensuring faculty and students have uninterrupted access to the systems they need.

### ● **VOICE:** Hosted Voice

- Clear and reliable calls are an essential part of seamless university operations. Interactions at every level, from academic advisors fielding student questions to campus safety communications to annual fundraising efforts, benefit from high-quality phone and voice service. Making the most of every single call requires reliable service that delivers consistent, clear quality no matter what.



# What's **Your Play?**

These are the connectivity plays educational institutions of all sizes swear by. Refer to this playbook every time you're thinking of adopting new technologies, and use these plays as building blocks to put together your technology game plan. It can help you think through every move to ensure your organization is set up for success.

The tactics contained in this document address broad use cases. Some products may not be ideal for specific use cases or situations, and some products not included in the play may work better for other scenarios.

Segra offers a broad lineup of technology services and will help you design a winning technology game plan tailored to your unique needs.

**Let's start a conversation today.**

