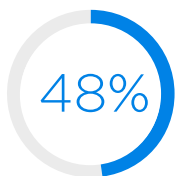


Modernizing IT to empower digital transformation

Meet evolving challenges in higher education
with the right IT infrastructure





of organizations say they struggle to control and predict IT costs.³

As colleges and universities prepare for the future, innovation will play a key role. If institutions are going to remain competitive, they'll need to leverage the power of technology to transform key operations, such as using big data to recruit students more effectively and digitizing resources to improve access to learning materials. As the higher-education technology group EDUCAUSE notes, "With the institution no longer confined to the physical campus, leaders must find new strategies for supporting technology everywhere and anywhere."¹

Innovation isn't possible without a modern network infrastructure that maximizes the value of IT, reduces operating costs and supports secure, high-speed connectivity. In fact, a recent survey by Forrester Consulting found that outdated IT infrastructure is holding up innovation at organizations worldwide. Only 55% of organizations said they can effectively scale their operations as needed. Nearly half of organizations (48%) said they struggle to control and predict IT costs.²

This white paper takes a closer look at why it's important for colleges and universities to modernize their IT infrastructure and what that entails. It also examines the biggest challenges to IT modernization and how a managed approach can solve these challenges.

Why modernize

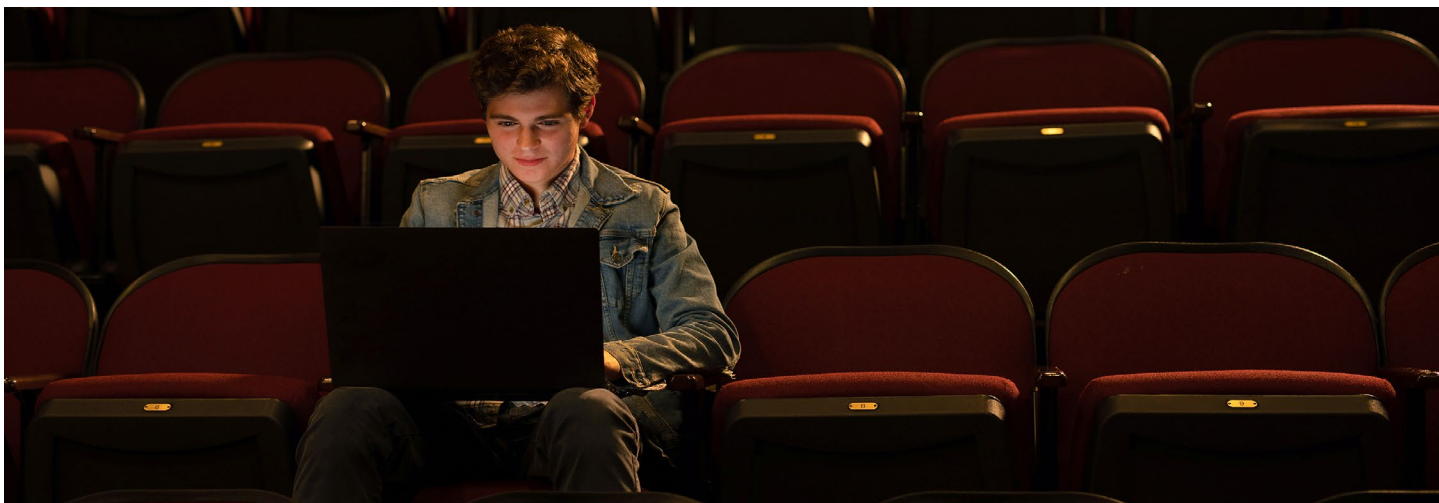
Factors such as globalization, college ranking systems and declining public funding have already made higher education a highly competitive marketplace. Now, colleges and universities are also competing for a shrinking pool of prospective students.

U.S. undergraduate enrollment has been slowly declining since its peak in 2010, and this trend is likely to continue as a result of demographic shifts. According to economist Nathan Grawe, highly selective colleges and universities will be least affected. But in states like New York, Ohio, Michigan, Wisconsin, Illinois and Louisiana, demand for national four-year universities could decline by 15% or more.⁴

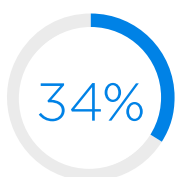
Innovation will be a key strategy for institutions to differentiate themselves as they compete for market share. Student expectations were already changing, as consumer apps have fueled a desire for online, on-demand services. The shift to remote instruction during the pandemic has created further demand for digital access to campus resources.

A modern IT infrastructure is essential for enhancing the student experience. Outdated systems and applications make it hard for students to connect with leading-edge services and for software to integrate seamlessly throughout the institution. In contrast, 44% of organizations that have modernized IT systems report improved quality of service and 40% report greater user satisfaction.⁵

Besides enhancing the student experience, innovation is critical for streamlining operations and reducing expenses. For example, smart campus infrastructure can help institutions save on energy costs and automation can reduce labor costs. These measures can play a significant role in reducing budgetary pressures while the economy recovers from the global pandemic.



In fact, IT modernization is an important cost-cutting strategy in its own right. Legacy IT systems are not only expensive and hard to maintain, they're costing colleges and universities in other ways as well. Unsupported systems that can't be properly secured expose colleges and universities to the risk of cyberattacks — and the overall cost of these attacks to the education sector is \$3.56 billion.⁶ In an IDG survey, 34% of respondents said they've seen measurable improvements in cost efficiency from modernizing IT systems.⁷



of organizations have seen greater cost efficiency from modernizing IT.⁸

Key elements of IT modernization

When modernizing IT systems, campus leaders should consider the full range of IT infrastructure necessary to keep pace with student and staff expectations and support future innovations. This includes:

Dependable connections. Modern teaching, learning and research initiatives require exceptional network performance and reliability. Institutions must plan for uninterrupted internet access for essential applications. Redundant fiber connections are important safeguards for failsafe connectivity.

The network services that colleges and universities deploy must be able to scale easily to accommodate future growth. With live video and other bandwidth-intensive applications becoming more common, network technicians should be able to optimize and prioritize the fast-growing volume of traffic. IT teams need platforms that make it simple to manage updates and configuration settings for routers across the institution.

Security solutions. Legacy firewalls are no longer sufficient. According to one recent report, 79% of colleges and universities have been the target of a ransomware attack, just one of many types of constantly evolving online threats.⁹ With the increase in remote working and learning as a result of the pandemic, the attack surface has only grown.

Modern network architecture requires flexible security solutions that can meet the unique risk profile of your organization. A trusted solutions provider can create the right combination of on-site hardware, unified threat management (UTM) and DDoS protection that meets your needs.

Cloud connectivity. Colleges and universities have steadily moved applications to the cloud for simpler remote access, greater interoperability and more efficient workflows across locations. Institutions can increase the speed and reliability of cloud-based applications with a high-performing and private connection between their organization and cloud service providers, bypassing the public internet for superior performance and security.

Modern networking. New turnkey solutions for routing, switching and other network architecture make deployment and configuration of network services fast, simple and easy to manage from the cloud using software-defined networking and other technologies.

Ubiquitous WiFi. Students and staff alike rely on seamless wireless access to keep them connected on campus. To support this requirement, your WiFi infrastructure should connect users in the most efficient way possible, reducing congestion and optimizing network performance. Modern WiFi infrastructure can self-optimize performance in high-density locations, balance the load evenly among multiple access points and ensure uninterrupted service with seamless failover capabilities if a controller or access point should fail.

Anywhere TV. The rise of online streaming services has dramatically changed the media viewing habits of young adults. Offer a TV solution designed for the needs of today's students — with on-demand content they can watch anytime, anywhere on the device of their choice and access to TV channel apps. This can increase engagement, inform students with custom content relevant to their education and enhance their overall experience.

Challenges to overcome

Updating legacy IT systems can be difficult, as numerous surveys suggest. Here are some of the main pitfalls that organizations encounter when they try to modernize their IT infrastructure.

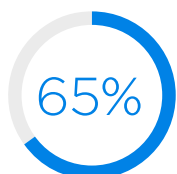
Staff capacity. Campus technology departments already grapple with IT staffing challenges; nearly three-fourths of campus leaders (74%) say hiring IT employees is a moderate or serious challenge.¹⁰ As a result, many IT employees are stretched to their limits just maintaining and supporting their existing technology systems.

Switching out legacy systems for new technologies involves several hours of installation, testing, configuration and training. These tasks create an additional workload that simply isn't realistic for many institutions to take on for themselves. What's more, campus IT departments might lack the skills and expertise necessary to complete these tasks. In one recent survey, finding staff with the right experience was one of the biggest barriers to IT modernization among organizations, cited by 20% of executives.¹²

Budgets. Modernizing IT infrastructure traditionally has required a large capital outlay. With campus budgets already squeezed from the effects of the pandemic, making a significant upfront investment in new technologies might not be possible for many institutions.



of organizations cite a lack of skills or expertise as a key barrier to IT modernization.¹¹



of campus leaders say data security is one of their top concerns.¹³

How managed services can help

Managed IT services can be a cost-effective way to address these key modernization challenges. With managed services, colleges and universities no longer have to purchase and maintain their own IT infrastructure. Instead, they can choose IT solutions that are fully owned, installed and managed by a trusted service provider.

Managed services directly solve the problem of staff capacity. By offloading hardware installation, system configuration, maintenance, updates and network administration to an experienced partner, campus IT teams don't have to worry about whether they have the expertise on staff to handle these tasks — and they can focus their time and effort on supporting students and faculty more effectively.

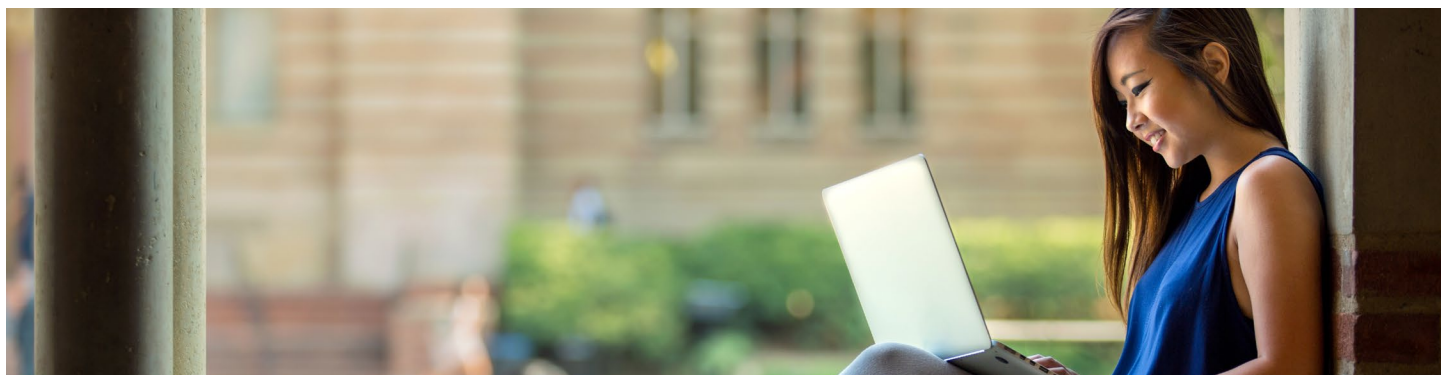
Managed services also make budgeting for IT modernization simpler. Instead of incurring a large upfront expense for new technology, colleges and universities pay a fixed monthly rate for managed services. This ongoing charge includes all maintenance and support, so there are no costly surprises if any equipment should malfunction.

Here are three additional benefits of choosing a managed approach to modernizing IT infrastructure:

Flexibility. When you buy your own equipment, you're investing in a specific network infrastructure with a fixed capacity. If your needs change faster than you anticipated, or if you underestimated the demands on your network, you're stuck until you have the additional capital needed for enhancements. In contrast, a managed solution lets you easily add more capacity as necessary. It also gives you the assurance that as technology evolves, you'll have access to the latest innovations.

Reliability. When you own your IT infrastructure, you're responsible for all maintenance and repairs. How might this affect the reliability of IT services? With a managed solution, you have the peace of mind that comes from having service-level agreements (SLAs) in place guaranteeing network uptime and a fast resolution to any problems that occur.

Security. Data security is a top concern for 65% of campus leaders.¹⁴ When you purchase and install your own network infrastructure, you're also accountable for implementing patches and upgrades to keep these systems secure. With managed services, security patches and firmware changes are installed for you to keep your systems continually up to date.



A trusted provider is critical

Working with a trusted service provider to customize, install, configure and manage the right combination of network solutions can help colleges and universities modernize their IT infrastructure with minimal disruption — especially for institutions with lean IT teams. Adopting a managed services approach offers many benefits, which is why outsourcing campus infrastructure to an experienced partner is becoming more popular in higher education.

When looking for a partner, your choice of service provider matters. You want a company that not only offers innovative technology but is also fully invested in your success. The right partner can help you at every step in your project, ensuring the success of your IT modernization initiative.

Spectrum Enterprise empowers colleges and universities to transform the student experience with industry-leading networking, voice, TV and managed services solutions. Our dedicated education IT experts serve hundreds of colleges and universities nationwide with a network engineered for exceptional performance, end-to-end accountability and 24/7/365 support.

Discover how Spectrum Enterprise can help you modernize your IT infrastructure.

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