

eCAMPUS NEWS

2022  
**SPECIAL  
REPORTS**

**DIGITAL  
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Resources for Ed Tech Leaders



# Digital Age Networking

for Education

Brochure

Alcatel·Lucent   
Enterprise



# Education

Alcatel-Lucent Enterprise Digital Age Networking provides a state-of-the-art network infrastructure that enables digital transformation in the education sector. It empowers educators to use next-generation digital learning tools, which can help improve student success, provide a superior experience, help with retention, and ultimately achieve excellence in education. Furthermore, ALE network solutions help improve campus operations by enabling IoT systems, simplifying staff activities, and reducing the overall cost per student. They also help improve school and campus security with automated and secure management of CCTV and other surveillance systems.

Digital age technologies that help improve efficiency are being adopted by universities and schools at an increasing rate. To stay competitive, schools need to integrate the latest mobility, data analytics, cloud and IoT digital innovations into their operations, processes and computing systems. This trend, known as digital transformation, enables learning institutions to evolve to an infrastructure that supports connectivity for digital applications, IoT and user devices, while enabling workflow optimization, more efficient processes, differentiated products and services, resulting in improved student and teacher satisfaction.

In the past it took days to provision a service on the network and configure it. Today it takes only seconds to provision using error-free automation with ALE Digital Age Networking. In this new paradigm, the network evolves from being a complex and costly underlying infrastructure, into an enabler of new revenue streams with low operational costs.

[Digital Age Networking](#) is based on three pillars and enables educational institutions to enter the digital transformation era.

- A high-performance [Autonomous Network](#) can automatically provision network services and automate mission-critical network operations while improving the user experience. In complex university and research center environments, as well as schools with limited IT budgets, the automated network configuration eliminates manual errors and increases operations efficiencies.

- [IoT](#) onboarding enables learning environments to scale-up digitalization through secure IoT provisioning and management. It can integrate, onboard, and connect a massive number of IoT devices that are at the foundation of the new digital business processes. In schools and research centers it can automate the provisioning of IoT devices in a secure and reliable manner.
- [Business Innovation](#) helps universities and schools accelerate their digital transformation with new automated workflows, taking the effort out of labor-intensive or repetitive tasks. In the education sector, business innovation improves the student and teacher campus environment by utilizing automated workflows for campus safety and efficient operations.



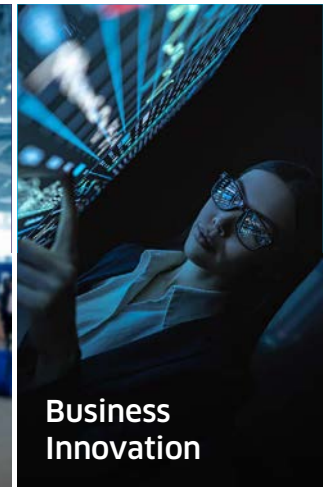
**Autonomous Network**

Automate mission-critical network operations and improve user experience



**IoT**

Scale up digitalization with secure IoT onboarding and management



**Business Innovation**

Accelerate transformation with automated workflows

## Brochure

Digital Age Networking for Education



# Autonomous Network

In any education institution there are multiple groups of users with different requirements. Students need access to the latest education technologies such as on-line courses, Learning Management Systems (LMS), and collaboration tools to communicate with their peers and teachers. Educators need access to grade systems, student information, research systems, as well as all the learning tools. Other staff requires access to administration systems, financial information, and security systems, among others. The Alcatel-Lucent Enterprise Autonomous Network simplifies the diverse need for connectivity, while ensuring that individuals only have access to the applications and systems for which they are authorized.

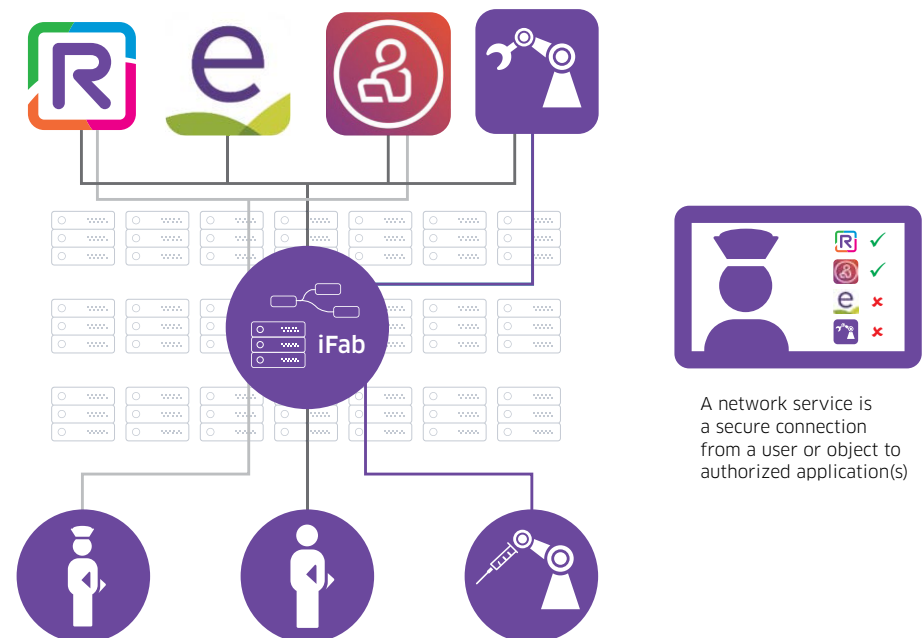
In a university environment there are many new technologies that are bandwidth hungry – demanding high-performance and unified experience on both wired and wireless networks. Research activities can collect, store and process massive amount of data, for example, a particle accelerator, astronomy image processing, and genome studies. As well, student entertainment and social activities make extensive use of videos including, social media, video streaming, and sport events. And, new learning technologies can consume tremendous amount of bandwidth for online courses, blended learning, and augmented reality. The ALE Digital Age Network leverages [Shortest Path Bridging \(SPB\)](#) which makes it simple to create a wide variety of network services, while maximizing all available links to provide better performance and a resilient network fabric.

IT infrastructure has evolved over the last 20 years to where it is now fully automated. Networks unfortunately have not kept up. While it takes minutes to deploy a new application, it can take days or even weeks to manually configure the network, element-by-element. This is now changing. IT leaders are shifting their focus to transformation rather than just building and running the infrastructure as was previously required.

The ALE Autonomous Network is configured and provisioned automatically. It ensures mission-critical, secure network operations, while optimizing the user experience. As part of the Autonomous Network architecture, [Intelligent Fabric \(iFab\)](#) technology automates the deployment of the network and simplifies moves, adds, and changes, while reducing the time and effort it takes to maintain and operate a network. In the future, it will adapt automatically to changing conditions and provide a secure connection automatically from a user, or object, to an authorized application. By analyzing network configurations, Quality of Experience (QoE) measurements, and known issues, correlated with network hardware and software version information, the network management software will be able to suggest configuration changes and updates to the administrator.

The ALE Autonomous Network provides a resilient and seamless connected experience with the [Alcatel-Lucent OmniSwitch® \(LAN\)](#) and [Alcatel-Lucent OmniAccess® Stellar \(WLAN\)](#) combined with ultra-fast convergence, secure network access control, assured Quality of Service (QoS), and secure diversified code to ensure an OS hardened switch. New generation Wi-Fi with embedded WLAN control in access points remove the need for physical centralized controllers. This distributed architecture delivers the best performance and scalability, and ensures high availability, with operational simplicity and low total cost of ownership (TCO). The WLAN solution is coupled with a comprehensive wired LAN that supports deployment requirements ranging from access, to core. All of this is supported in even the most extreme and harsh environments.

A single [Network Management System \(NMS\)](#) provides an additional level of integration between wired and wireless networks. This reduces the IT manager workload as they no longer have to handle two management systems with two sets of policies and configuration rules (one for the LAN, and another for the WLAN). The ALE NMS provides unified service management and network-wide visibility, which can improve IT efficiency and agility.



# Internet of Things (IoT)

The Internet of Things (IoT) in education spans multiple areas. In the education sector, there are many devices that support learning and research, for example, smart boards, 3D printers, robotics, and projectors. IoT also helps to ensure a superior experience for students and staff. It starts with student's personal devices such as, video games, Apple TV, Amazon Alexa, as well as university IoT devices such as digital signage, vending machines, smart washing machines, and parking sensors. Campus operations can also be optimized with connected and intelligent systems including HVAC, lighting, sprinkler systems, and sensors in the washrooms. Another area where IoT provides significant benefit is in ensuring campus safety. IoT enabled devices such as surveillance cameras, door locks, smoke detectors and other sensors help to provide early alerts about dangerous situations.

All of these IoT devices must be onboarded and provided with the required network resources for proper operation and monitoring. IoT enablement technology automates these activities; as well it ensures the network is secure and that only authorized individuals have access to authorized systems, minimizing the exposure to cyber attacks.

However, the limited processing power of connected objects prevents devices from having embedded, sophisticated security capabilities. This creates two major problems; devices are hard to configure, and they are easy to hack. The highest security risk is not the objects themselves, but rather the doors they open to other network segments. Once the object is compromised and hacked, the whole network becomes vulnerable to attack vectors such as a Trojan horse or other virus. When you consider the fact that educational institutions connect thousands, if not millions, of these objects, the challenge becomes clear; configuration and management of individual devices is totally unrealistic, and the security risks are enormous.

Alcatel-Lucent Enterprise's [IoT containment](#) approach is designed to provide an automated solution to securely onboard IoT devices while protecting the network at the same time.

Three major steps to connect, manage, and properly control any IoT device must be followed:

- **Discover and classify:** Each object connected to the network must be discovered and classified. Digital Age Networking provides the ability to access a very large (29+ million) device database to immediately identify the object connected to the network and automatically provision a configuration associated with a specific device.
- **Virtual segmentation:** It is critical to segment a single physical network infrastructure into separate virtual networks or containers, to ensure that each service or application has its own dedicated segment, enabling proper function and secure operations.
- **Continuous monitoring:** The network monitors behavior to ensure that the IoT devices and applications are functioning as desired. Each authorized object is stored in an inventory. This enables IT to know exactly and instantly, how many devices are connected on the network. It is important to continuously monitor a connected object on the network to take immediate action in the event that there is a deviation from usual behavior. In the event of unusual activity the network can take actions such as, disconnecting the faulty device, sending a notification to the network administrator, or changing the destination of the dedicated IoT container for further verification.





## Business Innovation

Automated workflows can provide specific and quantifiable information about the user connectivity experience and access to applications, and can compare it to benchmarks in other institutions in order to develop recommendations for improvements. Another important aspect that educators are trying to understand is what determines student's success. ALE Digital Age Networking collects a variety of information such as, where students congregate and with whom, class attendance, applications' usage, and devices used. This information combined with data collected from other systems can feed into a automated workflow system to help assess which students are more likely to succeed and which ones are more likely to drop out. While there is still a long journey to get to that point, intelligent networks can contribute to the process.

New processes are optimized when they leverage user, application, and IoT metrics in real-time. Digital Age Networking can help educational institutions optimize processes and services. This is key to innovation, improved productivity, workflow optimization, and an enhanced user experience.

Technology innovations including IoT, location services, and collaboration platforms are at the forefront of business process and services automation. Alcatel-Lucent Enterprise is leading the way by integrating these components to help educational institutions reap the benefits of their technology investments.

[Alcatel-Lucent OmniAccess Stellar Location Services](#) which include asset tracking and location-based services can help increase safety and reduce both operational and asset-related costs.

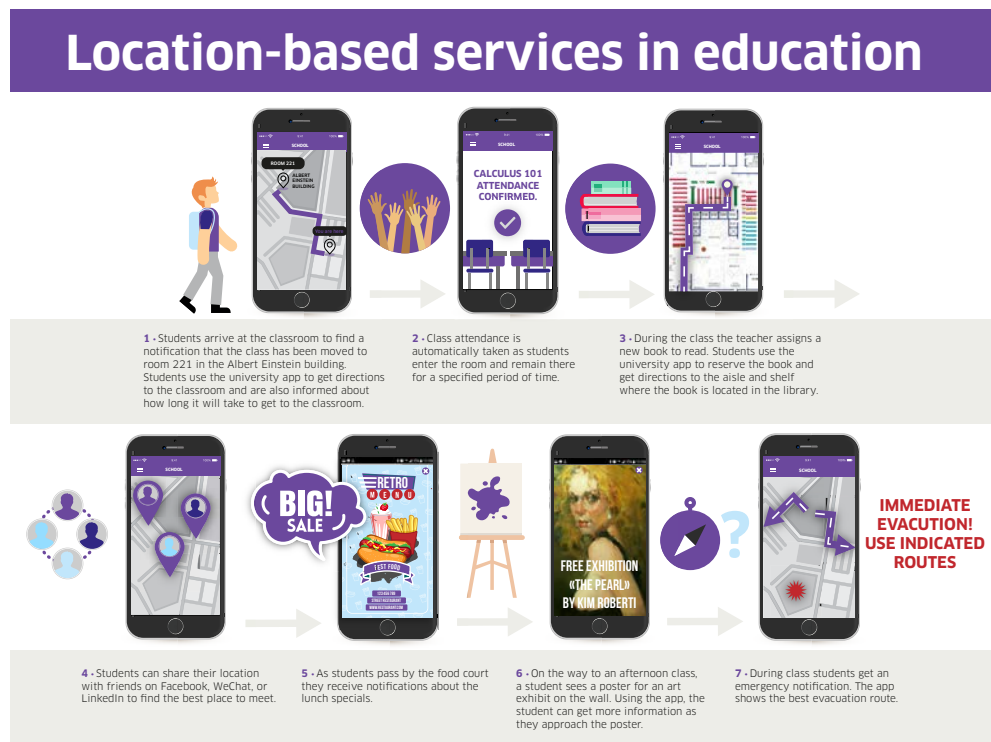
[Alcatel-Lucent OmniAccess Stellar Asset Tracking](#) provides real-time and historical location of users or objects in indoor facilities using Wi-Fi and Bluetooth technologies. This information allows education institutions to better understand workflows, increase utilization of equipment, significantly reduce the time it takes to find someone or something, avoid lost or stolen assets, and increase productivity, while enhancing user experiences. From an operations perspective, misplaced or lost equipment incurs heavy costs to schools and universities every year. Knowing where assets are in a real-time, or where they are stored, can help facilities keep equipment costs under control. Other key OmniAccess Stellar Asset Tracking features include real-time hot spot tracking and historical contact tracing which can help identify areas where crowd restrictions are being exceeded, or allow follow-up notifications with individuals in the event of an incident such as, possible exposure to harmful chemicals or infectious diseases.

[Alcatel-Lucent OmniAccess Stellar Location-based Services](#) (LBS) includes wayfinding (self-navigation indoors), and geonotifications (push messages) based on geolocation, all managed from a cloud application. **Wayfinding** enables turn-by-turn directions to classrooms, offices and lecture halls, as well as other points of interest such as, the cafeteria and restrooms. **Geonotifications** are messages relevant to the location, which can be sent to staff, students' and visitors' mobile devices. LBS enables education institutions to understand user behaviors and patterns. The LBS cloud application captures the data and provides analytic dashboards that can be used to optimize people, assets, and operational workflows. This information can help facilities run more efficiently, enable indoor navigation, and generate revenue by offering customer promotions and services based on the students' location.

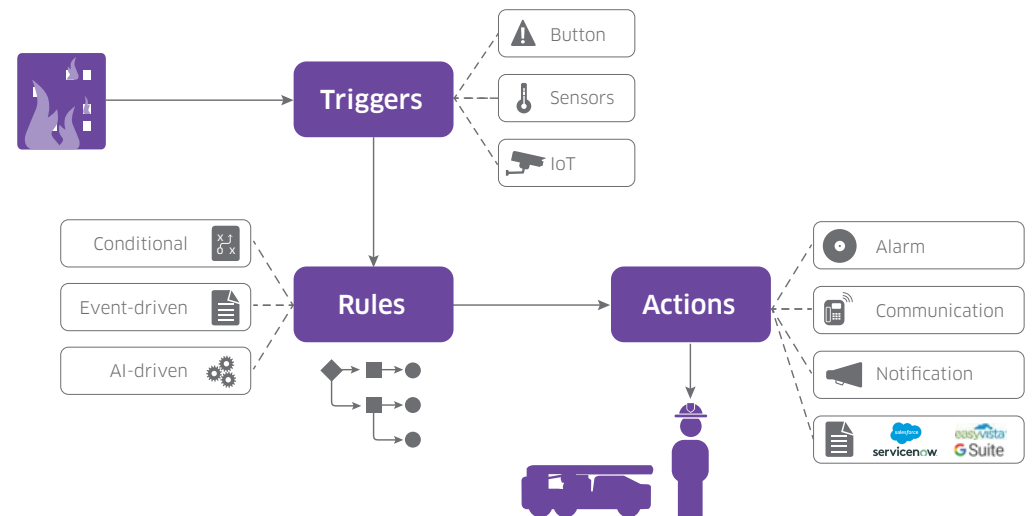
### Brochure

Digital Age Networking for Education

LBS can be combined with university apps to offer services that provide a unique and differentiated experience for students. LBS can also help institutions create new revenue sources as well as benefit from operational savings. Enhanced services can be offered to students and visitors. With wayfinding the university can provide information about the parking spot closest to class, give directions from the parking spot to the classroom, automate class attendance, or provide directions to the shelf in the library where a book is stored. With geonotifications, the university can offer local shops the opportunity to send promotions and advertisements to students and visitors as they pass by. Students could get notifications about the meal of the day, or special sales in a store that sells university apparel. Following are a few examples of LBS at work in an educational environment.



Real-time and historical data with a geolocation context enable the development of new innovative digital business processes and services. Integrating data from the OmniAccess Stellar Location Services with a business collaboration tool like [Rainbow™ by Alcatel-Lucent Enterprise](#) enables automation of simple or repetitive tasks. It also enables the development of workflows that can be automated using **triggers, rules, and actions**.







## Summary

Digital Age Networking is the Alcatel-Lucent Enterprise blueprint that helps schools and universities enter the digital era and enable their digital transformation.

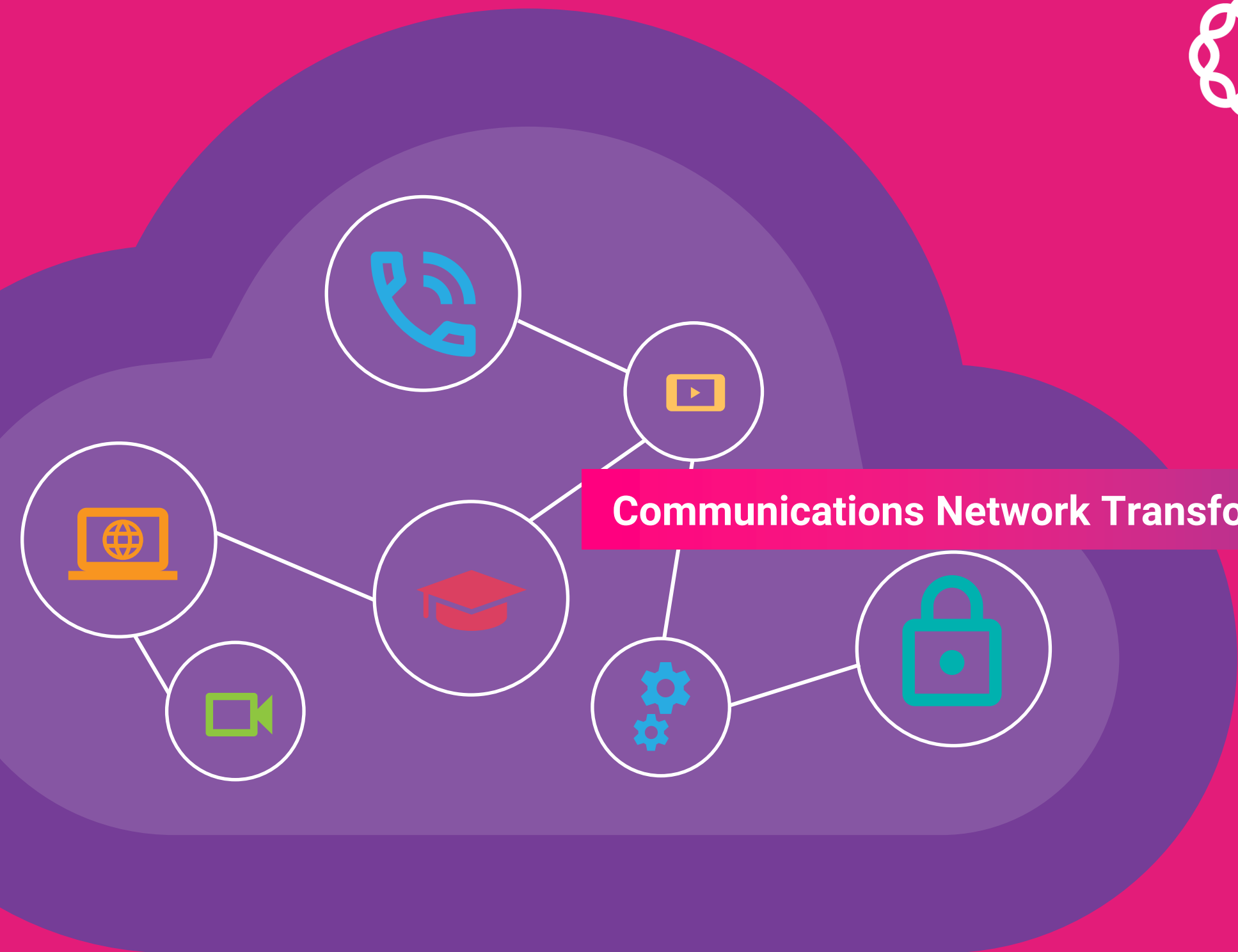
The ALE digital transformation blueprint is based on three pillars:

- **An Autonomous Network that easily, automatically, and securely connects students, teachers, processes, applications, and objects:** The Alcatel-Lucent Enterprise Autonomous Network is based on a streamlined portfolio complete with a true unified management platform, delivering common security policies across the LAN and WLAN. The Autonomous Network also provides deployment flexibility indoors, outdoors, and in industrial environments. Network management can be delivered on-premises, in the cloud, or in a hybrid deployment, depending on customer preference.

- **Secure and efficient onboarding of IoT devices:** Segmentation keeps devices in their dedicated containers and minimizes the risk of having the device and network compromised. IoT containment can help educational institutions easily and automatically understand if the device is behaving properly, or not, and help to keep the network safe.
- **Business innovation through workflow automation:** Integrating user, applications, and IoT metrics in real-time, with geolocation data into Rainbow workflow capabilities, simplifies the creation and roll-out of new automated digital process and services. This is the key to innovation, enhanced productivity and optimized workflows.

Alcatel-Lucent Enterprise is committed to developing networking technology and solutions that help learning institutions realize their potential through digital transformation.





# Communications Network Transformation in Education

# Communications Network Transformation in Education

**The typical college campus is a complex ecosystem, in many ways operating like a small city.**

Much like a city, universities have functional areas that must work together to create a community. Academic departments, research facilities, security, maintenance, IT, medical services and more need to stay connected to create a productive learning, and living environment for students, faculty, and staff. Of course, each function has its own unique, mission-critical communications requirements.

With Covid-19 and remote learning, colleges and universities have dramatically redefined the scope of their communications needs. In their drive to enhance the learning environment, reduce costs, and streamline network management, institutions are learning that communications network transformation can be complex.

As campuses look to transform their communications infrastructure, many are saddled with legacy hardware and analog devices that they would desperately like to retire. But that too is challenging.

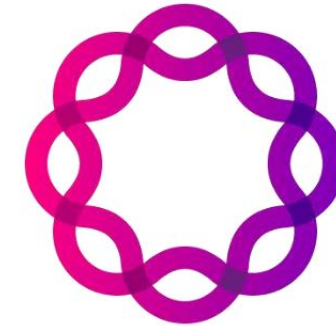
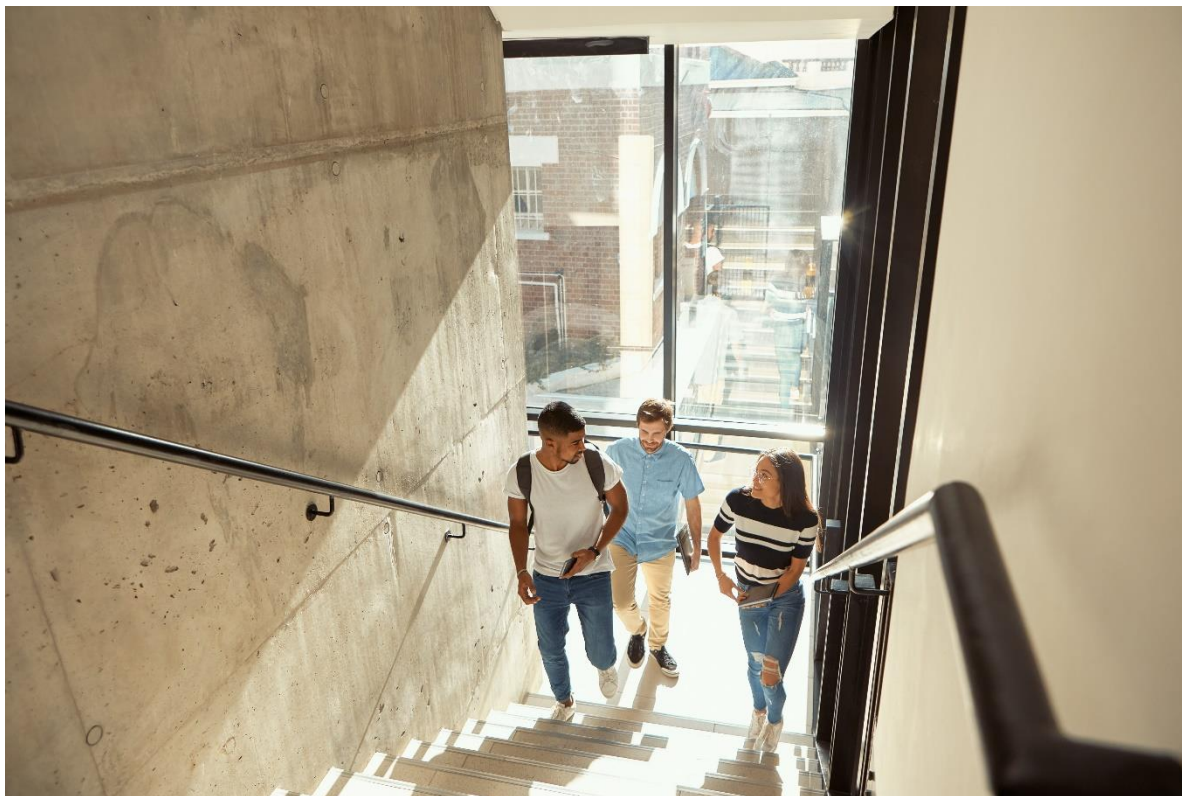
Consider something as simple as an analog security phone in a parking lot. It may be connected by copper wiring buried underground, 150 meters from an analog gateway. Technically it could be replaced by an IP or a wireless device but at what cost? Would new cable have to be laid or wireless infrastructure deployed in a remote location?

Suddenly a simple, inexpensive replacement turns into thousands of dollars in new infrastructure and many hours of labor for each security phone.



# Communications Network Transformation in Education

In any digital transformation, IT leaders must evaluate their users' needs and balance technology choices with the unique requirements of each constituency. A move to public or private cloud will likely be part of any infrastructure refresh but, legacy or updated premises-based equipment will almost certainly need to be part of a campus communications strategy.



ribbon®

Ribbon has a long history of transforming communications networks for the world's largest telecom providers. Our heritage translates well to university networks that likewise require scale, resiliency, and reliability. In this eBook, we'll cover some of the key considerations required to help higher education institutions make the transition from legacy communications environments to the latest technology. We'll also describe some of the Ribbon solutions that can help.



# A Little Background

First, let's start with how we got here and where we're headed. For decades, Ribbon has supported large-scale call control platforms, like the Nortel SL-100 and CS2100, that serve many of the world's leading universities. These carrier-grade platforms have served campuses with zero downtime for years at a time.

Many haven't been replaced as there were no cost-effective options that could meet the institutions' security, scale, and resiliency requirements while supporting the breadth of applications in use. However, the recent pandemic has exposed the biggest weakness of these platforms—they were designed to deliver services to users in fixed locations.

These platforms were developed long before mobile phones and cloud collaboration tools became part of everyone's life. IT leaders have recognized that the future for their campus communities is an evolution to cloud-based UC platforms like Microsoft Teams, Zoom, or a host of others. But the requirements for security, scale, and resiliency haven't changed. The reality is that new UC platforms will need to coexist with legacy call control platforms and other telephony systems.





# A Little Background

Ribbon is uniquely qualified to support this evolution. We have experience with the communication needs of educational communities, as well as long-standing business relationships with cloud providers like [Microsoft](#) and [Zoom](#).

The key tools in Ribbon's portfolio for communications network transformation are:

- [Session Border Controllers](#) (SBCs) that provide seamless connectivity to any telecom provider, voice security to encrypt traffic, and media transcoding to ensure legacy voice systems can communicate with each other.
- [Policy and Routing solutions](#) are the core of a communications network, offering centralized dial plan and user management across any collection of call control platforms.
- [Ribbon Analytics](#) is an enterprise scale platform that uses AI and Machine Learning to prevent fraud, robocalling, and Telephony Denial of Service (TDoS) attacks.
- [Line Access Gateways](#) from simple ATAs to carrier grade, high density analog line support with loop lengths over 7,500 meters.

Of course, creating a true solution is more than just one bit of Ribbon software or hardware; it's about harnessing an ecosystem of associated solutions (handsets, headsets, etc.) and deployment partners to deliver a complete solution.

With that context in mind, let's review a real-world example from a world-renown university.





# Transformation Case Study

A leading US educational institution, based on the west coast, had a complex voice infrastructure. The university community serves 150,000 users and has multiple telecom environments. The university has a large main campus and a medical system that includes hospitals, clinics, and doctors' offices.

As with any large organization, managing and connecting systems from different vendors, varying generations of technology, and numerous types of applications was complicated and expensive. The institution wanted to reduce its costs and deployment complexities, but one requirement stood out: it needed to efficiently manage the constant moves, adds, and changes as students, faculty, and staff came and went.

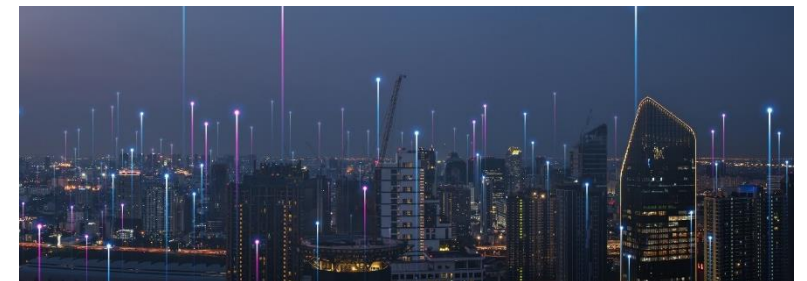
This constant management burden consumed too much time from a limited pool of skilled IT resources.

When the university approached Ribbon, it was looking for an intelligent, agnostic "core" campus network that was not tied to any one vendor. Ribbon was able to leverage its [SBCs](#), [analytics](#), and centralized [policy and routing solutions](#) to provide that core.

Instead of managing dozens of disparate systems, Ribbon's infrastructure allows calls to be seamlessly routed from one legacy system to the next, using a common dial plan maintained in the Ribbon communications core.

Additionally, Ribbon elements integrate with Microsoft Active Directory, making it easier to add new users or revoke services after employee or student departures.

Ribbon's vendor agnostic communications core allows the university to keep all its legacy systems connected while centrally managing policies and connectivity rules for individual users without having to administer each system every time a change is made. This saves thousands of staff hours annually, reduces the need to retain specialized labor, and minimizes mistakes that could disrupt services.





# Ribbon Elements Create a Connected Community

Ribbon's campus network solutions act as an overlay on top of existing or future communications environments to ensure that all the legacy and new technologies work together. Ribbon's management tools monitor the health and safety of the communications network.

Ribbon's analytics tools use machine learning to look for patterns and watch for known bad actors. Ribbon tools can automatically take action to respond to unauthorized network access, cyberattacks, denial of service attacks, fraud attempts, and network quality incidents.

For the university's employees, this automation provides a breadth and depth of engagement that can't be replicated manually, and it operates 24/7. Of course, Ribbon solutions work with connectivity from any telecom provider.

Finally, Ribbon's Line Access Gateways enable integration between modern IP systems and a myriad of analog devices (elevator phones, modems, fax machines, door phones, security devices and more) that still exist across the campus.

Ribbon's carrier-grade gateways can support the university's copper cabling, even if a device is located 1.5 kilometers or more from the gateway. Ribbon eliminates the cost and complexity of replacing decades worth of legacy infrastructure.

Whether the task is to connect PBXs with secure SIP trunks, simplify and secure Microsoft Teams or Zoom deployments, or migrate cloud UC solutions, Ribbon is a one-stop-shop for true digital transformation in education.

Most importantly, a Ribbon core makes it easier to introduce the latest cloud technologies. With Ribbon, one part of the university can move to Zoom while another can choose Microsoft Teams, based on their needs, and both can be integrated with legacy call control platforms.

Ribbon's centralized policy and routing solution allows individual groups and departments within the university to use the systems that best fits their unique needs.



# Conclusion

Many educational institutions are more anxious than ever to begin their own digital transformation journey. However, the scale and complexity of their campus communities often slows their transition. They need a partner that can help them overcome the obstacles, moving from legacy communications hardware developed one, two, or even three decades ago to modern cloud-based tools.

Institutions want experiences that match the expectations of their incoming freshmen, not their alumni. That's why it's no surprise that Ribbon is already at the heart and the core of modern communications in some of the world's preeminent educational institutions. Ribbon has the scale, resiliency, security, and cloud migration choices that educational institutions need. And we have system integrator partners who can help with deployment.

Simply put, the best campus network solutions are essential to keep faculty, staff, and students connected, all under the umbrella of **digital transformation in education**.

**And that solution is**





## About Ribbon

Ribbon Communications (Nasdaq: RBBN) delivers communications software, IP and optical networking solutions to service providers, enterprises and critical infrastructure sectors globally. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility, including core to edge software-centric solutions, cloud-native offers, leading-edge security and analytics tools, along with IP and optical networking solutions for 5G. To learn more about Ribbon visit [ribbon.com](https://www.ribbon.com).





# Q&A with the Experts: The Future of Remote Work in Higher Education

## The technology and remote worker partnership

The nature of work is changing all around us. In higher education, our fortunate circumstance is that the “why” of work never changes. Everyone in higher education is invested in successful outcomes for students. But we do not have an endless supply of money or time — and we need to use both wisely.

Adaptation and change are difficult in the best of circumstances. However, we have all been thrown into the unknown due to the COVID-19 pandemic. Colleges and universities reacted quickly, moving classes online in a matter of weeks. There is still much to learn about how to move forward effectively, efficiently, and in the most engaging manner possible.

We are going to explore how technology may be able to help you manage remote staff and maintain labor compliance with rules and regulations, while continuing to maintain your institution’s work culture.



### Jen Perkins, Higher Education Industry Consultant, UKG (Ultimate Kronos Group)

Jen Perkins has over 20 years of public sector experience. She has served as CIO of the City of Boston and Director at the System Office of Higher Education for the State of Massachusetts. Expertise: Strategic goals, measurements of success, and operational efficiencies.



### Dennis Miller

*AVP of Human Resources and Benefits Administration  
Claremont Colleges*

Dennis is the Associate Vice President of Human Resources and Benefits Administration in a shared services environment at the Claremont Colleges, a consortium of seven separate and highly regarded institutions of higher education. Dennis has held several executive roles during his career in human resources and was formerly the Chief Employment Officer for Cal Poly Pomona Foundation.

Dennis’ main focus in the workplace is organizational development with an emphasis on process improvement through the application of technology and team development.

Dennis holds a Senior Professional in Human Resources certification from the HR Certification Institute and a Senior Certified Professional from the Society for Human Resources Management. He holds a master’s degree in Human Resources Development and Management from Chapman University. He is also a retired Marine Corps Air Traffic Controller.

## Q&A: The future of remote work in higher education.



We have with us today Dennis Miller, who has years of experience managing people and thinking about ways to do so more effectively.

### Dennis, what are the biggest issues that the Claremont Colleges are facing right now?



I think the answer to the question is not limited to the Claremont Colleges. It's relevant to most higher education institutions — which is how to run a university and deliver a high-quality collegiate experience to its students when these outcomes have historically been achieved in person.

So, the big questions for today are, what level of on-site attendance will there be and how we can manage and lead an entire workforce remotely when they are accustomed to working on-site?

Our higher education workers fall into two general categories:

- **Exempt employees.** They include faculty and are typically paid an annual salary. These roles may be highly compatible with working remotely and are not held to strict time and attendance reporting requirements.
- **Nonexempt employees.** These are staff who are paid hourly. Unlike exempt employees, these employees are required to follow strict federal and state requirements to track actual time worked. This category poses the highest risk for noncompliance with rules and regulations that could result in litigation.

Ensuring our nonexempt employees are maintaining compliance is our focus. When employees are physically present, supervisors can visually confirm they are performing duties. When employees are working remotely, that visual confirmation evaporates.

Many companies use the honor system for hourly employees to track and report time. But we know that employees tend to adjust their time reported to their benefit. To be honest, even I'm not sure what time I started working ten or even two days ago.

**Research shows that time theft can cost organizations as much as 7% of gross payroll. Without automation, this theft will likely go unreported.**

Osterhaus, E. (2015, April 23). *43% of Employees Commit Time Theft: How Software Can Reduce Payroll Losses*. Website: <https://www.softwareadvice.com/hr/industryview/time-theft-report-2015/>

## Q&A: The future of remote work in higher education.



Yes, that makes sense — it's important to identify the areas that require the strictest compliance with rules.

### With a mix of on-site and remote employees, how are the colleges tracking time worked?



The majority of our staff are working remotely. But those who are still on-site use either timeclocks or mobile to punch in and out.

Mobile has been a very helpful and effective tool for us. It's important for geographically distant or remote staff to be able to clock in and out without having to go into the office. Geofencing and geolocation are two additional tools that can help managers who want to know the physical location of a person when they are clocking in and out. Using geofencing at my previous institution helped us ensure employees were staying within the guardrails of clocking in/out.

Leveraging these technologies provides flexibility for your employees, but consistently maintaining compliance is also vital. It's important to understand that there is a risk associated with balancing privacy and employee relation issues with compliance issues.



So, we've got dashboards. We've got visibility through technology. We've got geofencing. We have people using their mobile phones. This all sounds great! But it's also starting to sound a little expensive.

### How can we justify such an expense with all the fiscal pressures we are feeling?



Organizations that have existing tools in place may not be leveraging those tools or technologies as best they could. It's best to revisit how they're using technology and maximize its applicability.

For organizations that don't have technology in place, my recommendation is to develop a cost-benefit analysis. I know the American Payroll Association has statistics on rounding issues with employees who use automation versus paper timesheets. That alone will typically save enough money to justify implementing an automated solution.

In my opinion, electronic timekeeping systems are not as expensive as most people think. And they provide a lot of value to employees and metrics that managers can use to more effectively budget for labor.





## Q&A: The future of remote work in higher education.



The future can be very hard to predict. Institutions have to be ready to pivot and adapt to the current challenge and prepare for the next one.

### What changes in response to the pandemic do you see sticking?



I believe the status quo has been challenged, with respect to working remotely. We have proven over the past couple of months that there are more jobs compatible with working remotely than we thought three months ago. I expect more higher education jobs to migrate to working from home. And I believe on-site work will still exist.

The other trend I see sticking is the push for technology to manage the workforce. For organizations that use paper or manual processes, now is the ideal time to develop and execute a plan to migrate to an automated solution. Technology should become part of the higher education workforce culture — whether it's mobile access to record time or direct deposit. In fact, you'll probably ask yourself why you waited so long to do so. It's a smooth process that achieves something so necessary, and it's more than just ensuring employees are paid fairly and accurately.

Now is the very best time to prepare for incorporating workforce management technology into your methodologies, and the numbers are there to support such a budget expense.

**I would say now is the very, very best time to prepare for the future for organizations that may be a little hesitant to migrate from paper to technology-based time collecting.**

Dennis Miller



We've talked about some very interesting topics today, including the convenience of implementing automated management technology, the workforce visibility gained through using it, and some tips on how to justify such an expense. Your insight into the potential future status of the higher education workforce has been extremely valuable.

### Thanks, Dennis, for sharing today!



Connect with us online @UKG.com/highered