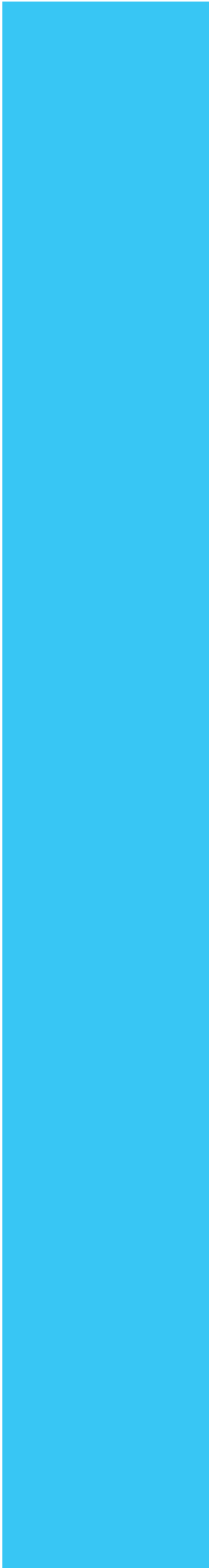# Lumen Helps University of Denver Take on Digital Transformation

Reliable network infrastructure powers innovation at DU

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The Platform for Amazing Things℠

As colleges and universities move forward from the pandemic, campus leaders are looking to leverage the changes they made during COVID to accelerate digital transformation.

Using smart technologies to improve campus operations and redesigning instruction to support digital literacy are critical strategies for driving student success and keeping institutions competitive, according to Russ Kaurloto, CIO and vice chancellor of information technology for the University of Denver (DU).

Kaurloto joined DU in July 2021 after serving as vice president and chief information officer at Clemson University for four years. Before that, he served in various IT leadership roles for a children's hospital, the City of Los Angeles government, and the University of Southern California over the course of 15 years.

With the help of industry partners such as Lumen, Kaurloto is spearheading innovations that will position DU as a leader in modern research and education. Here, he offers his IT vision for the university and the infrastructure needed to support it, as well as advice on how campus leaders can successfully achieve their own IT goals.

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Anytime, Anywhere Connectivity

Kaurloto envisions a campus environment in which teaching, learning, and research are powered by anytime, anywhere connectivity, made possible by both WiFi and LTE technology.

The university's 14,000 students would be connected to the internet and each other from anywhere on campus. Faculty and administrators would have access to real-time data on student engagement, performance, and other metrics, so they can provide the best possible student experience. Smart Internet of Things (IoT) sensors would collect and transmit information that can help the university streamline operations and achieve carbon neutrality.

To realize this vision, Kaurloto is looking to create a private 5G network on campus. He also wants to give every student a standard, LTE-enabled device when they arrive.

"If we give every student the same device running on the same platform, then we can achieve true digital equity," he explained. "And because the university owns those devices, we can push out apps to students that are relevant to their coursework and to completing processes that used to be manual. Instead of carrying around textbooks, students can use e-books and digital collaboration tools."

Ensuring that students are digitally literate and able to thrive in an information-based economy when they graduate is an important aspect of this vision. For instance, students should know how to communicate and collaborate with colleagues using digital tools and platforms. They should know how to leverage technology for digital storytelling.

In Kaurloto's vision, instead of requiring a written paper, an English professor might ask students to create a video or other multimedia asset. This content would go into a digital portfolio so that students can showcase their work when they're interviewing for a job.

"There is some really great work going on at DU already," he said. "My goal is to take these pockets of innovation and scale them across the university."

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A Modern Approach to Network Infrastructure

To support these initiatives, DU is moving to 100 Gbps connectivity and eventually will transition to 400 Gbps. Kaurloto is also consolidating and collapsing two legacy data centers on campus and moving to a hybrid cloud model for data storage.

Lumen is helping to bring his IT vision to life by providing scalable, resilient, high-speed fiber connectivity to the university. In addition, Kaurloto has explored on-premise network-as-a-service models, in which the university would augment its traditional network services with a subscription-based financial model. Lumen would provide the backend technology infrastructure with the ability to instantaneously scale for growing needs and expansion. Kaurloto recently deployed a NaaS solution and privatized 5G network at DU's mountain campus and it's currently in full operation.

The NaaS model also takes the pressure off of IT staffing issues. "Hiring effective network engineers is a challenge for universities," Kaurloto observed. A managed services model would allow the university to offload this responsibility so that IT staff can focus on more strategic priorities.

"I have a cable modem at home," Kaurloto offered as an example. "I don't own it. I can make changes to it. It's subscription-based. I don't have to buy it from the cable company. Why am I still going down this same path with network services? This is the last area within campus operations that hasn't been disrupted, and it needs to be. This is where I see us moving, and it's what I'm counting on from a company like Lumen."

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3 Keys to Success

Executing such an ambitious IT agenda isn't easy. "To gain buy-in for your strategy, it must have a proven ROI," Kaurloto said.

Campus CIOs must earn the trust and support of not only institutional leadership but also the students, faculty, staff, and other end users who will be affected by the changes. This can be accomplished only by demonstrating significant value for stakeholders.

Based on Kaurloto's extensive experience in leading IT transformation, here are three recommendations for success.
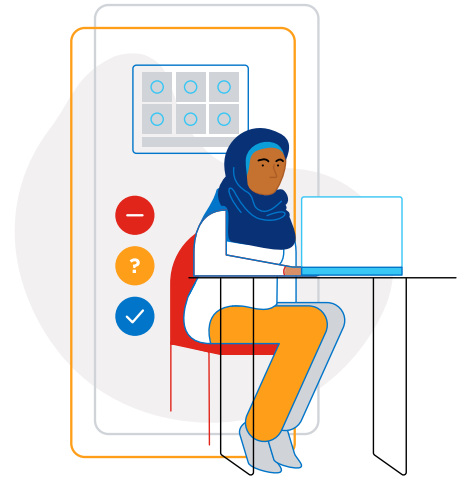
Start small. Kaurloto has learned not to bite off too much at first. "It makes people very nervous to make exponential leaps," he said, noting that CIOs will be far more effective if they begin with more modest initiatives and then make incremental changes. "If you try to start with the big bang, it's too much of a risk, and no one's willing to support you," he asserted. "You're setting yourself up for failure."

Share successes. To earn the support of stakeholders, CIOs need to communicate the value their initiatives provide through multiple channels, ensuring the entire campus community knows about it. "The best thing we can do for ourselves in IT is to have our own marketing team," Kaurloto said. "We don't market the good work that we do nearly enough."

Choose the right network partner. Partnering with an experienced, industry-leading network solutions provider such as Lumen can help colleges and universities build future-ready network environments that position them well for successful digital transformation.

"Connectivity is critical," Kaurloto concluded. "Without that, we have nothing. We might as well unplug what we're doing right now if we don't have that piece."

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