SAIT Polytechnic Case Study

About SAIT Polytechnic

As one of Canada's leading polytechnics – an innovative and entrepreneurial post-secondary institution, distinct from universities and colleges in that it offers a skills-focused approach to learning – SAIT Polytechnic offers relevant education and training for more than 66,000 local and international students each year.

The institution's main campus consists of thirteen buildings in four major complexes on approximately 92 acres. Its programs include customized training solutions and more than 2,300 career-oriented personal development courses to provide students with the required knowledge and skills for a rewarding career.

Educational excellence is an ongoing priority for SAIT, which is passionate about helping organizations further their commitment by establishing research partnerships, preparing SAIT graduates for work readiness, and delivering competency-based education, training, and workplace development solutions.

PANDUIT®

building a smarter,
    unified business foundation
Connect. Manage. Automate.

Company
SAIT Polytechnic

Country
Calgary, Alberta, Canada

Industry
Education

Business Challenges
To build a world-class educational facility with an agile network infrastructure to accommodate the institution's plan to quickly advance its learning culture and deliver a steady stream of highly qualified workers to the workforce.

Panduit Solutions
A highly reliable, scalable Enterprise infrastructure solution to increase network availability and productivity while achieving more sustainable operations.

Panduit® Net-Access™ Cabinets offer optimized thermal management, energy efficiency, and superior cable management. Category 6A 10Gig modular jacks, faceplates and patch cords ensure maximum performance and reliability.

Business Benefits
A future-proof, scalable infrastructure that provides systems reliability and optimizes SAIT's business operations while delivering an enhanced learning environment for its students.

Preparing for the Future – Today

The Panduit Unified Physical Infrastructure[SM] approach helps SAIT meet today's learning requirements and accommodate tomorrow's innovations

Business Challenges

SAIT Polytechnic is concerned about the economic health of Canada, which is threatened by a severe shortage of highly skilled young people to replace a generation of retiring baby boomers in a variety of trades and technology careers primarily energy, construction and manufacturing.

To address the pending shortage of qualified workers, SAIT decided to build a state-of-the-art learning environment that would support its mission of being "an innovative organization equipping people to compete successfully in the changing world of work by providing relevant, skills-oriented education."

The new building needed to contain a flexible network infrastructure to support a robust learning culture with a sharpened focus on student education and customer needs.

"We needed to future-proof our physical infrastructure as much as possible in a manner that would allow us to upgrade our bandwidth requirements and accommodate changes in our network infrastructure as these technologies advanced," said Peter Kehler, CIO, Information Systems, SAIT Polytechnic.

Funding the project was another major challenge for the institution because it could not afford to go over budget. In addition, the project needed to be completed within a 12 month timeframe to meet the anticipated start date for the fall semester of classes.

Unified Physical Infrastructure

communication   computing   control   power   security

Strategic Objectives

The main objective for SAIT was to construct a new building "to help students achieve their personal goals and graduate so they can meet the workforce needs of our country." A new facility would allow it to build an exciting learning culture that attracts new students and delivers a more enriched experience to the students.

SAIT also wanted to ensure the new structure would be operationally efficient with a reduced environmental impact. To achieve its goal of LEED certification, SAIT deployed a centralized building management system to reduce its energy consumption.

In addition, SAIT wanted an attractive location on the local and national levels for students to experience its programs of study. It also wanted the actual components of the building to be a part of the learning experience for students while having the resilience to ensure greater end-to-end network security, agility, and availability.

Panduit Unified Physical Infrastructure℠ Approach

The Panduit Unified Physical Infrastructure℠ (UPI) approach to infrastructure design and development provides effective integration of critical systems – communication, computing, power, control, and security – in a single, easy-to-manage network infrastructure. This approach gives companies such as SAIT Polytechnic the ability to foster a skills-based training environment to transfer innovation into the classroom while providing scalable growth and sustainable operations.

The Panduit Enterprise Solution aligned with SAIT's overall vision to acquire technology that could differentiate its new facility from similar institutions and supply the business agility and flexibility to accommodate ever-changing user needs for optimum performance.

Panduit Solution

SAIT has enjoyed a solid working relationship with Panduit for many years, which made it easy for the institution to choose a Panduit Enterprise Solution to fulfil its network infrastructure requirements. The solution supports voice over IP (VoIP), Power over Ethernet (PoE), and wireless systems throughout the facility.

According to Peter Kehler, "Panduit has the proven ability to deliver an end-to-end, unified solution with innovative designs that offer superior cable management, and effective network integrity within the entire facility, including the telecommunications rooms, classrooms, labs, and the equipment room."

Panduit ® Net-Access™ Switch and Server Cabinets house network equipment and were outfitted with IP monitored PDUs to maximize space and provide thermal management with improved airflow. The copper cabling system is a cost-effective choice, which helped SAIT stay within its tight budget.

The Panduit ® PatchRunner™ Vertical Cable Management System with angular patch panels and racks was deployed in all of the 30 network rooms to maximize density while minimizing floor space. Approximately 6000 network connections were implemented to maintain network reliability and minimize trouble shooting. The Panduit RJ45 plug lock-in device provided an added measure of physical security on all voice connections to prevent accidental disconnection of users and other critical connections.

Panduit also implemented Mini-Com® Faceplates which snap in and out for easy moves, adds and connectivity changes, a key requirement for SAIT. In addition, the 2 post telecommunications rack with high performance copper cables creates a reliable foundation for mounting SAIT's telecommunication and data center equipment.

"Panduit has the proven ability to deliver an end-to-end unified solution with innovative designs that offer superior cable management, and effective network integrity within the entire facility..."

Peter Kehler
CIO, Information Systems,
SAIT Polytechnic

Unified Physical Infrastructure

Business Benefits

On Sept. 5, 2012, SAIT officially opened the doors to the 740,000 sq. ft. Trades and Technology Complex, which consists of three buildings – the Aldred Centre, Cenovus Energy Centre and Johnson-Cobbe Energy Centre. These three wings are home of the MacPhail School of Energy, School of Construction and the School of Manufacturing and Automation.

The Complex is the first project to be selected as a finalist in two categories by the Project Management Institute Southern Alberta Chapter – the Engineering and Construction, and Community Advancement categories. The Trades and Technology Complex has also been named one of the most innovative and exciting urban infrastructure projects in the world, according to KPMG's Infrastructure 100: World Cities Edition publication.

Working diligently with Gibbs Gage, the architect who designed the project, and Canem Systems, who performed contractor services, Panduit was able to deliver the $400-million expansion project on time. This expansion is the largest in SAIT's history, adding capacity for an additional 8,100 students in a flexible and efficient learning space, which includes additional labs, classrooms and workshops. The larger facility allows more students to further their desire for skills-based training while furnishing instructors with the resources they need to provide students with the best education possible. To control costs, the project was funded by the Alberta Government and several generous donors.

SAIT now experiences ease of deployment and enhanced network performance for its demanding high-speed and bandwidth applications while exceeding the latest industry standards. As a result, the Trades and Technology Complex is positioned to meet existing and emerging technology needs for the next fifteen to twenty years.

The award winning architecture – which achieved LEED Gold Certification for the Aldred Centre and Johnson-Cobbe Energy Centre and Silver Certification for the Cenovus Energy Centre – features exposed systems, conduits and monitoring equipment to allow students to experience how the components they study function in the real world.

"SAIT has realized the initial goals of innovation, flexibility and technology capacity and maintenance in the Trades and Technology Complex which will generate benefits to the institution for years to come. SAIT's highly skilled graduates have benefited from the building components being part of the learning experience and are prepared to fill the needs of industry and drive economic health and prosperity today and in the future," said Kehler.

Real-World Solutions

*With a proven reputation for excellence and innovation, Panduit and our partners work with you to overcome challenges and implement real-world solutions that create a competitive business advantage. Panduit offers the broadest range of solutions, from data centers and intelligent buildings to manufacturing operations, to help you build a **smarter, unified business foundation.***

Technology Leadership

Panduit develops innovative physical infrastructure solutions that meet the rapidly changing needs of our clients, from hardware and software to advisory services. This commitment is supported by investment in advanced research, solutions-focused product development, world-class manufacturing, and collaboration with customers at the forefront of technology.

Partner Ecosystem

Our best-in-class partner ecosystem offers a comprehensive portfolio of services that span the project lifecycle, from planning and design to delivery, deployment, maintenance, and operation. Panduit business partners – distributors, and certified architects, consultants, engineers, designers, system integrators, and contractors – are qualified to help you achieve your objectives and realize predictable and measurable results.

Strategic Alliances

Panduit cultivates long-term strategic alliances with industry leaders, including Cisco Systems, EMC, IBM, and Rockwell Automation, to develop, optimize, and validate solutions for our customers. This investment in people and resources helps solve our customers' greatest business challenges.

Global Business Commitment

Panduit is committed to delivering a consistently high level of quality and service the world over. With a presence in more than 100 countries, local Panduit sales representatives and technical specialists offer guidance and support that bring value to your business. Our global supply chain, which includes manufacturing, customer service, logistics, and distribution partners, provides prompt response to your inquiries and streamlines delivery to any worldwide destination.

Sustainability

With a commitment to environmental sustainability, Panduit develops and implements solutions that protect, replenish, and restore the world in which we live. This commitment is demonstrated by Panduit's LEED Gold certified World Headquarters, leveraging the Unified Physical Infrastructure^{SM} approach to enable convergence of critical building systems to drive energy efficiency and ongoing operational improvement.

Transform Your
Physical Infrastructure

Call or visit us online,
we can show you how.

Panduit Corp.
World Headquarters
Tinley Park, IL 60487

cs@panduit.com
US and Canada: 800.777.3300
Europe, Middle East, and Africa:
44.20.8601.7200
Latin America: 52.33.3777.6000
Asia Pacific: 65.6305.7575

www.panduit.com

PANDUIT®