

# Victoria University Redefines Student Experience with a World-Class Next Generation Wi-Fi Network



## Victoria University

**Industry**  
Higher Education

**Location**  
Melbourne, Australia

**Size**  
40,000 students; 1,800  
faculty and staff

## Technology is an Integral Part of the Campus Community

For Victoria University, technology is more than simply a way to communicate. It's key to unlocking access to a wealth of opportunities across a vibrant campus community. For more than 100 years, the University has provided outstanding education to students from around the world.

Technology is present everywhere at Victoria University. The institution relies on its network to give educators, students, and the community access to a wealth of research and academic resources. Technology is also a huge part of student life, providing support for social networking, collaboration, and mobile technologies.

With so many critical operations depending on its network, ensuring high-performance, dependable connectivity anywhere, on any device, is key. But until recently, IT leaders were struggling to keep pace with an explosion of new devices and increasing expectations. Staff and students were complaining about poor coverage and repeated log-in requests as they roamed around campus.

"We were looking first and foremost for reliable coverage," says Marro Kim, Communications Infrastructure Manager at Victoria University. "Our legacy wireless network was about ten years old, and simply could no longer deliver the performance and density we required. In some situations, we had a single slow wireless access point shared by twenty or thirty students."

What began as a relatively limited initiative to improve wireless connectivity soon became part of a much larger vision to extend digital transformation across the University.

"We were going about a haphazard way of replacing our aging infrastructure," says Zoran Sugarevski, Executive Director, Information Technology Services at Victoria University. "We turned to a more strategic approach to transform our way of doing business through technology and Cisco wireless solutions. Upgrading wireless was just one part of realizing that vision."

"Now students can access university resources no matter where they are with a Wi-Fi connection that is always up, always on and easy to access," says Professor Peter Dawkins, Vice-Chancellor and President.

The transformative solution lets the University offer greater blended learning opportunities, so students can connect to live lectures remotely and view recorded lecture material online, ensuring they have the tools needed to succeed. Digital transformation also supports increased collaboration between peers and teachers, for better student outcomes and higher student satisfaction ratings. The University wants students to feel connected and supported, whether they are sitting in a classroom or studying remotely.

One of the most exciting benefits of mobile and Internet of Things (IoT) technologies is their ability to gather granular data from people, devices, and things. Victoria University wants to take advantage of all that data gain to provide insights into its students, their behavior and preferences, and its own operations. It wants to apply that understanding to deliver a more personalized experience to students, faculty, and visitors. Together with Cisco, the University has launched a long-term digital strategy to revolutionise learning and research across the entire campus community.

## Pervasive Wireless Erases Boundaries

The cornerstone of the Victoria University digital strategy is powered by an end-to-end wireless solution that includes Cisco Aironet Series 802.11ac Wave 2 Access Points and Cisco Catalyst Switches. Together, their innovation delivers higher speed connectivity and an improved, consistent user experience for students, faculty and staff.

Now students can view remote lectures in higher quality, listening to recordings of classes with less lag, and accessing richer digital content offered from instructors across the entire campus, whether they are indoors or outdoors. Students are also collaborating with peers and instructors via social networking and collaboration tools like Cisco Spark and WebEx, using smart phones, tablets, laptops, and

other devices. When a high-density scenario occurs such as a large flash crowd of students joining a lecture, the network will not collapse. Using wireless innovation such as Cisco's Flexible Radio Assignment, the network automatically adds enough wireless capacity to serve the large influx of students. Working behind the scenes, students and staff get world-class connectivity, without requiring IT to install additional access points to handle the extra load.

"This next-gen wireless network platform now provides the ability to layer new innovative services such as Cisco Mobile Experience (CMX) for space optimisation, utility efficiencies, and way-finding for improved campus experience," says Sugarevski.

The University has also dramatically extended the reach of its wireless network environment by deploying more than 2400 access points for indoor and outdoor coverage. The solution supports improved density with wireless innovations such as High Density Experience (HDX), to get more out of every access point.

"With our Cisco solution, people get a great wireless experience regardless of where they're accessing the network, how much bandwidth is required, or how many users are connecting," says Travis McIntosh, Network Communications Officer. "We've heard a great deal of positive feedback."

The Cisco wireless solution delivers centralized management, and troubleshooting. Its built-in Application Visibility and Control (AVC) lets network managers prioritize traffic to help ensure everyone gets the best experience. For example, a student watching an on-demand lecture would get bandwidth priority over someone who is streaming a movie. Cisco Catalyst Series switches provide a scalable, high-performance network foundation.

## A Secure, Manageable Environment

With thousands of students, faculty, and staff accessing the network on a regular basis, security is a key component of the University's digital strategy. Administrators work closely with the community and its industry partners to enhance these capabilities. To help protect communications and data from cyber threats, the IT team deployed Cisco Identity Services Engine (ISE) to simplify access with consistently enforced policies across all its wired,

wireless, and VPN connections. Regardless of what device the user has and at which location, the University ensures correct access privileges, to consistently enforce policies from a single platform.

"With Cisco Firepower firewall, we are now better prepared to detect attacks and threats by analyzing our network in real time and responding effectively, which was not as possible in the past," says Sugarevski.

The University also simplified and automated its network management to ease the burden on its IT staff, while helping ensure that the network stays up and running at its best. Cisco Prime Infrastructure consolidates management of the University's wireless controllers and environment under a single view dashboard and point of control. To keep pace with constantly changing needs, Cisco ONE Software subscriptions give the University's IT team freedom to deploy new innovative services on an as-needed basis. The University is armed to solve problems faster and reduce risk of downtime with Smart Net Total Care and Cisco Advanced Services.

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### Professor Peter Dawkins

Vice-Chancellor and President, Victoria University

## Real Benefits Today, and a Path Toward Transformation

With its Cisco wireless solution, Victoria University has successfully achieved its first step in providing a more connected, collaborative campus environment.

"I don't think a day went by when I did not receive an email from angry academics or students around the Wi-Fi and I have not received one since

we went live,” says Sugarevski. “The experience that the students are having is fantastic, and we’re hearing that from the student body. We’ve got great speeds and plenty of capacity on the Wi Fi Network.”

“The Cisco solution has enabled us to significantly minimize dark spots around the university,” adds Kim. “We went from about 75 percent wireless coverage to 100 percent.”

The benefits of ubiquitous wireless connectivity are impressive, but they are just the first chapter in a much larger story.

“It’s not just about pervasive wireless access, but what we can do with all that data,” says Travis McIntosh, Network Communications Officer at Victoria University. “Cisco not only provides wireless access, but also intelligence.”

For example, Cisco Mobile Experience (CMX) gives the University the ability to utilize location analytics to better understand how students are using the network, where they are spending their time, and identify potential bottlenecks.

“We’re already seeing some early indications of how students are spending their time on campus,” says Sugarevski. “Wi-Fi is not only giving people bandwidth capacity to connect to

online services, but also breaking down traditional ways of teaching for us. We’ve never before been in a position to understand how students are leveraging the services.”

With improved analytics and insight, the University can enhance capacity planning, gain a better understanding of which parts of campus need more coverage—and which parts of its infrastructure may be underutilized. This level of knowledge goes a long way toward ensuring the best possible experience on campus. And as the environment becomes more connected, IoT technologies could enable the University to extend those insights beyond students, to encompass facilities operations, campus safety applications, vehicles, and potentially anything that could connect to an IP network.

“In connecting the elements of technology together, if you have a cohesive Cisco roadmap, instead of fragmented solutions from different vendors and suppliers, it’s so much easier to add new solutions,” says Sugarevski.

With its comprehensive Cisco solution in place, Victoria University is confident that it has a scalable foundation to take the campus community as far as planners’ imaginations can go.

## Product List

### Security

- [Cisco ISE](#)
- [Cisco Firepower 4100 Series](#)

### Wireless

- [Cisco Aironet 1570 Outdoor Access Point](#)
- [Cisco Aironet 3800 Series Indoor Access Point](#)
- [Cisco 8540 Series Wireless Controllers](#)
- [Connected Mobile Experience \(CMX\)](#)

### Routing and Switching

- [Cisco Catalyst C3850-12X48U-S Series Switches](#)

### Management

- [Cisco Prime Infrastructure](#)
- [Cisco ONE Software for Wireless](#)

### Cisco Services

- [SmartNet](#)
- [Advanced Services](#)