AVONDALE COLLEGE
- Auckland New Zealand

Hewlett Packard Enterprise partners with Avondale College to fundamentally change the way education is delivered and supported by technology. The results will be transformative not just for NZ, but potentially for education throughout the world.

Avondale College is one of New Zealand's largest secondary schools. The school's student body is over 2,600, with 150 fee-paying international students and 160 staff. The school features 14 hectares of park-like grounds and modern facilities in specialist dedicated buildings for arts, performing arts, sports, physics and mathematics, dance and social science. The use of technology to enhance the teaching and learning experience is pervasive. A walk around the school grounds reveals a high-tech library and information centre, television and video suites, outstanding information technology facilities, 1200+ computers across all specialist areas and a recently built state-of-the-art Technology building.

While the facilities are impressive, it is Avondale's innovative approach to teaching and learning using technology as a tool that sets it apart. As a result, Avondale College is fundamentally changing the NZ education landscape with project driven, digital learning. This approach is proving so successful, the school is planning to also deliver Education-as-a-Service to other schools and education providers – a development that is now attracting international interest.

REQUIREMENTS

- Reliable access to high-end productivity tools to support project-driven, digital learning
- Enterprise-grade technology to enable students to gain industry-recognised certifications
- Migration from legacy storage and networks to pervasive Wi-Fi and cloud-based services to provide stability and scalability
- Implementation of scalable technology platforms to provide for campus growth and delivery of 'Education-as-a-Service' to other schools

SOLUTION

- HPE CloudSystem Self Service Portal
- HPE OneView
- HPE DL Servers
- HPE 3PAR All Flash (metrocluster con g pending) • HPN 5900CP Converged Core
- HPN IMC & SDN VAN
- Network Protector SDN application • Aruba Chassis and Edge Switches
- Aruba Access Points + Controllers • Aruba Airwave

BENEFITS

- Supports Avondale College to implement fundamental change in education delivery
- Delivers teaching and learning mobility for student engagement anywhere, anytime
- Supports transformational performance outcomes for students and teachers
- Provides technology as a service tailored to the individual
- Enables future move to deliver Education as-a-Service to small schools and remote schools

SUPPORTS AVONDALE COLLEGE TO IMPLEMENT FUNDAMENTAL CHANGE IN EDUCATION DELIVERY

Avondale College has pioneered the application of a different way of teaching with project style learning. It has applied this approach to a fundamentally new way of operating the Cambridge IGCSE and New Zealand NCEA curricula. Students are challenged to define a project that will have a meaningful impact on the school or student's community, and then design a solution using leading edge industrial tools such as Autodesk and Adobe along with Microsoft tools such as Visual Studio. Students love it.

Avondale College Principal Brent Lewis explains: "The world has moved on. If your students are way ahead of teachers in understanding technology, teaching and learning becomes boring, not engaging. We decided to develop a programme based around knowledge creation to make learning far more relevant to today's students."

The approach involves working on a project brief, with the application of system, design and critical thinking techniques to model societal behaviours and analyse the problem before then proceeding to design a solution. Students research, collaborate and use software to drive project design and delivery. Students also earn internationally benchmarked, adult industry certifications integrated into the syllabus.

Along with ground breaking device mobility initiatives, Avondale College also digitises resources wherever possible to facilitate self-service access so students can work at different paces, different locations and different times of day.

"We have enabled students to record and analyse progress. Students can also click-on-screen at any time to ask for help from teachers. Students are no longer reluctant to ask for help because they can see on-screen validation of progress and they can access teaching assistance easily at the point of relevance in their project," says Avondale's Paul McCLean.

"It's not just students that benefit," Principal Brent Lewis continues. "Teaching activity has changed from instructor led to real time engagement with transparent monitoring of progress. Teachers can see how much time students are spending on particular applications and tasks, and can plan targeted interventions. It is a data-rich teaching environment supported by robust classroom management tools."

DELIVERS TEACHING AND LEARNING MOBILITY FOR STUDENT ENGAGEMENT ANYWHERE, ANY TIME

Avondale College's success has been driven by inspired education leadership and supported by focussed technology changes to make it all possible. Reliability, performance and scale were identified as the three key challenges to address.

Aruba, a Hewlett Packard Enterprise company, and Avondale, worked together to identify network constraints and design a solution to support Avondale's ground-breaking use of technology in education.

Providing a robust network to meet surging demand

The old network simply couldn't cope with demand. Wi-Fi coverage was good in some parts of the school and virtually non-existent in others. Disparate storage systems for teaching materials were also at capacity.

"We were achieving amazing outcomes with technology in the classroom and as a result we had the largest number of Microsoft licenses in the NZ school licensing system, but our infrastructure had reached its limits," says Paul McClean. "The scale of change we have achieved together with Aruba is dramatic. The new digital learning environment features significant compute power, significant storage, along with a large set of credible applications so both students and teachers work on a platform that is rich, on premises and cloud-based, but most importantly, industry ready."

Taking a different approach to devices in schools

Some schools choose a Bring Your Own Device approach and ask staff and students to purchase their own laptop or tablet. However Avondale College acknowledged the strong socio economic arguments against expecting families to bear additional expenses for technology. The costs would simply have been prohibitive for many families. Aruba helped Avondale College to enable 800-series desktops in classrooms to work on Wi-Fi instead. Removing the need for 'the last 10 metres of cable' enabled significant savings in the number and capacity of switches that needed to be deployed. The school now intends to move all students and teachers towards a range of commercial-grade devices for mobility – something that was only made possible with the high density Wi-Fi coverage now available throughout the school.

Outstanding educational outcomes

Avondale College's technology-enabled learning has not only transformed education delivery, it has transformed education outcomes for students. With a school community traditionally challenged by socio-economic constraints, Avondale College students are now performing on the world stage. Indigenous Maori students nationally achieve lower university entrance rates but Avondale College students are defying that trend with university entrance rates consistently above the (non-Maori) national average.

PROVIDES TECHNOLOGY AS A SERVICE TAILORED TO THE INDIVIDUAL

Consistent with its reputation as a world-leader, Avondale College is also one of the first schools in Australia and New Zealand to implement enterprise grade Software-Defined Networking – made possible through collaborative development with Aruba.

This approach enables live, student interaction and performance management that:

- Quantifies the quality of planned teaching performance by predictively measuring the density of planned activities, lessons and projects
- Provides the ability to manage a student's performance in the immediacy of the moment
- Allows instant grading or real-time assessment with live dashboards for drilling into the detail.

"Software defined technologies are valuable because we can tailor the entire environment in real-time to meet individual needs," says Paul McClean.

ENABLES FUTURE MOVE TO DELIVER 'EDUCATION AS-A-SERVICE' TO SMALL SCHOOLS AND REMOTE SCHOOLS

Avondale College is at the forefront of a seismic shift in education delivery. Conversations at the national level are now being held about whether many aspects of the education system in New Zealand could, or should be, delivered in the cloud.

"We are a large school and we have used that size to advantage, but lots of schools are smaller, some with just 200 students. Many of the approaches we have pioneered at Avondale College could potentially be delivered remotely to those schools with the right cloud technology. That would have brilliant implications, for example, in enhancing services to a remote rural Maori school in northern New Zealand. We are excited at the potential to share our success with schools throughout New Zealand and perhaps even internationally in the future," says Principal Brent Lewis.

"Our partnership with Aruba and HPE makes it possible for us to now consider using cloud platforms to offer menus of potential services and education outcomes to any school. To be honest that's what most Principals and schools are really interested in, not the technology. Schools don't care about technology, only educational outcomes. But if we can use technology to share more broadly the educational outcomes we are achieving at Avondale College that is an incredibly exciting prospect," Brent Lewis concludes.

ABOUT ARUBA

Aruba, a Hewlett Packard Enterprise company, is a leading provider of next-generation network access solutions for the mobile enterprise. The company designs and delivers Mobility- Defined Networks that empower IT departments and #GenMobile, a new generation of tech-savvy users who rely on their mobile devices for every aspect of work and personal communication. To create a mobility experience that #GenMobile and IT can rely upon, Aruba Mobility-Defined Networks™ automate infrastructure-wide performance optimization and trigger security actions that used to require manual IT intervention. The results are dramatically improved productivity and lower operational costs. Listed on the NASDAQ and Russell 2000® Index, Aruba is based in Sunnyvale, California, and has operations throughout the Americas, Europe, Middle East, Africa and Asia Pacific regions. To learn more, visit Aruba at www.arubanetworks.com. For real-time news updates follow Aruba on Twitter and Facebook, and for the latest technical discussions on mobility and Aruba products visit Airheads Social at www.community.arubanetworks.com

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We make IT environments more efficient, productive and secure, enabling fast, flexible responses to a rapidly changing competitive landscape.

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