

Cisco India Education Study Tour

Changing learning and campus models
in response to industry and learners

March, 2019



Study Tour Presented by:



Study Tour Designed and Facilitated by:





Digital Summits Education at **Cisco live!**

Introduction

Digital is both the cause of and response to a number of major shifts happening in higher education. On one hand digital is changing the face of the labour market, raising student expectations, intensifying competition for Institutes and making it more difficult for industry to effectively forecast. Simultaneously it is enabling personalization at scale, creating opportunities to more effectively engage students and a platform for improvement to student outcomes.

The pace of change in higher education makes sharing and collaboration between universities essential. To this end Cisco organized a bespoke international study tour to enable Indian universities to interact with and learn from some of the most innovative universities in Australia in relation to the future of work in the digital economy, innovation and digital campus and smart classrooms. The integrated with Cisco's Digital Industries Summit held as part of Cisco Live in Melbourne.



INTUITIVE

Participant feedback

“

Made some good professional contacts with technology professionals from India and overseas. This will help learning in future and (validated) my own strategic vision for digital transformation.

- **Dhiraj Ahuja, India School of Business**

”

“

We have been using Cisco products since the inception of our School (almost 17 yrs) and this visit has strengthened my confidence in Cisco, not only product but people too. Well planned and well executed study tour. It was really a great learning experience.

- **Satish Papnoi, Pathway World Schools**

”

“

Smart campus is really eye opener for all of us.

- **Surya Panda, Chitkara University**

”

“

It was an awesome trip loaded with plenty of learning and fun.

- **Mohan Kumar, VIT**

”

“

Going back with a new vision and mission (and) now I have enough things to do for next 1-2 years.

- **Mahaveer Devannavar, Somaiya Vidyavihar**

”

Universities that participated in the program



Australian university site visits



Profiles of Universities visited as a part of the tour

India Study Tour – site visit summary

		<i>Topics</i>	<i>Images</i>
Site visits	<p>1</p> <p>Flinders University</p> 	<p>Digital and innovation as a driver of economic renewal</p> <p>Transforming the IT function including agile project management</p> <p>New venture institute: startups and entrepreneurship</p>	
	<p>2</p> <p>Deakin University</p> 	<p>Treating digital as a university differentiator</p> <p>Deakin Genie: using AI to improve student experience</p> <p>Deakin Scout: smart, personalised navigation</p>	
	<p>3</p> <p>Uni of Melbourne</p> 	<p>Digital campus and technology transformation</p> <p>Student engagement including campus navigation</p> <p>Digital improvements to the researcher experience</p>	

1

Universities need to rapidly transform

Technology is fundamentally changing the nature of work. Technology will increasingly take on the most repetitive and regimented tasks, freeing people up to work on things people do best. Jobs most vulnerable to disruption will continue to be those involving routine and repetitive tasks. This changing reality is particularly profound for universities which are not only responsible for 'teaching people how to think', but also ensuring that they are job ready. This narrative was no more profound than at Flinders University in Adelaide which is home to the Tonsley Innovation Precinct which houses Flinders University, a vocational training college, startups and a number of knowledge-intensive businesses. The site for the precinct is a former automotive manufacturing facility once operated by Mitsubishi. Remarkably there are now more people working on site at Tonsley than when Mitsubishi closed its doors and in jobs are also higher paid, more highly skilled and more sustainable.

“ A great wave of technological change will wash through the economy, transforming the nature of work and the shape of the labour market.

- *Oxford Economics report commissioned by Cisco* ”

¹ <https://www.oxfordeconomics.com/recent-releases/the-AI-paradox>

Artificial intelligence and automation are the latest of a series of technology shocks to hit the global labour market. Universities recognise they need to change mindsets, behaviours and investment decisions if they are to thrive. They must also meet rising student expectations; a major focus at Deakin University which is constantly looking for new ways leverage data in student services.

Deakin Scout



Deakin Scout is your smart, personalised navigation and wayfinding app that provides location-based services. It gives directions to locations on all campuses. The application helps students:

- Locate essential facilities and services
- Search for classrooms
- Search for meeting rooms
- Find somewhere to eat

Deakin Scout allows you to find or enter the current location and search for a destination. It provides step-by-step directions – even inside buildings and across floors.



Link:
<https://www.youtube.com/watch?v=ml0gdSCjGQ8>

2

Universities need to become living labs and invest in digital campuses

Universities are increasingly considered to be a microcosm of cities and experience the broad range of issues present in medium sized cities: transport congestion, rising energy costs, safety concerns and challenges with space utilisation. As cities have become smarter – particularly in India – so have university campuses. The term digital campus come to encapsulate a broad range of technologies that can be applied to teaching and learning, administration and research functions.



The digital campus has evolved in recent years in Australia. Rather than treating campuses as static; universities are starting to think about their physical assets as living lab. A living lab is defined as a user-centred, open-innovation ecosystem, often operating in a city or region. The living lab integrates research and innovation processes within a public-private-people partnership. All three universities visited as part of the study tour spoke of the priority placed on experimentation, particularly in relation to digital. The sheer volume of innovation in Australian universities is evidenced by Flinders University, below, spanning people and culture, research, education and student engagement.

Flinders University IT Projects

61 DELIVERED PROJECTS (COMPLETED 2018)

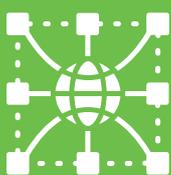
of Delivered Projects aligned to The 2025 Agenda



Flinders
UNIVERSITY
ADELAIDE • AUSTRALIA

# of Projects Delivered*	Strategic Delivery Objectives (Information and Digital Services)	The 2025 Agenda 'Four Strategic Pillars'
41	Transforming the delivery of services	People & Culture
4	Improving the research experience and building global reputation	Research
10	Enabling education, innovation and student success	Education
6	Making a difference and expanding our reach	Engagement & Impact

Specific digital campus initiatives highlighted during the tour included:



The planned establishment of a Factory of the Future which will showcase and provide capacity for experimentation in relation to AI, robotics and the internet of things



Significant work related to campus navigation and student engagement at the university of Melbourne, including the Melbourne ME application



Transformation of the CIO function at Flinders University including adoption of agile methodologies to ensure innovation is driven by academic stakeholders not just IT



A range of innovations at Deakin including capacity to identify where a students' friends are located in public spaces (e.g. the library), as well as the university's virtual personal assistant

3

Universities need to future proof people, processes and digital platforms

The pace of change in higher education is forcing institutions to focus on agility of their systems, processes, people and infrastructure. While universities can't necessarily predict the future, they can ensure they are able to respond quickly and decisively. Physical infrastructure such as classrooms need to be flexible and customisable so that they can adapt to the individual preferences of students but also evolving teaching and learning models.



Universities' underlying digital infrastructure also needs to be agile, scalable and robust. The digital infrastructure broadly refers to networks, servers and storage, device integration and unified communications that sit within a university's technology environment. At a minimum this infrastructure should be always on and always up but increasingly a digital infrastructure should be able to self-diagnose, be intuitive and capable of responding to changing conditions in an automated way. Universities are increasingly treating digital infrastructure as an innovation enabler and looking at what their infrastructure might support beyond critical business requirements. This is highlighted in the University of Melbourne's approach (highlighted in the break out box below).

University of Melbourne: Campus Future-Proofing



To maintain its position in the top 50 universities globally, the University must plan and design the campus of the future. This includes developing campus environments that exist in virtual, mobile and online spaces as well as in physical places.



Discussions about future-proofing frequently lead to decisions about cyber resilience. University networks need to protect institutions against myriad threats, including the ones we don't yet know about. The issue of cyber security is particularly acute for universities involved in cyber security research and teaching of future cyber security professionals. By positioning themselves as experts in cyber security universities - and individual academics - make themselves a target for malicious cyber criminals. During the study tour delegates heard how one prominent cyber researcher from an Australian university had been successfully breached on two occasions by foreign hackers.



4

Learning needs to change, and universities need to be more data driven

Capacity to draw insight from data is seen as a competitive advantage. Just as private sector business models are underpinned by access to rich data, universities are increasingly using data to improve decisions about all aspects of their operations. Examples covered in the study tour included:

Deakin Genie which was using student data to train the machine learning engine that sits behind the platform. The more data Genie collects, the more effective it is at accurately meeting and predicting student demands



Deakin Genie

Deakin Genie is a new personal assistant for students. It's ready to answer questions and make sure students keep on top of studies. Genie provides students with:

- 24 x 7 Q&A service
- access to learning resources
- assignment due dates
- assistance with referencing
- conversational user interface
- easy access to support staff
- library loans and holds
- timetable
- voice and text controlled



Link:
<https://www.youtube.com/watch?v=m10gdSCjGQ8>

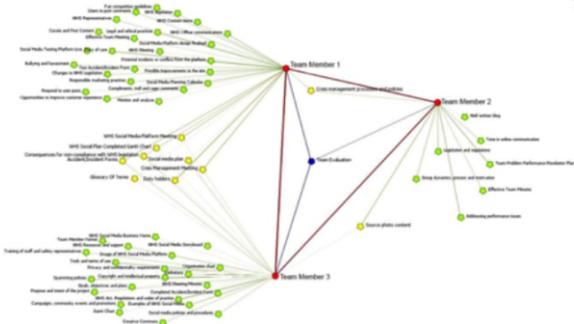
Analysis of data from sensors as part of the Flinders University – Cisco Digital Health Research Chair project. Data is being used to create new 'safe WIFI' solutions which will be deployed into healthcare settings

Visualization of data at the University of Melbourne to improve student navigation including within campus buildings

Mining student data as part of the learning process at Curtin University



Curtin University: Using Data to Analyse Group Work



Curtin University is using technology and data to solve one of the great teaching challenges: identifying individual contributions in group assignments. Curtin has also established a centre for Intent-Based Networking at Curtin

Links:
<https://news.curtin.edu.au/media-releases/cisco-and-curtin-university-launch-global-centre-for-intent-based-networking/>
https://www.youtube.com/watch?time_continue=25&v=QeOWJL1QIEY

Data is not only becoming more valuable it is becoming cheaper and easier to process. Big data analysis no longer exclusive domain of specialist researchers supported by super-computing infrastructure – it is now accessible to individual researchers and even students.

5

Universities need strong industry partners to help them navigate change

Universities visited as part of the study tour recognised that industry partnerships with critical. Cisco's partnership with Flinders, Deakin, Melbourne, Curtin, Victoria and La Trobe universities were profiled as part of the tour. The partnership with Cisco takes a number of forms, including:

Collaboration on innovation projects: Cisco has a network of Innovation Central hubs across Australia which are a focal point for collaborative projects involving industry and universities. These projects are developed in an agile way and are intended to create solutions to university and industry problems in a fraction of the time they used to take

The rollout of Cisco's Digital Schools Network (the DSN): The DSN was created by Cisco as a platform for school teachers and leaders to share their perspectives, tools and insights and ultimately improve student outcomes. The network includes schools from Australia, New Zealand, India, Japan and Singapore, with plans for further expansion. Universities have joined the network as strategic partners and there is interest from Indian universities to become one of the foundation university DSN partners in India (as Flinders University has done).

The Cisco Networking Academy which provides certifications to students in areas such as networking, IoT, cyber security and entrepreneurship. Flinders University incorporated NetAcad modules into degrees so students simultaneously earned a bachelor's and industry credential

International study tours and events including the one involving Indian universities

Digital campus projects in areas as diverse as smart classroom, campus safety, building utilisation and traffic management.



Flinders University at Tonsley



The ecosystem brings together leading-edge research and education institutions, established businesses and start-ups, business incubators and accelerators as well as government and the community to connect and collaborate in Australia's leading innovation district. Target sectors:



- Health and medical devices
- Cleantech & renewable energy
- Software & simulation
- Mining & energy services



Link: <https://blogs.cisco.com/education/transforming-higher-education-in-australia-flinders-university>

Next steps / actions

- Organise a demonstration at a Cisco Executive Briefing Centre, including demonstration of Smart Classroom technology which was profiled as part of the World of Solutions at Cisco Live. This technology has been adopted by the Victorian Government Department of Education and Training and being rolled out to 1600 schools
- Expressions of interest to become a Digital Schools Network foundation university partner. The DSN provides a major opportunity for universities to build relationships with schools, showcase courses / capability to students and teachers and position themselves as digitally progressive
- Book a Digital Business Roadmap session to accelerate the digital campus discovery process. The sessions have been held with a number of universities in the region, including some of those showcased at Cisco Live, and are designed to reduce the planning time required to validate digital campus opportunities. These sessions could also extend to co-development of digital campus blueprints

Digital Summits

Education at **Cisco** *live!*





To enquire about any of the above please contact:

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