

Cisco Chair in Digital Health Research at Flinders University

Industry-supported Health Innovation Research



Challenges

- Access and contribute to high quality research to drive innovation and extend Cisco's capabilities in emerging healthcare, cybersecurity and IoT technologies;
- Collaborate with academia and industry partners in research and development of international standards and innovation; and
- Raise Cisco's profile and credibility as an investor in research into future health technologies.

Outcomes

Cisco's partnership with Flinders University, through the Cisco Chair in Digital Health Research, facilitates international industry innovation by way of industry-supported university research applied to healthcare. The value of this initiative is realised through two main avenues: (a) direct value from the projects, research outputs and leadership of the Cisco Chair, Professor Trish Williams, in the digital health and cybersecurity space, and (b) the cumulative value to both Cisco and Flinders from the collaborative relationship.

(a) DIRECT VALUE of projects, research outputs and leadership of Cisco Chair:

- A transformational methodology was created by Prof Williams for Cisco, that enabled remodeling of the Infrastructure Maturity Assessment (IMA) process, transforming the way Cisco can benchmark its hospitals in Australia.
 - Prof Williams' publications and presentations serve as a conduit to acknowledge Cisco Australia's role as an innovator in international initiatives, such as the IMA/HIMSS initiative to establish a global benchmark for digital hospitals.
 - This methodology provides a basis for Cisco's partners – or any digital hospital infrastructure provider – to guide the future of technology and services in hospitals, for the benefit of Cisco's future sales.

- Prof Williams' acknowledged domain expertise has brought focus to critical problems encountered in the research of safe Wi-Fi, informing the creation of Safe Wi-Fi for Digital Hospitals. This research is guiding Cisco to lead the development and delivery of effective solutions to these issues in Australia and better place it to serve end-users and provide additional support to partner organisations.
- Prof Williams has provided thought-leadership on two Cisco Healthcare study tours, guiding customers to address system improvements through engaging with innovation. She has also provided leadership to Cisco customers who are developing secure information systems, and influenced them to address pressing cybersecurity challenges.
- Prof Williams has the ability to interpret customer needs into technical specifications and requirements, while remaining fully cognizant of the wide spectrum of stakeholder perspectives. This provides a valuable, extremely effective liaison between clients, Cisco partners and Cisco.
- Cisco's support of healthcare innovation receives exposure to the Australian and international digital health and health informatics community through Prof Williams' attendance at numerous industry, international standards, academic and public speaking events and webinars. The Cisco-Flinders partnership is promoted to influential government and industry bodies via invited public presentations at events such as the Australian Digital Health Agency, national cybersecurity meetings, and international conferences.
- The innovative Campus Mental Wellness Project, developed by Prof Williams, provides a model to extend Cisco's capability across new domains in healthcare, identifies and addresses a previously unrecognised market gap in this area, and gives the necessary structure to coordinate skillsets between industry and academic research.
- Prof Williams led the creation of a Health IoT Laboratory and the ability to test and showcase healthcare IoT innovation using the Cisco Kinetic platform.
- Prof Williams has established international collaboration with Cisco Chairs in Canada as part of a project in Health IoT and Edge Computing. This collaboration focuses on research and development of products for the Canadian and Australian market.
- Professor Williams has unique expertise in bringing together knowledge from multiple domains and identifying and filling gaps in outcome delivery. As a result, Cisco has been able to deliver the outcomes needed to meet their corporate responsibility, and benefit society.

Solution

The 2016 creation of a Cisco Research Chair in Digital Health at Flinders University, Adelaide. Appointed as Inaugural Chair, Professor Trish Williams is internationally recognised in her field, applying 30 years' experience in healthcare computing to research and practical outcomes in cybersecurity, health IoT, mobile health, medical devices, governance, patient safety, and health software safety. This Research Chair position reflects and complements both Flinders University's strong reputation for innovative research and development of health related technology across the areas of medical devices, assistive living and rehabilitation, and the establishment of the Cisco Academy at Flinders' leading-edge Tonsley Campus.

(b) The CUMULATIVE VALUE of the relationship between Cisco and Flinders University is realised in several areas:

Education:

Prof Williams has been instrumental in educating Cisco staff in translational research methods. These methods equip Cisco to transform current and future research into company products, services and IP, enhancing Cisco's future capability and value. Translational research is a recent and rapidly growing area, that attracts significant funding and Cisco is now empowered with the knowledge and capability to participate in this research as a valued partner. Further, Flinders is at the forefront of developing and demonstrating the value of this discipline.

Influence:

- Through the Chair's Professorial role, Cisco Australia has access to forums and decision makers in government, defence and international standards organisations - which is important to meet the government's desire for collaboration and support between industry and academia. This engagement is evidenced by newly brokered contacts with other digital health market leaders together with national and international speaking engagements, both of which provide a high-profile Cisco-Flinders badged digital health and cybersecurity presence in this space.
- Prof Williams acts as a focal point for digital health and cybersecurity in Australia and provides access to organisations that already recognise her contributions and capabilities.

These include Health Informatics Society of Australia (HISA, Board member), Integrating the Health Enterprise (IHE) Australia (Board position), Health Level 7 Australia (HL7, Australian past chair), HL7 International Security Co-Chair, National Health and Medical Research Council (NHMRC), Australian Research Council (ARC) expert assessor, International Organisation for Standardization (ISO) Australian Expert and Security Co-Lead, and NPS MedicineWise Data Governance Committee.

Reputational enhancement:

- Cisco's establishment of the Chair signals its commitment to research and investment in the future of healthcare. This, combined with Prof Williams' credibility as an independent expert with a long-standing, highly regarded reputation in digital health, provides Cisco with an uncompromised and unique profile that enhances confidence and domain credibility.
- Prof Williams' role at Standards Australia, ISO, IHE and HL7 affords Cisco Australia global recognition as a contributor and supporter of international standards in digital health, further growing its national and international reputation in the areas of cybersecurity, IoT and patient safety.
- Academic publications and conferences, co-authored by Prof Williams and citing Cisco's support, increase the reputation and reach of Cisco to otherwise inaccessible audiences, and grow Cisco's market presence and credibility.

“This powerful partnership between our outstanding Flinders researchers based in the Tonsley Innovation District and Cisco, a global leader in IoT, will enable us to investigate ways to use technology to create safer and more advanced health technology solutions. The outcomes of the research will make a major contribution to improving health in the years to come.”

Prof Robert Saint

Deputy Vice-Chancellor Research
Flinders University

Leadership:

Prof Williams facilitates strategic relationships, future-leader mentoring and student engagement, and provides the link for Cisco to the healthcare community. The Chair's academic role exposes students to the Cisco brand and by association, reputation, ensuring a high proportion of future leaders in IT and cybersecurity are fully aware of Cisco's capabilities. Further, Prof Williams' demonstration of female leadership and participation in diversity and STEM education places Cisco's name in front of future female leaders in the community and validates Flinders' commitment to increasing women's leadership in STEM - and Cisco's by association.

Access to world-class facilities:

The university-based Chair position provides Cisco with access to research consortia and world-class laboratory facilities, including the Digital Health IoT Laboratory located at Flinders' Tonsley campus. Providing a pipeline for Cisco's IoT platform, Kinetic, this laboratory will create a unique ecosystem to support international research collaboration between industry, academia and students.

Leading edge medical device, IoT and cybersecurity research will demonstrate the use of multi-sensor IoT to benefit health and wellness, resulting in transformational ways for the Cisco-Flinders partnership to positively impact wellness through IoT and analytics. Flinders supports both this research capability and the Chair's position by meeting the costs of overheads, thus reducing Cisco's costs to access to world-class research by a minimum of 25%.

The Future

Prof Williams will continue to address major healthcare technology and cybersecurity challenges, whilst driving new possibilities for the future. As Cisco Chair she will be critical in recognising nascent technologies and evaluating their applicability to Cisco. These initiatives will disrupt and create change worldwide and realise local, national and global impact. The Cisco-Flinders relationship is an exemplar of how industry and academia are working together in fundamentally new and exciting ways.

“Cisco Chair Professor Trish Williams has been instrumental in the delivery of our infrastructure maturity assessment, which represents a global benchmark in healthcare and other industries. This work will be a true industry gamechanger! The collaboration demonstrates the immense value and exceptional leadership that such a partnership can accomplish. The delivery of projects of this weight speaks directly to the exciting and massive potential of the close working relationship between Cisco and Flinders University.”

Barbara Casey

Global Healthcare & Life Sciences Director
Cisco Systems