

# The two worlds of a CIO

To succeed as a CIO today, you have to be a bridge between two worlds.

## The two worlds

The first is the world of technology – of infrastructure and enterprise architecture, and of the fast-evolving concepts such as cloud computing, Big Data and the Internet of Things, combined with security and trust.

The second is the world of business strategy. Standing in this world means understanding how technology drives societal and business trends, and feeding that insight back into the business strategy. It means looking inside the minds of customers to figure out how their use of technology is driving new expectations.

Bringing these two worlds together is never easy, and with technology evolving at an accelerating rate, it is also growing more difficult.

Those businesses born before the era of the commercial internet find themselves competing with technology-backed disruptive upstarts for whom technology is not just a business enabler, but the basis of entirely new business models.

As a result, the pressure on CIOs in traditional businesses has never been greater – and the pressure on those companies that supply to them is becoming no less so.

It is not unfair to say that for many businesses, this current era of technology change is one that we are making up as we go along. There are few established models and scarce case studies to model. For both CIOs and suppliers, the need to work together to find a path forward is critical.

This dual requirement of CIO as technologist and strategist was clearly in evidence during the Executive Symposium stream of Cisco Live 2015, held in Melbourne in mid-March, where attendees heard numerous speakers from both within and outside of Cisco discuss evolving technologies and services and the broader impact of technological change.

Prominent in the agenda were emerging concepts such as Big Data and the Internet of Things, along with the rapidly growing requirements for cloud services, and security and trust.

But it was the role that CIOs could play in wielding these concepts to create new business opportunities that focused much of the discussion.

## Evolving business models

According to Cisco's Senior Vice President for Worldwide Field Operations, Chuck Robbins, technology is accelerating the evolution of business models, and this is having a massive impact on the business community, as witnessed through predictions that 40 per cent of the Fortune 500 won't exist in 10 years as companies such as Uber and Airbnb rise to take their place.

"The disruption that is occurring is not about technology, but it is fundamentally enabled by technology," Robbins said. "What all of these companies have done is change the customer experience through technology."

This theme was picked up by the Managing Director for Optus Business John Paitaridis, who previewed the 2015 Optus Future of Business report by discussing how technology was vital to building a sustained competitive advantage – and how businesses were twice as likely to fail as succeed when running change programs.

"The fact is the failure rates continue to be high when it comes to technology change," Paitaridis said. "Change readiness we know is a key dependency for customer growth and for business growth, and organisations that excel in change readiness have lower cost of implementation and speed-to-market, better delivery to their customers, and more consistently realise the full benefits of that change program."

Understanding what makes companies such as Uber, Airbnb, and TaskRabbit successful is a key part of the role performed by Optus' Director of Industry Development Allan Burdekin. He described common attributes amongst many of these organisations, including their solid



John Paitaridis, Managing Director, Optus Business

focus on customers, extensive usage of Big Data, and their deliberate decisions to no longer own infrastructure.

Burdekin said these were attributes that traditional businesses should look to adopt.

"You need to look at where some of these fundamental elements may sit in your organisation moving forward," Burdekin said. "Does it make sense for you to own all of the assets? How are you using Big Data and are you gaining insights around your customer and infrastructure?"

Also common amongst the disruptive upstarts was trust – an attribute Burdekin said was absolutely paramount in the digital economy.

"If you can build a culture in your organisation that respects personal data. If you can demonstrate that there is empowerment to users such that they can see how that data is used - if you get it right, you will build your brand presence and your shareholder value," Burdekin said.

"If you get it wrong, the market will punish you, and we have seen that."

Cisco's Senior Vice President for Asia Pacific and Japan Irving Tan also cited Uber and Airbnb as examples of not just how quickly disruptive outsiders can shake up industries, but also of how models developed in one industry might be adapted to shake up another.

He cited Uber as a model whose broader potential was still unknown.

"The same platform can be used to fundamentally redefine logistics," Tan said. "So what does it mean to your business as you move forward in the logistics industry?"

## Cisco - changing for success

Cisco is itself well positioned to talk about the impact of disruption, having been responsible for great disruptions within the technology sector in market segments such as voice and video communication.

But in early 2014, Cisco found itself the victim of disruption when it missed earnings estimates by US\$700 million.

That Cisco was able to post 7 per cent growth in its more recent earnings call points to its ability to recover. It may also hold forth lessons for other organisations seeking to effect a similar transformation.

According to Robbins, the heart of this disruption was the realisation that concepts such as software-defined networking and cloud computing had shifted customer expectations in terms of how and what they wanted to buy, and that customers were not really interested in buying technology products anymore.

"What they really care about is the outcome they are going to enable through technology," Robbins said. "That's why they don't care about buying a switch anymore. They are saying 'help me increase my strategic relevance inside this organisation. Help me understand what I do. Help me help the marketing leader. Help me help the sales leader. Help me help my CEO!'"

Robbins described Cisco's response to disruption as a sea change for both its sales organisation and engineering team. The response took nine months to define, and involved reworking the entire organisational structure away from product units while bringing agility to product development to get into new adjacent markets.

"We had to speed up our innovation organisations and create some flexibility in our funding model to be able to move into some of these adjacencies," Robbins said. "And we had to deal with the fact that customers wanted to consume the technology differently.

"In engineering, we shifted from products to being an enterprise and service provider and creating solutions, and we have been able to deliver things like virtual managed services portfolio."

Robbins said that while much work had been done, they will always continue to look at how they evolve to best serve their customers.

The irony of this turnaround is that while Cisco was able to respond to market disruption through a cultural and process realignment program, it continues to drive the development of technologies that are feeding the ongoing disruption of other industries.

Principle amongst these is the Internet of Things. According to Tan, Cisco has invested \$1 billion in this emerging opportunity, including an

investment of \$15 million over five years in an Internet of Everything (IoE) Innovation Centre in Australia, complementing seven similar centres around the world.

The new Australian centre will operate from two locations, at Sirca (a joint venture of 40 Australian universities focused on advanced data processing) in Sydney and at Curtin University in Perth.

## Fast IT

Cisco's Vice President, Enterprise Segment Asia Pacific and Japan Scott Brown said Cisco was also seeking to help its clients better equip themselves to deal with disruption from within their own IT functions, through developing tools such as cloud computing and software-defined networking, to make organisations more agile and hence better able to pivot to take advantage of new opportunities.

It is a concept his company has dubbed 'Fast IT'.

"It is really about IT partnering with the business to talk about what we can do to disrupt the business," said Brown. "This is happening everywhere, even in government."

Brown said Fast IT was born of the knowledge that CIOs today are under siege from users who expected a similar experience from enterprise IT as they received when purchasing an app from an app store. For CIOs, that meant creating systems that were simple, smart and secure.

"This idea of Fast IT is an idea that really has percolated out of our customers," Brown says. "Our customers kept saying to us we need to bring to our businesses a greater velocity of IT innovation."



Allan Burdekin, Director, Industry Development, Optus Business

The first requirement to get to Fast IT is the ability to create an environment that can be programmed to respond very precisely under specific conditions, and do so automatically, as enabled by technology such as the Cisco Application Policy Infrastructure Controller.

Other elements of Fast IT include bridging virtual and the physical environments and improving visibility, and building application-centricity to quickly and efficiently deploy applications.

## Securing agile business models

Absolutely critical to Fast IT is automated threat detection. Brown said the castle-and-moat approach to security, which simply focused on keeping intruders out, was no longer applicable.

"People will get in, and now the focus needs to be what happens before the attack, during the attack and after the attack," Brown said. "The threat landscape has to be automating the threat detection, and then within milliseconds making decisions to shut down attacks as they happen and quickly remediating the damage that has been done. So we now need to think of our threat landscape as a 'before, during and after' conversation."

This point was a key theme throughout the Symposium, with speakers stressing the requirement for customers to be able to trust their service providers with their personal information.

According to Cisco's Senior Vice President for Security and Trust John Stewart the volume, sophistication and tenaciousness of cyber-attacks meant it was now essential that organisations share as much information as possible to be able to counteract them.

"Every company that I talk to right now is an IT company by default," Stewart said. "It has become the lifeblood of how corporations work. The consequence of that is, what happens if the services go down?"

"Now imagine a scenario where your data is corrupted in such a way that you don't know if you have the right financial data in your system, and you have to ask the question whether you can actually report earnings, and pay paychecks."

Hence he said the only way for organisations to succeed against cyber-attacks was to share information between themselves and service providers, because many attacks are essentially undetectable to the organisations that are experiencing them.

"If you try and protect your own company alone, you will not be successful," Stewart said. "There has to be a secondary set of organisations, from service providers to us and other companies, that are keeping an eye on you. You cannot see everything that you need to see about you from just the data that you see yourself."

### External forces shifting demand

While much of the discussion focused on technology and the role that it was playing in creating disruptive new business models, attendees were also reminded that in the world of business, there are also larger forces at play.

KPMG Partner and founder of the specialist advisory business KPMG Demographics, Bernard Salt, described how understanding demographic change could be a key factor in spotting business opportunities.

Salt discussed how the addition of four million people to Australia's population would change opportunities for business, as would the aging of existing demographic groups. One of the most important shifts would be that of Generation Y workers into their 30s, which would see them forming households and moving to the suburbs.

Similarly the aging of the Baby Boomers would create massive opportunities in the wellness industry, especially as the rise in expected lifespan from 63 to 82 over the last century meant Australians would spend on average 24 years in retirement.

He also described how Australian society had become obsessed with lifestyle, as indicated by the 121 per cent growth in liquor retailing in the past decade, along with the 49.9 per cent increase in restaurants and cafes over the past five years.

Understanding such changes was vital to finding new business opportunities, Salt said, while being in the wrong market at the wrong time could be just as devastating as any poor technology choice.

Be it changing markets or emerging disruptive competitors, the need for organisations to be thinking about transformation has never been greater. Unfortunately, the models they have to follow are not maturing at anything near the same rate as the challenges they are responding to.

Robbins said one of the key lessons that Cisco learned was that in a fast changing world, you would never have all of the information you need. And that meant taking tough decisions.

"From a leadership perspective you have to move when you have about 80 percent of the information, because if you wait for 100 per cent it is too late," Robbins said.

But by acting as a bridge between the worlds of technology and business, CIOs may just find themselves with a little more of the insight needed to make those decisions.

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