The Executive's Guide to Navigating Digital Disruption

Wisdom from the *iTnews* ACS CXO challenge

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Foreword FROM THE ACS.

What a difference a little over a year can make?

When the CXO Challenge kicked off in June 2014, the Australian dollar was at US94c. Fast forward to August 2015 and our currency is at US74c - yet a mini-economic boom hasn't eventuated.

Most notably, Iron Ore was over $90 USD/tonne twelve months ago and now is just over $50 USD/tonne. The cycle of capital investment in the resources sector is drawing to an end, moving to production.

This is a perfect storm for our technology leaders. Necessity is the mother of invention, and Australia has some challenges to overcome in terms of revenue generation and tax receipts in order to maintain our historically high standards of living.

Industries were already experiencing digital disruption, however over the last six months the political and economic landscapes have caught up and recognised the importance of this disruption.

We are seeing a focus on entrepreneurism to create new jobs. New Australian tech companies showing promise are stimulated to grow. Technological innovation is being encouraged so these new kids on the block will compete on the global market.

As the professional body for ICT in Australia, the ACS exists to advance professional excellence. We are passionate about technology and the ICT profession being recognised as a driver of productivity, innovation and business – able to deliver real, tangible outcomes.

With this focus comes a responsibility to showcase excellence and inspire others, believing that as the ecosystem develops, momentum will grow and ultimately benefit all Australians, both within business and our communities.

The CXO Challenge has been an invaluable research piece, providing extraordinary insight into technology leaders from across the ASX 200 and how they have embraced digital disruption to enhance their business models and develop new revenue streams.

Highlighting that value creation is an individual journey, approaches vary throughout the Challenge such as TabCorp bringing digital back in-house, Telstra's focus on ecosystem development, how ANZ considers analytics and automation will deliver a digital edge in the provision of advice as a service and tracking systems being deployed by Domino's to empower their customers.

Some themes are constant however such as seeking ways to deliver best of breed digital user experiences so that customers self-manage, providing content customised for different channels so that customers may consume content via their preferred channel, and focus on talent and workforce culture where people do the disrupting and technology is the enabler.

The production of this resource in partnership with *iTnews* will provide executives with a strong independent platform to challenge their own teams, to contest ideas, and consider how best to embrace the disruptive power of technology to deliver greater value for their customers.

I commend to you the Executive's Guide to Navigating Digital Disruption.

Andrew Johnson
Chief Executive *ACS*

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Ahmed Fahour- Australia Post

Australia's record on digital disruption

A RETROSPECTIVE REPORT CARD.

by Beverley Head

The day before Ahmed Fahour took up his new role as CEO of Australia Post, his eight-year-old daughter asked him; "what do postmen do?"

It was the moment Fahour grasped the enormity of digital disruption.

"It really hit me - at that moment - that I was entering a business that was facing a generational shift away from the product that it had been built on over the previous 200 years. My "communication world" when I was growing up was all about stamps, post offices and posties. The mail system connected with my world. Her world is about Instagram, iMessages, WhatsApp and eBay."

It's instructive that an eight-year-old was able to pinpoint the problem long before many leaders of enterprise Australia.

Fahour was appointed CEO of Australia Post in 2009. It was nine years after Y2K, seven after dot-bomb, and two years since the start of the Global Financial Crisis. Executives were exercised more by surviving global economics than exploring technology's potential.

But in March 2009, just a few months before Fahour moved across to Post, a small business was setting up in San Francisco that would become a global beacon for digital disruptors and software-defined businesses the world over; Uber.

With the benefit of 20:20 hindsight, the portents of digital disruption are clear. The first web page was served in 1990, Google was founded in 1998, Facebook in 2004, the first iPhone launched in 2007. Technology was changing the way companies and consumers behaved, accessed information and communicated.

It wasn't however until 2012 that Deloitte released its seminal report *Digital Disruption; short fuse, big bang?* The report put enterprise Australia on notice that a third of the Australian economy faced "imminent and substantial disruption by digital technologies and business models."

Dot-com bust complacency

By 2014, the extent of the transformation was brought into sharp focus when Telstra sold a 70 percent stake in the Sensis White and Yellow Pages business unit for $454 million. In 2005, the organisation had been valued at $10 billion.

Ajay Bhatia, now chief product and information officer at Carsales.com, was for five years product and technology director of Fairfax Digital, and a first-hand witness to digital disruption of an entire sector. The media and technology sector was identified in Deloitte's report as facing the greatest quantum of disruption.

Bhatia looks back and says that; "A lot of people took comfort from the dot-com bust. That led to some of the complacency."

Ross Dawson, futurist and strategy consultant, agrees, saying that after the dot-com bust; "The naysayers felt justified" while the GFC hijacked the focus of senior executives. "Australian business was largely not ready.

"Even in 2006/7 Australian businesses weren't getting it. There was a slow uptake of blogging, social media or connectivity," he says. It was incomprehensible to Dawson a self-described "apostle of the networked economy," given Australia's geographical isolation which made local businesses an obvious candidate for even more investment at least in communications technologies.

He says that it wasn't until the launch of the 3G iPhone in Australia in 2008, when data plans started to become more affordable, that consumer connectivity started to emerge and be recognized as a transforming force.

Professor Kai Riemer, chair of business information systems at the University of Sydney Business School, arrived in Australia from Europe in 2006, and was surprised to find local enterprises five or six years behind their northern hemisphere peers.

He believes the problem was partly geographical. "Australia is a big island at the end of the world," and until the mid-2000s did not attract the same level of ▶

competition as other developed markets says Riemer.

When the international competition did arrive – either via the internet or through a physical presence - bristling with technology and new business models, Enterprise Australia was still bent on protecting a previous paradigm.

Ajay Bhatia enjoyed his first couple of years at Fairfax, but explains that frustration mounted when services began to bubble up from Fairfax Digital which were viewed as capable of cannibalizing the media giant's "Rivers of Gold" classified advertising revenues. Instead of championing the new, Fairfax redoubled its efforts to prop up print leaving Bhatia; "working with my hands tied behind my back."

Fairfax management he says had; "lost sight of the fact that the real competition was out there."

In his view "We weren't competing with the newspaper business but with RealEstate.com and Seek." It was an expensive lesson for management says Bhatia.

"Realestate.com (REA Group) and Seek have a combined value of $13 billion." Bhatia says that when he was working with Fairfax it had a market valuation of $5 billion, "But they were focused on defending the $5 billion rather than becoming the $13 billion."

Retailer Myer had similar lessons to learn. Technology meant that Australian consumers could research and buy online – from local and international outlets such as ASOS. Technology enabled new retailers such as Zara and H&M to establish rapid response business models and logistics to tap demand for fast fashion turnover.

Myer clung onto its traditional approach. When it floated in 2009 the market valued the business at $2.2 billion. At the time of writing the share price has dropped to $1.25, valuing the retailer at $735 million.

Professor Riemer says that Myer and David Jones have both been slow to transform compared to international retail peers.

Establishment Ubered and Netflixed

But it's not just retailers and print that has experienced the chill wind of disruption. The banks faced the rise of PayPal and emergence of Bitcoin; Flight Centre was challenged by Expedia, by Webjet, even Airbnb; Harvey Norman suffered when it was slow to react to online challengers; ABC is being forced to close its loss-making stores and shift retail online; Blockbuster was Netflixed and Cabcharge Ubered.

Derry Finkelday, research director Gartner, explains that from here on disruption will be a constant companion for enterprises in every sector.

"We always seem to come back to the same stories, but there are always companies being disintermediated by other companies that do something better or different.

"The speed at which this is happening is increasing though because of digital technologies. We talk about Fairfax, Blockbuster, Australia Post – but there are transportation companies which have suffered from competition where a rival has used analytics or automation.

"What we are seeing now are some radical business

> ***What we are seeing now are some radical business model changes.***

Derry Finkelday - Gartner

model changes. For example, Rio Tinto with its Mine of the Future is taking automation to an area where it was never before seen."

Finkelday also points to examples of organisations which were being disrupted in one area, but themselves disrupting in another. So while Australia's banks feel competition in the payments area from the likes of PayPal, Square, even Bitcoin, they are also harnessing technology to disrupt themselves.

"Commonwealth Bank is a global leader in the sort of experience it is offering to customers online. St George is delivering cloud services (MyBusinessConnect) to small business users.

"There is a blurring of industry boundaries. This is not a simple situation where the new broom sweeps out the old."

She says that organisations are starting to invest in innovation laboratories and consulting around digital business opportunities which look beyond the borders of their own industry sector.

According to Finkeldey, the key is to remain focused on the perception of the needs of the end customer, and that this may require intercompany collaboration.

"The reason that Uber and Airbnb rose is that they looked to use technology to meet a demand that was not being met. Companies can and will be blindsided if they are not prepared to think about an issue from a viewpoint that is external to their own viewpoint."

Ross Dawson says that one of the issues facing enterprises as a result of digital disruption is that the "gap between the best and worst performing organisation is increasing, because there has been a dramatic shift in the use of technology which is changing how value is being created."

Those organisations that cannot move swiftly enough can still go out of business, he warns.

And there is another wave of disruption in the wings prompted by big data, analytics, the internet of things, machine learning and unprecedented levels of process automation.

Deloitte Access Economics has predicted the loss of as many as 25,000 public service jobs as a result of government sector automation and new digital platforms.

This raises challenges for enterprise Australia – how to harness technology to automate and streamline business in order to compete effectively – but also creates a new raft of issues for Governments, policy makers, educators and social scientists to navigate.

The ACS in partnership with Deloitte Access Economics released a report in June 2015 titled Australia's Digital Pulse. This report asserted that digital disruption is dramatically changing industries and occupations across the economy, and that the demand for ICT workers in Australia is likely to increase by 100,000 workers over the next six years, with many opportunities coming from industries outside of ICT itself.

The digital disruption Australian enterprise has faced thus far is just a teaser.

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Ripe for Disruption

WHY IS ONE INDUSTRY MORE PRONE TO DISRUPTION THAN ANOTHER?

By Liz Tay

Australian CIOs generally pin digital disruption on the same root causes: better internet connections; more machine data; and an increasingly digital-savvy culture.

But the extent of disruption varies from industry to industry.

Former Fairfax executive Ajay Bhatia witnessed firsthand how quickly online players transformed the media industry – and how slowly the incumbents responded to change.

Now the CIO and CPO of Carsales.com Bhatia says media and retail businesses are particularly ripe for disruption due to their exposure to consumer trends.

"If you look at the retail industry, what's happening is a majority of consumers now want to buy online," he said.

"Consumer habits have evolved to what's more convenient, what's better service at a better price. Traditional businesses aren't giving customers the service they need to prevent them from being disrupted.

"From that perspective, I think the retail industry is absolutely one that will continue to be disrupted."

Carsales was founded in 1997 as a car listings website. It has since grown into a $2.5 billion business with boat, bike, caravan, and home listings, and a controlling share of car loan and insurance provider Stratton Finance.

Bhatia and the Carsales executive team are acutely aware of the threat of digital disruption and the need to keep pace with consumer trends.

When mobile web browsing became the norm, Carsales chose to embrace the channel even though it cut into its traditional display ad revenues.

Carsales and Stratton last year also bought a 20 percent stake in online peer-to-peer lending platform Ratesetter – an investment that Bhatia described as Carsales' "foot in the door" to a potential disruptor.

No Ubers upstream

On the other end of the spectrum, CIOs in mining and manufacturing say technology will help boost productivity and cut costs, but won't fundamentally change how things are done.

While PayPal, Netflix, Uber and their like have reshaped entire industries by showing consumers better, cheaper and faster service, upstream businesses are relatively immune from the risk of consumers voting with their feet.

Iluka Resources CIO Paul Baker described the mining business as one built on years of major investments into mineral sand exploration and processing. He believes it wouldn't be easy for a disruptor to jump in.

"There are some mining companies that do it better than others, but I can't see an Uber coming in and transforming the way things are done," Baker said.

"You still have to have the tenements, still have to locate the deposit ... then you have to dig it up and process it."

Incitec Pivot CIO Martin Janssen is of a similar opinion.

Although the manufacturing and mining services firm makes more than half of its fertiliser sales via an ecommerce platform, Janssen said online competitors weren't a significant threat.

Incitec Pivot's fertilisers business accounted for 35 percent of its earnings in the 2014 financial year, versus 65 percent from explosives.

A vast majority of its fertiliser stock is sold through distributors. Only about 0.1 percent reaches the consumer market, which tends to be the segment that is more susceptible to digital disruption.

"[Online competitors] don't have any manufacturing capability or distribution capability," Janssen said.

"Every single business in the whole world is subject to that risk [of losing market share in the consumer-facing part of the business]. It's not one of our focus areas; there are more significant things that we need to focus on."

Why some are more prone than others

The CIOs' experiences echo a 2012 report by Deloitte that graded 18 industries by the potential impact of digital disruption on businesses, and when this might occur.

Deloitte forecast imminent change in retail, ICT and media, and finance: consumer-facing industries that could serve customers digitally.

Mining, manufacturing, accommodation and food, wholesale trade and construction would be relatively immune from digital disruption, Deloitte predicted, due to either the physical nature of goods and services or distance from the customer in the supply chain.

"You don't have to receive that DVD in the post or pick up a rental from Blockbuster; you can, in the digital age, download a series from Netflix or iTunes," Deloitte Access Economics partner John O'Mahony explained.

"But if you look at an industry like accommodation, it's true that bookings can be done digitally [but] the hotels themselves are physical things, and the ability for hotels to be disrupted is obviously a lot lower."

"The main thing that drives [the speed of] digital disruption is the extent to which businesses face customers," he added.

"If a business's customers are the general public, and particularly if it has younger customers, that tends to drive digital disruption. If a business' customers are other businesses or an older demographic, they tend to have a slower disruption."

Most of Deloitte's 2012 predictions have proven accurate in the past three years, O'Mahony said.

In the highly disruptable industries like retail and media, Deloitte has since noted a growing difference in revenue growths of the digital winners and losers: think Google versus Fairfax.

"There was a 10 percent increase in the variation between the revenue growths of businesses across the Australian economy, which is to say that there was a bigger gap between the winners and losers," O'Mahony said.

"That's a sign of digital disruption, and when we looked at individual industries, we found that it did chart what we ▶

expected from our digital disruption map – businesses in retail, ICT and media have a more pronounced gap between businesses with growing revenue and those that have experienced decline."

In the retail industry, giants David Jones and Myer struggled while online players like Kogan reportedly reached several hundred million dollars in revenue and began expanding into new areas like groceries.

Myer has shed staff and clothing brands to address poor sales and earnings. Recently appointed CEO Richard Umbers – its former CIO – told shareholders in March that the company had "lost relevance with some customers" and needed to overhaul its operations to "respond to this new retail environment".

Skeptics in banking

The story of digital disruption in the finance industry is a little more complex.

Macquarie Bank analysts last year reported that Australia's big banks could lose up to $27 billion – 30 percent of their revenue – to alternative payments and lending providers.

But they expected the banks to retain their dominance "where there are significant barriers to entry", including exchange settlement, holding a banking license, and accessing liquidity from the Reserve Bank of Australia.

Speaking with *iTnews* for the CXO series, ANZ chief technology officer Patrick Maes argued that very few digital disruptors could completely play the role of banks, which he defined as facilitating transactions, holding assets, and providing advice.

"The Googles of this world will say, 'we can build you a digital wallet.' The PayPals of this world say, 'we can complete transactions'," he said.

"Offering the transactions without the holdings is a pretty difficult business ... [And] the general evolution in financial services is that offering transactions is becoming almost marginless."

Even so, the payments market, worth some $9 billion, is not something banks can afford to lose.

Banking executives have spoken of the threats posed by the likes of Google and PayPal for some time, and have launched start up incubators and overseas study tours in attempts to replicate the Silicon Valley panache.

According to Bankwest CIO Andy Weir, banks' best defense against digital disruption is an internal culture that fosters innovation and a more customer-centric approach.

"We need to take on this digital disruption mindset," he said. "That doesn't mean replicating the business models of disruptors - but it does mean adopting their mindset and some of their processes.

"There is no doubt digital disruption is going to have a big influence on financial services - so in my book, you might as well get on with it, even if the impact is still a few years out." ■

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>
> Andy Weir - Bankwest

Digital Leadership

TRANSLATING BUZZWORDS INTO THE REAL WORLD.

By Paris Cowan

Digital buzz words only transcend jargon once they become real, on-the-ground, tangible projects.

This means that any Australian and New Zealand business leaders worth their salt will be tinkering with these themes in the real world, not just the board room.

During the course of the CXO Challenge a number of key priorities have risen to the surface that seem to be at the core of just about every CXOs agenda.

They can be distilled down to:

1. Agile methodologies
2. Improved data analytics
3. Mobility
4. Strategic partnerships
5. APIs
6. Outsourcing
7. Cognitive computing
8. Public cloud
9. Application rationalisation
10. Mobile apps

Don't know where to get started? The CXO Challenge has certainly dug up some worthy examples to follow - digital leaders really seizing these opportunities and running with them.

Across the Tasman, Trent Mankelow is bringing what he learnt from years working for start-ups to New Zealand's e-commerce behemoth Trade Me Group.

Trade Me's agile transformation is paying more than mere lip service designed to keep up with the Joneses.

Taking his cues from the Spotify development model, Mankelow has overseen the reorganisation of a fast growing tech team numbering around 200 into a series of 33 squads, plus tribes, chapters and guilds.

He says autonomy has been the guiding principle of their version of the model, where squads agree on their own membership and how they will approach their own challenge.

"When you read the research around workplace motivation it makes a lot of sense that you would give the teams a lot more autonomy as long as the work is getting done," he said.

Meanwhile, nearly every CXO spoken to outlined plans to boost their organisation's data analytics capabilities, in line with the 'data is the oil of the 21st Century' mantra governing customer engagement.

The Australian leaders in this space - airlines, supermarkets, telcos - are well known, and not always keen to share their tricks of the trade. At the same time, however, some interesting data experiments are emerging from less predictable quarters.

Over at toll operator Transurban, CIO Lisa Tobin is exploring the surprising capabilities the company's years of traffic data can offer in the hands of data scientists.

They showed up a remarkable correlation between particular road conditions and accidents.

"We found that with 98 or 99 percent accuracy we could predict an accident 30 minutes ahead of it happening. What that means is that we can start to divert and manage traffic - or put up signs warning drivers to slow down - and work to actually prevent that from happening," she said.

Tobin's advice to her peers? Never get complacent about change as something on the far-off horizon.

"We have taken the view that big changes are not 10 to 15 years away. We need to be ready for different business models in three to five years".

Over at national law firm Sparke Helmore, CIO Peter Campbell is crunching personal injury data for his clients to spot patterns, like when and where accidents happen most regularly, to help cut down on compensation outlays.

"It's not technologically challenging but the application of analytics and analysis of data to legal ▶

problems is relatively new," said Campbell.

Sometimes, however, true leadership comes from being brave enough to acknowledge you aren't best placed to deliver all services. A number of the CXOs interviewed offered some hard-won insights into maintaining the tricky balance between outsourced and in-house.

When he spoke to iTnews, Worley Parsons CIO Brian Adams was halfway through a process of sending commodity IT services to an external provider, and the resources contractor struggles to keep up with a downturn in the market.

He revealed a simple test he uses to decide what goes out and what stays in:

"The basic premise I work with is to ask 'are we bringing additional value to our shareholders and to our bottom line by doing this ourselves'? And if the answer to the question is yes, it is something we should be doing. If the answer is no then we have got to be looking at alternative ways of doing it."

Transfield's Stephen Phillips acknowledged that his company's back-office offshoring journey with Wipro had "not all been smooth sailing" but insisted he was seeing the benefits begin to play out.

His advice was to make sure the skills base that does remain in house shifts to reflect the new functions and priorities of the IT team. He said his hiring had shifted towards people with contract and partner management skills.

"I am also seeing more investment into specialist areas like security and risk management. Where technologies such as cloud deploy smaller providers and niche providers this raises an issue around the security of that data.

"There is also an increasing focus on the IT people that are dedicated to the needs of the business. Their skills and their ability to orchestrate what we want from the broader industry is increasingly critical," he said.

This top ten is hardly an exhaustive list, but is a good indication of where the priorities of Australia and NZ's top digital leaders lie, and a benchmark of how close the ASX 200 are to making these goals a reality.

Business leaders aren't judged on their ability to set good targets however. If the CXO top 50 haven't already pushed forward with capabilities in most of these fields then they have certainly begun to tinker and experiment around the fringes. The experiences will guide those who come next.

Adopting a disruptive culture

HOW TO COPY THE TRAITS THAT GIVE DISRUPTORS AN ADVANTAGE.

By Justin Warren

There is a lot of hype around the adoption of agile and DevOps techniques. The *iTnews* CXO challenge revealed many different approaches to agile methodology but all participants agreed that there is one thing you absolutely must get right to succeed and that's culture.

Picking apart the agile manifesto

When we talk about having an agile culture, what do we mean?

Agile software development, codified in the *Agile Manifesto*, was primarily a reaction to established ways of doing software development at the time. The techniques that had been used more-or-less successfully up to that point were rooted in a standardised waterfall process: requirements, specifications, documentation and Gantt charts.

In early 2000, a new breed of software companies (Google, Amazon, and others) was developing software much more rapidly than ever before. Existing techniques were seen as too slow, too cumbersome, to keep up with the fast-paced, online world of the internet.

Agile proponents set out a vision based on collaboration and responding to changes quickly, rather than trying to specify everything in advance. Indeed, the ability to change quickly is what gives agile its moniker, and is its chief feature. Yet if we dig into organisational culture a little deeper, we see that these ideas aren't really that new.

Organisational culture first burst into popularity in 1982 with the release of Tom Peters' and Robert Waterman's book *In Search of Excellence: Lessons from America's Best-Run Corporations*. In it, they put forward eight themes that sound terribly similar to those proposed by agile proponents:

- A bias for action;
- Close to the customer;
- Autonomy and entrepreneurship;
- Productivity through people;
- Hands-on, value driven;
- Stick to the knitting;
- Simple form, lean staff;
- Simultaneous loose-tight properties.

Ironically, *In Search of Excellence* was written in part as a reaction to competitive and economic forces present at that time. In the early 80s American businesses were being utterly trounced by the Japanese and this highly-competitive market had experts decrying previous business approaches, claiming they were no longer relevant. Sound familiar?

So while there is plenty of agreement that change is required within an organisation when there is change happening outside the business what strikes this author is that's not a new idea.

Culture rules all

No stranger to a challenge is Andrew Walduck, former CIO of Australia Post, who prior to a move to a general manager role, led the charge to build a digital capability within an organisation struggling to keep up with an intensely disrupted industry.

Walduck, a fan of Kotter's eight-step change framework2 says that establishing the need for change is a major component of driving a cultural change.

"Ultimately if there is one thing the work I've done here has taught me, it's that if your burning platform is clear, that drives change. You must establish a clear burning platform for change," he told *iTnews*.

Peter Drucker is famed to have once said that 'culture eats strategy for breakfast'. Walduck has coined his own ▶

turn of phrase to stress its importance. "I believe culture is technology's new critical infrastructure."

Kotter writes of ensuring a sense of urgency as step one in a change process, and while setting fire to things may achieve that goal, it doesn't guarantee success. Nokia's ex-CEO Stephen Elop used the *burning platform metaphor in 2011*, and we saw how well that turned out.

Others, such as Dick Smith's CIO Paul Keen took a *change management by stealth approach* to an aging legacy system.

An architectural rethink included the construction of an Amazon data warehouse to bring data closer to the customer with interfaces to the back end AS400 platform and more nimble SaaS solutions provided via APIs.

"We could spend the next three or five years putting in a large ERP system and get fired along the way for overspending. We are in turnaround phase so we needed to grow very quickly and needed the agility for a turnaround – we need to try everything and see what sticks," Keen says.

It's an approach that allows IT to turn on a dime when there is clearly identified benefit for the customer.

Keen sees this bimodal approach as critical to turning IT's frame of mind towards a "yes culture," a pre-requisite for an agile enterprise where a uncooperative tech team can be easily bypassed.

"We try to have a series of APIs available to different tools and services so we can instil some governance in the adoption of SaaS solutions. The key is to prethink what information will be required and expose it out to the systems so we are freed up to do the bigger ticket transformation projects.

"The idea of guarding everything is pretty much outdated – especially now any department can get a corporate credit card and sign up for an enterprise grade service like Salesforce."

Muddying the waters

Vincent Dempsey, general manager of Digital Channels at Vodafone, finds agile purists to be "unhelpful" when they treat established IT methods as the stuff of dinosaurs.

"You need to try and find a way to make the new world work with the old world," he says. "A lot of people who work in agile are advocates of lean start-up--and

DIGITAL INFLUENCERS

We asked the CXO who plays a crucial role in shaping their digital strategy?

that's a great way of working for start-ups--but large corporates also need to find ways to change. So there are people in the middle, and hopefully I'm one of those, trying to provide that bridge between the lean start-up world and the corporate world."

Others believe that providing a separate place for innovation to happen, an incubator, with the results re-integrated back into the main organisation copying the Xerox PARC approach is a viable solution. But as Nigel Dalton of REA Group correctly points out, re-integration is where the trouble begins.

Successfully merging in an acquisition is challenging at the best of times, and if there is a mismatch in cultures, success is highly unlikely. For a recent example, one need look no further than Cisco's failed experiment with Invicta.

So which is right? The bad news, which you might well expect, is that there is no one, simple answer. However, the good news is that this has been an active area of management research for well over thirty years and much is known about what works, when, and why.

While allowing for mistakes to happen and learning from them is one of the tenets of agile, it doesn't seem to make much sense to try things that others have already discovered don't work. Our successful executives all show a willingness to learn from outside sources, rather than trying to discover everything themselves from first principles.

One last bit of bad news: change doesn't come cheap. Many of the organisations that were facing challenges cited a lack of investment in IT as a major cause of their troubles.

Former Bank of Queensland Group CIO Julie Bale spoke of ten years of under-investment yet no one suggests that a major change program can be completed in less than a year.

But in the words of General Eric Shinseki, Chief of Staff US Army: "If you don't like change, you're going to like irrelevance even less."

A place for innovation

INCUBATORS AND HUBS OFFER IDEAS A PLACE TO GROW.

By Beverley Head

Almost two in five of the world's largest companies have established innovation centres as a global technology hub to ensure they are part of the next-big-thing.

Westfield is one of them.

In an eyrie at the top of a San Francisco shopping centre is Westfield Labs, established in 2012 and charged with developing the "mall of the future." It wants to reinvent the shopping experience using social, mobile and digital technologies.

Closer to home, Commonwealth Bank has established its Innovation Lab in Sydney, a city fast becoming a global fintech hub with incubators set up this year by Tyro and Chalk & Stone.

In July the bank and the retailer came together to announce that Commbank would pilot an offers and loyalty app on its digital wallet in Westfield shopping centres, leveraging Westfield's investment in technologies such as beacons and interactive advertising.

If the experiment works then it will help validate the innovation lab approach and cement the benefits of inter-sector collaboration.

The recently released report *The Innovation Game: why and how businesses are investing in innovation centres,* from Capgemini and Altimeter, says the rise of the enterprise innovation lab has been triggered by "digital Darwinism"; an organisations' determination to not only survive but prosper from digital disruption.

The report notes that since 2000, 52 percent of the Fortune 500 have merged, been acquired, or gone bankrupt – while the remainder are innovating madly to improve their chances of survival.

According to Jerome Buvat, global head of research at Capgemini Consulting; "Many organisations are solving the issue of embracing innovation by partnering with or acquiring technology startups, but too often this is a sole focus. A more equal balance between external and internal thinking is required.

"Innovation centres are proving an effective means to cultivate the agile startup mentality needed to remain at the forefront of the market, but it is clear that establishing an effective centre has many challenges."

The report says it can be hard to reap value from innovation labs – often because organisations investigate technologies that are either too far out, or too prosaic. Instead organisations need to achieve a goldilocks state where the innovation targets are just right.

Ian Hill, was installed last year as head of innovation at Westpac, and is responsible for the bank's 800-square-metre innovation lab, called the Hive at Kogarah in Sydney's south. He explains that the bank has a multi-pronged approach to innovation, which includes its $50 million ReInventure fund to invest in promising startups, that Hill describes as "adjacent to core financials", and also running an ongoing innovation challenge.

He believes that the Hive plays a central role. "There is now a good body of literature that shows it is hard for large enterprises to bring in disruptive organisations without the antibodies of the large organisation trying to destroy it.

"It is key for organisations to create a semi-permeable membrane between themselves and the companies they are nurturing."

The challenge facing incumbents

Professor Kai Riemer, associate professor of the University of Sydney Business School and chair of business information systems, says; "If you look at the problems incumbent businesses have with digital disruption it's that many businesses have built up internal structures in relatively stable markets using detailed business cases, expected outcomes and known cost factors.

"When those structures encounter disruptive forces they are quite helpless to deal with disruption."

Innovation labs and incubators he says can be useful in terms of providing the "freedom to experiment".

Westpac has harnessed those freedoms and since

the Hive's launch in September 2014 has had more than 500 teams use the facility, including internal teams, external partners and collaborations. One of the first products to emerge from the Hive was Westpac's emergency cash smartphone app which was taken into the innovation lab as a "minimum viable product" and then honed for market release according to Hill.

He acknowledges however that it was still too early to demonstrate an ROI for the Hive noting that on average it took three years between an idea being born to full commercialisation.

The innovation lab concept is well established internationally – even among the largest and most technologically savvy companies. Microsoft for example operates a string of 16 "Garages" around the world – including one in Sydney - where it allows staff to experiment.

Jeff Ramos is the US-based leader of Microsoft Garage and says that the initiative is important "to evolve the way we work".

According to Ramos; "We are a company that needs to change...to be competitive in a mobile-first, cloud-first world."

Having the Garages; "Drives the hack culture, supports small scale projects and moves ideas forward, and helps change the perception of Microsoft," according to Ramos. There are currently more than 3000 Garage projects underway, and 10,000 employees involved in the program.

Position, position, position.

Certainly the number of innovation labs being established and funded by Australian enterprises is rising rapidly. Most recently Telstra set up the Melbourne-based Gurrowa Innovation Lab in August (it already has a start-up incubator, Muru-D), IAG announced its incubator in July, while Suncorp and Bank of Queensland support the RiverCityLabs in Brisbane. Telstra has also announced that it will collaborate with EMC's spin off Pivotal to enhance its software development capability.

For Westfield Labs, San Francisco provides access to not only "talent and tech partnerships" according to chief digital officer, Kevin McKenzie, but a regular supply of willing retail guinea pigs.

According to McKenzie; "Having Westfield Labs located within Westfield San Francisco Centre was a very strategic decision. It allows us to observe and interact with our end customer, which not all Labs are able to do as easily.

"We are also at the intersection of the retail and tech industries in San Francisco and among some of the most tech-savvy customers in the country, in addition to visitors from all over the world, which creates a natural and unique testing environment."

Jeff Jacobs is an independent consultant, and principal of JMJ Consultants. He believes that innovation centres are useful to; "Get everyone up and running and help embed innovation in the culture of the business." While he is not convinced such labs will ▶

be needed long term, he says that to succeed in the medium term there needs to be sufficient investment in location, facilitators and executive sponsorship, and that innovation labs should be allowed to operate for at least a couple of years.

"They are particularly useful for companies in transition," he says.

Having a physical location where people know they can collaborate is essential he adds.

"And they need to be professionally run...facilitated by dedicated professionals," perhaps using innovation methodologies such as The Difference from PWC or Capgemini's RAIN (Rapid Innovation) he says.

Importantly innovation centres provide a venue where it's possible to demonstrate what has been achieved according to Jacobs. "I think everybody should be doing it – to get everyone thinking about it."

Not everyone agrees. Andy Weir, BankWest CIO isn't convinced that a standalone innovation lab is the right approach; "If I take it from the point of view that an org sees digital disruption, buys into the theory and wants to transform, I can't see the point of spending time setting up an organisation within an organisation or some sort of a cell that you incubate and hope by osmosis it brings the rest of the organisation with it. I fundamentally disagree with that.

"In my experience of seeing organisations create offshoots, it has precisely the opposite effect - it causes conflict, tension, and hostility between the mothership and the cell. It creates barriers and walls, not collaboration."

Sudhir Pai, chief technology officer for Capgemini ANZ, runs the company's innovation track and set up a Melbourne innovation centre for the business in 2014. He believes that the real benefit of innovation centres lies in their ability to rapidly apply innovations – not necessarily invent things.

Pai says Capgemini's centre uses the company's innovation framework to support co-creation, piloting, and to develop an innovation ecosystem.

But he stresses that at some stage the innovations emerging from the labs have to be implemented into a business. "The business model change is the hardest thing. Innovation centres can be just a tick the box thing. Business change is the hardest thing."

> ***"It is key for organisations to create a semi-permeable membrane between themselves and the companies they are nurturing."***
>
> Ian Hill - Westpac

Bringing digital in-house

WHY IT'S A WINNING STRATEGY.

By Allie Coyne

In tough financial times, it's all too tempting for businesses outsource their technology to an external provider.

Such an approach not only cuts down on costs and provides access to a greater pool of expertise, but it also transfers IT to a known 'specialist' - allowing the business to focus on its core activities. It's unsurprising many consider outsourcing an attractive option.

However, appointing someone else to handle your core IT does come with pitfalls (Queensland Health vs IBM being one of the more public examples of when outsourcing goes wrong).

Some IT functions may not easily lend themselves to being outsourced. You also lose a certain amount of control, and an external contractor is less likely to be as invested in caring for your data as an internal employee.

Not to mention one of the biggest disadvantages: vendor lock-in. Handing over your entire IT shop to one provider does not make it easy to transfer to someone else or wrest back control.

But for the CIOs of gaming giant Tabcorp and superannuation firm IOOF, the main instigator to bring digital operations back in-house was to help their businesses stand out from rivals.

Tabcorp CIO Kim Wenn made the call three years ago, at a time her business was being profoundly disrupted from new international wagering firms.

Five years of earnings decline and an underinvestment in digital forced Tabcorp to take a long hard look at its strategy and work out how it would tackle the influx of digital rivals.

Wenn managed to get the board to agree to take back control of digital from its outsourced provider, and set up a new unit that would allow Tabcorp to deliver features and functions in an agile fashion, enabling it to be competitive.

"We came to believe quite quickly that being in control of our own digital assets was essential - it was a touchpoint to a customer and a core differentiator that we wanted control of," she said.

The digital team now counts around 40 staff, and is able to push out daily releases to its systems, where Tabcorp's former outsourced provider only allowed two major changes a year.

Wenn considers success as Tabcorp's ability to be flexible at the front end - thanks to a new enterprise service bus - without compromising on the quality of systems of record.

And the proof is in the numbers - Tabcorp's digital turnover has continued to climb in recent years, and grew 18 percent for the 2015 fiscal year to $3.4 billion. Mobile now represents 63 percent of all digital revenue.

"We don't see digital as a disruption, we view it as an opportunity," Wenn said.

To obtain a solid digital capability, according to Wenn, not only do the executive and board need to be championing the cause, but you also need skilled staff who 'live it, breathe it, love it'.

"One of our interview questions is: has the developer contributed to an open source forum, a hackday, or some other development community in the last month? If the answer is no, they don't live it, breathe it, love it," she said.

It's a mantra that IOOF CIO Andrew Todd has also adapted to his business.

The challenge with the super industry - one of the more conservative given strict regulations and barriers to entry somewhat protect it from disruption - is ensuring the skills of IT staff are relevant.

Todd stands out among his peers for his inclination towards open source tools and newer technologies such as the Clojure programming language and software development lifecycle tools like Bamboo and Jira.

It's often resulted in a challenge to get more conservative, long-tenure IT workers using these modern products.

"I'm often asked, 'What if we can't find people to support it?'" Todd said.

"I'll take that risk. I've more or less decided - if they've ▶

worked in super and finance before, we are actually less likely to hire them. It's a better outcome to hire people that have a similar thought process to how we want to achieve our aims."

IOOF's technology shop sticks out like a sore thumb in an industry where others happily sign up for commercial-off-the-shelf solutions. There's no incentive to use technology to differentiate in a market as sleepy as super.

But Todd has taken the opposite approach. He sees technology as the answer to the problem of member engagement - and an in-house digital shop means the super firm can deliver features much faster than a vendor's timeline allows.

"With our own technology in place, we can more quickly test ways to increase member engagement," he said.

"If we own a platform and we need to offer a new website or a feature, we can fulfil that end-to-end. We don't have to be in a line for feature requests with every other user of a [COTS] system."

A software team of over 65 staff is a big overhead for any business, much more one the size of IOOF, but the firm has been willing to shoulder that cost in the belief it will allow IOOF to stand out from the crowd.

"Everybody in our industry is trying to deliver the same features," Todd said.

"We know we can't compete with the banks on how much money they invest in systems, but we can be nimble, and we have got some good technology.

"For us, technology is a differentiator."

Spin it off

WHEN YOUR DATA TEAM BECOMES ITS OWN BUSINESS.

By Paris Cowan

Digital disruption is not only about efforts to make up for lost revenue streams. In fact, for a lucky few, new and unexpected business opportunities have blossomed in places where tech investments were planted years before.

The Australian enterprises that really saw the writing on the wall years ago and capitalised on building an internal data capability are finding this experience and maturity is now so valuable it represents an asset that can be sold on to third parties.

Jet-propelled analytics

Its Frequent Flyer loyalty program has been running for a whopping 27 years, and now boasts billions of records on customers and the history of their transactions, both in the travel space and with any of the program's retail partners. It had 10.7 million customers on record at last count.

Last year, Qantas realised the loyalty wing of its company had matured to an extent that it could start offering analytics services to third parties.

Today it offers customer segmentation data to companies wanting to target their advertising, straight-up data analytics services, and customer research – which is leveraging the Frequent Flyer base to pass out consumer surveys encouraged by Frequent Flyer points.

As Qantas CIO Luc Hennekens explained it; "We must be doing something well if people are willing to outsource their analytics to us."

Hennekens is in charge of the Hadoop clusters Qantas and Red Planet are using to store and extract its unstructured data, and the Teradata and Cognos solutions it uses for analytics.

With customers like Avis Car Rental, Budget Car Rental, iSelect, Hilton hotels, NAB, Bankwest and American Express signed up since Red Planet went commercial in September last year, Hennekens says the spun out business is a testament to the airline's decision to keep data analytics in-house and "get its hands dirty" all those years ago.

"The key thing for us is not to get stuck into particular technologies, but to start educating ourselves and our staff on what is possible. You can rely on external agencies but then you don't learn as an organisation," he said.

On a smaller scale, much the same thing has been happening over at advertising group STW, which houses agencies like Howorth, Ogilvy and Hawker Britton.

STW Group's CIO Tom Ceglarek said advertising saw the data revolution "coming from a mile away".

In 2013 the company sent out a group-wide directive that all of the dozens of agencies operating under its umbrella needed to offer some sort of data service to its clients. In 2014 it took this a step further and launched a specialist data services agency called STW Datahub, offering advice in analytics tech and automation, plus its own data-enabled insights to inform marketing campaigns.

Once again, Datahub is the product of its parent company reaching that critical mass in data capability that all of a sudden makes it a credible commercial entity in its own right.

"We aggregate a lot of data from a lot of different sources, across all of our clients," explained Ceglarek.

"All that expertise we have across the different sectors we work in, [means we are] able to offer some deeper insights you might not get from some of the smaller players in the market."

Credit reporting agency Veda has taken a slightly different path to realise its own data business ambitions. With all the infrastructure and analytics capability you'd expect from a company that crunches out credit reports for a living, Veda decided it could leverage this back end for new purposes and in February 2014 bought a controlling ▶

> ***"All that expertise we have across the different sectors we work in, [means we are] able to offer some deeper insights you might not get from some of the smaller players in the market."***
>
> Tom Ceglaret - STW Group

stake in marketing analytics firm Datalicious. It is now chasing new revenue streams by providing customer segment analytics and media attribution services to a new market.

Chief data officer Lionel Lopez explained that its tightly regulated credit reporting data sets remain "very ring-fenced" from the Datalicious business, "but there is still room for us to deliver great things to our customers" he insisted.

"At the core is always data analytics and data manipulation," he explained, allowing Veda to piggyback off its existing assets built up over five decades of trading in knowledge and insight.

Giving into Impulse

For travel insurance firm Cover-More Group, the transition has been more incremental. It has not made a conscious decision to spin off any part of its business into a digital-only commercial wing. But at the same

time its proprietary analytics software, Impulse, keeps encroaching on its core business model and becoming an increasingly critical part of its market advantage.

Impulse is an analytics engine that links into the ecommerce and booking platforms of airlines and travel agents through an API. When a consumer books a trip it extracts the data and delivers back a tailor-made travel premium that they can purchase as part of the same transaction.

Cover-More has streamlined the tool with modern API standards, and uses its ease and speed of installation as a key selling point to partners. It is unlikely Cover-More will be offering access to the tool to any of its fellow insurers anytime soon, but it is almost certain the algorithm-driven software is its ticket to a future in Australia's digitally competitive financial services arena.

So what does all this mean for the Aussie enterprises that might have been a bit late to the party, or are still working on digging up the resources needed to sink into a really top notch analytics capability? The Qantas Frequent Flyer lesson is that every day your business spends "getting its hands dirty", so to speak, in data experience is a valuable return on investment. ■

WHO IS THE CXO?

iTnews conducted in excess of 50 interviews to compile the CXO challenge. CIO was just one title for the individual responsible for driving an enterprise's digital strategy.

Big data and analytics in media and advertising

TAKE IT PERSONALLY.

By Ry Crozier

When a 96-page internal report prepared for the *New York Times* leaked in 2014, it crystallised the challenges traditional media companies faced from a new breed of digital upstarts.

The report declared that NYT could no longer fall back on its high standard of journalism.

With dwindling numbers of people hitting its homepage directly, NYT needed to do more to find an audience for its content rather than simply keep on publishing it.

The media and advertising industries are dealing with the effects of intense disaggregation.

Many readers simply graze content via aggregation engines like Reddit – they come in, read one story and move on.

They can also take advantage of ad blocking tools within browsers, choking traditional avenues for revenue and giving rise to new models where branded content sits side-by-side with regular news.

Though some traditional media have tried to put paywalls around their content, it's a strategy that has experienced mixed success, and the gap in the market is quickly filled by new digital players with seemingly no problem providing everything for free.

These are some of the reasons that media and advertising companies are turning to big data and analytics, in the hope it will produce insights that help them adapt to the changing market conditions.

"Data has become really, really important to us to find out who is looking at our products, at our content, what they're looking at, when they're looking at it and how long they look at it for," News Corporation chief information officer Tom Quinn says.

"It's all about data now," STW Group chief information officer Tom Ceglarek concurs. "But it's such a nascent field that everyone is figuring it out as we go."

The personal touch

One of the great white hopes for big data is that it enables the media and advertising industries to really personalise the experience they are able to offer to users.

"Personalisation would be the biggest thing we are working on right now," Trade Me Group chief product officer Trent Mankelow said.

"We are sitting on a mountain of data. There is a lot we know about what our users do right across Trade Me but we do very little with all of that.

"Our desire is to offer experiences that are much more personalised so that your home page is different to mine, and the EDMs [marketing emails] you get are different to mine and are targeted and useful."

Likewise, Foxtel's director of information services David Marks also sees the importance of using data to achieve "a better experience for the customer".

"We have a lot of customer information and you can turn that into real insight on how they use our systems," Marks said.

One example of how big data could help drive a more personalised experience is around the augmentation of traditional TV programming.

"Imagine you're watching the story of a couple from Roma and their wonderful lemon tart on My Kitchen Rules," Seven West Media's chief digital officer Clive Dickens said.

Rather than making a mental note to buy the ingredients next time you shop, why can't you "pull out your tablet [and] immediately buy the ingredients for that tart [and have them] delivered to you from our friends at Coles?" Dickens asks.

Money, money, money

Personalisation using big data and analytics is that it is increasingly the way the media and advertising industries

make their money.

"If you can target particular consumer profiles with real precision, then you can command premium pricing," Southern Cross Austereo's director of digital and innovation Vijay Solanski said.

Employment site Seek is already using big data to eke more revenue from the jobs market.

"We have an ability to use data to really enhance the search experience, and the main way we are doing that is by proactively recommending jobs," product development and digital strategy boss Michael Ilczynski said.

"One of the biggest challenges with Seek is the sheer volume of jobs on our site. It's actually sometimes difficult for job seekers to make sure they have found every single job that is relevant to them.

"So what we are doing is using the data we have on the job seekers to fill this gap and make sure they don't miss the most relevant jobs. 'You know who I am, so tell me jobs that I have missed.'"

Seek delivered "nearly 200 million" job recommendations to its customers in 2014.

"At the moment we send out well over a million emails a week that are proactive recommendations from us," Ilczynski said.

"It's getting amazing traction in terms of open rates and increased hire rates."

Seek has also adapted the model to benefit hirers as well as candidates.

"For our hirers we can use the same content and say, 'Here are the 20 people who have applied for the role, but here are another 40 or 50 people from our profile database who haven't.

"'Do you want to reach out and connect with them? Do you want to send them the job, send them a message or download their CV? Or maybe pick up the phone to call them?'"

Base for a business case

While big data and analytics is helping content players consolidate their existing position and carve out new markets, the technology is increasingly fundamental to the way advertising operates.

"Everything is a lot more exact these days," STW's Ceglarek said.

"You still have big campaigns now and then, but more and more we are seeing tactical niche activities which have a determined outcome they are after, not just general brand building.

"There has to be a business case for everything, and everyone wants a quantitative result."

News Corporation's Tom Quinn agrees. "We've got to be able to tell our advertisers who [customers] are and what they are looking at, so they know where to place ads."

STW began its big data push at the end of 2013. At its core is a mandate that every company in the group must offer some form of data analysis capability.

"We are hiring a lot of data scientists," Ceglarek said. "There is a lot of data out there, but you have got to know the right questions to ask it to get the right insights and right outcomes."

The company also aggregates data from across the group into an STW data hub which it uses to generate deeper insights than its portfolio companies could do on an individual basis.

"Once you anonymise data to a certain point where you are just working on trends and correlations, that is information that can benefit a lot of people," Ceglarek said.

However, even he has some lingering doubts on what big data and analytics means to the industry.

"I think more and more, everyone is going to want to track everything and graph it with historical trend lines to make their business cases," he said.

"It is going to be about having the right data feeds, the right expertise to be able to interpret that data, and being able to implement it in a creative way and measure the outcome.

"But I'm concerned that all this big data is going to reveal is that none of this is very effective, or it's effective in ways that are hard to measure."

He cites the difficulty in working out whether page views are in fact real or not. "You don't know for sure that someone has looked at an ad," Ceglarek said.

"You talk about conversion rates of 0.03 percent [being] really good – [but] I'd guess a lot of those people clicked on the ad by mistake."

Testing privacy

The other challenge for media and advertising companies in embracing big data and analytics is perhaps not dissimilar to that faced in other sectors – how to do so while avoiding the creepiness factor.

"We are a very trusted brand here in New Zealand and that is for a good reason," Trade Me's Mankelow said.

"We are very careful with privacy and how we approach this kind of stuff, and this is perhaps part of the reason we have been a bit tentative around this.

"We will make sure that we honour the trust people have in our brand."

Why straight-through processing is the holy grail for banks

STRIPPING AWAY HUMAN INTERVENTION

By Andrew Colley

When the federal treasury published its long-awaited *financial system inquiry report* in November 2014, it put down on paper what many in the banking industry had been observing for nearly two decades.

It demonstrated that consumer adoption of the internet and the increasing digitisation of the economy had made financial services a broad target for disruption.

As the report's authors noted, with no physical product to manage, bank processes "readily lend themselves to improvements via digital technologies".

With billions being invested in financial services start-ups, the report found Australian banks have invested heavily in digitising their retail products. Core to the digitisation effort is what bank technologists refer to as "straight-through processing".

Straight-through processing broadly refers to the means by which organisations strip manual or physical activities involved in vending or providing services so they can be digitally automated end-to-end.

Former Westpac chief technology officer Jeff Jacobs said straight-through processing can also be referred to as "exception-based processing" - in other words, human intervention is only called on if an organisation's automation engine flags something unusual during a transaction.

It's by no means the exclusive domain of the finance sector. State road authorities are gradually phasing out registration stickers in favour of electronic notification of vehicle safety checks, which allows motorists to renew their registration online.

It's also catching on with immigration authorities. Last year India began offering online visa applications in Australia, relieving travellers of the need to march into the embassy clutching passport photos.

Similarly, Australian customs is gradually rolling out passport scanners at international ports that automate and replace the role of their human officers.

For these organisations, straight-through processing is a by-product of making fairly radical departures from pre-internet era business processes that had, in some cases, changed little in decades.

Inevitable path?

However, it's arguable that the arrival of the internet merely accelerated banks and financial institutions along an evolutionary arc already being inscribed.

In 1969 Australian banks started rolling out their first automatic teller machines.

ATMs were early examples of straight-through processing, and provided consumers with a new way to interface with banks that would eventually relieve thousands of staff in hundreds of branches of the need to partake in millions of small daily transactions.

The internet has effectively given banks the potential to put an even more sophisticated interface into the hands of every consumer virtually anywhere. National Australia Bank digital boss Adam Bennett told *iTnews late last year* that around 80 percent of the bank's retail customers use digital channels to transact. The rest of the big four and their second-tier rivals frequently offer similar statistics.

"What customers want to do today is to self-serve - to transact," Bennett said.

This has fired the starter gun on a race to take the most complex and manual intensive financial products

and squeeze them through the internet to consumers safely, former Westpac CTO Jeff Jacobs said.

"The bottom line is with any transaction that has a customer touch point, every bank will have a goal to digitise it," he told iTnews.

"Whenever you say you digitise you're inevitably talking about straight-through processing because you're talking about catching data. You're then putting it into a form that lets it be automated to work with backend systems."

Former Bank of Queensland Group CIO Julie Bale last year told *iTnews* straight-through processing was behind the bank's decision to overhaul its financial products.

The challenge, she said, was making sure customers didn't have to trip over any seams in the end-to-end process.

"The one thing that winds any customer up is thinking you're on a digital journey and then coming to a halt and being sent back into the old world," Bale said. "Could you imagine if you were asked to fax in details to change your name on Facebook?" Bankwest CIO Andy Weir *has previously said*.

David Gee (former CIO and start-up advisor) says banks have the potential to strip significant dollars from the cost of originating new financial products.

But more complex loan transactions remain a challenge for banks and credit unions, he says - they're still paddling in the shallow end of the digital processing pool.

"They've all got the right strategy, but it's a lot harder to do in the retail channel and I wouldn't say that any of them have nailed it yet except in certain domains," Jacobs agrees.

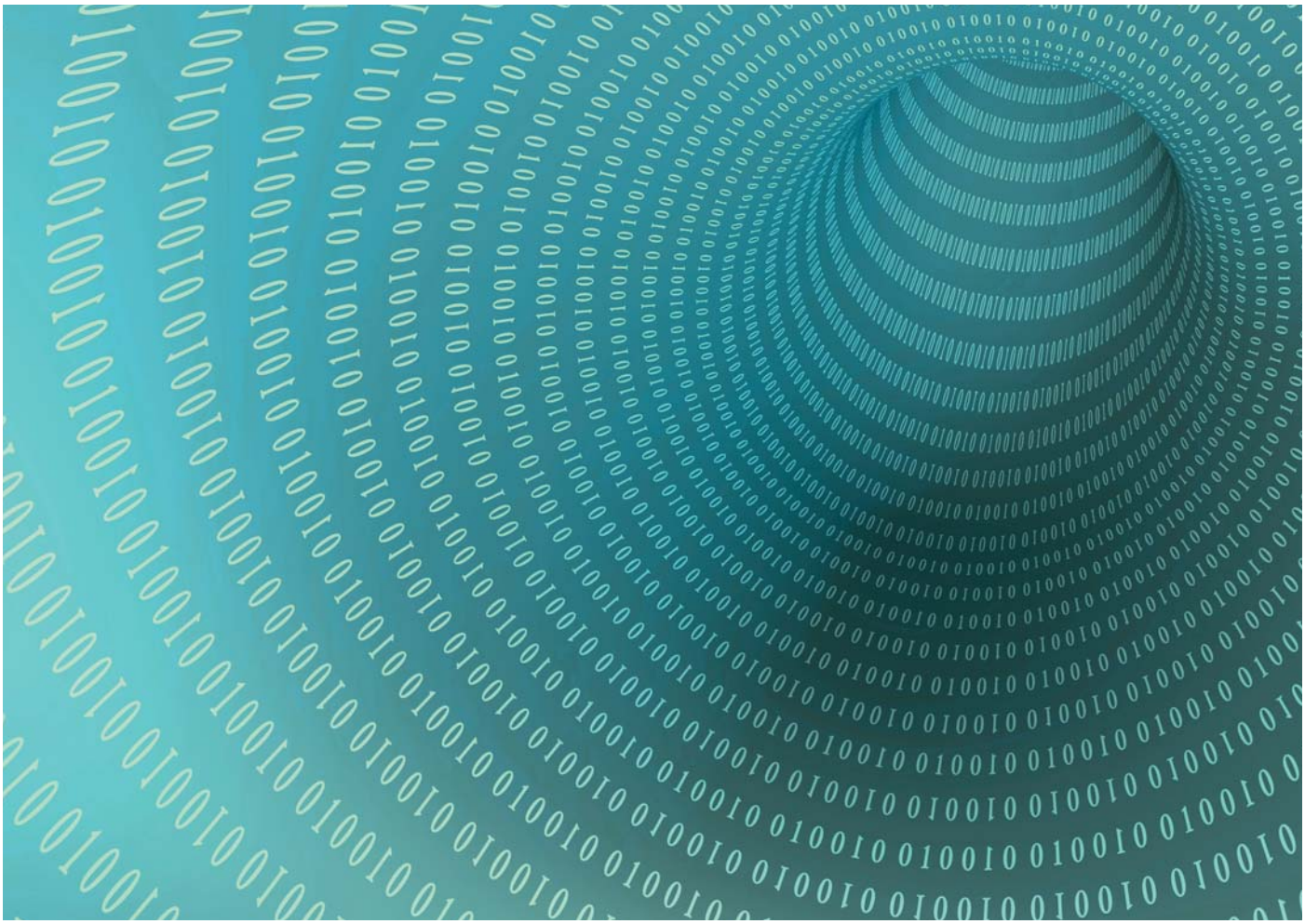
"That sort of stuff is still held together behind the scenes, whether they're doing it offshore in India or in Australia, it doesn't matter – there are still manual processes and people involved," Gee says.

The white whale

Arguably, the banks' straight-through processing white whale is the mortgage. Gee says this is the most expensive product for banks to vend and digitising it would pull both banks and consumers out from under a mountain of paperwork.

"All that paperwork that's done is kind of wasteful because no one reads it - not even the lawyers read it, right?"

However, issuing new credit cards and opening new accounts is relatively simple compared to mortgages. ▶



Banks can draw on readily available risk management systems and well-stocked consumer credit checking databases.

But mortgages have even more moving parts and could require valuation certificates, input from lands and titles offices and other asset registers.

Following from its core banking upgrade in October 2013, CUA has established a personal lending platform and it's working on the mortgage platform.

However, CUA chief operating officer Steve Chugg says it won't be a pure digital offering for the foreseeable future.

"There are technology solutions that will allow some degree of verification. From a CUA point of view, there is a need to have information confirmed or verified manually," he says.

"So to answer whether you could originate without any human intervention, that's certainly not on CUA's radar today."

Hampered by regulation

It's not hard to understand why the banks are taking a cautious approach: bank regulators appear to be struggling to keep pace with the technology.

To verify the identity of their customers, banks are required to carry out 100-point evidence checks.

It's a requirement that halts the flow of what could otherwise be an entirely digital process.

"As regulated entities, there are some boundaries we can't cross," former BoQ CIO Bale said last year.

She raised the option of using digital certificates or some other digital mechanism of trust, potentially combined with a social log-in, to replace this onerous verification process.

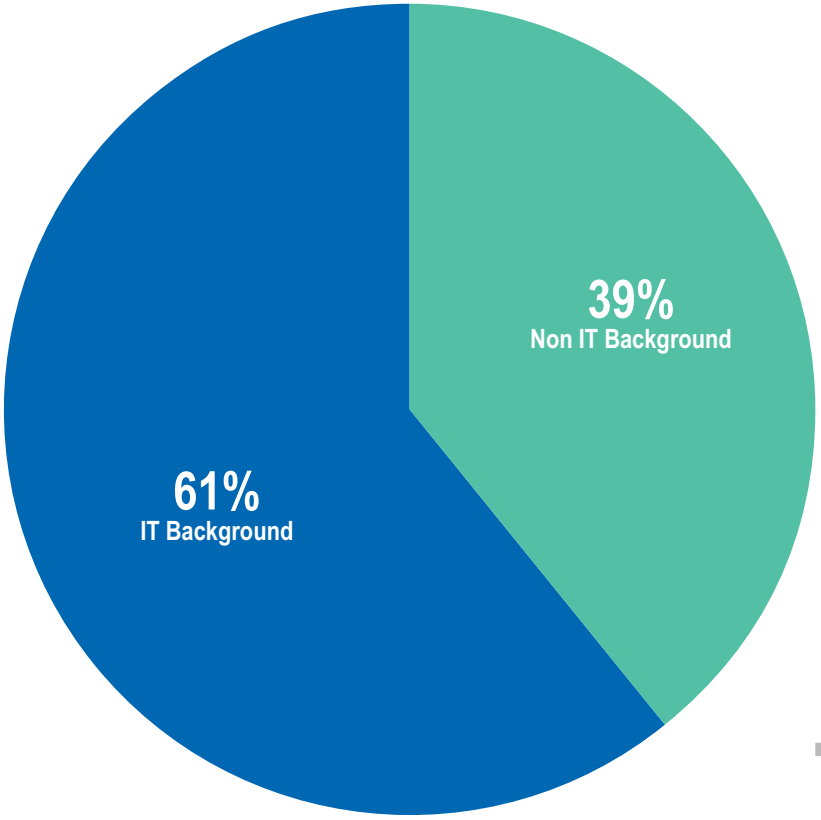
The federal government's financial system inquiry, while warning of the regulatory challenges from technology-driven change, indicated such a vision might not be too far off.

The paper devoted an entire chapter to innovation, recommending the establishment of a trusted digital identities token for consumers, which would remove a large number of digital processing bottlenecks.

The report's authors also said that while the benefits of innovation were hard to quantify, efficiency gains and improved customer convenience in areas like online banking were obvious.

"As the pace of technology-enabled innovation accelerates, it is crucial that government and regulators be aware of, and enable, the benefits of innovation to flow through the financial system while appropriately managing risks," the report recommended. ■

This article originally featured in the CXO challenge.



HAS THE CXO ALWAYS WORKED IN IT?

iTnews asked participants about their experience outside tech or digital roles.

APIs: rivets for the composable enterprise

EXPANDING A SAVVY CIO'S TOOLBOX.

By David Braue

The challenge of application integration has been a bugbear in computing modernisation for decades.

It defined the client/server revolution in the 1990s and drove explosive growth in any-to-any middleware - which then became a millstone for ERP overhauls - as integration of incompatible business systems single-handedly drove innumerable cost and schedule blowouts.

Web services protocols such as SOAP (Simple Object Access Protocol) – driven as they were by catalogues of defined application programming interfaces (APIs) – offered a workable solution, yet they also worked best with bespoke services rather than those built around legacy systems.

It is only in this decade, with web-based applications now well established and new cloud-based alternatives built from the ground up as web services, that the benefits of API-driven application architectures are shaping massive functional overhauls for some of Australia's largest enterprises.

No longer must systems be built from the ground up and maintained, updated and replaced by in-house teams that could lose key staff at any time.

Instead, the construction of API-based applications is driving the creation of services that are both better documented and intrinsically easier to modify to suit changing business requirements.

Lingua franca for the cloud

At a very high level, an API is simply a collection of application routines with a carefully specified set of methods for inputting and outputting data to those methods.

APIs are typically well documented to explain the functions they offer and define the way requests are structured for them to work correctly.

They have played a role in bespoke software development for some time, allowing developers to add capabilities quickly to their software without having to build it from scratch.

With the rise of web services and cloud, the scope of APIs has become much broader: one web application might, for example, use an API to send a street address to a geospatial lookup service.

The response might variously consist of the name of the person or company at that address, a street-level image of the premises, a measure of its elevation, or its Australian Statistical Geography Standard (ASGS) details.

In this context, the API becomes the broker of information exchange between systems that might otherwise never know how to communicate.

Just as the adoption of Latin as the lingua franca of the ancient world enabled unprecedented cross-cultural trade and communications, the broad use of APIs has become a fundamental building block of the cloud-computing economy.

APIs are, for example, regularly used by e-commerce sites to process credit card transactions, which are sent for approval to a card issuer that returns an approval code based on its internal processing.

Social media services like Twitter and Facebook also rely heavily on APIs to allow access to their services from other sites, or from client applications running on desktop computers and mobile devices.

The Dick Smith experience

When Dick Smith CIO Paul Keen took up the reins of the then-struggling retailer in 2013, he found some pointy challenges awaiting him.

The nationwide retail business was still running on IBM AS/400 midrange servers that had been architected well before concepts like cloud or even internet were on the radar.

Keen and his team embarked on a complicated ▶

planning process, aware that the future of the company depended on its ability to provide a flexible online retail environment.

Over a process of months, Keen's team designed and built a software wrapper that encapsulated AS/400 key functions – translating data requests from external applications into commands the system could understand.

Its output was similarly processed to meet the requirements of external services, allowing them to interface with Dick Smith's core retail system as though it had been designed yesterday.

That system has subsequently supported a turnaround at the company, which has grown since it went public in late 2013.

Seamless interfaces to the system have made it easier for third parties to access current inventory information, enabling business initiatives such as a partnership with David Jones and integration with online merchants eBay and Catch Of The Day.

A new click and collect initiative - which lets users shop from home but pick up goods at a nearby Dick Smith outlet - was designed and implemented across 400 stores in just six weeks.

Despite its modern user interface, click and collect ultimately triggers retail sales events in that very same AS/400 system.

"Legacy systems are easy to dismiss, but they're the gold of the organisation if you do the right thing by them," Keen told *iTnews' CXO Challenge*.

"They only turn bad because people don't upgrade them, get scared about rolling out patches, and don't know how to deploy new code. If you keep them active, they can be great."

The facilitator for this shot in the arm is the use of application programming interfaces (APIs).

Empowered by growing innovation from cloud services, APIs have become the trigger for a reinvention of the way businesses execute critical functions to take advantage of modern online services.

The API Post-er child

Australia Post has been one of the biggest proponents of the API-driven enterprise, building up a massive catalogue of the code in recent years as it worked to slim down its conventional operations and reshape many of its core services as online information systems.

Former CIO Andrew Walduck is looking particularly closely at how re-using this code can give the organisation a web presence beyond its own e-commerce real-estate.

"I'm sure the technology vendors may disagree, but my theory is we don't need any more technology. We have all the technology we need to create the next generation of services for our customers," he *told iTnews as part of the CXO Challenge*

"What we need to do is to rethink how we team and collaborate with other organisations to serve our customers."

AusPost now counts *five externally available APIs* that can be picked up by the e-commerce providers that drive volumes to its parcel business, having now added a delivery tracking widget and an automated address label generator to the publicly available suite.

Some have already been adopted by online shopping behemoth eBay, which has embedded the postage price calculator into it shopping cart.

"We want our products and services to be part of wherever our customers choose to do transactions," Walduck said.

"Our digital strategy is about making our capabilities available to be integrated into the digital offerings of other organisations. That involves us modularising the capabilities we've got for consumption by others."

> ***"Our digital strategy is about making our capabilities available to be integrated into the digital offerings of other organisations. That involves us modularising the capabilities we've got for consumption by others."***
>
> Andrew Walduck - Australia Post

Payment handling, electronic banking, payment transfers and other services are all internally managed by systems that are linked using a broad range of APIs that then go on to connect with AusPost's 26,000-device, $71 million *delivery tracking service*.

This is part of life in the new world. Walduck says such issues reflect the ongoing challenges of the push to turn monolithic organisations into flexible, customer-driven service providers.

"I hate technology for technology's sake," he said.

"As an industry we haven't always done ourselves a lot of favours when it comes to talking about the explicit value you get from [technology].

"But we have completely redefined who the customer is – and it's an immensely exciting time as an industry to change the discussion we can have about our enterprise. But it really involves a lot of internal change to get there."

The composable enterprise

The promise of API-driven architectural reinvention is growing every week as vendors find new ways to shift data-processing functions into the cloud.

Contact centre vendor Genesys, for example, recently extended its service to integrate seamlessly with Microsoft's Skype for Business product by writing part of its code to Microsoft's Unified Communication Managed API.

Online analytics vendor Qlik, for its part, offers APIs that allow web pages to incorporate its high-end analytics features.

Similarly, the development of APIs into the Dick Smith AS/400 system allowed Paul Keen's team to direct the AS/400 data feed to Amazon's Redshift service, a massively parallel data warehouse whose own APIs are now being used to manage the company's financials, inventory data, and more.

"The way we've been modernising our systems is to take functionality that existed in the AS/400 and select a best of breed solution to which we can integrate," Keen said.

"For example, rather than reporting using the AS/400 module we export that information through APIs into Redshift, where we can add an awful lot of CPUs for a low price as well as supplementing our data with online ratings, user reviews, and whatnot. Because it's in the cloud, it's closer to the customer."

Over time, the burgeoning capabilities of cloud-hosted services are going to simplify the way organisations access best-of-breed solutions in the cloud.

Where they previously had to install and maintain such solutions on their own premises, leading-edge capabilities in areas like human resources, recruitment and financial processing become as easy to access as writing a few lines of code. ▶

"APIs are clearly becoming a dominant part of the conversation when it comes to cloud computing," Gartner's APAC research director Darryl Carlton said.

"It's breaking apart the monolithic ERP single-point solution into components.

"As soon as you do that, each of these applications have to be able to talk to each other in a convenient manner – and the only way to achieve that is by having common and consistent APIs. As you are no longer specifying the format of the data going between applications, you've got to conform to standard APIs.

"This is making it increasingly important for organisations to standardise, effectively, on open standards rather than proprietary standards."

Victoria's La Trobe University recently took a big step in this direction.

It *embraced SAP's cloud-based S/4HANA platform* as a core element of a future IT infrastructure that will ultimately see the university's top 30 systems revisited and, through the extensive use of APIs that link various core systems with S/4HANA and each other, streamlined to boost operational speed for the future.

This approach will see greater leveraging of back-end systems to facilitate the development of a new services-based environment that's being designed to meet specific administrative and educational requirements for its 36,000 students.

La Trobe is just months into the first step of this process, which saw it integrate S/4HANA's cloud-based Simple Finance application into its existing environment.

The university will eventually move all its back-end systems into the cloud in this way, CIO Peter Nikoletatos said, and effective API management will be critical to making it all work in the long term.

"To me, the APIs are actually what's enhancing the ecosystem," Nikoletatos told iTnews.

"The database is at the core of the ecosystem, but that ecosystem can be anything you want to bring into it.

"We've taken the opportunity to simplify our business processes. We've been looking at enterprise architecture mappings and how we are moving data around the place, and what APIs we would need to make this happen.

"It's game-changing, and it's really because of the speed at which all of this is happening."

Open to the future

When used correctly, APIs not only break down the barriers between on-premise and SaaS applications, they can also become a catalyst for change both in the application environment and in terms of the burden on internal IT and development teams.

By using APIs to bring in external services rather than running them internally, IT teams can access cutting-edge functionality they might never have had the ability to integrate themselves.

Deployment of new technologies is not limited to those with the deep technical knowledge in the relevant area. Newer service suppliers can be swapped in for existing services simply by changing the APIs used to feed them data.

Areas such as user authentication and security are likely to become key drivers for reinvention since even outsourcing a simple credit card processing capability can alleviate the not-insignificant burden of PCI DSS compliance.

Facebook, Twitter and other services already offer APIs delivering their social media capabilities as a form of outsourced user login management.

The shift to an API-based infrastructure also offers enterprises a way to protect their own data: by forcing all external data requests to come through a single gateway, businesses can more easily enforce access control rules that might, for example, prevent a competitor from exploiting the APIs to access live inventory and pricing information.

Yet the process is not without its complexity.

IT teams not only have to be educated in the services that are available and the APIs they offer, but need to keep track of the new architecture and the impact of telecommunications, downtime, periods of high demand and other issues that can impact overall service delivery.

Once key services are run by third parties but relied upon for the business to function, it's critical that the availability of APIs is monitored and any outages acted upon immediately.

"There are lots of different SaaS services we can leverage faster," Dick Smith's Keen said.

"And there are so many interfaces now that our core competency is now less about building applications, and more about moving data very quickly and reliably between systems.

"But whatever you build, you need to monitor: knowing when that's not working is absolutely mandatory. If we can spot problems as soon as they happen, we can fix them before the customer ever notices."

This article originally featured in the CXO challenge.

Radical Responses

LAST RESORT – CUT YOUR COSTS AND DUCK

by Allie Coyne

Not all businesses have the benefit of cash reserves to deliver on their innovation dreams.

For many, the stark reality is that often the only way to combat digital disruption is to cut costs and drive down overheads - for these organisations, ensuring the business is viable comes ahead of providing customers with the latest technology.

This is especially true in the manufacturing and resources industries, where falling commodity prices, a weaker Australian dollar and global economic uncertainty are putting the strain on operations.

Explosives and fertilisers manufacturer Incitec Pivot is no stranger to such challenges. The company's current focus is keeping its costs low, and it's very prudent in how it spends its dollars. Its CIO, Martin Janssen, is therefore required to take a "practical" and "pragmatic" approach to IT.

Janssen has a $39 million budget for Incitec Pivot's entire technology base, which supports a workforce of 5000 employees globally.

It represents just over one percent of the company's overall revenue, which sits much lower than the 2.2 percent of revenue Computer Economics says was the average across all industries in 2014/15.
But Janssen is proud of the figure. He sees it as representative of his efforts to work around budget constraints by leveraging internal technologies and outsourcing where it would provide more value for money.

His mantra - and one the company more widely trumpets - is about getting more from less with IT.

But it's not just about driving down costs for costs sake - the company recognises that technology has the potential to achieve substantial productivity benefits. "For a manufacturer such as IPL, 'technology' is the use of the latest techniques to improve the way that work is done," CEO James Fazzino said in 2013. For this reason *predictive analytics and mobile technology* are two areas the company is willing to invest in.

"Predictive analytics would allow us to operate more efficiently [by improving our] ability to get predictable reliability or optimise production," Janssen says.

A cloudy forecast

Iluka Resources, the world's largest zircon producer, is also operating within a tight fiscal environment.

The company's earnings have plummeted for the last three years in a row thanks to lower demand for its products (zircon is the mineral used in cosmetics, ceramics and fibre optics). As such, Iluka has been more focused on keeping the business running than investing in innovative technologies.

It's been able to ignore innovation, for the most part, because its market - mineral sand processors - is not one that faces digital disruption.

Nevertheless, the company's manager of buisness services Paul Baker is working within his budget constraints to deliver technological benefit to the business.

One area ripe for innovation is in Illuka's outsourced supply chain - it hands off responsibility for mining and material transportation to third parties.

Baker is looking at the role the internet of things and mobile, wearable and automated technologies can play in this process.

"If you are out on the site fixing a pump and you can get access to the information you need around that pump, and order parts from the warehouse while you are right there - rather than having to write it down, walk back to your desk and put it into a system, then go out and try to do your work again - that's a key one for us," he says.

Baker will also need to assess his options when the company's fleet of production servers reach end of life ▶

next year, he will assess whether to operate under the 'if it ain't broke don't fix it' model or try something new?

Key to his considerations is the need to support the company's remote operations – among 40 sites globally – and ensure a site is not isolated should communications go down. At the moment, each site locally hosts its own phone system, some key mining applications and Exchange and Outlook.
He is *weighing up the cost benefits* of shifting to a cloud-based model versus "site survivability".

"Our objective is to create and deliver value for shareholders, and we have to be very cognisant of that and make sure that the move to a cloud or the decision to stay on our own servers or hybrid model ties up with that objective for Iluka," B ays.

Double whammy

For the likes of GPT Group, opting to avoid a large capital outlay to renew its data centre leases and buy new SAN kit by choosing to go all-in with AWS also had the added benefit of providing the company with technological scalability and agility to match its growth agenda.

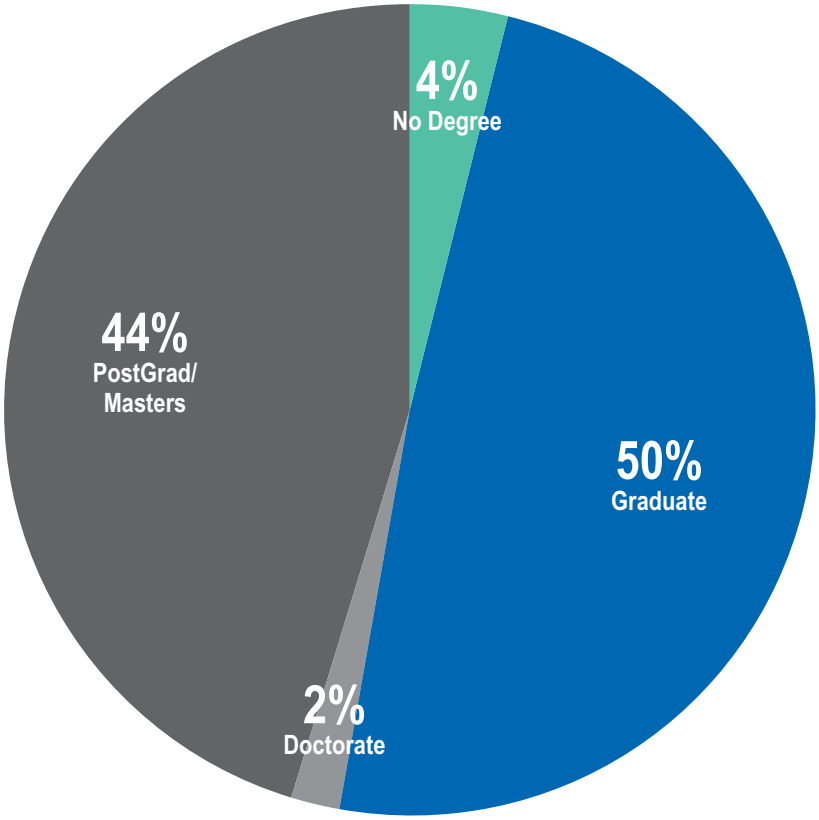
The move made the ASX-listed property services giant one of the first Australian businesses to move almost entirely to AWS – it pushed 95 percent of its IT environment into the public cloud.

According to CIO Sharmila Tsourdalakis, the decision was a "major contributor" *to a 30 percent decrease in IT costs* across the organisation.

But just as importantly, getting out of its legacy data centre leases already reduced the IT environment's carbon footprint by around 60 percent, freed up almost half the IT team from operational tasks, and allowed it to scale up operations instantly – an important function given the company's aggressive plans for growth. ■

DOES A CXO NEED A DEGREE?

iTnews asked CXO challenge participants what is the highest qualification attained.



> ***Our objective is to create and deliver value for shareholders, and we have to be very cognisant of that and make sure that the move to a cloud or the decision to stay on our own servers or hybrid model ties up with that objective for Iluka.***
>
> Paul Baker - Iluka Resources

Conclusion

When *iTnews*, in partnership with the ACS, launched a series of CXO profiles exploring the effects of digital disruption on Australian businesses last year, little did we realise we'd be contributing to the latest industry buzzword.

A phrase coined by Deloitte to describe the changes – both positive and threatening – occurring in business due to advancements in technology has now become the topic of every tech marketer's presentation.

Uber and Airbnb are constantly thrown about as examples of how established industry models could be unseated by a clever idea. CIOs are continuously reminded that keeping the lights on and the systems running smoothly just isn't enough.

The *iTnews* editorial team and our regular contributors enjoyed sitting down with some of the cleverest minds in the industry to dig into just how those individuals are tackling the challenge.

Although the organisations interviewed were at different points on their digital journey there were a few strategies that bubbled to surface.

The interviews afforded a unique opportunity to understand the career trajectory our digital leaders had taken to arrive at their current positions: what qualifications have they sort? Were they always technologists or have they mixed technical roles with finance or other disciplines? You may be surprised by the findings.

I'd like to thank ACS for the opportunity the organisation's partnership offered us. Drawing the CXO Challenge to a close by no means heralds the end of *iTnews* exploring the theme of how Australian enterprise struggles with the digital challenges it faces. This theme is at the crux of what *iTnews* reports every day.

Join the *iTnews* reader community and contribute to the discussion online.

Penny Wolf
Editor
www.iTnews.com.au

> ***When you read the research around workplace motivation it makes a lot of sense that you would give the teams a lot more autonomy as long as the work is getting done.***
>
> Trent Mankelow - Trade Me Group

About the ACS

The ACS is the professional association for Australia's Information and Communication Technology (ICT) sector. Over 20,000 ACS members work in business, education, government and the community. The ACS exists to create the environment and provide the opportunities for members and partners to succeed. The ACS strives for ICT professionals to be recognised as drivers of innovation in our society, relevant across all sectors, delivering real, tangible outcomes and to promote the formulation of effective policies on ICT and related matters.

www.acs.org.au

About *iTnews*

The CXO challenge and accompanying book on Digital Disruption were produced by the team at *iTnews*, Australia's most awarded technology publication for Australian business.

In an age where the right information at the right time can make or break a deal, Australia's technology leaders rely on *iTnews* for their daily fix of accurate, up-to-the-minute news, analysis and research.

Information and communications technology is the engine room of the modern business. Business leaders tell us they rely on *iTnews* to inform their strategy, make business cases for technology investments, set policies and chart their careers.

Collectively, the team at *iTnews* has won a swag of awards which include Technology Title of the Year, Best News Title, Best Editor, Best Business Journalist, Best News Journalist and Best Technical Journalist.

The *iTnews* team also curates technology conferences and judges the annual Benchmark Awards and SC Awards for excellence in ICT project delivery.

www.itnews.com.au

Appendix – CXO Challenge Interviews

Wisdom from the *iTnews* ACS CXO challenge

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Australia's godfather of agile

NIGEL DALTON - REA GROUP

by Brett Winterford | July 11, 2014

Few technology leaders have seen the forces of digital disruption so repeatedly and at such close quarters than Nigel Dalton, CIO of the REA Group.

Nigel Dalton is CIO of Realestate.com.au - a company that can take much of the credit for disrupting one of the most lucrative industries in Australia - the newspaper classifieds.

By applying a search engine to property listings, the company has displaced several hundred million dollars in annual revenues from the likes of the Fairfax media empire, which today has a market capitalisation of $2.2 billion versus REA Group's $5.9 billion.

Immediately prior to his time at REA, Dalton was CIO of Lonely Planet. While at Lonely Planet he railed against the inertia stifling the printer of travel guides as content began streaming onto the internet.

His experience leading digital teams in both disrupted and disruptive organisations - not to mention his voracious consumption of academic texts and championing of agile delivery in Australian businesses - makes Dalton a sought after commentator on disruptive business models and an ideal first profile for the CXO Challenge series.

While there are many texts Dalton looks to for inspiration, 'The Alchemy of Growth', written by a group of McKinsey consultants, provides his first port of call on the subject of digital disruption.

In a country where "the executives that make decisions are obsessed only with today," Dalton says, The Alchemy of Growth provides a basic structure around which we should frame any discussion about disruptive innovation.

"The challenge can be expressed this simply: An organisation needs to think in three different horizons simultaneously; this year, next year and anything beyond," he said.

Horizon one

Dalton uses the example of Toyota, which pioneered

the lean philosophy, to illustrate how these horizons need to be managed.

Toyota has strict rules about what executives spend their time focused on, he explains.

"In Toyota's hierarchy, the president and executive are only permitted to think about horizons two and three," Dalton said.

"The people at the coalface must run and operate horizon one.

"As a CIO, I am always drawn to the challenges of today - challenges around IT security, developer recruitment, or how we use cloud. But I have to trust the teams to manage horizon one.

"Thankfully with guys like Trent [Hornibrook] and Herry [Wiputra] around, I don't have to worry quite so much about that. That's the pleasure of being the CIO at REA Group."

Leadership, for Dalton, is about instilling a sense of purpose and developing a culture that embraces creativity. It shouldn't be his job to dictate precisely how work should be done.

"I am a strong believer in the agile principle of servant-leadership," he says. "The mission of the servant-leader is to get the barriers out of the way of the engineers, the scientists."

Dalton first put agile into practice as CIO of Lonely Planet – a time "fraught with trying to transform a printed service into the digital world", he recalls.

Agile was his response to a failed 'big bang' IT project initiated by his predecessors, which had attempted to combine an SAP ERP system, Vignette CMS, photo library portal, a video library, an online forum, an online bookshop and an online booking system in one mega-project.

Dalton sought a new model when he joined the company in 2007, specifically charged with bringing over four million pages of fresh web content online in under eight months.

He found it in agile, a subject for which his enthusiasm knows no bounds.

From a software development perspective, agile provides small teams the autonomy to iteratively build new products and features during time-constrained sprints, relying heavily on visualisation during the planning process and automation during testing and deployment.

Agile prioritises a 'minimal viable product' over 'big bang' IT projects, and a 'test and learn' model for deciding what features to next build on.

Early adopters of agile have found its principles to be of use beyond software teams. At Lonely Planet, its use spread from product development and IT through to legal and book publishing.

As an operational model, it gave Lonely Planet staff enough autonomy to manage horizon one without the management overhead that would distract Dalton's view of where the company needed to go next.

Lonely Planet's digital operations were moved from Australia to San Francisco and London in 2011, a decision Dalton recalls as "painful", but its legacy lives on in the digital operations of many Australian businesses.

The "Lonely Planet diaspora" stretches far and wide - with agile practitioners from that era now spread across organisations as diverse as Airbnb, ANZ Bank, Australia Post, Bankwest, Jetstar, Hooroo, REA Group, RMIT, Seek and Sensis

Horizon Two

Horizon two - the view of what will be required to remain competitive next year, "is where most disruptive innovation can happen," he said.

It's also where many large Australian organisations struggle. Hitting targets or overcoming obstacles in the current year loom large enough in the minds of most executives to worry about what's around the corner.

Some theorists, such as former Westpac CTO Jeff Jacobs, argue that to effectively embrace disruptive innovation, large organisations might consider setting up innovation labs that sit at arm's-length of the core business and are allowed to disrupt it.

Walmart is held up as a global example - its @WalmartLabs idea incubator rebuilt the US retailer's e-commerce platform and boosted online revenues by 30 percent.

Dalton understands why this is tempting.

"If you're a start-up, you're only ever thinking about horizon two," he said. "You are not worrying about making money until tomorrow. If start-ups were given the same challenge as every other business - to make money today, they couldn't do it."

But Dalton has reservations about splitting disruptive activities into a subsidiary. It may be difficult to reconcile back into the core at a later stage, he said.

"What that means is that discretely, if you outsource the second horizon, you tend to have problems integrating it with the first."

Organisations are also going to struggle to accept "a second horizon that will eat the first," he said.

"You have to be able to hold both thoughts in your head and be aware the horizon is moving toward you every day."

Horizon Three

Realestate.com.au, while one of the original digital

disruptors of the media market in Australia, might soon enough find itself challenged by competition coming from unexpected quarters.

In March, Google Ventures sunk US$50 million into Auction.com - an online property broker that cuts out the middleman and allows sellers to auction their own property.

Auction.com has moved US$7 billion of property in 2013, mostly because it disrupts a source of significant friction in the US property market. In America, both the seller and prospective buyers need agents, an overhead circumvented online.

Google's cash injection was "really impressive as a technology investment," Dalton says, "and it wouldn't have come up for no reason at all".

"Google are likely to be thinking not about today or tomorrow, but five years out."

Dalton is fascinated by peer-to-peer models and 'collaborative consumption', ideas best expressed by Rachel Botsman.

In the property market, he is impressed by LiquidSpace - a company which offers a peer-to-peer model for the booking of meeting rooms, offices and other collaborative spaces for business activity, relying on much the same model as Airbnb in the tourism market.

REA Group doesn't - or at least isn't speaking publicly about - any of its own peer-to-peer plays. But Dalton enjoys sharing information about these ideas with his team to keep the company's talent "thinking disruptive."

The company has been exploring what role virtual reality might play in viewing property listings, spurred on by the enthusiasm his software development team have shown for using virtual reality headsets as interfaces for gaming.

"We've been trialling the use of the Oculus Rift for conducting a property walkthrough," Dalton confirmed

"The theory is, why would you spend only 20 minutes at a property, when the next step is to turn up to the auction and place a bid? Why not spend three hours there?"

Oculus Rift is likely to be production-ready by next September, and if it takes off, REA will be well-placed to execute.

"We're well advanced on that road - we are just figuring out things like working within bandwidth constraints in terms of dealing with multiple large images," Dalton said.

"We could really do with a proper NBN about now."

Culture and leadership

But it won't be virtual reality that sets REA Group apart in the era of digital disruption. REA will retain its dominance, Dalton said, because of its culture.

"REA's competitive advantage is a real sense of purpose around property," he said.

"Property is the lowest rung on the hierarchy of needs - at the very bottom is the human need for shelter. It's so visceral, and there are strong emotions attached to it. Everyone has a story about an inefficient and stressful property experience trying to buy or sell property. We make it simple, efficient and stress-free."

More broadly, Dalton's advocacy for agile practices and innovation in Australian business help send the right messages to his team.

Dalton has set himself the task of convincing 20 percent of Australian IT shops to be using agile in practice by 2020.

"Australian businesses are still using Frederick Taylor management techniques from 100 years ago," he said.

"We need Telstra and CommBank to tip to agile. When Telstra tips, the momentum will be incredible. We'll have thousands of practitioners to choose from."

"We will get an agile, competitive economy. We just have to be patient."

Building a disruptive culture

ANDY WEIR - BANKWEST

by Brett Winterford | July 11, 2014

The time is nigh to start building a workplace culture that a Google or a Facebook would envy, says Bankwest CIO Andy Weir.

What is it that is unique to traditional banks, which at their core are simply technology companies wheeling and dealing in credit, that can't be replicated online?

That's the key question digital leaders from Australia's major banks will be asking themselves over the next three to five years, as new models emerge from surprising corners of the industry.

Whether it's Google or Amazon in payments, peer-to-peer players like Lending One and Society One in credit, or some other as yet unforeseen challenge, most agree that the industry is ripe for disruption.

Other industries, such as media and telecommunications, serve to remind us that neither scale nor the protection of regulators can shake a truly disruptive innovation.

If such a scenario were to emerge in financial services, an organisation can only rely on its own culture to remain relevant to customers, says Bankwest CIO Andy Weir.

Weir has enjoyed eight years in Perth with Bankwest after moving to Western Australia from a role at Halifax Bank in the UK. Half of that time has been spent in change management, the other as CIO.

And while Weir has built a small technology team that - at least on the digital front - punches well above its weight, as a former change manager he is most proud of the culture of the organisation.

"It is a little too simple to look at digital disruption and think of it only in terms of technology enabling the change. I genuinely think business leaders can disrupt from the inside, and it all comes back to organisational culture," he says.

"It is hard to quantify the numerous small things that come together to form a company's culture, but crucially, it is the one thing that can't be reinvented

overnight."

While it is a fully-owned subsidiary of the Commonwealth Bank, Bankwest has strived to retain its own culture and affinity with customers.

Weir believes a culture that is sustaining and meaningful can't be developed through a set of rules and expectations delivered from on high in the boardroom. Leaders should provide a strategic vision; they can invest in resources to set staff on a journey, but the culture will ultimately only be decided by the broader staff.

Like most well-structured organisations, Bankwest has a vision statement for its business. That vision statement says nothing that would surprise a customer familiar with the bank's messaging - but how it was written says a lot.

"In order to genuinely harmonise the company's organisational values, the executive realised that values are only lived out by a company when determined bottom up," Weir says.

"So Bankwest's mission statement wasn't designed by consultants or the executive. It was designed, built, socialised and refined by the staff.

"Executives can go off-site for two days and mull over what the company means - but does that statement cut to the heart and soul of the organisation?"

A long, slow, deliberate disruption

While it is never far from his mind, Weir isn't in a panic about digital disruption.

"I genuinely think its impact on financial services is not as close as some people think," he said.

Australia's banking sector remains tightly regulated, and didn't suffer the reputational damage many brands overseas did during the global financial crisis.

But even if it takes three to five years for disruptive innovators to steal any significant market share from the incumbents, Weir believes the time is right to consider why these disruptors are winning customers and learn from them.

"Digital organisations are raising the bar," he said. "The experience you get from digital companies - an experience that is simple, easy, flexible, reliable - is what customers will soon expect of every organisation.

"Could you imagine if you were asked to fax in details to change your name on Facebook?

"There is no doubt digital disruption is going to have a big influence on financial services - so in my book, you might as well get on with it, even if the impact is still a few years out."

What the digital disruptors do best, he contends, is customer centricity - something every banker talks about, but few manage to refine.

"We need to take on this digital disruption mindset," he said. "That doesn't mean replicating the business models of disruptors - but it does mean adopting their mindset and some of their processes.

"It's about thinking: how do I connect the people that create value in my organisation directly to the customer, rather than through several layers of bureaucracy and structure?"

When Weir started at Bankwest, its software developers were asked what they did for a living. Most said they cut code. Today, he said, they would answer that their job is to provide services of value to customers.

Weir sees a future where a bank's staff will be made up of individuals with multiple disciplines - each blessed with both the business nous to understand what customers want and the technical skills to deliver it.

The role of a leader is to give staff a sense of purpose and remove any bureaucracy that stands in the way of a developer's creativity and the value it might produce for a customer.

This is a radical change on how banks have operated for decades. Weir concedes that not all the staff will appreciate that vision - there is no shortage of technologists in Australia that would prefer to focus on domain expertise.

Some staff may choose to "self-select out" on that basis, Weir said, but that's ok.

"Others will be attracted to working for you on the very basis of the culture you are trying to build," he said.

Digital disruptors also differ from banks in that the latter tends to assume that they are experts on what the customer wants, without backing that decision with data. They are often spectacularly wrong.

"But at the same time, the organisation must recognise that customers don't always know what they want," he said.

Digital technologies provide an economical means of testing customer response to new ideas. The agile principle of 'test and learn' is used extensively within Bankwest's digital team.

Product managers and developers regularly push live new features they expect customers would want and assess how customers respond. If it works, they build further on the feature. If it doesn't, they ask why, and use that failure to help refine the next feature.

Over time, the aim is to refine a process whereby "you continually do more of the things customers

love and less of things that turn them off," says Weir.

So while Bankwest's online banking website is built around some fundamental principles key to the brand, new features are added (and occasionally withdrawn) at regular intervals, all based on how customers respond.

Aligning effort to customer value

Under Weir, Bankwest's technology team has been on a four-year journey to better align its resources to customer value.

Over that time the bank has embraced several new approaches to how it works - one being the embrace of activity-based working, another being an embrace of agile methods such as continuous delivery for its world-class online services and apps.

It has also developed a strong culture of innovation via use of 'hack days', for which it now provides guidance to many other organisations.

Weir prefers "iterative, systematic change" to digital disruption over knee-jerk reactions. There is nothing sustaining, he said, about changing your operating model or your leadership structure overnight.

It is "bonkers" to expect an improved culture inside your company by creating an innovation team outside of the company, he said, or by investing in disruptive innovators without changing the way the core operates, as Westpac has.

"If an organisation buys into the theory of disruptive innovation and wants to transform, I can't see the point of spending time setting up an organisation within an organisation or some sort of a cell that you incubate and hope by osmosis it brings the rest of the organisation with it," he said.

"I fundamentally disagree with that.

"You either want to transform your business or you don't. There is no point delaying the inevitable. In my experience of seeing organisations create offshoots, it has precisely the opposite effect. It causes conflict, tension, and hostility between the mothership and the cell. It creates barriers and walls, not collaboration.

"The only real way to influence culture is by helping promote small, sustainable changes and gradually building on them," he said.

Cultural change takes time, he said. Changing your operational model takes time.

"The worst thing organisations can do is sit and wait and transform when there is enough evidence disruption is happening, rather than accepting it will take a little bit of time to make the change.

"This is the time to look at your entire operational culture - not just what you do but how you do it," Weir said.

"You need to be completely open minded, because something that has been successful for your organisation for the last 15 years might not be in a digitally disrupted environment."

Earning the right to innovate

JULIE BALE - BANK OF QUEENSLAND

by Brett Winterford | July 22, 2014

Breaking down the barriers to innovation is a long, but rewarding process, says Bank of Queensland Group CIO, Julie Bale.

In 2012, after close to ten years of underinvestment in IT and facing the onset of new and unfamiliar competition, the Bank of Queensland urgently needed a change agent to run IT.

They found Julie Bale - an executive with an appetite for change that was already well grounded in the realities of running IT within a tier two bank.

Bale has spent less than 18 months as group CIO at the Bank of Queensland after stints at ING Direct and Bendigo and Adelaide Bank, but has been quick to make her presence felt.

She has shone a light on the bank's relationships with its partners and - even more crucially - it's relationship with customers. None of what Bale describes as the "traditional frames of reference" for running a bank have escaped her scrutiny.

The group CIO was provided scope to hire her own technology leadership team, take supply relationships to tender, address immediate systems availability issues and formulate a longer-term strategy to underpin the bank's value proposition in the middle distance.

Two years of tough decisions later - and with several still to come - Bale is helping to prepare the bank for a future in which the customer will have far greater opportunity to choose from a wider variety of financial service providers.

The speed of change in today's financial sector is startling, Bale told iTnews.

"In one year, it will have changed exponentially," she said.

The challenge for CXOs in such a rapidly changing environment is to retain a longer-term, strategic focus.

"Every decision we make around technology has to set us up for at least the next five years," Bale said. "There can be no more tactical decisions, no more bolt-on solutions. They carry cost and complexity within the organisation. Nobody wins."

On that basis, Bale has prioritised stabilising and commoditising the bank's back office over leaping into investment in new digital services that might otherwise have been tough to integrate back into the core.

The IT department of old in Australia's banks - the 'Ops Land', as she describes it - urgently needs to evolve.

"I want to run our back office as a well-oiled machine, almost in the dark," she said. "I want to shut the doors and turn the lights out, be commodity at the core, so that I can set up the business at the front end to be able to differentiate."

Bale's disciplinary approach - under which every IT project must promise a return on investment to be considerered by her office - is beginning to pay some early dividends.

Project success rates up are above 80 percent and goals have been set for cutting the cost of IT operations to free up capital for innovation projects. The bank has built the infrastructure necessary for applications to be deployed, iterated on or killed off quickly.

She now feels confident the business is ready to begin talking about how it might invest in disruptive technologies.

"Until I could get the basics right, I couldn't sit down at the table with the business and talk about innovation. I had no mandate for that.

"The basics are fixed and IT is now contributing to the turnaround story of the bank," she said.

"We now have a mandate to start talking about innovation."

Straight through processing

Most of the disruption in banking and finance to date has centred on payments, she said.

"This is playing out on a day-to-day basis," she said. "We've seen US$2 billion in investment put into payments startups [over the past two years] - it's easy to see why people see that as the major disruptor.

"[But] it's very difficult as a banker to back a winner at the moment. Everybody from Visa and Mastercard to the SWIFT providers have something in play."

An area of more immediate concern - or at least, one where a group CIO can invest in a realisable outcome - are investments into providing customers new digital experiences developed with 'straight through processing' in mind.

Straight-through processing refers to the onboarding of the customer through to fulfillment and settlement. It requires automated identity verification and credit scoring, among other technical complexities.

"For the customer, today's standard of banking can be a complex process," Bale explained.

"Our commitment to straight-through processing is about simplification at the heart of what we do. It's about making any transaction with us as simple as we can make it.

The Bank of Queensland is redesigning its processes for a range of financial products with this idea in mind - the first being a retail loan originations system.

"What would frustrate me as a customer of any bank is when you're onboarded for a service with the promise of it being done 'automatically', and the bank doesn't deliver," she said.

"You provide the bank what is required for 100 points of ID to apply for the loan, and then the bank sends you a form, asks you to sign it and scan it and email it back to them, and then promises to get back to you soon.

"The one thing that winds any customer up is thinking you're on a digital journey and then coming to a halt and being sent back into the old world.

"We are working to digitise the end-to-end process."

For many of the processes under review, the Bank of Queensland is moving from pen-and-paper and into the digital realm, rather than trying to improve on a half-baked digital process.

"We are coming off a low base - but often that can be advantageous," she said.

One key point of friction that has prevented any of the banks from achieving genuine straight-through processing are the stringent requirements financial services companies must adhere to in order to validate the identity of a new customer. The 100 point evidence system relied upon to identify new customers can break the flow of what is otherwise a digital onboarding process.

"As regulated entities, there are some boundaries we can't cross," she said.

Some of the traditional thinking around identity should be challenged, she said. Why, for example, is a driver's license a more valid form of identification than a digital alternative, when there are states with twice the number of licenses in circulation as there are licensed drivers on the books?

Bale doesn't see it as wholly unlikely that in the near future, digital certificates or some other digital mechanism of trust might be used, perhaps combined with a social log-in (LinkedIn or Facebook, for example), so that banks can "design processes for the way future customers will want to transact."

The trust users so readily place in services such as Airbnb, Uber or eBay, for example - a trust developed almost entirely on the strength of reviews from other consumers - suggest that there are as-yet unseen models that might better solve the challenge of verifying identity in the digital world.

But in today's regulated environment - and especially considering the anti-money laundering regulations put in place in response to September 11 - experimenting with new forms of authentication is a tough road for any banker to travel. The innovation is likely to be seen amongst startups first.

Banks should in the very least be keeping a watching brief on social credentials for authentication, if only as a means of inspiring new, more secure ideas.

"The younger generation is born into it," she said. "They expect us to know the customer through social channels.

"We have to escape our traditional frames of reference. We need to challenge some traditional thought processes and take regulators on the journey with us.

ANZ looks to life beyond the transaction

PATRICK MAES - ANZ BANK

by Brett Winterford | July 28, 2014

If digital disruptors think an online payments startup could rock the big four, they've missed the point of why people use banks, says Patrick Maes.

ANZ chief technology officer Patrick Maes is weary of the shallow applications that typify "cloud" and "big data" projects almost as much as he's tired of the alarm bells ringing in financial services about the threat posed by startups.

After several decades working in advanced computer science across banks the world over, Maes has seen it all before.

"I've learned one thing - a new technology is seldom very new at all," he told iTnews this week. "In 30 years, I've never seen a new technology. Every new thing is merely the next step on something that came before it."

Maes takes a long term view of technology investment that is rare in an industry abuzz with talk of digital disruption, 'SMAC' and 'Big Data'.

He began his career building data models for the Belgian Government, has overseen the build of transactional services within some of Europe's largest banks (AXA, Rabobank), and spent a good deal of time working for the banks from the supply side in senior roles for IBM and HCL.

Now both a CTO and general manager of strategy and planning within ANZ's operations group, Maes reminds his peers regularly that plenty of hyped technology trends failed to mature in the past.

"We seem to jump from one promise to the other," he lamented.

Too big to fail, too broad to disrupt?

As a student of economics, Maes defines banking according to the provision of three core services - a transactional capability, the holding of assets and the providing of advice.

Very few digital disruptors can provide all three, he notes.

"We have seen a lot of customers coming into the

payments space, and a lot more talk about it," he said. "The Google's of this world will say, 'we can build you a digital wallet, ' the Paypal's of this world say, 'we can complete transactions.' Offering the transactions without the holdings is a pretty difficult business."

"The general evolution in financial services is that offering transactions is becoming almost marginless," he said, using the example of the Single Euro Payments Area to illustrate.

The holding of assets, meanwhile, is regulated in Australia. The interim Murray Report would suggest that the protections offered to Australia's largest banks aren't about to erode any time soon.

Maes doesn't think it will be transactions nor the regulation of holdings that sets ANZ apart in the coming years - rather, its the third point of the triangle, the provision of advice.

While Maes doesn't say it explicitly, ANZ is spending a large share of its technology investments in wealth and advisory businesses - those that offer the best margins into the future. The customers ANZ most lust after have far more complex financial concerns than finding the best price using a basic online service.

They need to trade in multiple currencies and shares, he said, manage their superannuation and other investments for retirement. Invariably that requires a trusted brand, and favours an organisation with the breadth of services offered by ANZ.

ANZ plans to "create the advisory bank, the bank that offers insights," he said.

Cloud? Big data? Big deal.

Plans to offer superior insights naturally require investments in analytics.

But Maes is reticent to use the term "big data".

"People talk about big data as though it is new - I'm pretty sure banks were doing more advanced work with large sets of data in the 1990s than most industries are doing today," he said. "If big data is about having a vast amount of information, both structured and unstructured, and applying algorithms to it, we've been there already," he said.

"What the vendors are selling is the McDonalds version of big data - building a machine that produces cheap offers for their clients," he said.

"If everyone in the world focuses on cheap offers, we will create a new version of spam - people will simply start turning off."

Data analytics is of more value, he contends, when these increasingly accessible algorithms are complemented with heuristics. Rather than simply using the technology to inform the development of new products or offer them cheaper, these computations can contribute to the bank providing better advice for customers.

"The way banking will evolve will definitely not be about pricing," he said. "It will be about meaningful services and meaningful advice. That's more than just selling another mortgage."

ANZ has funded research programs at several universities - building prototypes to test how 'big data' might better inform retirement planning, help merchant customers benchmark themselves and help the bank's IT department better utilise its technology spend.

APIs, bundling and the cloud

The next revolution in banking, Maes concludes, will be the transition from a product-centric approach to a services-oriented approach.

Innovation, on that basis, lies in integration and automation - which is where cloud fits into the picture.

Maes uses the example of the USAA - a provider of financial services to the US military he once advised - as a model for how this might look in the future.

The USAA offers a breadth of products - traditional banking services, credit card lending, insurance, managed investments - but doesn't build the technology that underpins all of them.

"The USAA has moved away from a product-centric approach to an event-centric approach," he said. "They have identified 15 main events that are important to a customer - marriage, buying a house, kids going to school, divorce, retirement, and more - and their teams are organised around managing the financial implications of these events for their customers.

"Today, that's mostly done from within the contact centre - disruption will occur when automation is applied.

"Let's assume you are a member and you want to buy a car, and you've chosen a specific model. You push a button as a customer, and it becomes the bank's job not just to finance that car but to procure that specific model at lowest possible price, insure it, and deliver it to you.

"That's where banking is going to be - we will be combining our financial services to create meaningful interactions with our customers."

Cloud plays an important role in this future, he said, less so for its 'as-a-service' model and more for the tendency of cloud providers to leverage each other's APIs to bundle services together.

"At this point, banking truly becomes part of the value chain," he said. "With intelligent bundling in the retail space, price elasticity plays a much smaller role because customers will be happy to pay extra points for convenience.

"The next big disruption will be where we have an intelligent service layer - where we can externalise our services and capabilities for other companies to bundle with theirs."

Standing on a burning platform

ANDREW WALDUCK - AUSTRALIA POST

by Brett Winterford | August 12, 2014

Andrew Walduck is so driven he has developed an almost perverse attraction to taking on tasks most of us would think impossible.

"I love solving difficult problems," says the Australia Post CIO, recalling one of his first jobs in the tech sector, which required him to promote the adoption of RFID a good decade before it hit the mainstream.

Today Walduck is leading the build of a digital capability in possibly the most critically disrupted industry there is - postage services.

Globally, door-to-door mail delivery has been in a long state of decline. Canada Post expects to phase it out within the next four years, and a US Government Accountability Office report suggests the US Postal Service may head the same way.

The management at Australia Post has acknowledged these challenges for some years.

In 2009, the organisation plucked chief executive Ahmed Fahour out of Australia's financial sector to execute the 'Future Ready' program of work - a program which has thus far reshaped its value proposition both around parcel delivery (acquiring the remaining 50 percent share of StarTrack in 2012) and the development of digital services.

Fahour hired Walduck, a former Tabcorp CIO and Accenture executive, to lead the digital transformation, and found a leader ready to tackle transformation head on.

Walduck said he was immediately attracted to Fahour's corporate strategy.

"I loved the notion that what Australia Post does at its core is connect communities and enable commerce. That sole purpose has been there since its foundation 200 years ago and remains today.

"What has to change is how it does it."

Everything Australia Post has achieved in the physical world, he said, "needs in the future to be achieved digitally."

"For a technology guy, Australia Post was the perfect opportunity to join an organisation embracing

a big change: a very different model of engaging with customers."

Key priorities

Walduck initiated several streams of related work, with an overarching aim of devising a 'customer-centric' IT operating model.

It included the 'Technology People' program - which aimed to achieve a more agile technology workforce; the 'Security at Post' program - which integrated the function into software development; and 'Future Ready IT' - a back-end infrastructure refresh and the launch of a digital delivery centre.

'Technology People' was perhaps the most critical and controversial.

The crux of 'Technology People' has been a re-setting of expectations. Australia Post's technology team is now deployed according to a customer or project need rather than their areas of domain expertise.

Where once teams were based on their expert knowledge of SAP, middleware or IT infrastructure, they are now deployed around a task.

Virtual teams can be formed and collapsed to solve a specific problem Post requires, and dissolved so the experts return back to their centres of excellence when the project is complete.

"Today we create composite skills to solve a problem," Walduck said. "We have the ability to mobilise talent and skill better."

Walduck credits his time at Accenture in particular for developing the key skills required to build a "team-based" culture.

"At Accenture, most of the work is project based," he said. "You need to quickly identify the goals and pull together the subject matter experts and the people who will come together to achieve that in a tight deadline.

"I also learned that when you recruit people, it's not just about experience and expertise, it's more important how they work with peers to achieve what is required."

In two years at Australia Post, Walduck has doubled the company's technology investment program without building out an unsustainable headcount.

"That's a doubling of the projects we are required to do and it's also projects of far greater complexity. We've proven that you can absorb greater volumes and complexity and you don't need dramatic increases in workforce to do it."

Peter Drucker is famed to have once said that 'culture eats strategy for breakfast'. Walduck has coined his own turn of phrase to stress its importance.

"I believe culture is technology's new critical infrastructure."

Leadership and cultural change

Walduck, like fellow agile advocate Nigel Dalton, models himself on servant-based leadership.

"I love the notion of empowering the talent to solve problems," he said.

"I have spent a lot of my time establishing purpose for our staff. Fundamentally it's a set of behaviours to guide what people do every day - reinforcing how we value teaming and collaboration, how we value frugality and being lean and how we value the delivery of results for customers."

The IT team has had to redefine who its customer is as the person or organisation that buys products and services from Australia Post, rather than other Post employees.

"On the very first day I presented to my team, I defined for them what customer meant," Walduck said.

"I've spent a lot of time reinforcing that definition. Over time, both in our [technology] employee survey and the business experience survey of how the broader organisation views our services, the definition of who the customer is had shifted closer to the one I described.

"As a leader you need to be clear, simple and transparent. I expect a lot of my team and I work hard to match those expectations myself. You have to live what you say.

"You need to be able to answer the question, 'why would somebody want to be led by you?'"

The 'other' critical infrastructure

Australia Post's 'Future Ready IT' program of work aims to build a new IT foundation so new products and services can be deployed faster.

While it was among the first of the projects Walduck initiated, it's likely to be the last to reach the finish line.

"The analogy I used was that every time we wanted to build the second and third story on a building, we had to go back and address the foundation, which wasn't ready to built on," Walduck said.

Australia Post has migrated one data centre into a more modern facility and is working on a second. Several legacy computer rooms have been decommissioned. By the close of the year, Post will be operating from two modern facilities and will be set up to consume a vetted suite of cloud services.

The other two initiatives - the embedding of security into the development process, and the build of a digital delivery centre, are more or less considered complete.

The digital delivery centre was established as an innovation centre at arms length of the core Post business, set up to operate at a different speed to

traditional IT processes.

The centre is largely a software development and integration house. Its developers, practiced in the agile methodology, set about creating online and mobile products such as Post's Digital Mailbox.

Crucially, the centre aims to be an integrator and aggregator of digital services rather than building everything from scratch. Under Walduck, Australia Post is more likely to resell or reuse technology developed by third parties and equally to offer its own technology to be resold or reused elsewhere.

As a consumer of digital services, Australia Post now resells a range of white-labelled travel insurance, foreign exchange and international SIM card services, all value-added services to the identity verification services Post has long provided from its own stores.

The theory is, if an individual comes to an Australia Post outlet or website to apply for a passport, they are more than likely to be in the market for travel services.

Post's digital delivery centre also offers APIs to allow software developers to expose key functions of Australia Post's operations on their web pages. The three APIs Post has released to date as part of a beta program allow e-commerce vendors to embed Australia Post's postage calculator, delivery options or payments engine into their sites. More APIs are promised.

Organisations as large as eBay have embedded these widgets into their shopping trolley carts. A customer can confirm shipping and delivery costs, while merchants can easily print shipping labels and both can track shipping events, all using services made available by Australia Post.

"We don't believe we can dominate where consumers do business online," Walduck said.

"Our digital strategy is about making our capabilities available to be integrated into the digital offerings of other organisations. That involves us modularising the capabilities we've got for consumption by others.

"We want our products and services to be part of wherever our customers choose to do transactions."

Walduck believes the role of IT has to change to offer services to customers where they wish to transact, rather than attempt to build and host everything themselves.

"The next realm of IT is how services can be delivered by multiple organisations in a beautifully integrated way," he said. "It's about developing an ability to compose services of multiple parts and it's about our ability to link services together.

"I'm sure the technology vendors may disagree, but my theory is we don't need any more technology. We have all the technology we need to create the next generation of services for our customers. What we need to do is to rethink how we team and collaborate with other organisations to serve our customers.

"Digital disruption has completely changed what customers expect of us. They will use services where it's fundamentally easier to do what they need to do."

Disrupting from within

The digital delivery centre has matured as a capability to the point where it "no longer needs to be in a transformation program," Walduck said.

Invariably, it's likely to be absorbed into the mainstream of Australia Post's operations and influence the broader culture of the organisation.

"There is a lot of management theory out there about how to create the ability to innovate from within," Walduck said. "I look at it this way: the responsibility for digitisation lies with every leader in Australia Post, not just the CIO. The focus on digitisation and disruption is every leader's responsibility.

"I often get asked how leaders should drive a change agenda. Any future enterprise leader – of which CIOs should be one – must help other leaders understand why action is needed.

"Ultimately if there is one thing the work I've done here has taught me, it's that if your burning platform is clear, that drives change. You must establish a clear burning platform for change."

Australia Post isn't short of one. In June, Fahour announced the latest tranche of job cuts since he was brought onboard, and warned that Post won't be able to meet its current mail delivery workload within a few short years unless it streamlines services or is freed of regulatory burden.

Which brings us back to Walduck's perverse pleasure in attempting the near-impossible. Its rewarding, if only because it can't be boring.

"I've just been lucky enough to work on problems that have that clear burning platform," he said.

"I'm lucky to have the job I do. Our business underpins the massive scale and volume of a lot of commerce in Australia. We are the physical embodiment of enabling the digital economy."

How to disrupt yourself

AJAY BHATIA - CARSALES.COM.AU

by Brett Winterford | August 13, 2014

Former Fairfax exec Ajay Bhatia has seen first-hand the consequences of clinging to an outdated business model – and isn't going to let it happen on his watch at carsales.com.au.

A former technical trainer and project manager, Ajay Bhatia learned about digital disruption the hard way as an employee of F2, the online arm of the Fairfax newspaper empire set up with $100m of funding in 1999.

Bhatia's first job was to rebuild the drive.com.au website. It was a dream job, in many respects – the job satisfaction that came from building tools for mass media consumption was "amazing", he said.

But within three years his enthusiasm had waned.

"What happened at Fairfax was a classic case of digital disruption," Bhatia recalls.

"They had the newspaper arm and the online arm. Back when I started, the online arm was called F2. That in itself said a lot. What did that say to employees? It's like you are the second cousin, over there in the corner.

"What I came to realise was that everything we did was always about how we could integrate what we were doing with the newspapers. That was the conversation in the room, whenever you were making a decision. You are always thinking of newspapers."

As described in Pamela Williams' tell-all 'Killing Fairfax', Fairfax executives attempted to squeeze every last dollar out of the 'rivers of gold' of print classifieds.

It chose not to invest in disruptive startups like Seek at opportune moments. And even when its own online channels outperformed the market, they were restrained from competing with print classifieds.

"In hindsight, I am sure people will look back without the blinkers on, and say that it was a mistake," Bhatia says.

"We should have gone hard and competed with ourselves. We shouldn't have been so worried about online might be bundled with print.

"In reality, the executive wouldn't allow us to compete."

In 2006, Fairfax purchased Rural Press, reinforcing an even stronger newspaper culture.

"I stopped enjoying my job," Bhatia said. "It was like

trying to compete with your hands tied behind your back.

For him, that experience remains an example of how not to respond to digital disruption.

"What so many companies fail to recognise is that your real competitor is out there – it is not your previous business model.

"Fairfax still has great journalists that write great content, but with all respect, it made a mistake. We should never feel like making a mistake is a bad thing, we should realise it quickly and correct it quickly."

Success and failure at carsales.com.au

Fast forward a decade and Bhatia runs the technology team at carsales.com.au, a start-up that blew drive.com.au out of the water as an autos marketplace.

At the Carsales offices, Bhatia proudly displays a space in the building where his software development team are asked to regularly submit to a 'failure wall', a shrine that celebrates what each has learned from their mistakes.

It is his attempt to reinforce the notion that it is the speed with which you bounce back from misjudgements that matters more than getting it wrong.

"I want everyone to feel comfortable that we are going to try a lot of things – we're going to fail – and we are going to move on to the next thing," he says.

"Sometimes you have to acknowledge that what

you said in the past was wrong. But you must move on because today's right is different."

Carsales hasn't been getting a lot wrong. It boasts a market capitalisation of $2.7 billion versus $2 billion for the entire Fairfax business, with the former employing only 400-odd staff versus upwards of 10,000 at the latter. It's one of several "could have beens" for today's Fairfax.

The company has diversified from car listings into listings of several other categories such as bikes and caravans, and more recently into residential housing sales.

But Bhatia warns that "even digital businesses themselves are up for disruption".

"Digital disruption, to me, is about the world moving so much faster," he said.

"Time itself seems to have a different meaning. What we could do in a year, we now can do in a month or even a week.

"When I started at Carsales we used to deploy [code] twice a week. Last week we deployed 250 times. So the cost of change is very, very low. The time required to make the change is low. And the number of people capable of making the change is very high. There is a multiplier effect at work that has an enormous impact."

This speed enables organisations to be able to "afford to fail more often," he said.

"Digital disrupters and innovators will try lots of times. They will fail a few times. And the few times they succeed - it will be good enough to disrupt an established player.

"No longer can you contemplate a technology project that is one year long. You cannot afford it. By the time you get to the end of the year, someone will change the game on you. If you leave the slightest room for someone to innovate and compete, they will."

Disrupting Carsales

While it is primarily an online classifieds company, Carsales has faced several disruptive forces over the last 15 years that have beset most traditional media companies.

The first was mobile - which for many years loomed on the horizon but only very recently garnered as much traffic as desktop browsers. For Carsales, mobile sites presented the same challenge as most media companies - it would mean less real estate on which to serve advertisements.

It wasn't without some internal struggle that the company jumped in with a mobile site faster than any of its competitors, only to find customers preferring to consume apps. Apps were again a challenge as - at least in the case of iOS - they can break the direct line of communication between developer and customer.

That's the relationship that sets his team's services apart, Bhatia contends - the Carsales apps have had consistent four star reviews on the iOS and Google Play app stores because the developers themselves respond to customer queries.

In any case, Carsales has maintained its edge by jumping into mobile early. In most media organisations, the short-term means by which sales execs are typically incentivised has delayed moves to new platforms.

"I am a firm believer that executives should be incentivised for longer term rather than short term goals," Bhatia said.

"In our case, if we see consumers are going the way of mobile sites, or apps, or back to mobile sites again - that's exactly what we should do."

Bhatia keeps a very keen eye on Asian business markets as a bellwether for the disruptive forces coming to Australia. In some Asian markets, an entire generation of online sites were skipped over in favour of a mobile-first strategy several years before that became the trend in Australia.

The latest trend in Asian markets is the 'freemium' model - whereby a set of services are available for free and more advanced options available for customers prepared to pay.

Freemium represents a clear and present danger to the paid models of carsales.com.au, realestate.com.au and others.

"What we often speak about is the fear of digital disruption," Bhatia said. "[But] there is no reason why you yourself can't be a digital disruptor. It's cheaper than ever and easier than ever to do it. It's not about technology, it's about your business model. It's about open mindedness.

"I know it can be done because we've done it," he said.

This week, Carsales launched a product that is free for vendors to list on. Pitchi is a video listings site dedicated to the young and entrepreneurial seller, who is asked to produce a short video submission and submit it both to the site and their social channels to drive interest.

Pitchi aims to lock in a new generation of users who communicate through non-traditional channels, and gives them the opportunity to put themselves at the forefront of the sales pitch.

It also competes with Carsales' own model - Pitchi users are free to sell cars and other products available on the Carsales website. ■

Building a rapid response team

ANDREW LAM-PO-TANG - FAIRFAX

by Brett Winterford | August 25, 2014

Don't panic about digital disruption, says Fairfax CIO Andrew Lam-Po-Tang: just be sure the gun is loaded and ready to fire.

Andrew Lam-Po-Tang's role at Fairfax Media is in many respects a model for what a future technology leader might look like.

He wears three hats at Fairfax Media, as chief information officer, chief technology officer and director of group services - roles broad enough to recognise technology as a critical foundation of the business' future.

Lam-Po-Tang's overriding strength is as a calculated and articulate business strategist. A former gun for hire at the Boston Consulting Group, Lam-Po-Tang exudes confidence on any issue and is skillfully adept at articulating his vision for what is undeniably among the most disrupted industries in Australia.

The former consultant was hired amidst major structural change at the newspaper group.

"The observations I had made to the CEO and others at that time was that as the company transformed this group of businesses into a much leaner, tighter operating portfolio, IT could no longer operate on a siloed basis and would become increasingly important as a shared service," he recalls.

Lam-Po-Tang suggested a structure under which the IT department that served staff and the 'digital' teams building customer-facing products should be embedded together within the same reporting lines.

He anticipates that the line demarcating "information technology" from "digital" will erode over time. That's a theory that analyst firm Gartner came to espouse more recently - a trend the group expects to come into play after four or five years of friction between the two camps.

"Superficially, one might be forgiven for [considering] digital initiatives as different to enterprise IT and infrastructure," says Lam-Po-Tang.

"But if you scratch the service and get to the guts of the technology stacks in question, they are not so

different. Actually - and especially at platform level - the technologies converge over time."

He uses Amazon Web Services as an example in practice. AWS was originally proposed as a new web hosting option for digital businesses, targeted at the CTO.

Over time, AWS has added depth to its features and signed agreements with many of the world's largest applications vendors, such that a CIO might rent ERP or CRM software by the hour just as readily as they might host a website.

"The more profound shift into cloud may have started with digital consumer offerings, but is now rapidly permeating every single aspect of IT," he said. "As you burrow into the stacks, the two portfolios end up using the same technology and the same methodologies.

"So to avoid any internal competition for resources, or any wasteful fighting, [it makes sense to] manage the digital and IT portfolios as one."

At other organisations, like Telstra or Vodafone, IT and digital have been split out as separate operating units

This has largely eventuated because the requirement for rapid change in customer-facing systems ('digital' web sites and apps) isn't necessarily as urgent in traditional systems of record (IT).

The two groups also tend to report into different

stakeholders within the business - with IT as a service provider to corporate services functions, and 'digital' serving sales and marketing functions exclusively.

Lam-Po-Tang believes those barriers will break down over time as digital and IT borrow the best attributes from each other.

IT shouldn't see the consumerisation of technology through the lens of an "uncontrolled democratisation", he said, but simply as a new benchmark for the "perfectly reasonable expectations" users now have of technology services.

"The right response is to take the digital experience and say, why can't the rest of my portfolio behave like this? While that doesn't take away any of the conflict and the tension between the two, at least you are having arguments for the right reasons.

"At least you are saying that it is perfectly reasonable to expect to rent a [enterprise-grade] service by the hour, it is perfectly reasonable to accept applications to be primarily self-service and intuitive, and not require an onerous help desk to support them," he said.

"All of those things we accept as standard as consumers - I would argue that it is hard evidence that there is a better way to get things done. How do we make SAP stick the way your favorite applications do? How can it behave more like Uber, more like Facebook or YouTube on iOS?

"Even if that's not entirely possible, at least you don't need to imagine the target state any more. You can fire up your phone and see that it is a much better experience."

While enthusiastic about the consumerisation of IT, the pragmatic Lam-Po-Tang isn't a digital-first "tree hugger" type. He doesn't want to build sites because they are pretty, or because people feel good about them. He is fundamentally interested in what behaviour those aesthetics drive in the user - and more crucially, whether that will drive revenue for the publisher.

"When people feel good about a service, they tend to self manage," he said. "They complete their transactions efficiently. They don't waste their time, or anybody else's time. And from a business perspective, that's cost effective."

Seeking flexibility

By Australian standards, Fairfax has been an aggressive adopter of cloud services in an effort to drive a more flexible and adaptive business.

The media company was among the first in Australia to go "all-Google" for desktop productivity tools in 2012.

Fairfax is now rolling out the CQ5 content management system as its base platform for digital and mobile-first publishing - investing to the point that it has become Adobe's largest global customer. It's the company's intention to use CQ5 as "the primary authoring platform across all Fairfax properties", he said.

The new CMS will be hosted in the Amazon Web Services public cloud.

For Lam-Po-Tang, being 'cloud first' is all about speeding up the company's reaction time to digital disruption in the media landscape. He is working to create a more flexible and adaptable workforce, and is using the cloud model to negotiate more flexible licensing terms.

Achieving this flexibility has also required an investment in the tools and personnel to drive a "test and learn" culture.

Digital products are built first as a "minimum viable product", tested against audiences, and always developed "under the assumption that the product owner team will expect to be able to continue to innovate, because users will expect them to".

The only exception is when the company develops something that from a business process and output level is expected to have a life beyond two to three years, which Fairfax defines as a "platform".

Even then, he said, the strategy is to not over-engineer them, "because technology advances at such a rapid rate that your best possible solution in August 2014 will almost certainly be superseded by

December 2015".

"The smart thing to do is to limit the extent of your solution, and to say: This is good enough for at least a year."

Investments in these platforms have to be made with half an eye on the disruptive models that continue to nibble away at the edges of Australia's media empires.

One of the most pressing trends at present, he notes, is the use of social technologies not just as a means of promoting quality content to new audiences but as a basis for creating media content cheaply.

"You have to acknowledge the success of Facebook, of Buzzfeed or of the Huffington Post, for better or for worse," he said. "Regardless of how you might view what they have done to so-called quality of journalism, you cannot deny their readership, reach and engagement."

But the CIO is also careful not to throw too many resources into responding to what he calls "social experiments" that - while they might generate many millions of users - have no viable business model.

A genuine media player - and thus a genuine threat - marries the fourth estate responsibility - to 'keep the bastards honest' with a commercial opportunity," he said.

"The fact that some social experiments have an audience and content is a bit misleading. It does not mean they are media businesses, because what they don't have is a profit motive.

"The mistake a media CIO can make is to think you need to react to every experiment. You need to keep an eye on the experiments, but you need to distinguish between those that are social experiments and those that are businesses.The reality is, we all still have businesses to run and shareholders to satisfy."

Lam-Po-Tang is well schooled in business theory, and like REA Group CIO Nigel Dalton, notes some value in the 'Alchemy of Growth' theory conjured up by McKinsey and Co - which suggests business leaders need to pay greater heed to disruptive forces brewing two to five years away [horizon three] rather than the operational challenges of today.

"The trap with too much focus on horizon three opportunities is thinking you need to start building now for issues you might hit in a few years," he said. "In the past, that was true to an extent, because big projects took three years to stand up.

"What we know today is that with agile methodologies - not just at a technology level but at a total product level - allow you to build and drop a product quickly. You can test and learn, test and learn, and you can be in market in well and truly under a year.

"That changes the urgency with which you physically need to do stuff about horizon three. It gives you much more of a watching brief on what you think is in horizon three, because the reality is that the best you're ever going to do this far out is guess what will be important in two or three years time."

In Lam-Po-Tang's mind, the right strategy for countering digital disruption is simply to reduce the reaction time of his teams - something he is able to achieve through the use of agile and DevOps.

"The faster we can get at delivering from ideation through to in market proposition, the more we can de-risk business ideas," he said.

"We can limit the amount of upfront investment we need to make before we can test the commercial value of an idea. It dramatically reduces the lead time on investments we might need to make to capture emerging opportunities.

"Part of my response to the uncertainties of 18 months away and beyond is to get my reaction time down to six months or less. If you say to me there is a tidal wave two years away, I want my rational response to be that in 18 months time, I will pull the trigger.

"I'd rather be set up to do that than being forced into the position of needing to pull the trigger on some significant investments now, on the basis that I otherwise won't be ready in two years time."

Go fast enough, and you won't feel the shakes

TOM QUINN - NEWS CORP

Brett Winterford | September 4, 2014

After a decade of trying to ignore the turbulence, News Corp has tied its future to the cloud.

Tom Quinn is a man in a big hurry.

Ever since he declared a 'cloud first' strategy for News Corp in 2011, the company's chief technology and information officer has hacked away at hundreds of applications residing in the company's data centres, signing News up for cloud alternatives.

Today, everything from the media company's websites to its financial systems are hosted in public clouds offered by the likes of Amazon Web Services. Desktop productivity is delivered as a service by Google, as are CRM and sales automation by Salesforce, and HR systems by Workday.

Quinn's latest deal – etched a few weeks ago – will see News Corp offer its customers self-service subscriptions, again using a solution hosted by Salesforce.

"I'm not a private cloud guy," Quinn says. "If I can avoid it, I'd much rather just go flat out all the way to public cloud."

His KPI – more than any concern – is simply the speed with which he can deliver applications.

So what's the rush?

The fortunes of large, monolithic newspaper brands are in free fall. On the surface, News Corp is holding up admirably in the face of over a decade of digital disruption, thanks to its investments in e-commerce (REA Group) and the Foxtel Pay Television monopoly.

But recent leaked financial reports suggest media mastheads like The Australian lost around $27 million in fiscal 2013, with advertising down across the board to tune of ~20 percent.

Quinn, who spoke to iTnews prior to this information being revealed, was both frank and level-headed about the challenge all media companies must contend with.

Digital disruption was underway well before Quinn arrived at News some ten years ago, but the current rate of change – in which mobile traffic rose from out of nowhere to represent 47 percent of all page views last month – has taken many by surprise.

"We were well behind the game at News," he said. "[The media sector] was certainly being disrupted, but at a

senior level, nobody believed that the tsunami was coming and this business was going to change forever."

News has dedicated an inordinate share of its resources over the last decade to the protection and subsidising of its print mastheads.

"It's very hard for some of the old dogs to change," Quinn agreed. "The biggest issue here is getting people to consider all the platforms that we deliver media on rather than focusing just on the newspaper, or just on the website or just on the tablet."

News Limited faces the twin challenges of trying to hold its yield on print as circulation drops (around five percent, year-on-year), while producing a greater volume of content online in an environment where advertisers expect both lower prices and better metrics for how their ads perform.

That's a fundamental change of mindset for those in the newsroom and in supporting functions like technology.

"You've got to get the people in the right mindset to make the change," he said. "One of our mottos is 'own the day'. You've got to get [to the story] first and then you've got to build on it through the day."

This mindset also requires big changes in the way IT is delivered to the business.

Quinn has set about concentrating his technology spend on areas of genuine differentiation – such as the core systems that publish the company's content, and the systems that collect data about readers to serve up to

advertisers. For everything else, the cloud is good enough - and rarely just as a cost savings exercise.

"Well, yes, cloud can be cheaper, but sometimes not by much," he said. "It's all about speed. It's about breaking down your business stack, atomising it and finding cloud-based products that you can integrate together and stand up really quickly.

"Technologies are changing so fast, and new systems are coming onboard so often, that you don't want to be locked in to a big monster piece of tech, and you don't want to be spending time every two years and a lot of money upgrading the stuff.

"I know the IT purists would backflip down the street at hearing this – but I'd rather deliver an 80 percent right product fast and fix the 20 percent after. We have to ask ourselves, what's the minimum viable product you can deliver to meet the outcome? And then build on that."

Steering under turbulence

Quinn presents as an ideal executive to meet News Corp's considerable challenges. He has seen his share of action in precarious roles and has the scars to show for it.

He earned his racing stripes as CIO of the Australian Stock Exchange, where he oversaw the shutting down of the trading floor in favour of automated trading and settlement systems. He was "right in the middle of huge disruption to an industry that changed forever".

Quinn credits this experience for learning the importance of change management.

"I learnt that a big technology project is almost always as much about the people taking on the change as it is about the technology," he said.

"The other thing I learnt - which I've used through my career now - is to get to the end as quickly as you can. Seriously, go fast. It couldn't be more relevant today. The days of big, long IT projects are done. If you can't deliver something major in six months then don't bother starting, because your business will probably have swung on its head by the time you've finished."

Quinn was also employee number 17 and CIO of Star City Casino, which grew from a dozen employees in startup mode to over 6500 in under six months. It was at Star, Quinn recalls, that he learned about how to deliver to a strict deadline.

"We had a go-live date in the temporary casino and we had a go-live date in the permanent casino, and if we didn't go live at the time and date specified in the legislation we'd be fined, daily, because the Government was looking for its tax revenue. So that taught me really to look at the hard end of a project. If you promise a date you've got to meet it."

Quinn's other major CIO gig – at Optus – involved the outsourcing of the telco's entire technology stack, with infrastructure contracted to Compaq (now HP) and apps to IBM. This was followed by a stint in start-up land. Both taught him to be ruthless – to "cut corners" if it necessary, in order to deliver what had been promised.

These skills are arguably more crucial in today's media landscape than in any other industry at any other time. And Quinn is cut out for media – he enjoys telling an entertaining anecdote, but also cuts to the chase; he is as bluntly outspoken as Barclays Bank CIO Michael Harte.

"Whatever you say about Michael - some people say he's mad - but you can't deny he changed the Commonwealth Bank forever," Quinn says. "There were a lot of big ideas there – ideas about moving fast, about going to the cloud – that he was first to act on.

"He's a rockstar, Michael Harte, an absolute rockstar."

Quinn's kinship with Harte extends further than their shared experience with driving rapid change at large organisations. Harte made a case at CommBank for a core systems overhaul that stretched well over time and budget, but conversely set the company up for leadership in the years to come.

Quinn also backed the build of a core system with transformative vision in mind – and like Harte – it is as much of a millstone around the neck as a trophy to put out on display.

Quinn backed a project that aimed to replace 14 legacy content management systems with a single system for

all News titles other than its printed magazines, which was to be based on EidosMedia's Méthode multichannel publishing suite. (News Corp's print magazines are using Adobe's Digital Publishing Solution).

The new master CMS promises an ability to make the same piece of content available to which ever News Corp publication wants to publish it - whether it's a newspaper, website or app – and move with it all the attachments and metadata (tags, images, videos, comments, related links etc) intact.

The consolidation project, which carried the heavy legacy of tens of millions of existing images and stories on multiple platforms, has been predictably long, expensive and unpopular with some editorial staff.

Quinn argues it was worth the pain.

"We needed the ability to be able to move content around our properties, around our mastheads, which some of the purists don't like, but that's how it works these days," he said.

"Until this project, we couldn't take content right through the process easily from creation to all the distribution channels. We needed a new system and we needed it quickly."

The Méthode rollout put many of Quinn's strengths to the test. He recalls that he was initially given approval to roll out the new CMS in 30 months.

"After we got the business case approved, [CEO Kim Williams] called us back up to his office, and he said; 'I need you to go live in a year'."

Perplexed, Quinn asked for two weeks to stack a plan up that could get close.

"And we went back in two weeks, and said, 'Kim, we can't go live in a year. The best we can do is 14 months'.

"He leaned across the table to me, and he asked, 'Are you deaf?' So we went live with our first newspaper exactly two days short of a year."

The rollout is now "seen internally as extremely successful, even if some people carry on about having to change the way they work", and has been adopted by several of News Corp's global publications.

From manufacturing to retail

Quinn sees 'big data' as the next point of differentiation and innovation amongst media companies.

"If you put it in its simplest terms, News Corp has gone from a manufacturing business to a retail business," Quinn says. "We were manufacturing in that we used to produce papers and drop them in depots and deliver them to newsagents.

"Today, we've got to create content that we can sell, so I see us as a retailer. The one thing retailers need to know the most about is their customers. For a long time we have not known very much about the bulk of our customers because they're anonymous to us, but with the rising traffic on the web and tablet and smartphones, we can get to know a lot more about the people who use our products."

Media companies can, to a degree, very affordably gain insights into their audience on a bulk basis using software-as-a-service tools. But News Corp wants to narrow down the level of the individual.

"Data has become really, really important to us," Quinn says. "Its important to find out who is looking at our products - our content – everything from precisely what they're looking at, when they're looking at it and how long they look at it for.

"To do that, you've got to be able to manage acres of clickstream. We had to build a massive elastic data repository in the cloud that would enable us to bring all this stuff in and run some data science over the top."

For the last 18 months, this repository has taken the form of a Hadoop stack hosted in a public cloud, but the company is now "stepping up" to another level via use of a Google service called BigQuery.

BigQuery offers fast responses from simple queries against tremendously large structured datasets stored in the Google cloud.

Not everyone at News Limited is a fan of Google. It is, after all, the company most responsible for disruption to media companies, via the aggregating of content and sale of keyword-based advertising.

But Quinn argues that Google is "so massive, with such a lot of money spent on R&D and build scalable products, they're hard to ignore."

"I've got the job of really lifting our capability for our advertising customers," Quinn said. "We want to sell great content – and we want to sell that content so that our advertisers can access the people who read it. So we've got to be able to tell our advertisers who they are and what they're looking at, so they know where to place ads.

"That means we need to build a much bigger subscriber base - we've got to be out there marketing, running campaigns, having people register, having people buy, and we can only do that by stacking up our data in one spot."

Quinn is yet to see a tangible outcome from the project, "but the way we're going I think it's going to be a great tool for us".

"We're building up a data science team who can write the algorithms that get the best out of the data. My aim is to be as good at this is the banks.

"It's a tall order but to survive we need to be retailing rather than manufacturing."

A new perspective on digital leadership

ADAM BENNETT - NAB

Brett Winterford | September 8, 2014

Is the coalface of a bank's technology operations the data centre, or the contact centre?

Former National Australia Bank CIO Adam Bennett is the first executive general manager of the bank to choose an office in the company's Sydney-based call centre rather than in the bank's plush executive headquarters in Melbourne.

Bennett's role is executive general manager of digital and direct banking - and regardless of how broad you believe the divide is between the 'IT' and 'Digital' functions of a bank - Bennett is unlikely to be the last CIO to take a sideways step.

Bennett sees colocating with a contact centre as a "natural extension" of his prior work - both as CIO and as EGM of enterprise transformation.

"The experience and disciplines I gained learning how to run a bank I can now apply to customer channels and to frontline staff," he told iTnews.

Customer channels is an area of interest he developed after being asked to compare NAB's digital strategy with those of banks elsewhere in the world.

His conclusion was that much of what goes on behind the scenes in IT makes little difference to the company if it doesn't directly lead to customer outcomes.

As the financial services industry is hit with a new wave of digital disruption over the coming 18 months, "we'll see the types and version of technology - the flavours, if you will - as only the means, and not the end," Bennett says. "The ultimate end will be the customer experience."

A digital review

In late April, Bennett kicked off a review of NAB's digital strategy.

Thus far he's concluded that while NAB is "doing some good stuff", measuring the bank's strategy according to the features in its apps and the gadgets it supports doesn't really tell the story of whether they are

driving advantage for customers.

"I would characterise digital disruption along the lines of volatility, uncertainty and ambiguity, but also opportunity," he said.

"There is today a customer propensity to use different channels. We have seen massive growth of mobile devices and smartphones, with use jumping 55 and 60 percent. On the retail side of our business, four fifths of our customers are using digital channels every month."

For Bennett, digital strategy is about pursuing a process that reinforces an organisation's key values every time a customer engages with the bank using a digital platform.

"What customers want to do today is to self-serve - to transact. But ultimately I believe it will move to greater engagement. The question will be how to keep them coming back to you in all the ways they want to - in a way that hangs together well for a good customer experience."

Bennett notes that technology leaders within Australia's largest banks have a larger role to play than smoothing over the transactional experience for retail customers. The bank's business customers are themselves impacted by digital disruption, he said, and will be looking to NAB to help understand how to engage in these channels and transform their own operations.

"We need to be sensitive to change in all industries," he said. "No industries are immune to digital disruption – our customers are grappling with it too.

"We need to position ourselves between two bookends: catastrophising around the change on one extreme, and complacency on the other, the 'I've seen it all before' syndrome. Neither of those is where we want to be."

Creating space for change

Bennett refutes any suggestion that banks are too large and bureaucratic to innovate to the degree of digital disruptors, and defends the record of NAB's senior executive for its willingness to provide room at the bank for individuals to effect change.

"Absolutely, there are opportunities for individuals to shift an organisation," he said. "That happens at NAB all the time. We are working on a culture that allows individuals to have space to innovate and to pursue those big ideas."

NAB's Flik application, for example, was conceived independently by two NAB employees, who brought the idea to the attention of the executive. Flik is a P2P payments app facilitated via a mobile app which allows NAB customers to send and receive payments to each other via SMS, Facebook message or email without knowing each other's BSB and Account numbers.

"We gave [the two individuals] space and funding, it's now live and we're now building off it," Bennett said.

The same approach to innovation can happen on a larger scale, he said.

"We're the only big four with an online, digitised bank to play with [in uBank] – and its grown to hit $18 billion deposits and 400,000 customers," he noted. "That's an example of looking at ourselves in a different lens. Its very healthy for a bank to do that."

While structurally UBank sat "a little outside the core" of NAB's operations, Bennett said it was allowed to "have its cake and eat it too" by "drawing on all the good things from inside."

"That's the power of innovating within big companies," he said.

Bennett doesn't believe that the structure of a disruptive project is particularly material to its chance for success. He thinks UBank would have worked whether it operated as an independent subsidiary, at arms length to the business or from within the business.

"To me, the process, culture and leadership are bigger determinants of success than structure," he said. "Structure is only one lever."

Digital leadership

Bennett is nonplussed about where digital leadership should sit within an organisation – within IT, within marketing, or indeed as its own discrete function.

"Where it sits functionally is not that important, as long as you take a customer perspective. What's the experience of the customer? What's the next thing they are going to need from us?"

More critical will be the approach of the leaders themselves, he said. He believes that one of the most crucial leadership qualities in a digitally disrupted market will be "to remain curious", and to do a lot of listening.

"Sitting out in the contact centre gives me good insights into what's happening on the floor," Bennett says. "I have visibility over where we are generating leads from marketing, whether a particular campaign generates calls and how staff deal with it.

"Sitting here, you get a sense for the type of things customers are calling about. It helps you to elevate issues and prioritise."

Pressed for an example, Bennett recalls that the contact centre was taking some interesting feedback on the NAB Traveller Card product.

"The process behind that product wasn't working for the customer as we would have liked," he said.

Customers demanded the ability to load funds on and off their Traveller Card from their other accounts while they are logged in to an online banking session. Bennett was able to prioritise this investment, such that

this function is now offered "real-time in internet and mobile banking."

"We have to be more and more agile as an industry," he said. "Customer expectations are changing – today's innovation will be tomorrow's ticket to the game. At NAB, we have opted to chase a medium to long term view. We have to think beyond the next gadget and next feature. Because it is fair to say whatever expectations customers have now is the least they'll ever expect."

Bennett believes banks will survive digital disruption if they use digital to reinforce their core values – in NAB's case, the 'Fair Value Agenda' of lower rates and less fees.

But the lower margins available in a more competitive environment may require a more frugal approach to technology investment than what we've seen to date. He predicts that banks will move from being technology companies unto themselves into smarter integrators of technologies sourced elsewhere.

"A core competency is likely to be how well you can leverage an ecosystem to compete in the marketplace," he said. "That's fairly different to how banks have traditionally thought about technology – we've taken the whole, 'we're big, we can afford to build this ourselves' mentality. You're going to have to draw on the R&D that external partners can provide you."

Technology staff will need to hone the necessary soft-skills to collaborate both with other divisions of NAB and with other organisations. They will more likely be part of multidisciplinary teams, working towards "a single outcome for the customer."

"It will be less on the how and the tactical," he said. "IT staff will also have to focus on what's commercial – what is both good for NAB and good for the customer, not just what's possible. The 'what's possible' is the realm of toys and gadgets – that's not where this will all end up."

Leaders will also need to keep a keen eye on other industries that are equally impacted by digital disruption, he said.

"We need to reserve the right to get smarter. All of this challenge and disruption is playing out across industries, and its way too early to tell who is going to win.

"We will need to make 'no regrets' bets on where its going, without necessarily having the certainty of where its going.

"A key leadership skill is painting a picture of where the organisation could be, and creating a space for people to step into. Things like building a culture – the 'why are we doing this' stuff – that will be very important."

Keeping the peace

VINCENT DEMPSEY - VODAFONE AUSTRALIA

by Brett Winterford | September 19, 2014

It takes a thick skin to mediate between the IT and digital camps.

In May this year, Vodafone Australia parted ways with its chief information officer, and did not hire a new one.

The CIO role, the company announced, would be 'absorbed' into the broader technology team.

Vodafone, like fellow telco Telstra and many others, has over recent years run two technology teams: one that predominantly manages internal systems (IT), and one that manages online interactions with customers (digital).

After several years of investment in improving its mobile network and its IT systems, it's now the digital area that's getting a lot of the love.

Vodafone's priority in 2014 has been how to demonstrate the value of its infrastructure spend via digital engagements with consumers. On that score, Vincent Dempsey, general manager of digital channels at Vodafone, has been in the hotseat.

Dempsey qualifies that he's "not the IT guy, I'm the business guy," as if to suggest that somebody else at Vodafone should have been interviewed for a series on digital disruption.

But having worked in product roles for both Vodafone and Optus and running the digital channels strategy at Channel Ten, Dempsey's got good grounds to express an opinion.

Both media and telecoms have relied for many years on protection from new market entrants via the prohibitive costs of network and broadcast licenses, but can't rely on it much longer.

"The advent of the internet made that protection not so much worthless, but very much reduced in their value," Dempsey says, describing the challenge in media. "Today, anybody can create content and distribute widely.

"The entire business model around advertising on TV is about reaching a mass audience, but that can also now be achieved in digital environments. And over time, the cost per thousand (CPMs) that people paid for advertising is going off a precipice."

The experience taught him that business leaders "need to be vigilant", even in the most protected industries.

"Where any industry might think they're safe, there are always things in the background that can erode."

Telecoms differs slightly from broadcasting in that carriers have for a long time allowed others to access their networks.

Low-costs MVNOs (mobile virtual network operators) have in many cases had a bigger impact than desired by their wholesale provider. That's required the likes of Telstra, Optus and Vodafone to carve out a more defined audience that demands a higher value level of service.

Allowing competitors to access your network does have its advantages. The three major telcos have an unrivalled ability to pick up on digital trends far earlier than most other industries, and thus make smarter bets to meet the changing demands of consumers.

"If we're not in the driving seat, we're definitely at the front of the car," Dempsey remarks.

He believes the key differentiator over the next few years - now that Vodafone's network reliability issues have more or less been sorted out - is to offer a digital experience that is "second to none."

"We need to offer the leading self-service for a telco in Australia."

'You're that waterfall guy'

Dempsey arrived at Vodafone to find its digital transformation was already underway, led by the former head of product technology, Craig Rees.

Rees had garnered enthusiasm within Vodafone's digital team for using the agile software development method to deliver product at far greater velocity. Around 80 staff were working across ten streams and delivering services at far greater speeds than previously.

In contrast to this frenzy of activity, Dempsey was assumed to be a 'command and control' leader – a 'waterfall guy', in agile speak. He'd come from hierarchical, disciplined businesses, and didn't want to turn any tables upside down without getting the nod from the broader business first.

Dempsey was - despite a slow conversion to the practice - initially concerned that some of these early efforts at Vodafone were "agile for agile's sake."

He fronted the Agile Australia conference in June with a provocative message:

"I wish I could work for an organisation that had absolute freedom to iterate and iterate and just know that we'll get there in the end," he told the audience. "The reality is that we work in an organisation with rigid structures around approvals and finance. We needed to find a way to define business outcomes."

He decided that delivering on his goals would require the support of a range of stakeholders beyond the digital team and its home in sales and marketing.

C-level execs would need to buy-in. So would IT.

Bridging the gap

"I would not want to be a CIO or CTO right now," Dempsey told his audience in June. "Where would I even start?"

A few months later, Dempsey provides some context to what's fast becoming a sore topic across the entire industry.

What banks, telcos and other organisations on the path to digital disruption are looking for, he says, is a way to adapt the product construct around "actual intelligence of what the customer wants".

"[But] IT systems are structured in a way that it takes longer than it should to get new products out there," he said.

"If you look at the spectrum of pure agile to older world IT, I'm lucky in that I work completely in a digital environment. I get the advantage of all the new platforms and all the changes in technology that occurred in the last number of years.

"I think any CIO or CTO's job is very difficult, because you have to marry a world that has major backend IT systems with a world that is trying for a much faster, more agile outcome."

Dempsey says it is "unhelpful" that agile purists start from a position that the way IT has done things for decades is the stuff of dinosaurs.

"I actually think that agile sometimes feels a little bit cultish," he said. "Sometimes agile can be very preachy - everything you're doing is wrong, and you need to change.

"It's important not to try and change everything. My philosophy on that is yes, we've been doing this in a certain way for many years, and yes, it probably needs to change. But you need to find a way to still deliver on KPIs. You still need to provide the business with certainty around what we're going to deliver to the customer and some certainty on outcomes."

Some of Vodafone's initial experiments around agile ways of working had actually resulted in lower engagement levels amongst staff, he noted.

"You need to try and find a way to make the new world work with the old world. A lot of people who work in agile are advocates of lean start-up - and that's a great way of working for start-ups - but large corporates also need to find ways to change. So there are people in the middle, and hopefully I'm one of those, trying to provide that bridge between the lean startup world and the

corporate world.

"I'm working with the wider IT business on demonstrating how we can work together."

Getting buy-in

Dempsey found himself with the dual challenge of needing to win over the board on his vision for digital differentiation, while simultaneously trying to help the digital team understand the constraints they had to work in.

It required a "coalition of the willing", he said.

Dempsey promised his own boss, the head of sales and marketing, that with the right tools and processes in place, he would deliver on the challenging sales and service targets set for him at a faster rate of knots than forecast. In doing so earned himself his first executive sponsor.

He then delivered three truths to the telco's broader management to build a case for change: first, that digital will no longer be niche but mainstream.

Second, that the way customers interact on digital platforms will be a telco's "primary differentiator" in a world where "a network is a network and everyone has access to the handsets".

Finally, he had to deliver a difficult prognosis - that "if we keep working the way we are now, we're not going to get where we need to get to".

The most important executive for any technology leader to win over, he says, is the CFO.

"I talk a lot about getting the CFO on board, to make sure finance understands what you're trying to do and to get them to buy into your business outcomes," Dempsey advises. "He's the man with the cheque book."

Dempsey is resigned to the fact that the approval processes and funding gates CFOs usually seek for a project aren't going to go away in any soon. He also accepts that this doesn't mesh with a pure agile approach, which demands a constant trickle of funding.

So he chose not to talk of 'agile' and 'lean' approaches - concepts foreign to most CFOs in any case - and simply focus on the outcomes of "delivering faster and more efficiently."

He won a quarterly funding envelope, with the budget for every quarter dependent entirely on whether the team achieved the measurable outcomes set for it in the last. Dempsey chose some quick wins that would show what was possible, and got started.

Agile-lite, or 'the best bits'

Dempsey has attempted to take the best parts of agile - or at least its overriding principles and goals - and apply it within the constraints of a telco.

"The days of knowing what your roadmap looks like for 12, 18 or 36 months are gone, because with this level of disruption you just don't know what's coming," he said.

"So what I focus on is setting up a team that can respond quickly and still can deliver quality. That requires changes to the culture and the way we work - trying to remove it from 'command and control' model to an environment where you're leveraging collaboration across the people in your teams.

"Agile is a tool to do that, but it's not just agile. We've overlaid agile with lean - we've used some of the lean tools as the oil to make the collaboration work better."

The digital team now find themselves co-located with sales and marketing and IT. For the first time, Dempsey said, IT has been invited into the product conversation.

Vodafone runs collaborative design workshops for the development of digital services, where the team attempts to visualise the customer journey for any new process.

"We have everyone, including me, sit in a room," he explains.

"We all have pens and paper and everybody draws out what the end result will look like for the customer.

We have marketers in there, we have product owners in there, we have IT people in there. We come up with what we think the end result should look like and test it with customers before we build it."

This approach has already borne fruit – Dempsey proudly notes that an IT platform manager came up with the best design of a new, customer-facing e-commerce process from one of those meetings.

"The design that worked best for the customers came from a person who traditionally we would never have spoken to about that," he said.

Portfolio walls are now dotted across Vodafone's North Sydney offices and are used for daily stand-ups, as is a larger wall for management to consider the bigger picture.

"Traditionally large organisations have probably not been the best at acknowledging that there are always difficulties in projects, and they're hidden," Dempsey said.

"As a manager, I'm the one who gets the most action out of that wall. I walk away after meeting my team and at every level they are telling me that there is a blocker here or there, that 'I can't do this', that 'I need your help to sort this out'."

These practices have started to see traction in other areas of the business, he said.

"I think we're lucky at Vodafone in that because the executive have agreed that there can be a new way of working, they're open to learning where else it might be implemented. We can take some of the tools used in digital and ask whether the marketing product guys can also think a bit differently about product development. There's no sacred cow around how you should work in the future."

Months on, the overriding lesson for Dempsey is that explaining to your stakeholders why you're making a change is more important than 'how'.

If you're going to take on the agile journey, "you've got to acknowledge that that change will disrupt, at a people level, at an engagement level," he said.

"It's not enough to train staff in agile and "let them free". You've got to hold their hand a bit on the journey."

Staff engagement levels are back up, he said, "because we spent the last year actually doing the why."

And while he hopes he can be a good influence on the broader IT organisation, Dempsey doesn't pretend to have a silver bullet for how back-end systems can be refreshed "without breaking the bank or the back of the business."

"I think it's like eating an elephant," he shrugs. "It can only be done one bite at a time."

Technology, through a banker's lens

SUE COULTER - CREDIT UNION AUSTRALIA

by Brett Winterford | October 13, 2014

How do you experiment when members expect credit unions to only spend on the technologies they absolutely need?

When Sue Coulter was appointed to lead the technology operations of Credit Union Australia, it was decided she should not wear the 'chief information officer' hat.

Coulter has worked "in just about every division you can imagine" during her career in financial services, most recently leading the implementation of CUA's core banking overhaul.

After the resignation of CIO David Gee, it was decided she would simply add "...and technology" on the end of her existing title as general manager of business transformation.

"It was a conscious decision to have the word business in it," she told iTnews.

"What I bring to the role is a broader scope of understanding about business challenges in financial services.

"I have seen the frustrations that can build up in the business around IT. I could sense over the years that something would have to change. There has been such a convergence between business and technology."

Today's technology leaders "need to understand the product and marketing challenges", Coulter said, as well as "a broader understanding and awareness of what technology needs to do to support the business."

The expansion of Coulter's remit came as CUA crossed the finish line of a major technology refresh under former CIO David Gee.

CUA has punched above its weight in terms of technology investment in recent times. Gee's tenure included the restructuring of CUA's IT team, a move into two new data centres, a server, storage and networking refresh, a thin-client rollout and - most crucially - the overhaul of its core banking systems.

Gee was named Finance CIO of the Year at the conclusion of the overhaul - a credit he shared with Coulter in accepting the award.

With these foundations in place, Credit Union Australia is done with building and ready to productise and ultimately profit from this period of investment.

Coulter came onboard nine months after the overhaul was complete, with the company "just getting back to business-as-usual in terms of technology".

"We are in a nice rhythm of rolling out incremental improvements in the core every four to six weeks. That's a great place to be," she said.

"What we weren't doing, however, was looking down the pipe. Now we've got this great platform and have gone through the pain of moving to two new data centres and a thin client rollout. But we didn't have a view of where we wanted to be in two to three years."

Coulter has set about answering a few key questions: "Are we right-sized for the organisation? Is it the right shape? Are we focused on the right things? Do we have the right capabilities internally?"

It was natural, she said, for everyone from CUA's board down to its sysadmins to be engrossed over the past few years with delivering and stabilising the core.

"We need now to take the focus off running the technology division and divert and repurpose into 'grow' activities."

Faster product delivery

First off the bat was to use the new core as a building block for faster delivery of new financial products for customers.

This was made easier by combining the core with an enterprise services bus. An ESB essentially provides the credit union the ability to expose information from the core banking system in any channel they choose to.

CUA's enterprise services bus, based on Red Hat's open source software, has already been used to deliver a loans origination system for personal loans.

With the new core and ESB in place, CUA has driven the processing and approving of funds for a personal loan from several months down to "a new record" of two hours.

"It's all about removing as many obstacles as possible for customers to sign up for our services," she said.

Much of that work can now be re-used for home loans or other new products.

"You can build [a process] once, and reuse it any way you want. It's a simpler way to expose the information you've got and reuse it across multiple channels."

Coulter's team is assessing how this new capability might underpin CUA's digital strategy, which is expected to result in new products and services over the coming 12 and 18 months. It's more than likely that new services made available through the credit union's digital channels will need to call on data from the core.

Coulter sees collaboration with her peers across CUA as key to delivering a successful digital strategy.

She is working "side by side" with Jason Murray, CUA's general manager of product and marketing, whose marketing domain includes insights from data analytics and the credit union's digital initiatives - both areas the technology team might otherwise feel a sense of ownership for.

Coulter says she does hear stories about tensions between marketing and technology divisions for control of these domains, "and we've had a little bit of it in the past."

Her response has been to engage early, while these initiatives remain embryonic, and 'co-sponsor' the development of a business case, rather than waiting for IT to be called on to deliver on an approved one.

"Next week, we kick off a short exercise on the art of possible for big data," she said. "We co-sponsor it with product and marketing, as I don't believe it should be driven purely with a technology lens.

"The business themselves are defining what they want out of digital, so [Murray's] 'head of' and my 'head of' are working side-by-side on that strategy"

How can CUA be different?

CUA's digital strategy is being developed within two key constraints. First, it must differentiate the credit union in the years to come.

"We have to ask ourselves, what do we stand for? We exist to enrich our our members' lives, and that has to be made obvious to them in the way we ask them to interact us."

Coulter raises the prospect of using 'big data' - the combination of cheaper storage and data processing technologies with analytics to deliver faster and more trusted insights - primarily as a means of enabling product teams to sharpen their sense for what members want from products.

That differs from banks that consider big data as more of a sales tool to personalise offers to customers based on their unique financial position.

"Being a member organisation, we really need to be able to identify services and products that will be of better value for our customer base," Coulter said. "So our lens on big data will be slightly different to the other banks, in alignment with our brand. Our brand is about 'life rich banking'. It's about families partnering with an institution that is looking out for them."

The other key assumption is that innovation at the CUA must be tempered by the available budget.

"We have a little bit of catch up to do in that digital space, and you'll see that over the coming 12-18 months. But we'll never be a CBA - we'll never have the funding to build those teams - our innovation team is less than a handful of people.

"We will be very selective about what we do. For us, it's about understanding what's relevant for our members."

With this in mind, CUA is more likely to partner with a small, potentially disruptive startup than build new products that aim to disrupt the business of loans and deposits.

"For a credit union, finding the right partners to help will be of greater importance," Coulter said. "We have to remain relevant against the majors and Tier IIs, but we don't always have the breadth of skills internally that we need.

"We will look at organisations that can help us be more agile and get things out quickly," Coulter said. "We have assigned two or three people on our side to lead a program internally to ensure that these sort of engagements can begin within a matter of weeks."

One example of such an approach is CUA's 'redi2pay' mobile payments app, which was rolled out on Android via a partnership with Cuscal, a technology provider to several credit unions around Australia.

It was touted as the first in Australia to use host card emulation (HCE), rather than stickers or tags, to turn an NFC-enabled smartphone into a 'tap and go' payments device.

"Redi2pay is an example of an app done very quickly that we know our customers really appreciated," Coulter said. "It was great to see that the app drove customer acquisition as well - it helped to demystify the perception that credit unions aren't innovative."

Coulter said the CUA will be "doing a lot more of that - putting our toe in the water and testing organisations that can add agility for us.

"The aim is to get things stood up quickly, test and learn from it, without necessarily building full solutions," she said. "If we build a full solution only to learn its something customers don't want, we've wasted a precious member resource."

Digital engagement: more than child's play

PAUL YOUNG – ARDENT LEISURE

Andrew Colley | October 20, 2014

Sector-hopping CIO Paul Young wants to create digital experiences that add value to some of the world's most terrifyingly physical ones.

If it's engagement you want, there are few experiences quite as terrifying as hurtling down the 115 metre decline of Dreamworld's Tower of Terror.

So says Paul Young, the newly crowned CIO at Queensland entertainment conglomerate Ardent Leisure Group, when asked what impact advances in online gaming might have on the distinctly physical business of running theme parks like Dreamworld and franchised gyms and bowling alleys.

"It's a thought provoking question: could a digital experience replace something so physical?" he says. "They are very different experiences, and complementary.

"There is nothing like being on the Tower of Terror. But who knows? Perhaps over time we might see virtual digital experiences that supplement the actual experience."

Young came into his own as a CIO during a unique era for technology leaders. His skills were shaped during the technology boom that resulted from the mainstream adoption of the internet in the years before it began its reign of disruption.

The internet pushed the execs out of server rooms and into data centres, then closer to the boardroom as digital issues became more tightly entwined with core business decisions.

Young started out as a techie. In 2002 he was working for Wotif.com founder Graeme Wood from within a federal government co-operative research facility called the Distributed Systems Technology Centre.

"One day (Graeme) rang me and offered me the role as the CIO of Wotif.com. I guess you have to take your opportunities and be in the right place at the right time," Young says.

"That role was a really interesting opportunity. It was a fantastic business model, with a technology stack that was not capable of supporting it up until that point - so that was a really technical role."

After a short break for some consulting work, by

early 2008 Young was again doffing his CIO hat after an offer came in from global mining engineering specialist Ausenco. Again, his timing was fortunate. In the years that followed, Australia's mining sector has enjoyed strong growth that has only slowed in the last 12 months.

He's expecting his time at Ardent Leisure to be a significant change.

"There is a different set of challenges," he told iTnews.

"IT is largely the same wherever you go, but the opportunities are different in different businesses. My last role was about globalising an IT infrastructure for a global company that has operations in South America, North America, China and so on."

Ardent Leisure's technology operations, he said, face the sorts of challenges more akin to those faced by an e-commerce company. And while it has a large business in the Americas, Ardent's operations are predominately based in Australia.

The role at Ardent requires Young to draw on skills that he developed at Wotif.com as it attempts to transform a distinctly physical business to give it a digital edge.

"We have all these brilliant entertainment and amusement assets and it's all about how to make them more visible," he said. "[The challenge] is about how we do more with those assets in the digital world and attract more people into our different venues.

"People are increasingly coming to their entertainment via some sort online, social media experiences. How do

you tap into that and make people of aware of it?"

The importance of these digital engagements isn't limited to marketing, he said. Ardent is trying to find ways to augment its physical businesses so that they engage with people in digital realms.

"People walk around with their eyes glued to apps on various mobile phones these days," he said.

"I think that's the challenge – asking how we can reinvent these experience. How can we do things that have never been thought of, but keep the business running in its current form?"

Young has only been in the role a few weeks, so at this stage he's groping for ways to explain what sort of digital concepts are likely to evolve. However, he says the company's gym franchise, Good Life, could be a prime candidate for digital augmentation.

"It's great being able to go to a gym," he said, "but when you can't go there, might we provide some sort of digital program so it can work with you during the times you can't be there?"

It won't be a simple top-down exercise. Young says digital strategies are tough on shoe leather.

"It's surprising to me that people think digital is easy. Digital is a very deliberate strategy that takes a lot of discipline and it's something that you do over a really long period of time.

"You don't just transform a business. You have to get cultural lock-in from the rest of the business," he said.

"A lot of it involves working with CEOs and senior managers, trying to tease out where they could go digitally. It's about asking them what [information assets] are not serving them well, and suggesting opportunities they might like to take up".

While technology is increasingly informing marketing strategies, Young remains resistant to the idea that his role is increasingly falling within its definitional boundaries.

That said, he concedes the role is less technical than it once was.

"Generally speaking, the more technical part of the role in larger companies is these days done by a CTO or a similar role. The CIO is increasingly a business-facing role – it's worrying about the things that the rest of the executive team does.

"I think CIO roles are increasingly less and less technical roles, but I wouldn't say it's a marketing role. I'd say it is a business role."

Young believes many CIOs and IT managers find their careers held back because they haven't recognised the need for the role to evolve.

Peers complain that their technology prowess isn't as value as it used to be. The problem, he says, is that they don't view their role within a broader business.

"You still want to be a technologist," he says.

Cloud

At Ausenco, Young's main challenge was to mobilise the business and accommodate its heavily dispersed global operations.

His most recent strategy to meet these goals was move a greater proportion of its technology stack into Amazon's public cloud.

He warned, however, against assuming that Ardent Leisure would face a similar fate under his tenure.

"There has always been a constant tension between outsourcing and insourcing and the correct answer is that there is no one right way."

His best advice is that any services that are "truly a commodity" should be outsourced into a commodity service like the cloud.

"And if they're strategic and they add tactical value to your business, keep them very close to you," he says.

That moved the conversation to whether he's comfortable with the notion that cloud services may eventually prove that everything that defines a business can be reduced to a replicable commodity.

"The way I would look at it is like this: the way that you put those commoditised items together is how you deliver value for your business. That's where the real value is these days."

In any case, he's ready for the worst case scenario whenever he chooses to outsource.

"When I go into these things, I go into it in an abstracted framework [so] that I have the choice to pull out all of my infrastructure and put it into another cloud provider. You want to know that if the relationship goes south with that vendor you can move somewhere else".

As for his team, Young expects there will still be demand for positions in enterprise architecture, project and program management and sourcing/vendor management for the foreseeable future. ■

Culture: the one thing a bank can't buy

MATT PANCINO - SUNCORP

Brett Winterford | November 3, 2014

Making the most of the digital opportunity requires companies to fundamentally disrupt the way they work.

What are the first steps a business leader needs to take to steer an organisation towards agile practices?

That's a question we've asked dozens of executives as part of the CXO Challenge - and a question Matt Pancino has had plenty of practice at answering.

In June, Pancino was promoted from Suncorp CIO to CEO of Suncorp Business Services, the division that offers technology, HR and other shared services to the organisation's numerous insurance and financial services brands.

Pancino arrived at Suncorp halfway through a seven-year agile transformation led by his predecessor Jeff Smith.

What started as a project to change the way the technology function delivered value had gathered such momentum that Suncorp applied it more broadly across the organisation, to the point where the company has written its own curriculum on the subject to help introduce graduates and other new staff to this peculiar mode of work.

Agile is viewed by the likes of Pancino, REA Group's Nigel Dalton and Australia Post's Andrew Walduck as one organisational response to how to counter digital disruption - if not embrace it.

"While disruption can have negative implications for those organisations that are large, complacent and slow to move, for those who can embrace new ways of solving customer problems with speed, agility and scale, digital disruption should represent an equal amount of opportunity," Pancino said.

The difference between those that disrupt or are disrupted is "simply a question of culture," he said.

"Over the long term, I think about the culture as a key differentiator for any organisation.

"At Suncorp, we have developed an ability to explore new ideas at low frictional cost, and a willingness to fail fast. That helps us to discover new sources of value without destroying our existing revenues."

As an early adopter of agile, Pancino says he is often

asked where to start on the cultural journey.

Agile culture, he replies, requires adherence to a few related principles.

"The number one thing is to create the environment through your leaders," he said.

"Number two is to be constantly thinking about how to replenish talent in the organisation, and we have been very passionate for a long period of time for our graduate program.

"And three - be very open minded about partnering."

Suncorp chooses to work with technology partners that are "best in class in their domain," he said, rather than simply to lower its costs.

"We use partnering to enhance and diversify our thinking, rather than as a cost saving measure."

Leadership

Suncorp, like several of Australia's large banks, rotates its leaders across the business so lessons each of them learn can be applied broadly.

Pancino said where Suncorp excels is that leaders are asked to solve "real problems" rather than those steeped in bureaucracy.

The organisation also pursues a leadership structure that isn't obsessed with hierarchy, he said. In both his current position and former role as CIO, it was not

expected that he alone would be responsible for steering the organisation's technology strategy.

As a financial services organisation, Suncorp has to be "very aware" of what disruptive technologies might mean for the organisation, he said. That might mean keeping an eye on the impact of safer and smarter cars on general insurance, the impact of disruptive payment startups on the banking business, or what effect the augmenting of the most basic human senses using wearable technologies might have on life insurance.

But it can't be expected that a chief information or digital officer is going to recognise every opportunity disruptive innovation presents, he said.

"On an individual level, it's very hard to stay on top of all of that," he said. "Suncorp is not a hierarchical organisation where it is one person's job to deal with it. We have built a leadership system where people are encouraged to always be on the look out or exploring what technologies could impact our industry."

So what, then, is the role of a technology leader?

"Leaders of the future must be incredibly curious," he said. "They must use their peripheral vision to always know what best looks like, no matter what industry best has come from.

"And they must recognise that we can't do things the same way - we have to set a high bar in terms of finding new ways of delivering value to customers."

Talent

Suncorp's pioneering success with agile has one small drawback - other banks new to agile are now circling its staff, looking to make some hires to infuse the discipline into their own operations.

Pancino said this only serves to prove how "misunderstood" agile is in corporate Australia.

"Agile is not a binary state," he said. "It is a maturity curve. We went through Agile 101 into continuous integration, test-driven development, continuous delivery and into DevOps. Its now in our DNA. [But] every different team at Suncorp is at a different level of maturity."

To illustrate, Pancino noted that the company applied agile to its Building Blocks program - an overhaul of its major insurance claims system, and managed to move the speed at which it could make changes to production systems from once a quarter down to every six weeks.

Over time, it has refined that process so it could make changes once a month and, later, once a week. Today the bank can push out changes on a daily basis.

"We are applying it in areas others say you can't apply agile practices," Pancino said.

"We now have a fully automated test environment and deploy on a weekly basis to our mainframe platform. And moving forward, we want to build a continuous delivery platform for our core banking overhaul. We want to break down a big problem into small pieces."

Building an agile culture is not something you can buy, Pancino says. It's something you need to grow through graduate programs and on-the-job training, and via collaboration with "best in class" business partners.

"We see organisations try to buy in these skill sets," he said. "This is something we are not going to participate in. While we are operating in a competitive environment - and we can't keep everybody we hire - we have to maintain our focus on simply creating a great place to work."

That involves removing hierarchy and bureaucracy, he said, and ensuring all teams are working towards common goals.

Pancino said the bank is always looking at "smarter ways of working that encourage innovation and collaboration".

"We are building an adaptive culture that is open to experimentation."

He cites several initiatives that aim to retain talent - he company's techies and product staff participate in regular 'FedEx' hackathons to seed innovative thinking and to encourage staff to submit their best ideas to Suncorp. The organisation also sponsors local development forums and other initiatives that "reinforce and support that culture".

The bank uses technology to help its workforce be "more flexible, connected and efficient", whether that be via remote work conducted over the network using

virtual desktops, the use of instant messaging and video conferencing to connect disparate teams, or via the buildout of distributed hubs to decentralise the workforce and provide work opportunities for part-time workers such as mothers.

These distributed hubs are located in suburban areas - sometimes near shopping centres - which remote call centre staff can use for daily work or for team meetings. Pancino said the hubs "create a sense of team" for remote workers while also aiding the organisation's compliance efforts.

Data as a differentiator

Under Pancino, Suncorp's technology projects will run across three broad themes - a commitment to turning its vast data sets into actionable insights, an effort to get out of the business of IT infrastructure using cloud, and the overhaul of the core banking system at Suncorp Bank.

As previously reported in iTnews, Suncorp is rounding up some 800+ data analysts from across its insurance and banking businesses to form a shared centre of excellence around data analytics, and is consolidating some 12 data warehouses down to one.

The insurer aspires to being able to target its offers to customers at key moments in their life.

While Pancino argues that Suncorp's key differentiator is a "highly engaged workforce that enjoys working for Suncorp," he acknowledges that the organisation's scale doesn't hurt - it boasts nine million customers, which represents 42 percent of the Australian population.

"That gives us enormous information to draw on," he said, adding that data will "play a pivotal role" in the organisation's future. Better use of data analytics will provide an opportunity to "treat nine million customers as individuals" and - using test-and-learn approach - a better understanding of "how customers want to interact us in their daily lives".

When asked how close the industry was to being able to use the data held about customers to make personalised offers in real-time as they transact online or in mobile apps, Pancino said the amount of money spent by the industry on such an approach in the past 30 years meant it must be close.

"I've never seen so much disruption as now - the limitations we faced around compute power and storage are now removed from us thanks to public cloud.

"There has never been a better team to be part of this space because we are seeing tectonic shifts in terms of removing those limitations," he said.

"That's not to say every organisation will succeed in this space - the ones that will need to have the appropriate culture in place - a way of working in order to respond to real-time feedback."

That means hiring technology staff with strong digital skill sets and the ability to gain insight from data.

"We need people with what we call T-shaped skills - they need not only depth of expertise in terms of their technical skills, but also that peripheral vision to apply knowledge and experience to solve problems in other parts of the business," he said.

"We see talent as the way we'll succeed."

Debunking the innovation myth

DAVE CURRAN – WESTPAC

by Brett Winterford | November 14, 2014

Banks don't need chief innovation, data or digital officers, says Westpac's Dave Curran. They've just got to get on with the job.

Australia's banks are likely to lose a few toes to the startups nipping at their heels, but Westpac Group CIO Dave Curran thinks it highly unlikely anyone will lose a leg.

Curran, appointed into Westpac's top technology job in July, is a pragmatist when it comes to the subject of digital disruption.

On the one hand, he's cognisant that disruption is "coming at us fast."

"Increasingly, we are seeing startups literally created overnight with a scale and capability that we couldn't have imagined ten years ago," Curran told an FST Media conference earlier this month.

"These startups are very publicly stating that they are coming after the banking business."

But on the other hand, Curran cites three reasons why the business of a major bank is hard to fundamentally disrupt.

"To create a large-scale bank with 5 million+ customers doesn't happen quickly."

First and foremost, banking in Australia is a heavily regulated industry, he stressed, and Westpac has developed skills and processes to deal with that over 200 years.

Second, the banking sector relies on the highly intensive use of capital, which startups don't tend to have ready access too.

The third reason banks are difficult to disrupt, he said, is the trust and reputation built up with customers over relationships that span decades.

Why then is the financial sector fretting about new market entrants in payments, new modes of lending and alternative currencies?

Curran says the fact that payments is so often cited as a point of disruption only serves to illustrate his point.

"There has arguably been more activity in

payments than anywhere else," he said.

"When you look at what banks are coming up against, payments is the area with the least regulations, the least need for capital" - and it is more concerned with the passing of funds between known and trusted parties rather than entrusting one entity with storing your future livelihood in a digital form.

Where Curran does agree with the digital consultants is that the combination of cloud computing, data analytics, social and mobile technologies have created the potential for disruption.

But he feels banks have just as much opportunity as the 'born in the cloud' challengers to use these tools to its advantage.

"I have a view that over the last 10-15 years, the banking sector has addressed needs given to us, but we haven't responded to the changing environment with the urgency required," he said.

"In the last 20 years of banking, there hasn't been a lot of innovation in the product space - the introduction of mortgage offset or scheme debit were simply a combination of existing products or channels.

"The technology community within financial services now needs to become more proactive. We have to be our own disruptors. We have to stop letting others disrupt us and start disrupting ourselves."

Curran sees future innovation in banking and finance – while requiring some adoption of cloud, analytics, mobile and social - hinging mainly on a bank's mastery of customer data.

His first priority at Westpac has been to "clean up the beaches", putting forward an architecture that aims to strip customer data and business logic out of systems of engagement (front-end apps). He also wants to plan Westpac's future core systems around the customer record, rather than the products offered by the bank.

"While we have all of this capability around customer tracked in our product systems, it doesn't enable us to be as agile as we want to be in our customer systems," he explained.

If Westpac's technology team adhere to his vision, he expects the bank will be able to be a lot more ambitious around the bundling of services, or even consider the offering of 'custom' products long yearned for in financial services sector.

"If you had this dynamic capability, combined with the data from systems of insights, you start to get all sorts of more compelling customer propositions, which is where banking needs to go," he said.

"The days of banks being product selling companies are long over."

Forget structure

Curran is keen to avoid letting the 'digital' and 'innovation' crazes distract his team from the hard yards ahead.

"I don't think I'm an arrogant person, and Westpac is not an arrogant organisation, so of course we are cognitive of what's happening in the competitive space," he said. "But you can't let that distract you from your strategy and vision and what you need to do."

He doesn't, for example, see it as necessary to spin an innovation group out of his technology team as other companies have, to give them the freedom to challenge existing revenues and value propositions.

Changes will almost certainly be made to Westpac's technology team during his tenure, but these will align with the vision he's put forward rather than a concerted effort to be innovative in the digital sphere.

"I don't have strong views on organisational structures and frameworks," he said. "I have no favourite method and structure. I am a simple and logical person. I tend to think if you have a good answer for 'why', the 'what' and 'how' can take care of themselves.

"I will spend a lot of time providing the why to my team. In my view, it's not which method or model is better than another, it's about how clear and simple and logical is your approach and how dedicated and disciplined are you around it."

Besides, Curran sees innovation as everyone's job at Westpac.

"The last thing a CIO can afford to be is a chief innovation officer," he said. "People who think they own innovation are kidding themselves. Innovation comes from all sorts of places.

"My job is to create the framework on which we continue to innovate, so that when you have innovative ideas, you can test and prove them quickly."

That might mean, for example, coming up with ways to encourage the sharing of skills and resources across the group so that if the Bank of South Australia achieves something extraordinary, that good idea can quickly be executed across Westpac and St George.

He also doesn't believe large organisations need to appoint 'chief digital officers' or 'chief data officers' to focus on these emerging areas. To isolate either digital or data into distinct domains, he said, reduces them to technology issues, rather than the "foundations of so much of what we do as a bank".

"I expect all of my team to be continually developing skills and disciplines in these areas," he said.

Success in the digital landscape will depend largely on developing a culture within Westpac IT that values clarity, simplicity, collaboration and trust, he said.

"We need to work horizontally and not just within vertical silos. We need a clear articulation of our architecture, and we have to be best-in-class at integration - because we will only build when its a necessity rather than as a starting point." ■

Innovating in the sleepy super industry

ANDREW TODD – IOOF

by Brett Winterford | November 19, 2014

There's little incentive to be on the bleeding edge, so why is Andrew Todd fighting so hard?

Andrew Todd is one of the few Australian CIOs who learned his craft in the world of software development.

The prevailing narrative in management circles is that it's largely unnecessary for a CIO to offer such a skill.

The CIO role, according to the sort of advice bandied about by consultants, is all about being a good communicator and a good strategist. Harbour too much interest in the workings of the technology and it's assumed you misunderstood your job requirement.

"I don't believe that at all," Todd says.

While conceding there is "always a balancing act in terms of how much you need to know", the technology strategy at IOOF is largely informed by virtue of Todd's technical skill.

"I like to know what's going on," he said. "I like to know that technically it is what's correct. Technology is one of the most important things we do in financial services, so if I don't know what the teams are doing to a reasonable degree, how can I say to the board that what we're spending money on is right? Who is the checker, otherwise? Who, if not the CIO, is doing the validating?"

For this and many more reasons, Todd is a standout amongst technology leaders in Australia's superannuation and wealth management sector.

While most of his peers buy and customise generic off-the-shelf software to support their operations, IOOF builds its own systems.

The IOOF tech team has been practicing agile software development since well before it was fashionable to do so. And while he doesn't mandate it, "if we can use open source solutions, then we do."

Any room for innovation?

Australia's superannuation sector has gone through a significant period of consolidation in recent years. Several smaller providers have been snapped up as they've nipped at the heels of the "big six" (AMP, IOOF

and the four major banks), IOOF being one of the most acquisitive. Beyond those six, there is a long tail of firms struggling to compete.

"Running a technology platform, when there is a lot of money required to meet the regulations and to deliver product enhancements and features, is complex," Todd said. "Unless you've got a lot of members or you're looking after a lot of money, you run out of steam."

There has been the occasional start-up posing the slightest hint of a threat, but none with a radically new approach to operating a super business.

"All they've got is newer technology and less legacy - so they can implement new features or mobile apps faster," Todd said."They have no scale - they are forever trying to raise money. I think ultimately their business model is to be sold to a bigger player."

This routine M&A activity – and the relative safety of the big six – has left "a lot of old technology in super," he said, without enough of a pressing need for established players to innovate.

"Everybody in our industry is trying to deliver the same features," he said. "And as painful as it can be for us, regulation really helps to prevent disruption, because it's a big deal to go through all the gates and get a licence."

The high barriers to entry, coupled with complacency in the ranks of his competitors, provides IOOF with a unique opportunity to stand out from the

crowd, Todd says.

"We know we can't compete with the banks on how much money to invest in systems, but we can be nimble, and we have got some good technology," he said. "Most providers will have a technology platform provided by a vendor. We've chosen to develop our own platform.

IOOF's software development team – which numbers over 65 software developers, business analysts and QA staff – is a significant overhead for a company of its size.

But in an industry Todd diplomatically describes as "conservative", IOOF is among a select few organisations with a focus on homegrown innovation. "For us, technology is a differentiator."

Change agent

IOOF's homegrown platform was written using a mix of Java, Delphi and a functional programming language called Clojure, connected to a MySQL database and running on a mix of Red Hat Linux and Microsoft Windows servers.

Over time, Todd expects to lean more heavily on Clojure and Java, and consider the use of unstructured NoSQL databases.

But being on the bleeding edge isn't easy.

There are certain compromises that the company has had to make to satisfy industry regulator APRA that experimenting with the latest and greatest tools is as safe or safer than simply purchasing the better understood packaged software. One such compromise is to (usually) pay vendors to support some of the open source tools.

It also means Todd spends more time than some of his peers discussing the benefits of an agile development process with the regulator.

IOOF's team uses many of the software development lifecycle tools in vogue amongst agile practitioners (Australia's Atlassian Bamboo and Jira among them), which electronically document and manage the committing and testing of code.

In the past, however, regulators would expect to see changes to such systems go through documented gates, usually in the form of "signatures on pieces of paper."

For systems critical to the health of Australia's financial sector, APRA wants visibility over any systems change. Has the requirement been signed off by the business? Has it been unit tested? Has it been peer reviewed? Has it been authorised for release? Has it been tested by somebody that wasn't involved in developing it?

"What the regulator is after is segregation of duty," Todd explained. "That's been a principle of regulation forever in an effort to prevent fraud – to stop developers putting code in to funnel money out of the system."

The issue for advanced software development houses like IOOF is that these staged processes conflict with the agile model.

"We have spent a lot of time educating [APRA] on how our processes work and how we implement controls electronically. We've shown them how we can see everything that is happening, and that by doing smaller increments of work, the risks they concern themselves with are actually reduced," Todd said.

"When everyone is working so closely together, nobody can commit code into the repository without it going into Jira, and somebody has also likely been pairing with you. There are so many more eyes on the code. It would take a lot of collusion to commit a fraud than the old way, which only took a simple signature."

Todd expressed confidence that in the aftermath of a recent APRA audit – which was "very interested in our way of doing things" – the regulator is getting a better handle on agile and adjusting the governance models it finds acceptable for the software development process.

The benefits

But why go to all the trouble to work with the regulator, when peers are sitting comfortable using the COTS model?

It's about being responsive to customers, Todd says, and that gets better outcomes for everyone – including the regulator.

"As a business, there is a base level of features you have got to have. But the differentiation - and our proposition - is around service," he said.

"The real challenge that exists in super is around member engagement – that's essentially why the Government has been intervening around MySuper and by mandating low fees.

"With our own technology in place, we can more quickly test ways to increase member engagement."

That means offering requested features faster.

"If we own a platform and we need to offer a new website or a feature, we can fulfil that end-to-end," he said. "We don't have to be in a line for feature requests with every other user of a [COTS] system."

"We are not beholden to a vendor's timelines and how fast they can deliver features."

Today, the feature most requested by customers is a more straight-through process when signing up or making changes to products. IOOF won't wait around to make the necessary changes to give the customers what they demand.

"At the moment, for example, we can dramatically reduce amount of paperwork that the regulators mandate we send out to customers," he said. "Provided a member doesn't have any financial advice attached to that service, we can simply send them an email once a year, or send an SMS for that matter."

Beyond agility, there are also benefits from providing more flexible solutions for different parts of the IOOF business.

There are 1200 stakeholders on whom IOOF's business sorely depends – independent financial advisors that are not aligned with a bank.

"The advisors are a key channel - we spend time and energy helping their clients, knowing that if we do that well, we get to manage more money," Todd explained. "So our obsession is - how do we provide what the independent advisors want?

"That's a challenge because in advice businesses, everybody wants something different. How do you build a core and configure and optimise that core to make everybody happy?"

It's only something you can afford to do, he says, if your technology team knows your business intimately.

The business of talent

The most pressing concern for Todd is to keep the skills of his developers – split between Hobart, Sydney, Melbourne, Adelaide and Perth – up to date.

Today's IT staff need to possess 'T-Shaped skills' – a breadth of understanding of tools and methods across the stack rather than deep technical skills in one area.

The difficulty, Todd said, is superannuation's nature as a conservative industry.

"People work in the industry a long time. When you push some of the newer technologies, like Clojure, it can be a challenge to get the more conservative people to try it. I'm often asked, what if we can't find people to support it?

"I'll take that risk. We've been hiring new devs over the past 12 months and we're looking to change the whole hiring mindset," he said.

"I've more or less decided- if they've worked in super and finance before, we are actually less likely to hire them. It's a better outcome to hire people that have a similar thought process to how we want to achieve our aims.

"If you're smart – and you've got the aptitude and attitude – the specific technologies are something you can learn."

Todd wants to hire enthusiastic technologists that are interested in a continual cycle of learning.

"If a candidate starts talking about things, and you see there is genuine emotion, that's a good start," he said. "Because if you're going to work in tech, the big question is, do you love it?" ■

At the top of her game

KIM WENN - TABCORP

by Brett Winterford | November 26, 2014

A decision to bring digital operations back in-house three years ago has paid big dividends for Tabcorp.

Next year, Tabcorp CIO Kim Wenn will spend her tenth year with the company, making her what some in the racing industry might call "a stayer".

During that time, the wagering sector has experienced profound change. Wenn's response to that disruption - a crucial decision made three years ago - illustrates why she is still top of her field.

In 2008, Australia's highly regulated wagering sector was opened up to international competition for the first time. New market entrants like Sportsbet, now backed by UK's Paddy Power, and Tom Waterhouse, now backed by William Hill, came to the market.

These cashed-up foreign companies were given an opportunity to take on local licensees Tabcorp and Tatts Group in the digital space.

According to local analyst group IBISWorld, Tabcorp's earnings from horse racing declined by 1.6 percent in the five years to 2014. Tabcorp had leaned too heavily on its exclusive retail licenses in NSW and Victoria, and faced the growth of digital alternatives, facilitated by the new operators who set up their operations in low-tax, low product fee environments.

"Suffice to say, we had to raise our game with the onset of competition," Wenn says.

"We were significantly behind the corporate bookmakers on digital. Up until then, we had been operating in a protected environment. A lot of money had been paid for those retail licenses and while we had some digital assets, we hadn't invested a lot of time in digital."

In 2011, Wenn proposed to the board that Tabcorp bring its digital capability in-house from a tier 1 technology outsourcer to set up its own digital shop out of its Sydney office.

"We established the processes and practices to ensure we could deliver in an agile fashion and respond to the changing competitive landscape," she said.

"We came to believe quite quickly that being in control of our own digital assets was essential - it was a

touchpoint to a customer and a core differentiator that we wanted control of."

Dividends

In the intervening three years, this digital team has grown to 40-odd staff and is "truly cross functional", pulling together marketing and product development functions with developers, testers and DevOps (IT operations) engineers.

Wenn offers up two metrics to illustrate why it was a good move.

First, Tabcorp has demonstrated agility without compromising on systems quality.

Its systems of record have largely been barely touched - and won't be overhauled anytime in the near future.

"To me, back-end services come down to price, they don't make a difference to the customer," Wenn said.

The focus was instead placed on a service bus layer in the middle that allows the team to isolate back-end host systems and connect to front-end channels via a set of APIs (application program interfaces). This would allow the development team a great deal more flexibility at the front-end.

Tabcorp's former technology provider had previously only allowed for up to two major changes (releases) to its system each year. Today, Tabcorp's inhouse digital team pushes out daily releases to front-end systems.

Wenn puts that down to spending "quite a bit of time on base foundational assets - solid APIs, solid test harnesses, automation tools and processes".

The CIO points to a recent campaign for the FIFA Soccer World Cup as an example of how the co-location of Tabcorp's product, marketing and digital staff into an agile team allows for compelling offers to be pulled together at speed.

The company held a brainstorming session about what messaging its digital assets should carry as part of a broader marketing campaign around the event, where it was proposed that the team build a dedicated World Cup digital hub that would pull together pre-game news and stats, a live match centre, and post-match info - all delivered with integrated betting.

"We built that digital hub from idea to production in 6-8 weeks and it was 100 percent leveraging an in-house capability," Wenn says.

"That site led to significant customer acquisitions. We simply couldn't have done that three years ago.

The company also attempts to prove out the oft-quoted adage that today's organisation needs to "put the customer at the heart of everything you do."

Users are invited into technology showcases held every fortnight and their responses to changes to the user experience are tracked and filmed. The digital team attempts to respond to criticism of its apps posted on social media by the next working day.

Once the company had built up a track record for being responsive, "people wanted to help us, rather than scold us," she said.

But does that agility impact the bottom line?

"The proof is in the numbers," she said.

Tabcorp lays claim to market leadership in digital wagering - earning more than $1 billion dollars in digital turnover than its nearest rival.

Wenn says digital turnover was up 21 percent in the second half of FY2014, and over 62 percent of that turnover was transacted via a mobile phone during the first quarter of FY2015.

"Many customers have a preference for transacting with these devices," Wenn said. "Tabcorp was first to market with an app using TouchID - the fingerprint authentication tool made available in iOS8 - and back in the day it was the first in our market to offer an iPhone app.

"We don't see digital as a disruption, we view it as an opportunity."

Future plans

Future digital innovations will be based around three core strategic pillars - a customer experience that helps the company's brands stand out from the pack, a focus on data and content so wagering can become a more integrated part of the sports-watching experience, and digital and retail convergence.

It's on this third strategic pillar that Tabcorp provides an interesting case study into how to innovate without putting existing revenues at risk.

The company continues to hold an exclusive license for retail wagering and needs to continue to drive foot traffic into these locations, but many punters are migrating to online forms of betting.

The company has wisely chosen not to pitch the two channels against each other. The Tabcorp executive team is only incentivised to grow the wagering business as a whole.

"There is no demarcation of P&L that could result in fights between one channel to the next," Wenn said.

Further, the company has attempted to demonstrate its commitment to omnichannel by leading a brainstorming session on how to use digital to drive traffic into retail. This session generated over 200 ideas, which were redefined into 22 broad concepts.

The best two are now being developed as prototype services to be rolled out in the near future.

One of those is a plan to roll out iBeacon sensors to retail outlets, augment the retail experience with digital (via smartphone payments, etc), and feed the commissions from any sale or bet made digitally back to the retailer alongside data on customer habits.

Form guide

Wenn offered some words of advice on how an organisation might consider building a similar digital capability.

Like fellow CIO Andrew Walduck at Australia Post, Wenn believes the most crucial decisions a leader must make require a 'burning platform' – in Tabcorp's case, competition as regulators allowed corporate bookmakers to enter Australia.

It also needs strong leadership – and not only from the CIO's chair.

"Getting a strong commitment from the CEO is important," she said. "I'm very fortunate that our CEO has a strong IT background. He understands that we are a technology company. He understands the differentiation a customer experience provides versus the things that are a commodity."

Third, the internal structure needs to promote innovation – "things like how P&L is accounted for and how people are rewarded are important," Wenn noted.

The organisation needs to be structured so that everyone is goaled around understanding the barriers and "finding a way for technology to solve them," she said.

"That's something we've done quite successively."

Skills-wise, building a "solid digital capability" requires some scruples be applied when recruiting.

"Your staff have got to live it, breathe it, love it," she said. "One of our interview questions is: has the developer contributed to an open source forum, a hackday, or some other development community in the last month? If the answer is no, they don't live it, breathe it, love it."

The digital team "have to be engaged and innovative," she said, "you have to sponsor that innovation and encourage it and reward it."

Leadership also requires roles to be clearly defined. Wenn says one of her best moves was to recruit a general manager of digital technology and give him the opportunity to build a team. That's also given her space to focus on what the CIO role should ideally entail.

"I take my role as a CIO very seriously – I see my role as influencing our business strategy to take advantage of emerging technologies," she said.

"I see it as spending most of my time with my peers, getting them to understand the 'so what' of technology – what's actually in it for business. So I must remain pretty well read and open to new ideas."

Many of those ideas will come from outside the business, she said, which means a CIO also needs to play a 'networking' function.

"I keep a close eye on what the rest of the world is doing and am always asking what the implications might be for Tabcorp."

The CIO also has a key role in "nurturing the team," she said, "making sure I've got the best talent, developing the people, giving them space to create."

Disrupting the disruptors

MICHAEL ILCZYNSKI - SEEK

Paris Cowan | February 10, 2015

Keeping up with emerging business models makes Seek stronger, says digital chief Michael Ilczynski.

In the eyes of history, online job search giant Seek is definitely on the side of the disruptors rather than the disrupted.

Started in 1997, it was well and truly part of the web's devastation of the newspaper classifieds industry, dealing a blow that print media is still yet to recover from.

But after 15 years of operation - many of which have been spent in the market's top spot - Seek is now having to contend with the threat of even newer business models, including professional social network Linkedin.

Seek's product development and digital strategy boss Michael Ilczynski is circumspect but realistic about the threat Linkedin poses to Seek's slice of the Australian jobs market.

"I think you always have to be open to learning," he told iTnews. "You have got to pay attention to everybody and analyse what unique capabilities they are leveraging."

But even by its own admission, Seek is not a company under siege - not only did it reap over $750 million in revenue last year, its own analysis shows it is placing between 20 and 22 percent of jobs in Australia - the next biggest individual company is at two percent.

However, Ilczynski is by no means preparing to put his feet up.

He believes the strength of the business comes from its capacity to keep its focus secured on long-term value rather than short-term revenue wins.

"If you focus too much on revenue and monetisation then you're going to make mistakes. A good long-term strategy is to focus on value and then the rest will take care of itself," he said.

The long-term asset that is paying particular dividends for Ilczynski right now is Seek's enviable database of over 4 million job seekers and their CVs, compiled over many years.

This database is key to Seek's latest product offering, Talent Search.

Seek has traditionally focused on enabling candidates to search for employment. Talent Search underpins the company's push into services that make it possible for employers to proactively search for candidates.

Prospective employers can not only upload a job ad, but also use parameters to filter through Seek's candidate database for people who fit their profile - just like they might do on Linkedin.

"For our hirers we can use our same data to say: here are the 20-30 odd people who have applied for the role, but also there are another 40 or 50 people from our profile database who haven't - do you want to reach out and connect with them? Do you want to send them the job, send them a message or download their CV?" Ilczynski said.

"We have spent a lot of time over the past 18 months rebuilding this product. A big focus for us in 2015 will be to take it to the market."

Ilczynski is reluctant to compare Seek to Linkedin directly, but does credit its influence somewhat as forcing his company to push into the candidate search side of employment matching.

"To us these are two sides of the same coin," he said.

"Without trying to sound flippant, every threat is also an opportunity, and when we look at the areas we have traditionally played in and the areas we haven't, we see

that there are massive opportunities for us.

"Clearly we're not going to become a social network. That would be a silly avenue for us to go down. [But] If we don't participate, then obviously that is still a threat."

Dealing with the mobile tsunami

Ilczynski and his team are also having to respond to an astronomical increase in the proportion of job hunters and hirers who want to engage with the service from a mobile device.

He says the proportion of traffic coming from phones and tablets has grown from less than one percent five years ago to well over half.

The shift has forced Ilczynski to completely re-think the way the web service works.

"Most companies still require a resume to apply for a role, and you can imagine how difficult it is on a mobile to select a document, edit it and then attach it to an application," he said.

"We have addressed this issue by creating things like a Seek profile, which ensures that the user has all of their resumes already stored and accessible from their mobile device. That represented quite a large functional challenge."

The profile function will pre-fill application forms. The product team has also begun talks with some of the company's largest advertisers about making their application processes more mobile-friendly. But the work doesn't end there.

"Our hirers want to interact with Seek on their mobile devices as well. We're finding that some of our small and medium sized customers will post an ad on Seek and then want to review applicants on their mobile device," Ilczynski said.

Seek is also investing heavily in its search functions, and has partnered with two Victorian universities to develop an intuitive intention-based search capability that will allow users to enter queries in natural language rather than selecting from drop down menus and keyword bars.

When Seek makes it hard to find a job

But delivering the right products for customers requires having the right team to produce them.

And Ilczynski has a reputation for putting candidates through the wringer to ensure he has the best innovators on his team.

"People comment on that all the time," he laughed. "They say they feel like they've met half the company before they are even hired."

Ilczynski has the same do-it-once-and-do-it-right attitude towards skills as he does to products.

To make sure his future employees are passionate, subject matter experts with great judgement, Ilczynski puts them through "deep" and "experiential" interview sessions.

"For certain roles, like product based roles and senior managers, we will ask them about very specific problems and give them case studies to work through and observe how they approach that decision-making process," he said.

"It feels like a cost but I don't think it is at all. I'd prefer to spend six or seven hours with a candidate up front and make sure they're right, than only spending two hours and making a wrong hire that is going to cost you a lot more than that."

Step-by-step in the business evolution

Ilczynski hopes that this investment into Seek's internal innovators will become his own contribution to the business and its slow-burn vision for market longevity.

He says the company sees mobile and data driven changes as the second or third stage of evolution in the marketplace - suggesting there are many more to come.

"Being an online business is great but this marketplace is tough and it moves fast. So therefore you need to have a culture that really encourages that honesty, that debate and that is willing to take risks."

Friends with benefits

OWEN COPPAGE - AGL

Paris Cowan | February 19, 2015

AGL's CIO is wedded to his favourite suppliers and not ashamed to admit it.

Owen Coppage likes to be first.

Energy provider AGL's long-time CIO can't help but get his hands on the newest technology in the market and have it up and running before anyone else.

"I'm curious about how things work," he told iTnews.

This curiosity saw AGL become one of the first Australian businesses to move its entire workforce onto Office 365 a couple of years ago, and one of the first utilities in the world to implement SAP's in-memory database solution HANA.

Coppage is also confident that his SAP system is the largest customer billing engine in the world to be built on a Microsoft SQL database.

But his strategy isn't about ego or outdoing his peers - Coppage's agenda is far more strategic.

Platinum members

Coppage is working to build AGL's reputation amongst the vendor community as a willing and able guinea pig, and a genuine partner in innovation.

A couple of years back AGL decided to get into bed with a small handful of IT companies - Microsoft, SAP, Accenture and TCS - in a big way.

In return for this commitment, AGL has been let into their inner sanctum - access that continues to pay dividends for Coppage and his team.

"When we started looking at what is possible with Azure, we engaged with Microsoft," he recalls.

"But we weren't just engaging with local Microsoft representatives, we were engaging with the technology leads out of Redmond and their core competency back in the US.

"Our very close relationship with them means we are able to get straight to the details to understand what is possible and how we can apply new

innovations to our particular business needs."

He said building a reputation as a risk-taker and innovator ensures AGL always gets the A-team from its partners, freeing him somewhat from the rat-race that is staying ahead of the skills and recruitment game.

"Our partners don't want to just talk about an idea ... they want to explore it and get it into production," he explained.

"We are not simply a buyer of technology. Technology organisations recognise AGL as an enterprise that gets things done."

These vendors subsequently reach out to Coppage and his team to implement early showcases of their newest innovations - projects that are just as important to them as they are to AGL.

"This typically means we get the best people out of those organisations to work on our projects," he said.

"We're not an IT company, so we're possibly not going to have those really specialist IT people working for us because their career path would be very limited. That's why we partner with IT organisations such as Microsoft, Accenture, SAP and TCS. They employ technology people."

Laying the foundations

So what is the tangible benefit of having the global tech all-stars on AGL's doorstep?

Coppage says his original collaboration with Microsoft, to build the SQL-based customer database, has given him the foundation he needs to make the most of opportunities that have shown themselves in years since.

"Back in 2006 when we implemented SAP on SQL that was very unusual," he said.

"But that relationship with Microsoft allowed us to explore and test the boundaries of the changing trends in technology.

"The digital platform not only allows us to organise our customer data. Because we are already sitting on a Microsoft platform it's been a natural extension for us to use a number of the other emerging technologies that have come out of various organisations."

He pointed to Azure, which now hosts AGL's new geographically-tailored website, as one example. The quick pounce on Office 365 is another.

Coppage also says AGL's early adoption of SAP's HANA has set it up to cope with the massive influx of new usage data coming from smart meters - especially after Victoria mandated their installation.

"The data volumes are huge, but it takes less than three seconds now to do some of the big data aggregations," he said.

"We are well attuned and well organised to deal with this increasing volume of data."

Deregulated one day, privatised the next

Aside from all of these gains, AGL's experimentation has also given it some of the agility it needs to deal with a market that can change overnight.

While electricity and gas will remain everyday necessities impervious to threats from the digital ether, the industry knows too well that its operating environment can be turned on its head with the stroke of a minister's pen.

Energy deregulation in most Australian states kicked off in 2001, when retail competition was introduced to the sector.

The NSW government will also take its plan to privatise - or at least issue 99-year leases - on the state-owned energy network to the March election, potentially giving retailers like AGL new grid operators to negotiate with.

Staying ahead of the game has never been more important for Coppage and his trusted band of technology partners.

"We need to set ourselves apart from our competitors. We can't possibly achieve that by ourselves. We must work with others."

Betting all his chips on big data

KEL TELFORD - ECHO ENTERTAINMENT

Paris Cowan | February 23, 2015

Kel Telford is taking on digital disruptors with one arm tied behind his back.

If you ask Echo Entertainment CIO Kel Telford, Australian casinos haven't yet succumbed to the kind of pressure being felt by counterparts in US, as gamblers turn away from bricks and mortar in favour of online slots.

But it is likely only a matter of time. In its last fiscal six months, Echo's revenue dropped nearly five percent compared to the same period in 2013.

The company has found itself pinned between the same rock and hard place as many of its international peers - being directly challenged by a growing, readily accessible and easy to use online gambling industry.

Echo's ability to directly compete is made more challenging by domestic laws that ban Australian businesses from offering internet-based gaming where money or "anything else of value" changes hands.

Online gambling services - often hosted from regulation-light jurisdictions like Gibraltar - aren't bound by the same restrictions, and can access Australian consumers just as easily as Echo and its peers.

"We have a bricks and mortar business, but we are up against all these other companies that are online, like Facebook, online poker. How do we compete with that?" Telford said.

The solution?

"We join them, to some degree," he said.

Telford and his team are preparing a two-pronged attack on online gaming sites that he hopes will put an Echo Entertainment poker machine in the hands of his most regular patrons whenever they want a spin, while at the same time tempting them back into the company's network of casino complexes.

Intertwined with Echo's Absolute Rewards loyalty

program, Telford's plan would see online games offered to member patrons, but instead of real-money gambling, customers would play for access to new levels, loyalty points and discounts inside the casino and its hotels and restaurants.

Telford is quietly confident patrons will take up the offer.

"People will play, because they want to get to the next level or compete against other players. If they have used up all of their tokens, they can buy more," he said.

"What we are looking at is providing our loyalty patrons an opportunity to continue playing the games they like when they are outside the casino, and also rewarding them for their gaming with discounts when they come back into the premises. We need to be able to attract them back into the casino."

Mobile will be the scheme's interface of choice.

"Online gaming is not one of those things that people will go home, jump on the web and play on their PC. It is a mobility thing. The disruption is really coming from mobile and digital. Our patrons can be in any physical location and still play the slots."

Data. Data. Data.

The Absolute Rewards program lies at the heart of Telford's plan to get Echo's revenue back on track.

With around 25,000 visitors passing through Echo's doors every day alongside a database of about four million profiles, Telford has access to a data pool he calls an "amazing asset".

"Patrons sign up, and they get points when they play at a machine or when they sit at a table, and also when they eat at our restaurants or stay at the hotel," he said.

Using this expansive customer resource to target just ten percent of that database - who have ceased to be active visitors - and tempt them back into an Echo Entertainment facility would result in massive dividends for the company, Telford says.

"We're not about going out and getting everyone else. It's about protecting that patron database and reactivating those patrons who are not doing anything at the moment, trying to get them involved again."

Telford's current focus is on getting the analytics capability inside Echo up to scratch.

To truly and accurately reward customer activity, he said, Echo needs to get that down to just "one golden record of Kel Telford".

He's working on introducing a new loyalty engine that would ensure the company has the right visibility of a patron's activities.

"We can know that you love going to the Black Restaurant, and let you know [that we have] a half-price lunch for you. We will be able to get a lot better at doing this with our new loyalty system."

It's just one thread of Telford's proposed online gaming and loyalty program match-up. He wants to give customers the games they want when they want, and encourage them to engage with Absolute Rewards at the same time.

"Our challenge is to make sure we have great loyalty from our patrons and to keep providing great customer services," he said.

Read more: http://www.itnews.com.au/CXOChallenge/400761,betting-all-your-chips-on-big-data.aspx#ixzz3jsbX8OaN

Jumping off a cliff for your customers

PAUL KEEN - DICK SMITH

Beverley Head | February 26, 2015

Dick Smith IT chief's biggest threat is customers who know more than staff.

Paul Keen is clear-eyed about the threat of digital disruption.

"If digital really has disrupted you, you've been sleeping."

The general manager for IT at Dick Smith Electronics says that since he first started work - as a developer in an ecommerce business in the late 1990s - it has been clear that nothing would stay the same again.

"It's not like this is a new concept that has just come along...digital disruption has been gradually expanding its reach for the past 15 years, online, creeping up on us, and then in 2014 it became a big thing."

The real shake-up, he says, comes from the people walking in through the front door.

"What is disruptive is more of an evolutionary thing - customers are expecting more."

Keen says his role begins before the customers get to the front door - pointing out that in the electronics industry, 80-90 percent of customers have already done their homework online before they reach the shop counter.

The typical Dick Smith customer "knows as much about a product as our employees do and knows the competitive pricing better than our employees do," he said.

The ability to compare global pricing, reviews and recommendations at the click of a mouse have upped the ante for in-store sales staff, a trend that is not lost on Keen and his team.

He says the solution is to implement information systems that allow employees to add value to the conversation with the customer by providing them with additional insights about a particular product or practical advice to help them seal the deal.

For example, a customer data profile could alert a sales assistant that last time the customer bought a product from Dick Smith the delivery was late – and that they should offer a discount this time around by way of apology.

Transformation underway

At the same time as strategising for an increasingly savvy customer, Keen has managed the IT operations of Dick Smith through a blisteringly-paced corporate transformation.

Dick Smith was sold to Anchorage Capital Partners for $20 million in 2012. In November 2013 the company was floated for $520 million.

The company's 18-month old growth strategy has seen stores multiply – in the last six months it has added 65 new outlets and is on track to hit 400 this financial year – and it has also opened the Move electronics outlet at Sydney Airport. It currently employs 3500 people.

Online sales continue to rise – from five percent to seven percent of all retail sales during the past half year – while the business has kept overheads in check; in the most recent half year, the cost of doing business dropped 41 basis points.

This sort of growth coupled with cost control

demands a special approach from IT, according to Keen.

"It's more of a philosophical approach. We try and think about the customer even when we do internal work, even when we do internal planning. We always ask how the customer will benefit from this work. If the customer can't benefit we challenge ourselves - are we just navel gazing, does it really need to be done?"

This is probably why there has been no real rush to retire legacy platforms such as Dick Smith's AS400 platform – but there has been an architectural rethink.

"We could spend the next three or five years putting in a large ERP system and get fired along the way for overspending. We are in turnaround phase so we needed to grow very quickly and needed the agility for a turnaround – we need to try everything and see what sticks," Keen says.

To support that approach, the company last year constructed a data warehouse using Amazon's Redshift.

"We think the data should be closer to the customer - then we can provide interfaces, an API layer."

Redshift allows Dick Smith to create an information lake filled with data from its own ERP and financial systems while also adding in product ratings and reviews that can be served up easily to customers and employees. In the future Keen envisages adding warranty and receipt information to the warehouse.

It's an approach that allows IT to turn on a dime when there is clearly identified benefit for the customer.

Which is lucky because Dick Smith's marketing department signed a deal with CatchOfTheDay recently – and gave Keen a grand total of ten days build the back-end to support it.

"We try to pre-think what the departments are going to need – it's bimodal or two speed IT," he said.

"Our marketing departments want to know catalogue information, inventory information, pricing, information about orders and the customer.

"We try to have a series of APIs available for different tools and services so when they want to consume them we can control it and put some governance around it," he says, adding that this approach still leaves some headroom for tackling bigger ticket transformation projects.

Keen sees this bimodal approach as critical to turning IT's frame of mind towards a "yes culture," a pre-requisite for an agile enterprise where a uncooperative tech team can be easily bypassed.

"The idea of guarding everything is pretty much outdated – especially now any department can get a corporate credit card and sign up for an enterprise grade service like Salesforce."

Instead of putting up barriers around his territory, Keen encourages business users to come to the team with their requests.

Continue to find out why Paul Keen is underwhelmed by some retail innovations...

Read more: http://www.itnews.com.au/CXOChallenge/400935,jumping-off-a-cliff-for-your-customers.aspx#ixzz3jsczrGWV

Empty terminals and mountains of data

LUC HENNEKENS - QANTAS

Paris Cowan | March 2, 2015

Qantas CIO Luc Hennekens says no-one is safe from digital disruption.

Qantas CIO Luc Hennekens claims to love it when Sydney Airport's Terminal 3 looks like it has been deserted.

The shiny white space is often empty of the queues and cross-counter check-in tussles so familiar to air travel. The Dutch IT executive beams about the vacant space he has played a large part in creating.

"It looks like it's not in use because it is so efficient in getting people through that process," he explains. "This is all enabled by technology."

'Next generation' self service kiosks allow passengers to print their boarding pass and luggage tags, bypassing the check-in desk altogether.

The next step is giving passengers the option of doing the same thing from their phone.

Last December, Qantas began rolling out its domestic auto check-in service, a new offering that prompts travellers to download an electronic boarding pass to their phone via a text message the day of their flight, prior to their arrival at the airport.

Passengers with check-in luggage can scan the mobile barcode to drop their bag at the terminal, no lining up required.

There's no question Hennekens is under huge pressure to perform digital miracles to give Qantas the edge in a cutthroat airline market. But does that mean he is being 'digitally disrupted'?

Hennekens shrugs.

"The answer almost can't be no because there are so many industries where people thought they were safe and then all of a sudden something has hit them.

"But if you look at the core of what we do - flying people around - there is not much prospect of replacing that with a digital model...until someone invents teleportation," he laughs.

"Then we'll be in trouble."

But the weight of customer expectation is forcing Qantas to play differently than it has before, and at an ever increasing pace.

The pressure of competition means it's no longer good enough for flight attendants to smile politely and have immaculate hair.

In response, Hennekens has deployed a "CRM in the air" solution to make sure cabin crew and airport customer-facing staff have access to the full Qantas profile of each passenger they are serving - whether they drink red wine or white wine, whether they're in danger of

missing their next flight, or even, as one case went, if they have an injury and need to be prioritised when it comes time to disembark.

The tool is called red app, accessible by crew on around 1100 iPads.

Jetstream software powers the application, which draws data out of a range of Qantas systems, and allows crew to add extra notes to customer profiles once they are in range of a web connection.

Eventually, Hennekens forsees this data stream enabling a continuous fracturing of the different classes of air travel on offer down to a personalised service.

"We are on a journey from a traditional mass-produced product that is the same for you and your grandmother, to understanding micro segments with specific needs and tailoring an offer to them, and eventually having individualised offers - including individual pricing or something that goes beyond just a ticket," he said.

Staying tougher than a tough market

Such efforts are critical, because now more than ever Qantas needs to attact and retain all the passengers it can.

The company received the worst possible wake-up call in 2014, unveiling a $2.84 billion full year loss.

Besieged CEO Alan Joyce was forced to launch a dramatic cost-cutting drive, which included 5000 full time jobs - 3800 of which are already gone - wage freezes and simplified fleets.

Qantas' outsourcing IT partners were put on notice to provide more value for money lest risk losing their contracts. They also became subject to an ongoing review process and new engagement model with the airline.

The airline has also made a serious foray into cloud computing, even turning to auctions of public cloud compute resources that aren't being used to make its IT dollar go further.

Last week, a visibly relieved Joyce announced that the 'transformation' had successfully turned around the airline's situation, reporting a half-year profit after tax of $206 million.

But he also acknowledged that the airline was by no means out of the woods yet.

Buoyed by a low Australian dollar and dropping fuel prices - which returned more than $33 million to the Qantas purse in the six month reporting period - Joyce conceded to the ABC he could not rely on these turbulent factors to continue supporting his bottom line year on year.

With one eye on that unpredictable future, Qantas continued to invest in value-added services for its customers while at the same time making savage cuts internally.

It started building new premium lounges, lie-flat beds for business class and boosted food and entertainment services for economy, not to mention the tech innovations detailed above. Its revenue per available seat kilometre improved by $162 million in the half-year.

But Qantas faces another uphill battle: with all it is investing into delivering a premium service, how is it supposed to showcase this added value when most people choose a flight from a barren grid online?

"If you go into a travel agent or book online today, the only thing you really see is the carrier, the starting point,

ending point, time of departure and a class of travel," Hennekens said.

"We invest all this money into creating a rich product set that is really different to the competition but then when we get to the distribution channels they are not technically capable of showing that... these elements remain invisible in the ticket buying process."

Some work is underway in this space, but it is a capability that needs to be enhanced on a sector-wide basis, through all the travel agents, aggregators and back office systems, before any one airline can move forward with a richer booking process.

Industry body the International Air Transport Association has already launched a new XML-based data transmission standard for the back-end systems that communicate flight offerings to travel agents and other distribution channels.

Hennekens hopes to leverage the work to make the most of Qantas' customer investment.

"This set of standards basically helps airlines sell their product in a much richer fashion than simply saying you can go with us from A to B in business or economy," he said.

"The intent is to include rich media, and different products and services that are optional. It's about showcasing what business class is like, what the inflight entertainment is like, what the food is like, and what the experience on board is like."

'Mountains and mountains of data'

Once again, all of this capability comes back to how judiciously Qantas can leverage its data.

Sourcing it is certainly not the problem.

The organisation is dealing with "mountains and mountains of data," according to its CIO.

Thanks to its frequent flyer loyalty program, the airline has collected information on 10.5 million members. It signed up 400,000 new members in just the past six months.

"We already know an incredible amount about our customers. We have thousands and thousands of interactions with them every day," he said.

"What has happened in the past is that all of that was sitting in different systems and different functions. The core thing we are doing now is bringing this all together."

Luckily Qantas has many years experience in the field. So much so that in September this year it decided to spin out some of that in-house capability built up through years of running its loyalty programs into an external offering called Red Planet. It also bought a 51 percent stake in analytics firm Taylor Fry.

Internally, Hennekens is experimenting with Hadoop clusters and Bango, which tracks users mobile phone patterns. He says he is also using more established products like Teradata and Cognos.

Interestingly, considering his outsourcing push in other areas, Hennekens is steadfast on keeping most of Qantas' analytics work in-house, as a way to "start educating ourselves and our staff on what is possible".

"You can rely on external agencies but then you don't learn as an organisation. So we have taken the approach to push our internal staff to forums and to training, basically to say we want to get this out of a proof of concept - go ahead and do it."

Read more: http://www.itnews.com.au/CXOChallenge/401046,empty-terminals-and-mountains-of-data.aspx#ixzz3jsnK2l1Z

Redefining fast food with just four clicks

WAYNE MCMAHON - DOMINO'S

Beverley Head | March 9, 2015

How a slew of apps drives pizza business.

When pizza giant Domino's launched its quick ordering system in January this year, it reduced the distance between the consumer and their pizza into just four clicks - giving a whole new meaning to "fast food".

CIO Wayne McMahon claims there's "nothing confronting about digital disruption".

"At Domino's we are out to disrupt our industry. We don't want to rest on our laurels, to accept the status quo and always do things the way they've been done," he says.

"We are the disruptors, it's a compelling reason to be there. It's also an opportunity."

Right now, about 60 percent of Domino's orders are made online. The company expects that figure to rise to 80 percent in two to three years, based on its ongoing efforts to constantly improve the experience.

McMahon has jumped aboard the rapid growth in use of mobile devices and turned it into an "enabler for our business".

"We embrace it. We are excited by it. We use it to create value for our shareholders and solutions for our customers," he says.

"It drives us to push the envelope and create more for our customers. It's more compelling than confronting."

Domino's has released a slew of apps for smartphones and tablets and is rolling out a pizza tracker for Android smartwatches and Chromecast. It has also trialled the (now defunct) Google Glass in New Zealand, to send orders direct to workers so they could immediately start preparing pizzas.

It's all part of Domino's aim to become a global digital retail business with 80 percent of orders originating from digital solutions.

In recent years, the retailer's Vitalis project has worked to bring the entire global business onto one standard point-of-sale and HTML5 online ordering system.

The proprietary 'Pulse' PoS system was developed

by techs in the US, while the company's new standard online ordering system and all its various interfaces were born in Australia.

The company has successfully deployed both platforms across the US, Australia and New Zealand in recent years, and just recently ticked off a migration in the Netherlands.

It's now working on France, which is expected to be complete by the end of the year, before tackling Japan and being able to boast a truly global platform for its 1450- odd stores.

McMahon expects the approach will provide the company a significant competitive advantage.

"It will allow us to roll out our initiatives globally. It also makes it extremely cost effective, because we're not developing for a single market - we can innovate across all our markets," he says.

One example of such an initiative is the company's recently launched Pizza Mogul platform.

Pizza Mogul was the brainchild of Domino's CEO Don Meij, and was developed in association with ThoughtWorks.

Launched last July, the system is an example of what the company describes as "social retailing".

It allows consumers to design a pizza, create an identity and branding for it, share that to their social networks and earn up to $4.50 from every pizza sold.

The platform has attracted 55,000 users thus far.

"We are fortunate to have an absolutely visionary in our CEO who values innovation and technology, and more than that he will happily invest in it. We also have a team of incredibly talented people behind that," McMahon says.

But he stresses that disruption should not rely on a single individual.

"If you're in a business that has innovation at its core strategy and the willingness to disrupt your industry and take calculated risks... that's a powerful thing, but everyone has to be moving in the same direction and towards the same goal."

At Domino's, that means McMahon, new chief digital officer Michael Gillespie and Meij work very closely.

"Our CEO and CDO dream it... the IT function delivers and supports it," he says.

Digital innovation + great food = a recipe for success

Domino's core business is food: as far as McMahon sees it, the role of digital in the business is to make the transaction as easy and convenient as possible.

"Those who succeed are good at delivering innovation and solutions to the market with a wow factor that's truly useful to consumers," he says.

"Whatever solution it is, you need to be equally as good at supporting those solutions. If it's not there when consumers want to use it, you've failed."

Succeeding in being "digitally relevant" comes down the most basic of business propositions – understanding what the customer needs.

"It's also about being conscious of their time and ensuring solutions are robust, fast and streamlined in their user experience."

Why GPT Group put all its IT into AWS

SHARMILA TSOURDALAKIS - GPT GROUP

Paris Cowan | March 13, 2015

CIO Sharmila Tsourdalakis looks back on 12 months since the property giant was disrupted from within.

In 2013, property services giant GPT Group took the plunge with Amazon Web Services in a big way.

The company drove through a transformation that saw it push a whopping 95 percent of its IT environment into the public cloud - including its core SAP applications and its central leasing system.

The shift was the product of a number of IT planets aligning: serendipitously, GPT's SAN infrastructure reached the end of its life at roughly the same time as the company's data centre leases expired.

It was presented with the option of a large capital outlay to keep the lights on, or picking an alternative that would match its ongoing growth agenda with technological scalability and agility.

At the time it made the leap, GPT was one of the first ASX companies to have been so bold with the public cloud.

The only thing that still remains on GPT-owned hardware is a single legacy application that was too old to be switched out into the AWS infrastructure.

Being amongst the first Australian enterprises to go all in to AWS also means that GPT Group is now one of the first to really gain visibility of what such an internal disruption can deliver for a business.

GPT CIO Sharmila Tsourdalakis is peering through this rare 12 month window to learn what "all in" with the public cloud really means - and she likes what she sees.

She says the cloud move has been a "major contributor" to a 30 percent decrease in IT costs across the organisation.

Getting out of GPT's legacy data centre leases, which saw the business managing its own hardware within a third-party facility, has also reduced IT's carbon footprint by roughly 60 percent, including calculated emissions from its AWS usage.

"But the financials are only one of the benefits," she insists.

The AWS cultural transformation

Tsourdalakis estimates that at least 40 percent of her 30-strong team has been significantly freed up from operational infrastructure tasks as a result of the shift.

They can now focus on strategic capability and building commercial relationships both within and outside of the organisation, she said.

"You hear a lot about how IT organisations need to evolve, and I think [the cloud migration] is what really allowed us to move to that next level," she said.

"The ability to re-direct your team's time to more strategic initiatives has been a key enabler for us."

For one, she says, the IT team has now been able to appoint a dedicated resource to forming partnerships with other areas of the business.

Tsourdalakis expects happier and more engaged staff will mean better staff retention and skills development further down the line.

"The team is now focussed on building skills in areas like partnership and engagement," she said. "They are really enjoying that new capability from from an interpersonal context."

From the public cloud big things grow

Being able to scale up operations with the click of a button is also critical for a company looking to get bigger and bigger every year.

Last month, GPT Group posted a 13 percent profit leap for 2014, with predictions that its total earnings will expand by five percent in 2015.

The company, which owns and manages high profile properties like Sydney's MLC building, Rouse Hill Town Centre, and the Melbourne Central and Highpoint shopping centres, has embarked on an aggressive growth strategy involving both buying new property assets and expanding its wholesale funds business.

Tsourdalakis says the company's growth targets means it needs to be able to scale up quickly.

"The speed at which we can turn that around is quite measurable, and we have seen an improvement."

One recent investment seems to have taken its cues from AWS itself.

In 2013, GPT led a $6 million investment in Silicon Valley flexi-working start-up Liquid Space, which has seen the two pair up to offer online desk bookings for the Rouse Hill and Melbourne Tower premises.

"Through our investment in Liquid Space we have been able to allow people to rent office spaces by the hour at the click of a button," Tsourdalakis says.

Making the public cloud work

Not everyone can turn cloud transformations into a success, and shifting an entire IT infrastructure base into a public cloud is not a path well-traversed for numerous reasons.

So what is GPT's secret?

With her 12-month window of hindsight, Tsourdalakis credits early stage due diligence and being upfront with the board about the risks involved.

"We conducted a large amount of due diligence on the approach, including commissioning independent risk reviews. So there was certainly visibility within the company about the risk," she said.

"While we were one of the first in Australia to actually move all-in-one to Amazon, there were precedents overseas we could look to.

"We still stick to our plan to manage the risk. It's good to see, 12 months on, that extra effort has paid off."

Harnessing cloud to avoid a short fuse and big bang

TIM FLEMING - DELOITTE

Beverley Head | March 24, 2015

Tim Fleming knew his business was being digitally disrupted back in 2012.

'Digital Disruption – short fuse, big bang', published by Deloitte three years ago, warned that over the coming five years, most Australian businesses would face some form of digital disruption.

As a professional services firm Deloitte was in the short fuse, big bang quadrant, facing maximum disruption. Deloitte CIO Fleming was charged with providing information platforms to allow rapid response to the potentially explosive situation.

New Zealand cloud software business Xero was one of the digital disruptors lighting the fuse.

Xero hung its shingle in Australia in 2009. By 2011 it had 5000 users of its online accounting software, and 50,000 two years later.

It was threatening to eat a large chunk of Deloitte's lunch by removing the accountant from the equation. Today Xero claims to have around 200,000 paying customers in Australia.

Instead of rolling over, Deloitte sought new business opportunities.

The company announced it would offer its clients the opportunity to migrate onto Xero in 2013, and in 2014 it launched a Deloitte-branded service on top of the Xero platform.

Deloitte Private Connect integrates with Xero, as well as other cloud accounting systems such as Intuit and MYOB. Two apps - Transact and Analyser - take data from the cloud accounting systems then leverage that to offer Deloitte-branded bookkeeping services and business analytics for a monthly fee.

Fleming acknowledges that building the solution demanded a new approach from IT.

"The first thing we had to recognise was that this is not a solution you sit and build in a traditional .Net development. This was all about embracing stuff that's already out there in the cloud."

His team developed the data architecture and

then orchestrated a range of third-party services including Salesforce's force.com and the Zuora subscription platform to bring Deloitte Private Connect to life.

"If we were trying to develop this internally we would fail dismally after spending an enormous amount of money. It's all about harnessing the power of what is out there in the cloud... you can stand these things up comparatively quickly and much quicker than if we were trying to build it ourselves," Fleming says.

And there'll be more building ahead as Deloitte faces competition from rivals such as KPMG, which announced a similar service last year.

Embracing disruption

Deloitte is being pushed to continually innovate in order to compete and survive on every professional services front it operates

It has bought multiple digital businesses internationally including mobile app developer Ubermind, cyber security specialist Vigilant, and in Australia, Quattro, NXG and Digicon - acquiring digital skills and IP along the way.

Meanwhile, Deloitte Australia partner Peter Williams founded Deloitte Digital, now an

international business unit for the firm dedicated to delivering professional services online.

Williams then became "chief edge officer" for Deloitte's centre for the edge research unit, which advises how organisations can profit from emerging technologies.

So when Kaggle emerged as a disruptor to Deloitte's consulting business - offering access to hundreds of thousands of data scientists able to deliver niche pieces of work for a much lower cost than Deloitte - it's not surprising that Deloitte Australia swiftly forged an agreement so it could leverage the 276,000 data scientists on Kaggle's books.

Connective tissue

Deloitte's Tech Trends 2015 report suggests enterprise CIOs should assume the role of "chief integration officer", serving as the "connective tissue between many executives, strategies and agendas" in order to deliver an information ecosystem capable of supporting sustained innovation.

"We are in an ever-changing world and agility and flexibility is key...don't make decisions that paint you into a corner and try and avoid lock in decisions," Fleming says,

"The Private Connect project absolutely took that approach because it was a voyage of discovery. What we started off with was not what we ended up with. People on the business side were working deeply with the providers – the thing morphed and changed."

Fleming sees his role as communicating with executives across the business and orchestrating an environment to support the myriad of different professional service projects in which Deloitte employees are engaged.

But while some digital disruptors exist on the fringes of regulation, or in some cases (think Uber) actually flout the law – a professional services business like Deloitte has to play by the rules.

A lot of the data in cloud applications ultimately has to be drawn into Deloitte's core systems for end of year reporting for regulatory reasons, as an example.

It means any IT decision has to be viewed through legal and regulatory prisms, Fleming says.

"Salesforce could cause problems because you have data in a silo that doesn't talk to other core systems - that is going to give us regulatory issues because we could have two sets of CRM data."

Today Deloitte runs a mixture of in-house, global and local SaaS platforms including Concur for expenses, SuccessFactors for performance management and HP Project for portfolio project management.

The company has globally-determined standards for email, networks and security..

Around that infrastructure - and as long as the local team remaind mindful of regulatory and legal limits - Fleming and his team are free to innovate.

"I'm pretty comfortable that the firm is doing everything to stay on or ahead of the curve and reacting appropriately. We have proved over the last decade we react better and quicker than our competitors - at least here in Australia."

Is your lawyer smarter than IBM's Watson?

PETER CAMPBELL - SPARKE HELMORE

Beverley Head | March 31, 2015

Sparke Helmore CIO Peter Campbell expects machine learning to take a chunk out of law firm profits. But he's far from downcast.

When five University of Toronto students harnessed IBM's machine learning tool Watson to create Ross, a legal support service now in private beta testing, they heralded the automation of many of the tasks traditionally assigned to junior lawyers.

On the face of it Ross – and the increasingly sophisticated technologies that will inevitably follow from it – pose a serious threat to the billable hours propped up by young law firm staff combing through reams of court decisions and evidence files.

And it adds to technologies such as e-discovery, online dispute resolution, e-mediation and predictive coding that have already sent a shiver through the world's law firms by threatening to automate many tasks once performed by humans clocking in and clocking out on the client's purse.

Peter Campbell is CIO and knowledge director of national law firm Sparke Helmore, which employs 600 people in nine offices across Australia, including an IT team of 18 and knowledge group of 11.

He acknowledges that technologies like Watson threaten to "take a chunk out of the profit that lawyers make".

"I don't think it will replace lawyers, [rather] the stuff that lawyers have made money out of that doesn't offer an amazing value add is going to get completely stripped out, and this will be hugely disruptive for some firms," he told iTnews.

Campbell on his own can't close the lid of Pandora's Box to keep the winds of change from blowing. Instead he has to deliver services that allow Sparke to compete and survive in a revolving business environment.

In response, he and his team have created online portals that allow clients and lawyers to collaborate and communicate; they perform data analysis of client information in order to add value and insight;

and they continually re-engineer legal processes using information technology to remove friction and cut costs.

Teaching a 125 year-old dog new tricks

William Sparke lay the foundations of Sparke Helmore in Newcastle in 1882, and it has operated continuously – albeit with a handful of name changes – since, securing its position as a major player in insurance and government markets.

And, as a partnered firm, it doesn't necessarily have the sort of central control hierarchy that would allow it to dictate enterprise-wide IT reforms with haste.

This means that even more than his corporate peers, Campbell is expected to call upon his powers of persuasion to get things done.

He knows convincing lawyers to embrace the very same technologies that appear to be laying siege to their bottom line isn't easy.

After designing new automated work processes to boost efficiency, Campbell was asked by one lawyer if the changes would lead to them making more money.

"I said 'I'm not sure - at the end of this you might

go to clients and suggest you reduce your price'.

"He said 'what on earth would I do that for?' and I responded that such a move might mean he still has the account in three years' time, or gets the whole portfolio for the client instead of half of it because he can do it for a lower price."

And there are plenty of upstart competitors entering the legal space offering cut price alternatives to stubborn practices.

Melbourne-based Plexus is using artificial intelligence to provide information to clients for a fraction of the cost they would be charged by a lawyer.

Virtual law firms such as Bespoke and AdventBalance have none of the legacy infrastructure of traditional law firms and are rapidly growing market share; while UK based Riverview Law analyses matter data in order to offer clients fixed fee contracts – including for notoriously unpredictable litigation matters.

As Professor Richard Susskind, legal futurist and IT advisor to the Lord Chief Justice of England and Wales since 1998, has warned: "The competitor that kills you doesn't look like you".

Staying ahead of the wave

In 2012 Sparke Helmore's tech support was named legal IT team of the year at the annual Lawtech Awards, and under Campbell's leadership it has proved the worth of its innovation and investment back to the company.

That same year Sparke successfully bid for a three year contract with Westpac. To distinguish itself from rival firms it built a case management, workflow and document generation system for managing property leasing matters, along with a client web-portal.

The work proved to be the differentiator in the field and won the Westpac gig, which meant it recouped its IT investment in just four months.

Since then Sparke Helmore has established similar capability for three other clients.

"Clients now want a lot more transparency in terms of their matters and how their portfolios are running. They want updates in real time, not after waiting for a report, or ringing a lawyer. Some clients want to instruct us directly online," Campbell said.

Campbell also wants to leverage the client data that lawyers gather, to create yet another value-added offering that will hopefully keep his company ahead of the Watsons.

For example, Sparke handles personal injury work for large organisations, and is now analysing this PI data for patterns. Spotting locations where accidents happen regularly could be used by clients to schedule more effective health and safety campaigns.

"It's not technologically challenging but the application of analytics and analysis of data to legal problems is relatively new," said Campbell.

Analysing Sparke's own data, and making more effective use of project management techniques, is also allowing the firm to offer clients fixed price contracts for some work.

At the base level, Campbell runs his infrastructure on Windows servers housed in an in-house data centre in Sydney with a replicated environment in Newcastle. Lawyers use HP Autonomy iManage for document management, the Elite practice management and billing suite, and Lexis Visualfiles for case management.

To date, the firm has eschewed cloud solutions largely for security and privacy reasons, though clients themselves are starting to force the firm to modernise this stance.

"Some of them want to use Google Docs and they are trying to collaborate with us so we have to use Google Docs - even though we have all

these lovely secure, fantastically functional systems," Campbell said.

Not that the CIO is averse to changing his business processes for clients.

"One of the challenges that disruption presents for me as an IT leader is delivering services that are still relevant on the mobile and web when the ecosystem that's supporting me doesn't rise to that challenge."

Over the past five years whenever a change to the infrastructure has been required Campbell has focused on making systems more open so that they can easily connect to each other and - in the future – more cloud based infrastructure.

Beyond the CIO

Eventually Campbell hopes that the IT-fuelled changes he is delivering will lead to him moving beyond the CIO title.

"I'd like to be the legal operations director - less concerned about IT. One day I'll be seen as the person who's helping people manage their businesses," he said.

"IT will be just cloud services plugged in. My focus - where I add value to this firm is in making them run their legal services better, measuring it and managing it."

However just as he sees a future for lawyers - even junior lawyers - in a post artificial-intelligence legal services industry, Campbell concedes that there will still be a place for CIOs too.

"You'll still need someone to stitch together the strategy of how your systems will interact with your people - I just think the focus of that role might be different," Campbell said.

"The role of the CIO is still valid - but I believe that the slice that is related to impacting the business - in the trenches - that slice is going to get a lot bigger and the slice of stitching applications together is going to become smaller, but still necessary."

Tearing down walls at the ASX

TIM THURMAN - ASX

Liz Tay | April 9, 2015

ASX CIO Tim Thurman's take-no-prisoners approach to agile management has laid the groundwork for the organisation's $50 million tech transformation.

The Australian Securities Exchange was tied up with safeguarding traditional processes and technologies when CIO Tim Thurman came on board.

It was mid-2012. The ASX was essentially a monopolist born of multiple mergers over the course of about 150 years, with a siloed, methodical IT organisation.

But a great deal has changed in three years, as the ASX seeks to attract a new breed of digital-savvy employees, entrepreneurs and investors from a competitive global marketplace.

With the support of CEO Elmer Funke Kupper, Thurman has enforced a series of organisational changes to improve communication across the group.

The ASX has now embarked on its first officially agile project as part of a four-year, $50 million program that will consolidate and replace its decades-old platforms.

When deployed, the new platforms will completely transform how the ASX interacts with its customers – the superannuation funds, investment banks and traders that participate in its markets.

The exchange has also adopted a new digital strategy, under which it will completely overhaul its "old, competent" set of websites and continue using social media to share incident alerts, news, data and tips with the public.

"A lot of collaboration goes on in the group now, where before it never happened," Thurman said. "I think everyone has the expectation that it will be a lot better, now that we've started the journey.

"The good thing is until that [$50 million transformation] strategy was approved last November, we were not sure what was ahead. But we came out of that meeting with a roadmap, and you can see the energy now; it's amazing.

"We behave much differently today than we did three years ago ... I think in 12 to 18 months time, this will be a completely different organisation and I'm hoping our clients will see that too."

Disrupting a waterfall workplace

Thurman was barely four weeks into his role at the ASX when he kicked his general managers out of their offices and began tearing down walls.

He wanted his direct reports to work shoulder-to-shoulder with the ASX's 200-odd technologists, and for the ASX to eventually adopt agile project management practices, like those at Spotify, the Commonwealth Bank, and REA Group.

In agile projects, teams make small, incremental changes so they can deliver business outcomes more quickly and effectively - people must work together very closely for that to happen.

"When I got here, my general managers all had nice offices. People sat in their offices with the doors closed. The communication just wasn't there," Thurman said.

"It was a big change for the group, even to the point of garbage pails. Everyone had their own trash can or bin at their desk. I got rid of them all. We created common recycling bins and so forth and

funnily enough, that was a big challenge for people."

Thurman had to get people talking.

He wanted technologists to be bouncing ideas off each other, talking to ASX businesspeople, and sharing with their peers from overseas market operators.

After abolishing offices, he issued Macbooks, Thinkpads and Surface tablets to encourage staff to work more like he did: pulling up a chair where convenient and sharing ideas with people nearby.

ASX technologists went through another major change last October, when Thurman decided to merge various IT teams in preparation for the $50 million platform overhaul.

Former CIO Jeff Olsson had previously managed staff in units that served the ASX's distinct lines of business: operating its cash, bond, derivatives and share markets; risk management; and post-trade services such as settlement and clearing.

In October, Thurman brought together staff from those silos to form whole-of-business application support and development teams.

"We don't build software here; we're very good integrators," he explained. "The idea of bringing those guys together is fairly straightforward.

"My goal is to ensure they have cross-functional skills and allow our staff to have more opportunities to up-skill. That was very disruptive; I had people who wouldn't talk to even me after I did that."

Change didn't come easily, especially for longer serving staff who were used to the leadership style of former CIO Olsson, who had spent 15 years in the role.

"A good portion of my management team has been replaced. I have two new GMs starting in a few months," Thurman said.

"That's the unfortunate part of change: some people just don't come along for the journey. But the good thing is, among my staff – which is about half the [ASX Group] organisation – a lot have realised it's a much better way of working."

Becoming globally competitive

The ASX Group operates a $1.7 trillion domestic sharemarket, as well as cash, bonds and derivatives markets. It also provides the only post-trade clearing and settlement services in Australia.

Every day, the ASX matches some $3.8 billion in equities trades and $50 billion to $100 billion in futures trades using huge pieces of bespoke technology that communicate with market participants' IT systems at high speed.

Change is costly, and technical issues are a big deal.

So when Thurman suggested a technology overhaul almost three years ago, stakeholders were wary.

"It's not easy, because you know, if it's not broken, why fix it. Everything has been reasonably successful, and we're not talking thousands of dollars, we're talking tens of millions of dollars [in project costs]," he said.

But Thurman says the ASX would not have been able to be globally competitive without this transformation.

"Trying to push change [is difficult] when you have an environment like ours in Australia, which is so far from the rest of the world.

"But [the CEO's] philosophy is competing globally, and for us to compete globally, we needed to make these changes," he said.

"We have a plan in place now to basically replace all the core pieces of technology of the exchange … Everything we do, we're going to take it down to a single point of a process – try and simplify everything, globalise it."

The disruption there, according to Thurman, is going to be "massive" - and not just for the ASX.

"Global investment banks and even local banks who participate in the global market won't have to have this unique piece of software that's just for

Australia; they can start rationalising and making their own back offices more efficient based on what we're driving," he said.

ASX directors formally approved the $50 million program in November.

The ASX's IT architects validated their transformation strategy with rival exchanges in Canada, Germany, Singapore, Brazil and London. Thurman named Germany's Deutsche Borse as the best example of exchange technology.

Winning over the board of directors then took a bit of creativity. Thurman and his team had to split the transformation program into phases to meet the ASX Group's strict budgeting processes.

"We don't have the luxury of getting $100 million from day one to do all this work. We've had to put the strategy over the required cap-ex spend over several years," he said.

"Some companies get money and they can just go spend everything and that's when you get problems in terms of not being successful."

The exchange publicly announced its transformation plan this February, choosing Cinnober Financial Technology to replace its ASX Trade24 and ASX Trade platforms, Tibco to replace its market monitoring system, and Actifio for data management.

Trading, risk and market monitoring systems comprise the first phase of the transformation, with a budget of $35 million and a timeframe of two years. Thurman said the exchange would start discussing post-trade settlement and clearing technology – to be deployed in the second phase of the transformation program – this month.

"Our CHESS clearing system is unique to Australia," he said. "It's a great piece of technology, very reliable, but it's very old. To enhance it and innovate on it is very complicated and risky.

"It comes back to the right partners, the right technology, the right integration plan, and making sure our clients are there for us when we want to test with them.

"We're not quite sure yet how we're going to launch it – big bang or migration – but we know when we do launch it that our clients would have already gone through a very detailed testing strategy with us to validate what they've done and what we've done is ok."

Data: Advertising's best frenemy

TOM CEGLAREK - STW GROUP

Paris Cowan | April 15, 2015

STW Group's Tom Ceglarek faces a digital conundrum: he must feed his client's demand for performance insights while his industry is being undermined by data analysis.

One of the great hidden threats of big data is uncovering something you - or your business - doesn't want to know.

Once these insights escape, it's almost impossible to get that rabbit back into its hat.

It's a story the advertising industry knows all too well.

Many years ago it was hit from both sides by online campaigning and new electronic measurement of click conversions, which showed that people aren't actually paying all that much attention to what marketers put in front of them online.

Some surveys suggest that average click-through rates on online ads in some industries are as low as 0.03 percent, with even the very highest-converting industry - telecommunications - still only laying claim to clicks from less than one percent of all viewers.

One of Australia's largest marketing conglomerates, the ASX 200-ranked STW Group, is still struggling to overcome the devastation this shift wreaked on its market, as are most of its industry peers.

STW is home to 86 different companies across marketing, digital and consultancy, including Ogilvy, Howorth, JWT, The White Agency and Tribe.

As a whole, the group's 2014 performance was disappointing, with profits down 7.8 percent as clients dropped their expenditure on old media formats like TV, newspapers and magazines to match slipping audience numbers.

It's a familiar challenge to STW's CIO Tom Ceglarek, who has spent more than ten years working in the technology wings of Australian marketing firms, and has watched these online shifts

manifest themselves into a radical transformation to the very art of advertising.

He says the number one impact of the never-ending demand for quantitative measurement of advertising success - 'attribution', in advertiser speak - is cutting margins.

The next biggest impact has been the demise of large scale (and expensive) brand awareness campaigns.

"More and more we are seeing tactical, niche activities which have a pre-determined outcome, not just general brand building," he told iTnews.

"I'm not sure these campaigns are more effective, but they are definitely more measurable.

"Our clients need to be able to demonstrate results. Everything is a lot more exact these days and there has to be a business case for every dollar spent.

"A big brand ad is nice to have, but you can't really measure it - there are just too many factors at play."

Can't stop the data

But the data drive is not something STW and Ceglarek can turn their backs on now, even if they wanted to. The catch-22 facing the industry is that

companies like STW must continue to chase those increasingly granular insights no matter what uncomfortable truths they uncover.

At STW, the data push formally kicked off in 2013 with a directive from the executive levels of the company and increased training in the use of data analytics for 1600 staff.

Subsequently, STW mandated that all 86 (and growing) companies under its umbrella must offer some sort of data service to clients.

"It was triggered by the increasing number of client conversations that were happening," Ceglarek recalls.

"Once upon time it was okay to say 'we've had three editorial mentions so that is worth nine normal ads'. That approach doesn't work anymore. Our clients want hard data."

STW also corrals numerous other data streams tracking consumer behaviour drawn from a range of sources, and hopes to convince clients to share their own databases in the future in pursuit of a better-designed marketing product.

The group operates its own, spun-out data arm called STW data hub, and at least one of its companies boasts that ten percent of its workforce are data scientists.

It is up to Ceglarek and his team of 11 to build and operate the engine for this expanding data enterprise.

"The breadth and scale of reports we are producing now demands some really high performance tin," Ceglarek explained.

He is building a series of all-flash arrays linked to high performance compute, alongside STW's existing infrastructure in an on-site data centre located within its St Leonards offices.

He says he has "done the numbers" and it makes financial sense for the company to build out its own infrastructure rather than crunch its numbers in the cloud, largely because it can leverage off the data centre facilities it already has.

The scale of demand across all STW businesses, including the data hub, also warrants an on-premise solution, according to Ceglarek.

"We need a low-latency, constant feed," he said. "We have looked at the cost of doing this in the cloud and it actually ends up being cheaper for us to do it ourselves because we already have an amazing data centre here in the building."

The new data engine, however, will be separated out and individually secured from the NetApp-based hardware already in use.

"This way there is no problem with data sovereignty," he adds. "We have some financial services clients with sensitive information so it helps to be able to keep all of that in house."

Ceglarek acknowledges he's only ruled out the cloud for the time being.

"I'm sure there will be a point when the cloud will be more economical, but we're not there yet."

Already, the investment promises to reap some serious dividends for the company.

"We have already done some proofs of concept where the new infrastructure has brought reports that used to take eight hours to generate down to 30 minutes. That sort of productivity gain is huge for us."

Mind your own business

Ceglarek certainly lives his mantra that CIOs shouldn't live in ivory towers - he makes a point of spending 3-4 hours every week manning the helpdesk so he doesn't lose contact with the "coalface" of the business.

"Sometimes business groups can't see the forest for the trees," he says.

"I think it is important to retain this daily connection, because if you're far away from what is happening how do you know if your decisions are going to be right for the people who are doing the heavy lifting?"

The strategy helped him to intervene in some interstate whiteboard communications before it was too late.

"We have a training consultancy based in our Sydney office," he recalled.

"For the longest time they were doing their scheduling on a series of whiteboards in the office. Then they added a Melbourne team, who couldn't see the whiteboards, so they asked us if they could get a webcam to broadcast these whiteboards to the guys down there!"

Instead, Ceglarek delivered the team a web-based scheduling system that they can now access and add to from their phones, their home PCs and their work PCs.

"Their productivity has gone through the roof as a result," he said.

Ceglarek also believes in an economy of "little favours" that makes the business trust the IT department and keeps them sharing their productivity conundrums.

"Our helpdesk gets calls from people with spiders in their cars, asking us to come and get rid of them. I think it is good that we are trusted to that level," he laughs.

Good old days?

In some ways, Ceglarek rues the changes to his industry, and what has been lost as a result.

"With the capability of technology evolving so fast there is demand to get everything done - now. I'm concerned that people compromise on quality just to get things done on time."

While he is busy building STW's data capabilities, he remains philosophical about the 'unknowable unknowns' of human behaviour.

"Even simple clicks do not always necessarily represent real views," he says.

"When people talk about conversion rates of something like 0.03 percent being really good - I tend to think a lot of those people clicked on the ad by mistake.

"I'm concerned that all big data is going to reveal is that none of this is very effective. Or its effective in ways that are very hard to measure - because at the end of the day we are human beings and not deterministic systems."

But until humans start behaving predictably, or the data becomes so sophisticated it can understand our every move, Ceglarek and his team will keep paddling with the tide and feeding their customers demand for ever increasing insight. ■

Keeping up with the digital natives

NEIL HITCHCOCK - NAVITAS

Paris Cowan | April 17, 2015

Forget about MOOCs, for Navitas CIO Neil Hitchcock the real digital threat is coming from a customer base that can't remember a time before Facebook.

It might be hard to believe, but just a few years ago, analysts and insiders alike were predicting the downfall of the university system at the hands of massive open online courses.

These days, the fire has all but gone out of the MOOC hype.

In California, UCLA was recently forced to absorb a US$7 million loss from its investment into an 'all digital' campus it had hoped would attract students from around the world. Elsewhere, studies have shown that online learners underperform against their face-to-face peers.

Navitas CIO Neil Hitchcock has 19 years of experience under his belt at the multinational educational provider, and has watched the tides come and go for the education industry.

He says he doesn't think MOOCs are in "any way whatsoever" a game changer for the education sector - and never will be.

Hitchcock offered four points to back up his argument: one, there is no economic value in a MOOC - "at some stage even a university that gets government funding needs to have some sort of revenue coming in," he says.

Two, MOOCs have huge drop out rates - up to 93 percent of starters.

Three, universities are instrumental in the transition from being a child to being a self-determining adult, he says, something you can't get from a MOOC.

And finally, the issue of accreditation - "how do you prove that person who has taken that assessment or who has been doing that work is in fact the person who signed up?"

However, Hitchcock doesn't see the concept of open online learning as completely useless.

"They are a marketing opportunity - they can attract 10,000 or 100,000 people and get a brand out there. They are also an opportunity for institutions to test their online content," he says.

"A lot of universities now are using them as a quick way to change their course materials to be more meaningful in a face-to-face context."

So what is the real disruption shaking up Navitas?

"It is our students," Hitchcock says.

"Unlike other workplaces where you might have a range of people who are 15 to 70 buying a service, we have a bunch of digital natives who expect to do things differently."

It means Navitas needs to be able to offer everything on a mobile device.

"This is a big disruption in education where there are still old legacy learning management systems that only show data on a nice 1024 x 750 screen. They've got to change."

The CIO knows this customer base is not going to tolerate the kind of clunky, siloed services that are often the hallmark of an ageing back-end.

His team is therefore currently working on an integration platform that will connect the enterprise

across its 120 colleges and operations in 27 countries.

Based on IBM's Websphere enterprise service bus, Hitchcock expects the new back-end will allow him and his team to add and remove new applications "almost like lego blocks" without losing the continuity of student information required to seamlessly manage their study and enrolment.

"It is perhaps one of the largest things that we are doing right now," he said.

"From the point a person is interested in enrolling right through to when they become a a student, to when they're going on to become alumni, each of these different stages use a different management system.

"What is important is that we use the integration platform to make sure this whole experience is still seamless.

"It also gives us the ability to use best of breed tools for any part of the process. We don't have to be tied to old legacy systems that demand we use the whole stack."

Hitchcock is also readying the foundations for the day that education providers using data analytics to tailor the learning process becomes standard practice.

"The paradigm we have got at the moment says a student has to be in class for 14 weeks a semester, and must do a certain number of credit hours to be certified. It is a really old paradigm," Hitchcock said.

"Education providers are starting to question whether we should be putting 35 people in a room, and telling them to sit there for 14 weeks and learn content.

"We have the tools now to analyse assessments so we can see what that student doesn't understand and automatically send them down an alternative learning path. We can say 'you didn't really understand that concept, let's revisit it in a little more depth'."

Already at some of the Sydney colleges operated by Navitas, work is being done with the local learning management systems to leverage assessment and progress data to guide students through their study, but Hitchcock concedes that the work is still in an "embryonic stage".

He does, however, foresee this sort of bespoke approach to higher education, where students are allowed to complete courses at their own pace, as the inevitable path the sector is going down - much more of a sure thing than the MOOC-led apocalypse ever was. ■

Getting bang for your buck in the explosives factory

MARTIN JANSSEN - INCITEC PIVOT

Liz Tay | April 20, 2015

As a manufacturing industry CIO, Incitec Pivot's Martin Janssen doesn't have much money to spend on IT. But to him, that's all part of the fun.

Martin Janssen sums up his IT strategy in two words: 'practical' and 'pragmatic'.

Janssen has been CIO at Incitec Pivot (IPL) for ten years, supporting the company amid a major productivity drive, and as a growing number of customers demand to do their business online.

IPL manufactures and supplies fertilisers and explosives, and provides mining services in 16 countries including Australia, the US, Mexico, Chile, Turkey and Indonesia.

It is headquartered in Melbourne and like most Australian manufacturers, has been grappling with rising gas prices, wages and a high Australian dollar in recent years.

Bringing down costs is a major priority.

"One of the key messages at IPL is a low cost base," Janssen said. "It's not that we won't spend a buck. It's that we're very prudent in how we spend it. And generally, we get good value for every buck we spend."

Janssen has a budget of about $39 million a year for all of IPL's technology, including corporate and SCADA systems, IT infrastructure, networks, and desktop and mobile devices.

His team of about 80 staff and 20 project specialists supports a workforce of 5000 people, who speak six different languages in IPL's various offices and mine sites around the world.

And then there are the contractors, service providers and partners – like Cornerstone Chemical Company, which will operate IPL's US$850 million ammonia plant in Louisiana – that need access to IPL's IT.

"There's a reasonable level of complexity," Janssen said. "As an example, we're building an ammonia plant in Louisiana ... that's going to be operated by a third party as part of the industrial complex there. The

technology requirements associated with that need to be delivered.

"We're a manufacturing company so by definition, 'fast-changing' doesn't normally apply. [But] customers, logistics providers, they can change; those things really can be ground-moving changes and that's where dynamism is required from my team."

Spending money to save money

Getting more from less has been a long-standing mission at IPL, and one that has been driven from the top down.

The company has undergone three major productivity drives in ten years, beginning with former CEO Julian Segal's Project Tardis, which cut $143 million in costs through sales forecasting and supply chain improvements.

Current CEO James Fazzino, who was CFO under Segal, saved a further US$200 million under Project Velocity, which involved a major corporate restructure.

Fazzino has spent the past four years pushing LEAN manufacturing principles via IPL's BEx (Business Excellence) strategy.

Addressing an Innofuture survey of Australian CEOs in 2013, Fazzino described technology as "an opportunity to achieve substantial productivity

benefits".

"We think of 'technology' in different terms from those in government and academia," Fazzino said at the time.

"For a manufacturer such as IPL, 'technology' is the use of the latest techniques to improve the way that work is done."

Accordingly, Janssen has flagged predictive analytics and mobile technology as upcoming areas of investment.

"[Part of the job is] about trying to work out what are the right opportunities to pursue, given that there's always going to be competing priorities," he said.

"Opportunities such as predictive analytics and mobility are the ones where new technologies really present good outcomes for us.

"Predictive analytics would allow us to operate more efficiently [by improving our] ability to get predictable reliability or optimise production."

IPL uses SAP's BusinessObjects for business intelligence. It has also deployed Qlikview in the past three years to analyse and visualise data from its SAP systems.

Its business intelligence team is led by Fahed Mostafa, who has a PhD from Curtin University for his research into using data mining and neural networks to manage stock market risk.

To date, Mostafa's team has been tasked with surfacing information about safety, reliability and efficiency to support IPL's BEx continuous improvement methodology.

"At this stage, [IPL's analytics work has] been largely making sure the right knowledge, the right information is available to all parts of the business," Janssen said.

"BEx, to a large extent, hinges on people working collaboratively and using good information.

"We've got a very strong capability, almost world-class analytics capability in house. Steps forward we've made in the last couple of years are very significant.

"It's not just toes in the water. We're up to our ankles in the water, and some time in the next 12 months, I believe we'll be jumping in."

Winning over the board, without overselling

Janssen said he would need some real examples to demonstrate the power of predictive analytics before a bigger project might be approved.

His team has already been able to predict a reliability issue that rose at one of IPL's plants.

"There is minimal budget for [a big predictive analytics project] but it's the kind of thing where budget really is tied into the potential," he explained.

"I don't want to overstate it by saying it's given us the ability to prevent reliability issues, but we've been able to model that reliability issue and highlight that it could have been acted on much sooner than it was.

"The potential is really, really strong. We've got probably 20 large manufacturing sites, and what you manage to do for one, you can leverage across the rest."

Janssen picks his words carefully when discussing new technology.

After 25 years in the IT industry, including 15 as CIO, he has learned that managing expectations is key to driving technological change.

He highlighted a recent mine site deployment as an example of where IT missed the mark.

"Innovation was very strongly pushed" for that project in remote Australia, and the company sought to connect its corporate systems to a range of applications and SCADA systems in its on-site trucks.

The problem was that connectivity was very poor.

"We have large, very expensive trucks that deploy explosives in the field for the mining industry," he explained.

"Those trucks are mini-factories. They've got

SCADA systems, so integrating those SCADA systems to our corporate systems, including SAP, was the requirement.

"Ninety percent of the capability was well delivered from an applications point of view, but it was very difficult to make fully effective due to the telecommunications issues.

"In this case, perseverance is going to be the key. Telecommunications is improving and if that wasn't the case, we would be taking different options. But it really is a case of this will work, we've just got to persevere with it."

Business skills for the modern CIO

The CIO role has become increasingly business-focussed across most industries, and Janssen's job at IPL is no exception.

IPL spends about 1.17 percent of its revenue on IT – low compared to the Computer Economics' 2014/15 median IT budget of 2.2 percent of revenue across all industries.

Janssen said IPL's IT budget was in the bottom third quartile of spending by manufacturing companies.

"I'm proud of it," he said. "It is low relative to other manufacturing companies. We're not under-doing it, but we're definitely not over-doing it."

Janssen keeps costs down by leveraging his highly qualified in-house technologists when appropriate, and outsourcing when there is an opportunity to get a bigger bang from buck or when he's found it difficult to recruit the necessary skills.

IPL enlisted Melbourne-based BNW to help move its SAP systems from Oracle to a Microsoft private cloud environment in 2012. It used Presence of IT to deploy a hosted SuccessFactors recruitment system in 2013, and its SAP systems are maintained by global IT support firm Rimini Street.

"We're the first Australian company using SAP to move off maintenance services directly with SAP to a third party, Rimini Street," Janssen said.

"There's no religion in that. It's not being cheap, it's getting the best value – that's why we're with Rimini Street or other service providers.

"Occasionally we'll do something in-house because we believe we get better value that way, but it's really about the approach that delivers the most value for the dollars that we do spend.

Soft drinks and SoftLayer: A solution for hard times?

BARRY SIMPSON - COCA-COLA AMATIL

Beverley Head | April 23, 2015

Coca-Cola Amatil's CIO Barry Simpson shares his story of cost-cutting, outsourcing and why his software developers to ride around in delivery trucks.

Shift to the cloud, help shave $100 million from costs, strip away 70 IT jobs – then do more with less?

Welcome to Barry Simpson's world.

While Coca-Cola Amatil's information systems group looks radically different today than it did a year ago, according to Simpson, it's better placed to support the company's long-term ambitions.

"As a technologist you learn that when you don't have fixed infrastructure, technology jumps generations. That's affecting our thinking about why we need to move quickly to cloud."

A start-up competing with CCA wouldn't build its own information infrastructure, Simpson says, but instead leverage what's already available over the internet.

"That's a very different view of how you conduct business, so it's important for us to get on and manage as if we were a new business," he said.

It spurred Simpson most recently to shift CCA's Asia-Pacific customer planning and relationship management systems onto IBM's Australian SoftLayer cloud.

That arrangement, announced earlier this month, followed a 2014 five year deal with IBM to move CCA's SAP systems, known as OAisys (One Amatil information system), into IBM's Sydney cloud.

"We are a large business that is geographically dispersed, we have a large mobile workforce, a seasonal business, and a large customer base," he said.

"Put those things together and the idea of having to provision your own infrastructure internally for your highest peak volume, then secure it and connect to the outside world, doesn't make a lot of sense in a world that wants more consumer style technology.

"So the SoftLayer agreement is all around making it simpler for us to provision out of the cloud. We are pretty close to everything being in the cloud."

The beverage giant sells iconic drink brands such as Coca-Cola, Mount Franklin, Powerade and liquor including Jim Beam and The Famous Grouse. Headquartered in Sydney, CCA operates in six Asia Pacific countries, employs 14,900 people and claims 270 million consumers served by 700,000 customers across the region.

It has, however, hit rough seas in recent times. Net profit sank 25.3 percent last year to $375 million, on revenues which also slid 1.9 percent to $4.9 billion.

Analysts have suggested the company's woes stem from what had been a sluggish response to changing consumer preferences and underutilisation of assets.

A strategic review of the company ordered by incoming CEO Alison Watkins led to the announcement late last year of plans for "a next generation digital technology platform" alongside initiatives to strip $100 million in costs out of the business over three years and reduce headcount by 260 - with around 70 jobs slated to go from IT.

Simpson won't say how many IT staff report to him today – but acknowledges that following the move into the cloud there is very little IT left in-house. Since arriving at CCA in 2008 Simpson has completely overhauled the company's IT – starting with a $65 million program which replaced 120 legacy systems with the single SAP based OAisys core.

While the system was developed specifically for CCA, it makes of use of a series of SAP templates which have been developed by parent TCCC. It was this system that was first offloaded to IBM's cloud in 2014.

It's not where IT is but what you do with it

"If you look at areas of disruption it's going to be around the relationship with customers... [if] someone or something better understands them than you do today, then your service levels can be disrupted," Simpson says.

CCA claims to have the largest field service sales force in Australia and last year, to ensure service levels remained high, the company equipped all 1000-plus of them with an iPad loaded with CCA's SAM (sales and marketing) app.

"We took the decision early on to be mobile first and be cloud-based to allow access from anywhere and real time. That's been the design philosophy even around our core platforms at the back end as well as the consumption layer at the front end," he said.

"So if you look at the capacity of our salespeople they can see where they are tracking real time against their peers. They can interact with any part of the business in real time whether it's service, product, pricing, credit, delivery - all connected on the one platform real time consumed on the once device via easy to use consumer grade apps."

Buying in agility

Rather than develop the apps interally, CCA partners with a small group of software development firms which can inject new ideas.

To ensure those ideas are useful, Simpson has members of his team and the outside software developers work closely with business users, even ride shotgun with Coke truck drivers to see what sorts of apps could be useful.

"It starts with simple things such as integrating Google maps into what we do so drivers know which side of the road is better for them to stop on to unload," he said.

"Those kind of things you tend to get out of disruptive technology. We are leveraging the smaller design companies that can move much faster than us and we use an agile design methodology there."

It's an approach that has also reduced the risk of technology investment.

"We want to adapt and change very very quickly. We currently run six week sprints. Our business understands that it's OK if not everything is there in the first place because six weeks later we will have learned and they will get the next [iteration]."

So what are Simpson's feelings about failure?

"It's alright if you learn. The cost of failure is relatively low - the cost of not moving is relatively high."

This approach to rapid front end iteration is only possible because CCA has invested heavily in getting its back end systems up to scratch and in the cloud with a standard API layer between the back end and front end consumption layer.

"Technology is a key enabler and we have recognised that. Whether driving efficiencies through automation and self-service, or transforming our route to market, or around supply chain and leveraging our production assets - technology plays across every part of the business," he says.

"CCA over the last five years has made significant investments in our technology base. As we were going through the strategic review and transformation one of the key strengths was the investment we made in that technology. It would be

very hard if you had to start now."

Know thy customer

Having a modern back end also allows much greater flexibility in what can be served up to CCA's customers – the supermarkets, corner shops and convenience stores that sell Coke to consumers.

Simpson said the myCCA portal is being relaunched, with a lot more content from the SAM system, and starting this month will be made available as an iOS app.

The tool will let Coke vendors analyse their historical performance, identify their best sellers, where they are making more margin, how they compare against peers – right down to how to organise their fridges to encourage sales.

"We have 3D models of the picture of success for that ... you can walk through in the computer programme and look at how it should be laid out to maximise sales," Simpson says.

CCA has had the opportunity to test the calibre of its data insights during this month's launch of its new Coke Life drink range.

"We get real time visibility of our sales, our customers, and reorder plans, and track that at a more granular level than before. It allows us to adapt very quickly in terms of adjusting promotions or productions, act at leaner working capital levels and be more flexible," Simpson sais.

"Ultimately to tailor services and promotions and interactions at a customer level. For a company like ours that makes a huge difference."

Consumer commentary is also mined for insight, so when CCA attracted a flurry of negative comments about the texture and flavor of some of its Barista Bros milk drinks recently it responded quickly and took products off the market to rework them.

CCA uses Salesforce's Radian6 for media and social monitoring.

"This is where the world is going and how people want to communicate with one another and increasingly with companies like us - you've got to embrace it, there's no choice."

Simpson is also keeping a close eye on emerging technologies such as beacons and wearables.

While CCA has run beacon pilots, Simpson acknowledges that there remains a fine line between benefiting the consumer and "being a bit creepy".

He's also watching wearables and can envision the day when ruggedised laptops are replaced by consumer devices strapped to a truck driver's arm.

"It's amazing how fast that is moving, and the price point of things means that you can trial it - but to do it you have to have the architecture in place."

Having a modern foundation means Simpson "can move at a pace with capability that is very hard to match – you can make changes on ranging and understand the impact on your business, make a change in your contract and your ordering system is ready to apply that pricing immediately."

Simpson sees part of his role as demonstrating to CCA executives the "art of the possible" – a job which he says is easier than it was a decade ago when there was less executive appreciation of technology.

In the future he believes technology will make it possible for CCA to forge closer connections between itself, its customers and its end consumers, harness mobile technologies, data insight engines such as IBM's Watson and gamification to tighten the web between supplier, vendor and consumer by being able to "reach specific customers with specific offers tailored exclusively for them."

That's the thirst he wants ultimately to quench. ■

Taking the fight to the disruptors

CLIVE DICKENS - SEVEN WEST MEDIA

Beverley Head | May 1, 2015

Seven West Media's new chief digital officer, Clive Dickens, says if a media company as historic as Disney can take on the new media landscape, then so can he.

Dickens is clear: "If you don't encourage disruption in your own category then the only strategy you have is hope that [the disruptors] don't succeed."

It's not an option he entertains.

Dickens joined Seven West Media as chief digital officer this February, and is also a non-executive director of the Yahoo7 joint venture.

It has already proved an interesting ride for him.

This week Seven West halted ASX trading to announce a capital raising intended to simplify the balance sheet and reduce debt at the Australian media giant.

It will also provide an investment war chest if cross media ownership rules are relaxed, allowing the company to speed the pace at which it transforms itself for the new media landscape, which has been delivered by ubiquitous broadband and mobile devices.

Institutions have already signalled their interest in the plan, ponying up $289 million during the institutional phase of the capital raising. The retail offer opens next Friday (May 8) and Seven West is hopeful of raising up to $612 million in total.

That will no doubt be very handy for a company that Dickens says will be on a transformation trajectory for the next 12-18 months.

The challenge

Seven West Media is already diverse. It owns free to air television stations Seven, 7Two, 7Mate; print titles under the Pacific Magazines umbrella; and newspapers including The West Australian. Its online portfolio includes Yahoo7, bloo and Wjobs.

The company shares ownership of Netflix rival Presto, alongside Foxtel, and has also launched its

Hybrid TV service.

But it is experiencing competition at every turn, and that's reflected in its financials. During the most recent half year the company's revenues slid slightly to $943 million, down from $975 million in the comparable period a year earlier. Seven West however also reported a massive statutory net loss of $993 million, largely associated with redundancy costs and writing off the value of mastheads in the company.

That stern medicine combined with the current capital raising is what is pushing the company to embrace a new media landscape.

Dickens' current role is all about disrupting from the inside. He has spent time on the start-up side as an advisor to Shazam in its earliest days, and is prepared to not only sidestep, but blow up, sacred cows standing in the way of progress.

"Historically we positioned our business as a broadcasting business and increasingly we describe our business as a content and audience company," he said.

"The same disruption that impacts the way Australians will consume broadcast TV enables us as a company to go out and reach consumers in a different way. Plus7, which is our leading video on demand product, is experiencing huge year on year growth."

The company is seeking to satisfy its audience's every viewing demand, be it through free to air schedule content or catch-up viewing.

"That window of monetisation has broadened over the last couple of years, and our intention is to be part of that broadening," Dickens says.

But the challenge, he says, is to ensure that you own the different classes of rights for each of these different forms of access.

"If you are simply a domestic broadcaster that buys an increasing amount of your content from overseas and don't have the catch up rights for that content, then you are in the most challenging time."

Reviving the media

Creating and controlling content is a huge opportunity for the company, according to Dickens.

That's also the case in the company's print arm, which is facing ongoing technology-fuelled disruption.

"Finding the right business model around premium journalism and paid-for state news remains an everyday focus for the management team," Dickens says.

"The WA newspaper group has had a very strong period in the last five years compared to other masthead state-based titles - but we are innovating around the way consumers receive the news so the WA building in Perth houses the Channel Seven news program.

"It's one of the few digital newsrooms in the world where they are working on the home page of the newspaper, social journalism, front page of the paper and the primetime bulletin at 6pm all in one integrated service. That simply would not have been possible a couple of years ago."

The next phase of innovation will go a step further and see the company's magazine stable become ecommerce portals.

Titles such as Better Homes and Gardens, Marie Claire and Girlfriend are poised to become curated online shopping venues so people reading the magazines online can click on a photo of furniture, a dress or perfume, and buy it there and then.

Expect more of this over the next few months, Dickens says – and not just from print content.

"Imagine MKR (My Kitchen Rules). You are deeply watching the show, pull out your tablet, there's the story of couple from Roma and their wonderful lemon tart," he says.

"Why couldn't you immediately buy the ingredients for that tart and have them delivered to you immediately from our friends at Coles?"

Dickens also wants to hear from – and possibly partner with – start-up disruptors.

"When people come to me and say I'm looking to create a new journalism model or a new video model or TV model - I want to encourage those conversations," he says.

"The great thing about embracing disruption is if you don't generate a return on investment in the traditional sense of it you always learn something. If you invest in adjacent verticals … you are supercharging your own R&D. Every business should spend time understanding and defining what disruption means inside and outside their business."

Making the dream happen

As the company's chief digital officer, it's Dickens' job to dream. But what about the back-end technology to deliver on the dream?

"My role is to help create the vision and the strategy to execute that vision, then establish a centre of excellence team to take the strategy down to the thousands of individuals around the company and to move aside the roadblocks in technology and thinking and prioritise those," he says.

"Certain things will have technology friction - because we are just not set up to act in a certain way

- and other things will move quite fast.

"We have certain areas where we have invested well and other areas where we have underinvested."

After just three months at the company Dickens hasn't had much opportunity to lift the hood on Seven West's IT systems, but he says there has already been significant reinvestment in the information technology, and where new platforms are required to support a new initiative, Seven West will likely buy rather than build.

As far as Dickens' technology priorities are concerned mobile is number one.

"It changes every business and if you haven't found a way to work out how mobile changes your business then you are not thinking hard enough because mobile changes everything."

Second is cloud computing.

"Undoubtedly the access to scale that cloud computing brings. If you are still operating with limited cloud exposure and simply using it for cheap storage then you are really not understanding the way that is changing."

Finally, Dickens wants rich connectivity.

"How fast mobile is talking to content and how fast you can access the cloud computer. Those are the biggest changes - and they are interlinked."

While the transformation ahead is immense for a large enterprise like Seven, Dickens holds up Disney as his poster child for transformation.

Five years ago Disney's share price was languishing below US$40 – but a concerted effort to engage with consumers online and harness technology to deliver new classes of experience is generating significant benefits.

"It's a huge company, it's always been respected but now its share price is at an all-time high and on its current trajectory in three months it could be worth more than Facebook, because it has combined great content with great audiences with technology and innovation," Dickens says.

"My view is that in the next 10 or 15 years, are you going to be a Disney that gets it or are you going to be a legacy business?" ■

Battling for top recruits in the race to disrupt

DAVID HIGGINS - OZFOREX

Beverley Head | May 8, 2015

To be a good disruptor, you need good people. OzForex's challenge is finding them in a constrained market.

Australia's supply of top technology talent has always been tight, and Sydney's rise as a fintech hub is further constricting the local market in specialist skills.

The major banks are always ready to swoop on technology talent. Specialist fintech companies such as big data firm RoZetta Technology are growing, digital payments disruptor Ripple is setting up shop in Australia, and Swift needs tech talent to build its new payments platform.

And that's not even mentioning new Sydney fintech outfits like Tyro and Stone & Chalk - along with development superstars such as Google and Atlassian – which are all looking for the best and brightest.

David Higgins, chief technology officer of Sydney-based online foreign exchange service OzForex, isn't blind to the fierce competition he faces in attracting people to his IT team - which he plans to grow by 20 percent by the end of the year - but he remains confident.

The problem with being a disruptor, Higgins says, is that you need good people - who tend to be "quite picky" about the companies they work for.

"Of course we all want to get well paid, but they are particularly picky," he told iTnews

"They want to work with people that are doing interesting things, that are working with new technologies, and are prepared to spend some time and money investigating and moving to new things if that is best for the company."

Not only is hiring new skills is a challenge, Higgins says, it's sometimes hard just to get people to an interview.

"I've got colleagues who head up other IT departments in Sydney and they are not getting people coming to their interviews at all."

But he still believes the size of the OzForex business will attract the types of skills he's after.

"At the end of the day Google is a fantastic company, and a fantastic place to work - but it's a big company and

big companies still have the big company issues," Higgins said.

"We're not like that - we're not a big company with layers of management. You can get access to senior people quite easily and senior people are involved in things that prospective hires want to be involved with. You can come here and make a difference.

"Things like free lunches and Segways are nice - but at the end of the day you've got to sit down in front of your computer and do a job."

Making trading easier

The current focus at OzForex is taking the friction - and hence costs - out of retail foreign exchange.

More than $150 billion in over-the-counter foreign exchange transactions are conducted each day in Australia – the majority of them institution to institution.

But there is also a thriving retail foreign exchange market.

This market has traditionally been dominated by the major banks, but is increasingly being challenged by online foreign exchange providers – including locals such as OzForex and Pepperstone - and remittance services, along with emerging peer-to-peer payment services sometimes harnessing virtual currencies to facilitate international financial exchanges.

OzForex was launched in 1998, and has grown into a substantial online retail foreign exchange service provider with operations in Australia, the UK, Canada, the US, Hong Kong and New Zealand. Last year it handled 581,000 foreign exchange transactions worth $13.6 billion.

While some Australian banks maintain that the regulatory environment for online foreign exchange operations is less rigorous than the one they face, OzForex and its ilk are subject to regulations regarding money laundering and know-your-customer rules in each of the jurisdictions where they operate.

Licensed by ASIC in Australia, the listed company also has to adhere to different licence conditions in each of the six continents it operates in – and a patchwork quilt of US state rules.

Besides dealing with constant regulatory reform, OzForex is witnessing the rise of new categories of disruptor such as Ripple, recently established in Australia, which can be used to establish straight-through, real-time settlement systems for businesses using a virtual currency called Ripples, or XRP.

Other virtual currencies are also a potential disruptor for OzForex and co, essentially doing away with the middle man by establishing peer to peer payments.

Higgins sees his role as providing a robust platform that meets regulatory requirements worldwide, but also maintains enough infrastructure flexibility to respond to changing regulations or market conditions.

He's also aware that although OzForex is considered a disruptor, it can still be disrupted.

"If you have been in the industry for anyperiod of time, then you can be disrupted. We were a disruptor but we are not a new business. We set up in 98 and have been dealing since about the year 2000."

But he believes the architectural flexibility built into OzForex's information systems will allow it to rapidly respond to this disruption.

"We are completely online and web-based. We develop our own core IP but utilise - where it's available - commercial open source components in our applications and try to use services as much as possible," he says.

"There's no point in trying to build everything ourselves when someone has built something and there's a fantastic API that we can tap into."

OzForex harnesses third-party electronic verification services that ensure it meets its know-your-customer and anti-money laundering responsibilities, and also free Higgins and his 40-strong IT team to concentrate on the core foreign exchange business.

Higgins is keenly aware of the need for OzForex to be able to swiftly respond to changing regulatory rules both here and abroad.

"For us it's a matter of making sure we decouple the systems we have so we can switch a bit easier," he says.

"For example, part of the system is heavily involved in compliance. If you can decouple that as a separate piece, if you do need to replace that you can almost build a new service, decommission the old one and put a new one in there seamlessly."

While Higgins prefers to use third party solutions for vanilla requirements – CRM for example – and open source products where there is a strong business case, he maintains that by building and controlling the IP of the core foreign exchange system he has instrumented additional agility into the enterprise.

"They beauty of building your own systems is when the business says 'hey we've done the research and know that treating our customer this way or dealing with registrations this way will increase our conversion rates, or revenues' - we can turn around and say 'yes we can do that,'" he said.

The competitive edge comes from "how you put the open source or services together - how they work together".

He expects OzForex will be able to do that integration piece even better in the future by better harnessing its data.

Higgins is currently investigating Hadoop stacks to see how OzForex can analyse customer behaviour on its website in real time, predict their next move, and respond appropriately.

"My preference is to use something like Amazon so you have ability to scale up for peak loads without having [resources] sit there unused," he says.

"Whether or not that is software-as-a-service, infrastructure-as-a-service, platform-as-a service is the process we are going through now. There are some really good systems like RedShift and Elastic MapReduce with AWS and we need to see if those suit us.

"We've got the roadmap – we're now executing that – and are roughly halfway through."

Trust in the age of the data-driven

ROGER SNIEZEK - COLES

Paris Cowan | May 12, 2015

As the custodian of Australia's biggest loyalty database, Coles digital chief Roger Sniezek says he will never risk breaching the trust of his customers.

Coles' Flybuys program is the largest, and one of the oldest, customer loyalty schemes in Australia.

Started in 1994, Flybuys today counts 7.1 million active users, and the company is tracking a significant proportion of the 20 million transactions conducted through the store and online every week.

Cambridge-educated maths man Roger Sniezek has been in charge of this mammoth enterprise since 2011 when he was brought on board to overhaul the Flybuys brand and make it more appealing to customers.

In the middle of last year, Sniezek was also handed the rest of the supermarket chain's IT operations, a recognition that the powers that be were happy with his work.

After a swathe of Coles IT jobs were sent offshore, the company got rid of the CIO title and handed the full spectrum of responsibility - from back-end systems to ten-year digital strategies - to newly minted 'digital director' Sniezek.

"I don't sleep much," the busy exec joked.

The age of the data-driven supermarket

In the cut-throat, price-driven Australian supermarket industry this treasure trove of loyalty data is critical to Coles building an edge on competitors like Woolworths, IGA and Aldi.

In what the press has dubbed the "price wars" between the dominant retailers, Sniezek says that simple uses of this data, such as filtering out irrelevant offers and drilling down to the specials most likely to appeal to customers, have already proven highly effective.

"If you're a Flybuys member - and well over 60 percent of households in Australia are active in Flybuys

- then we will send you a weekly email that lists the things on special in your local store based on the things you purchase most from us," he said.

"Rather than getting our customers to go through hundreds and hundreds of specials, we can help them find the ones most relevant to them very quickly.

"This gets a great response from our customers."

This database is also helping Coles get ahead in the growing online ordering space - which Sniezek nominates as one of the industry's biggest disruptors.

Flybuys members ordering their week's groceries online will have their regular purchases pushed to them based on past in-store habits.

"You can imagine if you buy 60 or 70 things in your weekly basket, it can take some time to go and search for all of them," Sniezek says.

"Our research shows this reduces the time taken to place your first order with Coles Online by about 75 percent."

The digital chief is aiming for the same intimacy with the customer that founder George Coles might have had when he first took over the family store in early 20th century Melbourne - albeit at a much, much greater scale.

"If you go back 100 years to George Coles, I'm sure at the end of unpacking a cart he might have said 'I think you may have forgotten the milk this week'."

Sniezek said.

"Now, when you come to check out on Coles online, using a few computers in the background we will also suggest a few things that we think you may have forgotten."

The digital chief insists it is about customer service, not upselling.

"You have to do things in the way that best works for the customer. If you don't they will see through you very quickly."

Staying true to the data deal

This implicit bargain with his customers obviously looms large in Sniezek's business plans.

Brought into the company to reinvigorate trust and interest in the Flybuys brand, he understands that customers expect a good deal in exchange for their personal information.

"We enabled people to get $10 off their shop very easily. And for financial services customers, you're earning not just one point per dollar but three points per dollar. If you take out car insurance you get four points per dollar, and so on."

He also knows that the whole thing balances on a knife's edge of customer trust.

"What customers are saying to us is that they are prepared to give us their data provided that we handle it very carefully. They give us that trust and in exchange they expect great value and relevant communications."

According to the Flybuys privacy policy, the scheme's database holds information about its users from their name and contact details, to the size of their household, the age of their family members and the type of payment card they use.

The late 2013 theft of customer credit card details from US retailer Target menaces as a worst-case scenario lesson for everyone in the global retail industry. It cost the company US$10 million in compensation but incurred much more expensive damage to confidence in its brand.

Sniezek remained cagey about the specifics of Coles' infosec provisions, for security reasons, but insisted the company has "a very active program of work".

He also repeated Coles' promise to never sell customer data to a third party: "this is a blanket statement we live by".

His trust-based data mantra centres on "only doing things that would be within the reasonable expectations of the customer".

"If you look at the various privacy acts and all of the legislation around the world, that is how I would distill it all down," he said.

However, this sharing does take place within the walls of the burgeoning Wesfarmers conglomerate, and between a long list of Flybuys partners.

The Flybuys privacy policy also confirms that data on customer habits may be used to inform Coles' expanding financial services wing, which now offers credit cards and car insurance.

"Personal information" it explains, will be used to improve the program's "understanding of your interests, suitability, and behaviour in relation to products, services, and offers, including risk assessments for financial products (including credit and insurance)".

Willing to make the trade

None of this, however, seems to be creating any doubt in the minds of Coles customers, who continue to sign up to the loyalty scheme in droves, and who are actively making the most of what the Flybuys scheme has to offer them.

The 7.1 million member base is expected to grow even larger this year, according to Wesfarmers projections, and frequent

engagement with Flybuys offers has driven the website into the top 20 ranking web locations in Australia.

Analysts predict arch-rival Woolworths doesn't have deep enough pockets to cut its shelf prices any further in an effort to keep up with Coles and German discount outlet Aldi.

But Sniezek isn't content to leave Coles' competitive edge at the price tag - a temporary tactic at best. He and the growing digital team are looking to inject some start-up style innovation into grocery shopping, to give consumers a level of convenience he hopes they can't resist.

"We are trying to create a culture where we are constantly looking at innovation, focussing on small changes with big impacts," he says.

"There can be a tendency in the IT world to think we have to do huge projects in order to deliver benefits. We're really looking for a lot of small things that we can get done very, very quickly that will have big benefits for our customers and our team members."

One of Coles' big innovations has been taking its 'click and collect' system - designed for people who want to order online but can't be at home to take a delivery - to the next level.

"We now have lockers in convenient areas at a number of our Coles express sites and people are able to turn up, punch in a code and collect their groceries - including chilled and frozen products that are kept in separate lockers," he said.

"I think this is pretty much the first example of this in the world."

Coles has also just released Hiku to a test group of 50 customers. Hiku is a hockey-puck shaped device that takes instructions by voice - like 'I have just run out of carrots' - and transmits this information back to the Coles' app shopping list.

"We are doing this in a start-up manner, using lean thinking, getting things done very quickly and getting the product out there to see how it goes," Sniezek says. ■

Mining for value in tough times

PAUL BAKER - ILUKA RESOURCES

Beverley Head | May 15, 2015

Paul Baker is not a fan of technology for technology's sake, and working for his company's very survival has taught him to focus on the essentials.

In charge of IT for mineral sands business Iluka Resources, Paul Baker's laser-like focus on the business case has been honed through a career largely spent on the vendor side of the tech industry.

Fresh from his Curtin University information processing degree, Baker began his career at Alcoa in Perth before hopping over the fence to work for technology companies including Rank Xerox, Telstra and CSC.

By 2006 he was ready for a change and joined WA-based Iluka Resources, initially heading up the project management office before taking on a role as manager of information systems and technology in 2008.

Baker says his vendor experience drove an acute focus on the need for any technology investment to "create and deliver value for shareholders".

"It influenced me to be very clear about what the business benefits were," he said.

"Often when you start off delivering a project there can be lots of nice-to-have deliverables or distractions that can take you away from the core value of what the project was set up to achieve.

"If you are a consultant you are not going to get paid for the additional deliverables unless it is agreed up front, so that whole scope management effort is quite key for me."

Innovating when money's tight

Iluka isn't flush with cash either.

The world's largest zircon producer (the mineral used in ceramics, cosmetics and fibre optics), Iluka is also a major producer of high-grade titanium dioxide products (used in aircraft, solar panels and dental implants).

But group earnings have fallen three years in a row, and in 2014 the company reported a loss of $62.5 million.

Baker acknowledged the company has had some

fairly challenging times, and in recent years has been more focused on simply keeping the business going.

"So we haven't had the luxury of more profitable companies where you can invest more heavily in IT and performance improvements," he said.

"But we do have a push within Iluka around innovation and I think IT will have a key role in some of that."

IT is seen as core part of Iluka, Baker says, but admits it's coming off a fairly low base.

However, one positive about the market in which Iluka operates is that mineral sand processors can't easily be Ubered - meaning Iluka has no imminent digital disruptor threatening its business.

"You still have to have the tenements, still have to locate the deposit ...then you have to dig it up and process it," Baker said.

"With Uber you are sidestepping all the infrastructure of things, the taxi, the taxi licence, fitting out the car with equipment....whereas with Iluka you can't really bypass any of that.

"There are some mining companies that do it better than others - but I can't see an Uber coming in and transforming the way things are done."

Baker and his team of 40 IT employees and contractors support about 700 employees and have oversight of IT equipment across about 40 different locations – from simple deployments of a PC and a

modem located on a wharf through to its data centres at different mines.

Iluka is a Wintel shop, with a SAP ERP at its heart. It uses Acquire for its geological data management system, is moving to Insight for production accounting. It also uses Matrikon to provide processing plant connectivity.

The company has consolidated its metallurgical accounting systems to deliver greater transparency about its operations and to support decision making.

To cloud or not to cloud?

As far as technology platforms go, Baker is now considering his options as Iluka's production servers reach end of life in 2016, and is weighing a move to the cloud.

"We had a look at cloud when our servers came to end of life about four or five years ago - but that was too early for us."

As a miner with remote sites to support, Baker needs to consider "site survivability". At present the company hosts Exchange and Outlook at each site, and locally hosts the phone system, along with process control and a number of key mining applications.

"That means if we lose communications to a site they can still email each other and talk to each other. They have a relatively good level of functionality even though they are cut off from the outside world in that site."

If Baker ditches his site survivability approach and puts it all in the cloud, the company faces the prospect of a site being almost completely isolated in the event communications go down.

"That's one of the challenges for us".

He is however, keenly aware of the cost benefits involved in such a move.

"Our objective is to create and deliver value for shareholders, and we have to be very cognizant of that and make sure that the move to a cloud or the decision to stay on our own servers or hybrid model ties up with that objective for Iluka," Baker said.

Despite the spotlight on security and reliability of cloud services more generally, neither are a huge factor in Baker's decision on a cloud shift.

He's more concerned about the location of the data and the subsequent latency.

"We have operations here in Perth, the mid-west of WA, the south of WA, South Australia, Victoria, Brazil, Shanghai - so we would need to make sure the latency to all those locations meets our business needs," Baker said.

"The decision about moving to the cloud is a big one for us."

In terms of deploying innovative technology to support business processes, Baker is somewhat constrained as Iluka outsources the actual mining and transport of materials.

It's here that there's been a significant push to invest in internet of things deployments and testing of technologies such as driverless trucks.

Iluka does deploy mobile technology to support workers in its processing plants and its exploration teams. Workers are currently provided ruggedised laptops, but Baker is keen to test tablet and wearable technology to make sure all employees have access to the information they need to do their job.

"If you are out on the site fixing a pump and you can get access to the information you need around that pump, and order parts from the warehouse while you are right there - rather than having to write it down, walk back to your desk and put it into a system, then go out and try to do your work again - that's a key one for us."

Baker ultimately sees his role as providing information systems to support Iluka's core value chain – adding value to exploration, developing mines, mining, and processing to support sales and distribution as well as critical health and safety programs using a specially developed business intelligence dashboard.

"At the end of the day they are our core processes. I believe there is higher reward in those than there is in tweaking SAP or support services."

Sending in the drones

STEPHEN PHILLIPS - TRANSFIELD SERVICES

Paris Cowan | May 19, 2015

Margins are getting tighter in the industrial services industry, so Transfield Services' Stephen Phillips looks offshore - and to the skies - for the solutions he needs to keep pace.

Phillips concedes the industrial services industry "may be slower than other industries" when it comes to digital innovation.

But this reputation hasn't stopped the global contractor from tinkering around with a brand new set of drones.

As chief executive of Transfield's business services wing, Phillips is leading the drone trial and visibly lights up when he talks about the "really cool" scheme.

Transfield has the statewide contract to maintain NSW school buildings. One of the most time-consuming tasks in its remit is sending staff - equipped with loads of safety gear and a specially built protective scaffolding - onto roofs to check the gutters for leaves and other hazards.

Very recently, the company has started testing out whether drones can do the same job outside school hours.

"The trial went really well," Phillips told iTnews.

"It is an example of a technology that both improves safety and delivers a cost saving."

Time and cost benefits aside, the drone trial is even more important because it shows that the industrial services sector - driven by cost margin and price wars - can still innovate.

"This industry would not usually be seen as being on the forefront of this sort of stuff," he said.

"Whether or not the drone trial becomes a large scale application of that technology for us, what matters is that it represents our ability to think in an innovative way.

"These sorts of initiatives get people wondering about how we can make use of new technology and encourages them to innovate more broadly than we might traditionally do in this industry."

Next-generation outsourcing

Transfield Services has a footprint across numerous diverse industries in Australia.

It runs defence bases and offshore detention centres, rolls out telecommunications networks and services oil wells. The company employs roughly 19,000 staff, a figure that doubles when its subcontractors are also counted.

It doesn't necessarily have a Uber or a Netflix nipping at its heels, but it has been forced to deal with a transforming commercial environment over the past six or seven years. And in many cases the most viable business response has been a digital one.

"Margins in this industry are not high, and that means we have to be able to leverage a lot more than perhaps is the case in other industries," Phillips said.

Once upon a time, players in the first-generation industrial outsourcing sector could contract on a cost-plus pricing model that allowed providers to guarantee a percentage mark-up on the services they delivered.

But this commercial model has more or less dissipated now and businesses like Transfield are expected by their clients to wear a lot more of the risk if their services run over cost.

"But our clients are also expecting us to continue to deliver value over time," Phillips said. "And often that continuous improvement comes from deploying technology."

The upshot is that checking for leaves in the gutters

isn't the only function that Phillips - who oversees all business services including IT plus procurement, HR and equipment assets - is looking at automating.

Already, a number of tasks in the Transfield payroll department have been automated, a trend that Phillips expects will expand.

"Across the board we have seen a shrinking of those transactional roles and no doubt there will be more," he said.

"There is a lot more automation that we will roll out over the course of this year that again will take a number or those roles out."

Transfield is also in the midst of the third phase of an outsourcing journey that has already seen many of its core operational IT duties - infrastructure, applications, support desk - sent offshore with key partner Wipro.

"That was driven by a number of considerations: cost, capability, and the ability to leverage a large offshore player in terms of deeper technical capabilities than we had," Phillips recalled.

"After that we offshored a large amount of our back-end business processes like payroll.

"The third one we are looking at right at the moment is shifting procurement overseas.

"It has not all been smooth sailing - it never is with these sorts of things. But overall we have seen the benefits play out."

Disrupting the CIO?

How does the offshoring of tech roles affect the CIO role itself?

Phillips denied that the planned slimming of in-house IT had anything to do with the expansion of his remit from chief information officer to the chief executive in charge of the full spectrum of corporate shared services in 2013.

But he does think that a tendency towards shifting IT services to third parties is changing the way particular skills are valued.

He says "there is no doubt" that roles will change.

"When you have more of those activities being done outside the organisation, the focus moves to managing partners in that environment," he told iTnews.

"I am also seeing more investment into specialist areas like security and risk management. Where technologies such as cloud deploy smaller providers and niche providers this raises an issue around the security of that data.

"There is also an increasing focus on the IT people that are dedicated to the needs of the business. Their skills and their ability to orchestrate what we want from the broader industry is increasingly critical."

Keeping up with customers

Phillips will need to find and retain these new, value-added IT skills if Transfield is to have any hope of staying on top of the digital wave.

He has already finished a rollout of Office 365 across the organisation, and in June expects to see the final deployment in Transfield's migration to a single consolidated instance of SAP's ECC6 ERP suite across the organisation.

Transfield's growing fleet of mobile devices in the hands of its field workers presently numbers "a couple of thousand". He's also eyeing off adding ruggedised gadgets to the collection for oil and gas workers.

Phillips says beyond the world of profit margins, one of the biggest drivers for innovation inside the company is the need to keep up with increasingly tech savvy clients.

"If we have an oil and gas client who is using augmentation technologies, we're going to have to be able to use that augmentation as well or we will find ourselves behind the eight ball as far as our customers are concerned," he said.

"If they are technologically advanced in areas we are not embracing, then we run the risk of being exposed to other competitors who are able to do those things.

"Certainly we are not where banking and airlines are in terms of technology, but there is no way we can sit back and assume we can duck for cover as these changes play out."

Content, cost & constant innovation: How Foxtel plans to take on Netflix

NELL PAYNE - FOXTEL

Beverley Head | May 20, 2015

Nell Payne inhabits the "brave new world of blue strings and networking". Just don't ask her to put a TV screen on your microwave.

Just ten years ago, anyone wanting to get into the broadcasting business needed a slice of spectrum, specialised technology, skills - not to mention approval from the communications watchdog ACMA.

This high barrier no longer exists, says Foxtel's head of techonology and operations Nell Payne.

Payne – who can still split a coax cable and put a termination on it with the best of them – says the default communications layer for companies such as Foxtel is now IP (internet protocol) based.

This means IT systems are catching up with broadcast systems. And if a channel isn't an instant path to audience share anymore, content and service delivery become king.

Once-was-a-disruptor

Foxtel was born in 1995 through a a joint venture between News Corp's Fox and Telstra. It later merged with Austar in 2012.

Things have come a long way. Today Foxtel offers a broad range of entertainment options including cable television, iQ personal video recorders, mobile streaming apps, and Presto (a joint venture between Foxtel and Seven West Media) in order to compete with global powerhouse Netflix and Stan in the emergent subscription video on demand market.

Competition in the space is fierce. Mere days after launching in Australia in late March, Netflix already accounted for 15 percent of traffic for just one of its ISP partners, iiNet.

While Foxtel will likely benefit from the Government's planned introduction of the goods and services tax on all digital content, which is expected to help level the playing field for local providers against international rivals, it has a battle on its hands.

Not that Foxtel was waiting for a leg-up.

In 2014 the pay TV network lowered its prices in preparation for the competitive onslaught expected from the arrival of a local version of Netflix.

The move paid off and by the end of December Foxtel had 2.6 million subscribers on its books, with some media analysts predicting that number could rise to 3 million by 2017.

It also recently announced a no-contract, no lock-in service to woo even more customers.

No room for downtime

It's Payne's job to make sure Foxtel's systems are in proper working order.

Payne has a technical background and a degree in electronics and electrical engineering. Given her current broad role it's a useful foundation.

"I make light of it by saying that my problem is the mains and everything you plug into it. The diesel, the UPS, the building management systems, the IT, broadcast systems, the content systems, the desktop systems," she said.

These are the systems that allow Foxtel to compete in a sector where disruption is rife and the challenge to protect intellectual property continues apace thanks not only to peer to peer filesharing, but the advent of streaming video services such as Periscope and Meerkat.

Payne however says she thrives on acute competition.

"Nothing makes you fitter and stronger than competition.

"I think it's a really fun time for Foxtel. There are a couple of products that speak to our approach - principally the iQ3 which blends IP delivery, broadcast delivery, vod (video on demand) and a screened or linear service in one user front end," she says.

"The reason we think products like iQ3 differentiate us and identify our bench depth in this new environment is that customers buy and engage with and love content. I always joke that customers would watch Foxtel on a microwave if we could make it happen.

"Please don't print that or someone's going to come trotting downstairs and say 'why can't it work on a microwave?'," she laughs.

Payne acknowledges that customers don't care about what's under the hood – they just want seamless, smooth access to content.

The company faced a bit of a hiccup when the iQ3 first launched over performance issues, though the cacophony of complaints has now hushed.

Building infrastructure for the future

The iQ3 system is just one pointer to the constant round of innovation at Foxtel, according to Payne.

Innovation and transformation of the organisation's information systems is also continuing under the watchful eye of David Marks, Foxtel's director of information services.

Those systems are being constantly fine-tuned to meet customer expectations.

"We need to make sure that the infrastructure and systems underneath will support that changing device market," Payne says.

"So ten years ago, five years ago, no one would anticipate that everyone would have an iPad, iPhone, iEverything. In five to ten years' time we are not going to know what devices are going to be in the ascendancy.

"The trick is to build infrastructure that is flexible and can support the changing customer desire and need. To make sure that we rigorously review and adopt standards where they are appropriate and a proprietary approach where appropriate."

Having access to more, high quality data will also improve customer service offerings, according to Marks.

Since 2011 Foxtel has been on a journey to bring all its customer data and the technology stack back in-house to better manage online advertising and customer targeting, and Marks expects the insights delivered will be immensely valuable to the company in the future.

Cost consciousness and the need for flexibility is also influencing information systems decision making.

atever isn't spent on keeping the lights on can be re-diverted back into the content that will build Foxtel's subscriber base.

The company already uses the cloud-based ServiceNow to handle call centre case management, outsources the overnight batch processing of its billing system (Comverse's Kenan), and currently has a series of request for tenders in the market for other new solutions.

Taking cues on culture

As far as nurturing an innovation culture is concerned, Payne is inspired by the way Commonwealth Bank stood up its online trading division.

To achieve the required speed to market, the bank had to forego its traditional internal development and procurement processes, and instead established a separate company, separate staff, and separate procurement processes.

Once the business was up and running with a decent cashflow "they integrated it back into the mother ship and made it rugged and a force to be reckoned with and that's something that Foxtel has embrace," Payne says.

"So when we launched the Go platform for the Olympics in 2012, we stood up a little specialist team to get the application stood up, integrated and tested, and as soon as we had volume and customer buy in we then reverse integrated into the mothership," she told iTnews.

"We have a blended approach. Maintain governance through the big end of town processes and spin up work groups to achieve these often testing functions - because you often don't know if it's going to work until you've built them so we have these little hot house environments where we test things up and let them go."

The beauty of that, she says, is that you find the infrastructure that suits the product instead of designing the product to fit the infrastructure. ■

Predicting a road accident before it happens

LISA TOBIN - TRANSURBAN

Paris Cowan | May 20, 2015

Lisa Tobin is preparing Transurban for a future of driverless cars, road signs that talk and congestion that can no longer be solved by laying down new bitumen.

The tollway operator's customers judge its perfomance on how long it can get traffic moving again following a road accident.

So Transurban has uncovered a nifty way to to get a head start on this KPI, by trying to fix the congestion before the incident has even happened.

Its Melbourne headquarters remain a clairvoyant free zone, but IT general manager Lisa Tobin and her team are taking on similar functions in partnership with resident data scientists.

A recent proof of concept showed that by combining traffic data, control systems data, weather data and some other publicly available information sets and feeding everything into Transurban's predictive analytics engine, the organisation could predict incidents 30 minutes before they happen with 90 percent accuracy.

The conditions that consistently lead to road prangs are surprising.

"You would probably think the precursor to an accident would be peak hour traffic, or rain and diminished light," Tobin told iTnews.

"What we actually found is that the high risk time is on a Sunday, when speeds are higher and traffic is less dense. We are hypothesising that people are may not be as alert as they are in their working day.

"They might be tired or perhaps worse for wear from their weekend. They are just not as attuned to what is going on around them."

The company's new predictive analytics capability has big implications for Transurban, which is already tinkering around the smart infrastructure space.

"It gives us a great opportunity to look at how we use real-time messaging signs to keep people alert and aware of increased danger," Tobin said.

"At the moment we do this with signs on the road.

But increasingly, as more cars roll off the production line with onboard computers, there is the potential for us to interact with those visual displays in the car, and then a little bit further into the future we can start to interact with what their car is actually doing."

Cars that talk

Transurban is used to taking a long-term perspective on its business.

When your core capability is building major tollways through Australia's biggest cities, 10 or 15 years becomes a pretty standard project timeframe. No-one builds roads overnight, so looking towards the future comes naturally.

For Tobin, this outlook goes beyond boardroom platitudes. Transurban is already actively preparing for driverless cars and interactive road signs and the impact they will have on its commercial model.

In March the company announced it had set up a partnership with Optus, TomTom, and analytics specialists Quantum IT to nut out the ways that Australian transportation is likely to be disrupted by this technology - and how Transurban needs to prepare.

Tobin describes the group as "a sort of think tank".

"We are thinking about how we see business

models changing and what trials we would like to do to prepare for that," she said.

Quantum is crunching the numbers around the best models of user-pays road pricing going forward, be it per-kilometre fees, per trip or fees or annual fees charged according to anticipated usage.

TomTom, the GPS provider, brings its mapping expertise to the table. And Optus is offering insights into 5G network prospects, as well as providing Transurban with a window into Singapore's pioneering smart transport initiatives via its parent company SingTel.

The company has also teamed up with Virginia Tech in the US in an effort to get grants funding for a connected vehicles pilot.

"When I first arrived at Transurban they said change is coming, but it is 10 or 15 years away," Tobin said.

"It became apparent that they had been saying that for a while and they planned to keep on saying it for a while.

"We have since taken the view that we need to be ready for different business models in three to five years."

The exec is pragmatic about the challenges involved on the non-technological side before this Jetsons-style vision can be realised.

"There are driverless cars already. People have shown that they can combine big data processing with data analytics to allow a car to effectively 'see' the road and learn things like a human," she said.

"But the critical path is going to be policy development and consumer acceptance.

"No-one is going to allow wholly driverless cars or cars taking instructions from roadside signs before we have sorted out who has got warranties and who holds the liability, and what the insurance companies think.

"Socially, there is also the question of what we as community members think about ceding control. It is quite a primal, tribal thing to be in control of your own transport. So it will require quite a change in thinking."

In Australia progress has been slow. In February the South Australian government announced plans to rewrite its road rules to make provisions for driverless vehicles in an effort to address safety and road congestion. So far, no other states have followed its lead.

The US is miles ahead in terms of registration and testing. Around 800,000 American cars were registered for machine to machine accounts connecting them to the internet last year.

Tobin says she is watching the University of Michigan very closely as it sets up a "miniature city" with all the road infrastructure and signage you would expect in an urban landscape to test out vehicle-to-vehicle communications.

"It is not just about cars keeping away from other cars," she said.

"It is also about cars interacting with some of the roadside technology services to understand speed limits, lane usage.

"That whole dialogue between the cars and other cars and the cars and infrastructure, means that our focus on operational excellence will become based around these communications and these devices."

Bits, not bitumen

For Transurban, the roadmap for optimising traffic flows and revenue has already begun to shift away from duplicating laneways towards technological solutions.

"Once upon a time the simplest answer to easing congestion or meeting the need for road capability was to put down more lanes and take up more space," Tobin said.

"But in a number of urban environments that is just not a feasible option anymore, so it now comes down to how we use the existing floorplate more

effectively."

On Transurban's two US toll roads, the company has rolled out real-time dynamic toll pricing to control flows. In both locations, toll roads sit side-by-side with free public roads, and offer a speed guarantee to appeal to paying customers.

The operator pushes up the fee as demand rises to keep its traffic volumes steady, and ensure that it can meet its speed benchmark. However, Tobin doesn't think the approach suits an Australian landscape because drivers aren't presented with the same dual options.

"In the US there is a more explicit choice. If you needed to travel on the M2 in Sydney, the alternative is really quite messy," she said.

Instead, her team at Transurban is looking at how it can start to make all the traffic flow data it already has at its fingertips available to consumers, to allow them to make better choices about the best way home.

Tobin acknowledges that the market for transport apps is already pretty full, but has set her sights on something more personalised.

"Technology means it is now possible for us to devise the best route for you specifically because we know what roads you use, rather than just applying an aggregated, averaged travel experience," she said.

"We are looking at how we start to provide information services that are more individually targeted, whether that is on our roads, on other roads or on public transport."

Rather than charging a small fee for this kind of tool, she said, the driver of the concept is fostering better traffic flows across the network by diverting travellers away from congestion routes.

"That is a win-win for everyone. The travelling public moves faster and it moves closer to the optimum traffic flow on our roads," she said. ■

Don't mention digital disruption to David Whiteing

DAVID WHITEING - COMMBANK

Allie Coyne | May 26, 2015

Buzzwords don't curry favour with CBA's new CIO - it's all just innovation to him.

If you ask David Whiteing, there is nothing digitally disrupting the financial services industry.

A former IT consultant with the likes of Accenture and McKinsey, Whiteing doesn't like the term, nor the concept that his business might be being shaken up.

So what about the proliferation of mobile devices, the consumerisation of technology, Bitcoin and other payment protocols, or cloud computing?

"It's life," Whiteing says.

"I don't see it as something we have to react to, I see it as a part of business. That's the way we go to market.

"Our view is ten years from now, mobile devices will be the major form factor in pretty much everything people do, not just banking. So the question we've got is how do we integrate that in a broader sense beyond just the banking services, and actually think about this in terms of a total end-to-end customer service?"

Whiteing says he is yet to see a fundamentally disruptive business model - which he categorises as something that has never existed before - enter the financial services industry.

He references Google's development of a new search paradigm and Amazon's creation of a radically different platform for retailing as two examples that qualify for the disruptive label.

But the "trends" that are currently being bandied about as disruptive to the financial services industry - like Bitcoin and the rapid rise of mobile devices - are merely "innovation".

"It's entirely what we'd expect," he says.

"Really disruptive models are much more difficult to pick, and I don't see many at this stage."

CBA's goal is not to try and predict every new trend, but rather set itself up in a way that enables it to respond quickly and with ease to the latest innovation.

"This digital disruption that a lot of people feel is threatening and challenging, for us is just another consideration we take into account in planning how we

respond," he says.

"[Innovation] is actually driven more by business decisions than it is a massively challenging thing we have to create a program of work to do.

"I think if you retain that mindset, then the danger is you're already a long way behind."

He does, however, see a lot of potential in digital currencies like Bitcoin.

While Whiteing considers the currency aspect of Bitcoin a "business decision" and driven by regulatory requirements, the protocol behind it is "absolutely interesting" - but he's quick to call it a "technology evolution" rather than digital disruption.

"The protocol is an evolution, it's an innovation. Payments protocols are over 40 years old. But Bitcoin through the distributed ledger using public and private keys has created a protocol that allows you to transmit and receive information in a much more secure way," he said.

"That's just a newer, modern way of thinking about those protocols; breaking them down and reinventing them."

The bank has played around with other payment protocols in the market, and plans to use Ripple to transact between its subsidiaries. It's also considering trying some out with its customers to test the waters.

"We're more inclined to go with liability-based

ledgers over asset-based ledgers, because there's an inherent risk with an asset-based ledger like Bitcoin that you don't know the value of the asset you acquire. But with a liability-based ledger it's a pretty straight accounting process," Whiteing said.

"The interesting thing we think around payments protocols is they have multiple use cases. You can start to transact in things other than currency - so you could may transact in things like loyalty points, or you could start to use it for other transactions like share trading.

"It's definitely going to play, and the great thing about it is the various protocols that are appearing - Bitcoin is by no means the only one - they're just good technology. It's a very cool space, and one that I see is imperative for us to be playing in."

Too close for comfort

CBA's $1 billion, five-year core banking overhaul gave it a running head start in terms of room to move with technological innovation.

Under former CIO Michael Harte, technology became a core strategic priority and the bank introduced a new-found focus on the customer at the centre of all its operations.

This has meant CBA has comfortably retained the crown of chief innovator and tech leader within Australia's big four banks for a number of years now.

But while NAB and ANZ have become somewhat waylaid with their own transformational efforts, CBA's main technology rival Westpac has now mostly completed its efforts to tackle the front-end first and is now focusing on sorting out its backend.

The bank has just started work on a long-awaited upgrade to the latest version of its CSC core banking platform, Celeriti, which will also inform how it tackles a planned "customer service hub" - a master database of sorts set to serve as the single point of data on every customer.

It means Westpac is now nipping uncomfortably at CBA's heels: the near identical announcements of a cardless cash feature last year, and last month's boasting of Apple Watch apps within days of each other demonstrate the growing rivalry.

But Whiteing appears almost disinterested in what appears to be a slowly closing gap.

"Every business has their own context, and you make your choices based on the context you're in," he says.

"We had a requirement to do a core replacement many years ago for a multitude of reasons - that context was applicable then, we did the work we needed to do then aggressively amortised, and now we continue to invest more in technology than anyone else in the marketplace.

"We hold the lowest amortised software position on our balance sheet. And we're financially performing as well. That's a great position to be in.

"The rest is interesting, but not relevant to us."

He does, however, worry when people begin to talk about "silver bullets" in terms of tech overhauls.

"The reality is it's a composite of things that you need to do," he says.

"The real skill in driving and defining leadership is to be across all of those qualities so no one part of your architecture becomes too disconnected or too far away from another part, because at some point it'll catch up with you."

It's all about the culture

Where Harte's tenure could be characterised by the big-bang core systems overhaul, Whiteing's focus is centred on fostering the right internal skills and culture.

It serves as an example of two starkly different approaches: while Harte happily served as Australia's rock-star banking CIO, with Whiteing you sense he'd much rather be in the trenches getting stuff done than having to sit through media interviews.

His view is that it's collaboration and skills that will allow a business to succeed - not the technology

choices it makes.

"The technology part is relatively solvable - what's much more relevant is have we massively simplified and sanitised our business and everything that sits around that?" he asks.

"Have we really challenged ourselves to evolve and develop the human capability? Have we got the right people with the right skills so the people in the business and the technology function have the right ways of working together? Are we working with the right cadence, are we constantly evolving and updating the skills we've got?

"Are we making sure that as we recruit people we bring in those with the right skills beyond just functional or aptitude, people that have much harder to measure skills - ability to problem solve, resilience, ability to work in a muche more collaborative, agile way?

"That's a minimum five year effort."

Whiteing cites Google as one example of how success can be achieved by taking a longer-term view.

"Very early on I remember seeing an interview with what would have been the equivalent to a head of HR describing how they made choices, and the question they would ask is 'will this work when we are 10,000, 20,000 people?' They were a 400 person business at that time," he says.

"But they were taking a long-term view, thinking 10, 20 years ahead and making choices with that lifecycle - that's a big opportunity for a business like ours.

"The more we can pivot away from a short-term, project-oriented perspective and to a longer-term, outcomes-based perspective the more successful we'll be.

"Over the long cycle we'll outperform because we'll be more effective and more efficient in the way we spend our money. We'll have been able to deliver more for the same dollars, and we'll have created a much better customer experience."

While soft skills weigh heavily in Whiteing's criteria for an ideal worker, he's quick to not discount deep technical skills.

"I want you to be a deeply skilled software engineer or infrastructure engineer or UX designer, but I also want you to have the ability to problem solve, work collaboratively, work in a dynamic and fast environment, in cross-functional teams, and understand that when a risk person is pushing something they are doing so with a reason," he says.

"The combination of those skills and deeper domain skills are the winning combination. Too often technology problems and badly-run projects come about because those skills weren't there in a composite way at the requisite level."

His focus for the next five-odd years - he won't put a timeline on it because "there's always work to be done" - is to make sure every staff member in the IT shop is in exactly the right function to suit their skills.

It will mean reallocating workers, reskilling staff, and letting some go in order to create teams that operate to the highest level. At least a quarter of Whiteing's time is spent on talent, he says.

"Everyone comes to work every day trying to do the best they can. And if they're not able to do that, then that's a failure of leadership," he says.

"Leaders need to understand what their team is able to do and where the gaps are, and either helping people to make the transition or recruiting the right people to fill that gap.

Whiteing believes CBA can retain its leading innovator position by organising staff correctly - allowing the business to operate at its full potential and deliver those innovative solutions it needs to stay ahead in the cut-throat financial services game.

"We create a team of people that are very expert in a particular domain, and them make sure there's a constant flow of work around that domain," he says.

"That gets the team much, much closer to the customer, and allows them to drive that standardisation and simplification activity, and in a lot of cases what we're finding is those people are actually at the forefront of business innovation because they really understand the [technology] solution we've got and what it's capable of doing."

Beating the disruptors with bricks and mortar

MANDY ROSS - TATTS GROUP

Liz Tay | May 27, 2015

With ten years worth of data, a team of Wotif alumni and a new CRM, Mandy Ross is setting out to prove that online challengers can be beaten.

Tatts Group was busy merging and acquiring various gaming, lotteries and wagering businesses across Australia when it realised that the game had changed.

A landmark 2008 High Court ruling against "protectionist" state gambling laws opened the wagering market to international competitors able and willing to bet big on Australia's appetite for online platforms.

Digital disruptors backed by foreign giants Paddy Power and William Hill have since won ten percent of the $3.4 billion Australian horse and sports betting market from duopolists Tatts and Tabcorp.

According to Tatts CIO Mandy Ross, younger punters prefer to bet digitally, and online-only bookmakers benefit from lower costs and more resources to focus on that space.

But Tatts has an ace in the hole: more than ten years of customer data that will help inform a new customer-centric, omni-channel strategy that aims to put "the right products in the right place at the right time".

"We've got all this historical information; we know our customers intimately," Ross said. "We just haven't really unleashed that.

"If our customer wants to place a bet with us online because they're sitting in the comfort of their own home, then we want to be there. If a wagering customer is sitting in a pub or club or hotel with their mates, enjoying a game of football, then we'd also like to be bringing our product to them.

"[That's] the stuff that we'd be looking to do: offer a more personalised experience so it's more convenient, more seamless for [customers] to interact with us, rather than any kind of Big Brother-type stuff."

A group-wide CRM system and team

Tatts will this year spend tens of millions of dollars on its new customer-centric strategy, which encompasses

digital marketing, analytics and CRM.

The group comprises three business units: gaming (pokies machines), lotteries, and wagering (horse and sports betting). The latter division was rebranded UBET last month, with a new website and smartphone app, and a bigger marketing budget.

Tatts began implementing a new SAS CRM system and centralised CRM team for lotteries and wagering in 2013, and credited the new approach with more than $1.4 million per month in sales over the last financial year.

"We've certainly made a solid investment acquiring a new CRM platform and also hiring a great CRM team," Ross said.

"We have aspirations there to really lift our capability.

"Our goal is to have world-class CRM in place within the business within the next 12 to 18 months. I'm also looking at our data and insights strategy at the moment. We're really looking to do more with the information that we have."

Tatts is planning to invest in Microsoft PDW for data warehousing and Hadoop for analytics, Ross said, but it would need to be mindful of customer privacy and industry regulations.

To that end, Tatts will likely anonymise its trove of customer data, and use it to get a generalised view of individuals' behaviours and preferences.

That information could then inform a more personalised website layout for logged-in customers.

"When you talk about how can we differentiate ourselves from competitors in the industry, I firmly believe it's about the insights and data that we already have at our disposal," Ross said.

"I suspect that we have over a decade worth of data, obviously at different granularities.

"How relevant that is today, I'm not sure, but certainly we've got history around lotteries draws and all sorts of interesting stuff. So we're going to take a look at it and see what is actually meaningful to us today and moving forward."

Digital disruption and its limits

When Tatts CEO Robbie Cooke took the reins in 2013, he immediately began steering the company towards a digital future, and with good reason – according to IBISWorld research, digital betting underpinned most of the industry's growth in the past five years as demand for traditional TAB outlets fell.

Cooke and his CIO are no strangers to digital disruption. Both previously worked at Wotif, which was one of the first successful online travel agents in Australia.

Wotif made a splash when it listed on the ASX in 2006. But its $360 million annual revenue accounted for only a fraction of Australia's $9 billion accommodation market at the time.

Tatts' online competitors are in a similar position. It's not their ten percent market share that has Ross worried, but how quickly that number is growing.

"As soon as any competitor has a decent foothold in the market – once they exceed one percent – the rate at which they're growing is a good indicator of whether or not they're starting to gain traction and therefore are a threat that should be seriously contemplated," she said.

But digital disruption has its limits.

In the travel industry last year, Wotif's profits fell while Flight Centre's grew. According to share market experts, low barriers to entry for Wotif's direct competitors had made the online accommodation market increasingly congested.

Flight Centre was better protected from the digital onslaught, as its core business was a personalised advice and booking service it offered via phone, online and in person.

Tatts is betting that its omni-channel approach will prove similarly resilient.

"There's some interesting research coming out that pure-play [online] retail is not the path forward," Ross said, pointing to Amazon.com, which opened its first bricks-and-mortar store in February.

"The thinking is that people will want to venture out and interact in interesting ways. The way that they interact in a retail environment is certainly going to evolve, but the thinking is there's certainly a place for that virtual piece as well as the in-person retail experience.

"We actually see that we are well-positioned to differentiate ourselves in that way and we think that that strategy is well supported by some of the thinking and research that is starting to come out in the retail industry."

Restructuring for a digital future

Tatts' technology team has undergone some major changes since Cooke came on board.

The new CEO spoke publicly about growing Tatts' online business even before officially starting in his new role, and doubled the company's online resources in the 2014 financial year.

The group last year reported that its online channel had grown to represent 9.4 percent of lotteries and 22.9 percent of wagering sales, up from 8.2 percent and 20.2 percent in 2013.

"[Before Cooke took over], I guess the strategy had been slightly different," Ross said.

"There had been some investment in online and digital but it had been tackled almost as an add-on business unit. There was an online group running, say, online wagering – they were almost competing with the retail arm of wagering. And the same thing was the case

in lotteries.

"So there was certainly investment being made, but I guess the approach that Robbie has adopted and driven, and that I'm obviously picking up through the technology piece, is really about taking a whole-of-business approach to how we go to market in digital and online."

Soon after Ross was promoted to replace veteran CIO Stephen Lawrie last December, she restructured the division so that her direct reports were more product-focused instead of technology-focused.

Three senior technology executives left the group as a result of the restructure.

Tatts' technology leadership team now comprises CTO Janet Sutherland, gaming head Robin Mack, wagering head Ivan Ortiz, lotteries head Maree Adams, data and consumer head Dawn Stephenson, enterprise agility head Sharon Robson, and chief architect Derrick Hill.

Sutherland, Mack and Ortiz add to the Wotif alumni.

Ross said she sought staff who were adaptable, collaborative and good problem solvers, adding that she had been happy to find "a great number of people" who wanted to be a part of a more innovative Tatts technology team.

"We've certainly been doing some hiring and bringing in some external talent to complement the great industry knowledge that we have internally," she said.

"I believe it's the combination of both, mixing all that talent together: [people] who understand our industry, who have the history, and some of the people who've got more recent experience perhaps in different industries and working in start-up environments. That's really the formula for success.

"I certainly believe that no one person has the answer to how we should be responding in this complicated environment. It's through the combination of many ideas and enhancing those ideas that we can really succeed."

Change is the only constant at iiNet

MATTHEW TOOHEY - IINET

Beverley Head | May 29, 2015

iiNet's Matthew Toohey is trialling IBM's Watson - between preparing for an acquisition and making sure Netflix doesn't swamp the network.

Founded in a suburban Perth garage by Michael Malone in 1993, iiNet is currently Australia's second largest ISP. It has around a million customers using 1.8 million services.

Supercharged by a series of takeovers which have resulted in significant consolidation across the telecommunications sector, in the six months to the end of December the company reported record revenues up 11 percent to $547 million and after-tax profit of $32 million.

But that growth and user demand has led to technical challenges.

The latest and greatest challenge is Netflix, which iiNet CIO Matt Toohey says is the "the most disruptive thing I've seen in the last 18 months" in the telco sector.

The rollout of video streaming service Netflix in Australia has led to unprecedented, and unforeseen strain on the iiNet network.

A deal between the companies means that Netflix access goes unmetered on the iiNet network. Within a month of launch, Netflix traffic accounted for a quarter of all traffic flowing across iiNet's network.

"The utilisation of our network has suddenly increased dramatically - more so than we actually expected - and I dare say every other ISP will be experiencing the same thing," Toohey told iTnews.

"In the US when Netflix launched they saw a cannibalisation of traffic - people were using Netflix instead of using things like YouTube for video. The entire network traffic didn't increase dramatically - whereas in Australia we saw no substitution - YouTube traffic remained pretty static and Netflix jumped on top of that and scaled up rapidly.

"The total utilisation increased dramatically and disproportionately to what was seen in the US."

Dealing with that challenge largely fell to iiNet's

chief technology officer Mark Dioguardi and his team, who Toohey says worked round the clock to meet demand.

Toohey and Dioguardi carve up iiNet technology so that he owns everything behind the firewall, Dioguardi everything in front of it.

The only real impact Toohey's side felt from the Netflix disruption was the spike of demand in iiNet's call centres, which were suddenly inundated.

Australia's hottest corporate property

That isn't to say it is plain sailing on Toohey's side of the table.

March this year saw a battle kick off between TPG and M2 Communications to buy up the Perth-based telco.

Neither suitor has yet lifted the hood on iiNet's information systems, despite having lobbed bids worth $1.5 billion or more for the company. When they do perform their IT due diligence they will find well over 350 different systems running the joint.

Asked if he ever feels like he is juggling spinning plates, Toohey says that it's the second time in a week he's been asked that question.

"We have had extremely successful growth by

acquisition over the last few years. With that comes information systems and platforms that need to be maintained to service various products and platforms," he says.

"When we buy an organisation that has a capability, a system, a process, a product, we retrofit that into the iiNet core, we don't waste it or throw it away. For example, we are implementing products that we acquired after the AAPT acquisition a few years ago, and some core systems derived from the WestNet acquisition."

Many of the systems Toohey is now wrangling are also home-grown. Toohey says there wasn't always commercial or open sourced systems available to support ISPs in the early days, forcing organisations to develop their own applications.

So today, although iiNet uses Salesforce in some areas, its primary CRM is home-grown, as is the main ticketing system - although it uses Remedy to support corporate and government clients.

The default position today, however, is buy rather than build, and Toohey has a consolidation roadmap. But he acknowledges there is a long way to go with more than 350 separate systems currently in use.

"It is suboptimal and if I had the opportunity to start again I wouldn't do it this way."

But Toohey hasn't, in the decade he's been with iiNet, been able to slow the growth juggernaut in order to buy himself the breathing space to overhaul its computing platform.

"When I started there were about 400 employees, we are now sitting at somewhere in the vicinity of 3000. We are doubling in terms of customers, revenues, staff every two and a half years - it's been one hell of a ride."

That has meant Toohey has had to make sure that the information systems the business needs to run day-by-day - and most importantly to support its trademark customer service - are unimpeded. Consolidation has taken a back seat.

"We have a continual program of consolidation and a prioritised list of integration strategies and are systematically working through that to reduce what we call our technical debt. To reduce complexity, aim for simplicity."

"I don't want to make it sound like it is a mess, there is discipline there. Right now, we are well into several significant consolidation programs."

The question is, will Toohey himself be allowed to complete them?

Toohey and his team of 200 are likely to have new masters in the not too distant future. iiNet's board has already telegraphed its support for the sweetened $1.5 billion takeover offer from TPG.

"I could say c'est la vie. Whatever happens - there is a significant program of work," he said.

"My staff are dedicated, motivated, keen; they enjoy the work and the environment.

"I'm not seeing much concern among the team, everyone is rocking up to work with a smile on their face still. Also, a significant part of the team here have come in via an acquisition anyway - they've experienced it before - at least 50 percent of them."

Watson on the support line

Acquisition talk is not preventing Toohey from keeping one eye on what distinguishes iiNet from the market either.

Customer service has always been a priority for the company, and hence the information systems that support that are too.

Toohey says employees are paid and offered incentives based on customer satisfaction and service.

"It's part of our DNA."

"I think information systems are the key driver

and key differentiator of customer service," he said, explaining that the company's virtualised contact centre - using the Genesys platform - supports people working in a follow the sun arc from Auckland, across Australia and onto South Africa.

That means that customers can be routed to the most appropriate staff member regardless of location or time, to deal with the two million plus interactions that arise each month.

Toohey has also deployed Wikis, and staff are encouraged to use Lync to share insights and information in order to solve customer issues as effectively as possible.

iiNet has invested significantly in pulling together its data assets so that they can be used to provide added value to the customer service team.

Although Toohey's team has "played around with Hadoop" it is currently instead leveraging its IBM stack, consisting of DB2 through to Cognos and IBM's predictive analytics tool SPSS, to make sense of its data.

He is now exploring how it might be possible to deploy solutions such as IBM's Watson to support call centre staff, or allow customer self -service through the website.

While this is "very much a pilot" it demonstrates that despite all the takeover talk Toohey is still heavily invested in shaping the information systems for iiNet's future - whatever that might be.

As to his own future?

"I enjoy change," he insists. "I've got no concerns."

Telstra leans on partners as telco margins erodeRead more:

VISH NANDLALL - TELSTRA

Liz Tay | June 2, 2015

CTO Vish Nandlall is looking to bring a Google-like approach to Australia's biggest telco.

Telstra faces an existential crisis.

In some ways, it's the victim of its own industry's success, with 83 percent of Australian households connected to the internet as of 2013, according to the Australian Bureau of Statistics' most recent figures.

Digital players like Viber, Skype and Facebook have, in many cases, replaced traditional phone calls and SMS.

And consumers take connectivity for granted: while they are more reliant on digital services than ever, the means by which they get to those services has become largely irrelevant.

So telco profit margins are shrinking.

"There's a bit of a diseconomy of scale that is at play," Telstra CTO Vish Nandlall explained to iTnews. "[Consumers'] willingness to pay is going down, while consumption is going up.

"So the question is one of value: How can I create greater value across the delivery of those bits, so we can have more of a growth profile versus the current trajectory, which is a utility profile?"

Over the years, Telstra has branched out beyond traditional telecommunications into providing services like security, marketing and cloud for businesses, and entertainment and telehealth for consumers.

Many of those services are provided in conjunction with business partners like Medgate, Seven West Media, and SNP Security.

Nandlall wants to take Telstra's partnerships a step further, describing a "platform-based" business model that would open up more of the telco's capabilities to third parties.

"If I look at what a traditional telco offered – let's say it was voice – everything was pretty much vertically integrated from the voice application all the way down to the distribution to the consumer premises," Nandlall said.

"But if you take a look at the new world, you can

kind of almost segment that up. You could see an applications capability, which is the actual voice application. There's a connectivity capability, which is the physical infrastructure that connects these households and these wireless users to services.

"Then there's the whole distribution set of capabilities: our bricks and mortar infrastructure, our digital channels, our field force, our customer care centres ... there's all sorts of capabilities from a support distribution infrastructure that we have as well."

At the moment, none of those capabilities are currently exposed in a way that allows third parties to access them, Nandlall said.

"We're not really set up for third parties to leverage our basic DNA of services," he said.

"So the question is, how do you make those platforms, and how do you create the correct business model that engages partners so that we can become part of those new ecosystems and participate in their growth?

"That's really the transformation that has to happen for a lot of telco players and indeed that's what Telstra's journey is going to be over the next five to 10 years."

Digital partners

Telcos around the world have been trying to figure

out what to do about over-the-top (OTT), digital players like Skype, Viber and WhatsApp, which have been winning smartphone users away from traditional telephony for some time.

In 2012, analyst firm Ovum forecast OTT VoIP providers to cost telcos a total of US$479 billion globally in the eight years to 2020.

An EY telco industry report last year suggested a range of strategies including having telcos compete directly with digital disruptors by aggressively throttling OTT services and creating their own apps in-house.

Alternatively, telcos could choose to partner with digital players by, for example, bundling certain OTT services with their data packages, EY suggested.

That's where Telstra and its largest competitor, Optus, have diverged.

Optus' parent company SingTel made waves last year when CEO Chua Sock Koong said telcos should be allowed to charge OTT players for providing the rival services over their networks.

Singapore's communications regulator responded by stating that telcos should not restrict or block consumers' access to OTT services.

Optus has also flagged plans to charge video streaming providers like Netflix, Presto and Stan to ensure a high-quality streaming service to Optus customers.

Telstra has no such plans as far as video streaming is concerned, choosing instead to offer free six-month subscriptions to Presto and Stan to new home broadband subscribers.

Telstra has a stake in Presto via its pay-tv subsidiary Foxtel, but Stan is a competitor.

"There is a binary view of 'everybody is a competitor and I've got to compete at scale with them each', which I think is the wrong way to look at it," Nandlall said.

"I think it's more that there's ecosystems that need to be formed in each of those areas. We need to ask 'how do I participate in those ecosystems'?.

"If I look at something like the internet of things, is Telstra going to create all those applications, and serve every niche? It's obviously intractable for us to do that.

"The question is then, do we have the platforms so that a partner could come in and do that and be able to leverage a business that allows them to sell to residential consumers and industrial pro-sumers?"

Telstra's global head of OTT Will Hughs outlined its view of OTT partnerships in a blog post early last year.

Hughs said partnerships would give customers a better experience by optimising how OTT applications ran on its network – for example, by increasing network bandwidth for music and video streaming services.

That would in turn benefit OTT players by boosting subscription rates, revenue and brand loyalty.

Meanwhile, Telstra would benefit from access to more customer data – for example, whether users accessed online shopping or gaming apps – and tailor their marketing efforts accordingly.

From a technical perspective, Nandlall highlighted software-defined networks and network functions virtualisation as technologies that would allow Telstra to "actually participate in the delivery of applications".

'Out-experimenting' the competition

Telstra branched out into a diverse range of businesses under former CEO David Thodey, from buying video streaming platform Ooyala in mid-2014, to partnering with healthcare provider Medgate for its upcoming telehealth service, ReadyCare.

The telco giant has also bought six percent stakes in about 20 start-ups through its incubator, Muru-D.

Nandlall compared Telstra's diverse business interests with Google, which is involved in everything from search to wearable technology to self-driving cars.

"Google's main core business is selling ad inventory," he said. "Everything that they do is basically complementary to that business.

"They give away Gmail. They provide a tonne of capability for servers to accelerate content. They provide

really interesting different coverage capabilities like the Google Loon project. Even when you take a look at their infrastructure experiments, they're all about creating more eyeballs in different vehicles so they can monetise their ad inventory.

"That's the core of business and everything else is complementary in creating more value for their core business."

He's asking how the same approach can apply to Telstra.

"How do we participate in an ecosystem where these complements drive our core business, which is, in the end, still data access. How do I make data access more of a premium capability that is adding value? You have to tie it to a particular service," Nandlall says.

"So I look at all these other things as complements for something that is inalienably Telstra because not a lot of people can build out that infrastructure which is capital intensive. So you've got something that's a core business asset. How do you drive new value into that? By extending the ecosystem into these different areas."

As Telstra reinvents itself as a telco for the digital age, Nandlall is looking to drive innovation within the organisation through technologies that lower the cost and risk of failure.

Big data could help Telstra identify new projects, and more agile systems would help Telstra build and deploy projects at lower cost, he suggested.

"[Within] any company I've seen in the past, there's a huge amount of professional equity that people invest in to champion a particular program," he said.

"So the cost of failure becomes quite high because there usually is a reputation at stake, and as a result, that creates a tremendous amount of conservatism in terms of what we actually roll the dice on.

"If we can [transform] our underlying business platform [in a way that] helps to reduce the total cost of failure, it reduces the type of professional equity that people have to invest to champion a particular project.

"That's usually the place where I target: let's get into a mode where I can out-experiment the rest of the competition." ■

Inside the mind of the chief data officer

LIONEL LOPEZ - VEDA

Paris Cowan | June 5, 2015

Veda's Lionel Lopez thinks Australian businesses need to hire a dedicated data chief to avoid getting washed away in the information high tide.

If you believe Lopez, chief data officers like him will become a mainstay of Australia's corporate corner offices in the next couple of years.

Credit reporting agency Veda has been trading on its information holdings, and its ability to match credit patterns to identities, since the middle of the 20th century when the whole operation was run on card-based files zipped between shelves by staff members wearing roller skates, according to company legend.

So it makes sense that a business reliant on data as its bread and butter would need a CDO, a role Veda has maintained for two years now, with Lopez in the position since March.

But Lopez insists his company is not the exception.

"We have seen this type of role already emerging in the US and some of the western European countries," he says.

"I think we will see a growth in chief data officers in Australia too."

Analyst firm Gartner agrees, forecasting that globally 50 percent of companies in regulated industries like finance and telecommunications will appoint a CDO by 2017.

Other estimates have the global tally at about 400 significant CDO appointments worldwide, a figure that is doubling every 18 months.

Walmart in the US has a chief data officer. Barclay's Bank in the UK also has one. But the trend hasn't really taken off yet in Australia, where analytics remains primarily within the remit of the traditional CIO.

But that doesn't stop Lopez championing the cause.

He told iTnews he believes a chief data officer is critical to governing the flow of information into an organisation.

"You need discipline if you don't want to be submerged," he said.

"Someone needs to govern that or it can become

very chaotic with the pace with which the data is flowing into the organisation. It is a gatekeeper. You need a glossary, you need to be clear about the data dictionary. Everybody needs to understand clearly what an insight is for and what it means."

He argues that data will be the commodity that sorts the leaders from the pack more and more in the future of Australian business.

"I think data is the new oil. The problem with data is that there is no frontier. Oil is protected by borders, but data can be grabbed by anyone. So businesses need to be on top of their game," he said.

"I don't believe an organisation can claim they are customer centric if they are not insight centric ... You cannot say you know your customer if you do not have someone to connect the dots in the enterprise to understand what the customer wants and what they are doing".

"Secret sauce"

If Veda is to maintain its dominant position in the Australian credit reporting market - rather than cede to challengers Dun & Bradstreet and the Tasmanian Collection Service - it will be hoping Lopez can walk the CDO talk.

The credit reporting industry is a tightly regulated

space. Lopez was handed a whole lot of new data to play with at the beginning of last year when new privacy laws shifted Australia's credit reporting environment from 'negative reporting' - where only instances of non-payment and default can be collected and shared by the agencies - to 'comprehensive reporting', where a consumer's history of compliance as well as instances of non-compliance are added to the picture.

Even though Veda now operates its own marketing wing, Datalicious, which does ad attribution tracking for marketing companies, Lopez said this consumer information is "very ring-fenced" from the credit reporting operation.

Veda sources its data from the same sorts of places its competitors do - real estate agents, utilities, insurers, courts, government regulators and some corporate third parties. This means the volume of data itself can't offer the company a head start.

"[This means] it is about what you do with the data," Lopez points out. "That is the secret sauce."

Unfortunately one of the key characteristics of secret sauce is that it is secret - meaning Lopez refuses to divulge any of the tricks of his trade when it comes to the algorithms he uses to calculate things like a consumer's propensity to default on a loan.

"We have many years of experience around creating and matching and cleansing data, creating propensity models and delivering insights for those customers. I think we are well placed to take a competitive advantage in this space in Australia," he says.

Skills for the future

So, then - what makes a good CDO?

Lopez argues a data chief does not need to be a mathematician - before adding that, yes, he does have a degree in mathematics.

"You need to have a clear sense of numeracy and an understanding of data and its value. But I don't think a successful CDO needs to be a rocket scientist."

Rather, he says, the requisite skills are vision, the ability to articulate ideas clearly, commercial acumen and the bravery to fail fast.

"They are good skills for any business executive to have," he concedes. "But in this area they are critical."

He has also clearly invested many hours into thinking about exactly what kind of people he wants working for him in the CDO's office, to create what he calls the right "DNA" for the business.

He divides current candidates into data scientists and business managers.

"In today's world these two groups find it very hard to communicate. The data people find it hard to understand the commerciality and the business people don't know how to translate the problem into the data world."

He rejects research by analysts like McKinsey & Co which forecasts that demand for people with sophisticated data skills will soon outstrip supply. What he is hunting for, he says, is the people in the middle.

"I strongly believe you can find the data scientists. There are a lot of uni students coming out [with these skills]," Lopez says.

"We need people who have evolved from just being the data scientist into a senior role where they are exposed to the commercial side. Or they will be people in a senior role who gain those analytics skills."

Despite his strong feelings about the CDO's ascendancy, however, Lopez remains equally sure that "we will always need the CIO".

He says in time the CIO role will become more tightly concentrated on the technology side of the business, while information management gradually creeps into the CDO remit.

"The CDO will work with the CIO, but the CIO will become more technology focused, and will look at how to deliver what it is the CDO and business needs to do with that data."

Superannuation via the smartphone

SHAWN BLACKMORE - AUSTRALIANSUPER

Paris Cowan | June 12, 2015

AustralianSuper's digital boss Shawn Blackmore wants his members to check their nest egg as often as they check their bank balance.

It's a lot tougher for an Australian superannuation fund to stay on top of the market today than it was ten years ago.

The shift started back in 2005, when the Commonwealth brought in legislation giving all employees the right to choose which super fund their workplace would pay contributions into.

More recently, in 2011, the Superstream campaign introduced new standards for exchanging information and mandatory back-end changes designed to make it easier for consumers to switch super funds and roll over multiple accounts into one.

These changes, paired with an electronic revolution in the financial services industry that has made it easy for people to engage with their personal finances, have injected a mighty dose of competition into the sector.

Shawn Blackmore, who is responsible for customer service and advice at one of the country's biggest funds, AustralianSuper, describes the transformation as a shift to a "retail market".

"Ten years ago people would generally be defaulted into a super fund by their employer," he told iTnews.

"What we are seeing now is people actively making a choice about what super fund they are going to go into.

"I think if you give consumers choice and you give them the framework to make that choice, the combination of those factors is what moves us into that retail environment."

Blackmore estimates that in the past 12 months, nearly every fund board in Australian has held some sort of brainstorming day dedicated to preventing an "Uber experience" happening to them.

It is this relatively new race for hearts and minds that Blackmore believes is the real and present threat to the maintenance of his organisation's market share.

"Our perspective on digital disruption is that if we are not meeting our customer's' expectations then someone

else will," he said.

Beyond retirees

AustralianSuper has an enviable market share to protect, with 2.1 million members and more than $90 billion worth of funds under management.

But it is battling against a perception that engaging with a retirement nest egg is a task only for near-retirees.

Blackmore points out this outlook misses arguably the most influential point in a person's superannuation journey: their first job and the often eeny, meeny, miny, mo-style selection of a fund.

He faces the conundrum of getting the attention of a group of youngsters who cannot imagine what it is like to get old.

"We have got a youth segment that lives and breathes digital, and for a category such as super there can be a natural disconnect from day one," he said.

In response, AustralianSuper plans to release its first mobile offering in four weeks time in order to put its brand and its version of digital customer engagement in front of kids entering the jobs market for the first time.

"We are seeing the mobile app as a way to engage these segments and talk to them about things that might not necessarily appear to them to be related to super, but that will ultimately help them with their retirement

outcomes. This includes things like jobs and budgeting," he says.

The app will aim to break the purely transactional way people engage with their super - a task many of us may not revisit more than once a year.

Blackmore is taking his cues from the banking sector as he develops the functionality of the app in partnership with UX and data analytics agency Vivant.

"I go onto my banking app every day. But why would I log onto my super app to check a balance I potentially can't touch until I am 65? This is the pattern of engagement we need to break," he says.

The rationale behind the push is that customers who engage more with their super, and grow more familiar with AustralianSuper as a fund, are more likely to stay members as they move between jobs.

It will also deliver a stream of information back to the fund that the company can use to tailor its services to members and find out what people want to know about building out their retirement savings.

To get there, the digital team is looking to deploy gamification strategies, mixed with the lessons of behavioural finance, to get users expand their outlook on savings well beyond their next paycheck.

"People just can't picture themselves in retirement. People can't make long term choices," Blackmore said.

"I'm 38 now. My account balance now is going to mean nothing to me when I'm 65 ... At the moment if you talk about lump sums and account balances people are going to switch off."

AustralianSuper's app developers are starting to think about tools that will calculate how an extra super contribution today could tangibly change a member's life when retirement comes around, which Blackmore suggests could be visualised by "the difference between driving a Holden Commodore and a Ferrari".

He says the app will offer guidance about where people should invest their nest egg based on their particular circumstances.

"Someone under 30 might have all their money invested in a low risk asset class. Over time we see from the numbers that a higher exposure to equities or a higher return asset class might be more appropriate."

Competitors of the future?

The trillion-dollar scale of the Australian super industry, with all of its members' new-found portability, is proving to be an irresistible lure to challengers entering what was once a sleepy and conservative sector.

Blackmore has one eye on the supermarkets, who he says could leverage their existing loyalty schemes, brand awareness and customer data to make an incursion on the industry, expanding on the footprint they have already set with credit cards and insurance products.

"We think it is inevitable that if [Coles and Woolworths] think they can make enough margin they will definitely look at offering super," he forecast.

Other new competitors include what he calls "aggregators" - primarily banks who have evolved to offer customers visibility of their mortgage, banking, wealth management and superannuation on a single screen.

The are also "intermediaries" who are taking an electronic approach to selected segments of the financial services value chain, like automated "robo-advice" money management.

Blackmore argues it is critical that the foundation pieces are in place within an organisation to give it the culture and agility to be able to deal with new threats as they arise.

Six months ago, he says, AustralianSuper consolidated all its staff in digital functions across the company into a single unit working under him, which counts about 40 workers between internal, outsourced and "co-sourced" personnel.

"I think it comes back to that first point that if we are not meeting our members' expectations of a service and another provider comes in, regardless of who that provider is, it is something we're going to have to factor in to our service offering and respond to," Blackmore says.

"We like to say we're customer centric - but everyone says that don't they? To us it is about being true to that label."

Never waste a good crisis

BRIAN ADAMS - WORLEYPARSONS

Paris Cowan | June 12, 2015

After years of breakneck growth, a downturn in oil prices is giving WorleyParsons CIO Brian Adams the opportunity to iron out the crinkles in his back office.

Adams is a glass half full kind of guy.

His employer has had a tough couple of years. A downturn in energy prices has hit the engineering firm's customer base hard, and as a result clients are putting the kinds of new builds they would normally outsource to WorleyParsons on hold in favour of sweating their assets.

Late last year, researchers projected that up to $150 billion worth of global oil and gas projects would be paused or cancelled in 2015. In April, Atlas Iron announced it would suspend operations altogether as the iron ore price dropped below its break-even threshold.

And just yesterday, Uranium miner ERA, part owned by Rio Tinto, pulled the plug on the planned expansion of its Ranger mine in the Northern Territory.

The impact led to WorleyParsons announcing last month it would follow last year's 4000 job cuts with another 2000 redundancies in an effort to recapture some of its disappearing profits and save up to $100 million.

It projected that its earnings for the second half of the current financial year will be half of what it brought in during the first six moths.

Global headcount has been on a downward trajectory since the middle of 2013. In 2014, Worley's global revenue fell for the first time since 2001, with the exception of the GFC.

"We started battening down the hatches about 18 months ago," Adams told iTnews. "What that means from an IT perspective is we have got to keep our costs down."

But rather than moaning about a smaller budget, Adams is philosophical about the downturn.

"Never waste a good crisis," he says, borrowing a favourite expression.

"As we go through tough times in organisations,

it gives us the catalyst to go and fix things that we probably haven't been able to fix in a boiling market."

When things only went up

For the first decade of the 2000s, WorleyParsons became accustomed to a breakneck pace of growth. After going public in 2001, it went from annual aggregated revenue of $314 million that year, skyrocketing over the next decade to $6.2 billion in 2009.

A lot of this growth was fuelled by a bonanza of acquisitions. The dual moniker came to be when, in 2004, Worley bought UK-based Parsons E&C.

This kicked off a period that saw it take over environmental services firms Aston and Komex between 2004 and 2005, and later power company DRPL, infrastructure specialists TMG and Watkins & Goodwin, plus HG Engineering, Gas Cleaning Technologies and Jones & Jones.

It bought Canada's largest engineering company Colt in 2007, picking up SEA Engineering, Polestar and Unified Engineering that same year.

All the whike its key customers - ExxonMobil, BHP, Chevron, BP and Rio Tinto - were buoyed by strong energy demand.

But every CIO that has gone through this sort

of acquisitive expansion will be able to tell you what a nightmare it can create from a back office perspective, as every new business brings onboard its own applications, infrastructure and ways of doing things.

Adams argues that a cool-down creates the perfect environment for the sort of corporate soul searching needed to turn an amalgam like this back into an efficient and streamlined beast.

"As far as I am concerned this gives us a fantastic opportunity to take a deep breath, make our processes more efficient, so when the market picks up again we can continue to provide more value to our clients by providing innovative solutions, rather than being consumed by how it is we are going to add another server or add another network or deploy a suite of applications across our business," he says.

Adams made a head start on a campaign he describes as "standardise, optimise and consolidate" when he took up the global CIO reins at the beginning of 2011.

He moved the 35,000-strong organisation, running 157 offices in 46 countries, onto the same Windows operating system, made all businesses adopt Sharepoint and Lync and transition security policies to the same ISO27002 protocol, and globally consolidated services into the hands of common vendors and suppliers, among other things.

"IT in our organisation was run very regionally. So when I took over I said the only way to ensure we have efficiency is to make sure everything in standardised - that is security, networks, storage. Everything across your ITIL process needs to become standardised. And then once you standardise you can optimise," he said.

"Then that has allowed us to get into a position where we can alternatively source commoditised IT services that we traditionally delivered in-house.

"We are mid-flight through a program of doing that right now so to declare success is probably a bit premature. [But] that has allowed us to come a long way."

Adams' test for whether to keep functions in-house or to send them off to a third party rests on the value it would provide WorleyParsons

"The basic premise I work with is to ask 'are we bringing additional value to our shareholders and to our bottom line by doing this ourselves'? And if the answer to the question is yes, it is something we should be doing. If the answer is no then we have got to be looking at alternative ways of doing it."

Adams acknowledges one of the toughest elements of a standardisation on this scale is cultural.

He compares his global transformation to having "taken a bunch of pirates and turned them into the Navy".

"There are instances where we had resistance. Some people want to do everything themselves and go down to the corner store and buy whatever kit they want to buy because that is the way they have always done it.

"The smart people around the world recognise that this is how we have to be."

Halting Optus' descent into ones and zeros

ALLEN LEW - OPTUS

Paris Cowan | June 12, 2015

CEO Allen Lew doesn't plan to sit around as the telco becomes a pure utility, and says he's not afraid to take on the content providers at their own game.

Lew is the first Australian telco boss to speak publicly in favour of charging over-the-top service providers like video streaming giant Netflix a premium fee for special treatment on the Optus network.

In doing so he has knowingly stepped into the fractious debate around net neutrality - or the equal treatment of all web traffic - that has already seen the US telecommunications sector go head to head with the federal government in the nation's courts.

Net neutrality supporters fear that prioritising some traffic over the rest sets a dangerous precedent for fairness and democracy online.

Networks, meanwhile, are creaking under the weight of video-on-demand services and are looking for something in return for the investment they will need to make into shoring up their pipes.

Despite being a 35 year veteran of Optus' Singapore-based parent company SingTel, Lew thinks more like a media boss when it comes to the Netflix conundrum.

It is clear he sees Optus as key to delivering the all-important consumer eyeballs to commercial video streaming operators, and feels they should be fronting up some cash for the privilege.

"I think there is an opportunity for providers who want to optimise this service to stand out from the crowd, and to work with telcos like us to provide a level of service to their customers that is fit for purpose," Lew told iTnews.

"We already see this model in the business to business environment. It will be a matter of time before we a see it in in the business to consumer environment just as much."

The Optus boss said the exact status of the company's negotiations with Netflix remained "commercial in confidence", but raised the prospect of alternative, non-financial ways of getting around

the premium service issue.

"There is no clear cut business model," he said.

"To provide a premium service and to ensure that the quality of the bandwidth is sustained for a particular media partner is just one way. There are other things that can be shared with that partner - there are ways of going to market together, for example."

He said marketing contra deals were a possibility but ruled out the notion of sharing customer intelligence between partners.

Netflix, however, is just one piece of of the disruption the telecommunications sector faces.

"Everything thing is now boiling down to zeros and ones," Lew said.

"What we see is that the world is clearly shifting from a place where telecommunications providers provide voice to one where it is very data-centric."

As a result, carriers are at a serious risk of becoming commodity vendors with all their future viability tied to what is likely to remain steadily dropping prices they can charge per gigabyte.

Optus is hoping that getting its fingers in a lot of pies will be enough to see off the trend and "avoid becoming commoditised and just a pure utility".

"Everybody in the media space, in the telco space and in adjacent industries - even banks - are looking

at the disruption that is happening and trying out different options to make sure they don't just focus on one thing and get railroaded into a corner."

Taking a slice out of the broadcasters?

The media boss mindset doesn't stop at selling eyeballs. He wants to take on the content providers at their own game.

Lew revealed earlier this month that Optus was prepared to take on rival Telstra in the race to win the digital streaming rights for major football codes like the NRL and AFL - if it can afford it.

"[Sporting rights] have been priced and positioned very aggressively in terms of the rights. For me, as someone that is looking to provide that service in a better way to our customers, it has to make financial sense or it has to boost us in some way," he said.

"So there is a lot of discussion about the best sports to put together, and we are looking at a lot of options."

At this stage at least, he insists Optus plans to work in partnership with the broadcasters to get a foothold in the content space, rather than trying to take a chunk out of one of the TV industry's last remaining cash cows.

But as the line between broadcasting and online video streaming blurs, will there always be room for everyone in the market?

Earlier this week Seven West Media boss Kerry Stokes insisted to The Australian that the free-to-air TV jeremiad is one he's heard time and time before, and that in spite of the doomsayers he believes broadcast media has a strong future.

"I don't necessarily disagree with him," Lew said. "But I think things are going to change,"

Asked whether he thinks codes might bypass the broadcasters altogether to sign exclusive rights deals with the telcos, he remained cagey.

"Let's see what happens. I will never say never."

Bread and butter

The most obvious value add, of course, in how Optus treats its customers.

Part of a pumped-up $1.8 billion capex spend SingTel has injected into the Australian business this year will go towards ongoing work on "next generation" customer care and billing platforms across the telco group.

In particular, the company is working on the ability to proactively detect when customers are having trouble with the network and make contact to reassure them Optus is onto the matter.

"We know for example, if your network experience is sub-optimal. We can see that and look into it, then we will drop you a note to let you know what is happening."

He said the customer care push will also see it track the kinds of speeds customers are experiencing to advise them whether they are using the device and the network most appropriate for their browsing habits.

This data will also help Optus direct the bulk of its capex spend to the neediest parts of its network.

"Inside the home on wi-fi we know the experience differs greatly depending on how far the customer is from the Telstra exchange," Lew said.

"So knowing where the customer is and finding a way to boost the signal coming from the exchange, either with the existing line footprint, or even enhancing it, are the sorts of things we are looking towards."

The majority of the money, however, will be spent on adding lanes to "the highway", to borrow Lew's favoured analogy.

"The board of SingTel clearly sees that as being critical," he said.

It is focusing on the mobile network in Australia's cities as a priority. Lew said 50 percent of this mobile traffic is now dedicated to watching videos - meaning Optus "needs to reach a minimum speed to make sure that happens properly". ■

Ditching the CIO title in favour of a customer focus

ANDREW WATTS - BENDIGO BANK

Beverley Head | June 23, 2015

Bendigo and Adelaide Bank's Andrew Watts is racing to give his customers what they want ... before someone else does.

"Customers don't wake up every morning wanting to do their banking," Watts says.

"They want to live their life, manage their time and grow their business."

Once upon time Watts was CIO at Bendigo and Adelaide Bank, but has now refocused his attention as the executive in charge of customer service improvement.

There's method in the decision: Watts now views disruption through the prism of what it means to a customer rather than what it could mean to the bank.

The financial services sector has been profoundly disrupted by technology, which in turn has shifted customer expectations: they're demanding fast, frictionless payments.

They want to do their banking when and where it suits them, but also retain access to a branch network bristling with technology and specialist skills when they need it.

"The most important disruptor is the customer," Watts told iTnews. "Mobile technology has allowed the customer to take control."

He says the established banks have to understand that online services and aggregators are already taking the friction out of doing business, and will happily poach account holders who grow frustrated with the service they're getting.

US banking service Moven is already nipping at Australia's borders, having signed a licensing deal with Westpac New Zealand, which often acts as Westpac's sandpit for new technologies.

Moven links a savings account with Kansas-based CBW Bank and a MasterCard-enabled debit card to a smartphone and watch-based financial app that gamifies the process of tracking income and outgoings.

Startups like Moven are making "the front door to banking easy," Watts says.

Watts is also watching the rise of non-traditional players such as Coles enter the financial services space alongside peer to peer lending, alternative payments platforms from the likes of Apple, PayPal, Square and Mint; and organisations that can analyse consumer spending patterns and predict outcomes or make recommendations.

Disrupting Bendigo-style

The bank is keen to play in the space – but in its own way.

There were some raised eyebrows when the bank released a QR-code based contactless payment system called redy last July.

Developed by the bank's subsidiary, Community Telco Australia, redy also established a virtual currency called "creds" which saw value generated every time consumers used the payment system.

To make a payment, customers scan a QR code on a merchant's redy terminal. Merchants are charged a 1.5 percent transaction fee, a third of which generates creds that can be used to receive discounts from participating merchants passed on to a range of charities.

The problem with QR codes is that they are clunkier to use than near-field communications chips

for contactless payment. But Watts maintains it was a pragmatic solution to a customer need.

He acknowledges demand has been mixed, but says "where the customers in the communities can see the link between using redy - buying local and creating redy points that can be put back into community activity and charities and causes - when that connection works it is successful".

The bank has also just finished work on a new mobile banking application which was "built from the ground-up based on customer feedback".

"We were able to move that into the market very very quickly and are pushing out new releases based around that application every three to four weeks," Watts says.

"We have delivered the agility through the smart use of integration services, using more iterative and agile techniques in the development of software - but the most important thing is listening to the feedback of our customers and being able to respond to that quickly."

Throwing out the job title

Something must be working. The bank was this week ranked number one in a credit card satisfaction study released by J.D. Power Asia Pacific, which found that Bendigo performed particularly well in customer interaction, coming out ahead of the big four.

According to Watts, the secret is in "the way you combine people process and technology. [That is] where the magic lives".

The bank was formed in 2007 from the merger of Bendigo Bank and Adelaide Bank. Today it has almost 900 outlets and 1900 ATMs across Australia, assets under management of more than $52.1 billion and a market capitalisation of around $3.3 billion.

Watts, who has a Bachelor of Engineering and Graduate Diploma of Business Administration, joined Bendigo Bank in 1994, and was made inaugural CIO of the merged entity in 2007.

Having been the bank's CIO and later taking charge of its change program, Watts is now leading the customer service improvement function.

But he's also responsible for the bank's overall enterprise architecture and the IT strategic direction. Kevin Dole, head of technology services, manages day to day IT operations.

"My personal view is that too much in the industry gets associated to titles. The latest trend has been that you need a chief marketing officer or a chief analytics officer," he says.

"The way we look at it is we should build the organisation around the customer and then we build the organisational structure to meet the customer need and the things that are our priorities.

"It means we are a little unconventional - but we will continue to evolve IT according to the business' needs."

The golden record

One evolution underway is greater use of data analytics.

Watts says the bank now has a "golden record" for 98 percent of its 1.8 million customers which it uses to generate a single customer view.

He says the outstanding two percent of records have not been completely integrated due to a couple of small product systems that the bank either has not had time to clean up or can't justify working with for a relatively meagre return in terms of business value.

"But at 98 percent we are sitting in a very very good position compared to the financial services industry in general," he said.

"Customers are willing to do more business

with you and share more information with you as long as you are using that information to better service their needs. In our case having a single golden record of our customer relationship puts us in a much better position to identify needs and objectives that we may have a product or solution to meet."

Bendigo and Adelaide Bank has also established a "customer voice" group to listen to what customers are saying both directly to call centres and branches, and harnessing analytics for transaction and activity data.

He stresses this is not just about boosting sales.

"A lot of the investment we have made into customer information analytics puts us in a better position to make better decisions particularly on the credit side, acknowledging that customers don't want to be put in a position of stress."

Unlike the major banks, which have had to overhaul decades-old legacy core banking systems and product silos to bring all their data into one place, Watts says Bendigo and Adelaide, which uses CGI's RFS Retail Banking system, has been spared this headache.

"We have a core banking system that we have been operating in the company for a long long time. It's an extremely well architected system - it's real time so when things come in like the industry's new payments platform, for us it's a relatively easy move to leverage that."

Architecturally the bank uses RFS for its systems of record and has established an integration layer that allows systems of innovation to connect.

Watts is also looking to maintain agility by making sure innovation is in the working remit of everyone working for the bank.

"I'm not a big believer in ... an innovation group - as if one group has all the insights and answers. So we try and drive a culture in the organisation where people are constantly challenging the organisation and finding new ways to do things," he said.

"Ideas are coming from everywhere and I think that's a really healthy thing – it's far more sustainable and gets much stronger buy in from the organisation."

Going all in with Spotify-style agile

TRENT MANKELOW - TRADE ME

Paris Cowan | June 26, 2015

Trent Mankelow is watching as NZ online trader Trade Me transforms itself into dozens of tribes, 33 squads, and more than 400 free-thinking innovators.

Trade Me was so impressed with Spotify's agile operating model it decided to import the blueprint to the land of Kiwis and pineapple lumps.

Faced with plateauing financial fortunes, the company radically overhauled its nearly 200-person tech workforce based on the music streaming juggernaut's own unique take on the agile development framework.

Just 18 months ago, the Trade Me Group relied on one central IT team that supported business units in Wellington, Auckland and Christchurch and delivered services from vehicle sales to online dating.

It was an approach that created support bottlenecks and resource tension between the different services and their individual profit and loss targets.

The structure simply wasn't working.

Enter Spotify.

The business' initial success saw it double its staffing levels every year between 2006 and 2013. Spotify was a scrum-based organisation at the beginning, working in capped groups towards time-boxed delivery goals.

But its rapid growth and geographic dispersal forced it to shape the scrum model into a new flavour that could work at scale.

The Spotify blueprint emphasised autonomy, and it transformed scrums into squads with the power to decide who would be a member and how they would tackle the problem at hand.

But the model got too big - it counted 50 squads in four cities as of March last year - so Spotify added tribes, chapters and guilds to its organisational vernacular.

Tribes are lightweight groupings of several squads. Chapters are horizontal groupings of similar functions between squads. Guilds are informal communities of interest that emerge between the different groups.

Trade Me's IT workforce knows a thing or two about growth.

As of February the business employed 424 staff, up

69 people in just six months. The tech wing, however, grew even faster, expanding by 55 workers to become a formidable team of 189.

Mankelow, a one-time Unisys software engineer with a background in UX and startups, was one of the new hires, brought on board nine months ago to become chief product officer.

He told iTnews the company now has 33 squads based across its three NZ sites.

"It was a conscious decision to borrow from the Spotify model," he said. "It seems to have worked pretty well for us."

In keeping with the 'rules are made to be broken' sentiment of the Spotify model, Mankelow said Trade Me had tweaked the blueprint to fit the Kiwi's context, but continues to push autonomy as a core motivating principle.

"When you read the research around workplace motivation it makes a lot of sense that you would give the teams a lot more autonomy as long as the work is getting done."

He said each squad is allowed to "pick their flavour of agile" - be it kanban or scrum or whatever - and elect the squad they want to be in.

"When we started the squadification it was pretty nerve racking," Mankelow said.

"For example we formed a code health team, which is people who do maintenance on the code base, and they

were a bit worried that no one was going to choose to join them.

"But as it turned out is was the complete opposite and that was one of the teams that was oversubscribed."

Despite the "dungeons and dragons" style taxonomy, he said the business was embracing the restructure with both arms.

"Every now and again I hear people talking about the bad old days of projects that took a year and a half to get out, then were finished in one big go, before falling over and ending up in a war room.

"I don't think anyone wants to go back to how it was."

Read on to find out how Trade Me plans to keep Tinder, ASOS and Facebook at bay...

It is no accident Trade Me Group is taking radical action to boost innovation internally: it has found itself in an odd and unfamiliar situation.

For 15 years, the site grew accustomed to being a disruptor - one of the online classifieds success stories that took down the Goliath newspaper.

But Mankelow is frank about the current situation and admits there are big and fierce players on the scene with scale and international pricing working in their favour, while the traditional bricks and mortar retailers heave themselves into the online trading space.

The company is feeling the heat in its Marketplace, the front page of the site that deals with buying and selling general items. Revenue through this major segment was down 1.5 percent in the last half-year.

"When you look at the overall growth in ecommerce, the growth of our marketplace business isn't really keeping up with that. It is a really interesting position to be in after a decade and a half of being at the forefront of of that disruption," Mankelow said.

"We have found that a lot of organisations have really stepped up their game, whether or not that is an ASOS with free shipping around the world, or Amazon which continues with innovation, or even locally Briscoes or Rebel Sport and all the major New Zealand retailers that have really lifted their game."

Trade Me Group is more than New Zealand's answer to eBay, however. There is no area of online trading it isn't into. Mankelow describes the business as "kind of a combination of eBay combined with Carsales.com, combined with REA. It's like everything mashed together."

This means Mankelow's team have more urgent fish to fry than the global auction giant. Trade Me holds 90 percent of the used goods market in New Zealand, where eBay never really gained traction. He is looking further afield for the next competitive threat.

"We have competitors in all different pockets. It means we can't be complacent," he said.

"We actually decided that Facebook groups would be an interesting comparison. They are gradually making it easier and easier for people to buy and sell on Facebook."

One of these new fish is Tinder, which has taken a huge chunk out of the sleepy match-maker market that includes Trade Me business FindSomeone.

Mankelow said the only thing more amazing than Tinder's decimation of sites like match.com, Okay Cupid and eHarmony was the speed at which it has happened.

"Tinder basically knocked them all off the top. These guys were cruising along thinking that things were going well and then 200 days later they were in freefall decline."

Investing in renewl

"It's no secret that we're in the throes of an accelerated period of re-investment," Trade Me chairman David Kirk told shareholders in February.

The business is not planning to sit around as its model is swept out from underneath it, so is planning an aggressive period of acquisition, continuing a year that saw it buy a stake in peer-to-peer lender Harmoney, online payments gateway Paystation, and real estate inspection management application Viewing Tracker.

For his part, Mankelow is rebuilding the website to proper leverage the "mountains of data" the group is sitting on, and the company is in the final stages of recruiting a head of analytics.

"We are really trying to get our act together around the data side of our business," he said.

"Not many businesses are looking at life in the way we are. We know what kind of jobs you look for, what kind of vehicles you buy and what kind of property you are interested in, as well as what new and used goods you buy and sell.

"Our desire is to offer experiences that are much more personalised so that your home page is different to mine, and the EDMs you get are different to mine, and they are targeted and useful.

"We are doing a lot of stuff at the moment with Google tag manager which is a generic way of capturing how people are interacting with the website and the apps we have.

"It is pretty basic stuff but we still have a way to go."

He is quick to add that he plans to very much honour the trust customers have in the brand.

"We are very careful with privacy and how we approach this kind of stuff and this is perhaps part of the reason we have been a bit tentative around this."

Disconnecting from the internet of stupid things

ALISTAIR CARWARDINE - M2 GROUP

Paris Cowan | June 26, 2015

Alistair Carwardine says it's all about dial tones at M2 Group, not lightbulbs with an IP address.

Carwardine joined the Navy at 15 and spent the next 15 years on Naval destroyers and in submarines before deciding to pack it all in to write code for Qantas.

Turns out being underwater and being a father were not compatible occupations.

But there are a few parallels between manning a military vessel and heading up IT and network operations for a multi-channel telecommunications group.

M2 Group's business prospects are certainly not following any sort of submarine trajectory. Its latest round of half year results revealed record revenue, up eight percent year-on-year, with net profit up 25 percent.

The board clearly felt the business was in good enough shape to enter a potential bidding war with competitor TPG for the purchase of WA-headquartered ISP iiNet, despite eventually coming out second best.

Come July, however, it will add New Zealand's third largest ISP Call Plus Group to the stable.

But Cardawine says he wasn't inspired by the beeping radars and high tech military machinery of the Navy to start a career in IT.

"I was not there for the technology," he told iTnews.

"[The career shift to Qantas] was not accidental. But it was about an opportunity for a career change."

Waves of change

In an homage to his past career, Carwardine describes digital disruption as a kind of once-in-a-lifetime-blue-moon ocean swell that is crashing waves of change over the world, one right after the other.

"I think digital disruption is a terrible term," he said. "But the concept is valid."

"If you look over the past decade there have been waves of change, whether it is access, the change from analogue to digital in mobile, or the rise of social media.

"All of these waves have come through in peaks and troughs and the industry has got very excited about each

of them.

"But what is happening now is that these waves are peaking concurrently.

"When you bundle all of this together you get a magnitude of change that is probably much greater than it would have been if these waves of change were occurring at different times."

M2 is at the coalface of a number of these crashing tides. The group includes the iPrimus and Dodo consumer telco brands, the Commander business which targets the SME segment, and M2 wholesale - plus the newly acquired NZ CallPlus.

The business is watching history occur as the Australian telco landscape shifts under the weight of the NBN, and simultaneously as the public's consumption of data connectivity goes through the roof.

"The real challenge for telco is that customers are demanding greater and greater bandwidth but the supply of that bandwidth is naturally constrained. Therefore we need to be really smart in the way that is being allocated and deal with what is being needed," Carwardine says.

One of the things Carwardine and his team are doing to make sure they can continue to keep up with this trajectory is to focus on virtualising M2's network infrastructure to take some of the burden out of provisioning services to customers, starting with core IP switches.

"The fact that these concepts of virtualisation are

hitting the network is very exciting," he said.

"We used to have data centres full of fridge-sized cabinets that we used for the delivery of our voice. We have now reduced that from something like 200 racks down to six racks.

"It is that sort of scale that can be achieved through virtualisation. There are enormous prizes for the network, the carrier side of our business, and the data centre side of the business."

But, he adds, reliability is at the core of M2's business proposition, so he won't take any risks that threaten his customers' all-important dial tone.

"We targeted our core voice products and we are testing the next round of products at our core network.

"We are being very careful in the way we are assessing the virtualisation of our networks. But at the same time we have to examine it because there is great opportunity here."

Internet of stupid things

Carwardine and the rest of the executive team at M2 know they will have to start preparing their networks to deal with the much-touted 'internet of things', as cars, wrists, health devices, even toilets are connected to the web.

But he is not in any particular hurry.

"There is no doubt that there is going to be rich opportunity with the internet of things, and we are very excited about it. But some of the use cases that are coming out are really twee," he said.

Towards the end of last year, a frustrated David Rowan of UK Wired coined the term 'Internet of Stupid Things' to describe the sometimes-ridiculous territory the IoT trend was headed into.

Things like sensor-enabled jugs to tell you when your milk is off (presumably for the smelling-impaired), and smartphone-connected kitchen scales (presumably for those of us who find it to hard to look away from Facebook long enough to glance at an inbuilt display).

All devices, Rowan said, that are driven by marketing rather than any actual real-life consumer purpose.

"You know the idea that you should give an IP number to an incandescent bulb so that when it blows you get a little pop up on your desktop ... this stuff really needs to be tested," Carwardine concurs.

"So do we have an internet of things program today? No we don't.

"The use cases are still flushing out," he said, with no intentional reference to the infamous Japanese Satis toilet that can be operated remotely via a smartphone app.

"But we know that as there are improvements in wi-fi and bluetooth, especially as they become low power, then we will truly become able to explore how to connect things.

"So we're keen to see how that fleshes out, and make sure we're part of it."

The mantra

Carwardine distills his mission at M2 down to three aims: ensuring reliable access to networks is maintained, making sure customers see their services provisioned and their problems responded to as quickly as possible, and guaranteeing their experience transacting with any of the M2 brands is simple and pleasant.

"I don't think disruptive is a great world. We are focusing on satisfaction and simplification," he said.

"We operate in a world where it is all minutes and seconds. And we also live in a world where services have to be easy to deal with.

"Things have to work. And that is probably the biggest contribution technology can make."

When does an insurance company turn into a software vendor?

CAROLE TOKODY - COVER-MORE GROUP

Paris Cowan | June 29, 2015

The lines are blurring for ASX-listed Cover-More Group.

How close is the day when members of what we know as the financial services sector turn around and realise they are no longer selling financial services, they're selling software?

There is no doubt digital savvy and fortified core banking infrastructure is fundamental to what the financial giants take to the market today. No less is this the case in the insurance sector.

ASX-listed travel insurance company Cover-More Group claims to have 40 percent of the Australian market in traveller premiums sewn up.

In the 2014 financial year, Cover-More earnt $154 million from its travel insurance products, bolstered by $65 million from its medical assistance business - it employs 280 health professionals based in Brisbane, Sydney, Shanghai and Kuala Lumpur to assist partner policyholders.

The majority of its policy sales still come out of partnerships with the traditional travel agent network - the Harvey World Travels and Flight Centres.

But growth in its travel insurance sales rests with integrating its policy sales engine into the booking systems of airlines like Air New Zealand and Malaysia Airlines, plus selling through other intermediaries like Medibank and Australia Post.

Today, if you book a flight to Christchurch on New Zealand's national carrier, Cover-More will automatically calculate your premium and push you an insurance offer before you get to the payments checkout.

All it requires is a ticked box and some details between the name and address form and the payments gateway.

This is enabled by a piece of proprietary software called Impulse.

Impulse is, at its core, an analytics engine that hooks into the e-commerce platforms of Cover-More's partners through an API.

It collects a feed of traveller data from the partner booking platform and crunches this in real time through "optimisation algorithms" to push back to the customer a tailored premium designed to deliver the best possible chance they will opt in.

Cover-More's sales chief Carole Tokody told iTnews Impulse uses travel dates, the number of travellers booking together, relative risk levels of destinations, classes of travel and a "host of other factors" to calculate a personalised offer for each customer.

"We have thrown out the old playbook of travel insurance marketing and sales and led the charge into a fully interactive and engaged model of customer-aware marketing," she said.

Cover-More is by no means the only insurance operator taking its product direct to customers within an airline ticketing booking platform. Qantas has integrated QBE travel policies into its flight checkout, and Virgin Australia does the same with Allianz.

The difference between Cover-More and these global insurance monoliths is Cover-More doesn't really supply the insurance either.

The company's model outsources that level of risk to a series of underwriters, leaving it with the task of selling the policies and processing the claims - meaning it also isn't regulated by APRA.

Does that mean what Cover-More is really selling is analytics-driven software with a side serve of

administration?

Tokody is not so keen on the label.

"Technology is only a portion of the value chain we deliver ... Not only do we deliver medical assistance to our partner's customers in their time of need, Cover-More manages other equally important services such as claims, product development, pricing and optimisation," she said.

"Having a number of underwriters globally does not distract from the fact that Cover-More is a specialist in managing global travel insurance portfolios including the most appropriate underwriting partner."

Talking the software talk

This doesn't stop Tokody from taking several notes out of the software executive's manual to pitch her wares, however.

She says one of the characteristics that sets Impulse apart from what other insurers have to offer is its speed of processing and integration.

The platform utilises the RESTful API and JSON data standard - where, she says, her competitors are stuck on SOAP and XML - and offers better integration times: partners opting into Impulse experience average integration times of three and a half weeks, she said.

Embedding the service into a partner platform involves syncing up a number of system calls: the platform needs to open an authenticated dialogue with Impulse, send through the traveller data, and let the Impulse back-end know whether the customer has accepted the offer before closing the session.

"These server side calls are modelled quickly and most partners can have a working model up within the first few days," Tokody said.

"The bulk of the time within integration is end-to-end testing of the system to ensure no conflicts with the partners' systems and also the handling of back office reconciliation. The development effort itself is minimal."

Disruptor?

With this technology at the core of Cover-More's future, Tokody is likely justified in arguing the insurer is "not so much exposed as involved" in digital disruption. She says the three-decade old business is "respectful of our legacy" but "not controlled by it".

"That allows us to look at leading-edge methods and technologies rather than being shackled by older systems."

Not all legacies are unhelpful, however. Cover-More's history has left it with 30 years worth of data on Australian and international travel habits.

"Having migratory perspective of travel insurance trends over a 30 year perspective is of course useful from an actuarial perspective, however, it's now the marriage of real-time travel analytics married to this historical data that provides deep opportunity," Tokody said.

Cover-More is also not afraid to get its hands dirty in the telco space, partnering with United Global SIM to bring its customers an in-house branded 'global SIM' bundled into their policy, which serves the dual purpose of protecting policyholders from global roaming charges while also keeping them conveniently close to hand if their insurer needs to get in touch.

"Location and messaging services underpin this conversation and recently during the tragedy of the earthquakes in Nepal, Cover-More was able to proactively reach distressed customers and usher them to a join a chartered air bus that we had sent to the region for evacuation purposes," Tokody said.

The company's approach appears to be working.

In its last half year results, Cover-More reported significant revenue and profit increases despite a weakening Australian dollar and a softer outbound travel market.

It plans to continue the push of its services, including Impulse, into Asia in order to future-proof and diversify its market.

Tech SWAT teams kicking down the digital door

KAREN WAGNER - CARDNO

Paris Cowan | June 30, 2015

From dam engineers in Ecuador to Sydney light-rail gurus, Cardno's global CIO Karen Wagner is linking up her widespread organisation.

It's not usually the first descriptor attached to an IT career, but Wagner insists she became a CIO for the creativity.

The global IT lead for engineering firm Cardno - which has its headquarters in Brisbane's Fortitude Valley but works across Australia, the Americas and the developing world - says it's what attracted her to a degree in computer science in the first place.

"I find technology to be extremely creative," the New Yorker exclaims.

"It is about that initial idea generation and really bringing great minds together to go through that creative process.

"I love talking to our clients and business constituents and identifying the challenges and the opportunities, and really brainstorming all the different approaches we could take."

Cardno is certainly an enterprise that could use some creativity right now.

In the past 12 months the business has been hit on a number of fronts by economic shifts in its many locations. Closest to home, it has seen a lot of its Australian and NZ revenue dry to a trickle as dropping oil and iron ore prices force resources clients to curb the scale of their operations.

Roughly 30 percent of Cardno's revenue comes out of this region, and the resource industry accounts for 16 percent of that slice.

In the Americas, which makes up around 60 percent of global fee revenue, government spending on the kinds of infrastructure projects Cardno specialises in has dropped.

At the same time, work has slowed down on the cleanup of the Gulf of Mexico following BP's Deepwater Horizon oil rig explosion in April 2011 - one of Cardno's largest projects.

Its most recent half year results revealed profits were

down 27 percent year-on-year. They aren't expected to pick back up until 2016 at the earliest, when a $10 million a year savings drive starts to deliver returns.

Right now the company can't afford to ignore innovation.

The best manifestation of Wagner's particular brand of tech creativity could be the four to five 'SWAT teams' working on forward-thinking experiments that could become Cardno's next competitive differentiator.

Wagner describes these scrum-like groupings as "stealth teams" pulled together from a mix of IT workers and subject matter experts from elsewhere in the business, roughly following a membership formula of three business people, two developers and an architect.

"Those teams are a combination of technology and business people. We are breaking down those traditional silos ... and that is what helps us with rapid application development or services development," she said.

One of these teams put together one of Wagner's pet capabilities, a real-time safety information app called Zap. Zap uses a specially designed interface that allows workers in the field to report real-time safety incidents or 'near misses' with minimal fuss.

"A worker could report that they are working somewhere there is black ice," she said. "And maybe their boots are old and have lost their treads, so they report it as a near miss.

"This goes back to our safety and security centre and

they are able to immediately assess the situation and reach out through the application to anyone else who might be impacted, as well as prompting site leaders in their morning safety meeting to talk about black ice, wearing the right boots, and avoiding slips."

Soul searching

Wagner joined Cardno after what she called a period of "soul searching" that followed two decades working in the financial services industry and then for advertising giant Publicis, as a divisional CIO and CTO.

"Financial services really didn't have that spark for me," she recalled.

"Then I thought - I've been in media and advertising for a while, I think I really would like to get aligned with a company that is really giving back to the world."

About 18 months ago she decided Cardno fit this ideal, based on the role it plays in social projects like the joint Australian and South East Asian efforts to combat people trafficking, and HIV testing and AIDS awareness programs in the developing world.

"I looked across three or four projects and they really ran the gamut," she said. "In some of these countries we really are touching people's lives and making a difference."

Ironic then, maybe, that it's the work at the other end of the feel-good spectrum in the oil and mining sectors that is giving the company its current headache.

When it comes to IT's contribution to the $10 million recovery drive, Wagner says keeping the team nimble is all about being "extremely smart and informed in your investment decisions".

"What we are doing is on a periodic basis looking at priorities again, and sometimes being bold and cancelling them," she said.

She said it was important for someone in her position to be open minded about sourcing strategies and look at project-based staffing.

Under Wagner, the IT function has gone through a restructure which split it into two different sides: the operational "back to business basics" team keeping the lights on, and the innovation and strategy wing that populates her SWAT teams - reflecting her view on the two value systems of work.

"I think it is critical for executive teams to recognise the information economy is really based around creativity and innovation and acceleration, where the industrial economy is more about the process and operational side of the house."

Digital disruption?

The global CIO thinks the first wave of digital disruption is now behind her.

"The forces we all know to be cloud, and information, social and mobile, I feel like this was the first wave we went through ... and we are largely leveraging all of those elements," she said.

The Zap app, for example, is enabled by Cardno's mobility campaign - a tricky one-size-does-not-fit-all program that is aiming to distribute tablets, ruggedised devices and smartphones to workers tailored to their working environment, be it a remote community or an offshore oil rig.

Only some of the solutions are simple: "We have gentlemen out there who are working in gloves. So we can't give them a touchpad, they need something with a stylus".

On the social side, Wagner claims the organisation is already reaping the dividends of a global collaboration platform, partially built in-house, that is helping spread professional development, e-learning and IP sharing across Cardno's far-flung locations.

The collaboration tools are allowing Cardno workers to link up with education drivers, thought leaders, and experts in the industry and vendor community.

The next phase for the business, Wagner claims, is the internet of things.

"All the newer sensor data, all of the drones and robotics - information is everywhere and everything is connected now."

She is cagey about what exactly Cardno is working on in this space, describing the efforts as "a bit of a competitive edge", but says the team is "developing strategies on how we can leverage that proliferation of sensor data from everywhere".

"We really see opportunities emerging in the robotics and intelligent machines space," Wagner said.

"That is one of those areas where we think we can make a really big difference in terms of optimising our efficiencies and getting better value for our clients in the end.".

Australia's digital crescendo

VIJAY SOLANKI - SOUTHERN CROSS AUSTEREO

Paris Cowan | July 3, 2015

Barely unpacked from his move from Amsterdam, Southern Cross Austereo's new digital boss Vijay Solanki is looking for Australia's untapped potential.

Just seven weeks after landing in the country, Solanki sat down with iTnews in his new Sydney digs to reflect on his new professional home.

The digital media guru has travelled to the opposite end of the globe - from the Amsterdam headquarters of former employer Phillips - and says he has already been struck by a lot more about Australia than wearing t-shirts in winter.

A hungry consumer of business media, he thinks Australia has all the building blocks in place to become a true digital leader, such as a high rate of smartphone penetration and a digital media market due to hit $5 billion in value by the end of this year.

He says he has never seen a country that markets via Instagram as prolifically, and calls the "awesome" CBA banking app an example of the best he has seen.

"The country is at a real tipping point," he told iTnews.

"I get this sense, six or seven weeks in, that there is this crescendo leading towards some quite serious action."

In the process of researching his new professional home, however, he hasn't been able to avoid the shortcomings, pointing to research that shows Australian kids lagging behind in coding abilities and executive complacency about digital disruption inside the country's board rooms.

"Whilst on the one hand there are some really powerful trends in Australian digital media consumption, I still think there is work to be done."

Data driven radio

The Southern Cross Austereo group - home to radio stations Triple M and Today FM and responsible for distributing Channel Ten into the regions - is a microcosm of this not-quite-fully-realised digital potential, according to Solanki's first impressions.

"Part of digital's role is to help prepare the business for

the changing media environment. SCA has already made inroads," he said.

"It is beginning to happen but we need to keep moving at pace."

The radio group's digital pedigree includes what Solanki considers the first radio show to be tailored for video and simulcast on YouTube outside of the US, the world's first top 20 song list determined by Shazam queries, and a cross-brand radio app currently undergoing beta testing - plus more than 80 web properties.

But the new digital chief sees the future in data, and foresees a day when radio follows the Netflix route and creates programming based on its listeners' preferences.

"There is absolutely a future for a company to try and use that same model from an audio perspective. It becomes a data-driven model of consumption and you start to create bespoke content based on that consumption," he said.

But baby steps first. Today Solanki is occupied with figuring out how to extract the most value out of the data Southern Cross Austereo already has.

"We have good foundation ... but the analytics world is one that is moving super fast, so I think we need to move up the gears and I think we can move faster," he said.

What he has in mind is profile-driven web content, where programmatic advertising is finely tuned to push messages to the most receptive ears.

"I absolutely see a future where you and I may both

be listening to Hamish and Andy, but I'm served different ads to you because my profile and my needs are different to yours," he says.

"You know with a lot of traditional media there is a risk of wastage.

"Most of my career I have been the client and marketeers ask the same question - I know half of my marketing dollars are working, I just don't know which half.

"So if you can target particular consumer profiles with real precision then you can command premium pricing."

In Australia especially, the smartphone revolution has effectively delivered a radio to the hand or pocket of every consumer, creating an enormous market for whoever can position themselves as broadcaster of choice.

But SCA will have its own hands full swatting away competitive pressure from music streaming giants like Spotify and Apple Music.

Solanki is nonplussed by this challenge, however.

"Apple already has an ecosystem. They have the credit cards of hundreds of millions of consumers and that gives them a lot of leverage," he says.

"What they don't have is unique, compelling local content. So I think what organisations like ours need to do is play to our strengths, that is what we're good at."

We're all in this together

Southern Cross Austereo, like most of its traditional media counterparts, is still fighting to make ends meet in what is one of the worst hit industries in terms of digital disruption.

Its last half year results revealed a profit decline of 24.4 percent year-on-year, foreshadowing the subsequent departure of CEO Rhys Holleran.

There is no doubt a lot of pressure on the company's new digital recruit to make digital pay, and luckily Solanki has been in this game for a long time - specifically since he started building a web strategy for the UK's Capital Radio in 1999.

He was one of the first 20 people employed by Shazam and hopes this lineage will help him grow the data sharing partnership the two companies have already kicked off with the Shazam top 20.

So how does he think the media industry can haul itself out of its quandary? According to Solanki, it's all about working together.

"When it comes to digital you need to know that there is a time to compete and there is a time to collaborate. I think we're at the point where as an industry there are all sorts of competitive threats and there is a certain point where you need to team up."

SCA is putting this mantra into action with its new beta radio app. What Solanki anticipates will come out of the work is a single portal for radio fans to access any brand of audio content they want - including Southern Cross competitors.

"Right now it has our stations on it ... and ABC stations too. We are in the process of talking to other companies," he said.

"The consumer will be the ultimate arbitrator.".