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DIGITAL LEADERSHIP

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Over the last year or so the technology conversation has gained urgency. Today everybody is "Going Digital". It seems that nearly every organisation from the largest corporates through to government departments and many SMEs are now pursuing a digital agenda. Digital transformation is the new initiative du jour.

It's easy to see why. Whole industries have disappeared due to the advances in technology and many more industries have been significantly impacted, or you can see the writing on the wall. This is not new news. Technology has been "slowly" revolutionising industries for decades. Sabre, which led to a massive change in airline bookings, was launched in the 1960s. There are many other examples. In New Zealand we took an instant liking to EFTPOS in the 1980s and 90s which began the electronic payments revolution.

The pace of change quickened in the 90s as more people gained access to the internet. For the first time ordinary households gained real time access to merchants and merchandise around the globe. Amazon, among others, took advantage of this and launched in 1994. eBay launched in 1995 providing an easy way for ordinary people to trade with each other. And so the changes progressed at an ever increasing rate. Let's add great mobile connectivity and smart phones to the mix and in 2009 you get Uber and many other location aware services.

The cumulative effect of all these changes and the apparent pace of change over the last few years is such that awareness of "digital" as a transformative force has reached tipping point and now most believe that they need to act now or risk losing their company, or even the whole industry.

The problem is, very few organisations know how to make this happen or even what they should expect if they were to succeed. Let's face it, if becoming a digital leader was easy everyone would have done it and no one would be talking about it. If you aim to become a digital leader there are lots of issues that stand in the way. The first of these is the pace of change, it's going to accelerate and it's going to accelerate fast!





In 1965 Gordon Moore predicted that the price performance of technology would double every two years for at least 10 years. It was a preposterous prediction at the time as that rate of change had not been experienced before. As it turns out Moore was very conservative. This doubling has continued more or less until today, 50 years later and while a number of pundits believe we are getting close to the theoretical limits, the trend continues. That's 25 doublings over 50 years and we are still going.

It's hard to imagine what this means because our brains tend to relate to change linearly rather than geometrically, so let's put some numbers to it. If I gave you \$1 in 1965 and then doubled it every 2 years how much money would you have 50 years later? Well let's start.

In 1967 you get \$2 (and have \$3). 1969 \$4 (and have \$7) and so on. It doesn't seem that dramatic. But let's wind forward.

It's 2015, last year and how much do we get? Thats easy enough to work out. It's 2²⁵ or \$33.5 million and in total you will have just over \$67 million (2²⁶-1). We have approximately 67 million times the computing processing power today than when Moore made his prediction. That level of change is pretty scary. No wonder digital is transforming our world.

But here's the kicker. By 2017 this will have doubled again! In 2017 this will be 134 million times the processing power, by 2019 it will be 268 million - let's be precise 268,435,455 times the computing processing power than we had when Gordon Moore made his prediction.





When we look at the world we perceive that the pace of change has accelerated and it has, and it hasn't. The pace of change has actually been very consistent - doubling every two years or so. The problem is the change is geometric and as I mentioned earlier we struggle to perceive what this means¹. This geometric growth is unprecedented and it is the underpinning dynamic that is causing and will continue to cause the perception of increasing change and it is having all sorts of implications.

One of the implications of Moore's law and geometric change is that technology allows for differentiation and commoditisation at the same time. Here's an example.

In the 1980s and 1990s large organisations around the world spent \$10s of millions and sometimes \$100s of millions on implementing customer relationship management systems. Those who succeeded (and many didn't) gained significant advantages over their competitors as they gained increased visibility into their customers and began to leverage that information for their own benefit and for the benefit of their customers.

In 1999 Salesforce.com launched and made this same functionality available to everybody for a few dollars a month. Now everyone can get close to their customers and the technology advantage is gone.

Then there are the new entrants to markets that take advantage of technology to provide services using a completely different model than the incumbent competitors. There are many examples of this. I have mentioned some already, Amazon and retail, Uber and taxis, AirBnB and accommodation, Apple and music. The list goes on.

This is happening everywhere in the technology landscape. In the mid 2000's as a CIO I ordered a 100 meg network link to support our new webstore. It cost me \$10s of thousands a month. I have just put 100 meg fibre broadband into my house for \$89 a month.

¹There are lots of myths around the impact of doubling and how we underestimate the impact of geometric change. Here is one example on wikipedia - <u>here</u> and another from Demi in her retelling of a how a village girl outsmarted a greedy king to feed the hungry - <u>here</u>





The price performance S-curves in technology are frighteningly short and in an environment where technology goes from differentiator to commodity in a few years, when do you invest? As the customer management example shows, first movers who assume the pathfinders risk and spend millions to differentiate themselves can be effectively neutralised a few years later for a few thousand dollars and a relatively less risky implementation process.

This constant differentiation and commoditisation is driving the rapid accumulation of technologically obsolete systems. Yesterday's strategic platform is today's expensive legacy system that is holding the organisation back. Even though the industry is less than 50 years old established organisations are likely running technology from 3 or 4 different eras. To make matters worse, in many organisations these systems aren't exactly well integrated, 100% supported and robust.

There are many reasons for this including sloppy work practices in the IT team and stranded technologies that result from a change in the organisation's strategic direction.

You know what I mean, those systems that we have to get in quickly because they are important to our strategy so let's just go live with the prototype and we'll come back and do it properly later. Of course we seldom do, no money, no time, change of executive direction, but the system still runs.

These technologies are largely incompatible with each other, often overlap (I know one organisation that has nearly 500 asset management systems), require different skills sets and are expected to work together seamlessly and readily adapt to the new market realities. Yeah right!





Most organisations aren't exactly set up for a successful transition into digital. To make matters worse while we know that we need to go digital we are scared to do it. This is rational because let's face it, very few organisations have a great track record of delivering technology projects successfully. Most of the literature suggests that half of all IT projects fail to deliver. A 2012 study by Mckinsey and the University of Oxford found that on average "large IT projects run 45 percent over budget and 7 percent over time, while delivering 56 percent less value than predicted." Further they found that 17% of all large IT projects go so bad that they threaten the very existence of the company.

Want more evidence? The appropriately named "2015 CHAOS Report" from the Standish Group reports that for all software development projects 29% were successful, 52% were challenged and 19% failed. They also found that success rates decreased the larger the projects were. It seems that small, simple and probably not that important changes are easy whereas large, complex and likely to be more strategically critical are very difficult indeed.

So yes, we need to go digital but all the statistics suggest it probably won't work, will cost way more than we imagine and there is a significant risk it will destroy us or at least put us way behind the 8 ball.

I'm feeling inspired how about you? Do we really want more of this?

I have one more little nugget for you. There have been many studies that have looked at the relationship between spending on IT and organisational value. The result, there is none. Look at this quote from a recent PWC study.

"The results clearly show no direct correlation between technology investments and profitable growth; spending more on technology does not necessarily lead to better financial performance."





I could have quoted McKinsey, Bain Accenture or Gartner but you get the picture. It makes you wonder, why would you bother with this whole digital thing?

The answer is because those who get it right substantially outperform the rest of their industry and those that fail to invest in technology are losing ground and becoming irrelevant in their marketplace. It's a double edged sword. Here are two examples of the research that show this:

- In their book, "IT Savvy", Peter Weill and Jeanne Ross report on MIT's Centre for Information Systems Research (CISR) where they have found that the most "IT Savvy" firms.
 - Are 20% more profitable.
 - The top 18% of firms with the best portfolio management practices have higher profitability.
 - Firms that are above average on IT Savvy and IT spending have margins that are 20% higher than industry average vs those lower in both, whose margins are 32% lower than industry average.
- In "The Digital Advantage" a joint research effort between Cap Gemini and MIT's Centre for Digital Business found that the top 25% most digitally mature organisations had:
 - 26% higher profitability than the industry average.
 - 9% higher sales vs assets and effort employed than industry average.
 - They also found that the 25% least digitally mature had 24% lower margin and 4% less sales than industry average.





This relationship between technological capability and organisational performance is shown more fully in the diagram below.

	ORGANISATIONAL OUTCOME/ NEED		PROFITABILITY vs INDUSTRY	IMPROVEMENT FOCUS
Digital Leader	Competitively Differentiated	Extremely High	+ >40%	Press your Advantage
Digital Business	Digital Enabler	High	+ 30%	Leverage and Extend
Traditionally Competent	Efficient & Effective IT	Medium	+ 10%	Build the Digital Platform
Technically Adequate	Reliable Technology & Projects	Low	- 25%	Simplify and Streamline
Technically Incompetent	Established / Ad Hoc IT	Very Low/ Negative	- 40%	IT Process Improvement

Technical Capability is a description of the demonstrated level of IT capability within your organisation. Technical capability considers the capability of your whole organisation, not just the capability and performance of your IT team.





Organisational Outcome / Need represents the core outcome that the organisation has achieved by getting to this level in the model. The higher the level in the model the more organisational needs that have been met.

IT Value provides an overall representation of the value that IT is perceived to be delivering to the organisation.

Profitability vs Industry is the likely performance of companies vs the industry if they are at and remain at this level of performance. Whereas the IT value column is a representation of the perceived value this column represents the actual value delivered or destroyed.

Improvement Focus highlights what needs to be done to enable your organisation to move from one level in the hierarchy to the next. Each level requires a specific focus to support the organisation to move to the next level in the model.

The fact that each level requires a specific focus to ensure that the next need in the model is met means that the model, as a whole, tends to form a hierarchy and you typically need to meet the most basic need before you switch focus and work on the next².

OK so now let's look at each level in detail.

² It's not strictly a hierarchy and teams can and do work on meeting multiple needs at the same time however the general point holds that each level requires specific focus and so the most basic need typically is where you start and as the saying goes if everything is equally important then in reality that means nothing is important.





Established IT / Technically Incompetent

If you are in this position at the bottom of the IT Hierarchy of Needs you're aim is to begin to deliver reliable IT services to your users. The focus on reliability mainly falls on day to day services rather than projects. This is not because day to day services are any more important than projects, however at this level day to day services usually consume over 90% of all resources allocated to IT and therefore the day to day services need to be addressed as a matter of priority to begin to create forward progress.

The outcome of successfully meeting this need is that your IT services will be seen as reliable, that is they will work when the users expect them to and in the process the perception of the IT will likely move from being technically incompetent to technically adequate.

Reliable IT / Technically Adequate

If you are in this position in the IT Hierarchy of Needs your aim is to become an effective and efficient supplier of IT services. The general theme is a focus on simplifying and streamlining the IT systems and improving the team's overall customer focus. At this level in the hierarchy there is an equal emphasis on improving day to day service and effective project delivery as the volume and value of projects slowly begins to grow. It is worth noting however that the bulk of the projects undertaken at this level are technical in nature, that is addressing deficiencies in IT rather than on delivering new and improved functionality to users (although there maybe a limited amount of user focused investment).

The outcome of successfully meeting this need is that your IT costs are likely to be well below industry average and you are now beginning to free up a significant amount of money for investment in enabling the business.





The IT team is seen as being technically competent, they are extremely good at their core technology role, they are easy to deal with and provide excellent support. From a business perspective IT has demonstrated an excellent understanding of the basic disciplines of organisations by ensuring that they run as leanly as practical, with the result that IT is now in a low cost position and is seen as delivering good value for money. Finally people from across the business are beginning to engage on how IT can further support them.

Efficient and Effective / Technically Competent

Congratulations in achieving technical competence and demonstrating that you have the wherewithal to run an effective and efficient technology team. Achieving this is a major tipping point in your quest for maximum value from technology. You now have strong foundations on which to build a digital business. What you have achieved to date may not be sexy or high profile, but your organisation has little chance to realise the value of becoming digitally enabled or a digital leader without these foundations. And that is precisely your focus now, building your digital platform to enable you to become a digital business.

The outcome of focusing on building a coherent digital platform is that the organisation will become digitally enabled.

The bulk of your investment is likely to be in relatively standard mainstream and early mainstream technologies and comparatively little investment will be made in enabling true uniqueness through bespoke developments.

That said, enabling uniqueness may have started, particularly if you have established a venture fund to experiment with new technologies. The good thing is that while the emphasis is largely mainstream technologies you will experience the benefits of this investment as customers begin to reevaluate your brand and you can seamlessly execute through a well built coherent platform.





You're focus on investing in strategic platforms and building critical skills will pay off as the benefits of being digitally enabled flow naturally through the organisation. If you have moved to digital without consciously investing in strategic technologies and the skills to leverage them, while you may be able to create a compelling customer experience, you will likely create inefficiencies within your organisation that drive up your costs. Sure your revenues may increase, and that's great, but it is likely that your profitability will stagnate or even deteriorate as duplicated systems and broken processes still plague the organisation.

Digital Enabler / Digital Business

As a digitally enabled business you are likely to be outperforming your industry but there is more to do, more value to be realised. You do this by leveraging and extending the digital platform that you have created. Your focus in extending the digital platform is to create a distinctive and hard to replicate value proposition into the market place.

As you do this customer engagement with your brand is likely to be at an all time high. You have great share of voice among your target market and you provide your customers with an experience to remember rather than simply a transaction.

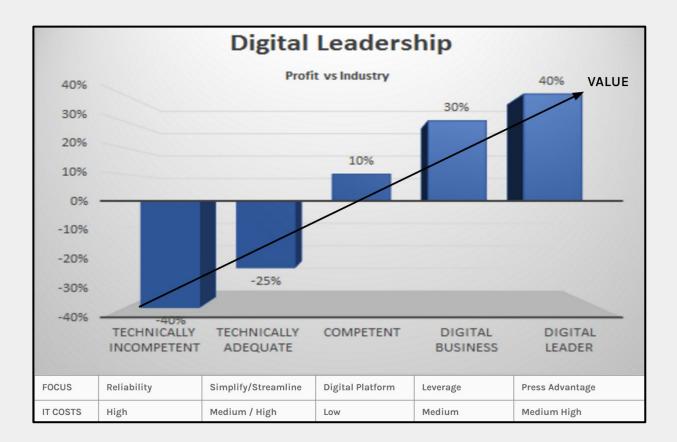
When your customers transact with you, you can fulfil on that transaction efficiently and with panache. You are much loved and your core financial results are showing the benefits. Improving revenues, improving margins. Congratulations, you have become a digital leader and all (well nearly all) is good when you are a digital leader.





Competitively Differentiated / Digital Leader

Yes, life is good as a digital leader but the reality is that you now have a significant target on your back. Everyone in your industry will be looking to be as good as you if not better. And it's not just your traditional competitors that are aiming at you. There will continue to be new entrants to your market.



They are likely to launch with very different business models, very different ways of competing that you have never seen before. Then of course there is the seemingly never ending pace of change. What was unique last year is industry standard today, or it will be soon.





And to top it all off your industry standard processes and applications will soon be laggard processes unless you remain mindful of keeping them relevant. As they say it's hard to get to the top (i.e. become a digital leader), but it's harder to stay there. This is your focus as a digital leader, to remain a digital leader, or better yet to press your advantage even further.

OK we get it, if you can become a digital leader then organisational performance will improve and we will significantly outperform our industry peers. But what does it take to become a digital leader?

To become a digital leader you need to be "technologically fit" and you need to be laser focused on understanding and leveraging your specific organisational uniqueness. Get these two things right and you can become a digital leader. Let's look at each in turn starting with organisational uniqueness.

The Case For Uniqueness

The case for uniqueness is essentially a strategy conversation and if we are going to have a strategy conversations we should start with the work of Michael Porter. Porter and his team were the driving force behind much of what we know today about strategy and Porter's ideas are the bedrock of most strategic planning processes. When it comes to understanding strategy and validating the role of uniqueness there are few better places to start than this quote from Porter"





"Competitive strategy is about being different. It means deliberately choosing a different set of activities to deliver a unique mix of value.³"

According to Porter, uniqueness is at the heart of a competitive strategy. Indeed Porter argues that if you are not unique, that is you do not have differentiated activities, you cannot claim to have a strategy. Without uniqueness all companies can do is strive for operational effectiveness that is the relentless pursuit of doing what are essentially the same activities better than anyone else. This is important work to ensure that you maintain competitiveness, and can lead to improvements in profitability, however these gains are usually quickly competed away. As Porter puts it.

"The quest for productivity, quality, and speed has spawned a remarkable number of management tools and techniques: total quality management, benchmarking, time-based competition, outsourcing, partnering, reengineering, change management. Although the resulting operational improvements have often been dramatic, many companies have been frustrated by their inability to translate those gains into sustainable profitability.⁴"





This was written in the 90's but it still applies in today's rapidly digitizing world. Millions of dollars are being invested in technologies that in the end are non differentiated and while there maybe some short term gains, through better implementation, these gains seldom translate is sustained improvements in profitability. This is confirmed through IT Value research. For example, let's return to that PWC report I mentioned earlier and complete the quote⁵:

"The results clearly show no direct correlation between technology investments and profitable growth; spending more on technology does not necessarily lead to better financial performance. This by itself is not a new revelation, but our research further shows a strong correlation between technology and profitable growth if the investments are focused on targeted capabilities, augmented with the right operating model and implementation skills."

To put it in the terms that we are talking about here, there is no correlation between IT spend and organisational performance unless you are explicitly investing in unique differentiated capabilities. You don't have to think too hard for this to make sense. If you run the same or a very similar ERP system (for example) as your competitors, where is the differentiation in that? The quest for operational excellence has driven sameness, improved operational efficiency and been a primary cause of increased competition amongst non differentiated competitors, who despite all this investment by and large end up no more profitable than they were.

The irony is, much of the clamour we have today is about the need to move off of these ERP solutions onto the even more highly commoditised and same as all your competitor "X as a Service" offerings. More operational efficiency, well maybe, but definitely more standardised, less differentiated and limited value accruing to the organisation.





Nicholas Carr would be very proud, after all he predicted that IT would become just like every other utility in his May 2003 HBR Article IT Doesn't Matter. That said, even Carr knew that uniqueness was the key to value. To quote MIT Deloitte:

"The trap to avoid, according to Carr, is focusing on technology as an end in itself. Instead, technology should be a means to strategically potent ends.⁶"

Porter defined what he considered to be the three archetypes for generating competitive advantage. Treacy and Wiersema took Porter's generic strategies, extended them and cast them as value disciplines and empirically tested them in the marketplace in an attempt to identify what differentiated high performing companies from the others.

The three value disciplines are⁷:

Product Leadership which is characterised by products that are the best in their market and highly valued by customers.

Operational Excellence which is characterised by low or lowest price and hassle free service

Customer Intimacy which is characterised by occupying only one (or a few) high-value customer niches and being obsessive about understanding the individual customers in detail.

What Treacy and Wiersema found is that the market leaders in virtually every industry became the market leaders the same way, by dominating one of the value disciplines "They have become champions in one of these disciplines while meeting industry standards in the other two."

⁶G. C. Kane, D. Palmer, A. N. Phillips, D. Kiron and N. Buckley, "Strategy, Not Technology, Drives Digital Transformation" MIT Sloan Management Review and Deloitte University Press, July 2015.





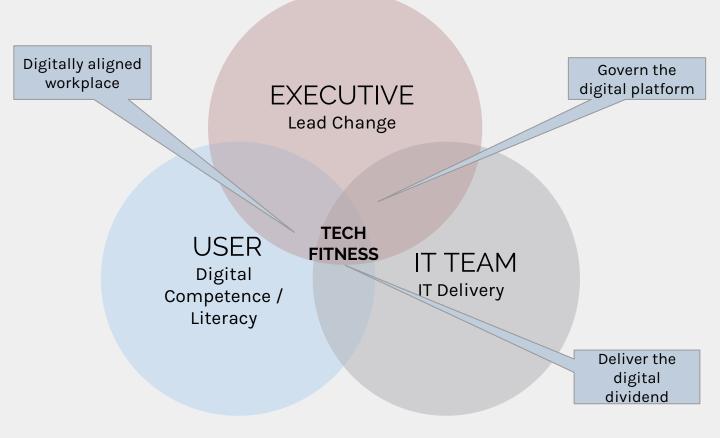
So the best in any given market typically seeks to be differentiated and unique in one of the dimensions while being good enough in the others. There are direct implications for how we invest in technology.

IT should focus their energy and investments into supporting activities that help the organisation to dominate that one critical discipline, while using good enough commodity technology to ensure they remain relevant (meeting industry standards) in the other dimensions. Uniqueness yes, but only where it makes a sustainable strategic difference.

If it doesn't make a sustainable difference using commodity technologies to meet industry standards makes a lot of sense, however remember, even commodity technologies are far from "set and forget". The technology landscape is always changing and always improving, so yes, use commodity technologies but you still need to monitor these technologies to ensure they remain market relevant and competitive enough. There are plenty of examples of an already dominant commodity technology being replaced by even better technologies that then themselves commoditise quickly. Think telco networks and network speeds.







Technology Fitness

Historically most organisations have left technology to the CIO and his / her geeks to sort out. This was never really a good idea but it is no longer possible if you have any hope of being a digital leader. Becoming a digital leader is a whole of organisation effort led by the executive, enabled by IT and delivered daily by all employees and increasingly by our customers and suppliers.





In the end IT fitness is all about delivering the IT capabilities that you need to be a digital leader but it goes beyond just IT delivery. An organisation is IT fit when they can consistently define, deliver and use IT based innovations in a way that make a positive difference to their organisation and their customers.

The role of the IT team in this is reasonably obvious and well understood. They deliver, operate and maintain IT. To be successful at this task the IT team needs to climb the IT Hierarchy of Needs⁸.

Now let's breakdown the roles of the executive and the users starting with the role of the executive.

Executive

Executive teams serve three critical roles in the search for IT fitness. The first is defining organisational uniqueness as we have discussed above. It is the executive's responsibility to define and clearly communicate an organisation's uniqueness all the way from why the organisation exists through to defining how that purpose will be expressed through a unique set of activities in the marketplace.





The second area that the executive have a role is to effectively lead the change. It is quite trite to say that executives need to lead change but the cold reality is that too often executives don't lead change preferring instead to proclaim change. It's a major reason, maybe the major reason that so many IT projects fail. Look at any analysis of project failure and right at the top of the list is ineffective sponsorship, the wrong people / skills being assigned to projects, unrealistic "fact free" expectations on delivery, lack of support in issue resolution. These are all leadership issues. If you judge people by their actions, when it comes to IT most executives are not leaders preferring instead to preach, distance themselves and blame. They may be executives, but this is not leadership.

Finally, the executives need to ensure that IT is coherent. That is all the pieces of IT and the activities that they support need to work together as seamlessly as possible.

Typically this happens through IT governance. IT governance has a bad wrap because it is badly executed in many companies. IT governance has three main purposes:

- 1. To ensure that the digital platform is coherent and capable of being leveraged for value creation
- 2. To ensure that the digital platform delivers the unique capabilities and
- 3. To ensure that all of this delivers real value to the organisation.





The Users

In the end value is created when a user of IT services does something. The user could be one of our employees, a customer or a supplier but ultimately it is the user using the services that actually creates the value. This is all pretty basic, assuming that the users have the skills they need to effectively use the technology. The problem is there is a wide range of digital skills in our organisations and many users are not particularly digitally competent. To make matters worse, organisations don't systematically invest in the digital competence of their team, they then lament their inability to deliver real tangible value from their technology investments. You can't be a digital leader, or expect to realise the digital dividend if your team members are not digitally competent.







OK, so how do you build digital competence? Well, it depends on the type of users you have in your organisation. The twenty something millennials will need very different support than their baby boomer and gen X peers, however the focus for all groups is on building the following skills⁹:

- 1. The ability to Identify, locate, retrieve, store, organise, analyse and judge the relevance of digital information.
- 2. The ability to communicate in digital environments, share resources through online tools, link with others and collaborate through digital tools.
- 3. The ability to use digital tools to complete tasks, create and edit new content (from word processing to images and video), integrate and re-elaborate previous knowledge and content, produce creative expressions, media outputs and programming and deal with and apply intellectual property rights and licences.
- 4. The ability to keep yourself and your organisation safe including personal protection, data protection, digital identity protection, security measures, safe and sustainable use.
- 5. The ability to problem solve including Identifying digital needs and resources, making informed decisions as to which are the most appropriate digital tools according to the purpose or need, solving conceptual problems through digital means, creatively using technologies, solving technical problems, updating one's own and others' competencies.

⁹The skills listed here are largely based upon the digital competency framework published by the European Commision. I have made some minor adjustments to their framework to reposition it away from an individual only focus to include organisational concerns. You can find out more information on the framework <u>here</u> and a previous <u>blog</u> I wrote.







If you get these three aspects of technology fitness right, mix this capability with a truly differentiated business strategy, then you can become a digital leader and reap the benefits of digital leadership including improved profitability.



About the author OWEN MCCALL

Owen is an experienced management consultant and CIO who is passionate about harnessing the power of technology to create value for businesses, communities, families and individuals.

Previously, Owen spent 18 years with Deloitte where he worked with clients from around the world to implement technologies that supported their business strategy. He also led Deloitte's outsourcing practice for Australia and New Zealand.

Owen then became the CIO of The Warehouse, where he was responsible for actually delivering value from IT.

These roles have given Owen a broad perspective of IT, its power and its challenges. He now operates as an independent consultant and advisor, guiding CIOs and senior executives on how to use technology in a way that adds real value to their organisation. He is a regular blogger and contributor to CIO and iStart publications and a sort after speaker across the technology industry.

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