When Technology Fails to Deliver

Why our digital transformation initiatives don't always go to plan and how we can get them back on track.

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Change has become disruption

At times it seems 'digital disruption' and 'digital transformation1' have become the most overused phrase in business. For many it is hard to distinguish between the idea of 'disruption' and good old fashioned every day 'change'. After all, digital technology is not new, for most businesses it has been around since at least the mid 1990s (and some might be able to track their use of digital technology back another 30 years before that). So what is so different about what is happening now?

To determine whether the technology driven change we are seeing now is fundamentally different than the 'normal' change we have seen in the past, there are two factors that we might want to consider. The first of these is the *speed of change* and the second is the *magnitude of its impact*.

The speed of change

The speed of change is perhaps one of the hardest things to get our heads around because changes in digital technology are exponential rather than linear in nature. We are good at understanding linear change because the change we have seen in the past is a good indication of what we will see in the future, but with exponential change this is not the case.

One of the best illustrations of how they differ comes from the founder of the Singularity University, Ray Kurzweil. He points out that if we take 30 steps in a linear fashion we will move about 30 metres, but if we take 30 steps in an exponential fashion (where each step is twice as big as the last) we will move about 1 *billion* metres.

This is equivalent to walking to the moon and back.

Now let's translate this back to the growth in computing power over the last couple of decades. If each step is representative of one year most businesses are about 20 steps into their digital journey. Based on the power of exponential growth this means that the total change we have seen over the last 20 years represents less than 1% of what we will see in the next 10 years.

¹ In this paper the term digital transformation refers to a coordinated effort to improve an organisations long term effectiveness using technology.

In effect, digital technology will become 100x more powerful in the next decade than everything we have experienced to date.

The magnitude of impact

In the early days of this digital revolution we had a fairly narrow view of what technology could do, and subsequently, which jobs it would impact. We generally understood that computers were good at managing numbers and we were fairly happy to see our accounting systems and other calculation intensive processes get digitised. We were also fairly comfortable with the deployment of robots in highly repetitive and potentially dangerous manufacturing processes.

What we didn't necessarily realise was:

- 1. Digital technology was potentially better than us at almost ALL information intensive tasks.
- From building relationships to working with others, designing products, ordering materials (or just about any other part of our jobs), almost ALL the work we do involves the creation, use or sharing of information².

This doesn't mean that we are all replaceable by technology, but rather that information technology will become an increasingly prevalent part of almost everybody's job.

So although some jobs that are highly information intensive and require little human interaction may be fully automated we are likely to experience most jobs being automated in part. In fact recent research by McKinsey's suggests that about 60% of current occupations could have 30% or more of their activities automated by adapting currently demonstrated technologies³.

History shows us that the exact impact of technology is often difficult to predict. But given that technology will become 100x more powerful over the next decades it will surely have an extraordinary impact on the business landscape and be key to the success or failure of many organisations.

In the words of technology commentator Kevin Kelly:

"We're just at the beginning of the beginning of all these kind of changes. There's a sense that all the big things have happened, but relatively speaking, nothing big has happened yet."

² For more on this I can highly recommend the book Exponential Organisations which shows that even our natural world and biological systems are largely information based.

³ http://www.mckinsey.com//Insights/Business_Technology/ Eour_fundamentals_of_workplace_automation?cid=digital-eml-alt-mkqmck-oth-1511

"If the rate of change on the outside exceeds the rate of change on the inside, the end is near."

~ Jack Welch

Technology drives value

So it seems fair to say that based on the speed of change and the magnitude of impact, the term 'digital disruption' is an appropriate one, and its effects are being felt by many small and medium sized enterprises (SMEs).

Almost irrespective of industry, businesses are seeing increased competition and shrinking margins as a direct result of changing technology. Firstly, it has created a global marketplace that allows customers to compare product and service offerings from competitors around the world.

Secondly, it has lowered the barriers to entry and made it easier for new, technology focused competitors to get a foothold in the marketplace.

Thirdly, it has improved efficiency across the supply chain resulting in lower margins and growing price pressure.

The ability of organisations to continually identify and respond to technology has very quickly become a key driver of future success. In fact, research by Capgemini and MIT's Sloan School of Management shows that irrespective of industry, organisations that are leaders in technology investment and managing digital transformation are already significantly outperforming their peers. The research shows that on average, digital leaders are 26% more profitable and generate 9% more revenue than their industry average. In comparison, digital beginners generate 4% less revenue and are 24% less profitable than their peers⁴.

With these types of returns at stake it is no wonder that so many SMEs are currently pursuing some form of digital transformation agenda. Unfortunately, with SMEs often lacking explicit technology expertise at the executive level and with no clear definition for 'digital transformation', many organisation's efforts won't be enough to ensure their longevity.

As technology driven change continues to accelerate, organisations will need to accelerate their digital transformation initiatives to match. But to achieve this, organisations will require a significant shift in how they view and how they respond to digital disruption.

⁴ The Digital Advantage:How digital leaders outperform their peers in every industry <u>https://www.capgemini.com/resource-file-access/</u> resource/pdf/

The_Digital_Advantage_How_Digital_Leaders_Outperform_their_Peers _in_Every_Industry.pdf



The Disruption Spectrum

The Disruption Spectrum is a simple way of thinking about an organisation's response to technology change.

At the bottom of the spectrum are the **Disrupted**. The organisations that are disrupted may be feeling the impact of technology change but are generally ignorant of its cause. This may be because they are focused on other things or have beliefs about 'the way things used to be' which means they are unable to appreciate its importance. Organisations at this level tend to avoid any type of meaningful conversations about technology.

Defenders show a level of awareness about technology that allows them to identify potential threats, but they make a conscious choice to protect old ways of doing things from new ones. In doing so, Defenders divert scarce resources away from innovation to protect the status quo. This ultimately results in a culture that discourages proactive change.

Organisations led by Defenders may manage to achieve short term financial gains by protecting its 'cash cows' but in the medium to long-term they are likely to face abrupt and rapid disruption as they lack the ability to make changes quickly.

Maintainers may understand that digital disruption is inevitable and even see it as beneficial. But Maintainers don't generally see technology as being core to their business, and as a result they continue to take a cautious, ad hoc approach that responds to change rather than initiating it. As a result Maintainers generally focus on upgrading or replacing existing platforms rather than seeking out new technology opportunities.

In times of slow, predicable improvements the Maintainers approach is potentially a sound one, but in a world where technological change is accelerating and its impact is growing Maintainers risk being left behind.

Dissenters are aware that today is not necessarily a great predictor of tomorrow. They have a culture that encourages employees to question the status quo, even when the alternatives are not entirely obvious. Within Dissenter cultures tinkering around the edges is acceptable and even encouraged but this is still somewhat ad hoc in nature and there is no meaningful support given to exploring new technologies and different ways of working. Unlike the Dissenters, the **Upstarts** have a structured, supportive and resourced approach that encourages the continual identification and implementation of new technology opportunities. They build support for new projects by continually delivering value back to their end users (and not just the organisation) and their proactive approach means they operate at a level of productivity and effectiveness that most of their competitors could only dream of.

At the top of the spectrum are the **Disrupters** who are generally the leading users of technology in their industry. By consistently delivering value to people across the organisation they create two important outcomes. Firstly, they generate immediate interest in and support for new initiatives. Secondly, a general uplift in the digital skills across the business means new opportunities are identified sooner.

In a virtuous cycle, the Disrupters' ability to identify, and willingness to adopt new technologies early, means they are also in the best position to act on the next generation of opportunities more quickly than their competitors.

Its about survival

On a day-to-day basis we don't necessarily consider that our organisation's survival is not guaranteed, but as the esteemed scientist Carl Sagan points out 'in nature extinction is the rule, survival is the exception'.

To position our organisations for long-term survival there are times where different parts of our organisation need a subculture that allows them to move up or down the Disruption Spectrum. They may move up to identify new opportunities and then down again as they are incorporated into the organisation. With the exception of the Disrupted, it is arguable that all these roles have a place in the modern organisation.

At the same time it is important that overall the organisation maintains both the appetite and an ability to pursue new technology opportunities, and this only happens at the top end of the spectrum. Even the ability to question the status quo isn't enough, it is only through a culture that resources and supports continuous action that will ultimately move fast enough to ensure their future relevance.

When technology fails to deliver

Most leaders would intuitively agree they need to be more proactive when it comes to technology, but many are also sceptical of the value proposition that technology projects offer. It turns out this scepticism is well founded, especially when it comes to large technology projects. Large technology projects systematically overrun on time, cost more than budgeted and fail to deliver the promised outcomes. In fact research suggests that projects larger than \$6 million generally fail to deliver any benefits back to the organisation at all⁵.

So although leaders may intuitively agree that a more proactive approach to digital transformation is required, experience tells them it doesn't make practical sense for them to do so. Without a clear way forward this tension generally results in inaction but as technological improvements continue to shape the winners and losers across various industries, this is a tension that will need to be resolved.

What this tension ultimately highlights is not whether we *should* be pursuing digital

transformation initiatives (if we didn't think we should there would be no tension at all) but rather *how* do we approach them in a way that improves their success.

Unfortunately many SMEs operate with limited internal IT expertise and the design and structure of their IT departments is relatively stable, even though the technology itself is evolving rapidly. This means that for many organisations, their approach to digital transformation is based on how technology used to be rather than how it is now.

This has resulted in the wrong technology projects being selected, or the right projects being done at the wrong time or in the wrong way. This in turn results in overruns in cost and time, underperformance against expected outcomes, low levels of technology adoption and frustration amongst users who feel like their needs aren't being met.

Fundamental to this problem are three myths about digital transformation that SMEs need to be aware of.

⁵ Why Your IT Project May Be Riskier Than You Think https://hbr.org/2011/09/why-your-it-project-may-be-riskier-than-youthink

Myth #1 - It's a one-off event.

When technology changed slowly and opportunities were hard to come by, treating technology projects as discreet one-off events was a valid strategy. But now that opportunities are prolific and change has become continuous, our digital transformation strategy needs to be updated to match.

Once we acknowledge the need for a continuous improvement approach to technology it highlights some important distinctions in how we approach them. Firstly, the conversation about project selection needs to shift from whether we should do a *particular* project to what are *all* the projects we could possibly do, and then, which order should we do them in.

Secondly, to manage a continuous approach organisations need to develop and retain their own internal experts to proactively identify and oversee projects rather than just relying on external consultants or contracted IT professionals.

Myth #2 - It's all about technology.

There is an increasing realisation that when it comes to technology projects it's not necessarily the technology bit that's hard. The hard bit is the bit that involves people.

If we think back a couple of decades, it made sense to treat technology projects as technical endeavours. The technology was slower, less unreliable, difficult to use and expensive. There was a lot that could go wrong with the technology and organisations hired technically minded people to make sure projects were kept on track.

But as the technology has got better and change has become faster the challenges around digital transformation projects has shifted from being a technical one to being a human one. These days, a project's failure to deliver promised benefits is more often than not to do with technology adoption rather than a failure of the technology itself. People are suffering from technology burnout that leaves them closed off to new technology projects, even when they offer significant organisational benefits.

If organisations were to think of technology projects as people projects, it highlights two more important distinctions we need to make in their approach to digital transformation. Firstly, organisations need to take a people first approach that focuses on what's in it for them (end users), rather than what's in it for me (the organisation or the person implementing). Secondly, we need to order the delivery of projects in a way that takes into consideration the capacity of people to understand, learn and adopt them.

Myth #3 - Start with the most valuable projects first.

When we have many possible projects to choose between and limited resources to deliver them it seems to make sense to pursue the most valuable projects first. But the most valuable projects are often the ones that take longest, are the most complex and involve the most risk. Research has shown a strong negative correlation between the size of projects and their likelihood of success⁶.

Not only do these risks inherent in these projects make it more likely they will overrun on time and cost, the complexity makes technology adoption far more challenging. Bigger projects are generally more conceptually difficult for stakeholders to understand which in turn means that personal value (the what's in it for them) is harder to define.

To improve the likelihood of digital transformation initiatives succeeding, it is therefore necessary to focus on building and maintaining momentum over the long-term rather than the delivery of individual projects. To do this, organisations should start with the simplest, easiest projects first. These may lack the headline value of bigger projects but they provide the quick wins that help build momentum quickly. When bigger projects become unavoidable (and they surely will) the organisation needs to put considerable effort into chunking these down to create projects that are both easier for the organisation to manage and easier for people to adopt.

⁶ Double Whammy – How ICT Projects are Fooled by Randomness and Screwed by Political Intent <u>https://arxiv.org/pdf/1304.4590.pdf</u>



Digital transformation done right

As the saying goes 'Insanity is doing the same thing over and over and expecting a different result'. It is clear that the common approach of pursuing big, high value technology projects on an irregular basis isn't reliable. An alternative approach based on the principles of Lean, Agile and other successful improvement methodologies would be to encourage small, low value projects to be done all the time. In this sense what needs to be transformed is not necessarily an organisation's processes but rather its approach to managing technology driven change.

The starting point for a continuous improvement approach needs to be in SMEs identifying a pipeline of possible projects to choose from. The truth is many organisations fail to identify even a fraction of the technology opportunities that are available to them because firstly there is no clear process for identifying them, and secondly the wrong people are doing the looking. The responsibility for identifying technology projects is often done by people with a technical focus who don't necessarily understand the operational needs of the organisation.

Once a pipeline of projects has been established it is then important to identify the right ones to start with. As noted earlier this should be done with the aim of building and maintaining momentum rather than delivering the maximum short-term value. As such it is important to choose one or two small projects⁷ that offer immediate benefit to end users rather than big long-term projects where the benefit accrues to the organisation⁸.

Throughout the investigation and implementation of these projects it is important that there is consistent engagement with stakeholders. This ensures the project addresses a meaningful problem,

⁷ Depending on the size of the organisation, a small project might generate value of between \$5,000 and \$100,000 per annum and cost anywhere between zero to 50% of its value to implement.

⁸ In general the most successful technology projects are the ones where value accrues to both the individual and the organisation but when looking to build momentum, it makes sense to prioritise the individual benefit over the organisational one.

and that end users buy into the proposed solution.

Finally, as a continuous approach, it is important that as the first projects are completed the pipeline is reviewed and the next most suitable projects are started. In this way, constant small changes becomes the new norm and through the delivery of each little project, momentum builds and technology capabilities improve.

As value is created for both the organisation and end users, the appetite for technology grows with it. This creates the conditions where larger, more complex (and potentially more valuable) projects can be delivered in the future. Although on the surface this slow and steady approach may appear to be out of step with the need for organisations to 'catch up' with more technology savvy competitors, the results can be surprising. Through the delivery of six to eight small technology projects a year, each generating between \$10,000 and \$100,000 of reoccurring value, SMEs have shown the ability to consistently deliver in excess of \$500,000 of reoccurring value per annum. At the same time a constant people focus means projects are properly embedded while at the same time laying the foundations for more valuable projects to be undertaken in the future.



The role of Digital Champions

This high touch, long term, continuous approach to digital transformation requires us to think differently about how we resource our technology projects. This is not an approach that can be outsourced to external experts. It requires individuals who not only have a good understanding of business operations but also have sufficient influence within the organisation to get things done.

It may be that these insiders partner with external consultants or outsourced IT as part of the project delivery, but the responsibility for identifying, investigating and implementing technology projects needs to be managed and controlled internally.

In larger organisations this understanding has lead to a massive growth in the number of Chief Digital Officers (CDOs) over the last few years (research suggests that 6% of organisations had a CDO in 2015 but by 2016 this had jumped to 19%⁹). Although CDOs can fill a number of different functions they are often tasked as change agents, facilitating the understanding and adoption of technology within the organisation. They understand the business need first and the technology a close second. They are advocates of the end user but also know how to communicate effectively across stakeholder groups.

In smaller organisations (less than 500 employees), budgetary and resourcing constraints mean a full time CDO is often unrealistic. For SMEs this is the role of a Digital Champion. A Digital Champion provides a similar mandate and skill set to a CDO but only undertakes the role on a part time basis.

Whereas the IT department might be considered the builder of digital solutions, the Digital Champion is the architect. Like an architect they rely heavily on human engagement and interaction to understand the needs of various stakeholders, They then work with IT teams, vendors and other external suppliers to define and implement practical solutions to meet their needs.

⁹ The New Class of Digital Leaders https://www.strategy-business.com/article/The-New-Class-of-Digital-Leaders

Perhaps the biggest challenge for SMEs is in finding the right people to fill the role. Hiring a Digital Champion externally is both difficult, because people with such a skill set are rare, and potentially unadvisable, because you ideally want your Digital Champion to have an intimate connection with your operations and people rather than just a knowledge of technology.

As much as it will require an investment of time and resources organisations wishing to pursue a Digital Champions approach will often be left with little choice but to identify and develop digital champions themselves.

The good news is that in many organisations a digital champion already exists, even if it's in an unofficial capacity. It may be someone already well regarded for their technology savviness and perhaps they also provide ad hoc advice and support to others. It could be an internal IT resource that just needs help in how to engage with others or it could be a business improvement professional that needs to build insights and knowledge of technology.

Yet without the explicit support of the executive these individuals will always operate in an ad hoc and unstructured approach, especially as they try and balance their informal role as a digital champion with their other formal obligations.

The starting point for this is explicit recognition by the CEO and the executive. This means promoting the Digital Champion to others in the organisation and lending additional influence to projects if required.

Secondly, Digital Champions require resourcing. A thorough approach to identifying, investigating and implementing of technology projects takes time and effort. The time requirements should be an explicit part of the individual's role and funding needs to be made available when suitable solutions are identified. Although the cost of individual projects is much less than with the legacy project based approach, the implementation of new solutions is not without cost.

Thirdly, the executive team may be called on to help prioritise the digital opportunities that are identified. Although it's important that technology projects are kept small and maintain a focus on value to the end user, it's also important that they align with the organisation's strategic objectives.

There is little doubt that this type of approach to digital transformation requires a more significant commitment than the current project based approach. It requires dedicated (though part time) resourcing, support from the executive and a longer time horizon for the delivery of big projects. But given the systemic failures of the current approach and the frustrations it constantly creates, a continuous improvement approach using Digital Champions might just be the best way forward.

Summary

We are now adding more computing power each and every hour than we did in the first 90 years of the computing age. This extraordinary growth in technology potential means that the ad hoc approaches of the past are unlikely to serve organisations well in the future.

The underwhelming nature of so many technology projects indicates that smaller organisations either lack the expertise or a suitable approach to managing digital transformation initiatives. If SMEs are to remain effective in a world of increased technology driven change they are going to need to rethink their approach.

An alternative to the current ad hoc project based approach is a continuous approach based on small projects with a people focus done often. But to undertake this approach SMEs will need to develop the internal capabilities to manage these projects. This is the role of the Digital Champion and in an increasingly technology risk world, this just might be the most important role that currently doesn't exist in your organisations.

Digital Champions will not develop organically. It requires direct intervention from the CEO and executive to provide the necessary support and resourcing they will need to be effective.

Five questions to ask yourself

- 1. Where do you feel your organisation currently sits on the disruption spectrum?
- How well have your organisation's last five technology projects performed? Were they delivered on time and on budget? Did they deliver expected outcomes? Are users happy with the solution?
- 3. Overall, how comfortable are you that your organisation's approach to digital transformation is adequate?
- 4. Is someone explicitly tasked with identifying and implementing technology projects in your organisation or is this just done in an ad hoc fashion?
- 5. If you know who your digital champions are, what are you currently doing to develop and retain them?

"We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten. Don't let yourself be lulled into inaction."

~ Bill Gates

Need help with the next steps

The Digital Champions Club is a program for SMEs who want to improve the success of their digital transformation projects. This is achieved through the development of internal experts within organisations who can consistently and successfully identify and deliver technology projects.

The Digital Champions Club provides a combination of community, accountability, training and support that maximises returns and minimises risks. Everything in the program is designed to shortcut the time required to identify, assess and deliver the

projects that will add value to your users and your organisation.

With just two digital champions committing two hours each per week you can expect your organisation to generate an additional \$200,000+ of value each year.

If you'd like to find to find out more about the program you can download the membership guide from

digitalchampionsclub.com/membership-guide

or to arrange a catch up with Simon call his business manager Sunny on 1300 66 55 85.





Simon Waller is an international keynote speaker, published author and founder of the Digital Champions Club.

Where some people talk about the future, Simon chooses to live it. He researches trends and emerging technologies, then runs experiments on himself, his business and sometimes his family.

Armed with his first-hand experiences, Simon helps others implement the future and successfully navigate the risks, challenges and opportunities it brings. For organisations seeking deeper conversations and more hands on support Simon also facilitates strategic workshops and runs insanely practical training programs.

Along the way, these experiences have also resulted in a couple of books: **Analogosaurus: How to avoid extinction in a world of digital business** is about how to engage people in the opportunities of technology and



The Digital Champion: Connecting the dots between people, work and technology is both a practical guide to identifying and implementing technology opportunities and the handbook for a program he runs called The Digital Champions Club. You can find out more about Simon at simonwaller.com.au or contact him on simon@simonwaller.com.au

Simon's book The Digital Champion: Connecting the Dots Between People, Work and Technology is available from simonwaller.com.au/the-digitalchampion/