WHITE PAPER

The Three Romances of Digital Transformation

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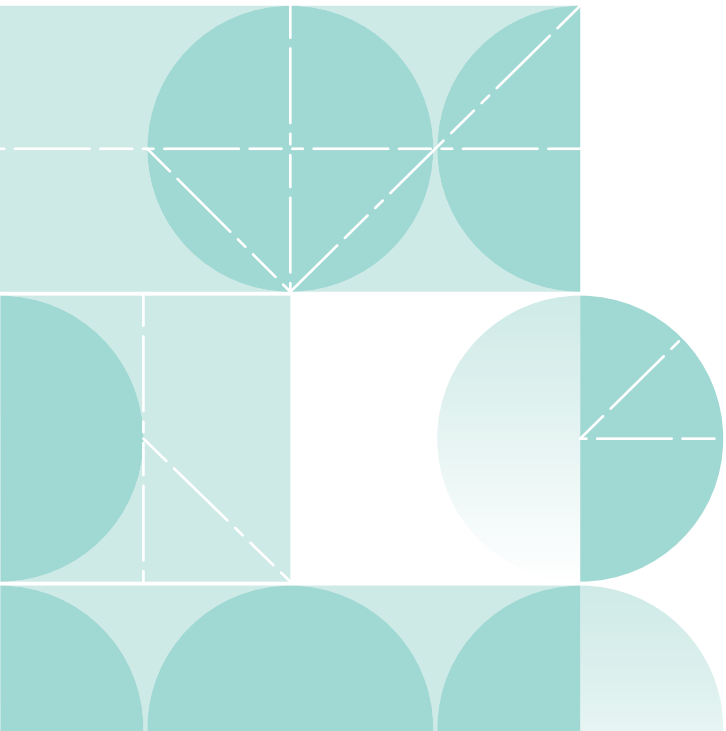

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Introduction

Many large organisations are currently facing the need for transformations within their enterprise to meet the challenges of a digital economy and a digitally oriented customer base.

These transformations—as is often the case for significant business change—are not occurring spontaneously; rather, they are intentional, strategic changes with leadership backing. As such, they are being planned and funded as programmes with expressed goals in mind.

Unfortunately, these programmes often fall short of expectations and do not meet their goals, leaving organisations wondering why and how this happened.

RedCrew and Pivotal have worked with numerous clients in the Asia-Pacific region on transformation initiatives. This white paper is a summary of these experiences and articulates the learnings that have been gleaned through active participation in such transformation programmes. It explains the why and the how of digital transformation and, while this paper does not purport to be a research paper, it articulates insights and recommendations gained through practical experience.

Executive Summary

Digital transformations are increasingly included in strategic plans tabled with corporate boards. The business drivers for this trend are both internal and external. These transformations are not merely aimed at implementing new technology; rather, they seek to transform culture, internal processes, and in some instances, the fundamental business model of the organisation as a whole. Hence, failure of these programmes is not only costly to the organisation—it's also destabilising. This is why it's so critical to get digital transformation right the first time.

When these transformations fail, it's usually not due to lack of funds or leadership commitment. The reasons for failure are rooted in something more core to the people involved: emotions, passions, and desires.

This paper articulates three "Transformation Romances" that have been repeatedly observed in transformation programmes of all sizes. These romances lead to poor decision making, groupthink, and ultimately to programme failure. They are:

- **Love of an idea:** Falling in love with a specific business solution, product, or customer experience
- **Love of an approach:** Falling in love with a methodology, structure, or technique that is the panacea for all problems
- **Love of a technology:** Falling in love with a specific technical platform or architecture that will, by itself, deliver on all of the business needs

This paper explores the implications on these romances and provides a series of recommendations for how to avoid them, thus ensuring the success of a transformation programme that will best position the organisation for the future.

The Case for Transformation

Before exploring the reasons that digital transformation programmes fail, it's important to understand why so many businesses are commencing such initiatives. Understanding the reasons and goals for transformation will inform what success looks like for these programmes.

After working with numerous organisations that are seeking to transform, there are a number of external and internal drivers for transformation that are outlined below. This isn't an exhaustive list of the drivers that lead to transformation, but it does include the drivers commonly cited by senior leaders. If you're a leader of, or in, a large and established business, then these drivers may resonate with you.

External drivers
These are the key external drivers that are frequently stated by corporate leaders as the reasons for the adoption of a digital transformation strategy.

Competition
The threat of increasing competition is a frequent driver in established industries. This competition may come from new entrants seeking to disrupt the industry by providing a digital offering in a high-margin niche or by incumbents embarking on their own digital transformation.

Industry change
For many industries, technology disruption has fundamentally changed the cost structures and operational models that are most efficient. Whether the innovation is the steam engine, lean manufacturing techniques, or digital technology, history has not been kind to businesses that fail to adopt the most efficient delivery models for their industry. Currently, this is a strong driver for industries specialising in service delivery (such as hospitality) or fungible products (such as financial services).

Customer behaviour
Customers are changing. They've been trained to expect instant access to information and services on their phones and are increasingly frustrated with businesses that don't engage with them in this manner. This expectation was initiated in wholly digital industries (such as social media), but now bleeds over into other, more traditional industries (such as banking).

Regulation
Governments are increasingly recognising the challenges of the digital economy and introducing regulation that forces the adoption of digital technology for entire industries. This regulation comes in obvious forms. An overt example is the General Data Protection Regulation (GDPR) directive in the EU, but there are other, more subtle forms of regulation that drive the need for transformation, arising from policy areas such as money laundering prevention, adoption of data ownership rights, and the need for service accessibility for vulnerable citizens.

Internal drivers
There are also internal drivers that will result in an organisation undertaking a significant digital transformation programme. Where these drivers exist, the need for transformation becomes a prerequisite to meet other strategic goals for the business.

Cost pressures
It's now clear that the marginal cost of service delivery via digital channels is significantly lower than the same service via other channels (such as face-to-face engagement or via call centres). The difference is often multiple orders of magnitude with the difference increasing over time.

Velocity
The speed of change across the entire economy has increased dramatically. Many established businesses must now deliver significantly more technical change every year with demand arising from business building initiatives and regulatory compliance. The only way to accommodate this increased demand is to scale capacity or increase the speed and efficiency of delivery. Increasing velocity is obviously the more attractive solution.

Financial
The introduction of technical architectures that facilitate consumption-based licensing models—such as cloud infrastructure and software-as-a-service (SaaS) offerings—results in a very different financial model for organisations that adopt digital technology. For businesses that are seeking to reduce their fixed capital or annual capital expenditure, the ability to divest themselves of data centres and semi-regular infrastructure refresh programs can be very attractive.

Strategic
Many businesses are embracing the concept of being customer driven and wish to strategically reorient the entire culture of an organisation to be more customer focused. Alternatively, an increase in innovation and innovative thinking may be a strategic goal. These are both examples of scenarios where a primary strategic goal would be facilitated by the adoption of digital technologies and approaches. Agile delivery methodologies, customer journey mapping, and lean startup business modelling—along with the technologies and architectures that facilitate these approaches—are supportive of a more innovative and customer-driven environment. In these cases, a digital transformation programme can be seen as a vehicle for the wider organisational and cultural change programme as a whole.

Leadership mandate
Sometimes a digital transformation programme will be established simply because the CEO or Board require it. This need for transformation may objectively arise from drivers listed above. It may also arise from more subjective reasons, such as a fear of being left behind or the desire to be an industry pioneer. For the people on the ground, however, these reasons may be left unsaid as the most important practical driver is that leadership have decreed it.

The Goals of Transformation

Transformation programmes inevitably have explicit and implicit goals that must be delivered. These goals reflect the drivers that led to the programme being initiated. It's important to consider these goals when discussing the causes of failure, as they represent the definitions of success.

For a true transformation programme, the important goals that define success will not be technical deliverables, such as a new mobile app or web site. The truly important goals will be the less tangible goals that will have more long-term impact, such as fundamental cultural and business change.

Below are some of the common goals of this nature that define whether a transformation programme is or isn't successful.

Customer engagement/emotional connection
Customer engagement and affiliation with the brand or products are improved by delivering online services and experiences that delight and solve customer problems. This is hard to achieve but not impossible. There are celebrated cases across many industries where this outcome has been achieved: from BBVA in banking to Domino's in food franchising.

Increased sales and revenue
Sales and revenue are increased by taking advantage of digital capabilities, such as frictionless online ordering, data analytics for targeting, and improved pipeline management.

Channel migration
Costs are reduced by migrating low-value customer interactions from high-cost, face-to-face channels to lower cost online channels. The face-to-face channels can then be reduced in size and cost or repurposed for higher value activities, such as sales.

Business model change
The business has an active strategy to convert its business model and the transformation is a vehicle for that transition. This change in business model could be converting the business from a bricks and mortar to an online retailer or something more significant. Netflix is an example of this, converting from physical DVD distribution to online streaming.

Internal culture change
The adoption of dynamic and innovative practices will be the catalyst and vehicle to drive new behaviours and values that will support an internal culture change. This goal is often included in a digital transformation programme when the existing culture is seen to be moribund and a barrier to progress.

The Reasons Transformations Falter

In many cases, when a large-scale initiative with high visibility and expectations fails, the organisation simply shrugs and moves on to the next attempt without any meaningful attempt to learn the lessons of the past. Sometimes there is a process of identifying and rationalising the causes of this failure, but this process is more likely to identify a series of technical issues that occurred, such as vendor underperformance, lack of funding, technical difficulties, or invalid assumptions. These findings are usually accurate and valid—but they are superficial. This kind of analysis only identifies the easily observable surface issues.

What this process is unlikely to highlight are the true, underlying, root cause issues that resulted in the technical issues arising or being left unresolved. The technical issues are the symptoms, not the disease.

A “surface” response to these deeper issues will not actually deliver the required digital transformation for the organisation. This section, therefore, discusses some of the actual root cause issues that repeatedly and reliably cause problems for transformation programmes. These issues have been identified and harvested from the personal experience of the author in multiple digital transformation programmes, combined with numerous discussions with practitioners at many levels of seniority, with similar firsthand experience.

These issues are collectively referred to as **Transformation Romances**. This title expresses the very heart of the issue: that key individuals become deeply attached to certain aspects of the programmes and therefore are *subjectively* driven in how they go about the business of digital transformation, rather than data driven. As a result, when challenges inevitably arise, the wrong decision is *subjectively* made or difficult issues remain *subjectively* unaddressed.

Transformation Romance #1: Love of an idea

This occurs when a senior stakeholder or group of stakeholders "falls in love" with a specific product idea or experience. Due to the innovative and visual nature of digital technologies, this kind of romance is very common among digital transformation programmes.

Once this romance develops, the idea overtakes all other considerations. Even in the face of clear evidence (i.e., *data*) that the product will not deliver the expected benefits, there is an unwillingness to let go of the idea. Every effort will be made to tweak the product to address issues that arise, but the concept that the core idea should be modified or abandoned is dismissed outright.

Stakeholders may even take the position that customers simply don't understand the product, and that once it's delivered all will be well. Proceeding against the recommendations and insights derived from well-structured customer testing is a very risky strategy.subjective suppression of valid concerns and the development of groupthink.

In the case of a particularly powerful romance of this nature (in which the passion and devotion to the idea is especially strong), poor behaviours from otherwise experienced leaders will be demonstrated. Stakeholders will begin to sideline and marginalise the people within the organisation that they perceive to be naysayers or detractors. This results in well-meant but *subjective* suppression of *valid* concerns and the development of groupthink.

Case Study: Love of an Idea

A large government agency in the Asia-Pacific region—seeking to make the transition from physical correspondence to the digital era—sought to deliver an online alternative to physical mail. This service was far less successful than expected despite millions of dollars of investment.

Interviews with team members involved in the product indicate that the team had no idea that the service would not resonate with the public. The internal expectation was that the idea was foolproof and would be inevitable successful.

Symptoms: How do I know if we have fallen in love with an idea?

- Are decisions about the product and features being taken by senior managers alone or are they being made in response to customer feedback?
- Are the results of customer testing that challenge the core idea being undermined or ignored?
- Are issues with the product discussed openly or behind closed doors?
- Are people afraid to escalate issues they are seeing with the feasibility of the product?

Transformation Romance #2: Love of an approach

Another such romance that has been repeatedly observed occurs when an organisation "falls in love" with a specific approach, methodology, or vendor.

This happens when there's a lack of belief amongst the leaders that they have the capability within their organisation to lead the transformation. In this believed absence of capability, they search externally to try to import the missing capability by contracting with "experts."

Once selected, this approach—whether a methodology or a vendor—becomes the focus of strong, *subjective* attachment by key personnel in the organisation responsible for ensuring the digital transformation. Indeed, this romance can lead to the organisation growing dangerously complacent, undermining the likelihood of success of digital transformation.

This romance has been observed in the following forms:

- The transformation revolves around a specific methodology like SAFe, customer journeys, or the so-called Spotify model.
- The transformation evolves into an implementation of a single, preintegrated software stack provided by a large software provider.
- The leadership and key decisions for the transformation are handed over to a consulting company or systems integrator.

It should be noted that seeking outside capability or techniques isn't an inherently bad thing. In fact, it will be essential for the transformation to be successful. The problem here is when the organisation abrogates its own agency and delegates accountability for success to an external agent. True success in digital transformation is far more likely when the organisation remains deeply enmeshed with the goals and desired outcomes of the process, expressing these via commitment and a determination to "own" the transformation, whether aided by external vendors or not.

Case Study: Love of an Approach

A large Australian Bank embraced the concept of customer journeys proposed by a well-known consulting company and then proceeded to restructure the organisation to follow this approach.

Interviews indicate that internal escalations suggesting that the change was occurring too quickly or that early successes were not as conclusive as suggested were squashed, which resulted in people holding back on raising criticisms.In the end, the approach did not lead to the benefits suggested and the strategy was shelved with less fanfare than when it was initiated.

At the end of the process, staff were confused about how to operate and were demotivated by being ignored. Overall, productivity was static or decreased by the implementation.

Symptoms: How do I know if we have fallen in love with an idea?

- Do staff identify more with the approach or with the organisation?
- Do people regularly say things like, "That's not the way it should be done" in response to suggestions for improvement?
- Are vendor and product choices politically driven rather than objective?

Transformation Romance #3: Love of a technology

When an organisation gives accountability for its transformation over to the IT department, this third Transformation Romance can result.

Technologists, perhaps unsurprisingly, have a tendency to *really* like technology, and if left to their own devices, they can easily "fall in love" with a specific solution. It's very easy for technologists to get wide-eyed about a platform or software stack and forget that the technology is only a means to an end, not the end itself. Here (again) *subjectivity* as a key driver can emerge as part of the digital transformation process.

Those familiar with the technology industry will recognise this pattern. In previous decades, IT departments have "fallen in love" with various technologies such as client/server architecture, thin clients, service-oriented architecture, and web portals.

Currently, technologists have a tendency to "fall in love" with things like machine learning, cognitive, robotic process automation, and microservice architecture. There are strengths and weaknesses in all of these technologies; issues that negatively affect digital transformation arise where subjective attachment to a technology drives what should be data-driven decisions. This *subjectivity* can be so deeply entrenched that it's extremely difficult for leadership at the very top of an organisation to identify. This is why this particular romance is so important to recognise as a possibility and address.

Currently, cloud computing is by far the most common technology to attract such *subjective*, unquestioning devotion by technologists. This may be because cloud computing has dual appeal: developers love it for its capabilities and ease of use and procurement teams love it due to the availability of consumption-based contracts.

All of these current technologies are excellent and should be used in any digital transformation—but none of them are a panacea. They all need to be assembled consciously into a solution that works for the specific needs of the business and there are an infinite number of ways to do this successfully. Hence, development of the solution must be *data driven* in its assembly of various technologies and never driven by a current *subjective* love of technology by the technologists tasked with data transformation.

Case Study: Love of an Approach

A major government department in the Asia-Pacific region accountable for significant services to citizens undertook a major transformation to replace an existing mainframe implementation with a new full-stack product suite supplied by a major software vendor.

After five years, the new technology had taken over only a fraction of the activity of the department, but hundreds of staff had been trained and capabilities in other technologies had been allowed to degrade.

At the same time, the focus on technology replacement left the business stakeholders disengaged and true business transformation had been neglected. Interviews with team members indicate a high degree of frustration with the outcomes.

Symptoms: How do I know if we have fallen in love with an idea?

- Are other technology suggestions or approaches rejected out of hand?
- Are issues with the chosen technology downplayed despite significant evidence?
- Are senior leaders presenting at sales conferences for the chosen technology?
- Is there PR about the the use of the technology rather than the outcomes it is delivering?
- Are engineers using the programme to pad their CVs and find other employment?

Transformation Romances as "hidden interests"

The dangers of hidden interests are recognised in many areas of business. As a result, most organisations have very clear policies around conflicts of interest. Rules around the registration of received gifts, transparent procurement processes, and open decision-making forums are all examples of this. Audit functions and whistleblower policies are other well-known tools for addressing the negative outcomes of hidden interest in organisations.

These policies are only able to address tangible, pecuniary interests. Unfortunately, detrimental personal and emotional interests—such as those identified in the three Transformation Romances—are hard to identify, even for those experiencing them. There is a fine line between the conviction of a strong leader with a vision and a leadership blind spot. Where Transformation Romances exist, a blind spot invariably exists also.

When such a blind spot occurs, there are a number of observable negative impacts on a digital transformation programme. Here are some examples:

- **Objective information is filtered.** When the people "on the ground" think the digital transformation programme is red but the Steering Committee receives a report showing its status as green, then there is a problem. This is an example of a "Watermelon Project"—green on the outside but red in the middle. This is a risk on any project but the speed at which digital development occurs can seriously exacerbate this issue and undermine transformation success.

- **Critics get sidelined or removed.** People who identify and highlight the problems articulated in the three Transformational Romances often encounter a harsh, dismissive response from those whose judgement is affected by the particular romance. This response very quickly leads everyone else to keep *data-driven* criticisms to themselves, lest they too be sidelined or removed from the transformation project. The resulting lack of robust questioning and discussion amongst organisation personnel undermines the ultimate success of digital transformation.

- **There is a difference in language between leaders and doers.** Some digital transformation programmes develop a sophisticated form of "correct" language that allows emerging issues to be avoided or superficially addressed. The leaders will adopt this language, but the people "on the ground" doing the work are less likely to. This leads to unnecessary, unproductive divisions amongst key teams who need to work together to ensure the goals of digital transformation are realised. This kind of "in-group" behaviour also creates cynicism within team culture—a further hindrance to success.

- **The technology options narrow.** Due to the *subjective* belief in the "rightness" of the particular Transformational Romance (or romances), the programme will make decisions that remove other options. This could manifest as reducing the size of teams maintaining "legacy" systems or allowing contracts for other technologies to lapse. This behaviour, if not consciously thought through, increases delivery risk.

- **The best developers leave.** It's no secret that the best developers have career options and can discern (often before others) when the programme isn't on a successful path. It's not uncommon for them to simply find other work if they believe that long-term digital transformation success is unlikely. This is a form of dilution. Any large programme only has a small number of exceptional developers at the best of times. If these developers leave and can't be replaced, then the overall capability of the programme is irreparably harmed.

- **Success is claimed when it isn't justified.** Transformational romances often lead personnel to support whatever the current course may be despite the best efforts of others to bring valid and constructive criticism to the work. Worse still, success can be claimed when the outcomes are simply absent or mediocre. This raises expectations for the programme and increases the negative organisational impact of a necessary course correction (if indeed it finally occurs).

Consequences of Transformation Romances

The term "Transformation Romances" has been chosen to describe a series of leadership and decision-making pathologies and blind spots (which often manifest in hidden interests). These pathologies and blind spots are observed repeatedly across organisations and have decidedly negative outcomes in terms of digital transformation. In the Asia-Pacific region alone, the opportunity cost of failed or underperforming digital transformation programs would be conservatively estimated in the hundreds of millions of dollars.

The common thread between the romances is that key decisions are not made to service the organisation or the expected outcomes of the programme, but rather to service a separate agenda—often a subjective, hidden one. It's important to recognise that where the interests of the organisation and the separate agenda align, digital transformation can proceed smoothly—but when these interests diverge, digital transformation either fails or is seriously impeded. Ultimately, the organisation loses out.

Avoiding the Pitfalls

Having proposed some of the causes that lead to the failure of a transformation programme, it's important to also propose some of the solutions.

As stated, the fundamental premise behind the Transformation Romances is that subjectivity overrides data and objectivity, leading to poor decision making and pathological team cultures. This section outlines some techniques and observations that can be used to minimise this risk.

The approaches outlined below have been observed to work and to help deliver successful transformation. They are effective techniques for helping decision makers keep their objectivity and focus on the data. It should be noted that **transformation is really hard** due to the inevitable ambiguities of the target and the inherent implication that the activity is different from the usual activities of the organisation. There is no simple, guaranteed solution that will make a transformation successful.

These techniques will reduce the degree of difficulty, however, by redirecting the focus of leaders and team members on data and objective, transparent, decision making.

It should be noted that any cultural or organisational changes that are only partially adopted or undermined by the personal behaviours of senior leaders is doomed. It should be assumed that total leadership commitment is a prerequisite for implementing any of these techniques.

Focus on how decisions are made

The negative impacts arising from the Transformation Romances arise from poor decisions that were influenced by subjective bias. To avoid this risk the process of decision-making on a transformation programme should be an area of specific management focus. By deliberately constructing the way decisions are made, emphasising objectivity and the use of data, the risk of hidden interests can be mitigated.

There are many ways of doing this. Below is a series of specific, practical steps that are recommended.

Invite the counter argument

One way to ensure that groupthink and subjective biases don't go unchallenged is to actively encourage the articulation of a counter argument. In some team cultures, this can be as easy as inviting people to offer a counter to a proposal and then actively listening. In cultures where there is strong social pressure to be agreeable, more targeted practices may need to be adopted, such as:

- Giving visible recognition (perhaps even a formal reward) to someone for calling out an issue so that it could be acted on
- Actively seek an opportunity to change an existing decision based on good data and then be visible about why the decision is being changed

- State that any decision proposal that hasn't faithfully articulated the counter arguments will be deferred
- When a decision needs to be made, seek the opinion of several people outside of the leadership team
- Legitimise the role of the "black hat" in decision making by taking on this role and providing the counter argument yourself

Employ slow thinking

In the bestselling book *Thinking, Fast and Slow,* Nobel laureate Daniel Kahneman outlines the existence of two systems of thinking in the human brain that are in constant operation. *Fast thinking* is characterised by low-effort, instinctive, and emotional decision making that achieves efficiency by simplifying problems and using heuristics. *Slow thinking* is characterised by more effort and more conscious, rational, and logical reasoning. This book also outlines how many of the cognitive biases that people exhibit can be traced to the interplay of these two modes of thinking.

In familiar situations, people primarily use fast thinking to make decisions, but it's possible to consciously employ slow thinking to address an issue. When you feel that decisions on the programme are happening too fast and without enough rigour, it's valuable to pause and actively review some of the decisions that have been made. Consciously and actively thinking through a decision again from base principles and with an eye to unsubstantiated assumptions provides a good audit of whether specific biases are influencing the decision-making process.

Generate and use data

Actively demanding and using objective data in decision-making processes is a highly effective strategy for mitigating the risk of subjectivity. Requiring and actively interrogating data during a decision-making process for senior leaders is an effective way to drive a data orientation throughout the programme.

"In God we trust, everyone else bring data"

- Unknown

This approach does have problems, however. Sometimes data is absent or incomplete. Data can also be misinterpreted without understanding how it was created and what it means. This can lead to the appearance of objectivity, but poor decisions may still result.

To address this, it's important to seriously consider investing in the gathering of high-quality data about the programme itself. For example, establishing an independent team tasked with obtaining and interpreting data in response to specific questions is one way to generate invaluable insights that will improve the quality of decisions.

This kind of investment should not be considered a luxury, as it will directly contribute to the overall success of the programme.

Lean hypothesis

All decisions have inherent risk. If the wrong choice is made, then resources and time will be misspent. The bigger the decision, the greater the risk—and this can lead to decision making becoming overly conservative.

It follows that one way to improve the quality of decisions is to reduce the risk of making the wrong decision. A practical and effective way of doing this is to use a Lean technique for making decisions that borrows the concept of problem statement, hypothesis generation, and experiment formulation from science.

Rather than making a full decision, the problem is defined as specifically as possible, the viable hypothesis (or option) is determined, and then an experiment is undertaken to validate the hypothesis. If this experiment proves the hypothesis, then there is more data and the hypothesis is strengthened. A full decision can now be made or the cycle may recommence with a new, more detailed hypothesis and another experiment.

Alternatively, if the experiment shows the hypothesis is flawed, then another hypothesis can be identified with minimal loss of time and resources.

This approach has multiple benefits: it forces the problem to be clearly stated, it emphasises objectivity, and it provides an avenue for a poor decision to be reversed quickly and at low cost. It also allows for work to progress without being stalled while a complex, high-risk decision is made. A smaller, lower risk, decision can be made quickly and activity can continue.

Set the right expectations and accountabilities

Some of the issues associated with poor decision making can be offset if the right expectations are established when the transformation programme is first initiated.

At the beginning of a digital transformation programme, there are two key decisions regarding expectations that can have a profound impact on the pressures and biases subsequently experienced by the delivery teams. The first question is whether the business or technology stakeholders have the lead on decision making and the second is how fast the transformation was expected to deliver results.

The selection of these two questions out of the myriad of potential questions that will be asked and answered when a transformation is started may seem arbitrary. These specific questions, however, have been selected due to experience with multiple transformation programmes. These two decision points set the balance of power (who is charge) and how much time pressure there will be (how fast must we go).

The following diagram highlights these two decisions in a classic two-by-two matrix.

This matrix labels each of the four combinations of a transformation programme that can arise from the outcome of these two decisions and colours them according to their relative likelihood of failure. This assessment is driven by experience but is also supported by evidence from the reviews of failed transformation programmes. These combinations are described below.

White elephant

When the business leads a digital transformation, there is much greater risk of the Transformation Romance #1 (Love of an idea) occurring. If the expectations are for rapid delivery, then there will be less time to thoroughly validate the business idea and much greater impact to the programme if the idea has to be amended substantially or dropped altogether. As a result, while the programme is likely to deliver something due to the twin pressures of business expectation and time, what is delivered is much less likely to meet customer needs. The outcome may be an expensive white elephant. This approach is therefore classified as a medium-risk approach.

Road to nowhere

This form of transformation is characterised by decision making being led by the technology teams of the organisation and reasonable expectations around delivery timeframes. This approach is especially susceptible to Transformation Romance #3 (Love of a technology). The more reasonable timeframes result in space for the technology teams to focus exclusively on the tech and can result in overinvestment in the "gilding" of platforms. If these impulses can be contained, however, then this approach can deliver benefits. This approach is therefore also classified as medium risk.

Doomsday

Assigning budget, granting the technical teams autonomy, and then expecting rapid delivery is the worst-case scenario. Without a commercial focus, the teams are likely to focus on the delivery of the technology rather than business outcomes. Under time pressure, there will be a constant temptation to cut corners and a reluctance to reassess solution decisions that don't work out. This approach is not recommended.

Renovation

The recommended model for a digital transformation programme is strong, committed business leadership combined with reasonable expectations for delivery of significant change. A business focus will keep the customer front of mind for team members, but the reduced expectations will leave room for changes of course, or pivots, if the initial ideas for change turn out to be less than optimal once customer testing occurs. This approach will also allow room for the technology teams to do the engineering work required to deliver solid platforms, but will reduce the likelihood of over-engineering. This approach is more analogous to a renovation of the organisation's digital capabilities than it is to a wholesale rebuild or transplant of capability. As with a renovation on a home, change of this nature can lead to a completely different final outcome, but would avoid the need for a full demolition and rebuild.

Transforming the people

As previously discussed, digital transformations are as much about changing the culture and people in the organisation as they are about changing technology and digital experiences. A true digital transformation will leave behind an internal culture that is more adaptable, customer focused, and dynamic. This will allow the people in the organisation to keep pace with the new levels of change velocity made possible by the new digital platforms.

Most people engaging in digital transformation planning are aware of this, yet the level of preparation for the required organisational change is usually inadequate. There is often an underlying assumption—perhaps fueled by the rhetoric surrounding successful transformations—that the required changes in culture will happen organically and automatically without the need for intervention. This is not the case.

There is a significant need for a digital transformation to drive culture and organisational change if it's to have lasting impact. Organisational change is, however, not the focus of this paper. Rather, this paper provides a series of practical techniques that have been observed to be successful in various digital transformation programmes to drive culture change:

- **Celebrate failure.** This is now a cliché in the technology industry but it doesn't come naturally to many traditional organisations. Failures are opportunities to learn and adapt. While failure should never be the goal, it must not be punished, as this will prevent the honesty and transparency required for a team to harvest these learnings.
- **Leaders become role models.** If you want a team to behave a certain way and adopt a certain culture, then the leaders of the programme need to visibly and consistently role model the new behaviour. If the leaders don't walk the talk, then the team members will, at best, pay lip service to the desired values and behaviours.
- **Be ready for turnover.** Moving to a digital delivery model for any organisation will result in staff turnover. There is no alternative. Some people will simply not enjoy—or will be unwilling to adapt to—the new delivery model. Not everyone will make it to the end of the transformation journey. This may be an uncomfortable prospect, but it's true.
- **Embed cultural leaders.** Actively find people, either internally or externally, who exemplify the desired behaviours and values. Deliberately place them throughout the programme to act as cultural leaders.
- **Train for understanding, not process.** Many transformation programmes that are adopting agile processes will send all staff on SAFe training, agile training, or some other form of relevant skill-based training. This approach is counterproductive. The people trained in this manner will know what to do but not **why** they are doing it. They will become zealots of the new process instead of adaptable, agile team members. It's more productive to train people in the underlying concepts of agile delivery methods and why they are effective than in any one specific method.
- **Actively remove chameleons.** Learn to be suspicious of team members who embrace the new delivery approaches and culture too quickly. If they are merely acting from a desire to please, rather than a deeper commitment and understanding of the programme, then they can seriously endanger the desired outcomes. Experience has shown that they are less likely to communicate negative information and will actively avoid questioning leadership decisions. These people will reinforce the negative aspects of the Transformation Romances.

Choose solutions for the context

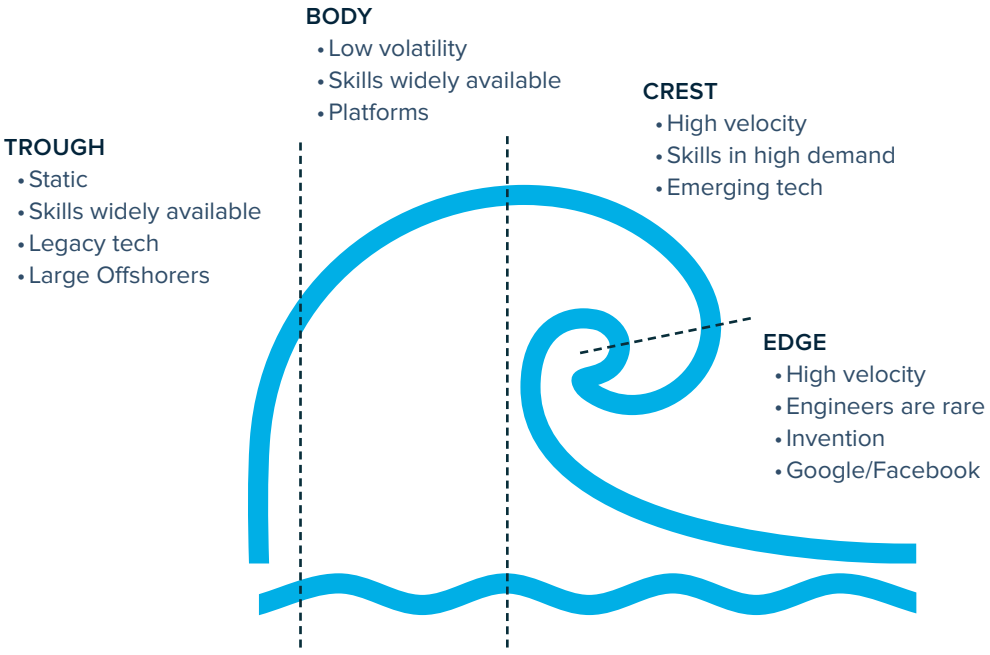
Many teams that are tasked with a digital transformation feel a strong need to eschew the old technologies of their legacy assets and use new, modern technologies exclusively. This is a tendency that, if left unchecked, leads towards Transformation Romance #3 (Love of a technology).

Any transformation will (and should) make extensive use of modern, innovative, technologies. The introduction of new technologies results in workforce changes, training, and the establishment of capabilities. This is hard and should be recognised as such. It's unwise, therefore, to raise the level of difficulty of transformation by using new technologies to solve all problems. The reality is that not all problems are the same and the application of a new technology or architecture may not be the best answer.

In addition, not all new technologies are the same. Novelty and popularity are not the only defining characteristics of technologies. Some are cutting edge, involving new concepts that are still being tested and understood, whereas others are simply new, easier ways to do something that has been around for a long time. Some have extensive support from a diverse community; some are incredibly niche.

To organise the categorisation of technologies,so they can be used for the right problems, it's helpful to use the metaphor of a wave. Seeing the relentless progress of software development techniques as a wave feels correct on a number of levels. There is always a thin leading edge, a large trailing wake, and an assumption that the wave will keep ploughing forward under its own momentum.

Representing technology innovation as a wave results in a picture like the one below:



The wave has four parts to it:

1. **The Edge.** The edge of the wave is very thin and very fast moving. This is the cutting edge where new technologies are developed rapidly and often discarded just as rapidly. If you are using technologies in this space, then your business model is predicated on innovation. This is where Google and Facebook live. They are creating the technologies that the rest of us will use in a few years.
2. **The Crest.** The crest is where the wave starts to bulk out and has more volume, but is still very fast. In technology terms, this is where early adopters begin to use emerging techniques and they begin to gain prominence. It's in this phase that a new technology lives or dies. It either becomes Angular or Ember. This is where startups live. They're not necessarily inventing the technologies themselves, but they're incentivised to adopt the newest and most effective techniques because they have no other choice. A solution built at this part of the wave has the longest shelf life, because the technology has a long way to go before obsolescence kicks in—but it still has very few people that know how to use it or support it.
3. **The Body.** This is the most visible part of the wave and where the bulk of the water is. In our analogy, it's where most technology investment occurs. This is where mass adoption of a new technology occurs and where most developers have some form of exposure and interest in the technology. It isn't the space that's really cool, but most people have some experience, so it's easy to recruit and easy to support. Unfortunately, it's also closer to obsolescence. The replacement technology is probably already being used at the crest.
4. **The Trough.** This is where legacy lives. It's the largest and most voluminous part of the wave and it goes on forever (like many legacy applications). This is where you find mainframes, C code compiled with an unsupported compiler, or a proprietary mishmash built by multiple generations of developers. This software probably works but is hard to change, hard to upgrade, and nobody really wants to work on it.

This metaphor is useful when making technology decisions as it will aid the matching of technology to problem domain, as well as give an insight into the relative difficulty that will exist in setting up a scaled team to work with the technology.

For the areas of the transformation where you expect to get the most benefit, you should target the use of crest technologies. This will maximise longevity of the solution, and the added difficulty of training and adoption is worthwhile to achieve the benefits identified.

For less important areas of the transformation, it may be acceptable to use technologies in the body of the wave. They will be less sexy, but they will also be faster and cheaper to implement.

Edge technologies should be used sparingly, if at all. You should not bank the success or failure on these technologies as they're still speculative, but they may be useful for specific, niche problems that don't require rollout at scale.

One of the biggest mistakes that recurs in transformation programmes is when an edge or crest technology is selected, but the assembled team is more adept at using body or trough technologies. This rarely works—no matter how much you invest in training. If you use edge technologies, you need edge people to implement it, and they are rare and expensive.

For most digital transformation programmes, it's recommended that 70% of the capability is delivered using body technologies, 25% is delivered with crest technologies, and no more than 5% is delivered using edge technologies.

Conclusion

Although the drivers and goals of digital transformation are well identified, substantial, and justified, the resultant change programmes are often unsuccessful.

In these failures, while many (often surface) technical issues may be identified and blamed, the root cause is more likely to be less tangible problems in the way decisions are made and how the programme is established from the first.

In particular, the tendency for leaders to make poor decisions based on personal preferences—referred to here as subjectivity—despite contrary evidence, is a major factor in transformation failure. This is exhibited in the three Transformational Romances that result in digital transformation failure.

Ensuring that a digital transformation programme is successful requires humility from all organisational personnel who work in this space, so that when one's subjectivity is identified and highlighted as a barrier to success, a solution can be effected with agility and flexibility. There is no doubt that this requires personal fortitude and strength of character on the part of those of us who are part of digital transformation today.

Further, the ability to recognise that a programme is on the wrong path and needs to change course to secure success is a challenge for leadership. To reduce the degree of difficulty of this challenge, it's necessary to adopt practices and approaches that put data and evidence at the heart of decision making at every level of the programme.

Finally, the prizes from a successful digital transformation are significant but these can be won only by identifying and following the data along the journey.