

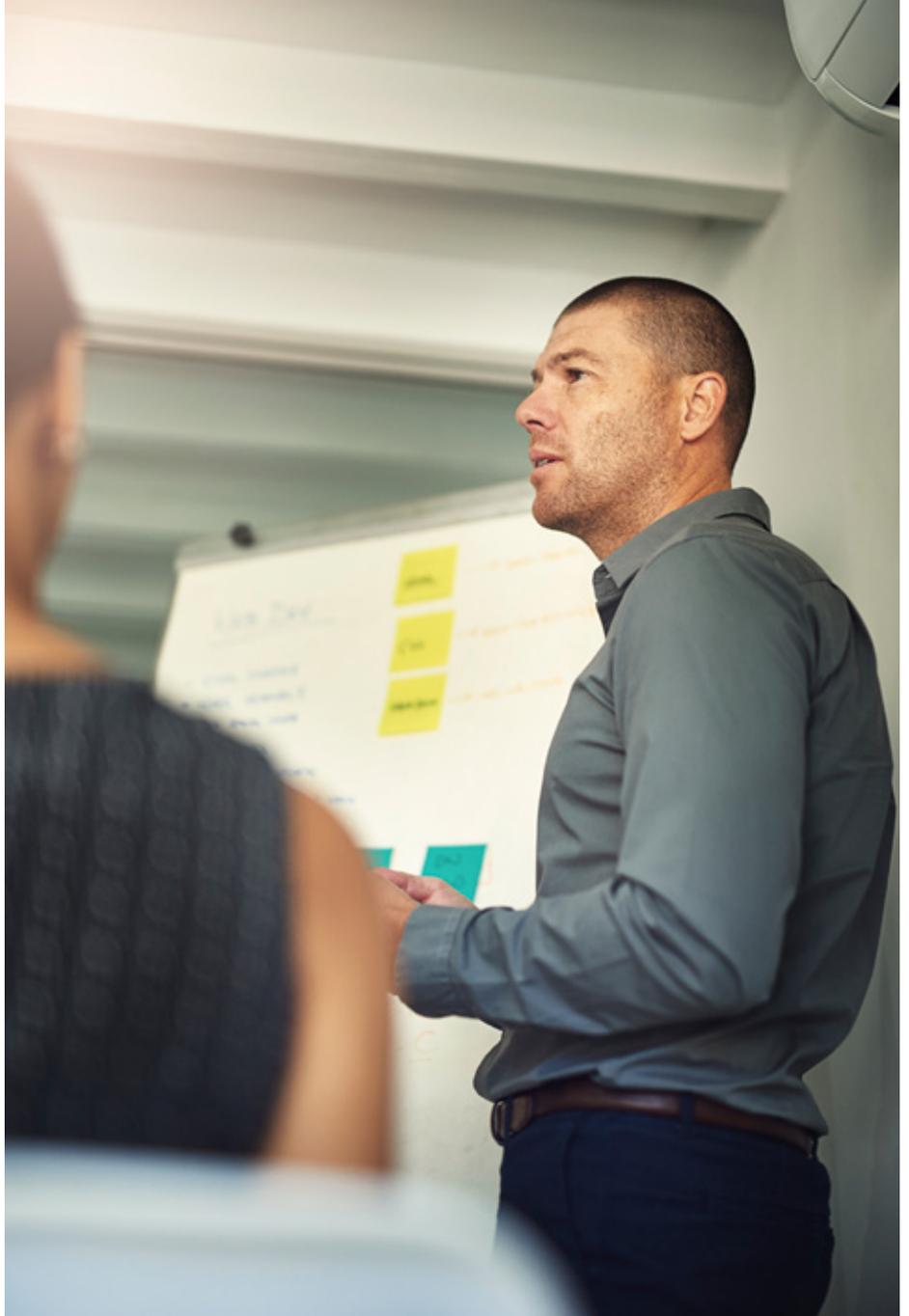


Accelerating Business Agility

Whitepaper: How to rapidly sense, adapt and respond in the face of constant change.

"Agility is the ability to adapt and respond to change. Agile organisations view change as an opportunity, not a threat."

Jim Highsmith, Fellow, Agile Business Consortium



Business agility for better business performance

In order to survive and thrive in today's volatile and unpredictable market conditions, many progressive businesses are turning traditional ways of organising people and work on their head. In the most profound revolution of managerial thought in 200 years, concepts that were until recently deemed as 'given' are being overturned and replaced: command-and-control hierarchies are giving way to highly autonomous teams, long-term strategic planning is giving way to iterative innovation, and product-centricity is giving way to customer-centricity. Agile businesses are learning to slough off ossified forms of thinking to unlock high levels of organisation-wide collaboration and ingenuity.

For businesses wanting to embark on such a transformation, one thing is clear: the mindsets of a critical number of people must change.

For an organisation to embrace agile ways of working the inertia of tradition must be overcome, a tipping point of collective thinking needs to be reached. The fastest way for this to occur is to educate executives and key influencers on the mental models and concepts that underpin agility.

Overcoming outdated mental models

About 200 years ago, the first industrial revolution started off when machines started mass-producing goods that were previously produced by hand: the loom and the factory started replacing artisans and droves of people abandoned rural life for the cities. Then, approximately 100 years later, the second industrial revolution kicked in when electricity and the internal combustion engine accelerated mass-production. This was when the assembly line was invented, as well as most of the management theories that we still use today. The third industrial revolution, the digital revolution, started in the 1980s when analogue forms of information (paper, magnetic tape, photographs, etcetera) were converted to digital format. This in turn unleashed the information age that we live in today. We now find ourselves perched on the cusp of the fourth industrial revolution, which is likely to have far more impact than anything we have seen before. Digital technologies are being systematically embedded throughout the fabric of society: in “the cloud”, in our cars, in our buildings, in our urban infrastructure, even in our bodies. This interconnected, exponentially advancing, digital fabric creates the conditions for runaway innovation and extreme market volatility — new threats and opportunities emerging all the time.

The management theories that were penned 100 years ago are no longer suited to today’s business environment. They were designed to organise unskilled labour around highly structured work in stable and predictable markets. They were all about control. As such, they are unsuited for today’s volatile conditions. In a complex and ever-changing market the business imperative is not control, it is adaption.

Pioneering companies are now reimagining businesses as more of a living organism than a machine¹ and drawing on lean and agile theory to enable this transition. What is emerging is a new

business operating principle: the post-bureaucratic organisation², or more colloquially — agile business.

Following similar principles that enabled unprecedented success in software development³, agile businesses are learning to thrive in extreme conditions. Some are so successful that they are putting traditionally managed firms out of business⁴. Agile businesses aim to constantly adapt to changes brought about by exponential technologies⁵, market shifts, disruption, and the customer’s ever-shifting perception of value. Their goal is to change as quickly on the inside as the market is changing on the outside.

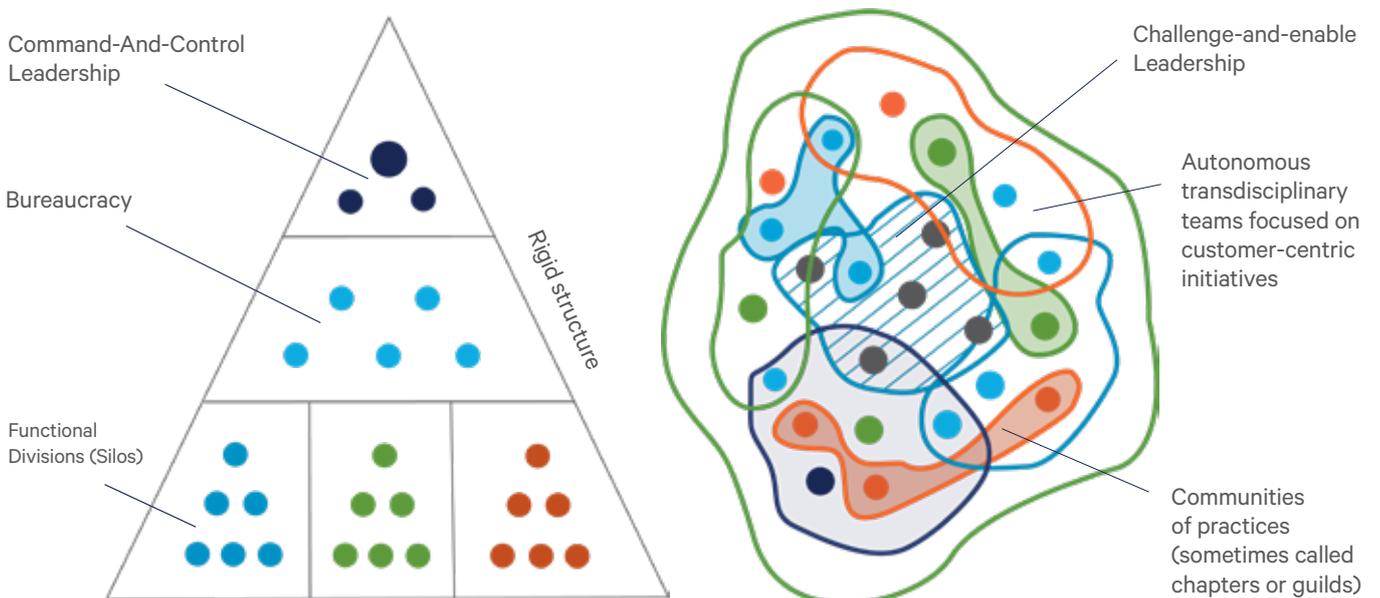
Because an agile transformation requires an organisational-wide paradigm shift in terms of conceptualising and organising work⁶, industrial-era management doctrines need to be uprooted and superseded by principles where:

- individuals and interactions are valued more than processes and tools,
- value creation is more important than comprehensive documentation,
- customer collaboration has a higher emphasis than contract negotiation, and
- responding to change trumps following a plan⁷.

In the truest sense of the word, becoming agile requires a *radical*⁸ departure of how businesses are traditionally run. Siloed departments need to be dissolved and replaced with teams that have end-to-end responsibility for specific customer-related purposes. These teams need to be broken into small, highly autonomous, transdisciplinary sub-teams that work collaboratively together on initiatives — constantly exploring, ideating, testing and innovating. To support this structure, leadership must change from command-and-control to challenge-and-enable. It is a big change.



Traditional vs. Agile Structure



Dangerously, some organisations attempt shortcuts by adopting commodified 'frameworks' without the important work of deeply understanding agile thinking. This is very risky. The term agile gained traction through its ascension in the software industry. However, the Business agility body of knowledge stems mostly from lean thinking and complexity theory. While there is a notable overlap, practices such as "Scrum" that software developers use do not necessarily transfer to other domains. Organisations that attempt to simply graft practices that evolved in the software domain onto another will be unlikely to achieve business agility.

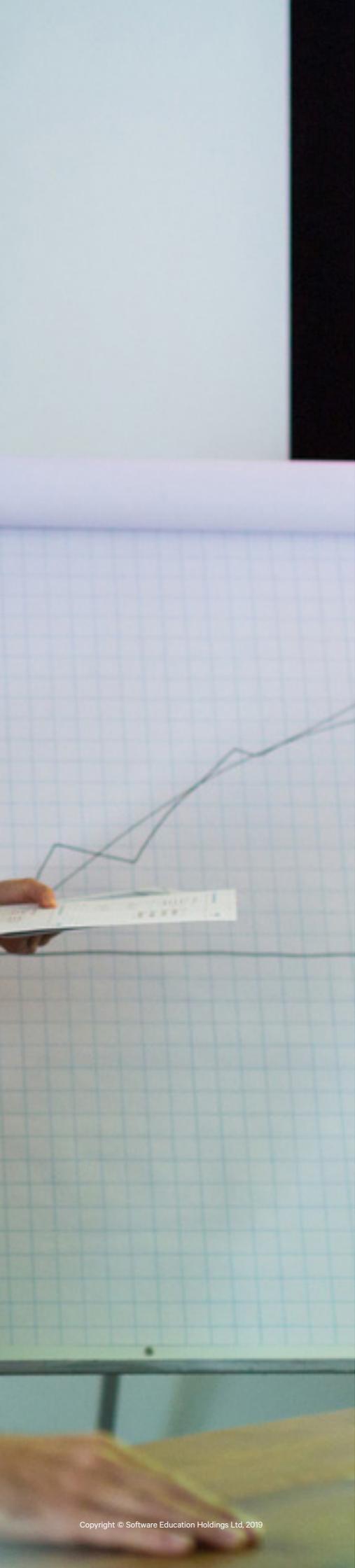
In helping many global businesses with their agile transformations, we have found that the most successful learning occurs when a sound theoretical basis underpins practice; that is, when newcomers understand the whys and the hows of agile, not just the whats. As dynamic work designers, Repenning, Kiefer and Repenning suggest, the key to transferring practices across domains is to firstly understand why they work and then modify them to match the new context - whilst retaining the underlying principles⁹.

At the core of agile thinking is a cluster of interrelated topics that together represent an 'agile mindset'. By teaching practitioners foundational mental models¹⁰, we typically witness a paradigm shift in thinking that does not occur if agile practices or frameworks are taught in isolation. In a study conducted for the 2015 Drucker Forum, the Learning Consortium For The Creative Economy found that mindset change was the single most important factor for activating agility. They concluded, that where management practices and methodologies were implemented without the corresponding mindset, no tangible benefits were displayed¹¹.

The key to transferring practices across domains is to firstly understand why they work and then modify them to match the new context - whilst retaining the underlying principles.

The mental models that we introduce to business agility practitioners are drawn from lean thinking, complexity theory, learning theory, design thinking, change psychology and organisational behaviour. They help the practitioner view organisations as complex adaptive systems rather than rigid pyramidal structures. This in turn contextualises the various practices of agile into a coherent perspective and catalyses positive behavioral change.





Understanding agile's genesis

It is important for newcomers to understand the roots of the agile movement, why it came about, the problems it was trying to solve, and its relationship to lean thinking. This knowledge helps cut through the proliferation of misinformation about “agile”, differentiates business agility from software development practices, positions it as an evolving discipline, and gives the practitioner confidence to discuss the topic with authority.

“Agile” is a blanket term for many approaches. The discipline arguably dates back to the 1930s when Walter Shewhart of Bell Labs applied Plan-Do-Study-Act (PDSA) cycles to the improvement of products and processes¹². W. Edwards Deming then took PDSA to Japan after World War II to develop the Toyota Production System, which later became the seed of today's lean thinking movement¹³. It espoused iterative and incremental development over the sequential “waterfall” model and produced breakthroughs in quality and efficiency.

In the late '90s, the software industry was under pressure to deliver results in increasingly complex conditions. The Information Age had taken hold. New technology and disruptive business

models were enabling some organisations to dwarf their competition. Software had pervaded all aspects of business and the digital economy was thriving¹⁴.

In response, innovative programmers, influenced by lean thinking, started working on various lightweight development frameworks, including the now popular “Scrum”. In 2001, seventeen self-described “organisational anarchists” met in a ski lodge in Utah to flesh out the competing ideas. The meeting gave birth to the famous *Manifesto for Agile Software Development*¹⁵ (which is usually shortened to “The Agile Manifesto”), and influenced the agile movement in general.

As the movement matured, more lean techniques such as Kanban¹⁶ were incorporated into the body of knowledge. Then, forward-thinking companies, impressed with what they were witnessing in their digital teams, started deploying agile techniques in other business units, from marketing to human resources to finance¹⁷.

Today, every major management consultancy advocates agility. McKinsey call it the “*new dominant organisational paradigm*.”¹⁸



Understanding the need for organisational adaptivity

The agile practitioner needs to understand the external driving forces of organisational adaption in order to fully appreciate the need for agility.

The Fourth Industrial Revolution, unlike previous revolutions it is evolving at an exponential rather than a linear rate. We are witnessing frequent breakthroughs in fields such as artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing. The technology is advancing so quickly that the normally conservative World Economic Forum believes “in its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before.”¹⁹

The Fourth Industrial Revolution, unlike previous revolutions it is evolving at an exponential rather than a linear rate.

Emerging technologies, and their exploitation by nimble competitors, can radically alter market dynamics. One minute a retailer is at the top of their game, the next it has lost its customers to Amazon. One minute the taxi industry looks indomitable, the next it is being disrupted by Uber.

In the language of complexity science, the market is a *fitness landscape*²⁰. If the fitness landscape (the market) reconfigures due to changing customer expectations,

then a business that was optimised for the previous conditions can suddenly find itself unfit for survival. It will be expert at serving customers that no longer want its products. To use an ecological term, it will be maladapted to the new environment.

Today the market landscape is far more volatile than it ever was in the past. Tomorrow, due to the exponentially increasing power of technology, it is likely to evolve even more rapidly. In five years time technology will be ten times more powerful than it is today for the same price; and in ten years, the increase will be hundredfold. It is impossible to predict the market evolutions that this phenomenon will cause. (see page: 19)

Operating a business in such a dynamic fitness landscape requires constant adaption. It requires what Shona Brown and Kathleen Eisenhardt call “*thriving on the edge of chaos*”²¹ — being structured enough so you can efficiently do things but open enough that you can take advantage of opportunities.

When an agile practitioner conceptualises the market and their organisation in these terms, there is no doubt or hesitancy about the need for constant experimentation and innovation. It becomes the obvious adaptive response.

Growth Mindsets

Because agile businesses are constantly conducting experiments, many of which will fail, Agile practitioners need to develop a frame of mind that views failures as learning opportunities. Stanford psychologist Carol Dweck²² calls this disposition a “growth mindset”. People with a growth mindset thrive on challenge and see failure as a springboard for growth. By comparison, people with a “fixed mindset” view character, intelligence, and creative ability as static traits that can’t be significantly changed.

In a poll given to 143 creativity researchers, Dweck found that persistence within a growth mindset was consistently rated as one of the most important factors contributing to creative achievement. With a growth mindset, success is not about proving you’re smart or talented, it’s about stretching yourself to learn something new. Failure is not seen as a flaw, it is seen as a focal point for learning.

Importantly, Dweck found that a growth mindset creates a passion for learning rather than a hunger for approval — “a belief that your qualities can be cultivated leads to a host of different thoughts and actions”²³

Adaption is all about learning: learning how new products are being accepted, learning how customer’s preferences are changing, learning how to eliminate waste, learning how to collaborate better, learning how to apply new technologies to old problems and so forth.

Since learning is essential for adaptive challenges, the widespread cultivation of growth mindsets throughout the workforce is a key enabler of business agility.

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Complexity

The science of complexity helps practitioners make sense of the many challenges faced by businesses today: emerging technologies, globalisation, disruptive competition and cultural change to name a few. Complexity science deals with systems that have many interacting variables and provides useful models to guide decision-making.

A particularly useful tool is Dave Snowden’s Cynefin Framework²⁴. The framework differentiates challenges into one of five domains: Simple, Complicated, Complex, Chaotic and Disordered²⁵.

In the *Simple* domain, the relationship between cause and effect is well understood by everyone and decisions are straight-forward. Increasing capacity in production to meet seasonal demand is a simple challenge.

The relationship between cause and effect in the Complicated domain is still understood, but only by experts. Solving specialised technical problems, such as troubleshooting an aeroplane, is an example of a complicated challenge.

In the Complex domain, the relationship between cause and effect is not known until the challenge is solved. There are too many variables at play for anyone to predict the outcome of an action. Many business challenges fall into this domain. For example, the uptake of a new app by customers is unknown before it launches. It is in the complex domain where agility is of most value. By approaching complex challenges with an experimental and exploratory mindset, agile practitioners establish the conditions to discover emergent solutions.

In the Chaotic domain, there is no relationship between cause and effect. No manageable patterns exist. This is the type of challenge characterised by catastrophe. In chaotic challenges, swift action that creates stability is required.

Finally, the Disordered domain is where there is no clarity about which of the other domains apply, where “multiple perspectives jostle for prominence, factional leaders argue with one another, and cacophony rules”²⁶. The way out of this is to unbundle the situation into components and assign each to one of the other realms.

Understanding the Cynefin framework, and other complexity models, greatly improves decision making. It helps practitioners to see things from new viewpoints, assimilate complex concepts, and address real-world problems and opportunities.



Lean Thinking



Agile business practitioners should strive to create value every day. They should strive to create value for customers in terms of products and services that they want. They should strive to create value for the business in terms of efficiency. And they should strive to create value for colleagues in terms of contributing to purposeful collaboration and harmonious flow.

From a lean thinking perspective, any activity that is not creating value for the customer, the employees, or the business is considered waste. Such activities include unproductive meetings, bloated processes, over-engineered products and presenteeism²⁷, to name a few. The agile practitioner needs to learn to push hard to eradicate waste in everything they and

their teams do. New era managers need to understand how to empower teams to optimise value delivery, eliminate waste and to innovate. Value must be measured in terms of making an impactful difference to a customer or to the business²⁸.

A relentless focus on delivering value and eliminating waste means that mistakes will be made all the time. Agile businesses must learn to celebrate mistakes instead of punishing them. If mistakes aren't being made it is probably due to individuals and teams remaining too far inside their comfort zones. This denies the organisation learning opportunities and adaptive responses.

Agile business practitioners need to *become comfortable with being uncomfortable*²⁹.

"The 21st century will be equivalent to 20,000 years of progress at today's rate of progress; organisations have to be able to redefine themselves at a faster and faster pace."

Ray Kurzweil, Director of Engineering at Google



Slicing safe-to-fail experiments very thinly

Today's dynamic environment creates too much unpredictability to determine in advance whether a initiative is going to work or not. Past performance is no longer a reliable predictor of future performance because the conditions — the competitive landscape, customer expectations, underlying technologies — keep changing. Therefore to invest heavily in an untested idea, or to repeat a strategy that worked with a previous set of conditions, is extremely risky.

Rather than launch grand initiatives that have been dreamed up in an annual strategy session, agile businesses seek emergent solutions to complex challenges. They do this by running, parallel, thin-sliced³⁰, safe-to-fail, experiments.

Snowden explains that approaching complex challenges with small, contained experiments allows emergent possibilities to become more observable. *“The emphasis is not on ensuring success or avoiding failure, but in allowing ideas that are not useful to fail in small, contained and tolerable ways. The ideas that do produce observable benefits can then be adopted and amplified when the complex system has shown the appropriate response to its stimulus.”*³¹

A seasoned agile practitioner lives and breathes experimentation and knows how to keep pushing for the thinnest possible slice³² — the absolute minimum amount of work that is required to test a hypothesis.

Design Thinking

Design thinking is a process of creative problem solving and innovation. It is a mature discipline with well defined techniques around empathy, ideation and experimentation³³. Its power comes from its ability to overcome the cognitive bias and groupthink that normally stifles innovation.

Through structured processes and a collection of well documented tools, even stakeholders not formally trained in design disciplines can become involved in finding creative solutions to complex challenges. As strategist Jeanne Liedtka explains, design thinking creates a flow from research to roll-out. Insight from customer experience creates data which, in turn, generates useful information to begin to ideate on. Assumptions can then be tested through rough, low-cost prototypes and the design iterated upon as learnings are made³⁴.

Most agile businesses use design thinking to steer their innovation processes. Some organisations create innovation offices to ensure continuous improvement is not deprioritised by business-as-usual demands. Ignacio Juliá Vilar, Chief Innovation Officer at ING, explains why:

*“In the day-to-day management of the business, managers have to stay on top of their P&L, competition, and regulations. They often neglect the part that is important but not urgent. The innovation office forces the organization to have ring-fenced resources, people, budget, all that is needed to make sure that we are going towards a certain direction and that we force the whole organization to go towards that direction.”*³⁵

Because design thinking is a collaborative endeavour, we find that it is best taught through immersive exercises. Working on a real-life design problem under facilitation greatly accelerates skill development and confidence in the process.

Agile leadership and change

The old adage that the only constant in business is change has never been more true. Agile businesses are constantly adapting, evolving and changing. Therefore, the nature of change needs to be well understood by those involved in leading it.

The classic ‘changing as three steps’ (unfreezing > changing > refreezing) model³⁶, which is the foundation of the change management industry, has no relevance in fluid environments. Adapting to dynamic landscapes is not a slow-moving, linear process that a ‘change agent’ can ‘manage’. Time does not permit the creation of ‘sponsor roadmaps’ and ‘resistance management plans’.³⁷ In complex environments everything is changing all the time.

What is important are the effects of change on individuals: what happens to people when the status quo is challenged, the anxiety they encounter during disequilibrium, and the growth and learning that occurs when emerging from chaos. Drawing on models of practical psychology, such as the Satir change model³⁸, is of far more use to the agile practitioner than highly structured step-processes.

Fortunately, the field of organisational behaviour is flourishing and work by researchers such as Amy Edmondson, Brené Brown, Dan Cable, Sheryl Sandberg and Adam Grant is making its way into popular literature. Topics such as psychological safety, the importance of displaying vulnerability, unlocking intrinsic motivation and building resilience are entering mainstream management discourse. Consequently, we are seeing growth in people-centered business cultures that reduce anxiety around change³⁹.

In agile businesses, the leadership approach is not command-and-control. Rather, the focus is on empowering teams to collaborate and align to a common purpose. This requires a different type of leadership to that which is usually found in bureaucratic organisations.

Agile leaders lean towards “servant-leadership”⁴⁰ which focuses primarily on the growth and well-being of people rather than the accumulation and exercise of power.

The most effective agile leaders take great lengths to cultivate a climate of psychological safety⁴¹ where people are “able to show and employ one’s self without fear of negative consequences of self-image, status or career”⁴². Effective agile leaders encourage a diversity of opinion and stimulate creative conflict⁴³.

We have found the Adaptive Leadership model developed by Dr. Ron Heifetz and Marty Linsky, from thirty plus years of research at Harvard University, is particularly useful to agile practitioners. The model differentiates between technical and adaptive challenges. Technical challenges are those where the problem and solution are clear, where cause and effect is obvious, and which can be dealt with efficiently through a delegated authority — someone who knows exactly what to do. Adaptive challenges are those where the problem and solution are not clear and require learning: complex problems in other words.

In adaptive challenges, the locus of responsibility for problem solving shifts from authority figures to stakeholders. Heifetz and Laurie advise that “solutions to adaptive challenges reside not in the executive suite but in the collective intelligence of employees at all levels, who need to use one another as resources, often across boundaries, and learn their way to those solutions.”⁴⁴ It is not the job of an adaptive leader to come up with solutions, their job is to get the stakeholders to do so. This takes skill and requires specific training⁴⁵.

The job of the agile business leader is to cultivate an environment of collaboration, experimentation and constructive conflict. It requires being a more human leader than the industrial-era archetypes. As Javier Pladevall, CEO of Volkswagen Audi Retail in Spain, suggests: “Leadership today is about unlearning management and relearning being human.”⁴⁶

What is Business Agility?

Business agility is the ability of an organisation to sense changes internally or externally and respond accordingly in order to deliver value to its customers.

Business agility is not a specific methodology or even a general framework. It's a description of how an organisation operates through embodying a specific type of growth mindset that is very similar to the agile mindset often described by members of the agile software development community.

Business agility values individuals and their interactions, collaboration, driving toward outcome and constant learning.

Reference: Agile Alliance / Business Agility⁴⁷



Inducing the necessary paradigm shift

Gary Hamel eloquently describes bureaucracy as a “genetic disorder” and points out that “Band-Aids, braces, and bariatric surgery don’t fix genetic disorders.”⁴⁸ Business agility requires a radical shift in mindset, an ‘un-learning’ of old beliefs and assumptions, what Thomas Khun called a paradigm shift⁴⁹.

The paradigm that most businesses operate under was forged during the industrial revolution over 100 years ago and resulted largely from the work of engineers who had a particular interest in increasing productivity within factories⁵⁰. These industrialists viewed business as giant machines⁵¹, and employees as components in those machines. Many of the management practices in use today, and still taught at MBA courses, stem from that era: hierarchical structures of authority, the division of labour into specialised silos, centralised decision making, performance based incentives, quality control procedures, project management, and so forth. These ideas need to be completely uprooted to enable agility to flourish.

Some successful agile businesses advocate using velocity to overcome inertia. Vincent van den Boogert, CEO of ING Netherlands claims, “If you do a transformation at a gradual pace, then you give people the idea that it may be a failure, and there are always people who want to prove that it won’t work.”⁵²

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We agree with this insight. In our work we have seen a certain tipping point occur when a critical mass of influential people have been properly educated and immersed in the culture and practices of agile.

Malcolm Gladwell defines a tipping point as “the moment when an idea, trend or social behavior crosses a certain line and spreads like an epidemic”⁵³. He explains that tipping points occur when ideas are taken up firstly by some influential early adopters then spread to an early majority. Ideas die when an early majority isn’t created.

Therefore, to supercharge a transformation it is wise to first seek out the people that are likely to embrace agility and help them spread to the early majority. These are the go-to people in an organisation, the linchpins that others rely on to get their work done⁵⁴. It is not the job of the formal leaders to push agility on everyone; their job is to empower the go-to people to create a movement.





The Second Half of the Chessboard

Digital technology does not advance in an orderly, linear, fashion. It advances at an exponential rate. It keeps doubling in power every 18 months or so, and is likely to continue to do so for the foreseeable future⁵⁵. Because we lack a reference point in nature (things like trees and babies do not grow exponentially), it's hard to appreciate what exponential growth is like. There is a nice fable about the invention of chess that helps. In the fable, the inventor of chess offers to be paid in the amount of rice grains that can fit on a chessboard as calculated in the following way: starting with a single grain of rice on the first square, on each of the subsequent 63 squares the quantity of rice is doubled — 2 grains on the second square, 4 on the third, 8 on the fourth and so on. Believing this to be a terrific bargain the ruler promptly agrees to the deal. However once the court starts counting out the rice grains the mathematics get crazy. By the time they get to just the second half of the chessboard there is an entire harvest's worth, about 300 tonnes. From then each doubling creates astronomical amounts of rice. By the time it gets to 64 squares the pile would be higher than Mount Everest.

Using the invention of the microprocessor as the starting point, some have calculated that we crossed into the 'second half of the chessboard' somewhere between 2006 and 2013⁵⁶. The point is, despite the incredible advances that we're witnessing in technology — artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing, to name a few — in the words of Andrew McAfee of MIT, "*when it comes to the impact of digital technologies on the business world, we ain't seen nothing yet*".⁵⁷

Conclusion

In conclusion, for most organisations, developing business agility is requisite for survival. It is also the best way we know to thrive in volatile markets. However, it is very risky to throw people into such a radically different way of working without first laying the right cognitive foundations, the mindset required to embrace agility. For this to occur, the legacy of over 100 years of industrial-era managerial thinking needs to be overturned by inducing a paradigm shift. By teaching the mental models that underpin agile thinking, such a paradigm shift can occur. Then, rapid strides can be made and practical knowledge diffused rapidly throughout organisations, especially if the go-to people are given the necessary support to catalyse a movement.

"To put it simply, there has been no other point in history when so many aspects of disruptive change have collided and conspired to wreak havoc."

Doug Stevens

The Retail Revival: Reimagining Business for the New Age of Consumerism

About the author



John Dobbin is a seasoned technologist, business leader and consultant. His background is in mathematics, computer science and organisational development. As the Principal of a prominent systems integration firm in the early 2000's, he was an early adopter of agile software delivery and assisted numerous multinationals make the transition to agile thinking. He continues to research and explore the frontiers of behavioral science and complexity theory within the context of organisations, innovation and human development.

About SoftEd

SoftEd work with organisations of all sizes and from all industries to help to transform the mindset and practices of leaders and teams to create adaptive and more efficient organisations.

Our aim is to transform the way that business is done using the latest in organisational design and thinking. We work with individuals and teams in some of the world's largest and most innovative organisations to sharpen their skills through a comprehensive service offering encompassing consulting, coaching, training and mentoring.

In today's fast-paced world, agility is the key to managing and responding to change quickly and efficiently. This is where we excel - we have vast experience supporting organisations as they adopt new ways of working.

We work with businesses to improve upon existing core project delivery capabilities to help them to achieve improved speed to delivery, shift their focus to become more output-led, and to help them engage sponsors for faster decision-making.

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