Strategic Agility in an AI World

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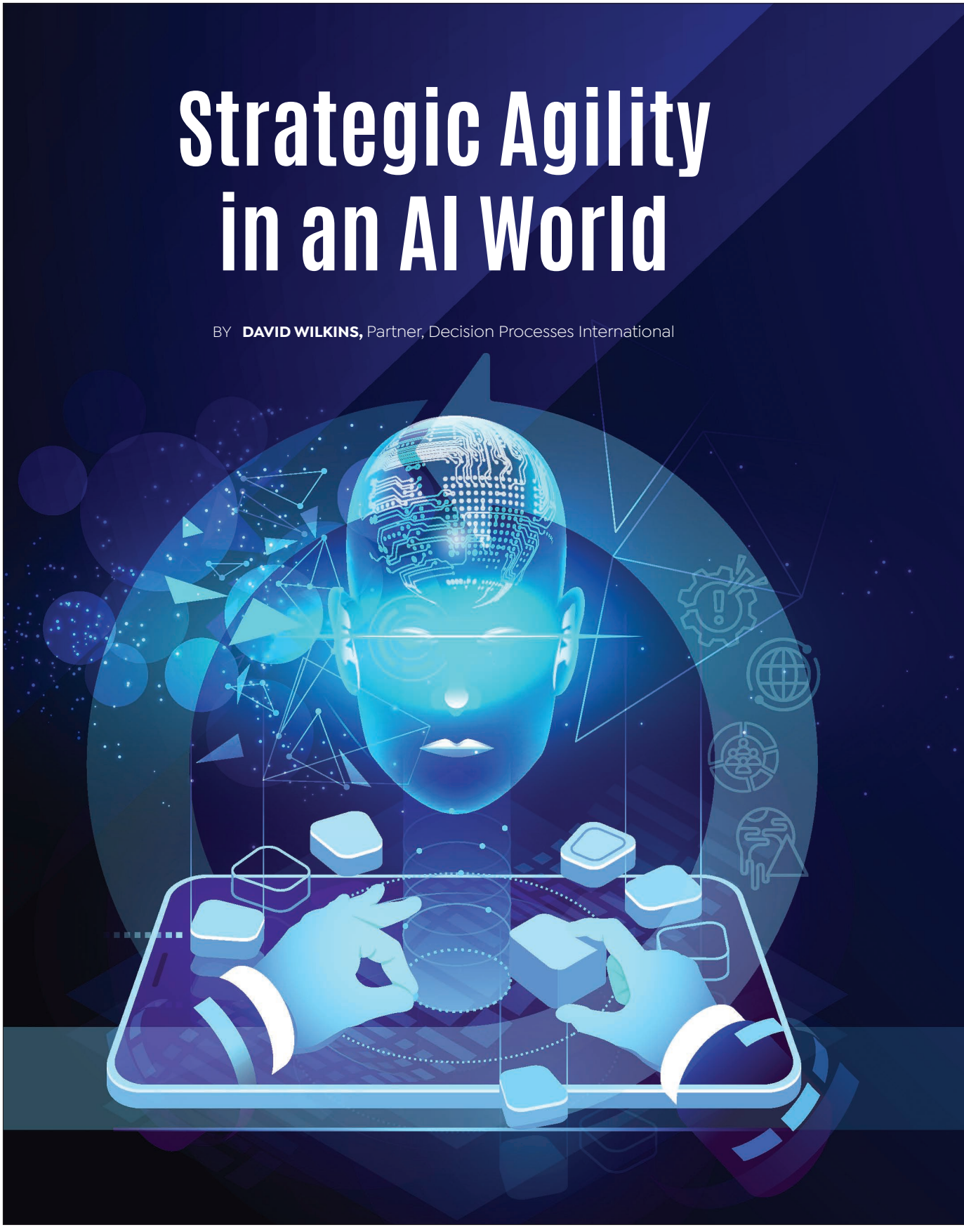

Directors are responsible for the future success of the business. As such, boards must consider how the organisation will respond to mega-change events, such as the rise of AI. A superficial response will not suffice. The key is to leverage AI to enhance the organisation's strategic agility and achieve distinct relevance in an ever-evolving landscape.

There are changes. And then there are mega changes. For example, the discovery of electricity in the mid-1700s, the invention of the telephone in 1876, the commercialisation of the internet in the early 1990s, and the digital technologies of today.

No business can escape their implications. In recent years, entire industries have disappeared because they became irrelevant to their customers. Think photo development salons, video rental stores and brick-and-mortar travel agencies.

Even countries can become irrelevant. In his book, *Kaput: The End of the German Miracle*, Wolfgang Münchau argues that Germany's once-thriving economy is facing possible decline by not responding well to the mega changes of the times: technological disruption, globalisation, demographic shifts and climate change.

A mega mega change is upon us today: artificial intelligence (AI). For a brief history of AI's development, see the box on the next two pages, "AI: How We Got Here and Where We Are Now."

Artificial Intelligence: How We Got Here

1950s: Genesis

The origins of AI can be traced back to the 1950s when British mathematician Alan Turing proposed the idea of machines that could simulate human intelligence. He introduced the concept of the Turing Test, a criterion for determining whether a machine can exhibit intelligent behaviour indistinguishable from that of a human.

In 1956, the Dartmouth Conference brought together researchers to explore the possibility of creating "thinking machines." It marked the official birth of AI as a field of study and coined the term "artificial intelligence."

1960s: Early milestones

The 1960s saw significant advancements in AI, including the development of the first AI programmes. One notable achievement was the creation of the Logic Theorist by Allen Newell and Herbert Simon, which could prove mathematical theorems.

Another milestone was the development of ELIZA, an early natural language processing programme created by Joseph Weizenbaum, which simulated a conversation with a human.

1970s: Expert systems

Initially, AI research focused on expert systems, but these had two major limitations:

- A human was needed to provide the rules.
- The rules were focused on a very specific task.

These limitations gave rise to genetic algorithms, inspired by the process of natural selection. Genetic algorithms could learn an optimal set of parameters from training data, demonstrating AI's potential for solving real-world business challenges.

1980s and 1990s: Machine learning

The 1980s and 1990s witnessed a shift towards machine learning, a subfield of AI that emphasises the ability of machines to learn from data. That is, a human does not need to define the rules. Instead, the underlying neural network figures these out for itself.

Neural networks, inspired by the structure and function of the human brain, were pivotal to this shift. Training a neural network is akin to showing a baby thousands of flashcards to nurture recognition of objects.

21st Century: Deep learning, Agentic AI, GenAI

The 21st century has seen rapid advancements in AI, fuelled by the exponential growth of data and computing power. The development of deep learning (basically bigger, more sophisticated neural networks trained on big data) has enabled machines to achieve human-level performance in tasks ranging from image recognition to natural language understanding.

Among these advancements, two key ones stand out: Agentic AI and Generative AI.

- Agentic AI that can act autonomously and make decisions to achieve specific goals.
- Generative AI that can create new content, such as text, images, music and even code.

Where We Are Now

Agentic AI

Agentic AI, or AI agents capable of making autonomous decisions, has emerged as a dominant trend. These agents can understand context, set goals and adapt actions, completing tasks previously thought impossible for AI.

Examples include virtual call centre agents, self-driving cars and robots navigating complex environments.

GenAI

Generative AI (GenAI) creates new content, including music, stories, visuals, computer code and product designs.

It works by learning patterns from existing data – text, images, or code – and using this knowledge to produce original and often surprising outputs.

LLMs

Large language models (LLMs) are a specific type of generative AI that excels at understanding and generating human language. Known technically as Generative Pre-trained Transformers (GPT), LLMs are trained on vast amounts of text and underpin applications such as chatbots, writing assistants and translation tools.

ChatGPT-3 pioneered large-scale language modelling with approximately 175 billion parameters. Its successor, GPT-4, dramatically expanded this scale, potentially involving 1.8 trillion parameters distributed across multiple interconnected models.

Modern LLMs develop intricate mathematical representations of human language, but their internal workings remain largely opaque – a true black box of AI. They are still prone to hallucinations and other errors. Retrieval Augmented Generation, a process that involves searching the web and in-house repositories to help enhance accuracy, has emerged as the most promising way to address this so far.

Reasoning Models

DeepSeek recently generated a shockwave with its claim of comparable performance to OpenAI's offerings at a fraction of the cost. What was lost in the furore was DeepSeek's open approach, especially to their advanced reasoning model, R1.

Reasoning Models are essentially LLMs that have undergone additional training rounds specifically designed to teach them "how to think". In this process, they learn to reply to queries in a way that appears to embed problem-solving and thinking heuristics, leading to better answers.

Most providers are tight-lipped about the underlying details. For example, OpenAI is very vague about the training process of its "4o" model. The "thinking" part of its response is also hidden from users.

In contrast, DeepSeek has taken a more open approach. They have published their training process and even include the model's thought process in the responses generated by the R1 agent. Moreover, the entire model is free for anyone to download.

AI is no longer a futuristic concept – it is a present-day force reshaping industries, economies and business models. Companies ignore it at their own peril.

Understanding AI's evolution and trajectory is crucial for directors to fulfil their governance role, which includes ensuring the organisation's business model remains relevant, and the company responds quickly to changes in market conditions.

The battle for relevance

A successful business model achieves relevance for the organisation by satisfying specific needs and wants.

Relevance is distinct when the company satisfies needs and wants in a way that sets it apart from its competitors, creating a unique value proposition in the marketplace. This is especially when it employs a game-changing business model that tilts the landscape in its favour.

Here are two examples of organisations that have demonstrated an ability to achieve distinct relevance:

- **BYD** transformed itself from a battery maker into the largest electric vehicle (EV) seller, overtaking Tesla. BYD leverages vertical integration and a wide variety of technological capabilities to offer the best value-for-money EVs. The prowess of its underlying battery technology is a key part of the company's competitive edge. The Chinese manufacturer proudly states that other EV makers (including Tesla), which are its customers, do not get the latest and best batteries.

- **Hitachi**, a 114-year-old Japanese conglomerate, underwent a dramatic transformation by embracing AI and clean energy solutions. Facing potential bankruptcy in 2009, Hitachi's market value has since tripled to over US$100 billion (S$135 billion). A significant part of this transformation is attributed to Lumada, its data science services division, which has positioned Hitachi as a leader in AI applications for industrial sectors.

Achieving strategic agility

An organisation's strategic agility – its ability to anticipate, adapt and swiftly respond to changing market conditions, emerging trends and technological advancements – is crucial in maintaining relevance and competitiveness.

How can the board improve the organisation's strategic agility in response to AI and emerging technologies?

Here are three key considerations:

- Adopt a growth mindset.
- Develop a transformational strategy.
- Execute effectively.

The box, "Responding to AI with Strategic Agility", highlights the core elements of this approach.

Organisational mindset

It is important to reflect on the AI mega-shift before taking action.

In doing so, the board should consider AI in its broadest sense – not just Generative AI tools like ChatGPT, Gemini or Co-Pilot. Specifically, what is the organisation's mindset toward AI? Without the right mindset, any action taken could lead to unintended consequences.

Organisational mindsets around AI often fall into two extremes:

- **Defensive:** where AI is perceived as a death threat, a force that could render the organisation obsolete.

- **Growth:** where AI is seen as a game changer, a massive opportunity to drive growth and innovation.

This is not about an individual or even the board's perspective but the organisation as a whole. Even if the board views AI as a game changer, how aligned is the rest of the organisation? Will the corporate immune system – the entrenched culture and processes – accept or reject AI?

From a strategic agility standpoint, mindset matters deeply because it shapes how the organisation responds.

A defensive mindset rarely leads to distinct relevance. The histories of Kodak, Nokia and Borders are sober reminders of this. These companies were not blindsided by disruption. It was their defensive mindset which prevented them from adapting proactively.

The most critical action a board can take in response to AI is to shape the organisation's mindset. Without this, the corporate immune system will resist any meaningful adoption of AI.

Moreover, the board must lead by example. What AI tools are the board members using, and for what purpose? Demonstrating openness and adaptability at the top sets the tone for the rest of the organisation.

Organisational strategy

How should the organisation respond to the "AI elephant" strategically?

Broadly, a company's strategic posture will fall into one of three categories:

- **Defensive:** Preserving the current strategy by building barricades. This approach may buy time, but rarely succeeds in the long run (e.g. Kodak and digital cameras).
- **Incremental:** Making small adjustments or fine-tuning the existing strategy.
- **Transformational:** Undertaking significant, systemic change to adapt to new realities.

It would be tempting to take a defensive stance and think, "AI will eventually take over all the thinking in the future; it's a death knell". Instead, adopting a growth mindset and aggressively embracing AI as transformational will help integrate AI into the company's products, services and strategy.

The right approach should be grounded in several key assumptions about the future:

- **Key decisions will still be taken by humans.** While AI increasingly automates routine choices, strategic decisions will continue to involve human judgment. In AI circles, this is referred to as the Human-in-the-Loop model. For instance, while we may rely on Google Maps to determine driving routes, humans still set broader navigational priorities and strategies.

- **AI is a tool, not merely an automation solution.** From a strategic agility perspective, AI should not just be seen as a means to automate operations. It is better framed as a tool to enhance human thinking – enabling us to think faster, deeper and more effectively.

- **AI can either enhance or hinder critical thinking.** Poorly managed adoption of AI can diminish critical thinking. For example, over-reliance on ChatGPT without verifying its output has led to adverse consequences from hallucinations. When done right, AI can enhance, not worsen critical thinking.

- **The risk of cognitive offloading must be managed.** As we embrace AI, there is a danger of losing certain mental abilities – a phenomenon known as *cognitive offloading*. For example, just as calculators have undermined mental arithmetic, real-time driving skills can be degraded by the way we use Google Maps. Does it matter if mental arithmetic or driving skills suffer? Probably not. However, the question for leaders of organisations is: what are the key skills that individuals and the organisation must maintain? What skills should not be offloaded to AI or other technology? For example, two such skills may be strategic thinking and critical evaluation.

When organisations define their AI strategy, there are four key roles which AI typically play:

- Grunt work: Performing data gathering and analysis efficiently.
- Environmental monitoring: Tracking trends, risks and opportunities in real-time.
- A sparring partner: Challenging assumptions and generating alternative perspectives.
- Creativity agent: Enhancing brainstorming and ideation processes.

Strategic execution

While day-to-day execution is the responsibility of executive management, from a governance perspective, the board must take reasonable steps to ensure the organisation has the right conditions in place for effective execution.

Besides mindset, three essential ingredients to having the right conditions are:

- **Culture**
  Culture cannot be left to the human resource department to handle. Culture is a decision, just like strategy and structure. The board should decide what type of culture is required to successfully implement its strategy and adopt AI effectively.

  The board should ask the following questions:
  - What kind of culture is needed to support our strategy?
  - How does our current culture align with what is required?
  - What steps are necessary to make the transition?

- **Structure and operational processes**
  A robust strategic review always considers whether the organisation's structure needs to evolve. Part of this process involves identifying the top critical business processes that will drive future relevance.

  While many processes are important (e.g. product innovation, cash management, research and development, customer insights, sales and marketing, and risk management), the board should focus on the two or three processes

most critical to executing the strategy. These then should receive the necessary attention and resources to support execution effectively.

- **People and skills**
  Ultimately, people and their skills are the foundation of successful execution. Recent research consistently highlights the following skills as essential for the future:
  - Critical thinking.
  - Strategic thinking.
  - AI adoption and use.
  - Collaboration and teamwork.
  - Effective communication.

Boards must take an active interest in how these skills are being developed across the organisation and how effectively they are being applied. Ensuring the workforce is equipped with these capabilities will position the organisation to execute its strategy and thrive in an AI-driven future.

AI for the ages

AI is here to stay. It will continue to evolve and improve, reshaping industries and redefining competitive dynamics. Organisations must therefore develop a thoughtful and proactive response to the profound changes brought about by the advent of AI.

Successful firms will harness AI to achieve distinct relevance and drive business transformation. The key lies in the organisation's strategic agility – its ability to integrate AI as a core enabler of that agility. In other words, AI must become part of the solution, not just a challenge to overcome.