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Good governance

Navigating on purpose and complexity-based principles

Theo Kocken and Stefan Lundbergh

INTRODUCTION

Why are so many companies and institutions across the globe incapable of adapting to a changing environment? With hindsight, it is easy to write case studies analysing the Kodaks of the world, identifying the series of strategic mistakes leading towards their demise. These cases demonstrate that management were already aware of, or could have easily identified, that the commercial environment was changing. The pertinent question is: how could management have been so wilfully blind to a changing environment that it refrained from taking sufficient actions? A more nuanced question is: why did the governance framework fail to support management to be adaptive in a fast-changing and complex world?

A financially sustainable company, or institution, needs to be robust to survive in the short term and adaptive to survive in the long run. In addition, the company needs to attract good employees, pay taxes in the local community, and maintain its 'licence to operate'. We argue that good governance requires companies and institutions to have:

1. A clear purpose, acting as a compass helping the organisation to adapt in an ever-changing world;
2. A principle-based corporate culture that fosters a robust decision process, benefitting from an integrated open worldview of the trends and non-linear changes shaping our future; and
3. Tools and processes which help the organisation to deal with uncertainty, mitigate human biases, and effectively tap the 'wisdom of employees'.

This might sound like a utopia, but it is supported by many real-life examples. At the end of this chapter we will also discuss three real-life examples: how purpose drift and a cultural transformation ultimately brought Enron down; how Dutch pension funds used purpose as a beacon when changing the pension contract and introduced tools for dealing with fundamental uncertainty; and finally, how a clear purpose and a principle-based culture helped IKEA to revolutionise the furniture business.

SUSTAINABILITY IN A COMPLEX WORLD REQUIRES BOTH PURPOSE AND PRINCIPLES

Adaptiveness in a fast-changing world is essential for companies to sustain long-term profitability, customer satisfaction and the hiring and retention of engaged employees – in short, being sustainable. To achieve this, we must acknowledge that the world is a complex place and that we often face ambiguous situations which cannot be captured by ‘complicated’ models alone as we will illustrate below. In our complex world, a clear purpose acts as a compass helping the organisation to navigate an ever changing environment. Through a principle-based culture that defines how the purpose should be achieved, it is possible to decentralise decisions and create an adaptive organisation that does not shy away from ambiguity.

The world is often a complex, not a complicated, place

A modern car is comfortable and provides a safe journey for both its driver and passengers. The car is a complicated piece of machinery that involves scores of components designed to interact with each other in a strictly predefined manner. The mechanical and electronic systems are bounded by the laws of physics. A car mechanic can therefore diagnose and repair a car that has broken down by applying their detailed and expert knowledge about this complicated system. In fact, the car is a top-down system. When the driver hits the accelerator, this causes the engine to react, which generates motion in the wheels and the car picks up speed in a totally predictable manner. The causal relationships – the responses from input to output – of complicated systems do not change over time and are therefore largely predictable, bar any unexpected failures of components.

The traffic flow on a busy motorway is best described as a complex system. Watching the traffic flow from a helicopter, it appears to be organised and orchestrated, but what we observe is the emerging result of self-organisation. It is a bottom-up process. In order to avoid bumping into nearby cars, drivers adapt by keeping their distance, changing lanes, and adjusting the speed relative to the other cars. One car moving significantly slower than the general traffic flow may cause unexpected traffic jams, known as ‘ghost jams’. These

effects are caused by the interactions between drivers, but this human interaction is not constant over time. The human drivers react to their environment, in turn creating feedback loops. It is not a one-way causal relationship but a two-way dynamic interaction which cannot be fully determined. Small changes in individual behaviour can lead to large changes on a higher aggregated ('macro') level such as the traffic jam as a whole. It is therefore impossible to predict how a traffic flow will evolve, even if we have access to historical GPS coordinates and the speed of all individual cars. It is the behaviour of, and the interaction between, drivers that create uncertainty.

About a century ago, the economist Frank Knight contrasted probabilities with fundamental uncertainty (Knight, 1921). Probabilities can be defined as quantifiable deviations from a 'mean' in a complicated system. When the system itself follows various fundamental laws that do not change over time, we can assess the likelihood that a car engine running without oil will break down within a certain timeframe. Uncertainty is defined as events arising from a complex system which is not possible to quantify – for example, predicting the movements of an individual car on a busy highway. The uncertainty does not exclude us from observing 'patterns' emerging that may give us a better understanding of the dynamics in a complex system, but that does not make it possible to predict it in a precise manner.

By applying the same reasoning to the economy and the financial markets, it becomes apparent that we are faced with complexity. The economy is nothing but the result of an intricate interaction between billions of humans in various frameworks. Our daily decisions are influenced by our emotions and we adapt as the world evolves. Daniel Kahneman, Amos Tversky, Paul Slovic, and many other behavioural economists and psychologists revealed via experiments how we make irrational, inconsistent, and emotion-driven decisions that do not fit a complicated worldview where people are very consistent in their decisions and have static utility functions over time (Kahneman, Slovic, and Tversky, 1982). In practice, investors' behaviour creates self-reinforcing feedback loops which add significantly to uncertainty. Investors react to market movements (i.e. their 'utility function' changes), which is then driving market movements, which impacts the reaction of investors. George Soros called this endless loop 'reflexivity', which can lead to speculative bubbles that eventually burst (Soros, 1986). The economist Hyman Minsky formulated the 'Financial Instability Hypothesis' to describe how these feedback loops always lead to instability (Minsky, 1986). As private debt levels grow, the economy endogenously creates its own booms and busts. This fits with Brian Arthur's view on the economy and financial markets as hardly ever being in an equilibrium, but most often they are in disequilibrium due to human feedback loops (Arthur, 2014). Mark Buchanan argued that based on what we observe in physics, one should view financial risk as following a power distribution instead of a normal distribution (Buchanan, 2002).

Innovations add another layer to the non-static behaviour of our economic system. The smart phone and many other information technology related innovations have fundamentally changed business models in ways that no one could imagine in the late 1990s, when mobile phones first became a mainstream consumer product. The companies that emerged from these new technologies often required much less capital than traditional firms. This has created ripple effects across capital markets, changing the dynamics of interest rates. How the world will develop is uncertain and that makes it impossible to consistently predict the future. In other words, the world is a complex, not complicated, place.

Emotionally, it is reassuring to have a complete mathematical representation; using complicated statistical models to 'predict' the future removes our perceived ambiguity. As humans we dislike ambiguity and want to be in control. It is therefore compelling for us to use models which assume a complicated world and we become wilfully blind when the underpinning assumptions are not valid. We must therefore remain vigilant to the fact that these complicated models must not be mistaken for the complex world itself. A complicated model will sometimes help us gain some understanding of the complex world, but it is only a partial description of the reality based on several strong (refuted) assumptions and generalisations. Still, we have a tendency to pursue making decisions based on complicated models, even if we know we deal with a complex system. Ellsberg showed with experiments that we have a preference to change from a game in which we do not know the probabilities to a game where we do know the probabilities, even if it is not to our benefit (Ellsberg, 1961). This is called ambiguity aversion.

A counterproductive result of ambiguity aversion is to assume that the complicated model is the correct description of how the world works – and pursue 'optimal' strategies based on that model. This is particularly important for financial institutions and investors, who often fall prey to the so-called 'model trap'. In a complex world, 'optimal' is the enemy to short-term robustness and long-term adaptivity. In his book *Adaptive Market*, Andrew Lo argues that investors should not optimise their portfolio based on one model; instead, they should select the portfolio that delivers satisficing outcomes, while being resilient to what we do not know under as many situations as possible (Lo, 2017). The same holds for management of a company when evaluating different projects and business lines.

Purpose is more than profit, but key to sustainability

In a complex world, a clear purpose is the compass helping a company to navigate uncertainty without jeopardising its licence to operate. A purpose, such as reducing old-age poverty or creating wider financial inclusion, is

often linked to the UN Sustainability Goals and provides invaluable guidance on how to adapt a business as society evolves. If the purpose is fuzzy, it is not clear why the company exists nor how it should adapt to change.

Profits are necessary to sustain both business and society. Without profits, it is not possible to retain the right people, pay taxes, conduct research, create new products, and pay interest and dividends to investors. Profit is a boundary condition, but it is only one of several critical factors that need to be managed in an integrated way. Ultimately, a company needs to earn the trust of its clients and society.

This includes finding a balance between short-term robustness and long-term adaptivity. Reducing investments in research and innovation will boost profits in the short term but hamper long-term sustainability. Being a good corporate citizen includes paying taxes in the countries where the business operates and being mindful of externalities, such as reducing the environmental footprint. It also involves avoiding the notion that the society has to 'nationalise' its losses. A strong purpose makes employees proud and results in a genuine engagement.

Companies lacking a purpose often replace this by profit alone. When profits become the only purpose, things can go terribly wrong. Profit is a too narrow measure that doesn't provide any guidance for setting the direction for the future. Replacing purpose with profit is tempting, since it creates an easily observable metric against which everything can be monitored and managed. A simple metric reduces the need for management to make judgement calls choosing between different potential solutions. For companies whose largest shareholders, of which most are money managers, only hold a few per cent of the outstanding stock, profits may serve as the least common denominator and therefore replace the purpose.

Without a clear purpose, management assumes the world is a complicated place and often end up optimising short-term profit alone. By failing to include all available information, particularly the information that is not easily quantifiable, management becomes blind to longer-term developments that could either kill the profitability or risk losing the licence to operate. By lacking a purpose, combined with too narrow an optimisation, management have sealed the fate of many 'great' companies over the years. Peter Drucker once wrote that 'what gets measured, gets managed' (Drucker, 1955). If we don't know what to measure, apart from profits, things can drift into the wrong direction.

A clear purpose helps senior management and staff to channel their energies towards innovation by pursuing new initiatives that fit the purpose and 'fail fast', if necessary. It will help to find 'real options' for the longer term that management can turn into strategies to re-invent the company. This is also important for investors allocating money to these companies, ensuring that

they invest in a long-term sustainable company, instead of optimised short-term profits.

Principles – the foundation of good governance

To serve ‘purpose’, an organisation needs clear principles – for example, how to interact with each other inside the company, how to treat clients and learn from failures. Principles are guidelines that embody a sound corporate culture. Good governance is often referred to as having clear delegation of responsibility and accountability, from the board of trustees down to each employee. In most of the large corporate scandals, the formal governance structure, processes, and systems were in place, but the underlying corporate culture was corrupt. Good governance not only has a sound formal structure, but sound principles for working together. In practice, this boils down to creating an environment that encourages diversity in thinking, does not shy away from dealing with ambiguity, and has a sound way of learning from mistakes, plus incrementally improving the company.

The culture is much more powerful than leaders themselves. For example, the mayor of a city is an important person, but less influential than we think. The city is a decentralised system: citizens and companies decide to live there or move somewhere else. A city is prosperous simply because its citizens make it thrive. Thriving cities attract new talented people, creating more opportunities. It is a decentralised process where individuals and companies are mainly self-organizing. The mayor is not in control of this complex environment – far from it. The mayor can only nudge behaviour in certain directions by creating and maintaining an environment that in turn makes the city an attractive place.

The board of a company faces the same challenges as a mayor of a city. A large company is too complex to manage top-down by using one simple metric, such as profit. But still, many companies try to control their entire organisation top-down. Leadership is about nudging emergence in an organisation using principles as the main tool. The role of principles is to guide decentralised decisions by providing guidance on how to deal with each other, to get the most out of everyone working in the company and de-bias the internal decision processes. Adaptiveness requires freedom and autonomy to innovate, but it is central that non-viable ideas are stopped. A principles-based culture can guide this process and therefore the principles should, at least, target the following areas:

- **Improving decisions under fundamental uncertainty.** The principles should address how decisions are formed in the company. Diversity in thinking is an extremely important tool for dealing with the different aspects of a complex environment. How are we getting individuals

involved and how do we have constructive dialogues and ‘conflicts’? How do we mitigate individual cognitive biases and reduce effects of negative group dynamics? How do we structurally make use of real opposing views to improve the quality of decisions? One of the companies that has written down its principles on decision-making and lives by those is Bridgewater. Their main objective was to create an ‘idea meritocracy’ to improve investment decisions (Dalio, 2017).

- **Learning from failures.** How do we deal with and learn from failures and errors made by management and employees? How do we create a true learning culture without blame, learning from mistakes? In complex environments, failures are often caused by changes to the environment which impact the dynamics of the complex system. Most of the time, the changing dynamics of the complex system dominate the human error as the main cause of failure. A culture based on an open mindset that embraces failure as an opportunity to improve turns out to be much more successful than a culture where mistakes are seen as human failures. Mathew Syed referred to this as black box thinking, inspired by the civil aviation industry that effectively learns from failures and disseminates this knowledge across the industry (Syed, 2015).
- **Empowering employees.** How do we give employees the courage and empowerment to make them try new things? What tools are available to boost creativity without being reckless or inefficient? How do we balance the need for local autonomy of business units to allow for emergence, but centralise some functions that are best shared across business units? In his book *The Tipping Point*, Malcom Gladwell describes W.L. Gore & Associates, the manufacturer of Gore-Tex, that opted for a decentralised and flat organisation structure (Gladwell, 2000). When a division grows beyond 150 employees, they split it into two smaller divisions since they believe it improves employees’ communications and makes the business more efficient. The limit of 150 employees is known as the Dunbar’s number, which is the average number of relationships an individual can handle simultaneously without hampering the effectiveness of the group.

No doubt the stakes are high. A company that fails to be adaptive in a complex world will not just disappoint its shareholders and employees, but also negatively affect the wider community in which it operates. It is necessary for a sustainable company to have a purpose as the compass, complemented by principles as bearer of corporate culture. For sustainable goals to be effective over the long term, they must be derived from the purpose and the principles, otherwise it is just window dressing.

Robust long-term decisions can be very painful in the short term, both in terms of profit and for the organisation itself. The history books are full of

‘successful’ companies that were not able to adapt, not because of a lack of knowledge or insight, but mostly because they were not able to face the pain of adapting, which was necessary to continue to fulfil their purpose. Peter Drucker captured this with ‘Management is doing things right; leadership is doing the right things’ (Drucker, 2000). In many cases, shareholders pay a significant leadership premium in the CEO’s remuneration but end up appointing a manager.

WAYS TO BECOME MORE ADAPTIVE

In our daily life, we regularly make decisions where the information is incomplete. This is the case for minor decisions, such as choosing a restaurant, as well as life-defining decisions, such as choosing a career or getting married. When looking for a restaurant for a dinner with friends, we typically choose between a set of known restaurants that satisfice our needs, rather than looking for the optimal restaurant. Herbert Simon, Noble Laureate, explained this using his theory of bounded rationality (Simon, 1984). The idea is that when making decisions, our rationality is limited due to the complexity of the problem, our behavioural biases, and the time available. When making a decision, we act as satisficers trying to find a satisfactory, instead of optimal, solution.

We are ignorant, by definition, to what we do not know. Unfortunately, we are easily framed by social conventions, corporate culture, and most importantly, our existing knowledge. In addition, we have a strong aversion for ambiguity, which is a consequence of fundamental uncertainty. To deal with that, we seek comfort from ideologies around how we want the world to look and our confirmation bias helps strengthen that view. Ironically, much of what we do not know could be better understood if we only tried to see the world for what it is, not for what we want it to be.

When deciding a business model, or strategy, it should satisfice our goal (i.e. fulfil our purpose) while being robust against our own ignorance. To do this successfully, we need diversity in thinking as well as applying de-biasing tools and techniques to mitigate our human biases and prevent negative effects of group dynamics. This applies to all decisions, at all levels in the organisation, so it is essential to cultivate a principles-based culture that does not shy away from dealing with ambiguity.

In the following, we will focus on the challenges facing institutional investors, but this approach is generically applicable to most decision situations.

Becoming robust to our own ignorance

We do not know, by definition, what the future innovations will be. Even if we could know, we cannot predict how individuals will adapt to the innovations.

We are left with making decisions based on incomplete information. In this context, the role of the purpose cannot be underestimated. To become robust to our own ignorance, we should aim for a sufficient outcome that lets us achieve the purpose. Among the set of possible solutions that fulfil this goal, we choose among those that are robust against the worst possible outcomes we can imagine. This forces us to think in terms of consequences of what we do not know (our ignorance).

Mainstream finance relies heavily on complete mathematical models and historical data to describe the world. The narrative is that markets are mean-reverting and that a long-term strategic investor should choose the optimal portfolio at the efficient frontier and adjust the level of risk by allocating between the optimal portfolio and cash (or borrowing money). From these base recommendations, investors can derive 'optimal' solutions premised on the mathematical model and historical correlations. The 'optimal' solution is very attractive to many investors since it eliminates the need for complex discussions and making difficult judgements. But the solution is 'optimal' if, and only if, the complicated model is a correct description of the complex reality. In finance, the 'optimal' solution is, unfortunately, nothing more than beggars' belief.

Abandoning this false sense of control induced by complete mathematical models and historical probabilities means that it is impossible to find optimal solutions. Instead, investors must judge the consequences of a multitude of alternative solutions under different worldviews. This seems discouraging at first, but let us take a step back and reflect on what we are trying to achieve in the first place. For most investors, the goal is probably not to earn a maximum investment return under a wished-for worldview, but to earn a sufficient return without risking losing almost all in the process if our wished-for worldview turns out to be wrong.

Diversity in thinking and models

Specialising in, or optimising for, a certain environment can lead us into disaster due to the inherent uncertainty of the world. The negative consequences of optimisation can be illustrated by the fate of the banana plantations in the 1950s and 1960s. Back then, the most popular banana variety in the West was Gros Michel (also known as Big Mike). It was so popular that vast monocultures of these variety were established throughout the tropical parts of Latin America. A contagious fungal disease, known as the Panama disease, infected the Gros Michel plantations, killing the plants and nearly wiping out this banana variety.

Inspired by the philosopher Ayn Rand, former Federal Reserve Chair Alan Greenspan had a strong belief in the free market hypothesis (Rand, 1966). He

heavily relied on the assumption that people are rational and that both banks and consumers will never be exposed to (collective) irrational, overconfident behaviour. This made him a strong proponent for deregulating the financial markets and removing constraints on consumers, since he believed that this would lead to 'optimal' outcomes. In a Senate hearing after the 2007/08 crisis, Greenspan admitted that he relied too much on one simple theory based on very strong assumptions of rationality and equilibrium. The collective reliance on this worldview was one of the root causes of the great financial crisis.

Uncertainty is a real danger for monocultures and nature's cure is biodiversity. In finance, the cure is diversity in thinking. Diversity in thinking results in diversification between different complicated approximations of how the complex world might work. This is a higher-order diversification compared with diversifying between strategies within one specific complicated model. In other words, we should not put all our eggs in the basket of one theoretical model; even if that particular basket has different padded compartments, it only provides us with a second-order diversification.

In a complex world, we have to make decisions based on incomplete information. We don't know what the world looks like; however, the main challenge for us is what our theories and models do not capture. Looking at a problem from multiple angles using theories from different disciplines helps us to get a more complete picture of the world. Examples of theories are: agent-based modelling, stochastic models, network theories, and scenario thinking, which all bring different perspectives.

- **Agent-based modelling.** In a complex world, we must be careful generalising findings on a micro level to a macro level (or the other way around). To better understand the 'ghost jam' problem mentioned previously, an agent-based model is used to bridge micro behaviour of drivers with the observed macro dynamics of the traffic flow. A simple model of how individual drivers behave contains simple rules for matching speed with traffic, avoiding bumping into other cars, and staying on the motorway. Based on this simplified model of the drivers, dynamics, and interactions, it is possible to simulate macro behaviour of traffic flow. The same can be done for interactions between different players (investors, institutions, brokers, etc.) in financial markets. For example, by modelling how the players 'learn' subjectively from changes in the market and analysing how this learning changes the market dynamic and vice versa. This modelling of social feedback loops increases our understanding of financial instability and helps financial institutions to make them more robust. It also helps to improve the effectiveness of regulations and creates a bit more macro stability (although never 'equilibrium') in financial markets.

- **Stochastic models.** Stochastic models can be helpful by providing insight in the dynamics over a long horizon. Acknowledging that probabilities derived from the stochastic models are far from ‘exact’, stochastic modelling can help us to better understand the consequences of changes to strategies. For example, a pension fund can use stochastic modelling to assess the impact on its long-term sustainability, due to changes of the contribution policy and investment policies. In addition, the consequences of closing a pension fund for new employees or unexpected changes in longevity can be better understood using stochastic models.
- **Network theory.** In the 1960s, Stanley Milgram performed an experiment illustrating that we are more closely linked to each other than we intuitively think (Milgram, 1967). He found that there are six degrees of separation between any two individuals. In social networks some individuals are more connected than others, and we think of these individuals as networkers or influencers. Interconnectivity also applies to countries, institutions, and organisations, and understanding how it works could give us a better understanding of the world. For example, which institutions are system-critical in a financial system (too connected to fail; not so much too big to fail)? How can a monoculture, driven by strict regulation, create system instability? Analysing networks can help us to understand non-linear phenomena by propagating shocks through a network and seeing how a shock goes from one institution to another to another and then affects the initial institution. Banks have complex debt relationships that can create non-linear self-reinforcing feedback effects that cannot be explained by traditional ‘equilibrium’ tools.
- **Scenario thinking.** When the uncertainty around key input parameters dominates the outcomes, it is better to apply a scenario thinking methodology. For example, the solvency of a defined benefit pension scheme is dominated by unexpected changes to life expectancy, interest rate movements, investment returns, and the credit quality of its sponsor. The goal in scenario thinking is to imagine, not assume, how a broad set of plausible futures could impact the pension scheme. This will help decision-makers to live through possible events and consider consequences of different actions. By familiarising ourselves with the events leading to a certain future scenario, it can also help us find signals that will help us to recognise in a timely manner that a world turns in a certain direction. Herman Kahn’s pioneering work during the Cold War provides us with tools that helps us to remember the future.

Box 4.1 The road to hell is paved with good intentions

After the Global Financial Crisis of 2007/08, regulators concluded that the lack of transparency of bilateral trades was an important factor exacerbating the crisis. No one quite understood the extent of interconnectivity between the many different banks, insurance companies, and pension funds. The regulatory response was to introduce Central Clearing Platforms (CCP) for derivatives. These platforms act as centralised institutions for both trading and clearing derivatives. From a stand-alone perspective, the CCP were safer than the previous approach with bilateral trades. From a network theory perspective, the CCP are centralised nodes and the systemic risks have increased compared with the past decentralised network of bilateral trades. Research shows that small players particularly incur more risk in a CCP network. A recent lesson from the Nasdaq Nordic Commodities Exchange accentuates this systemic risk. A relatively small incident by one individual trader resulted in knock-on effects that eventually wiped out 70% of all the buffers of all the traders involved in that particular Central Clearing Platform. And the management of the platform had to start an investigation but could not explain how so much capital could be wiped away. Sounds like a complex system that is treated as a complicated system. This should trigger alarms at the worldwide financial stability authorities.

In practice, tools and models should be combined. Agent-based models can help us to understand how markets might evolve under new regulations. Scenario thinking can use this as input for more broad scenarios that not only look at economics but also demographics, technological breakthroughs, ecological and social/political changes.

Adaptivity and the innovator's dilemma

Scenario thinking includes imagining different worlds and anticipating how the company would need to adapt in order to fulfil its purpose. This is not a claim on being able to predict how the world may emerge, but it helps us understand what could happen. Identifying the signals that are inherent for the different potential worlds will help management to take action and adapt in a timely manner when observing early warning signals.

By thinking through how to act in each of the scenarios and what the consequences might be, management can take action if one of the scenarios

should materialise. This will give a headstart versus competitors who have not been thinking in scenario terms, whose first response will be denial and then gradually trying to cope with the new reality. The outcome of this scenario thinking analysis might challenge how the company is structured today. Maybe management realises that under several scenarios it will need to take action today in order to survive in the future. With a clear purpose as a compass, the company is better positioned to implement adaptive solutions even if it will result in short-term pain.

Many of today's management tools and techniques have been designed for efficiently managing complicated production processes. Unfortunately, these tools and techniques are also often applied routinely when managing complex processes. Trying to optimise the business strategy based on an incomplete complicated model of the complex world could result in failing despite management doing everything 'right'. If the world is changing, it is not sufficient to continue doing what we are doing today a bit more efficiently. To adapt, we must be prepared to ask ourselves three soul-searching questions:

- What are we really good at?
- What could the potential future look like?
- How can we contribute to fulfil our purpose in these potential futures?

In addressing these central questions, a clear purpose acts as the compass for the organisation and principle-based culture broadens the chances of reaching an adaptive strategy, addressing the answers to these questions. A company with purpose has a 'why' and, as Nietzsche once wrote, 'Hat man sein Warum des Lebens, so verträgt man sich fast mit jedem Wie'¹ (Nietzsche, 1889). The consequences may be painful for the organisation and many of its employees, but failing to address these questions will lead to even more pain in the future.

In his book *The Innovator's Dilemma*, Clayton Christensen concludes that it is very difficult, but not impossible, for a company to adapt a new technology (Christensen, 1997). A company has its own lifecycle: it begins as an innovative startup exploring a new technology, challenging the incumbents. As the company matures, it refines its technology and eventually becomes a defensive and monopolistic incumbent that will be challenged by a new startup. Sometimes companies can rejuvenate themselves and adapt to the new technology, but most companies are not able to do so. The natural inclination of many companies is to pursue a defensive strategy that will deliver attractive profits in the short term by not investing in the future. A clear purpose can help a company to rejuvenate itself. As the company begins to drift away from its purpose, it is a clear signal for triggering innovation before it is too late.

Living with uncertainty

Successful application of these theories requires that we have tools and processes in place to help mitigate our behavioural biases, as well as reduce the negative elements of group dynamics such as groupthink. A principle-based culture is central to achieving this and we need to proactively design processes that will de-bias decision-making and effectively tap into the ‘wisdom of the employees’.

Looking at the world through a multitude of models will make us more robust, and more adaptive to changes in our environment. The question is how to do this, since we simply don’t know how likely, or severe, extreme events could be. Diversity in thinking provides us with more information and that can be contrasted using different perspectives. A diversity of models and theories will not help us predict the future, but they will help us to better understand the market dynamics and help us to calibrate how bad, ‘bad’ could be and how to react.

THREE EXAMPLES FROM PRACTICE

The considerations above have scientific foundations in cognitive science and complexity theory and are illustrated by practical examples: Enron, Dutch pension funds, and IKEA. This section discusses three diverse cases that show in a more elaborated context the role of purpose and principles.

Losing the purpose – the cautionary tale of Enron

In December 2001, Enron filed for Chapter 11 bankruptcy protection after one of the largest accounting frauds in history was unravelled. Its auditor, Arthur Andersen, one of the world’s most renowned accounting firms at the time, was also dragged down in the aftermath of the Enron debacle.

Enron is a clear example of how purpose drift can lead to failure, and there are some important lessons to be learned for managers. The demise of a ‘great’ company is often the result of several factors acting in concert, of which purpose drift is one. Lacking a purpose is not a sufficient condition for failure, in the same way that a stable purpose is not a sufficient condition for success. We argue that having a clear, well-defined, and stable purpose *helps* in avoiding a destructive drift into new business areas which do not fit the culture of the company.

In the late 1980s, Enron was a boring traditional natural oil and gas company with distribution capabilities in the form of an interstate gas pipeline. After the energy deregulation in the mid-1980s, Enron provided its clients with a fixed gas price while hedging the volatile spot price using financial

instruments. This required a solid risk management culture, both to avoid physical accidents and financial blow-ups. Enron's top management had a clear ambition to take advantage of the deregulation and expand the business internationally. Jeffrey Skilling was hired as the head of trading and he set a new strategic direction which implied a quick transition away from distributing gas towards becoming a financial institution, or even a hedge fund, running a largely unregulated trading operation which combined market making, trading, securitisation, and project financing.

The purpose changed from safely delivering gas at a fixed price towards profit-making in general, mainly through proprietary trading. In that process, the balance sheet began to fill up with financial contracts, crowding out heavy assets such as production and pipelines. Only heavy assets that provided 'information' for the trading were kept. To make the profits visually more attractive, Enron began to apply mark-to-market techniques developed by the financial sector in the early 1990s. A significant difference was that most of Enron's assets were not traded on a public market; for example, Enron could finance a plant and in the valuation they embedded future profits even before the plant had been completed.

Enron's purpose had drifted towards making money on trading, and management keenly ventured into new markets such as trading in electricity contracts and, later on, broadband contracts. Trading in itself can be a sensible purpose, but requires an even more prudent, elaborate financial risk management culture compared with producing and distributing highly flammable gas. In addition, it was a big step moving from trading on the gas market, where Enron had a deep expertise, towards a new market such as broadband. Since management accidentally drifted into these new markets, none of Enron's top people had experience from these new markets, nor had they defined what was needed to build a top-notch safe trading company. Surprisingly, Enron's ill-prepared moves towards other markets were not punished, but rewarded, by investors. On the day, in 2000, when the new broadband 'strategy' was announced, the Enron stock price increased by 26%.

As often happens with companies where the purpose begins to drift, a new organisation culture emerges. Enron's talent management program was an annual 360 review by a committee, where employees in the lowest-performing quintile were at risk of redundancy. This created a toxic culture of not asking questions in combination with complex internal political gaming (Heffernan, 2011). The organisation gradually began to lose its diversity, as more and more people with a heart for the original business left and were replaced by people with a similar lack of interest in risk management as top management. In the end, there were no natural cultural breaks left in the organisation.

During the second half of the 1990s, everybody in the market expected Enron to present stellar profit growth and Enron used more and more

innovative accounting tricks to meet the market expectations. The purpose shifted from making profit to increasing the share price. Enron's unprecedented level of 'innovative' financial engineering passed the realm of what was legally allowed by deliberately hiding loss-making activities off-balance sheet by placing them in special purpose vehicles.

As often happens in good times, financial regulators were so impressed by Enron's financial performance that they did not take action until Enron dramatically failed in 2001. In retrospect, the excessive performance in Enron's case was not an indicator of exceptional visionary skills; instead, Enron's management showed an exceptional creativity in systematically fooling people. It is clear that one of the biggest bankruptcies in US history was the result of a decade-long drifting away from the original purpose of the company combined with an unhealthy corporate culture (Dekker, 2018).

The purpose as beacon still requires the right principles to navigate – the Dutch pension funds

Dutch pension funds are organisations with a clear purpose. They are a central pillar of security in society and reduce the risk of old-age poverty among their members. The pension funds facilitate saving while working and mitigate the individual risk of members outliving their pension savings. The member gets a lifelong income at the end of their working life, which reduces financial insecurity. Society benefits since a robust pension makes the financing of the social welfare system more protected against changes in demographics. In addition, the reduction of financial insecurity during old age improves happiness and wellbeing. For pension plan design and long-term strategic investment plans, the standard practice through the 1990s was to use linear 'stochastic' projections based on complicated models of expected investment return and life expectancy. Based on these complicated models, plan members were 'promised' an inflation-linked retirement income, and an 'optimal' long-term asset allocation between different asset classes was chosen. The sponsoring employer agreed to bear the financial consequences of the difference between the projections of the complicated models and the realisation based on the complex reality.

There were massive changes between the late 1980s and late 2010s. Over this 30-year period, long-term interest rates declined from over 10% to almost 0% and the remaining life expectancy, at retirement, increased by over 50%. In addition, the Global Financial Crisis unfolding in 2007/08 came as a surprise to many well-renowned investors and academic professors. Even the best complicated models did not incorporate any of these 'extreme' events and yet they happened in the complex world we live in.

After the dot.com crash in 2000, it became clear that the projections of the complicated models deviated too much from the complex reality. Sponsoring

employers could no longer afford to fill the funding gap. Compared with many other countries where pension funds were rapidly closing, the Dutch started from the purpose and accepted that the design was no longer fit for purpose. This resulted in pension design innovation, through an adaptive process lasting for two decades, where the scale of benefits was gradually adjusted and the financial risks were eventually transferred from the employer to the members.

With this change, pension fund trustees took sole responsibility for navigating the investment portfolio in a complex world. Instead of disregarding extreme events as too unlikely in the mid-2000s, many pension funds proceeded asking questions such as: 'how can we best navigate a diverse range of (beneficial and adverse) extreme scenarios?' This resulted in taking effective actions around, for example, interest rate hedging and adjustments to the pension design, because the trustees imagined these potential outcomes and concluded that they would not be able to fulfil their purpose if these adverse scenarios would materialise. Of course, such a shift in thinking did not occur overnight and didn't happen to all pension funds at once. Over time, some pension funds suffered more from still thinking in a 'complicated worldview', relying more on bold projections about how the world worked than others.

Going forward, Dutch pension funds must adaptively manage their investments accepting a complex world. This means that their portfolio needs to be made resilient against future challenges such as climate change, innovations in energy supply, and other potential developments that cannot be captured by a complicated model.

In summary, the strong purpose of the Dutch pension system helped them change the pension contract so that it better reflects a complex world. The challenge ahead is to deal with investing in an uncertain, complex world. Many of the well-intended investment beliefs are still based on a complicated worldview, which, applied to a complex world, could lead to fragile outcomes. Purpose is a great beacon but good principles around sound worldviews are needed to create real sustainability.

The Testament of a Furniture Dealer – the IKEA Bible

Ingvar Kamprad grew up in Sweden on the Elmtaryd farm near the village Agunnaryd. The farm is located in heart of the province Småland, where inhabitants have a reputation of being extremely careful with their money and not letting anything go to waste.

In 1943, at the age of 17, Kamprad registered IKEA as a business and over the following decades it evolved into one of the world's leading furniture manufacturers. At his death in 2018, Kamprad had an estimated net worth of \$59 billion, making him the world's eighth richest person. Compared with his ultra-wealthy peers on the Bloomberg Billionaires Index, Kamprad's lifestyle

was quite frugal. Honouring the spirit of Småland, Kamprad flew economy, did not stay at luxury hotels, recycled teabags, bought secondhand clothing, drove a 1993 Volvo estate, and did his own grocery shopping.

In 1976, in preparation for the international expansion of IKEA, Kamprad wrote 'The Testament of a Furniture Dealer' in which the purpose of IKEA – 'to create a better everyday life for the many people' – is outlined and explained in plain English (Kamprad, 1976). It also contains the critical elements of the IKEA culture summarised in his nine 'commandments':

1. The product range – our identity
2. The IKEA spirit – a strong and living reality
3. Profit gives us resources
4. Reaching good results with small means
5. Simplicity is a virtue
6. Doing it a different way
7. Concentration – important to our success
8. Taking responsibility – a privilege
9. Most things still remain to be done. A glorious future!

Kamprad wrote the testament at a time when IKEA had grown, and the bureaucracy and the layer of management had increased. IKEA was preparing for an international expansion and he was worried that the organisation would lose its way as it expanded internationally. Kamprad's ambition was to keep the culture similar to a small firm, by reducing layers of management and pushing the responsibility down in the organisation. Quite similar to the Gore-Tex approach, it reduced the amount of communication and management overload an expanding company usually acquires. Although the IKEA culture is not for everyone, those who like the culture tend to stay for many years.

Sara Kristofferson outlines the history and culture of IKEA in her book *Design by IKEA*, and mentions how the 'commandments' influenced the company's way of working (Kristoffersson, 2014). Traditionally, furniture designers were not constrained by the production process, but at IKEA, production efficiency and logistics constraints posed hard restriction on the furniture designers. This was new to the industry, but it made the products affordable to a broad market. One such constraint was that the flat package had to fit on a standard European pallet.

The IKEA culture is driven by narratives, where the legend of Ingvar Kamprad has a clear role as the cultural bearer. He is often portrayed as an underdog who found innovative solutions to the problems he faced by looking at things differently. An example is the narrative around the origin of the short pencil in the IKEA stores. Kamprad met the producer of the standard yellow pencils in Sweden and challenged why they looked the way they

did. The producer responded that this is what a pencil looks like in Sweden. Kamprad took a pen, broke it in the middle and said, 'This way you have two pencils for the price of one', and don't paint it yellow. He added, 'this is the IKEA way of doing things.'

IKEA has become a sustainable company because it follows a clear purpose as a beacon, has clear principles of how to work collaboratively and allows for decentralised working – avoiding the pitfalls of larger organisations that want to have top-down control, a structure which, in the end, reduces profitability and innovation as size increases.

IKEA is a privately held family-owned company that has grown organically. This has allowed them to be long term and do things their own way, since they did not have to worry about what stock analysts would say or short-term fluctuations of the share price. At Kamprad's death, the stewardship of the culture had been handed over to the second generation and the question is to what extent the purpose and culture will be able to continue to develop in the spirit of Kamprad's philosophy. The deepest root cause of sustainability is in consistency of purpose and culture. There is a possibility that, over time, IKEA might transform into a more 'traditional' multinational company. Only the future will tell.

CONCLUDING REMARKS

Having a clear company purpose as a beacon for the long-term navigation of a complex world is very helpful. Each time a company needs to adjust to new circumstances, the purpose will help to reflect what the best strategy is. It avoids dilution of activities: business expansions, acquisitions, changes of strategy all benefit from having a clear purpose. For long-term investors, it is therefore relevant to assess a company based on its clearly and consistently expressed purpose as it is probably a better predictor than the snapshot provided by the current balance sheet.

We only provide casuistry evidence using examples and reasoning. People may argue that being able to change the purpose means flexibility in pursuing new profitable strategies. In practice, many companies do not have the experience or organizational strength to make proper strategic judgements after a shift in purpose. The knowledge of the new territory is not in the genes of the company – the Enron case is a lucid example of that. In addition, a shift in purpose may demotivate current staff and prompt the best talent to leave, leading to increased vulnerability, especially in a stage of expansion.

Apart from a distinctive purpose, sustainability benefits from clear principles of how to work together and how to see the world. Being able to accept that part of the external and internal world are complexity-driven systems will make companies better equipped to deal with uncertainty and be more

adaptive. The Dutch pension fund case shows how a worldview of complexity is beneficial in navigating unprecedented longevity growth and interest rate declines. Taking into consideration that the largest part of the world is still embracing a ‘the financial world is complicated’ worldview, the shift in the Netherlands displays a relatively high adaptivity.

The success of IKEA provides some evidence that the narrative of the leader, which provided both purpose and clear successful principles, is beneficial to success. There is a risk that this founder-based narrative and therefore purpose and principles will dilute over time. It is up to the management of this and many other firms to make sure there is stability in purpose and that this is reflected in the principles which will help keep the business fit for purpose. Principles need to incorporate modern insights from behavioural sciences and complexity theory in order to avoid counterproductive decisions based on narrow worldviews.

The analysis around purpose and principles in this chapter applies to every company in the world. But especially in finance, the abstract nature of services and products, the long horizons and extremely high uncertainty of financial markets makes people – professionals included – more prone to behavioural pitfalls and a flight into safe ‘complicated but unambiguous’ models. Consistency in purpose combined with adequate principles of how to effectively work together in a complex world will be particularly beneficial to sustainability in the financial sector.

NOTE

- 1 This is often translated as, ‘He who has a why to live, can bear almost any how.’

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